



United States Department of the Interior

FISH AND WILDLIFE SERVICE

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13 February 2013

Mr. Bruce Pleasant
Acting Director, Community Programs
USDA – Rural Development
4405 Bland Road, Suite 260
Raleigh, NC 27609

RE: Environmental Assessment and Preliminary Engineering Report for Creedmoor Wastewater Project

Dear Mr. Pleasant:

The US Fish and Wildlife Service (Service) has reviewed the NEPA Environmental Assessment (EA) and Preliminary Engineering Report (PER) for the City of Creedmoor's Wastewater Collection and Treatment System Improvement project, prepared for the US Department of Agriculture, Rural Development Program (USDA-RD). The applicant, the City of Creedmoor (City), is applying for \$27M in funding from the USDA-RD and the Infrastructure Finance Section (formerly Construction Grants and Loans) of the NC Division of Water Quality (NCDWQ). The project consists of providing a wastewater transport system, a new 1.15 MGD wastewater treatment plant, and a discharge of effluent to the Tar River at Cannady Mill Road. The Service has identified the Upper Tar River ecosystem as a significant resource for the protection of federally listed endangered species as well as several other rare and endemic species. Federal goals for the conservation of trust species depend explicitly on the sustained integrity of the Upper Tar River ecosystem. These comments are submitted in accordance with the Fish and Wildlife Coordination Act (FWCA) (48 Stat. 401, as amended; 16 USC 661-667d). Comments related to the FWCA are to be used in your determination of compliance with environmental requirements (7 CFR 1779.9, 7 CFR 1794) and in your water and wastewater loans and grants review (7 CFR 1780, 7 CFR 1783). Additional comments are provided regarding the USDA's determination of project impacts pursuant to section 7 of the Endangered Species Act (ESA) of 1973, as amended (16 USC 1531-1543). Note that we have submitted comments to USDA-RD on the Biological Assessment (BA) for this project under separate cover (USFWS 2013).

The Service has a significant interest in the conservation of globally and nationally-significant aquatic resources in the Upper Tar River. One of our office's overarching goals is to recover populations of federally listed species (including the federally endangered dwarf wedgemussel (*Alasmodonta heterodon*) and harperella (*Ptilimnium nodosum*)) and conserve at-risk species such that their listing is unnecessary (USFWS 2012). The Upper Tar River has been explicitly identified as essential to the survival and recovery of both the dwarf wedgemussel and harperella (USFWS 1990, 1993). In addition, the NC Natural Heritage Program (NCNHP) characterizes

the Upper Tar River as having "Outstanding" significance for aquatic biodiversity, and it is in the top 3% of the most highly significant natural heritage sites in NC. In fact, the Upper Tar River is one of the best locations in NC for the dwarf wedgemussel, Atlantic pigtoe (*Fusconaia masoni*), and Chameleon lampmussel (*Lampsilis* sp.); and it supports 18 species identified as imperiled by NCNHP (NCNHP 2013). Of these species, three (Carolina madtom (*Noturus furiosus*), Neuse River waterdog (*Necturus lewisi*), and the NC spiny crayfish (*Orconectes carolinensis*)) are endemic to only the Neuse and Tar-Pamlico drainages and occur nowhere else on the planet.

Page 50 of the EA states: "Creedmoor and the consulting engineers and biologists are presently coordinating with federal and state wildlife agencies and water quality agencies to develop effective design and operational strategies to minimize impacts to these species." And pages 57-58 claim: "The WWTP design team is coordinating with federal and state wildlife agencies and water quality agencies to ensure appropriate effluent limits, effective treatment design, and an appropriate effluent and instream monitoring program to ensure protection of the river's designated 'best uses' including propagation of aquatic life and conservation of protected species." While the Service has submitted comments on the BA for this project under separate cover (USFWS 2013), our concerns related to listed species have not yet been addressed, and we do not feel that there has been adequate coordination with the resource agencies. In order to provide a complete review of the potential impacts of the proposed project, the "design and operational strategies that will minimize impacts to species" (as mentioned above) must be detailed in the EA. In addition to this lack of information, the Service has identified many issues and inconsistencies that also need to be addressed in the EA and PER.

