September 2016

Response to Comments on The 2016 NYS Section 303(d) List of Impaired Waters Requiring a TMDL

A Draft 2016 New York State Section 303(d) List was made available for public comment for a 45 day period that ended on March 4, 2016. Prior to the development of the Draft List, a solicitation for available data also elicited a number of responses. Between these two opportunities the New York State Department of Environmental Conservation (NYSDEC) received comments from eight (8) organizations (Ausable River Association, Bronx Council for Environmental Quality, Friends of Van Cortlandt Park, Onondaga Nation, Owasco Watershed Lake Association, Pace Environmental Litigation Clinic, Saint Regis Property Owners Association, SUNY Stony Brook School of Marine and Atmospheric Sciences), nine (9) municipalities/government agencies (Cayuga County Department of Health, Cayuga County of Department of Planning and Economic Development, Cayuga County Water Quality Management Agency, Town of East Hampton, New York City Department of Environmental Protection, Orange County Department of Public Works, Town of Southampton, Village of Southampton, Town of Southold,) and four (4) private parties/individuals. The Draft Section 303(d) List was also reviewed and commented on by the US Environmental Protection Agency (USEPA) Region 2, which has approval authority for state Section 303(d) Lists. A summary table of these comments is also included as Appendix A.

The current (March 2015) Assessment and Listing Methodologies were also made available for public comment along with the List. The Assessment Methodology outlines the process and specific criteria that guides NYSDEC's use of water quality data to determine waterbody assessments. The Listing Methodology guides the development of the Section 303(d) Impaired/TMDL Waters List which builds on the monitoring data/information and water quality assessments. Public comments on the methodologies were received from some of the same organizations and municipalities; USEPA provided the most extensive comments on the methodologies.

General Response to Comments on Section 303(d) List

A review of the comments received regarding the Section 303(d) List reveal that there is, in general, considerable agreement regarding the sources of pollution that impact New York State waters. Even in instances where those commenting on the List suggested the addition or removal of waterbodies and/or pollutants, NYSDEC and the commenters are in agreement that there are water quality impacts related to these waters/pollutants that require action. Disagreement typically revolves around whether it is appropriate – given the definitions and parameters of the Section 303(d) List – to include certain waters on the List, and/or the details of how the waters are listed. In developing the List NYSDEC has determined that some water quality problems do not rise to the level of an impairment and/or that some impaired waters are not appropriate to include on the Section 303(d) List for TMDL development. A further discussion of the thresholds of water quality impact, impairment and listing was included in the Response to Comments on the 2012 Section 303(d) List, and is repeated as Appendix B to this document.

A number of public comments on the Draft 2016 Section 303(d) List raised a number of listing issues that are not specific to any one particular waterbody. Response to these more general comments and/or comments that concern multiple waterbody/pollutant listings are presented here.

Harmful Algal Blooms

A number of comments received regarding specific waterbodies concern NYSDEC listing decisions pertaining to impairment due to harmful algal blooms (HABs). These comments raised three specific issues related to HABs: 1) the threshold of HABs occurrence that constitutes an impairment of uses, 2) whether HABs is an appropriate cause/pollutant for impaired water listings on the Section 303(d) List, and 3) when are concurrent listings for nutrients (phosphorus, nitrogen) appropriate for waters impaired by HABs.

Not every occurrence of HABs on a waterbody rises to the level of causing an impairment. That threshold depends on the frequency, duration and spatial extent of the bloom. NYSDEC has implemented a HABs surveillance and notification effort that will continue to collect data to help better quantify an appropriate threshold for impairment due to HABs. Currently the threshold is defined in the Assessment Methodology as *occurring on multiple days and verified over more than a 2 week period, at multiple locations covering significant spatial extent, with likelihood of annual recurrence*. In some instances HABs occurrences may also trigger other impairment criteria related to administrative use restrictions on water supply, public bathing or recreational use. Note that the criteria related to administrative use restrictions also have frequency, duration and spatial extent components.

If the occurrence of HABs is such that the impairment threshold for a particular use (or uses) is determined to be exceeded, then the waterbody is evaluated as being impaired by HABs for those uses. However HABs represent a condition, rather than a pollutant for which a TMDL can be developed. The Section 303(d) List is commonly thought of by the public as the "Impaired Waters List." However, it is actually defined as the list of impaired waters/pollutant combinations *for which a TMDL is required*. It is not possible to develop a TMDL to regulate and reduce pollutant loads of HABs; as noted previously, HABs are not a pollutant. Impaired water/HABs combinations are more appropriately categorized as IR Category 4c Waters – Impaired Waters where the Impairment is Not Caused by a Pollutant. If HABs in a water are determined to be the result of nutrients or some other pollutant that is appropriate to address through a TMDL, then a concurrent waterbody/pollutant listing for the pollutant is appropriate to include on the Section 303(d) List.

The determination of the role of nutrient pollutants in HABs in a specific waterbody is the third of the 3 issues noted previously. The NYS narrative nutrient standard – *None in amounts that will result in growths of algae, weeds and slimes that will impair the waters for their best usages* – is frequently wrongly interpreted to mean that if there is excessive algal or plant growth, then nutrient levels must be in exceedence of the narrative standard. Though that is often the case, it is not automatically true. The NYSDEC interpretation of its narrative nutrient standard is that there are two benchmarks that must be met in order for the narrative standard to be violated. First, growths of algae, weeds and slimes must be sufficiently frequent, persistent, and widespread that designated uses of the waterbody are impaired. And second, the amounts of

nutrients in the waterbody must be sufficiently high that it is likely that the nutrients are the cause of the excessive growths of algae, weeds and slimes. With the increased monitoring of HABs, NYSDEC has identified a number of waterbodies where the first of these benchmarks is exceeded, but where the levels of nutrients are well below eutrophic (or mesotrophic) levels, indicating that the HABs are not the result of the typical nutrient eutrophication pathways and there appear to be additional triggers beyond nutrient levels for driving HABs in some cases.

The Section 303(d) List was established for the purpose of prioritizing that subset of impaired waters that require a TMDL. NYSDEC does not see the logic in listing a waterbody as impaired by nutrients where that nutrient is below thresholds of concern, and requiring a TMDL to force further reductions in nutrients levels when there is no reasonable expectation that those reductions would reduce HABs in the waterbody.

The Use of Enteroccocus and E-coli Data in the Absence of a Water Quality Standard
A number of organizations submitted sampling data for enterococcus or e-coli in support of proposed additions to the Section 303(d) List for pathogens. However, while NYSDEC is currently evaluating the possible adoption of these indicators to replace or supplement its current total and fecal coliform standards, there are presently no New York State water quality standards for enterococcus or e-coli. Therefore the comparison of data for these indicators against the USEPA Recreation Water Quality Criteria, or any other benchmark, is not sufficient justification for a listing. NYSDEC will use enterococcus and e-coli data to update water quality assessments in its Waterbody Inventory/Priority Waterbodies List database. Assessments and use impact and impairment determinations based on this data may be appropriately designated as suspected or unconfirmed. Such designations are not meant to diminish the value or quality of the data, but rather reflects that the criteria against which that data is compared has not been adopted through NYS water quality standard setting procedures.

Low Dissolved Oxygen
In previous Section 303(d) Lists NYSDEC included two separate listings for individual waterbodies that did not meet the applicable dissolved oxygen standard; one listing for *Oxygen Demand*, and a second listing for the specific oxygen-demanding substance (typically a nutrient, either *Phosphorus* or *Nitrogen*). However the *Oxygen Demand* listing in such cases is redundant and has been removed as a second separate listing. In the 2016 (and future) Section 303(d) Lists, waterbodies impaired by low dissolved oxygen are listed for the specific pollutant related to the oxygen demand (typically phosphorus or nitrogen). These pollutant notations are appended to also include "*/Low D.O.*" but separate listings for *Oxygen Demand* have been eliminated. Separate listings of waterbodies for *Oxygen Demand* will continue if no specific oxygen demanding substance has been identified and listed.

This approach is consistent with the applicable CWA Section 303(d) language that requires states to "…identify those waters within its boundaries for which effluent limitations are not stringent enough to implement any water quality standard applicable to such waters." NYSDEC's approach does, in fact, identify the water in question. It also identifies "Low D.O." along with the oxygen-demanding nutrient; the substances not meeting standards are just included in a single water listing. USEPA had commented that a water not meeting applicable DO and nutrient criteria must be listed as impaired by both criteria. However, this is a

misreading of CWA Section 303(d) in that this section specifies the listing waters; it is actually silent on the listing of specific criteria (pollutants) that are not being met in those waters.

Listing Decision for Uncertified Shellfishing Waters

A number of comments were received regarding specific waters with shellfishing impairment and the appropriate part of the List for the placement of these waters. Designation of waters as impaired for shellfishing use and inclusion on the Section 303(d) List is based on shellfishing certifications issued by NYSDEC Shellfisheries Program and the National Shellfish Sanitation Program. Typically waters that are uncertified or only seasonally certified for shellfishing will be included in Part 2c of the List. In some cases shellfishing restrictions for the protection of public health are based on shoreline survey assessments and documentation of potential sources (discharger outfalls, boat traffic) rather than actual sampling data. While these restrictions still represent an impairment of shellfishing use, the development of a TMDL to reduce pathogen loads may not result in the restoration of the use while the potential sources remain. These listings may be more appropriate to include in Part 3c of the List as impaired waterbodies for which TMDL development is deferred pending the identification of other more appropriate alternative restoration measures.

The inclusion of uncertified/seasonally certified shellfishing waters are not appropriate for Part 3a of the List as impaired waters for which TMDL development is deferred pending verification of impairment. As noted previously, designation of impairment is based on the current shellfishing certification. Data indicating a potential future change to the shellfishing designation would be appropriate to capture in updated Waterbody Inventory/Priority Waterbody List (WI/PWL) assessments for the waterbody. The lack of recent data may also be appropriate to note in the WI/PWL assessment. However the aging of data is insufficient for delisting a water or for movement to Part 3a so long as the uncertified/seasonally certified designation remains in place.

The inclusion of uncertified/seasonally certified shellfishing waters are not appropriate for Part 3b of the List as impaired waters for which TMDL development is deferred pending verification of cause, pollutant or source. The cause/pollutant for uncertified/seasonally certified shellfishing waters is in most all cases pathogens. There may be instances where the quantification of loadings from various known and unknown sources needs further verification. However such verification would be appropriate to undertake as part of a TMDL, rather than deferring the TMDL.

Additional Data Submitted During the Public Comment Period

A number of commenters submitted data during the public comment period in support of new listings/delistings that were not previously suggested for consideration in the development of the Draft 2016 Section 303(d) List. NYSDEC is clear in its Assessment Methodology regarding the establishment of a September 30 (of the year prior to the issuing of a Section 303(d) List) as the cut-off date for submitting additional data and information to be considered by NYSDEC for inclusion in the List. Establishing a cut-off date was first proposed by USEPA in its 2010 Integrated Reporting Guidance to the States. The September 30 cut-off date is necessary to allow states an opportunity to consider solicited data, develop a Draft List, collect public comment, and submit a Final List to USEPA by the April 1 mandated submittal date. In addition

to being impractical, it would be inappropriate to add/delist waters not previously considered in the Draft List because there is no second opportunity for the public to support/rebut a newly listed/delisted water. Therefore NYSDEC generally deems it more appropriate to defer any listing/delisting action based on consideration of new data submitted after the cut-off date until the next listing cycle. However the data/information will be incorporated into the appropriate WI/PWL assessment fact sheet. Where appropriate, NYSDEC may also use data submitted after the cut-off date to move already-listed waterbody/pollutant listings to a more appropriate part of the List.

Request for Extension of the Public Comment Period
NYSDEC did receive one request (Riverkeeper, Inc) to extend the Public Comment Period for commenting on the Section 303(d) List.

NYSDEC responds that due to the established schedule for states to submit Proposed Lists to USEPA by April 1, 2016, and NYSDEC's commitment to adhere to that schedule, it is not possible to offer an extension beyond the original 45 day comment period. However NYSDEC also notes that because the Section 303(d) List is updated every two years, there is future opportunity to comment on the content of the List. In fact the solicitation of data for the subsequent List – which is itself an opportunity for the public to comment – often begins less than a year after the approval of the preceding Final List. Furthermore, the water quality assessments that underlie the listing decisions are updated on a rotating schedule independent of the 303(d) List cycle. In other words, NYSDEC views the assessment of waters and identification of impaired waters as a continuous process, which is punctuated every two years with the updating of the Section 303(d) List. The public is encouraged to participate in the larger and ongoing NYSDEC statewide water quality assessment effort, which serves as the foundation for Section 303(d) List development.

2016 Delisted Waters
A separate list of Delisted Waters/Pollutants – those waters/pollutants that appeared in the previous (2014) List but that have been removed in this listing cycle – is also available. This listing was compiled in order to provide easier tracking of specific waters and changes from the 2014 List.

General Response to Comments on CALM Assessment/Listing Methodologies
As noted previously, the current Assessment and Listing Methodologies were also made available for public comment along with the List. The most extensive comments specifically on the methodologies were from USEPA Region 2. The responses to these comments are included as Appendix C. Responses to other comments on the methodologies are presented below.

Riverkeeper, Inc. commented regarding
Limits on Use of Outside Data
Riverkeeper reiterated previous concerns regarding proposed limits on the use of third-party and volunteer data by the Department to make water quality assessments. They urged NYSDEC to "…set *clear and attainable guidelines for citizen scientists."*

In response, NYSDEC believes setting appropriate benchmarks regarding the use of such a wide range of data is critical to developing consistent assessments.

NYSDEC also points out that these benchmarks are for identifying data that is of sufficient quality that the Department can use it to make assessments absent any other data. The Assessment Methodology notes that data/information that does not meet these thresholds may still be useful in identifying waters for further investigation. This approach is consistent with the USEPA guidance that each State "assemble and evaluate [emphasis added] all existing and readily available water quality-related data and information" that was cited by some of the commenters. NYSDEC will continue to consider data and information from outside groups, but in a way that also recognizes the importance of data quality and the need for consistency in the resulting assessments.

Pace Environmental Litigation Clinic, Inc. commented regarding
Exclusion of Waters from the List Using IR Category 4b
Pace Environmental Litigation Clinic commented that the "…entire (4b) category of excluded waters is contrary to the Clean Water Act, contrary to the applicable regulations and contrary to EPA Guidance." In large part, the commenter's objection concerns USEPA regulation regarding Section 303(d) Listing and the establishment of IR Category 4b. The commenter also states that NYSDEC has not provided adequate justification for excluding particular waters from the Section 303(d) List as IR Category 4b waters.

