

Responsiveness Summary on the draft 2008 303(d) (Category 5) List
Submitted April 1, 2008

Public comments were received from the following entities and individuals: Neuse River Foundation, City of Raleigh, Pamlico-Tar River Foundation, USDA Forest Service, Friends of Rich Fork Creek, Coastal Federation, Friends of the Rocky River, City of Charlotte, Town of Benson, Mecklenburg County, Town of Apex, Weyerhaeuser Co., The Haw River Assembly, Watershed Association of the Tuckasegee River, Wendy Patoprsty and Ken Badgett. These comments with NC Division of Water Quality responses are provided in Section 1.

Comments received from NC Department of Environment and Natural Resources agencies other than the Division of Water Quality are provided in Section 2. Changes due to comments made during the public comment period by Division of Water Quality staff are provided in Section 3.

Section 1.

One commenter provided comments and information for Rich Fork Creek, from source to Payne Creek, 8.5 miles, Ecological/biological Integrity Benthos: first listed as impaired in 1998 and delisted in 2008. Who collected the new data? Are you totally confident of its veracity? Is the fecal coliform gone? Rich Fork Creek from Payne Creek to Abbots Creek, 12.1 miles, Low Dissolved Oxygen, first listed in 2004 and delisted in 2008. This delisting appears to be based on the facts. Are there endocrine-disrupting agents, estrogenic agents as well as endogenous hormones, phthalates, biphenyl A, organophosphate pesticides, other phenols, benzene or toluene in the drought concentrations of effluent? Which of these can avoid destruction by the ultraviolet lights? I see that testing for PCBs and dioxins is now available. Are they or flame retardants being evaluated in the Westside effluent? Additional information was provided.

Response: Rich Fork Creek (AU#12-119-7a) -From the source to Payne Creek. A benthic sample collected in 2006 by DWQ was rated Good-Fair indicating improvement in the benthic community from 1987. A TMDL was completed in 2004 for fecal coliform bacteria and the data collected between 2002 and 2006 by DWQ did not indicate a standards violation (monthly geometric mean 120). AU#12-119-7b from Payne Creek to Abbots Creek: Low dissolved oxygen has been a past problem and while there were exceedances during the assessment period (7.7% below 4.0 mg/l) there were not enough to constitute a violation. Based on recent research, it is likely that endocrine-disrupting compounds, estrogenic compounds, and endogenous hormones are in most any domestic wastewater. The Division's Aquatic Toxicology Unit (and other researchers nationally) is currently reviewing the literature associated with the ecological effects of these compounds at the levels that they are routinely found in wastewater effluents as well as investigating practical analytical techniques. The organic compounds mentioned are evaluated using EPA Methods 624 and 625. Those methods are required by their NPDES permit as part of the facility's annual pollutant analysis and are submitted annually and with each permit renewal. Toluene, chloroform, and dichlorobenzene were all detected in the most recent analysis at 1 to 3

parts per billion, levels well below those expected to adversely affect aquatic life. Although all of these compounds are degraded by ultra-violet (UV) lights, keep in mind that the UV unit process installed at the facility is not intended for this purpose. This unit is designed to eliminate bacteria, particularly human pathogens. Organic compounds are typically removed in a waste treatment plant's biological unit process, in this case, aeration basins. The additional information provided by the commenter has been forwarded to DWQ Basinwide Planning Unit to assist in source identification and future implementation of restoration and recovery plans.

One commenter asked about Little River near the proposed Little River Reservoir site, which is “impaired for aquatic life” due to low dissolved oxygen (DO) levels. Consultants have identified extensive beaver impoundments within the normal pool of the proposed reservoir on Little River. The commenter believes that the low DO concentrations that have been observed in the Little River are the result of low streamflows and/or stagnant water resulting from the activity of beavers. They further believe that the low DOs are associated with decaying of natural vegetation in combination with the low streamflows, which result in limited reaeration of the stream. They requested that the Little River not be included in the Final 2008 303(d) list of Impaired Waterbodies. Additional information was provided by this commenter to support the request.

Response: 27-57-(1)b – Thank you for the information. We will investigate this segment to determine its suitability for delisting based on natural conditions.

One commenter inquired about Scotts Creek, Savannah Creek, and a section of the Lower Tuckasegee River, listed as impaired by fecal coliform bacteria. Are you including the outfall from the Bryson City Treatment Plant? Why should it not extend upstream?

Response: The impairment boundaries were based on stream segment descriptions defined by our stream classification system. The results from each sample site were applied to the stream segment in which the site was located. The listing identifies where samples were taken, but may not define the extent of impairment. The sample site causing the impairment is located in the Lemons to Peachtree segment. The Cochran to Lemons reach did not contain a sample site. The DWQ ambient station in the segment upstream of Cochran did not show fecal coliform impairment. This finding was based on 56 monthly samples that had a geometric mean of 24.

One comment related to Town Lake (Pittsboro Lake): is it on this list? And there was no mention of the TMDL for Robeson Creek Cove of Jordan Lake (phosphorus impairment). The commenter would like to meet with TMDL staff to clarify these issues. They are spending a lot of BMP dollars to address the phosphorus problem.

Response: 16-38-(3)b -Pittsboro Lake is currently Not Rated for aquatic weeds. There is no current assessment method for aquatic weeds impairment and the lake is currently in the process of being restored/repared to stream/lake/wetland. During the next assessment period DWQ will decide on the appropriate data to use in assessing water quality in this segment of Robeson Creek. 16-(37.5)b - The Robeson Creek Arm of Jordan was added to Category 5 (303d) for Turbidity,, High pH, and Mercury. There is also an impairment listing in Category 4a for chlorophyll a. The TMDL has been approved so this AU/parameter combination was recategorized into 4a. Thank

you for your good work in this watershed. Please contact Kathy Stecker at 919-733-5083 x505 to set up a meeting with TMDL staff.