Endangered Species Issues

While USDA-RD indicated that the EA and PER were supporting documentation to the BA, the Service did not receive the EA in adequate time to use it as such (in fact, we never received a copy of the PER, but were able to locate it on the City's website). Thus, the Service has provided the majority of our listed species concerns in separate comments on the BA to USDA-RD, dated 24 January 2013.

Section 3.5.7 (p.57) of the EA makes it seem like the selected discharge location at Cannady Mill Road was acceptable because the listed species were not known from this location. However, there was no "consultation" with resource agencies (as was done through the scoping process for the previous Hwy 15 location) to verify this. A current query of existing databases (not information from 2004, as presented in the EA) as well as informal communication with resource agency staff would have indicated that there was reason for possible concern regarding presence of rare species, and a re-scoping for the new location could have indicated early on the magnitude of concerns raised by the Service and others.

Both the EA and PER attempt to minimize the importance of the federally listed species that may be affected by the proposed project. "The Tar River...was found to support small populations of two federally endangered species that were not previously reported from this segment" (EA-

p.50). Despite this, the preferred location was selected because it “avoids the major known population areas of dwarf wedgemussel and harperella” (EA-p.2). In fact, the proposed discharge will be directly in the middle of a known metapopulation of dwarf wedgemussel. This metapopulation is part of a greater population in the upper Tar River headwaters (including the mainstem and tributaries upstream of the confluence with Tabbs Creek). The EA incorrectly states that there are “no records [of harperella] in the mainstem of the Tar River downstream of Fishing Creek” (EA-p.48). In fact, surveys for this project located a population just downstream of the proposed discharge location, and this metapopulation is part of the only natural (and best) population of harperella in NC. The Service does not agree with the claim that the rise in flows due to the discharge “will have negligible impact on the river’s hydrograph and is unlikely to adversely affect the Harperella plants” (EA-p.55). The recovery plan for the species states that it is extremely sensitive to fluctuations in water levels (USFWS 1990), and it has not been adequately demonstrated that the fluctuations caused by the discharge would in fact be negligible.

The Service feels that the cost analysis presented in Section 6.1 of the PER is inadequate. In our comments on the BA, we detailed our concerns about the design and operation of the plant as they relate to impacts to listed species, and we also detailed the necessary considerations to help mitigate those impacts (e.g., treatment levels for several of the constituents, contingency planning, watershed protection, etc.). Those considerations have not been factored into the analysis, and therefore conclusions about the true cost of the proposed project are inaccurate. This is important because it affects the cost component of alternatives analyses and there are alternatives with less impact to listed species.

Significance of Natural Resources in Upper Tar River watershed

The significance of the rare species and their habitat in the Upper Tar River is under-emphasized in both the EA and PER. In fact, the PER claims that “all of the natural areas and natural communities are located outside of the project area” (PER-p.6). There is no indication of the Upper Tar River Significant Natural Heritage Area (SNHA) or the Wilton Slopes SNHA in either the EA or PER, and neither the Upper Tar River SNHA nor the rare species locations are provided in Exhibit 5 or any other map/exhibit. As mentioned previously, the Upper Tar River is one of the most highly significant sites in NC for aquatic biodiversity (NCNHP 2013), and omitting it from the discussion leads to incomplete impact assessment and inaccurate conclusions about impacts to the aquatic system. This inaccuracy may be a result of using old NCNHP data (references in the EA/PER indicate data were from 2004). The Service believes that a more recent review of data, as well as more detailed project area maps, would allow for a better review of the overall impacts to rare species and habitats.

Apparent inconsistencies between Creedmoor and Southern Granville Water and Sewer Authority (SGWASA)

There are several discrepancies that are presented in the EA and PER that need to be resolved. These include: 1) how SGWASA will meet Stage 1 and Stage 2 of the Falls Lake nutrient rules,

and whether they will have the capacity to continue to treat Creedmoor's wastewater, 2) what are the limits of technology for nutrient reductions, and 3) whether or not SGWASA has the capacity and willingness to meet Creedmoor's future sewer needs.