NYSDEC responds that any objection to USEPA Guidance and the establishing of IR Category 4b is an issue that is more appropriately taken up with USEPA. For its part, NYSDEC has been using IR Category 4b to appropriately prioritize waters that are and are not appropriate for TMDL development since the category was introduced by USEPA for the 2002 List. As per the 2008 USEPA guidance cited by the commenter, NYSDEC and USEPA have worked closely to ensure that Category 4b demonstrations are adequate to support the decision not to include these impaired waters on the State's Section 303(d) List. Regarding the specifically cited New York City CSO waters, USEPA allows the process to address impairment due to CSOs to proceed under the CSO Long-Term Control Plan (LTCP) process. The specific elements required to demonstrate Category 4b eligibility are outlined in the 2005 New York City CSO Order as subsequently modified (most recently in 2015) and detailed in the individual waterbody LTCPs. USEPA has reviewed and approved the use of IR Category 4b in these instances.

That being said, NYSDEC reserves the right to return waterbody/pollutant listings to the List in spite of USEPA's previous approval of an IR Category 4b delisting. NYSDEC notes that in its 2014 Section 303(d) List one of the delisted waterbodies – Alley Creek/Little Neck Bay Trib, (1702-0009) – was returned to the List. Although USEPA's previous decision that the requirements of the NYC CSO Order provide adequate justification for the delisting of these waters as IR Category 4b waters remains in place, NYSDEC is choosing to return some New York City CSO-impacted waters to Part 3c of the 2016 Section 303(d) List as waterbodies for which TMDL development is deferred pending the development and evaluation of other restoration measures (specifically, the LTCPs). This approach will provide additional assurance, beyond what was deemed necessary for delisting, that the LTCPs to adequately address CSO impairment will be forthcoming in a timely manner.

It is NYSDEC's intention that the relisted waters will remain on Part 3c of the List only until NYSDEC approval of LTCPs that meet the requirements of the Order. Once LTCPs are determined by NYSDEC to be adequate and are approved, NYSDEC will re-assign the waterbodies covered by approved LTCPs to IR Category 4b in the subsequent Section 303(d) List. (See also *New York City CSO Waters* in the *Response to Specific Comments on Section 303(d) Listed Waters* section below, and Appendix D).

Pace Environmental Litigation Clinic, Inc. commented regarding
Inadequacy of NYSDEC's Method for Updating its Draft List
Pace Environmental Litigation Clinic commented that NYSDEC's five-year rotating basin assessment cycle is inadequate to meet the Clean Water Act requirement to provide biennial reports on the quality of waters of the state.

NYSDEC responds that it fully meets the Clean Water Act requirement of providing updates of biennial state water quality reports under Section 305(b). The commenter expresses an opinion that the updates should be more robust, specifically that more waters should be sampled within the two-year window between biennial reports. While NYSDEC would welcome additional resources to sample more waters more frequently, the five-year rotating basin approach to sampling is more than sufficient to report on the overall quality of the state's waters, which in reality does not change very much from year to year. Additionally, the five-year rotating basin approach is specifically supported by USEPA in its 2010 Integrated Reporting Guidance (also cited in the 2014 IR Guidance), recognizing the value of the approach and supporting its use as an effective and practical means for assessing waters. The guidance also notes USEPA's expectation that states continue to consider other existing and readily available data and information, regardless of basin and rotating schedule, when compiling Section 305(b) Reports and Section 303(d) Lists. NYSDEC meets this expectation through it public solicitation of data prior to the development of the Section 303(d) List. But to be clear, this data solicitation is used to supplement the state's appropriate and adequate statewide monitoring and assessment effort already in place.

Other Comments on the Methodologies
Other commenters raised issues that relate to the methodologies in comments pertaining to specific waterbody/pollutant listings. These issues are addressed in the response to the comment on the specific waterbody/pollutant listing. Some of these methodology issues are also be addressed in the *General Response to Comments on Section 303(d) List* section above.

Response to Specific Comments on Section 303(d) Listed Waters

The public comments NYSDEC received regarding specific waterbody/pollutant listings on the Draft 2016 Section 303(d) List and the response regarding whether or not to incorporate those comments into the Proposed Final List are presented below. A summary table of these comments is also included as Appendix A.

Village of Southampton and
S**UNY Stony Brook School of Marine and Atmospheric Sciences** commented regarding **Agawam Lake (1701-0117) listing for HABs**

The commenters requested that Agawam Lake be added to the 2016 Section 303(d) List based on data and information showing high levels of Microcystin and Anatoxin-a related to harmful algal blooms (HABs).

NYSDEC responds that this supporting data was submitted after the September 30 (2015) cut-off date for submittal of data in response to the data solicitation for development of the 2016 Section 303(d) List. The 303(d) listing process begins in the spring of the year prior to updating the List with a solicitation of data from the public to suggest (with supporting documentation) waters for listing/delisting. We use this solicited data, along with in-house data, to arrive at a Draft Section 303(d) List that is released for public comment. From that point forward, additions/delistings are generally limited to those that were considered in the Draft List. It would be inappropriate to add/delist waters not previously considered, because there is no second opportunity for the public to support/rebut a newly listed/delisted water. Conducting a second public comment period is not practical, because the Department must stay on schedule to deliver a finalized List to USEPA by our April 1, 2016, deadline.

That being said, NYSDEC notes that Lake Agawam is currently already listed in Appendix B, as a waterbody not meeting dissolved oxygen standards, possibly due to natural conditions. Consequently while a request for the addition of a waterbody to the List would typically be deferred, the movement of a waterbody within the List based on the submitted data can, to some extent, be considered.

There appear to be two overarching water quality issues in the Lake: low dissolved oxygen (DO) which based on the available data is likely driven by nutrient eutrophication; and HABs, the exact causes of which are not entirely confirmed. Regarding the low DO, it is appropriate to remove Agawam Lake from Appendix B since nutrients (rather than natural conditions) are the likely cause of the low DO conditions. The Lake will be moved to Part 1 of the List with the cause/pollutant noted as *Phosphorus/Low D.O.*

Regarding the HABs, as noted previously HABs represent a condition, rather than a pollutant for which a TMDL can be developed. Because it is not possible to develop a TMDL to regulate and reduce pollutant loads of HABs, impaired water/HABs designations are more appropriately categorized as IR Category 4c – Impaired Waters where the Impairment is Not Caused by a Pollutant. The data supporting an impairment due to HABs will be evaluated and appropriately incorporated into an update of the WI/PWL assessment for Agawam Lake, including consideration of an IR Category 4c designation. (See also the Harmful Algal Blooms discussion in the General Response to Comments on Section 303(d) List section of this document.)

New York City Department of Environmental Protection (NYCDEP) commented regarding
Alley Creek/Little Neck Bay Trib (1702-0009) listings for Pathogens/Oxygen Demand
NYCDEP requests that NYSDEC correct the reference to the Consent Order in the justification for the delisting of Alley Creek/Little Neck Bay Trib.

NYSDEC responds that the reference to a "2015 Consent Order" is incorrect. The reference in the draft should have been stated as "the 2005 NYC CSO Order as subsequently modified (most recently in 2015)" where it occurs. See also the response below regarding *New York City CSO Waters.*

Town of Southold commented regarding
Beach/Island Ponds, Fishers Island (1701-0283) listing for Pathogens
The Town of Southold requested that Beach/Island Ponds, located on Fishers Island, currently impaired for pathogens that prohibit shellfishing uses, be moved from Part 3c of the List (TMDL deferred pending evaluation of other restoration measures) to Part 3a (TMDL deferred pending verification of impairment). The commenter believes this move is justified because the original listing is based on sampling data that is over 17 years old.

NYSDEC responds that aging of the data alone does not warrant delisting or the proposed relocation of the waterbody within the list; there must be new sampling data or a remedy applied to justify such changes. Designation of waters as impaired for shellfishing use is based on shellfishing certifications issued by NYSDEC Shellfisheries Program and the National Shellfish Sanitation Program. Since this waterbody is currently not certified for shellfishing, verification of impairment is not necessary. The waterbody was previously moved to Part 3c to recognize that the impairment might not be appropriate to address with a TMDL. (See also the *Listing Decision for Uncertified Shellfishing Waters* discussion in the *General Response to Comments on Section 303(d) List* section of this document.)

USEPA Region 2 commented regarding
Lower and Middle Cassadaga Lakes (0202-0003, 0202-0002) listings for Phosphorus
USEPA requested additional justification for the delisting of for Lower and Middle Cassadaga Lakes. Specifically requested is available data and information showing that applicable narrative nutrient standard and the numeric guidance value, as established in TOGS 1.1.1 are attained.

NYSDEC responds that for Lower Cassadaga Lake, the median total phosphorus value is 19 ug/l while the summer seasonal mean is 29 ug/l. However data for the most direct indicator for support recreational use – chlorophyll-*a* – is well below the criteria used for impairment (15 ug/l) or stressed (10 ug/l) uses; lake values of chlorophyll-*a* are less than 2 ug/l. When evaluating recreational impacts and possible impairment, NYSDEC takes both of these indicators into consideration. Most recent research indicates that while total phosphorus can be a useful regulatory threshold, it should not be considered a one-size-fits-all criterion. Additionally the current NYSDEC Guidance Value of 20 ug/l for phosphorus is unique among all Guidance Values in that it is not aligned with the protection of any specific established best use, and NYSDEC interprets this value as an indicator of stresses, that may (based on other factors) rise to the level of impairment. For Middle Cassadaga Lake, the median and mean for total

phosphorus are both 70 ug/l. But again the chlorophyll-*a* values are less than detection (2 ug/l), indicating that recreational uses are supported.

Both of these lakes would benefit from additional sampling and assessment (the most recent data cited previously is from 2010), and NYSDEC will be sampling waters in the Allegheny River Basin in 2016-17. At this time the weight of evidence indicates Lower Cassadaga Lake is appropriate to delist for phosphorus (assignment to IR Category 4c due to invasive plants should continue). The higher phosphorus values for Middle Cassadaga Lake suggest that continued listing on Part 3a (requiring Verification of Impairment) would be the most appropriate listing decision. This lake is also assigned to IR Category 4c due to invasive plants.

USEPA Region 2 commented regarding
Cassadaga Lake, Upper (0202-0001) listing for Low Dissolved Oxygen (Appendix B)
USEPA commented that NYSDEC has proposed to delist Upper Cassadaga Lake (0202-0001) for low dissolved oxygen (DO) due to attainment of the applicable DO criterion. However NYSDEC data provided to USEPA indicate that the applicable DO criterion is sometimes not met. The commenter requests that these waters not be delisted until data shows that the applicable DO criterion is met.

NYSDEC responds that these waters had been included in Appendix B of the Section 303(d) List as Waterbodies Not Meeting Dissolved Oxygen Standards Pending Verification of Use Impairments/Pollutants/ Sources. It is acknowledged in Appendix B that "morphology and other natural conditions may contribute to periodic dissolved oxygen depletion at lower depths in significant numbers of thermally stratified waters." Although USEPA has noted that NYS water quality standards include no exception for no natural conditions (such language is proposed in New York's next water quality standards rule), it was agreed that listing of all waters where DO falls below the applicable "never less than" value in limited, non-representative potions of a waterbody (estimated in previous DEC lakes assessments to be about 70% of all NYS lakes) provides no value and would be inappropriate. Appendix B was established to identify the subset of the majority of NYS waters that have some periodic (and non-representative) occurrences of DO below the standard, where NYSDEC has not evaluated whether or not the low DO is causing an actual impairment and/or whether the low DO is naturally occurring. In other words, Appendix B is not a listing of all waters where "never less than" DO standards are ever exceeded, but rather it is a list of those waters where low DO has not been evaluated to determine if uses are impaired and/or if the low DO is due to anthropogenic, rather than natural, sources.

In the case of this, and three other, lakes, NYSDEC is not claiming that these waters meet USEPA's overly-stringent interpretation of the "never less than" DO standards. Rather NYSDEC has completed an evaluation and has determined – based on the health of the aquatic (fishery) community, the long history of low DO, the lack of other sources, or other evidence – that low D.O. in the waterbody is naturally occurring and any impacts do not rise to the level of impairment of uses.

USEPA Region 2 commented regarding
Cuba Lake (0201-0016) listing for Low Dissolved Oxygen (Appendix B)
USEPA commented that NYSDEC has proposed to delist Cuba Lake (0201-0016) for low dissolved oxygen (DO) due to attainment of the applicable DO criterion. However NYSDEC data provided to USEPA indicate that the applicable DO criterion is sometimes not met. The commenter requests that these waters not be delisted until data shows that the applicable DO criterion is met.

NYSDEC responds that these waters had been included in Appendix B of the Section 303(d) List as Waterbodies Not Meeting Dissolved Oxygen Standards Pending Verification of Use Impairments/Pollutants/ Sources. It is acknowledged in Appendix B that "morphology and other natural conditions may contribute to periodic dissolved oxygen depletion at lower depths in significant numbers of thermally stratified waters." Although USEPA has noted that NYS water quality standards include no exception for no natural conditions (such language is proposed in New York's next water quality standards rule), it was agreed that listing of all waters where DO falls below the applicable "never less than" value in limited, non-representative potions of a waterbody (estimated in previous DEC lakes assessments to be about 70% of all NYS lakes) provides no value and would be inappropriate. Appendix B was established to identify the subset of the majority of NYS waters that have some periodic (and non-representative) occurrences of DO below the standard, where NYSDEC has not evaluated whether or not the low DO is causing an actual impairment and/or whether the low DO is naturally occurring. In other words, Appendix B is not a listing of all waters where "never less than" DO standards are ever exceeded, but rather it is a list of those waters where low DO has not been evaluated to determine if uses are impaired and/or if the low DO is due to anthropogenic, rather than natural, sources.

In the case of this, and three other, lakes, NYSDEC is not claiming that these waters meet USEPA's overly-stringent interpretation of the "never less than" DO standards. Rather NYSDEC has completed an evaluation and has determined – based on the health of the aquatic (fishery) community, the long history of low DO, the lack of other sources, or other evidence – that low DO in the waterbody is naturally occurring and any impacts do not rise to the level of impairment of uses.

Pace Environmental Litigation Clinic (Pace) commented regarding
Esopus Creek (multiple segments) listings for Turbidity
Pace commented that the listing of Middle and Lower Esopus Creek should be moved to Part 1 of the Section 303(d) List and that a TMDL for turbidity for these waters be expedited.