One commenter questioned DWQ's intention to move more than 36,000 acres of SA waters from its highest priority requiring clean up to a lesser category usually reserved for waters contaminated by pollutants from non human-related activities. Under EPA rules, those waters don't require corrective actions. The Division is clearly implying that it erred when it included these waters in Category 5. What was the error? What were the EPA regulations that the division misinterpreted? The commenter suggested that the Division include a clear, detailed justification for the de-listings and reopen the comment period. The Division needs to provide much more information than it has so far in its publicly available documents to justify why 36,000 acres of shellfish waters, some classified as Outstanding Resources Waters, won't be considered for TMDLs. For the division to imply now in its draft 303(d) list that these bacteria aren't induced by man's activities is illogical. If we're causing the bacteria to enter the water and impair them, then those waters don't qualify for listing in Category 4c. The commenter believes that the Division is under a federal mandate to clean up the worst waters by 2012. They would prefer that the Division use the 303(d) list and the accompanying 305(b) report to clearly and accurately assess the situation for the people of North Carolina. Such an assessment by the state's top water agency could begin to build the coalitions that will be needed to lobby legislators for the money to clean up our dirtiest waters. The commenter also provided information on recent research in coastal areas.

Response: The analysis of data provided by the NC DEH Shellfish Sanitation section for some of the impaired segments (or assessment units (AUs)) does not indicate that there is an exceedance of the North Carolina Division of Water Quality (DWQ) Surface Water Standard for shellfish harvesting areas in Class SA waters. This water quality standard is not used to classify growing areas as prohibited, conditionally approved, or approved, but it is used to assess for 303(d) listing. NC DEH operates its monitoring program under guidelines outlined in the National Shellfish Sanitation Program's (NSSP's) Guide for the Control of Molluscan Shellfish. When a condition or event occurs that could elevate fecal coliform levels, DEH closes those waters to protect public health. The purpose of the monitoring performed by the DEH Shellfish Sanitation program is to protect public health and therefore, to determine when waters are again safe for shellfishing. For this reason, evaluation of the DEH Shellfish Sanitation water quality data will not always indicate an exceedance of the standard, and in these cases, development of TMDLs will not be appropriate. For DWQ's purposes, these waterbodies, or AUs, will still be considered impaired based on DEH's closure policy, and they will be moved from Category 5 to Category 4cs in the DWQ's Integrated Report to the US EPA. If waterbodies in Category 4cs are later found to have water quality standards violations based on monitoring data, these waterbodies will be moved to Category 5, requiring development of a TMDL. In the meantime, any Category 4cs waters adjacent to Category 5 waters will be included in any TMDLs developed. Category 4cs waters will be prioritized for future sampling by DWQ, DEH, and/or DMF. Please note that Category 4cs is not "reserved for waters contaminated by pollutants from non human-related activities," but indicates an impairment, a failure to meet water quality standards, that is not based on water quality data. Waters in Category 5 are impaired based on violations of water quality standards supported by data. The commenter obtained additional information and clarification directly from

Cam McNutt during the comment period. Please note that DWQ is not “under a federal mandate to clean up the worst waters by 2012.” Thank you for the information you provided. We have forwarded it to DWQ’s Basinwide Planning Unit to assist in source identification and future implementation of restoration and recovery plans. Thank you for your support of efforts to clean up the State’s waters.

One commenter remarked that it looks like the data is from 2003 for New River and 2004 for Cove and Beaver Dam Creeks in the Watauga. How significant is this? What message should people get from this report? The data are old.

Response: Data from 2003/04 are considered current. Every five years DWQ conducts biological sampling. The New River basin was sampled in 2003, and will be resampled in summer 2008. The Watauga Basin will be sampled again in summer 2009. The message from this report is that these listed waters are not meeting water quality standards. Under the Federal Clean Water Act, DWQ is required to report these waters to the USEPA every 2 years.

One comment asked where waters with approved TMDLs ended up on the list, and more specifically where North Buffalo Creek ended up.

Response: The 2008 list includes category 5 waters only (303d list). Category 4a waters are considered impaired but have an approved TMDL. The 2008 de-listed waters only include those that were category 5 in 2006 and are not category 5 in 2008. North Buffalo was de-listed from 5 to 4a in 2006.

One commenter noted that local sample data are collected in Irwin Creek (AU#11-137-1) quarterly at three sites, and include samples taken at the State’s compliance point. A review of 31 sample events between 2004 and 2007 revealed no lead exceedances, and only one sample above minimum detection limits. A query of EPA’s STORET database was conducted to determine the dates and times of samples collected by the State exceeding water quality standards. An analysis of that data reveals that every ‘hit’ was collected during high-flow, or storm water, conditions with flows above 325 cfs. In contrast, all locally collected data was performed with flow rates below 100 cfs. Since no other stream in the area demonstrates lead problems under ambient conditions, we feel that the impairment in Irwin may be attributable to a point source. To determine possible sources of lead pollution to Irwin Creek, local staff identified a now closed facility in the catchment formerly with an NPDES permit (NCG030089) requiring lead sampling. Willard Industries was located at 101 Foster Av. in Charlotte, above the State’s sampling location. A review of the facility’s self-monitoring data during the 1990’s reveals effluent concentrations well in excess of permitted benchmark concentrations on multiple occasions. Efforts were made at that time to address the violations. Were the source of lead due to discharges from this facility, it is unlikely that a non-point source based TMDL would properly address the impairment. Perhaps a more detailed study should be undertaken to determine whether the pollutant can be tracked to a particular source. The commenter would like to be actively engaged in the TMDL development process, and would like to look at partnering scenarios related to completing TMDLs in their areas.