Both the EA and PER claim that in order for SGWASA to comply with Stage 1 nutrient limits by 2016 and Stage 2 limits by 2036, "SGWASA would [only] be able to operate its wastewater treatment system at significantly lower average daily flows...than the currently permitted flow" (EA-p.1; PER-p.1). We would offer that reducing flow is not the only way to reach these limits, and that additional treatment options (e.g., tertiary treatment via membrane filtration, reverse osmosis, activated carbon adsorption, wetlands, etc.) do exist. Regardless of tertiary treatment options, SGWASA has presented information (in their EA comment letter, 17 January 2013) that they currently maintain levels that already comply with some of the nutrient limits, and it is currently undergoing an upgrade in the existing system to further reduce nutrients in the existing discharge. Furthermore, on pages 2-3 and in the attachments to their comments, SGWASA presents the argument that they can continue to treat Creedmoor's wastewater, despite Creedmoor's assertions otherwise (EA-p.14).

The limits of technology presented in the EA and PER are 3.0 mg/l TN and 0.2 mg/l TP. However, SGWASA has indicated (in their comments on the EA, 17 January 2013) that those limits are "no longer the lower sustainable limits for conventional treatment system[s]. The new limits that are sustainable are 2.0 mg/l TN and 0.1 mg/l TP." Apparently these levels of treatment have been reached at existing WWTPs in NC.

The PER states: "Considering the intent of the Optimization Plan and Facilities Analysis and Reuse Evaluation to optimize plant performance in terms of reduction in nutrient discharge levels in effluent and reduction in quantity of effluent discharge by implementing all viable levels of effluent reuse, SGWASA will not be able to entertain acceptance of any more wastewater flow from the City of Creedmoor and the City will be required to evaluate alternative options for its long term wastewater treatment and disposal need" (PER-p.43). Further conclusions of SGWASA's inability to meet Creedmoor's future needs are presented in the EA (pp.6, 8, 12 and 14). In their comments on the EA (17 January 2013), SGWASA claims that they "can serve all the citizens of southern Granville County for at least the next 20 years with the proposed Wastewater Treatment Plant Improvements that have already been approved for funding and construction."

These apparent inconsistencies must be resolved. The result of this clarification could ultimately help solve Creedmoor's wastewater needs, and thus possibly alleviate the need for the proposed project. At a minimum, resolution of the discrepancies is needed for an accurate and transparent alternatives analysis.

Water Quality Concerns

The Surface Water Quality section of the PER (p.66) claims that “the proposed project...will have minimum direct impacts on the Tar River water quality” yet the Tar River (including the river segment from Fishing Creek to the Granville/Franklin County line) is classified as “Nutrient Sensitive Waters” (NSW) (EA-p.59). The EA notes that “biologically or chemically impaired waters (303(d) listed waters) identified... include... upper Fishing Creek near Oxford. Problems noted in these stream segments include low biological diversity (benthos or fish), low dissolved oxygen, high fecal coliform bacteria, high turbidity, and elevated copper and zinc levels” (EA-p.58). Fishing Creek joins the Tar River upstream of the proposed discharge location, therefore there may be existing water quality issues that need to be addressed before another wastewater discharge is added to the system. And, despite its “benign” appearance, the “clear, odor-free, non-foaming effluent, disinfected with UV light” may still contain chemicals at concentrations that are harmful to aquatic species. The description of the BNR type wastewater treatment plan in the PER (pp.60-63) should include explicit details on how effluent constituents of concern to freshwater mussels (e.g., ammonia, copper and other metals, or organic compounds from pharmaceuticals and household products) would be treated/processed.