NYSDEC responds that all waterbody/pollutants listings on the Section 303(d) List require the development of a TMDL. However the prioritization of waterbody/pollutant listings for TMDL development, reflected in the segregation of the List into different parts, is left to the discretion of the states. The listing of Esopus Creek in Part 3c of the List and deferring of TMDL development at this time is appropriate. However NYSDEC notes that the conditions that resulted in the original listing – high turbidity resulting from storms Irene and Lee in 2011 – have long-since subsided and more recent evaluations indicate that these waters are meeting water quality standards.

USEPA Region 2 commented regarding
Fort Pond (1701-0122) listing for Low Dissolved Oxygen (Appendix B)
USEPA commented that NYSDEC has proposed to delist Fort Pond (1701-0122) for low dissolved oxygen (DO) due to attainment of the applicable DO criterion. However NYSDEC data provided to USEPA indicate that the applicable DO criterion is sometimes not met. The commenter requests that these waters not be delisted until data shows that the applicable DO criterion is met.

NYSDEC responds that these waters had been included in Appendix B of the Section 303(d) List as Waterbodies Not Meeting Dissolved Oxygen Standards Pending Verification of Use Impairments/Pollutants/ Sources. It is acknowledged in Appendix B that "morphology and other natural conditions may contribute to periodic dissolved oxygen depletion at lower depths in significant numbers of thermally stratified waters." Although USEPA has noted that NYS water quality standards include no exception for no natural conditions (such language is proposed in New York's next water quality standards rule), it was agreed that listing of all waters where D.O. falls below the applicable "never less than" value in limited, non-representative potions of a waterbody (estimated in previous DEC lakes assessments to be about 70% of all NYS lakes) provides no value and would be inappropriate. Appendix B was established to identify the subset of the majority of NYS waters that have some periodic (and non-representative) occurrences of D.O. below the standard, where NYSDEC has not evaluated whether or not the low D.O. is causing an actual impairment and/or whether the low D.O. is naturally occurring. In other words, Appendix B is not a listing of all waters where "never less than" D.O. standards are ever exceeded, but rather it is a list of those waters where low D.O. has not been evaluated to determine if uses are impaired and/or if the low D.O. is due to anthropogenic, rather than natural, sources.

In the case of this, and three other lakes, NYSDEC is not claiming that these waters meet USEPA's overly-stringent interpretation of the "never less than" DO standards. Rather NYSDEC has completed an evaluation and has determined – based on the health of the aquatic (fishery) community, the long history of low D.O., the lack of other sources, or other evidence – that low D.O. in the waterbody is naturally occurring and any impacts do not rise to the level of impairment of uses.

USEPA Region 2 commented regarding
Glen Cove Creek, Lower (1702-0146) listing for Pathogens
USEPA commented that NYSDEC had indicated in discussions subsequent to issuing the Draft List that available data and information do not support delisting Glen Cove Creek for pathogens. Consistent with these discussions, Glen Cove Creek, Lower and tributaries should be included on the final 2016 303(d) list for pathogens.

NYSDEC responds that they concurs with this comment. The listing for Glen Cove Creek will remain on the Final 2016 List. However the listing will be moved from Part 1 to Part 3a reflecting the need for further verification of conditions in the Creek.

Town of Southold commented regarding
Gull Pond (1701-0231) listing for pathogens
The Town of Southold requested that the Department remove Gull Pond from the Section 303(d) list as it was inappropriately identified as a Class SA water, when its true classification is SC. An SC water is not classified to support shellfishing uses and therefore would not warrant listing for failure to meet pathogen criteria corresponding to shellfishing use.

NYSDEC responds that the listing of Gull Pond was made in error and that it is indeed a Class SC water. The Section 303(d) listing for Gull Pond will be removed. The WI/PWL fact sheet for Gull Pond will also be updated.

New York City Department of Environmental Protection (NYCDEP) comments regarding
Harlem Meer (1702-0103) listing for Phosphorus
NYCDEP requests that NYSDEC clarify the basis for listing this lake (and other NYC lakes) and share the data sets for the assessments supporting the listing.

NYSDEC responds that monitoring of this lake was conducted in coordination with NYC Parks during 2015. Results of sampling of Harlem Meer found high levels of phosphorus and chlorophyll, poor water clarity and occurrences of harmful algal blooms (HABs) that meet criteria for impairment of recreational uses. The data for specific lakes can be obtained from the USEPA Water Quality Data Portal (http://waterqualitydata.us/) or by submitting an online Freedom of Information Law request to NYSDEC using the department's website (http://www.dec.ny.gov/public/103696.html).

Private Individual (K. DiMaso) commented regarding
Hillside Lake (1304-0001) listing for Phosphorus
A private individual requested that Urban/Stormwater Runoff be included as a suspected source on the Section 303(d) List for Hillside Lake. The commenter also expressed concern regarding the local municipalities' compliance with the requirements of MS4 (stormwater) permits.

NYSDEC responds that Urban/Stormwater Runoff is included as a suspected source in the Waterbody Inventory/Priority Waterbodies List (WI/PWL) Fact Sheet for Hillside Lake. The WI/PWL database provides an opportunity to capture more robust and detailed information about impacts, pollutants, sources and other water quality information than can be captured in the one-line listings on the Section 303(d) List. The review and update of the WI/PWL assessment information is a continuous process, with the Fact Sheets updated as sampling results and/or other water quality information becomes available. NYSDEC will revisit the assessment for this waterbody and update the appropriate cause, source and other information.

Town of East Hampton commented regarding
Hog Creek and tidal tribs (1701-0277) listing for pathogens
The Town of East Hampton provided information disputing the Department's assertion that *Urban/Storm Runoff* is the source of impairment for high pathogen levels in Hog Creek, and requested the waterbody be moved from Part 2c of the list, to Part 3b for Unknown Sources. The commenter provided a map showing limited inputs to Hog Creek and a statement that the town follows a strict minimal clearing practice for development in the watershed.

NYSDEC responds that the source category of *Urban/Storm Runoff* is not intended to be limited to urban runoff generally associated with MS4 areas, but also includes other nonpoint runoff from less developed lands. However the sources of impairment for this listing are disputable and therefore the suspected source of the impairment will be changed from *Urban/Storm Runoff* to *Unknown/Multiple Sources*. However continued inclusion of the waterbody/pollutant on Part 2c of the List as a shellfishing impaired water is appropriate due to closures issued by NYSDEC Shellfisheries Program and the National Shellfish Sanitation Program. Identification of the loadings from various known and unknown sources is needed. But this evaluation would be appropriate to undertake as part of a TMDL. (See also the *Listing Decision for Uncertified Shellfishing Waters* discussion in the *General Response to Comments on Section 303(d) List* section of this document.)

Pace Environmental Litigation Clinic (Pace) commented regarding
Hudson River (multiple segments) listings for PCBs and other contaminants
Pace commented that a TMDL for PCBs and other contaminants in the Hudson River should be expedited.

NYSDEC responds that all waterbody/pollutants listings on the Section 303(d) List require the development of a TMDL. However the prioritization of these listings for TMDL development reflect a number of factors, including the likelihood of a TMDL resulting in the reduction of the target contaminants. As the commenter pointed out, there are a number of other actions being taken to reduce contaminants in the river. However at this point a TMDL for PCBs in the Hudson is not seen by NYSDEC as a high priority.

New York City Department of Environmental Protection (NYCDEP) comments regarding
Kissena Lake (1702-0258) listing for Phosphorus

NYCDEP requests that NYSDEC clarify the basis for listing this lake (and other NYC lakes) and share the data sets for the assessments supporting the listing.

NYSDEC responds that monitoring of these lakes was conducted in coordination with NYC Parks during 2015. Results of sampling of Kissena Lake found high levels of phosphorus and chlorophyll, poor water clarity and occurrences of harmful algal blooms (HABs) the meet criteria for impairment of recreational uses. The data for specific lakes can be obtained from the USEPA Water Quality Data Portal (http://waterqualitydata.us/) or by submitting an online Freedom of Information Law request to NYSDEC using the department's website (http://www.dec.ny.gov/public/103696.html).

New York City Department of Environmental Protection (NYCDEP) commented regarding
The Lake in Central Park (1702-0105) listing for Phosphorus
NYCDEP requests that NYSDEC clarify the basis for listing this lake (and other NYC lakes) and share the data sets for the assessments supporting the listing.
NYSDEC responds that monitoring of these lakes was conducted in coordination with NYC Parks during 2015. Results of sampling of Central Park Lake found high levels of phosphorus and chlorophyll, poor water clarity and occurrences of harmful algal blooms (HABs) that meet

criteria for impairment of recreational uses. The data for specific lakes can be obtained from the USEPA Water Quality Data Portal (http://waterqualitydata.us/) or by submitting an online Freedom of Information Law request to NYSDEC using the department's website (http://www.dec.ny.gov/public/103696.html).

USEPA Region 2 commented regarding
Lake Como (0705-0029) listing for HABs/Phosphorus
USEPA commented that recreational use of Lake Como is impaired due to the presence of harmful algal blooms in 2015. According to information sent to NYSDEC during the data solicitation period, the Cayuga County Health Department, on multiple occasions, advised the public to avoid swimming or otherwise exposing themselves to the lake due to the blooms. This indicates that the narrative nutrient standard ("None in amounts that will result in growths of algae, weeds and slimes that will impair the waters for their best usages") is not being met. Lake Como therefore, should be included on the 2016 Section 303(d) list.

NYSDEC responds that USEPA suggests that since Lake Como experiences harmful algal blooms (HABs) that impair the waters of the Lake for recreational use, that is automatic evidence of a violation of the narrative nutrient standard and justification for a listing for phosphorus. NYSDEC disagrees with the premise that excessive nutrient levels are the only possible explanation for algal growth. In fact, there are increasing examples of waterbodies that experience HABs even though the measured level of nutrients in the water are surprisingly low, signaling that the cause of HABs and the HABs-related impairment can be something other than nutrient load. Lake Como is not the clearest example of this condition, as summer average total phosphorus levels in the lake in recent years range from 21 to 29 ug/l. However other important lake trophic indicators such as chloropyll-a and lake clarity do not approach impairment thresholds, suggesting that HABs issues in this case follow the traditional eutrophication pathways. See also the *Harmful Algal Boom* discussion in the *General Response to Comments on Section 303(d) List* section above.

NYSDEC supports the assessment of Lake Como as impaired due to HABs, but is hesitant to list the lake for phosphorus and pursue a phosphorus TMDL until there is a better understanding of the specific causes for HABs in the Lake. NYSDEC suggests that IR Category 4c or IR Category 3 are more consistent with the current assessment of conditions and represents the most appropriate assignment for this waterbody.

USEPA Region 2 commented regarding
Laurel Pond (1701-0128) listing for Low Dissolved Oxygen (Appendix B)
USEPA commented that NYSDEC has proposed to delist Laurel Pond (1701-0128) for low dissolved oxygen (DO) due to attainment of the applicable DO criterion. However NYSDEC data provided to USEPA indicate that the applicable DO criterion is sometimes not met. The commenter requests that these waters not be delisted until data shows that the applicable DO criterion is met.

NYSDEC responds that these waters had been included in Appendix B of the Section 303(d) List as Waterbodies Not Meeting Dissolved Oxygen Standards Pending Verification of Use Impairments/Pollutants/ Sources. It is acknowledged in Appendix B that "morphology and other

natural conditions may contribute to periodic dissolved oxygen depletion at lower depths in significant numbers of thermally stratified waters." Although USEPA has noted that NYS water quality standards include no exception for no natural conditions (such language is proposed in New York's next water quality standards rule), it was agreed that listing of all waters where D.O. falls below the applicable "never less than" value in limited, non-representative potions of a waterbody (estimated in previous DEC lakes assessments to be about 70% of all NYS lakes) provides no value and would be inappropriate. Appendix B was established to identify the subset of the majority of NYS waters that have some periodic (and non-representative) occurrences of D.O. below the standard, where NYSDEC has not evaluated whether or not the low D.O. is causing an actual impairment and/or whether the low D.O. is naturally occurring. In other words, Appendix B is not a listing of all waters where "never less than" D.O. standards are ever exceeded, but rather it is a list of those waters where low D.O. has not been evaluated to determine if uses are impaired and/or if the low D.O. is due to anthropogenic, rather than natural, sources.

In the case of this, and three other, lakes, NYSDEC is not claiming that these waters meet USEPA's overly-stringent interpretation of the "never less than" DO standards. Rather NYSDEC has completed an evaluation and has determined – based on the health of the aquatic (fishery) community, the long history of low D.O., the lack of other sources, or other evidence – that low D.O. in the waterbody is naturally occurring and any impacts do not rise to the level of impairment of uses.

New York City Department of Environmental Protection (NYCDEP) commented regarding **Little Neck Bay (1702-0029) for Pathogens**
NYCDEP commented that Little Neck Bay is again listed as impaired due to pathogens, although NYCDEP has submitted a Long Term Control Plan (LTCP) for Alley Creek and Little Neck Bay to address pathogens. They request that Little Neck Bay be delisted for the same reason that Alley Creek/Little Neck Bay Tributary were delisted under category 4b. NYCDEP also pointed out that they submitted a similar comment during the creation of the 2014 List.

NYSDEC responds by reiterating (from its 2014 response to NYCDEP comments on this listing) that additional sources other than CSOs (i.e., failing/inadequate onsite septic systems) contribute to the Little Neck Bay pathogen listing, and that the waterbody cannot be delisted until those additional sources are addressed. These additional sources are the reason Little Neck Bay was not delisted with other New York City CSO waters in 2012 or 2014.

Town of Southold commented regarding
Mattituck (Marratooka) Pond (1701-0129) listing for phosphorus
The Town of Southold requested the listing for phosphorus be modified to reflect an alternate suspected pollutant source and the phosphorus listing be moved from list Part 1 to Part 3c.

NYSDEC responds that the request to modify the suspected source of impairment was supported by data submitted by the commenter in September 2015. The Department reviewed the data and agreed that the previous source listing, 'Urban/Storm Runoff,' was probably not the most appropriate and will change the suspected source to 'Other (in-lake recycling)' as suggested. Part

1 of the draft 303(d) List released in January modified the suspected source of phosphorus impairment is Mattituck Pond from 'Urban/Storm Runoff' to 'Other (in-lake recycling)'.