Response: Thank you for the analysis and recommendations. The Irwin Creek data were collected at station C8896500 in calendar years 2002-2006. Three of 20 (15%) samples collected here were above the Pb standard of 25. Greater than 10% results in a standards violation and a category 5 (303d) Impairment. This was the only lead

impairment in NC for the 2008 draft assessment. We welcome your ideas and suggestions, and look forward to working with you to improve water quality in your area.

One commenter provided information and data analyses for 11-(117) – Lake Wylie from Mountain Island Dam to I-85 Bridge at Belmont – Low pH. All of the violations were recorded by NCDENR at site NC3900000 (NC27 Bridge). No pH measurements collected by the commenter were below the state standard for pH. The pH problem in this section of Lake Wylie may be local to the area upstream of the NC27 Bridge. The commenter reviewed other pH data collected between 1995 and 2004. There were a handful of pH violations. This information seemed to indicate a localized problem, potentially a point source discharge issue, between NC27 and the dam on the main stem of Lake Wylie. The commenter is working with the staff at NCDENR’s Mooresville Regional Office to complete a review of the Discharge Monitoring Reports from all permitted dischargers in the area to determine possible sources. They will also obtain instantaneous pH values from the Mountain Island Hydro to determine the possibility of it as a source. In addition to these actions, the commenter would like to partner with NCDENR to develop a monitoring plan for pH in this section of Lake Wylie. The commenter is able to provide staff hours for plan preparation and sample collection.

Response: 11-(117)- The data were collected at station C3900000 Catawba River at NC27 near Thrift during calendar years 2002-2006. Seven of 51 (13.7%) samples collected here were below the pH standard of 6. Greater than 10% results in a standards violation and a Category 5 (303d) impairment. There were 4 others measured at pH of 6. There were five other Catawba basin waters with low pH impairments in 2008. We welcome your ideas and suggestions, and look forward to working with you to improve water quality in your area.

One commenter provided information on 13-17-17 – Clear Creek from Source to Rocky River – Turbidity. The commenter is installing a continuous monitoring turbidity sensor at Clear Creek and Ferguson Road (SR3181), which is also the location of USGS stream gage number 0212466000. The commenter can provide the information collected by this sensor to NCDENR. Additionally, the commenter would like to partner with NCDENR to better understand the turbidity issue within the Clear Creek Watershed and to participate in the development of a TMDL if it is determined that one is necessary.

Response: 13-17-17 DWQ recommends development of a QAPP so that the data collected can be used for future use assessments and TMDL. We welcome your ideas and suggestions, and look forward to working with you to improve water quality in your area.

One commenter noted that for 11-137-8a and b Archdale Road is misspelled in the 303(d) document as “Arcdale.”

Response: 11-137-8a and b- Made requested changes.

One commenter asked why 13-17-18a - Goose Creek from source to SR 1524 is not listed.

Response: 13-17-18a Goose Creek assessment information is in Category 4a.

One commenter asked what appears to be the cause of the problem on Endicott Creek in Surry County.

Response: Endicott Creek AU# 12-63-5-(3) is impaired based on a 1991 benthos (QB69) sample of Fair. The station is about 0.5 miles below Raven Knob Lake Dam. The impairment is due to proximity of an upstream dam, and our results are atypical due to the influence of the dam on flow. This segment will be recategorized from the 303(d) list to category 4c (impaired but not requiring a TMDL).

One comment reported that in the case of Beaverdam Ck. (Neuse AU=27-101-15), outflow from forested headwaters drains through other land uses. The current biological condition may reflect natural swamp water conditions. The commenter would be glad to work with DWQ as investigations proceed.

Response: AU#27-101-15- Beaverdam Creek is currently impaired based on swamp biocriteria of severe. Thank you for your willingness to assist us.

One commenter noted that the segments of the tidal river portion of the Neuse River and downstream estuarine waters (AU=27-(96) a; AU=27-(96)b1; AU=27-(96)b2) are addressed through the Neuse River Total Nitrogen TMDL (phase I approved in 1999 and phase II in 2001). The low frequency of chlorophyll a values exceeding the water quality criterion of 40 µg/L in segment 27-(96)b1 demonstrates progress on improving water quality in the system through implementation of the TMDL. Further, the 2006 basin assessment report for the Neuse River basin indicates that the next upstream segment of 27-(96)a also meets the water quality standard for chlorophyll a and should be delisted from Category 4a to Category 1. Segment 27-(96)b2 is an example where the chlorophyll a standard has yet to be achieved based on information contained in the 2006 basin assessment report; however, the segment is covered by the existing TMDL. Shouldn't the segment remain on Category 4a on which 27-(96)b was placed in 2002 and 2004 along with other segments covered by the existing TMDL rather than being placed on Category 5 requiring a new TMDL?

Response: AU#27-(96)b2 has been moved to category 4a.

One commenter focused on Hannah Creek (DWQ Assessment Unit No. 27-52-6a). Hannah Creek has been listed since 2004 as impaired due to low dissolved oxygen. In the draft 2008 list, it is now also listed as impaired for ecological/biological integrity – benthos. The commenter believes that the causes of the impairments of Hannah Creek are numerous and complex, and is committed to investigating other potential causes, including non-point source pollution and beavers that might be damming water and creating stagnant, swamp-like conditions. The commenter is being active in taking steps to improve Hannah Creek's water quality. Additional information regarding activities to improve water quality was provided by this commenter.

Response: Thank you for your interest and actions. The additional information provided has been forwarded to DWQ Basinwide Planning Unit to assist in source identification and future implementation of restoration and recovery plans.