The Service believes that adding 56% (and up to 100% at times) effluent to the system may directly impact surface water quality in the Tar River at Cannady Mill Road. The EA correctly notes that “the WWTP effluent limits assigned by DWQ are calculated to meet NC water quality standards and protect most forms of aquatic life. Because this river segment supports endangered species, the speculative limits issued in 2010 may need to be adjusted if these species are found to require more stringent limits to ensure adequate protection” (EA-p.56). Note that our comments on the BA (USFWS 2013, pp.4-6) indicate what those more stringent limits should consider. Also note that NCDWQ has not yet issued speculative limits for the proposed discharge location. While the PER (p.54) “anticipate[s]...better assimilative capacity and subsequently... lesser stringent effluent limits,” the Service cautions that assumptions of greater assimilative capacity (EA-p.20) may be erroneous. The proposed location is downstream of the confluence of Fishing Creek which already receives permitted effluent discharge from Oxford’s 3.5 MGD WWTP. Further, mixing and assimilation of waste effluent are not possible during extremely low flow events. The EA indicates that 27-56% of the instream flow will be comprised of effluent when the proposed WWTP is operating at full capacity however, there is no discussion of the concentration of effluent during extreme low flow events (i.e., those flow periods below the 1.4cfs 7Q10 estimate). As mentioned by the Pamlico-Tar River Foundation (comment letter on BA, 25 January 2013), calculated effluent concentrations would be greater than 56% for 19% of the time, given calculations derived from the 5-year span from 2007-2012. This poses a considerable direct threat to sedentary species (i.e., species that cannot readily move out of the way), like freshwater mussels.

In addition, the Service would like to point out that this area of the Tar River basin has been considered under efforts by NCDWQ to develop sites-specific management strategies under the provisions of 15A NCAC 2B .0225 or 15A NCAC 2B .0227. The Service encourages dialogue

with NCDWQ as they consider their obligations under 15A NCAC 2B .0110 for procedures to assign water quality standards with considerations for federally-listed threatened or endangered aquatic species, and how this project fits in with their planning and regulatory efforts in the Tar River basin.

Based on the aforementioned water quality issues, it appears that nearly all of the warnings identified in Step 1 – “Determine if the proposed discharge will be allowed” of NCDWQ’s Engineering Alternatives Analysis (EAA) Guidance Document (NCDWQ 2005a) would indicate potential restrictions to a wastewater discharge to surface waters at the proposed Cannady Mill Road crossing.

Tar-Pamlico Basin Association (TPBA) Membership

The ES and PER should contain additional information about how Creedmoor became a member of the TPBA, and how the logistics of acquiring “unused” nutrient allocations were figured out. None of the documentation about the transfer of nutrient allocation is provided in Appendix III of the PER. The PER (p.57) indicates these should be available, but they are not included in the document. According to Phase III of the Tar-Pamlico Nutrient Sensitive Waters Implementation Strategy (NCDWQ 2005b, p.7), under Table 1, Section III- Association Members there is an indication that there was a permanent removal of the sole industrial discharge from National Spinning. It is not clear in the Phase III document that this discharge would be made available for future allocation.

Interbasin Transfer (IBT) Issues

The EA and PER should contain additional information provided on all potential interbasin transfers that the City plans to engage in. The PER indicates that “initially the water flow to be transferred [from the Neuse basin to the Tar basin] is less than 2 MGD and therefore IBT is not required” (PER-p.71), however the PER also indicates that “construction of the treatment units should be arranged in logical stages with flexibility so that future upgrading and/or expansion can be implemented at lower cost” (PER-p.59). While it is true that the initial request for 1.15 MGD is under the 2 MGD threshold for an IBT certificate, it appears that future expansions of the wastewater infrastructure are planned. Furthermore, it appears that Creedmoor plans to obtain up to 2 MGD of water from the Roanoke basin via Oxford (NCDWR 2009). This additional need for water will likely result in an increased need for more wastewater discharge capacity.

It is not clear whether the NC Division of Water Resources (NCDWR) would allow an interbasin transfer into a Nutrient Sensitive Watershed. The PER states that “the project area lies in the Nutrient Sensitive Falls Reservoir watershed and discharging of effluent into the Tar River will have beneficial impacts on the water quality of the Falls Reservoir, a Nutrient Sensitive Water in Neuse River Basin” (PER-p.66). What the PER fails to discuss is that the Tar River is also a Nutrient Sensitive Water, and this project would result in simply moving nutrients from one NSW to another. Despite receiving nutrient allocation through the TBPA, details of this

allocation and subsequent nutrient offset are not clear (see comments above). The Service encourages discussion with NCDWR, and we would like to see the details and impacts resulting from these interbasin transfers addressed in the EA.