The request to move the phosphorus listing for Mattituck Pond from list Part 1 (Individual Waterbody Segments with Impairment Requiring TMDL Development) to Part 3c (Waterbodies for which TMDLs Are Deferred (Pending Development/Implementation/Evaluation of Other Restoration Measures)) was included in the commenter's comment on the Draft List (not included in their September submission) and no additional supporting data accompanied it. The commenter believes that a TMDL is not appropriate for this waterbody due to the nature of the suspected impairment source. The commenter's previously provided data does not provide enough evidence for the Department to completely rule out a TMDL as a solution to phosphorus impairment in this waterbody. The waterbody will remain on Part 1 for phosphorus impairment.

Town of Southold commented regarding
Mattituck (Marratooka) Pond (1701-0129) listing for pathogens
The Town of Southold requested the pathogen impairment listing for Mattituck Pond be moved from Part 3c (Waterbodies for which TMDLs Are Deferred (Pending Development/Implementation/Evaluation of Other Restoration Measures)) to Part 3a (Waterbodies for which TMDL Development May be Deferred (Requiring Verification of Impairment)).

NYSDEC responds that the commenter did not provide any additional pathogen sampling data to support that there is no pathogen impairment in the waterbody or that uses (drinking water and recreation) are supported. The commenter believes there is insufficient data to support the continued listing of this water in Part 3c and 3a is more appropriate due to this lack of data. In consultation with USEPA Region 2, the pathogen impairment in the waterbody is presumed due to the abundance of wildlife (waterfowl) sources, but the appropriate abatement of the pathogen pollution is uncertain. Because wildlife sources are difficult to address with a TMDL, the Department stands by its original decision to list Mattituck Pond in Part 3c.

New York City Department of Environmental Protection (NYCDEP) comments regarding
Meadow Lake (1702-0030) listing for Phosphorus
NYCDEP requests that NYSDEC clarify the basis for listing this lake (and other NYC lakes) and share the data sets for the assessments supporting the listing.

NYSDEC responds that monitoring of these lakes was conducted in coordination with NYC Parks during 2015. Results of sampling of Meadow Lake found high levels of phosphorus and chlorophyll, and poor water clarity that meet criteria for impairment of recreational uses. The data for specific lakes can be obtained from the USEPA Water Quality Data Portal (http://waterqualitydata.us/) or by submitting an online Freedom of Information Law request to NYSDEC using the department's website (http://www.dec.ny.gov/public/103696.html).

Ausable River Association commented regarding
Mirror Lake (1004 0067) listing for dissolved oxygen
The Ausable River Association provided data that supports the addition of Mirror Lake (Essex County, NY) to the list due to possible dissolved oxygen (DO) impairment.

NYSDEC responds that the data was submitted after the September 30 (2015) cut-off date for submittal of data in response to the data solicitation for development of the 2016 Section 303(d) List. The 303(d) listing process begins in the spring of the year prior to updating the List with a solicitation of data from the public to suggest (with supporting documentation) waters for listing/delisting. We use this solicited data, along with in-house data, to arrive at a Draft Section 303(d) List that is released for public comment. From that point forward, additions/delistings are generally limited to those that were considered in the Draft List. It would be inappropriate to add/delist waters not previously considered, because there is no second opportunity for the public to support/rebut a newly listed/delisted water. Conducting a second public comment period is not practical, because the Department must stay on schedule to deliver a finalized List to USEPA by our April 1, 2016, deadline. (See also the *Additional Data Submitted During the Public Comment Period* discussion in the *General Response to Comments on Section 303(d) List* section of this document.)

In the case of Mirror Lake, the department will review the data submitted to update the WI/PWL fact sheet for the lake accordingly. The Department may conduct further monitoring of Mirror Lake to confirm the data and possible sources/causes of the impairment and will consider it for inclusion in the next List.

Pace Environmental Litigation Clinic, Inc. commented regarding
New York City CSO Waters (multiple segs) listings for Pathogens, Low Dissolved Oxygen
The commenter requested the relisting of previously delisted waters impacted by New York City combined sewer overflows (CSOs). The commenter stated that the delisting of these waters as IR Category 4b waters, for which there are other required control measures are in place to address the impairment, is not justified and inappropriate.

NYSDEC responds that USEPA reviewed and approved in 2012 the delisting of 27 waterbody/pollutant listings and the reassignment of these listings to Integrated Reporting (IR) Category 4b as waterbody/pollutant impairments where required control measures other than a TMDL are expected to result in attainment of water quality standards within a reasonable period of time. In its review and approval of the 2012 NYS Section 303(d) List, USEPA determined that the 2005 New York City CSO Order (as subsequently modified) is consistent with the National CSO Control Policy and that pursuant to this policy the Long Term Control Plans (LTCPs), when implemented, are expected to result in the attainment of water quality standards.

However, although USEPA's previous decision that the requirements of the NYC CSO Order provide adequate justification for the delisting of these waters as IR Category 4b waters remains in place, NYSDEC is choosing to return some New York City CSO-impacted waters to Part 3c of the 2016 Section 303(d) List as waterbodies for which TMDL development is deferred pending the development and evaluation of other restoration measures (specifically, the LTCPs). This approach will provide additional assurance, beyond what was deemed necessary for delisting, that the LTCPs to adequately address CSO impairment will be forthcoming in a timely manner. See also *Pace Environmental Litigation Clinic, Inc. commented regarding Exclusion of Waters from the List Using IR Category 4b* in the *General Response to Comments on CALM Assessment/Listing Methodologies* section above, and in Appendix D below.)

The Onondaga Nation commented regarding
Onondaga Creek (multiple segments) listings for Turbidity, and Salinity
The Onondaga Nation commented that the identified suspected source of *Streambank Erosion* for the current listing of turbidity in Onondaga Creek is not appropriate and should more clearly reflect the contribution of the "mudboils" in the upper creek. The Nation also commented that an additional listing for the upper reaches of Onondaga Creek for salinity be included on the 2016 Section 303(d) List. The Nation submitted sampling data from the Onondaga Environmental Institute for salinity and other related parameters.

NYSDEC responds that given the constraints of the one-line listings in the Section 303(d) List, the terms for pollutants and sources are often more general and lack the specificity appropriate for individual situations. Additionally, the specific pollutants and sources are drawn from an established list, which also limits the flexibility to be more specific. However for each listing – in fact, for all waterbodies of the state – NYSDEC maintains a corresponding Waterbody Inventory/Priority Waterbodies List (WI/PWL) assessment Fact Sheet, where water quality issues are discussed in greater detail. For the Onondaga Creek segments, these fact sheets include the more specific discussion of sources – including the Tully mudboils. In addition, NYSDEC will add to the currently listed suspected source of *Streambank Erosion* (again, the most appropriate source of the choices available) a parenthetical note specifying the mudboils. NYSDEC believes that this change to the listing appropriately capture the issue raised in this comment regarding the recognition of mudboils, at least within the limitations of the List format.

Regarding the request to add a listing for salinity, NYSDEC responds that a review of the data provided shows that the average salinity for most (all but 4 of 38) sites for which data was submitted is less than 1 part per thousand (or gram/liter), 1 g/l being the upper threshold for freshwaters. At the 3 upstream sites below the mudboils, the averages of salinity (1.00 - 1.12 g/l) were just above the 1 g/l threshold for freshwaters, but at the lower end of the range of 1.0 - 3.0 g/l for slightly saline waters. The only site where the average was higher (@ W. Kirkpatrick St) had an average salinity that was 1.79g/l, also within the 1.0-3.0 g/l range for slightly saline waters. This increase was attributed to the influence of a spring near the site. While NYSDEC recognizes and shares some concern regarding the increase in salinity at these two locations on the stream, these levels do not rise to the level of an impairment to uses or exceedence of water quality criteria (although NYSDEC does not have a standard for salinity specifically, as noted above results for most sites fall within the accepted range for freshwaters), and thus a listing of the Onondaga Creek as impaired for salinity is not justified. However the concerns you raise regarding salinity and total dissolved solids are also captured in the more robust assessment WI/PWL fact sheets for the Creek. These WI/PWL fact sheets include the identification and discussion of salt and salinity impacts on the stream.

Owasco Watershed Lake Association (OWLA) and
Cayuga County Water Quality Management Agency and
Cayuga County Health Department and
Cayuga County Department of Planning and Economic Development and
USEPA Region 2, and
additional individuals commented regarding
Owasco Lake (0706-0009) listing for Phosphorus
The commenters requested a listing for Owasco Lake for phosphorus based on occurrences of harmful algal blooms on the Lake in recent years and the resulting impacts to recreational and water supply uses. These requests include phosphorus data sets that were collected in Lake tributaries and directly in algal blooms. Also cited were findings from monitoring for the Lake conducted by the Finger Lakes Institute (FLI).

NYSDEC responds that it has been unequivocal in its agreement with the commenters that harmful algal blooms (HABs) cause an impairment in Owasco Lake. However the available data for phosphorus levels (and the additionally important eutrophication indicators chlolophyll-*a* and water clarity) in the open lake are well below criteria indicating an impairment. Therefore, although NYSDEC acknowledges an impairment due to HABs, a Section 303(d) Impaired/TMDL Waters Listing for phosphorus in the Lake is not justified at this time. (See also the *Harmful Algal Blooms* discussion in the *General Response to Comments on Section 303(d) List* section of this document.)

Some of the commenters reference the NYSDEC narrative nutrient standard that limits nutrients (phosphorus, nitrogen) to amounts that do not result is growths of algae. They then make the assumption that any growth of algae is clear justification that the narrative nutrient standard is not being met and the waterbody should be listed for phosphorus or nitrogen. NYSDEC disagrees with the premise that excessive nutrient levels are the only possible explanation for algal growth. In fact, there are increasing examples of waterbodies that experience HABs even though the measured level of nutrients in the water are surprisingly low, signally that the cause of HABs and the HABs-related impairment can be something other than nutrient load.

In the case of Owasco Lake the annual mean total phosphorus concentration for the Lake (15.5 ug/l, 2015 FLI Report) was well below the water quality criterion of 20 ug/l. Regarding these findings FLI explicitly stated in their report that the Lake is not impaired due to phosphorus. Overall the trophic status of Owasco Lake is near the oligotrophic/mesotrophic boundary, again suggesting that the HABs in the Lake are not driven by traditional nutrient eutrophication pathways. NYSDEC supports the continued assessment of Owasco Lake as impaired due to HABs, but is hesitant to list the Lake for phosphorus and pursue a phosphorus TMDL because that pollutant is already below the levels of concern.

However due to the significance of the HABs in the Lake in recent years but also recognizing that by standard measures the Lake is not impaired by phosphorus, NYSDEC proposes an alternative to a phosphorus listing. NYSDEC has added Owasco Lake to the Part 3b of the 2016 Section 303(d) List as a waterbody for which TMDL development is be deferred (pending verification of cause/pollutant/sources). However the specified Cause/Pollutant accompanying this listing is “Unknown” with a footnote capturing the points discussed previously regarding

generally lower phosphorus levels and the need to better understand the dynamics of the Lake and cause of the HABs.

Town of East Hampton commented regarding
Oyster Pond/Lake Munchogue (1701-0169) listing for pathogens

The Town of East Hampton requested that Oyster Pond and Lake Munchogue, both in Montauk, NY and listed as impaired for pathogens, be removed from Part 2c of the List and placed in Part 3c. The justification provided by the commenter for moving these waterbodies on the List was the data supporting their current listing was old and no longer reflected the current state of these waters. No monitoring data was provided or cited demonstrating that the waters currently meet pathogen standards. The commenter also disputed the cause of impairment (currently listed as *Urban/Storm Runoff*) for these waters, citing that there is little to no urban/suburban development in the watershed.

NYSDEC responds that aging of the data alone does not warrant delisting or relocating a waterbody within the List, there must be new sampling data or a remedy applied to justify such changes. Furthermore, designation of waters as impaired for shellfishing use is based on shellfishing certifications issued by NYSDEC Shellfisheries Program and the National Shellfish Sanitation Program. Since this waterbody is currently not certified for shellfishing, continued listing on Part 2c of the List is appropriate, as the waterbody meets this impairment threshold. No modifications will be made to the list location of Oyster Pond and Lake Munchogue in the 2016 List. The Department will modify the source of pollution associated with the listing to read 'Unknown/Multiple Source.' (See also the *Listing Decision for Uncertified Shellfishing Waters* discussion in the *General Response to Comments on Section 303(d) List* section of this document.)

Orange County Department of Public Works and
Orange County Sewer District #1 commented regarding
Ramapo River, Upper (1501-0037) listing for Phosphorus, Low DO, and Silt/Sediment.
The Orange County Department of Public Works and Orange County Sewer District #1 (collectively "the County") requests the addition of a listing of Upper Ramapo for phosphorus to the 2016 Section 303(d) List; data in support of this request was also provided. The County also urges NYSDEC to establish Clean Water Plan and appropriate TMDLs for the Upper Ramapo River Basin.

NYSDEC responds that the data supporting the addition to the List was submitted after the September 30 (2015) cut-off date for submittal of data in response to the data solicitation for development of the 2016 Section 303(d) List. The 303(d) listing process begins in the spring of the year prior to updating the List with a solicitation of data from the public to suggest (with supporting documentation) waters for listing/delisting. We use this solicited data, along with in-house data, to arrive at a Draft Section 303(d) List that is released for public comment. From that point forward, additions/delistings are generally limited to those that were considered in the Draft List. It would be inappropriate to add/delist waters not previously considered, because there is no second opportunity for the public to support/rebut a newly listed/delisted water.

Conducting a second public comment period is not practical, because the Department must stay on schedule to deliver a finalized List to USEPA by our April 1, 2016, deadline.

The department will review the submitted data to update the WI/PWL fact sheet for the waterbody accordingly. The Department may conduct further monitoring of the waterbody to confirm the water quality conditions and will consider it for inclusion in the next List.

Regarding Clean Water Planning for the Upper Ramapo River Basin, NYSDEC strongly supports using a watershed-based approach to outline a strategy for improving water quality. A handbook for developing watershed plans to restore and protect waters has been developed by the United States Environmental Protection Agency (EPA) and may be found on their website at: https://www.epa.gov/polluted-runoff-nonpoint-source-pollution. Additional information regarding Clean Water Plans is also available on the NYSDEC website at http://www.dec.ny.gov/chemical/23835.html.