One commenter recommended adding the entire Rocky River to the 2008 list and beginning the TMDL-specific studies that may be required to begin the process of cleaning up the Rocky River. As an alternative, the commenter recommended that a complete study be conducted immediately on the Rocky River to develop a watershed

plan. The commenter is committed to working with the Division to conduct the needed studies in a timely manner and develop a meaningful plan to restore the river. The Rocky River has not been adequately studied so it is not listed as impaired. If it is not impaired, funds cannot be readily obtained to study the river and the result is that there is no management plan or TMDLs. The restoration of the Rocky River should not be put off another two years until another 303(d) list is compiled or another generalized basinwide water quality plan is developed. Tributaries to the Rocky River, Loves and Tick Creeks, have been listed for a number of years because of impaired benthos and fish communities. The headwaters above the upper Rocky River reservoir were included because of impaired biological integrity and turbidity. The commenter asked to be notified of actions taken to include the Rocky River in the 303(d) list or in initiating the studies required for management plans. Additional information was provided by this commenter to support the request.

Response: All existing and readily available data were used to assess attainment of water quality standards in this watershed. The additional information provided has been forwarded to DWQ Basinwide Planning Unit to assist in source identification and future implementation of restoration and recovery plans. Thank you for your willingness to assist us.

One commenter noted that Back Creek was not on the list. They have found disturbing results, including fecal coliform. Though their study was done in 2002, the problems causing the contamination have not been eliminated. They recommend that the State do further testing on Back Creek. The commenter provided further information on this creek.

Response: DWQ does not have the data on Back Creek 16-8-(1), (1.5) and (6). Data submitted with a QAPP can be used in the assessment process. You may submit a QAPP and data at any time. The information provided has been forwarded to DWQ Basinwide Planning Unit to assist in source identification and future implementation of restoration and recovery plans.

Two commenters observed that Dry Creek is not listed for impairment due to sediment, and they believe that it should be. In 2005, there was a serious sediment spill into Dry Creek from Chapel Ridge construction. The state Division of Land Quality and Division of Water Quality issued a Notice of Violation to the developers of Chapel Ridge. Two to twelve inches of mud covered the bottom of the creek for at least a year following the sediment spill in 2005. There are still significant areas of the creek that have not recovered. Listing as impaired due to sediment would be accurate.

Response: Dry Creek 16-34-(0.7) is currently in category 5 because of impaired biological integrity. Thank you for the additional information on sediment, a probable source of the impairment. Dry Creek is scheduled to be resampled by DWQ in 2008.

One commenter reported that monitoring done by them and DWQ showed exceedances of the pH standard (high) in 2006 in sections of Jordan Lake. The commenter believes these sections should be listed as impaired for high pH, similar to the already-listed Haw River arm.

Response: 16-41-1-(14) and other AU data do not indicate a high pH standard violation. An AU was assessed as Impaired for aquatic life when greater than 10% of

samples were greater than a pH of 9 (SU) for freshwater. A minimum of 10 samples was needed to rate the water as Impaired.

One commenter noted that atmospheric deposition of mercury into surface waters is a problem across much of North Carolina. They questioned why only some segments of Jordan Lake are listed for mercury.

Response: The Category 5 mercury listing for the Haw River Arm was carried over from past site specific impairments based on fish tissue data collection sites. Since that time a statewide mercury advisory has been issued by DHHS (see <http://www.epi.state.nc.us/epi/fish/> for more information). Therefore all NC waters are considered Impaired for fish consumption use. This is stated in the Listing Methodology. Listing all 12,989 Assessment Units individually would reduce the utility of the list.

One commenter observed that the Trent River, a large tributary of the Neuse River watershed, is not on the list. The Trent River continues to be under constant pressure from the agricultural industry, particularly that of concentrated swine producing facilities.

Response: Trent River 27-101-(1) from source to mouth of Deep Gully was assessed for fish community, benthos community, aquatic life numerical water quality standards, and recreation standards. No criteria were exceeded in these assessments. The overall category for this assessment unit is 2, supporting monitored uses.

Two commenters believe that many of the reasons for delisting (“Draft 2008 Delisted Waters”) are misleading or give no clear indication as to the reason why they were removed. What happened to cause the standards to be met? The commenters asked that there be a formal review and disclosure of any and all documentation resulting in a waterbody being listed or delisted. The documents that have been released for public comment do not provide sufficient information on the reasons for delisting waterways.

Response: Inquiries about specific waterbodies can be directed to the appropriate basin planner (see <http://h2o.enr.state.nc.us/basinwide/contacts2.htm>). The reasons for delisting are worded to be consistent with Federal regulation 40 CFR 130.7(b), which only allows certain specific “good causes” for delisting.

Two commenters asked about changes in the assessment process and information released for public comment. Procedures for 303(d) listings appear to have changed in the 2008 draft. Waters that are still considered impaired due to evidence in water quality data are now considered delisted from the 303(d) list due solely on the fact that a TMDL or other strategy has been developed and approved. This does not mean the waters have improved, only that there is a plan, enforceable or not, to reduce the pollutant of concern.

Response: Starting in 2007 the DWQ assessed all NC waters using the most current 5 years of ambient data, including data from monitoring coalitions, DEH Shellfish Sanitation and RECMON, and DWQ data. The reasoning for this was to assure that Category 5 waters (waters where a TMDL is required to address a standards violation) were represented using the most current data. In the past, assessments were done on the basinwide planning schedule, resulting in some basins’ data being 5-12 years old. It was easy to compare from list to list because the assessments were exactly the same and using the same data as the previous list until that basin was updated. This time lag was unacceptable and DWQ now has the technological and data processing

capabilities to assess water quality statewide every two years. Biological data will still mostly be collected on the basinwide (five year) schedule due to resource constraints. Previously the assessments were reviewed by the public as part of the basin planning process before they were updated to the Integrated Report (Categories 1 through 5; defined in the Description of Integrated Reporting Categories posted with the public notice). The basin plans accounted for all units assessed in tables and Impaired waters (Category 4 and 5) in the text of the basin plans. The process did not, however, account for all data types collected and uses assessed. The 2008 statewide assessment (data window 2002-2006) completed in 2007 accounts for all data, uses, and assessment units statewide. DWQ provided only Category 5 and those waters recategorized from 5 to another category for public comment. DWQ will be publishing an entire assessment document once Category 5 is approved by EPA per CWA section 303(d). Waters in Categories 4 and 5 are considered to be, and are treated as, impaired.