Secondary and Cumulative Impacts

Secondary and cumulative impacts (SCI) must be addressed during the environmental review process. Both the EA and PER refer to “some” minor indirect effects and “some” cumulative effects (mentioned in several locations throughout the documents), however, very little detail is provided on these potential SCI. Furthermore, the EA merely provides inaccessible links (i.e., inactive hyperlinks to documents that no longer exist on the website) to Creedmoor’s Land Use and Comprehensive Master Plan and the Comprehensive Development Ordinance and Zoning Map (EA-p.28), and the document does not detail how these plans and ordinances help address SCI (Note: scoping comments provided by resource agencies (EA Appendix 2, #2) such as NCDENR, NCWRC, and NCNHP could provide direction for what aspects of SCI to address in an EA).

The Service would like to see a thorough analysis of impacts related to anticipated growth (and proposed mitigation for impacts of growth with the potential to harm aquatic species) as well as impacts to others (including municipalities like Raleigh and Louisburg, and citizens in southern Granville County). “Creedmoor’s proposed wastewater service area is mainly in the Falls Lake (Neuse River) basin, and thus indirect and cumulative effects of urban growth supported by this project will be almost exclusively in that basin” (EA-p.30). The EA and PER should contain details about what these effects will be. In addition, detail should be provided about the need for future expanded wastewater capacity and potential tie-ins from other areas in southern Granville County. Furthermore, the EA and PER should contain a discussion on how the IBT from the Roanoke basin will fit in to the anticipated growth and future increased wastewater treatment needs of the City.

In addition to a thorough analysis of SCI, the EA should include a detailed discussion about mitigation for such impacts. For example, a description of what the City’s plans are for future conservation of water resources should be included. The EA briefly refers to riparian buffer protection and good stormwater management in their comprehensive development ordinance (EA-p.61) – the details as they relate to this project should be in the EA and PER. Additional details should be included on how the “City’s close planning coordination with neighboring local governments and land conservancies [has helped] protect biologically important lands” (EA-p.58). Furthermore, are there any efforts to protect these areas in the Tar River basin that pertain to the proposed project and alternatives?

In summary, the SCI analysis in the EA is insufficient. The Service guides the City to the NC Department of Environment and Natural Resources’ “Guidance for Preparing SEPA Documents and Addressing Secondary and Cumulative Impacts” (NCDENR 2007). The City may also be interested in developing a Secondary and Cumulative Impacts Master Mitigation Plan

(SCIMPP) as many other local governments in the Triangle area have undertaken. A SCIMPP is an environmental planning document that identifies SCI on a holistic level across a local government's jurisdiction and planning horizon.

Alternatives

The purpose of the proposed project (to provide adequate wastewater collection, treatment and disposal facilities to support the 20-year projected residential, commercial, institutional and industrial growth in the Creedmoor wastewater service area) can be met in several ways. While several alternatives are reviewed in the EA and PER, the Service believes that some do not have adequate evaluations for the "nonviable" conclusion to be reached, and there are additional alternatives that should be considered.

First and foremost, the Service does not believe that Alternative #1 (Optimum operation of the existing facilities) and Alternative #5 (discharge of Creedmoor's 1.15 MGD wastewater to the existing SGWASA wastewater system) have been adequately assessed. It is not clear why the current upgrades at SGWASA are not included in the discussion in Section 5.1 of the PER, and why this upgrade still makes Alternative #1 "nonviable," at least in the short term. Furthermore, additional information about how other dischargers in the Falls Lake watershed are meeting nutrient limitations should be provided. For example, in the "Falls Lake Point Sources – Baseline & Target Loads" spreadsheet in Appendix III of the PER, it appears that Durham has double the volume of SGWASA, but half as much nutrient inputs.

"Referring to the discussion given in Sections 4.2 and 5.5 of the Preliminary Engineering Report for SGWASA's compliance needs for the Stage I and Stage II nutrient reduction requirements and SGWASA providing upgrade for its wastewater treatment system to include most commonly used BNR technologies in municipal wastewater treatment for achieving nutrient reduction at reasonable cost, SGWASA would be able to operate its wastewater treatment system at significantly lower average daily flows...than the current permitted flow of 5.5 MGD, unless SGWASA considers upgrading its wastewater treatment facility to include tertiary treatment such as membrane filtration and reverse osmosis (MF-RO) processes with feasible options for disposal of reject wastewater from reverse osmosis and/or significant reuse of reclaimed wastewater" (EA-p.5).