Town of Southampton commented regarding
Scallop Pond (1701-0354) listing for Pathogens
The Town of Southampton provided information indicating year-round fecal coliform levels in Scallop Pond meet the Class SA criteria for shellfishing. Scallop Pond is located in the Town of Southampton, Suffolk County, NY. Scallop Pond was originally added to the list in 2002 due to seasonal shellfish closure.

NYSDEC responds that the submitted data shows water quality improvements with regard to pathogens. However this data is insufficient to support year-round certification of the waterbody for shellfishing. Also, no updated certifications have been issued by NYSDEC Shellfisheries Program and the National Shellfish Sanitation Program demonstrating the waterbody now meets designated uses. To recognize that water quality is improving for the segment, the listing will be updated with a footnote detailing the observed water quality improvements. The source of impairment will also be updated from *Urban/Storm Runoff* to *Unknown/Multiple Sources* to reflect the uncertainty of the impairments source as detailed by the data submitted. (See also the *Listing Decision for Uncertified Shellfishing Waters* discussion in the *General Response to Comments on Section 303(d) List* section of this document.)

Town of Southold commented regarding
Spring Pond (1701-0230) listing for Pathogens
The Town of Southold requested that Spring Pond, located near East Marion, currently impaired for pathogens that prohibit shellfishing uses, be moved from Part 3c of the List to Part 3a. The commenter suggests this move is justified because the original listing is based on older sampling data and the arbitrary nature of 'administrative closure' practices that prohibit shellfishing based on proximity to marinas and high density moorings.

NYSDEC responds that aging of the data alone does not warrant delisting or relocating a waterbody within the list, there must be new sampling data to justify such changes. Furthermore designation of waters as impaired for shellfishing use is based on shellfishing certifications issued by NYSDEC Shellfisheries Program and the National Shellfish Sanitation Program. Since this waterbody is currently not certified for shellfishing, verification of impairment is not

necessary. The waterbody was previously moved to Part 3c to recognize that the impairment might not be appropriate to address with a TMDL. (See also the *Listing Decision for Uncertified Shellfishing Waters* discussion in the *General Response to Comments on Section 303(d) List* section of this document.)

Ausable River Association commented regarding
Taylor Pond (and Mud Pond) (1004-0063) listing for Low Dissolved Oxygen
The Ausable River Association provided data that supports the removal of Taylor Pond (Clinton County, NY) from Appendix B of the list due to possible dissolved oxygen (DO) impairment.

NYSDEC responds that the data was submitted after the September 30 (2015) cut-off date for submittal of data in response to the data solicitation for development of the 2016 Section 303(d) List. The 303(d) listing process begins in the spring of the year prior to updating the List with a solicitation of data from the public to suggest (with supporting documentation) waters for listing/delisting. We use this solicited data, along with in-house data, to arrive at a Draft Section 303(d) List that is released for public comment. From that point forward, additions/delistings are generally limited to those that were considered in the Draft List. It would be inappropriate to add/delist waters not previously considered, because there is no second opportunity for the public to support/rebut a newly listed/delisted water. Conducting a second public comment period is not practical, because the Department must stay on schedule to deliver a finalized List to USEPA by our April 1, 2016, deadline. (See also the *Additional Data Submitted During the Public Comment Period* discussion in the *General Response to Comments on Section 303(d) List* section of this document.)

In the case of Taylor Pond, the department will review the data submitted to update the WI/PWL fact sheet for the lake accordingly. The data will be considered in the 2018 listing cycle to remove Taylor Pond from Appendix B. The commenter is encouraged to resubmit this data and any additional data in 2017 for consideration in the development of the 2018 Section 303(d) list.

Bronx Council for Environmental Quality (BCEQ) and
Friends of Van Cortlandt Park (FVCP) commented regarding
Van Cortlandt Lake (1702-0008) listing for Phosphorus
The BCEQ and FVCP request the inclusion of the local community in NYSDEC plans to develop a TMDL, or for NYSDEC assistance with preparing a third-party TMDL. In addition to participating in the TMDL development process, BCEQ and FVCP would like to participate in the monitoring and assessment process, particularly the assessment and subsequent WI/PWL update activities.

NYSDEC responds that while a TMDL has yet to be developed for Van Cortlandt Lake, the department applauds the efforts of the BCEQ and FVCP in working with the surrounding community to create awareness, restoration and protection for Van Cortlandt Lake. The department supports and encourages an all-inclusive TMDL development process. Should the BCEQ and FVCP decide to develop a third-party TMDL or a Nine Element Watershed Plan, they should coordinate with the NYSDEC. Regarding participation in the monitoring and assessment process, NYSDEC also supports and encourages public involvement. The review and update of the WI/PWL assessment information is a continuous process. Waterbody

Assessment Fact Sheets are updated as sampling results and/or other water quality information becomes available. Review of the water quality assessments and participation in the WI/PWL update process is open to the public. BCEQ and FVCP are welcome to comment via email on specific water quality assessments at any time. For more information send an email to: 4pwlinfo@dec.ny.gov.

Riverkeeper, Inc. commented regarding
Wallkill River and other Hudson River Tribs (multiple segments) listings for Pathogens
Riverkeeper provided pathogen (enteroccocus) data during the data solicitation and requested consideration of listings for these waterbodies. After the issuing of the Draft List, Riverkeeper met with NYSDEC to discuss the submitted data and NYSDEC's basis for not adding pathogen listings for these waters to the List. Riverkeeper also provided formal comments on the Draft List during the public comment period. In their comments Riverkeeper acknowledged the prior discussions with NYSDEC, and NYSDEC's plans to use the Riverkeeper data to update the Waterbody Inventory/Priority Waterbodies List (WI/PWL) to better characterize conditions in these waters and to prioritize future sampling investigations and other efforts. The commenter also outlined specific considerations that should be taken into account during the updating of the WI/PWL assessments for these waters. These included the suggestion that the enterococcus data as compared against the USEPA Recreational Water Quality Criteria (RWQC) should be used to identify suspected impaired waters in the WI/PWL, that the RWQC should be used to assess all classes of waters, that the Riverkeeper data supports a designation of water quality impairment as "suspected" rather than "unconfirmed," that the data supports that pathogens are "known" pollutants."

NYSDEC responds that enterococcus and E-coli data exceedences of the USEPA RWQC are not used for making Section 303(d) List determinations because these criteria have not been adopted into NYSDEC water quality standards. These data will, however, be used to update the WI/PWL assessments for these waters. (In separate comments, USEPA concurred with this approach.) The updating of the WI/PWL assessments will commence after the Section 303(d) List process has concluded. That update process will provide local stakeholders – including Riverkeeper – with additional opportunity for input and comment. The specific recommendations for the WI/PWL assessments of these waters submitted during the Section 303(d) List public comment period will be considered during the WI/PWL update process.

New York City Department of Environmental Protection (NYCDEP) comments regarding
Willow Lake (1702-0031) listing for Phosphorus
NYCDEP requests that NYSDEC clarify the basis for listing this lake (and other NYC lakes) and share the data sets for the assessments supporting the listing.

NYSDEC responds that monitoring of these lakes was conducted in coordination with NYC Parks during 2015. Results of sampling of Willow Lake found high levels of phosphorus and chlorophyll, and poor water clarity that meet criteria for impairment of recreational uses. The data for specific lakes can be obtained from the USEPA Water Quality Data Portal (http://waterqualitydata.us/) or by submitting an online Freedom of Information Law request to NYSDEC using the department's website (http://www.dec.ny.gov/public/103696.html).

APPENDIX A

2016 Section 303(d) List – Public Comment Log

Waterbody	Commenter	Comment/Issue
Agawam Lake	Village of Southampton (M. Epley) SUNY – SMAS (C. Gobler)	Request to add Lake Agawam to the List for HABs. Action: Lake moved from Apdx B to Part 1; pollutant changed to Phosphorus/Low D.O.
Alley Creek/Little Neck Bay	NYCDEP (M. Eckels)	Request to correct reference to NYC CSO Order. Action: Reference corrected to 2005 NYC CSO Order as subsequently modified.
Beach/Island Ponds, Fishers Island	Town of Southold (M.Collins)	Request to move the listing to Part 3a because of the need to verify impairment due to the age of the data. Action: No change to List. Placement in Part 3c is appropriate.
Cassadaga Lakes, Lower/Middle	EPA Region 2 (D. Flint)	Request for additional data supporting delisting of these lakes for phosphorus. Action: Continued listing (Part 3a) for Middle Cassadaga Lk; Lower Cassadaga to be delisted.
Cassadaga Lake, Upper (Appendix B)	EPA Region 2 (D. Flint)	Commented that low D.O. lakes cannot be delisted until the applicable DO criterion are met. Action: No change to Draft List. See full response above.
Cuba Lake (Appendix B)	EPA Region 2 (D. Flint)	Commented that low D.O. lakes cannot be delisted until the applicable DO criterion are met. Action: No change to Draft List. See full response above.
Esopus Creek	Pace (T. Ommen)	Request to move listing to Part 1 and for NYSDEC to develop a TMDL for turbidity. Action: No change to List.
Fort Pond (Appendix B)	EPA Region 2 (D. Flint)	Commented that low D.O. lakes cannot be delisted until the applicable DO criterion are met. Action: No change to Draft List. See full response above.
Glen Cove Creek, Lower	EPA Region 2 (D. Flint)	Request that the creek continue to be listed for pathogens; inadequate justification for delisting. Action: Continued listing, but moved from Part 1 to Part 3a of the List.
Gull Pond	Town of Southold (M.Collins)	Request to delist the pond since as an SC water it should not be evaluated for shellfishing use. Action: Waterbody/pollutant to be removed from the List.
Harlem Meer	NYCDEP (M. Eckels)	Request clarification of the basis for the listing and for the supporting data. Action: No change to Draft List.
Hillside Lake	Private Individual (K. DiMaso)	Request to change suspected source from Onsite WTS to Urban/Storm Runoff Action: No change to Draft. Inadequate information to support change.
Hog Creek	Town of East Hampton (M. Abramson)	Request to move from Part 2c of the list to Part 3b and change suspected source to *Unknown*. Action: Source Changed to Unknown/Multiple Sources. Continued listing on Part 2c..
Hudson River	Pace (T. Ommen)	Request for NYSDEC to develop a TMDL for PCBs and other contaminants. Action: No change to Draft List.
Kissena Lake	NYCDEP (M. Eckels)	Request clarification of the basis for the listing and for the supporting data. Action: No change to List.
Lake in Central Park	NYCDEP (M. Eckels)	Request clarification of the basis for the listing and for the supporting data. Action: No change to List.

Waterbody	Commenter	Comment/Issue
Lake Como	EPA Region 2 (D. Flint)	Request that Lake Como be added to the List for phosphorus due to occurrences of HABs. Action: No change to Draft List. HABs may not be nutrient-driven.
Laurel Pond (Appendix B)	EPA Region 2 (D. Flint)	Commented that low D.O. lakes cannot be delisted until the applicable DO criterion are met. Action: No change to Draft List. See full response above.
Little Neck Bay	NYCDEP (M. Eckels)	Request to delist the bay due to the submittal of a LTCP to address pathogens from CSOs. Action: No change to the List. Delisting is not justified.
Mattituck or Marratooka Pond	Town of Southold (M.Collins)	Request to remove the phosphorus listing and replace with Other (in-lake recycling) as a TMDL cannot address in-lake recycling of phosphorus from lake sediment. Action: Suspected Source changed to *Other (in-lake recycling)*. Waterbody remains on Part 1.
Mattituck or Marratooka Pond	Town of Southold (M.Collins)	Request to remove from Part 1 of list for pathogens as there is no supporting data for such a listing. The requestor suggests the waterbody be moved to Part 3a. Action: Mattituck Pond remains listed in Part 3c for Pathogens from Wildlife Sources.
Meadow Lake	NYCDEP (M. Eckels)	Request clarification of the basis for the listing and for the supporting data. Action: No change to List.
Mirror Lake	Ausable River Assoc (B. Wiltse)	Request to add listing for the lake for low DO Action: No change to List. Supporting data submitted after September 30.
NYC CSO Waters	Pace (T. Ommen)	Request to add listings for NYC CSO waters previously delisted as Category 4b waters. Action: 20 waterbody/pollutant listings are being relisted pending NYSDEC approval of LTCPs.
Onondaga Creek	Onondaga Nation	Request that source of turbidity reflect mudboils as source; add listing for salinity. Action: Source changed to reflect mudboils. Data insufficient to support salinity (or TDS) listing.
Owasco Lake	Cayuga Co. DPEC (M. Wunderlich)	Request that Owasco Lake be added to the List for phosphorus due to occurrences of HABs. Action: Owasco Lk added to Part 3b for unknown pollutant, HABs likely not nutrient-driven.
	Cayuga Co. Health (E. O'Connor).	
	Cayuga Co WQMA (S. Lynch)	
	Owasco Wshd Lk Assoc (J. Beckwith)	
	Private Individual (R. Nelson)	
	Private Individual (J. Brooks)	

Waterbody	Commenter	Comment/Issue
Oyster Pond/Lake Munchogue	Town of East Hampton (M. Abramson)	Request to remove Oyster Pond from Part 2c of the list and add to Part 3c as the Town considers its condition unverified since it has not collected samples since 2007. Action: No change to Draft. Data does not support moving.
Ramapo River	Orange County DPW (A. Griffin)	Request to add listing for Ramapo River for phosphorus, low DO, silts/sediment Action: No change to List. Supporting data submitted after September 30.
Scallop Pond	Town of Southampton	Request to delist the pond due to data showing standards for shellfishing waters are being met. Action: Listing remains in Part 2c. Improvement noted, source revised to *Unknown/Multiple Sources*.
Spring Pond	Town of Southold (M.Collins)	Request to move the listing to Part 3a because of the need to verify impairment due to the age of the data. Action: No change to List. Placement in Part 3c is appropriate.
Taylor Pond	Ausable River Assoc (B. Wiltse)	Request to delist the pond due to data showing standards are being met. Action: No change to List. Supporting data submitted after September 30
Van Cortlandt Lake	Bronx Council Env Qual Friends of VanCortlandt Lk	Request to support development of a TMDL for the currently listed Van Cortlandt Lake Action: No change to List. Request forwarded to the TMDL Vision workgroup.
Wallkill River	Riverkeeper (D. Shapley)	Request that Wallkill River and trib waters be added to the List for pathogens. Action: No change to Draft List. Waters prioritized for follow-up monitoring.
Willow Lake	NYCDEP (M. Eckels)	Request clarification of the basis for the listing and for the supporting data. Action: No change to Draft List.
Appendix B Low DO Small Lakes	EPA Region 2 (D. Flint)	Commented that low D.O. lakes cannot be delisted until the applicable DO criterion are met. Action: No change to Draft List. See full response above.
General Comment	Riverkeeper (M. Dulong)	General Comment to extend Public Comment Period. Action: None. Public Comment Period cannot be extended due to List submittal requirement.

