LNBA and NRCA Draft 303(d) Listing Methodology Comments and Concerns

1. Proposed Changes to the rules related to the Chlorophyll a standard attempt to deal with the scientific needs to base quantification on a "central tendency" measurement rather than an instantaneous value. Repeated concerns and discussions with the NC DWR Science Advisory Council have also centered on the need for an interpretation of the standard based on a central tendency rather than a never to exceed instantaneous value. The proposed 303d methods do not address this issue.

2. Proposed 303(d) methods indicate that Chlorophyll is an aquatic life standard. There is no technical support for this conclusion. Aquatic life standards normally use detriments to sensitive species thresholds (plus a safety factor) to establish a water quality standard. Chlorophyll a is an indicator of biological productivity not an aquatic life standard. Chlorophyll a is best considered a water quality standard for the protection of designated use impairment – aesthetics and recreation. Chlorophyll is not toxic. Chlorophyll has no levels associated of endangerment of sensitive species. This is an important but minor change. It is important because EPA has established detailed procedures for aquatic life standards that do NOT include chlorophyll.

3. DWR Staff have not addressed the establishment of procedures for determining 303(d) Assessment Units (AU's) with the EMC. Assessments Units are segments of streams, lakes, or estuaries where monitoring data is merged from different stations in order to provide a representative perspective of the quality of a particular waterbody. Determining the geographical extent of AU's can be the deciding factor in attainment or non-attainment of water quality standards. *Example*: *If there are three monitoring stations within an AU and DWR determines that collectively these three stations are attaining water quality standards but individually if one of these locations is not attaining standards then the DWR can subdivide the AU in order to declare this individual sub-segment as an impaired AU*.
DWR rules are very clear that Uses and Standards are determined through the assignment of appropriate Stream Classifications. The spatial (geographical) extent of stream Classifications is not routinely altered without a public review process and is not based on fluctuations or variability of water quality data. However, for water quality impairment decisions, DWR has continued to alter 303(d) Assessment Units based on the observed data for each assessment period. Altering Assessment Units based on the changing concentrations of observed data is particularly important in Reservoirs and Estuaries. Concentration data is normally variable even in pristine waterbodies. When DWR observes differences in standards attainment at particular stations within an AU, the AU is subdivided into two AU's one meeting standards and one not meeting standards. Once an AU has been subdivided based on a particular assessment period, the subdivision is not re-combined. This can help to maximize 303(d) listings. Simply put, if DWR continues to promote 303(d) decisions based on single monitoring stations the number of 303(d) impairments will increase. The end result is that the central tendency of a classified water body segment is not used to evaluate impairment. Impairment decisions are made based on limited sampling sites and limited data rather than an assessment of the entire classified portion of the water body. The EMC has not evaluated or approved the DWR approach to establishing AU's.

4. The new listing methodology proposes to create additions to the 10% / 90% method where data sets are limited and where there are uncertainties. The use of new confidence limits of 40% and 70% are not well explained in the methodology. No examples are presented. And it is not clear if this only applies to delisting or may also be used to apply to potential listing issues under 305 (b). Additional clarification is needed.

5. Small data sets are problematic for 303(d) listings. Without a sufficient number of samples to characterize an Assessment Unit over time and space the probability of an erroneous assessment for impairment greatly increases. Based on the proposed methodology, it appears that only three observations collected in a short time period (perhaps a single year) that exceed a numeric criteria could place a segment on the impaired waters list without any additional samples being collected within the last five years. Incorporating older data (more than five years old) to meet a ten sample minimum does not help the representative evaluation of current water quality conditions. The public is entitled to a confident scientific and representative evaluation. The concern is the promotion of selective sampling approaches in order to achieve a 303(d) listing rather than the use of representative samples over time and space.