Building off the above statement, it is not clear why Creedmoor could not craft and evaluate an alternative to contribute (via applying for a different USDA-RD grant/loan to improve existing wastewater infrastructure) to a project that would improve the overall treatment at the SGWASA plant. The SGWASA plant is currently undergoing an upgrade, and it seems like exploring tertiary treatment options would be beneficial. Tertiary treatment technologies can be extensions of conventional secondary biological treatment to further stabilize oxygen-demanding substances in the wastewater, or to remove nitrogen and phosphorus. Tertiary treatment may also involve physical-chemical separation techniques such as carbon adsorption, flocculation/precipitation, membranes for advanced filtration, ion exchange, dechlorination and reverse osmosis (Siemens

2013). Tertiary treatment could also involve constructed wetlands to allow natural processing of the wastewater before it enters surface waters. It is not clear whether or not these options are more or less expensive than the currently proposed \$27M project.

To further address Alternative #5, the Service encourages continued discussions with the City of Raleigh. In their email to Creedmoor (EA-p.76), Raleigh indicated: "It is likely that we would recommend opposition to any project in the Falls Lake basin that would remove flow from the basin. We would be, however, open to any innovative suggestions that would avoid this impact." We believe that the City of Creedmoor's dismissal of this option is premature, as "innovative suggestions" have not been discussed.

An additional alternative that has not been considered is connecting to the Franklin County WWTP in Franklinton, NC. While it could be argued that there are also dwarf wedgemussel issues to be addressed with this option, the Service believes the impacts would be significantly less at this location. The Service encourages discussion with Franklin County, as well as an analysis of the cost of transporting wastewater to that location.

Yet another alternative is to move the proposed discharge location further downstream on the Tar River. The Service suggests aquatic surveys in the stretch of river below the Tabbs Creek confluence to assess whether there is a better location than the currently proposed location. We also suggest consideration of Louisburg's input into this potential alternative.

Alternative #7 (discharge of Creedmoor's 550,000 gpd wastewater to the SGWASA wastewater system and remaining 600,000 gpd treated wastewater by land application) needs additional consideration. While the costs associated with this appear higher than the preferred alternative, the Service believes that once additional cost considerations are calculated (see comments above), Alternative #7 may become more cost effective in relative terms. We remind the City of the Phase III Tar-Pamlico NSW Implementation Strategy: in section X - "Violations of Terms of this Agreement" it states "All new dischargers shall evaluate non-discharge alternatives as their primary option and implement a non-discharge system unless they can demonstrate that non-discharge is technically or economically infeasible" (p. 21, NCDWQ 2005). We do not believe that this standard has been met. We would also highlight that the mitigation for Endangered Species (Section 5.5.2, PER-p.78) seems sufficient for Alternative #7.

Alternative #9 (discharge of Creedmoor's 1.15 MGD wastewater to the City of Oxford wastewater system) needs additional consideration. Oxford did indicate willingness to accept the additional 600,000 gpd needed by Creedmoor, but there was no response on the full 1.15 MGD request. "No response" does not seem like a sufficient explanation for why this alternative was deemed nonviable. We encourage additional discussions with Oxford, as well as cost calculations for the option of keeping 550,000 gpd at SGWASA and 600,000 gpd at Oxford.

Table 2.4 "Matrix Rating System for Alternatives" (EA-p.24) appears entirely arbitrary, and the Service recommends removing it from the EA, or providing data to support the "Ratings" assigned. We would especially like further clarification on the "Permitting Time" and the "Environmental Impacts", as we believe the "Cost and Other Factors" for Alternative No. 1 are much lower (and therefore "less desirable") than indicated.