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APPENDIX B

Water Quality Impact, Impairment and Listing Determinations

The following discussion was included in the Response to Comments on the 2012 Section 303(d) List (September 2012). It is included with this response because it is pertinent to many of the comments received on the 2014 Section 303(d) List as well.

The Threshold for Listing: Impairment

While there is typically considerable agreement on what waters experience water quality impacts and what is causing those impacts, a number of comments on the Draft List reflect disagreement with NYSDEC's assessment as to the magnitude of the impacts. Specifically at issue for Section 303(d) Listing is whether water quality impacts rise to the level of an impairment of uses. The thresholds used to make this determination are outlined in the NYSDEC Assessment Methodology (available at http://www.dec.ny.gov/chemical/31296.html). Typically the threshold for determining impairment hinges on whether water quality standards are, or are not, being met.

In reporting to USEPA on the status of its waters, New York State uses the federal USEPA assessment categories. These Integrated Reporting categories are used to identify waters that are impaired and not supporting uses (either impaired and needing a TMDL or impaired and not needing a TMDL), waters that are not impaired and fully supporting uses (fully supporting all uses, or fully supporting all uses for which they were assessed), and waters with insufficient data/information to make an impairment/listing decision. However NYSDEC's assessment program – the ***Waterbody Inventory/Priority Waterbodies List (WI/PWL)*** – expands on the federal fully supporting uses categories to include the identification of waters that are fully supporting of uses but that experience minor impacts and/or threats. The tracking of these ***stressed*** waters allows the state to identify waters where water quality protection efforts – as separate from restoration efforts – can be implemented to prevent impairments in waters before they occur. This approach supports a state water quality strategy that balances both the protection of ***at-risk*** resources and the often more task of difficult restoring impaired waters.

However the identification of stressed waters in the WI/PWL is occasionally misinterpreted. Specifically, a few commenters asked why waters that NYSDEC identified in the WI/PWL as having minor impacts are not included on the Section 303(d) List. NYSDEC's response is that these waters – though not pristine – do not meet the threshold of impaired waters, and are more appropriately captured in the USEPA Integrated Reporting (IR) categories of non-impaired waters that fully support designated uses. As noted above, the key distinction between stressed waters with minor impacts and impaired waters is whether or not water quality standards in the waterbody are being met.

NYSDEC and other states have previously commented to USEPA that the IR categories are somewhat limiting in that waters are required to be assessed as either being impaired or not impaired. However, such "black or white" assessments are at times difficult to apply in the real

world. In reality, waters that do not reach the threshold of impaired fall across wide a spectrum of varying "shades of gray."

Insufficient Data/Information to Make a Listing Decision

One instance where the USEPA assessment categories do recognize "shades of gray" is in the use of the ***IR Category 3 – Waters with Insufficient Data to Make a Listing Determination***. This category recognizes that any assessment of a waterbody as being impaired should be supported by a minimum threshold of confidence and certainty that such a designation is appropriate. Maintaining that minimum threshold is all the more appropriate when one considers that the threshold for delisting waters once they are listed is quite high and requires significant documentation of water quality improvement. Therefore, it is NYSDEC's philosophy that the Section 303(d) List be reserved for those waterbodies where impairment of uses is clear. Waters where impairments are suggested but not confirmed are more appropriately characterized as IR Category 3. Additional monitoring and verification of conditions in these waterbodies will be conducted in accordance with New York State Monitoring Strategy (available at http://www.dec.ny.gov/chemical/31296.html). Meanwhile, resources for the development of a TMDL and other restoration strategies can be more effectively directed to those water quality problems where the need for and benefits of such actions are more certain.

Impaired Waters NOT on the Section 303(d) List

Some of the discussion and debate regarding the public comments on the Section 303(d) List revolve around the nature of the List – it is by definition a list of impaired waters requiring a Total Maximum Daily Load strategy – and whether a TMDL is appropriate to address specific waterbody problems. NYSDEC points out that the List is not defined as, nor intended to be, a comprehensive list of waters that meet the threshold of impaired. Rather the List is defined in the Clean Water Act as including only those impaired waters for which development of a Total Maximum Daily Load (TMDL) is necessary to address the impairment and restore the designated uses of the water. If a TMDL has already been developed or if a more effective means to address the impairment (other than a TMDL) is available, then inclusion on the List is not appropriate even if the water continues to be impaired. Consequently, NYSDEC typically refers to the list as the Section 303(d) Impaired/**TMDL** Waters List.

USEPA regulations and guidance concerning Section 303(d) Listing recognize three specific circumstances when a waterbody that meets the threshold of being impaired should not be included on the Section 303(d) List. These circumstances include:

- Waters where a TMDL has already been developed and approved by USEPA;
- Waters where other required control measures are expected to result in the attainment of applicable water quality standards in a reasonable period of time, and;
- Waters where the impairment is the result of pollution that is not the result of a specific pollutant (substance) and for which a loading (TMDL) cannot reasonably be developed.

While NYSDEC may agree with commenters that certain specific waters are impaired, these waters may not be included on the List based on a judgment that the situation regarding these waterbodies corresponds to one of the three (3) circumstances outlined above.

In principle, NYSDEC agrees with an opinion expressed by many that a more comprehensive list of impaired waters that includes all impaired waters – regardless of TMDL status – would be less confusing and perhaps more useful in characterizing the condition of the waters of the state. This is why New York State includes with its 2010 Section 303(d) List a separate supplemental listing of ***Other Impaired Waterbody Segments Not Listed (on the 303(d) List) Because Development of a TMDL is Not Necessary***. The purpose of this supplement is to provide a more comprehensive inventory of waters of the state that do not fully support designated uses and that are considered to be impaired (irrespective of the development of a TMDL). The supplemental list includes the justification for not including each of these waters on the Section 303(d) List.

Other Measures More Appropriate than a TMDL

Related to the preceding discussion, another issue that emerged through public comment concerns the recognition of instances where TMDL development would be of little value in restoring a waterbody. As noted above, Section 303(d) allows for not listing impaired waters where other more appropriate required control measures will result in restoration in a reasonable period of time. However there are additional examples where there is no obvious alternative to a TMDL, or where the alternative would take a lengthy period of time to restore the waterbody.

Part 3 of this and previous Lists includes waterbodies where a determination has been made that TMDL development at the current time should be deferred due to other factors (i.e., need to verify impairment or pollutant, implementation/evaluation of other efforts). This category of listed waters has been useful in prioritizing waters for TMDL development in the face of limited resources. However it also clear that there are still other cases of water impairment where TMDL development would be of little, if any, benefit to resolving the impairment. That fact does not change even if there are no other available alternative strategies. For example, the Section 303(d) List includes a large number of waters with fish consumption advisories that are the result of pollutants for which there are no remaining active sources and where in some cases the chemical has been banned (e.g., DDT in Keuka Lake). Although practical options to speed up the restoration of these waters are not available, development of a TMDL would provide no benefit while redirecting limited resources away from waters where a TMDL could actually be useful. In another example, one commenter noted that a TMDL would be of little benefit for Cayuta Lake, where the phosphorus loading is largely from in-lake recycling of existing nutrients. For the 2012 List, Cayuta Lake is included in Part 3a of the List as a waterbody for which TMDL development is deferred pending verification of impairment. However this is not an entirely accurate characterization of the waterbody since the need for additional verification is unclear. These examples illustrate the possible need for an additional listing option – *Impaired Waterbody for which TMDL Development is Deferred due to Limited Benefit*, or something comparable – that should be explored in future Section 303(d) listing cycles.

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APPENDIX C

NYSDEC Response to USEPA Comments on the Assessment and Listing Methodologies

Comments on New York's Draft Consolidated Assessment and Listing Methodology

U.S. Environmental Protection Agency, Region 2

to New York State Department of Environmental Conservation (NYSDEC)

USEPA provides comments on the Assessment and Listing Methodologies of the Consolidated Assessment and Listing Methodology (CALM) only. USEPA will not be providing new comments on the Monitoring Methodology because New York has not updated the methodology.

Assessment Methodology

1. Page 2: The link in the last sentence of the first paragraph under "Waterbody Inventory/Priority Waterbodies List" no longer works. Please update the link.

NYSDEC Response: The link to the Waterbody Inventory/Priority Waterbodies List has been updated.

2. Page 3: "However it is important that previous broader stakeholder input during the WI/PWL process is not arbitrarily set aside in light of new data that is not fully reviewed. Therefore NYSDEC may defer final consideration of new data until the next appropriate WI/PWL basin update." EPA regulations at 40 CFR § 130.7(b)(5), require states to "assemble and evaluate all existing and readily available water quality-related data and information to develop the list." We recommend NYSDEC revise the above sentence to indicate that NY will evaluate all data submitted before the close of the data solicitation period and not defer that evaluation until the next Waterbody Inventory/Priority Waterbodies List (WI/PWL) basin update. New York, pursuant to 40 CFR § 130.7(b)(6)(iii), must provide a rationale for any decision to not use any existing and readily available data and information.

NYSDEC Response: The language in this section has been edited to make it clearer that new data will be evaluated and considered in developing the 303(d) List. However NYSDEC reserves its ability to defer listing decisions using IR Category 3 where the available data is incomplete or conflicts with other available information and additional verification of conditions is appropriate. Specific revised language is as follows:

> *The ~~2010~~ United States Environmental Protection Agency (USEPA) Integrated Reporting Guidance ~~(also cited in the 2014 IR Guidance)~~ recognize**s** the value of the rotating basin approach and supports its use as an effective and practical means for assessing waters. However the guidance indicates that USEPA expects the states will continue to consider other existing and readily available data and information, regardless of basin and rotating schedule, when compiling Section 305(b) Reports and Section 303(d) Lists. To incorporate more recently collected data and information, particularly for waters that*

have not undergone a WI/PWL update during the most recent two-year Integrated Reporting cycle, NYSDEC has established September 30 of the year prior to the issuing of a Section 305(b)/303(d) Integrated Report as the deadline for submitting additional data and information to be considered for inclusion in the Section 305(b) assessment and 303(d) List. This deadline (6 months before the ***List*** ~~*Integrated Report*~~ *is due) provides time for NYSDEC to* ***evaluate*** ~~*consider*~~ *the additional data* ***and consider additions/deletions to the List*** ~~*as well as some time for public stakeholder review and comment on proposed revisions to existing water quality assessments*~~*. However it is important that* ~~*previous*~~ *broader stakeholder input during the WI/PWL process is not arbitrarily set aside in light of new data that is not fully reviewed. Therefore* ***where additional data is incomplete or insufficient to override previous assessments,*** *NYSDEC may defer final* ~~*consideration of new data*~~ ***listing decisions as IR Category 3 – Waters with insufficient data*** ~~*until the next appropriate WI/PWL basin update*~~ ***to make a listing determination****.*

3. Page 3: The CALM states that "A change in the waterbody class of a waterbody usually necessitates the division of the waterbody into separate segments, since different classes of waters are assessed for the support of different designated uses." Please provide an example or an explanation of when a waterbody class could change.

NYSDEC Response: The language in this section has been edited to clarify that this was not meant to refer to a change in classification over time, but rather those instances where the water class is different in one part of the waterbody than in another. Specific revised language is as follows:

Where portions of a single river or lake waterbody have different water classifications, ~~***A change in the waterbody***~~ ***those differently classified portions are often managed as*** ~~*class of a waterbody usually necessitates the division of the waterbody into*~~ *separate segments since different classes of waters are assessed for the support of different designated uses.*

4. Page 4: "Because the factors used to segment waterbodies are fairly constant, the boundaries of a waterbody assessment units rarely change." We recommend that since the sentence says "rarely change" and not "never change," information on how and when waterbody segments change be added to this paragraph.

NYSDEC Response: NYSDEC will add a sentence after the cited sentence above, as follows: *Changes in surrounding land use and, to a lesser extent, changes in classification would be the most likely, yet still very rare, reasons to drive changes in segment boundaries.*

5. Page 4: The table that shows waterbody uses would be much more helpful if the corresponding waterbody classifications were included. Here is an example of what we recommend NYSDEC include in the CALM:

Waterbody Uses	Applicable Waterbody Class
Water Supply Source	A, AA, A-Special

Shellfishing	SA
Public Bathing	B, SB, A, AA, SA, A-Special
Recreation	all
Aquatic Life	all
Fish Consumption	all
Habitat/Hydrology (condition)	all
Aesthetics (condition)	all

NYSDEC Response: This modification to the table will be considered during the update of the Assessment Methodology. However NYSDEC believes that the existing narrative in the Assessment Methodology regarding waterbody uses and their corresponding classifications is thorough and that USEPA's recommended table is not necessary.

6. Page 6: Because the majority of the New York State numeric and narrative water quality standards do not include frequency and duration components we interpret these standards as not to be exceeded values. As such, sampling frequency and sampling size are not relevant in determining compliance with such applicable standards. Please make it clear that the frequency of occurrence can only be used in the WI/PWL to indicate level of documentation.

NYSDEC Response: To clarify, NYSDEC is not suggesting in this section that there is a minimum number or frequency of samples (unless specified in the applicable standard) that must be met for consideration in the assessment. However sampling results upon which an assessment is based must be representative of the waterbody being assessed. That representativeness should include consideration of the frequency of exceedences. For example, if 100 samples were collected over a 3 year period and 3 of the samples exceeded standards, it would be more appropriate to assess the waterbody as meeting standards (which it does 97%) of the time, rather than impaired/suspected.

7. Page 7: The table on page 7 highlights the waterbody use impact levels of severity, however, it does not relate this back to the 303(d) list. We suggest NYSDEC add that precluded and impaired means a waterbody will be included on either the 303(d) list or in Category 4.

NYSDEC Response: Although the assessment and listing processes are closely related, it is NYSDEC's intention to have separate documents that capture the unique aspects of each process as a whole, without excess cross referencing between the two. Table 10 on page 24 of the Assessment Methodology adequately establishes the link between impaired assessments and impaired listings.

8. Page 8: Given that some waterbodies are labeled as unassessed, NYSDEC should include "unassessed" in the table "Use Impact Evaluation Confidence Levels."