One commenter asked what happens to the document. Does it end up on a shelf or on someone's desk not to be touched until the next biennial review is undertaken?

Response: Nearly all DWQ staff use the 303(d) list in their work, including decision-making; setting monitoring, funding, and restoration priorities; selecting watersheds for TMDL development; and providing guidance to other organizations in focusing resources. Note that Category 4 waters are also considered to be impaired.

One commenter asked about TMDL priorities. The commenter recommends that DWQ recognize North Carolina's contribution to mercury impairment of the Tar-Pamlico River and all other river basins in the state. Recent studies show that atmospheric deposition of mercury is not solely attributable to sources outside of North America, or North Carolina for that matter. Studies have demonstrated that 70% of mercury emissions can deposit locally. While the commenter agreed that a regional and countrywide program must be in place to reduce emissions, NC DWQ has the duty and authority to ensure that our streams are meeting their designated uses, as well as enforcing the anti-degradation policy set forth via the Clean Water Act. Certainly a statewide TMDL can be established for mercury deposition, with requirements by mercury sources to reduce their emissions that are impacting the state's aquatic fauna and placing the public's health at risk.

Response: DWQ continues to work with DAQ to track reductions in mercury emissions. A TMDL is a Clean Water Act tool for accounting for and calculating reductions needed from pollutant sources. Only permits for discharges to water are required to be consistent with TMDLs. A TMDL cannot require emissions reductions in air permits.

One commenter approves of the listing of the Pamlico River region and many of its tributaries. Their field investigations confirm the ongoing nutrient impairment in the estuarine region. They urge DWQ to begin a search for funding for the purpose of remodeling the Pamlico River estuary. The nutrient goals developed for the Pamlico River expected to see no water quality standard violations of chlorophyll *a* by 2013. With ongoing water quality standard violations and the re-listing of the Pamlico River it is clear that the current nutrient reduction goals need to be re-assessed to determine the appropriate level of reduction to attain the overall goal of an unimpaired estuarine system. We strongly urge DWQ to include in its analysis all nutrient sources to the

estuarine system, including atmospheric deposition of nitrogen from sources such as Confined Animal Feeding Operations.

Response: DWQ will continue to monitor and re-evaluate its strategy as appropriate. We will address a number of these issues in the 2009 basin plan update. Thank you for your support and suggestions.

One commenter provided additional information on two assessment units (AUs) on Middle Creek in the Neuse River Basin that were not previously listed: Middle Creek [AU# 27-43-15-(1)b1] from 0.8 miles south of US 1 to up on west side of creek 3.0 miles downstream and Middle Creek [AU# 27-43-15-(4)a] from the dam at Sunset Lake to Terrible Creek. This section was sampled because of rapid development in the Upper Middle Creek watershed and the commenter believes that stormwater runoff, sediment and potential habitat modification are likely factors contributing to the "Fair" rating. Please note that Apex has recognized the effects of urbanization on streams and implemented 100 foot stream buffers and stringent stormwater controls on all future development.

Response: The information provided has been forwarded to DWQ Basinwide Planning Unit to assist in source identification and future implementation of restoration and recovery plans.

One commenter noted that Wilson Creek (11-38-34) is proposed for listing from its source to the Johns River. Parts of this corridor flow through the Grandfather Ranger District of the Pisgah National Forest. This corridor has been identified as a National Wild and Scenic River (under the Wild and Scenic Rivers Act), and has management and monitoring plans in place to insure that the outstanding resource values (ORVs) for which it was classified remain intact. Water quality is one of those ORVs, so to propose the entire corridor as impaired seems contrary to the Wild and Scenic River study conducted for Wilson Creek. The commenter has also measured low pH values in the Wilson Creek headwaters as part of their monitoring efforts related to acidic deposition. Streams in this area flow through acid-sensitive soils and geologic formations and are located in a key deposition area based on topography and wind patterns, but these low pH values do not represent the entire length of Wilson Creek. We do not contend that these low pH values are "natural". Our monitoring shows that they are a result of long-term nitrate and sulfate deposition on the area, base cation depletion, and low acid-neutralizing capacity of local soils. We respectfully request that the proposal for the listing of Wilson Creek as an impaired stream be confined to the reach where the low pH values have been sampled.

Response: DWQ generally does not extrapolate data interpretations beyond the named and indexed segment where the data are collected for assessment as in this case. The next downstream station with no pH standards violations is the Catawba River (more than 15 miles downstream). If the commenter can provide the downstream extent where the low pH is no longer violating standards, DWQ could consider reducing the spatial extent of the impairment.

One commenter observed that the Davidson River (6-34-(15.5)) is proposed for listing from Avery Creek to Olin Corporation Water Supply Dam. The upstream part of this corridor flows through the Pisgah Ranger District of the Pisgah National Forest. The entire Davidson River corridor is a highly managed, nationally recognized area, with an

emphasis on trout fishing. The commenter respectfully requests that the proposal for listing of the lower Davidson River as impaired be confined to the portion of the River where the low pH values have been sampled.

Response: DWQ generally does not extrapolate data interpretations beyond the named and indexed segment where the data are collected for assessment as in this case. If the commenter can provide the downstream extent where the low pH is no longer violating standards, DWQ could consider reducing the spatial extent of the impairment.