Finally, the Service does not believe that the "Advantages/Disadvantages" discussions after each alternative in the PER are complete. For example, an advantage indicated in Section 5.5 of the PER is that the new discharge to the Tar River at Cannady Mill Rd will be a reduction in nutrient discharge to the Falls Reservoir, but there is no mention of the clear disadvantage that the new discharge will increase nutrients being discharged into the Tar River. Another example is that the disadvantages itemized for land application alternatives presented in PER (p.83) are not correct; in reality, only #1 (purchase of land) is really an issue. The other three mentioned disadvantages do not appear to be supported in the EA. And finally, the advantages of the partial land application alternative should mention that the endangered species issues are significantly less for this alternative than for the preferred alternative.

Mitigation

Section 4.0 of the EA summarizes the mitigation for threatened and endangered species for the proposed discharge to the Tar River, and while the PER provides a different summary of mitigation for the same proposed project, the Service argues that neither the summary in the EA nor the PER is adequate for offsetting the anticipated and potential impacts to listed species. We direct you to our comments made on the BA (USFWS 2013) for complete details of our concerns.

Technical Issues within the EA and PER

To improve future reviews of the environmental documents, the Service suggests correcting the following technical issues:

- Provide OCR (Optical Character Recognition) electronic versions (with active hyperlinks) of the documents to allow reviewers to "search" and "find," copy text, and readily access hyperlinked information.
- Correct the common and scientific spelling for the dwarf wedgemussel (i.e., *Alasmidonta heterodon*).
- Make sure that information referenced in the Appendices is actually included in the appendices. It appears that the information got confused between the Appendices for the EA and PER, as Creedmoor's request for additional allocation is not in the PER (but is referenced in the PER), but it is actually in the Appendices for the EA.
- Delete duplicated information in the Appendices (e.g., there are several letters that have been repeated three and four times in the Appendices).

According to NC General Statutes (15A NCAC 18A .1900), the practicable wastewater treatment and disposal alternative with the least adverse impact on the environment is required to be implemented. It is clear from the comments discussed above, as well as those provided to USDA-RD on the BA (USFWS 2013), the Service believes that the proposed project is not the alternative with the least impact on the environment, and therefore we do not support the conclusion that the project provides the most "environmentally sound solution" to Creedmoor's future wastewater needs. It is also worth noting that a Nationwide Permit (EA-p.37) may not be applicable to this situation, as those permits are for activities that have minimal impacts to the aquatic environment. We encourage discussions with the US Army Corps of Engineers to see if an individual permit would be needed if the proposed project is pursued.

The Service appreciates the opportunity to comment on the EA and PER. In summary, the Upper Tar River ecosystem is an extremely significant aquatic resource, and thus impacts of the proposed project must be carefully evaluated. The protection of the Upper Tar River and the rare species it contains is one of our office's highest priorities. There are deficiencies and inconsistencies in the EA and PER. For these reasons, we believe it is extremely important to thoroughly explore alternatives, more accurately assess the costs and benefits of the alternatives, fully value the quality of the natural environment in the project area, and continue to involve the resource agencies and the public in the process. The Service has met with representatives of the City regarding this project and others to share information and explore means of achieving a shared vision of sound wastewater treatment and for sustaining and conserving the aquatic resources of the Upper Tar River basin for the continuing benefit of the American people. Discussions to date have been constructive and we look forward to continued dialogue throughout the planning process.

If you have any questions regarding our comments on this project, please contact Sarah McRae of this office at 919-856-4520x16 or sarah_mcr@fws.gov. Thank you for your cooperation in the effort to protect endangered and threatened species.

Sincerely,



Pete Benjamin
Field Supervisor

eC:

Brent Miller, USDA
Shari Bryant, NCWRC
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David Emmerling, PTRF

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References:

NC Department of Environment and Natural Resources. 2007. Guidance for Preparing SEPA Documents and Addressing Secondary and Cumulative Impacts. (<http://portal.ncdenr.org/web/guest/rules-policies-laws-and-regulations>; accessed February 2013)

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-----1993. Dwarf wedgemussel (*Alasmidonta heterodon*) Recovery Plan. Hadley, Massachusetts. 52pp.

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-----24 January 2013. Letter to USDA-RD RE: Biological Assessment for Creedmoor Wastewater Project. 31pp.