NYSDEC Response: It is not appropriate to include "Unassessed" in this table. The Use Impact Evaluation Confidence Levels reflect the amount of data/information available and are included in the table to note the differences in the level of adequacy of data/information used in

evaluations of use support. Because Uses that are categorized as Unassessed have no data/information upon which to make an evaluation a further characterization beyond "unassessed" is not necessary.

9. Page 9: Please summarize NYSDOH's monitoring program in the first paragraph under "Source of Potable Water Supply Use."

NYSDEC Response: The reference in this language is not to a specific NYSDOH program, but to the general mandate of the agency to protect water supply use. NYSDEC prefers to reference the programs of other agencies in general terms rather than more specific detail since those agencies might modify those programs without input from NYSDEC.

10. Page 10 and also applicable to other tables throughout: NYSDEC should relate the use evaluation criteria tables back to the 303(d) list. Alternatively, NYSDEC can include information in the summaries saying "Precluded or impaired waterbodies are included on the state's 303(d) list."

NYSDEC Response: Please see response to Comment #7.

11. Page 10: NYSDEC should explain why the table no longer lists different values for impaired, stressed or threatened under the "Parameter-Specific Use Evaluation Criteria" section of the table. Upon further review, if New York determines these are still applicable, they should be included.

NYSDEC Response: The NYSDEC CALM Workgroup decided not to include the different values for impaired, stressed, or threatened under Parameter-Specific Use Evaluation Criteria during the revision of the CALM. Rather, stressed and threatened conditions are determined by how closely conditions approach, or are likely to exceed in the future, the impaired threshold.

12. Page 11: NYSDEC should clarify whether or not shellfishing data from other departments of the state is used. If so, NYSDEC should include which department provides data in the CALM. In addition, DEC may want to add that when a shellfishing bed is closed and the water is impaired or precluded, it is included on the 303(d) list.

NYSDEC Response: The language is pretty clear that these assessments are driven by the NYSDEC Shellfishing Program. NYSDEC would not preclude the use of other data that was available, but neither are there sources of such data that are appropriate to call out in the methodology.

13. Page 13: Why is total phosphorus no longer included under "Parameter-Specific Use Evaluation Criteria" for Tables 3 and 4?

NYSDEC Response: For the WI/PWL and 305(b) assessments, other indicators (chlorophyll, clarity, pathogens) are more appropriate indicators of public bathing and recreation use support. Most recent research indicates that while total phosphorus can be a useful regulatory threshold, it should not be considered a one-size-fits-all criterion. Additionally the current NYSDEC

Guidance Value of 20 ug/l for Phosphorus is unique among all Guidance Values in that it is not aligned with the protection of any specific established best use, and NYSDEC interprets this value as an indicator of stresses, that may (based on other factors) rise to the level of impairment. Additional discussion regarding the total phosphorus guidance value is included at the bottom of page 14 of the Methodology.

14. Page 13: The New York State water quality standards for total coliform are not uniform for each class. However, the table makes it look like they are all based on the geometric mean and a value of 2,400/100 ml. Please include the following standards:

The standard for A- Special is: The geometric mean of not less than five samples, taken over not more than a 30-day period, shall not exceed 1,000

The standard for AA is: The monthly median value and more than 20% of the samples, from a minimum of five examinations, shall not exceed 50 and 240, respectively

The standard for A, B, C, D, SB and SC waters is: The monthly median value and more than 20% of the samples, from a minimum of five examinations, shall not exceed 2,400 and 5,0

NYSDEC Response: Table 3 reflects the specific coliform criteria that corresponds to public bathing use. The standards for class AA and A-Special waters are for protection of water supply use and are not used to evaluate public bathing. The class AA and A-Special standards are more appropriate to use to evaluate water supply use in waters of those specific classes. This comment did expose an error in Table 3 that has been corrected; the Coliform, Total criterion of 2,400/100ml should be expressed as a median value, rather than geometric mean.

15. Page 15 (appears to actually be pg 14): "Until that effort is complete, the criteria for chlorophyll-a (when accompanied by elevated nutrients) and presence of harmful algal blooms (HABs) will be used as surrogate indicators for the assessment of nutrient impacts and corresponding impairments to recreational use." The chlorophyll-*a* criteria has not yet been developed. NYSDEC should clarify what will be used in the meantime.

NYSDEC Response: For the purposes of WI/PWL and 305(b) water quality assessments, types of evaluation criteria include Administrative Use Restrictions, Water Quality Standards/Criteria and Surrogate Water Quality Indicators (discussed on page 5). Chlorophyll-*a* criteria – until more formally adopted – falls into the category of a Surrogate Water Quality indicator.

16. Page 18: Can this table relate back to the pH water quality standard? Shellfishing waters have a different standard than other waterbody classes and it would be helpful to see that in this table. Specifically, the pH criteria for Class SA, SB, SC, I and SD waters (The normal range shall not be extended by more than one-tenth (0.1) of a pH unit) is not represented in this table. I suggest adding it under "Conditions Occasionally Prevent or Frequently Discourage Use."

NYSDEC Response: The Assessment Methodology does not purport to include all criteria that might be used to evaluate use support and make water quality assessments, rather it outlines

those criteria and other benchmarks that are most regularly used for these determinations. The specific marine water standard is rarely a driver of water quality assessments and as a result is not highlighted in the Methodology. Nonetheless if data were available to show exceedence of this standard, it would be evaluated to determine if a water quality impact/impairment and possible listing were appropriate.

17. Page 19: "The NYSDEC Division of Fish and Wildlife and Marine Resources monitors contaminant levels in fish in selected waterbodies." The CALM should explain how the DFWMR selects which waterbodies to sample.

NYSDEC Response: The monitoring and site selection methods are the prerogative of the DFWMR and are presumed to be driven by various factors, including availability of resources. NYSDEC prefers to include this information by reference to the program so as to not be misleading if methods and priorities change.

18. Page 26: In the last paragraph, delete the word "of" in the first sentence where it says, "These pollutant and source identifications are derived from available of information."

NYSDEC Response: NYSDEC concurs with this suggestion and will incorporate USEPA's recommended correction.

19. Page 28: "*Suspected* identifies pollutants/sources are where the contribution…" Delete the word "are."

NYSDEC Response: NYSDEC concurs with this suggestion and will incorporate USEPA's recommended correction.

20. Page 30: It would be helpful to say that the *Impaired/Threatened Waters Requiring a TMDL (IR Category 5)* is the 303(d) list.

NYSDEC Response: NYSDEC concurs with this suggestion and will incorporate USEPA's recommendation.

Listing Methodology

1. Page 3: "…other actions required by federal, state, and/or local agencies are more appropriate than a TMDL and are expected to result in water quality restoration." NYSDEC should revise this to indicate that this category (4b) is appropriate for waters where "other pollution control requirements are sufficiently stringent to achieve applicable WQS within a reasonable period of time."

NYSDEC Response: NYSDEC concurs with this suggestion and will incorporate USEPA's recommended language.

2. Page 4: The table shows that a water can have a use impact level of severity of "Impaired" with evaluation confidence level of "Suspected" and a PWL assessment category of "Minor Impacts". It also indicates a waterbody can be impaired but on the PWL as "Needs Verification"

and confidence level of unconfirmed. Impaired waterbodies should only be in either Category 4 or in Category 5, not in Categories 2 or 3. NYSDEC should update the table.
NYSDEC Response: The level of confidence in an assessment is expressed as *Known*, *Suspected*, or *Unconfirmed*. Where the level of confidence for an impaired water is *Known*, those waters are assigned to IR Categories 4 or 5. However where an impairment has not been confidently validated (i.e., level of confidence is *Suspected* or *Unconfirmed*) these waters are more appropriately assessed as Needing Verification of impairment and assigned to IR Category 3, or in some cases, interpreted as having known minor impacts – that might rise to the level of impairment, but also need verification – and assessed as having Minor Impacts (corresponding to IR Category 2, where some uses are supported and other have not been fully assessed). Identifying waters as "potentially impaired" is a useful option for prioritizing additional monitoring and verification efforts.

3. Page 5: Under "Waters with Insufficient Data" NYSDEC should indicate that NY's RIBS cycle is designed to obtain information sufficient to make assessment decisions so these "Waters with Insufficient Data" would be the exceptions to the rule. In order to more effectively target additional monitoring, we recommend that NYSDEC maintain a list of Category 3 waters or assessment unit-specific designated uses that require additional data and the type of data needed to make assessment decisions.

NYSDEC Response: NYSDEC currently maintains (within the WI/PWL database) a list of waterbodies that require additional data or verification to make assessment decisions. This list is used to target monitoring by the NYSDEC RIBS program. The ability to complete such verification is less a function of program design, and more likely to be a function of the complexity of the situation and available resources.

4. Page 5: "Such waters are assessed as *Needs Verification* and typically assigned to IR Category 3…" NYSDEC should explain how assignment to IR Category 3 is done. Is there a table of Category 3 waterbodies?

NYSDEC Response: NYSDEC maintain the IR Category for each waterbody segment in the WI/PWL database, so lists/tables of waters in any category can be produced when needed.

5. Page 5: It may be helpful to include a sentence on how IR Category 3 differs from Part 3 of the list to avoid any confusion. This comment also applies to the section "Reassessment of Waters" on page 10.

NYSDEC Response: The relationship between IR Category 3 and List Part 3 is explained on page 8. Pages 2-7 detail the IR Categories and no other attempts are made to relate the IR Categories to List parts in these sections. Relating/clarifying the relationship between IR 3 and list Part 3 is not appropriate in this section of the document. On page 10, we do not see the value/relevance of identifying the original IR Category that landed a waterbody on Part 3. Since this section focuses on reassessment, the new IR Categories to be used when waters are removed from Part 3 is the more relevant item to be detailed.

6. Page 6: NYSDEC should state here that the alternative measures used for Category 4b waterbodies will result in attainment of water quality standards within a reasonable amount of time.

NYSDEC Response: NYSDEC concurs with this suggestion and will incorporate USEPA's recommendation.

7. Page 6: "Because TMDLs are pollutant-specific load reduction strategies, the development of a TMDL is NOT required for waters where no pollutant has been identified," should be edited as follows: "Because TMDLs are pollutant-specific load reduction strategies, the development of a TMDL is NOT required for waters where a pollutant is not causing the impairment."

NYSDEC Response: NYSDEC concurs with this comment and will modify this language to read:

> *Because TMDLs are pollutant-specific load reduction strategies, the development of a TMDL is NOT required for waters where the impairment/threat is attributed to pollution rather than a specific pollutant.*

8. Page 6: Excessive native aquatic plant growth unaccompanied by elevated nutrient levels does not belong in Category 4c. Please remove this as an example. Additionally, Category 4c is for waters where "The non-attainment of any applicable water quality standard for the segment is the result of pollution and is not caused by a pollutant." Therefore, where there is a pollutant/source causing the pollution, that segment doesn't belong in Category 4c. Even where nutrient levels are low, excessive aquatic plant growth may still be caused by nutrients. A more thorough assessment is typically needed to determine that the excessive growth is caused by pollution, not a pollutant. Factors to assess may include (1) whether aquatic plant growth is occurring in another segment and drifting to the impaired segment with low nutrient levels; (2) whether there are anthropogenic sources/loads of nutrients that may contribute to excessive growth; (3) whether invasive species such as Dreissenid mussels alter the environment to favor aquatic plant growth; (4) whether there are other known conditions that are not pollutants that can be shown to be causing the excessive growth.

NYSDEC Response:
NYSDEC believes that Category 4c is the most appropriate designation of such waters, at least until a specific pollutant causing the impairment can be identified. There is agreement on USEPA's point that "where there is a pollutant/source causing the pollution, that segment doesn't belong in Category 4c." There is also agreement on the comment that "…Even where nutrient levels are low, excessive aquatic plant growth may still be caused by nutrients." However NYSDEC stresses that waters should be not listed as requiring a TMDL (IR Category 5) for a pollutant that may be causing an impairment. NYSDEC also agrees that a "more thorough assessment is typically needed to determine that the excessive growth is caused by pollution, not a pollutant." The only disagreement between NYSDEC and USEPA on this issue is regarding how to categorize a water while that "more thorough assessment" is being conducted.

If uses are truly impaired by excessive native aquatic plant growth then the uses in that waterbody should appropriately be characterized as impaired. However because plants themselves are not a pollutant that can be quantified as a load to be regulated in a TMDL, this cause of impairment fits within the parameters and definition of IR Category 4c. If the excessive native plant (or algae) growth is accompanied by and determined to be a result of high levels of nutrients, the specific nutrient cause is appropriate to additionally categorize as IR Category 5.

9. Page 7: NYSDEC should remove the discussion on Natural Conditions. If there is no natural conditions clause within an applicable water quality standard and that standard is not met, waters must be listed on the 303(d) list.

NYSDEC Response:
For the purposes of WI/PWL and 305(b) water quality assessments, it is reasonable and appropriate to consider whether impacts to waters are the result of natural conditions unrelated to anthropogenic sources, and therefore unable to be addressed through the Clean Water Act mechanisms outlined in Sections 305(b) and 303(d). USEPA has acknowledged that the assessment of waters can recognize natural conditions. The issue is that NYSDEC has not specifically included language in its water quality standards identifying natural conditions as a consideration (language to do so will be included in the state's next triennial water quality standards rule update). NYSDEC does not see the value in ignoring the agreed upon reality that natural conditions influence assessments and will continue to recognize such conditions in the WI/PWL and 305(b) assessments while changes to the water quality language are completed. With regard to the 303(d) List, NYSDEC suggests that water impaired due to natural conditions be categorized as IR Category 4c waters. This is preferable to categorizing these as IR Category 5 waters and including them on the 303(d) for development of a TMDL – an effort that provides no water quality benefit is such cases.

10. Page 8: Under Part 3, the different sections should be listed as a, b and c instead of 1, 2 and 3 so that it is consistent with the 303(d) list.

NYSDEC Response: NYSDEC concurs with this suggestion and will incorporate USEPA's recommended correction.

11. Page 9: Under the delisting reason, "the original basis –standard or criterion – for listing has been revised or replaced (reassessment)," NYSDEC should add "and the water has been assessed as meeting the new criteria."

NYSDEC Response: NYSDEC concurs with this comment and will modify this language to read:

> *…the original basis/criterion for listing has been revised/replaced and is being met (reassessment)"*

12. Pages 9 and 10: Waters cannot be delisted solely based on the fact that there is a new or revised WQS or surrogate water quality indicator. Water quality data and information for the water must be assessed against the new or revised WQS or surrogate water quality indicator and where that assessment results in the determination that the new or revised WQS or surrogate

water quality indicator is met, the water can be delisted. NYSDEC should make this clear in the section "Delisting of Waters from the Section 303(d) List."