One commenter noted that the Cheoah River (2-190-(22)a) is proposed for listing from Santeetlah Dam to Rock Creek, based on ecological/biological integrity (benthos). This portion of the Cheoah River flows through the Cheoah Ranger District of the Nantahala National Forest. The proposal to list this section of the River as impaired is based on biological monitoring data from 2004. This portion of the Cheoah River is the historically dewatered reach associated with hydropower production at Santeetlah Dam, and there is no denying that the long-term dewatering of this section of the Cheoah River resulted in impairment of both fish and benthic communities. However, intense FERC relicensing negotiations resulted in minimum flows and high flow releases designed specifically for improving biological condition and diversity of the lower Cheoah River. These flows were instituted in 2005, and multi-agency monitoring since then has shown measurable improvement in the biological communities within the River. Therefore, we respectfully request that biological communities within the lower Cheoah River be re-evaluated by the NCDWQ prior to listing as an impaired water.

Response: Data collected during 2002-2006 were used in the 2008 assessment. DWQ will make every effort to resample the site in 2008, so that if the biological community has improved sufficiently, this segment will be delisted in 2010.

Section 2. Comments received from other NCDENR Divisions during the public comment period.

One comment related to the descriptions of the impaired waters in Albemarle and Croatan Sounds, which appear to be incomplete: #30d (page 52 of 96), #30c (page 56 of 96), #30-20-(2)c (page 53 of 96), and #30-20-(2)d (page 53 of 96).

Response: 30c and 30d were reassigned and descriptions made more accurate. For 30-20-(2)c and 30-20-(2)d, descriptions are based on original classifications. DWQ will rework the descriptions to better match current landmarks and for easier use in a GIS.

One commenter was concerned and puzzled by the proposed removal of over 35,000 acres of impaired shellfish waters from the Draft 2008 303(d) list. Most of these waters are conditionally approved. Much of the bacterial contamination comes from human-induced sources, such as stormwater. The reason given for the de-listing of most of the waters is “Documentation that the state included on a previous section 303(d) list an impaired segment that was not required to be listed by EPA regulations.” The commenter found this explanation to be unclear, and respectfully requested a more detailed response as to the reasons for delisting these waters when they will clearly continue to be “impaired” and therefore will not be meeting their designated use of a harvestable shellfish resource.

Response: The analysis of data provided by the NC DEH Shellfish Sanitation section for some of the impaired segments (or assessment units (AUs)) does not indicate that there is an exceedance of the North Carolina Division of Water Quality (DWQ) Surface Water Standard for shellfish harvesting areas in Class SA waters. This water quality standard is not used to classify growing areas as prohibited, conditionally approved, or approved. NC DEH operates its monitoring program under guidelines outlined in the National Shellfish Sanitation Program’s (NSSP’s) Guide for the Control of Molluscan Shellfish. When a condition or event occurs that impacts the open status of waters, DEH closes those waters to protect public health. The purpose of the monitoring performed by the DEH Shellfish Sanitation program is to protect public health and therefore, to determine when waters are again safe for shellfishing. For this reason, evaluation of the DEH Shellfish Sanitation water quality data will not always indicate an exceedance of the standard, and in these cases, Category 5 listing is not appropriate. For DWQ’s purposes, these waterbodies, or AUs, will still be considered impaired based on DEH’s closure policy, and they will be moved from Category 5 (requiring a TMDL) to Category 4cs in the DWQ’s Integrated Report to the US EPA. If waterbodies in Category 4cs are later found to have water quality standards violations based on monitoring data, these AUs will be moved to Category 5 requiring development of a TMDL. In the future, data should include samples collected immediately after a rainfall event causing closure of waterbodies. DWQ has also had problems identifying waters because different agencies are using different base maps. A common and accurate base map will greatly enhance the efficiency of data exchange and the accuracy of identifying impaired waters.

One commenter noted that there were listing criteria for C, B, WS, SC, SB, SA, and Sw waters, but not for Tr waters.

Response: This has been added.

One commenter believed that placing waters that violate the temperature standard for Tr waters on part 3a of the list is not protective.

Response: DWQ interprets this standard to only be assessed with thermal discharges.

One commenter found the assessment methods for fecal coliform bacteria confusing. The first sentence under “Fecal Coliform Bacteria Screening Assessment” contradicts the paragraph above.

Response: There are two different methods, one using data collected in a 30-day period, the other based on less frequent data collection. A standard violation (category 5 listing) can only occur when data are collected in the same 30- day period.

Two commenters asked about using data outside the 2002-2006 window in some cases and not in others. It is important to allow the use of data that is more recent than the 2002-2006 data window if the data are from the same sites that are listed or delisted. This is especially important for streams that are listed as impaired due to a short-term impact. Clean Water Management Trust Fund, Soil & Water Conservation Districts, local water quality groups, and even EEP, among others, are impacted by this decision not to use more recent data.

Response: DWQ is assessing all data statewide every two years. New data will be assessed in the 2010 cycle. It was not possible for DWQ staff to assess data beyond 2006 and still meet internal and public review dates, and the April 1, 2008 Federal submission deadline.

One commenter thinks it’s great that the list is to be updated for all basins every 2 years; however, the user cannot see what data were used to make decisions. Fish and benthos data at this point are still reported every 5 years. Data from special studies that have occurred since the basinwide sampling are not online. Is there some way to notate the data source in the list and provide the data online?

Response: More complete documentation will be provided after final EPA approval. The benthos and fish data sets used in the assessment are available in a GIS.

One commenter provided additional information about Mill Creek in the Broad River Basin, listed based on one benthos sample in 2003. There is a large pond about 0.25 mi above this site. If the source of the impact is a pond, shouldn’t this then be placed on category 4c of the list?

Response: Thank you for the information. We will investigate this site further before finalizing the 2010 303(d) list.

One commenter provided additional information about Zacks Fork in the Catawba River Basin. This stream has been delisted with the explanation that “assessment of new data documents that applicable water quality standards are being met.” It has terrible habitat and water quality problems resulting from the heavily commercialized US 321 corridor. It should not be delisted.

Response: Thank you for the information. We will investigate this site further before finalizing the 2010 303(d) list.

One commenter asked why Morgan Mill Creek in the French Broad River Basin was de-listed, but Peter Weaver Creek was not.

Response: New data on Peter Weaver Creek will be assessed in the 2010 cycle. Morgan Mill Creek was de-listed based on 2000 data and probably should have been de-listed earlier.

One commenter inquired about Ross Creek, Gash Creek, and Mill Pond Creek in the French Broad River Basin, and provided additional information. All of these streams have been moved from part 5 to 3a of the list, because these sites have a smaller drainage area/width than what is needed to rate a stream with benthic data. There has been a large community effort to improve Ross Creek; by delisting this water, you are likely drying up some of the funding sources for more work. You could sample Mill Pond Creek just below a large tributary. This would allow you to be more protective of the resource if it does indeed belong in Category 5.

Response: Availability of funding sources is not considered in use assessment. We will investigate Mill Pond Creek further before finalizing the 2010 303(d) list.

One commenter provided additional information on the Bald Creek watershed (French Broad River Basin). The commenter has data from sites in this watershed. Why are these streams not listed in Category 5?

Response: DWQ does not have these data sets. Submittal of the data sets with approved QAPP to the Planning Section Assessment Coordinator is the best way to assure consideration.

One commenter asked whether detailed monitoring data collected by DWQ Watershed Assessment Team, Biological Assessment Unit, and Aquatic Toxicology Units were incorporated into the 2008 303(d) list, and used in subsequent TMDLs for impaired waters. Thank you for the opportunity to comment on this important document.

Response: Most of these data sets are provided by the programs within DWQ for use in assessment.

Section 3. The following changes resulted from DWQ staff comments during the public comment period. Many were errors not discovered in earlier reviews.

- AU# 16-(37.5)a Haw River. Removed turbidity violation.
- AU#18-(71)b Cape Fear River. Changed description ‘to a line from Walden Creek to the Basin.’
- The following AUs were moved to Category 4s: 27-33-(10)b, 27-33-(3.5)a, 10-1-35-(2)b, 13-17-20-1, 27-52-6a.
- The following AUs were split into smaller segments to reflect data differences in ambient monitoring stations: 12-119-(6), 13-17-36-(5)a1, 12-119-(6).
- AU# 16-41-1-(11.5)b was moved from Category 3a to 5.
- AU# 17-(4)b and c were moved to Category 3a.
- Corrected the spelling of chlorophyll a
- AU# 27-(118)a1, Neuse River Estuary was renamed and description changed to include a reference point on the north shore at Wiggins Point. Acreage area increased to 17,135.4.
- Established AU# 18-27-(3)cUT2 and applied B7584900 STORET data.
- Added AU# 30-16-(7) for turbidity violation.
- AU# 18-87-31.2 moved to Category 3a.
- AU# 12-46 added to Category 5 for fecal coliform violation.
- AU# 12-108-21. Water quality data was assigned in previous assessment with wrong geographical data on an unnamed tributary. AU was resplit to reflect changes into a, b and c. UT is no longer assessed.
- AU# 16-30-(1.5), 18-5-(1)a, 18-5-(1)b, moved to Category 3a.
- AU# 99-(7)j and k were removed as assessment units and rolled into AU#99-(7)i. These were based on incorrect application of data.
- The following AUs were moved to Category 3a. 13-39-(10), 13-45-(2)a, 15-25-1-(11), 15-25-2-(7.5), 18-18-1-(2), 18-68-17, 18-74-42, 19-16-(3.5)a, 20-(18)a1, 21-35-7-10-4, 27-128-3a, 28-87-(0.5)d, 29-(1), 29-(5)a, 29-34-(12)a, 29-34-(5), 29-34-34-(2), 30-3-(12), 30-6-(3), 30-9-(2), 30a, 11-69-(0.5), 18-31-(18), 18-42b, 18-46, 18-20-(24.5), 18-23-(10.7), 18-23-(24), 18-31-(12), 18-31-(15), 18-31-(23), 15-25-13, 15-25d

Responsiveness Summary on the Revised Draft 2008 303(d) Category 5 List
Submitted February 5, 2010

Public comments were received from the following entities and individuals: Town of Cary, City of Durham, Coastal Federation, NC Cooperative Extension Service, Tar- Pamlico River Basin Association, City of Monroe, Western NC Alliance, City of Greensboro, NC Pretreatment Consortium Inc., City of Charlotte, Alley Williams Carmen and King Inc., Malcolm Morrison, Daniel Tolfree. These comments with NC Division of Water Quality responses are provided.

One commenter believes that the data used to assess AU#27-43-15-(4)a for zinc was atypical of normal stream conditions and was related to an isolated event. The commenter requests that a re-evaluation of the stream for zinc should be conducted with information they provided and removed from Category 5. The information provided indicates that the high instream zinc concentrations could be attributed to a temporary spike in influent zinc that has been addressed and has not reoccurred since then.

Response: AU# 27-43-15-(4)a was split into AU#27-43-15-(4)a1 and AU#27-43-15-(4)a2 due to an impoundment between stations J4868000 and J4870000. The zinc and turbidity impairments were only in the upstream station J4868000 in AU#27-43-15-(4)a. Based on information provided by the commenter regarding pretreatment issues at the time of the Zinc exceedances the Zinc impairment has been reassessed in Category 4b (Impaired but not requiring a TMDL due to other efforts addressing the issue) pending further metals sampling after new standards are in place.