NYSDEC Response: NYSDEC agrees with the point made in this comment, but maintains that the existing language in the Listing Methodology is adequate to explain the delisting of waters from the Section 303(d) List.

13. Page 11: "Generally water quality impacts or impairments affecting more than 10-20% of a waterbody length/area are assigned to the entire waterbody segment. Any limitation regarding the extent of the impairment is noted in the segment narrative. If impacts/impairments are limited (specifically, if 80-90% of the waterbody does not experience impacts/impairment) the waterbody may be considered to be meeting uses and – in the case of impairment that is limited – excluded from the Section 303(d) List." NYSDEC should clarify how this applies to a waterbody that is not meeting an applicable standard where that standard includes language such as "never less than." For example, how would this apply to a Class D waterbody not meeting the applicable DO standard (Shall not be less than 3.0 mg/L *at any time*)?

NYSDEC Response: The degree to which data not meeting standards collected within a waterbody are representative of the water quality conditions in that waterbody is dependent upon the magnitude, frequency/duration, and spatial extent of the values not meeting the standards. The language cited above refers to the spatial extent of measurements showing compliance/non-compliance with standards within a waterbody. It refers to instances where multiple samples taken throughout the waterbody might show different results, and how those differing results are reconciled to reach an assessment of the waterbody. A "never less than" standard relates to the frequency and duration of conditions at specific single locations, and is applied to determine compliance at that one location. However if that location is not representative of conditions in the larger waterbody (i.e., samples at 10 other locations in the waterbody indicate compliance with the same standard) the non-compliant location is out-weighed by the 10 other samples when determining the overall assessment of the waterbody.

14. Page 12: "Although waterbody/pollutant listings that do not require a TMDL (IR Category 4 Waters) are not included on the Section 303(d) List, NYSDEC typically provides a separate list of these of these waterbodies/pollutants at the time that the Section 303(d) List is updated." Please remove the word "typically."

NYSDEC Response: NYSDEC concurs with the suggested edit. NYSDEC notes that the inclusion of a separate list of IR Category 4 Waters is not a requirement. However NYSDEC believes such a list is helpful in understanding impaired waters and listing decisions and anticipates providing one as a companion to future Section 303(d) Lists.

APPENDIX D

Relisting of Previously Approved (by USEPA) Delistings of NYC Waters

In its 2016 Section 303(d) List NYSDEC proposes to include 20 CSO-impaired NYC waters; 16 that were previously delisted due to the NYC CSO Order and its requirement of LTCPs to address the impairments in lieu of a TMDL in 2012, and 4 new pathogen listings that result from the recent adoption of pathogen standards for Class I/SD waters. These waters will be included on Part 3c of the List as waters for which TMDL development is deferred pending evaluation of submitted LTCPs. Upon NYSDEC approval of LTCPs that meet the requirements of the Order, the waterbodies covered by the LTCP will be delisted and assigned to Integrated Reporting (IR) Category 4b as waters where other required control measures are in place to address the impairment. This action is in response to comments received from Pace/Riverkeeper regarding the exclusion of these waters in the Draft 2016 List.

Background

In its 2012 Section 303(d) List submittal to USEPA, NYSDEC proposed the delisting of 27 waterbody/pollutant listings and the reassignment of these listings to Integrated Reporting (IR) Category 4b as waterbody/pollutant impairments where required control measures other than a TMDL are expected to result in attainment of water quality standards within a reasonable period of time. For the 19 [(1)] of these waterbody/pollutant delistings where the impairment was due to pathogens or low dissolved oxygen, the specific required control measure cited was the 2005 New York City CSO Order on Consent (the Order). In its review and approval of the 2012 NYS Section 303(d) List, USEPA determined that the Order is consistent with the National CSO Control Policy and that pursuant to this policy the Long Term Control Plans (LTCPs), when implemented, are expected to result in the attainment of water quality standards.

In its 2014 Section 303(d) List NYSDEC returned one of the delisted waterbodies – Alley Creek/Little Neck Bay Trib (1702-0009) – to the List. Although the requirements in the Order that provided the justification for assigning this and the other NYC waterbody listings to Category 4b remained in place, NYSDEC determined that it was within its prerogative to return this waterbody to the List in spite of USEPA's previous approval of an IR Category 4b delisting. USEPA subsequently approved the 2014 List that included the relisting of Alley Creek/Little Neck Bay Trib. USEPA's approval also recognized the continued assignment of the remaining NYC CSO waters to category 4b.

Subsequent to the relisting of Alley Creek/Little Neck Bay Trib in 2014, NYCDEP did resubmit a revised LTCP for the waterbody to meet the requirements of the Order (specifically, the LTCP provides for attainment of water quality standards and compliance with other Clean Water Act requirements). NYSDEC had again proposed Alley Creek/Little Neck Bay Trib for delisting in the Draft 2016 Section 303(d) List as a Category 4b waters in anticipation of approving the LTCP as meeting the requirements of the 2005 NYC CSO Order (subsequently modified in 2012). However the revised LTCP remains under review by NYSDEC.

[1] The other 8 of the 27 delisted waterbody/pollutant listings were for impairment due to nitrogen which is addressed in a separate Jamaica Bay Nitrogen Consent Judgment, which is not dependent upon development of subsequent LTCPs.

In spite of the disapproval of the initial LTCP, the CSO Order did result in the submittal of a subsequent LTCP for Alley Creek/Little Neck Bay, as well as submittal of LTCPs for Westchester Creek, Hutchinson River, Flushing Creek, Bronx River, Gowanus Canal and Coney Island Creek – and is expected to lead to LTCPs for the remaining New York City waters impaired by CSOs – that are expected to meet requirements in the Order and would be approvable by NYSDEC. However although USEPA has previously approved the delisting of waters where the Order requires LTCPs to address pathogen and low dissolved oxygen impairment, NYSDEC is choosing to return these waterbody/pollutant listings to Part 3c of the 2016 Section 303(d) List as waterbodies for which TMDL development is deferred pending development of other restoration measures (specifically DEC-approved LTSPs). This approach will provide additional assurance, beyond what was originally deemed necessary for delisting, that LTCPs which adequately address CSOs impairment will be forthcoming in a timely manner.

It is NYSDEC's intention that the 20 CSO-impaired NYC waterbody/pollutant listings (16 relisted and 4 newly listed) will remain on Part 3c of the List only until LTCPs that meet the requirements of the Order are submitted and approved by NYSDEC. Once LTCPs are determined by NYSDEC to be adequate and approved, NYSDEC will re-assign the waterbodies covered by approved LTCPs to IR Category 4b in the subsequent Section 303(d) List.

The 20 specific waterbody/pollutant listings that are being added to part 3c of the 2016 Section 303(d) List include:

- 10 of 13 previously delisted waters with impairment due to low dissolved oxygen. The other 3 previously delisted D.O. waters – Gowanus Canal, Lower Bronx River and Shellbank Basin – are now meeting water quality standards for dissolved oxygen.
- All 6 of the previously delisted waters with impairment due to pathogens.
- 4 additional waterbody/pollutant listings whose impairments (due to pathogens) were not among the 19 originally identified for IR Category 4b delisting in the 2012 List. These new listings (for Thurston Basin, Spring Creek, Newtown Creek, and Flushing Creek/Bay) are the result of the recent adoption of new pathogen standards for Class I/SD waters.

APPENDIX E

Responses to Data Solicitation

As part of the process for developing the 2016 Section 303(d) List, the public was solicited to provide water quality data and information (by September 30, 2015) for NYSDEC's consideration. In response, NYSDEC received a number of petitions advocating for the inclusion (or delisting) of specific waters as impaired. Most of these petitions provided documentation of water quality issues that NYSDEC agrees warrant some level of attention.

However in most instances these submittals did not result in an addition to, or delisting from, the Section 303(d) List. As discussed previously, the guidance and established practices used in considering waters for inclusion on the Section 303(d) List are very specific and reflect a fairly high bar when determining whether the impacts to a waterbody meet the threshold of having impaired uses. In addition, there are a number of nuances in the Section 303(d) regulations regarding listing that result in waters that are impaired justifiably not being included on the 303(d) List.

Additionally while the data submitted during the data solicitation is given consideration during the development of the Draft List, NYSDEC also values the broader stakeholder input and monitoring/assessment information gathered the statewide monitoring and WI/PWL assessment process. Because the bar for delisting a waterbody once listed is significantly higher that the bar allowing waters to be listed initially, NYSDEC takes full advantage of IR Category 3 (Waters with Insufficient Data to Make a Listing Determination and may defer listing where submitted data is incomplete or insufficient to override previous assessments.

For the waters suggested for inclusion on the List, more specific reasons for not including them are 1) the submitted data was limited (either spatially or temporally) and needs to be verified, or 2) the water quality issue of concern is already reflected in a current listing and/or the corresponding assessment of the waterbody in question, or 3) the water quality impact does not rise to the level of an impairment, or 4) the cause of the impact/impairment is not a specific pollutant for which a TMDL would be able to address, and therefore that particular impact is not appropriate for inclusion on the Section 303(d) List of Impaired/TMDL Waters. More specifically data/information was submitted for waters:

- with occurrences of harmful algal blooms (HABs) that did not meet thresholds for frequency duration, or spatial extent, or were not accompanied by unusually high nutrient levels. Such waters are assessed as having uses either stressed or impaired by HABs, but are not appropriate to include on the List (See Harmful Algal Blooms discussion in the *General Response to Comments on Section 303(d) List* section above),
- with elevated levels of a constituent (such as enterococcus) for which NYSDEC has not currently adopted a water quality standard, or where the standard does not apply to the specific waterbody of concern. Such waters will have the issue of concern reflected in the appropriate waterbody assessments and will be identified as a priority for follow-up investigation by NYSDEC, and
- with occurrences of low dissolved oxygen where the where the impact/impairment is more appropriately listed for the pollutant that is causing the oxygen demand – e.g.,

phosphorus, nitrogen – rather than for dissolved oxygen. Such water will be listed for the more appropriate pollutant that is the cause of low dissolved oxygen.

Although most of these waters were not added to the 2016 Section 303(d) List, the information submitted will be used to update the Waterbody Inventory/Priority Waterbodies List (WI/PWL) water quality assessment fact sheets. The WI/PWL database is used to continue tracking water quality conditions in individual waterbodies, and to prioritize monitoring and assessment to verify suspected conditions, and to identify management management actions.

Some petitions and comments expressed the need for a listing in order to increase attention or opportunities for restoration funding for a specific waterbody. NYSDEC stresses that decisions regarding water quality assessments and resulting listings are to be based on actual conditions evaluated against applicable assessment criteria. The prioritization of waters (for funding and otherwise) needs to be driven by credible assessments. NYSDEC disagrees with the alternate suggestion that water quality assessments be influenced by other priorities.

NYSDEC also notes that the department competitive funding priorities are based on the assessments in the WI/PWL, not on the 303(d) List. There are a number of nuances in the Section 303(d) regulations regarding listing that result in waters that are impaired justifiably not being included on the 303(d) List. For example impaired waters for which a TMDL has been complete, or where other required regulatory controls outside of a TMDL will address the impairment, are appropriate to exclude from the List. Therefore using the WI/PWL assessments is a better gage of waters that are impaired and in need of resources for restoration than is the actual Section 303(d) List.

A summary of the information received through the data solicitation is included below. Some of these organizations and individuals also provided follow-up comments during the public comment period on the Draft List. More detailed responses to public comments submitted regarding the Draft List are included in the responses above.

2016 Section 303(d) List –Data Solicitation Log

Waterbody	Solicitor	Data Submitted
Cayuga Lake	Cayuga County Health (E. O'Connor)	Photos of HABs, algae, sediment plumes, and WI/PWL Worksheet and request for listing for HABs, phosphorus.
Wallkill River and other Hudson River Tribs	Riverkeeper (J. Epstein)	Enterococcus data for multiple sites in support of listing for pathogens.
Lake Como	Cayuga Co WQMA (M. Wunderlich)	Completed WI/PWL Worksheet indicating high phosphorus data and presence of potential HABs.
Long Island Embayments	The Nature Conservancy (C. Lobue)	Photos of Potential HABs and other algae, QAPP for dissolved oxygen findings in Long Islands Coastal Embayments, and a revised WI/PWL Worksheets with supporting data for Northport Harbor, Penniman Creek and tidal tribs, Three-Mile Harbor, Tidal Tribs to East Moriches Bay, and Tidal Tribs to Quantuck Bay/Canal.
NYC Waterbodies (multiple)	NYC Water Trail Assoc (R. Buchanan)	Four years of entero data for various NYC waters.
Owasco Lake	Cayuga County WQMA (E. O'Connor)	Completed WI/PWL worksheet for Owasco Lake along with maps and charts with information on potential HABs and phosphorus data.
Quassaick Creek	Quassaick Cr Wshd All. (J. Gebhards)	Entero data from 2014-2015, for 14 locations on Quassaick Creek, select tributaries, and the Hudson River.
Reeder Creek	Seneca Lk Pure Waters (D. Corbett)	Completed WI/PWL worksheet for Reeder Creek, a Seneca Lake Watershed Management Plan, and nutrient and pathogen data.
Seneca Lake and multiple tribs.	Seneca Lk Pure Waters (M. Kowalski)	Completed WI/PWL worksheet for Seneca Lake and stream monitoring information on Catharine Creek, Big stream, Keuka Outlet, and Reeder Creek.
Slater Creek	Monroe County (A.Sansone)	Water Quality Data for Slater Creek/Slater Creek Stormwater Assessment and Action Plan
Cayuga Lake	Cornell University (L. Moran)	Scientific papers/findings regarding the listing of the South end of Cayuga lake for phosphorus.
Long Island Ponds (multiple)	Town of Southold (M. Collins)	Completed WI/PWL worksheets for these waterbodies and pathogen data.
St. Regis Chain of Lakes	St Regis Prop Owners (D. Cameron)	Lake Management Report outlining recommended management strategies such as developed nutrient budgets.
Wallkill River	Wallkill R Wshd All. (J. West)	Photos of potential HABs and other algae.
Long Island Sound Embayments	Save the Sound (P. Linderoth)	Completed WI/PWL worksheets for each waterbody, pathogen data, precipitation data, and a QAPP.