One commenter requested water quality assessments to be conducted on Cane Creek, AU#16-28.

Response: We have forwarded your request to the appropriate basin planner, Nora Deamer 919-807-6431, nora.deamer@ncdenr.gov.

One commenter emphasized that the additional criteria listed in the assessment methodology for the review of potential copper or zinc assessments was suitable and appropriate.

Response: Thank you for your support.

The commenter encourages DWQ to contact local governments for additional sources of monitoring data or information regarding sources, particularly during the basinwide planning and Total Maximum Daily Load processes. The commenter requests DWQ to publish documented justification for a final Integrated Report Category 5 listing of copper and zinc within the draft and final 303(d) list. The commenter focused on three waterbodies.

Response: DWQ invites all commenters to provide other lines of evidence indicating that any parameter should or should not be assessed in Category 5. DWQ will evaluate the Category 5 Zinc assessment in Ellerbe Creek for the 2010 IR review and also note the potential sources of metals exceedances provided in the comments on the other streams. However, the methodology negotiated with EPA does not allow for review of Zinc or Copper Category 5 assessments (>10% Exceedance of standard) when biological bioclassifications are Fair or Poor. The current justifications for Category 5 assessment of Copper and Zinc are clearly stated in the methodology-greater than 10% of samples exceed the standard. Per federal regulations, justifications are required only when Copper or Zinc exceedances are not assessed in Category 5. These justifications must include information from multiple lines of evidence that indicate

Copper or Zinc exceedances are likely from only natural conditions, or evidence that the data are not valid.

One commenter was pleased to see that the previously listed Category 4cs waters (shellfish) were moved back to Category 5.

Response: Thank you for your support.

One commenter inquired why AU# 6-55a had been removed from the 303(d) list.

Response: Upper AU# 6-55a was removed because of Not Impaired bioclassification.

One commenter inquired why AU# 6-55-8-1a and 6-55-8-1b had been removed from the 303(d) list.

Response: Bat Fork 6-55-8-1a and b are located on the bottom of page 26 of the draft 303(d) list (they were not removed).

One commenter requested water quality assessments to be conducted on Britton Creek AU#6-55-9 and Shepherd Creek AU#6-55-6a & b.

Response: We have forwarded your request to the appropriate basin planner, Michael Tutwiler, 919-807-6433, michael.tutwiler@ncdenr.gov.

One commenter identified an incorrect location description for 15-25v Montgomery Slough, and indicated that the corrected description would identify it as "From the ICCW at the mouth of Lockwood Folly inlet extending eastward."

Response: The description has been changed and will be reflected in the final 2008 303(d) list.

One commenter identified several segments of the Pamlico River as impaired for chlorophyll-a, indicating that greater than 10% of the water quality samples exceeded 40 µg/L and a TMDL is required. Given that a TMDL has already been established for these waters, they should not be listed on the 303(d) list of impaired waters that require a TMDL. These Assessment Units should be placed on the Sublist 4A of the Integrated Report.

Response: All of the Pamlico River AUs with chlorophyll a exceedances have been assessed to Category 4t (formerly 4a).

One commenter focused on six waterbodies: Richardson Creek, Little Richardson Creek, Stewart Creek, Lake Monroe, Lake Lee, and Lake Twitty. The commenter recommended that existing data with relevance to the listing process be utilized if it has not already. The Yadkin Pee Dee River Basin Association via its MOA with the State has generated very high quality and defensible data on many streams in this basin. The commenter requested that this data be considered in the listing process and ask for confirmation if this has occurred.

Response: All QAQC information is available upon request from DWQ Environmental Sciences Section. Stations Q8800000 and Q8820000 are YPDRBA stations and were used in this assessment.

One commenter highlighted that The Ross Creek watershed protection and improvement master plan was recently completed. It details the water quality assessment of Ross Creek and its watershed and provides recommendations to improve water quality and stream conditions. The extensive study identifies the significant impact that urbanization and stormwater runoff from surrounding impervious surfaces have on the streams impairment. The extensive water quality data also shows the stream as still being steadily impaired for benthos, fecal coliform, and turbidity. The study sharply disagrees with a 2008 draft proposal to remove Ross Creek from the 303d list based on this water quality data.

Response: AU# 6-78-23b will be added back into Category 5 based on a Poor bioclassification in 1999.

Two commenters indicated that the assessment for total metals “impairment” should also be suspended for all metals until DWQ has completed their study/review of appropriate metals water quality standard development and implementation. When DWQ finalizes the water quality standards assessment and implementation strategy, the 303(d) list can then be revisited in light of the new approach in evaluating the impacts of metals to assessing toxic effects.

Response: The current method was negotiated with EPA using North Carolina’s current standards. When new standards are in place, DWQ will develop a corresponding assessment methodology. DWQ believes that Copper and Zinc exceedances of the current action level standards in stream are not very robust indicators of aquatic life impacts and had previously not assessed exceedances of these standards instream; however EPA region 4 has not concurred with this method and required that Copper and Zinc be assessed using North Carolina’s current water quality standards.

One commenter questions why certain stream segments are listed as impaired in the 2008 303(d) listing based on the data and information we have available to us. The commenter requested DWQ to consider the addition of the data they submitted with their comments. The commenter believes their data show compliance with the Action Levels.

Response: We considered the data and information submitted by the commenter. All of these sites also have impaired biological integrity. We concluded the Category 5 listings are appropriate for copper and zinc. DWQ has a standing data solicitation process. We welcome the commenter to submit all data from 2006-2010 for the 2012 303(d) list by April 2011 to ensure adequate time for review.

One commenter identified that AU#13-17-9-4-(1.5) Cold Water Creek as being impaired with the reason being Excellent Bioclassification. Can you check this rating?

Response: The bioclassification is Fair for site QF96. This has been corrected.