Responsiveness Summary:

Triennial Review of Mississippi's Water Quality Standards Compilation of Public Comments Received

RE: Draft modifications to Mississippi's Water Quality Standards

Title 11, Part 6, Chapter 2: Mississippi Commission on Environmental Quality Regulations for Water Quality

Criteria for Intrastate, Interstate, and Coastal Waters

The Clean Water Act states that water quality standards must include three components: (1) the designated uses for the state's waterbodies, (2) the water quality criteria (narrative or numeric) necessary to protect those uses, and (3) antidegradation provisions to protect water quality. The Clean Water Act also requires states to review, revise, and adopt water quality standards at least once every three years in a process known as the triennial review. Mississippi's triennial review of water quality standards is currently underway. A 45-day public comment period for the draft modifications was held from Thursday, February 11 until Monday, March 29, 2021. A public hearing regarding the proposed regulations was held on Tuesday, March 30, 2021. A request was submitted on March 29, 2021 requesting a 10-day extension to the public comment period regarding the proposed amendments. The extension request was approved by the Mississippi Department of Environmental Quality (MDEQ). Therefore, written comments regarding the draft modifications were accepted until Friday, April 9, 2021 at 5:00p.m.

Comments were received from six entities including: the Mississippi Forestry Association, the Mississippi Manufacturers Association, the Mississippi River Collaborative, Weyerhaeuser NR Company, Tulane Environmental Law Clinic, and Healthy Gulf regarding the draft modifications. MDEQ's responses to these comments are provided below.

Comments from Mississippi Forestry Association (MFA)

MFA Comment #1:

Given the short timeline, MFA would request MDEQ consider allowing additional comment time after the public hearing to give our members more time to fully understand any and all proposed changes in this triennial review.

MDEQ Response #1:

MDEQ acknowledges that this triennial review included numerous revisions and updates. Pursuant to regulatory requirements, MDEQ provided a 45-day public comment period and held a public hearing to accept comments regarding the draft revisions. During this time, a 10-day extension to the public comment period was requested by stakeholders and approved by MDEQ. MDEQ received modified/expanded comments from one entity (Healthy Gulf) during the extended comment period. No additional comments were received during the 10-day extension. MDEQ wants to be helpful and responsive to our stakeholders providing answers to any questions they may have. MDEQ's Water Quality Standards Program staff are happy to provide support to any stakeholder by providing further information, answering questions, setting up a conference call, scheduling a face-to-face discussion, and/or making presentations at meetings or conferences. MDEQ's Water Quality Standards Program tries to be open and transparent, to keep our stakeholders informed, and to encourage ongoing stakeholder engagement and feedback.

MFA Comment #2:

MFA would like to applaud MDEQ for recognizing forestry Best Management Practices (BMPs), and the positive roll they have played in Mississippi for over 30 years, in the proposed updates.

MDEQ Response #2:

Comment noted.

MFA Comment #3:

We request that the agencies (MDEQ and MFA) continue collaborating on these positive efforts in the future.

MDEQ Response #3:

Comment noted.

MFA Comment #4:

MFA would also encourage MDEQ to clarify that existing forestry BMPS are acceptable and effective for any Outstanding Waters.

MDEQ Response #4:

MDEQ's draft revisions to Mississippi's Water Quality Standards include the addition of three new waterbody classifications, including the above referenced Outstanding Mississippi Water Classification. There are no waterbodies being assigned to this classification as part of this triennial review. In the future, if a waterbody is being evaluated as a potential Outstanding Mississippi Water, MDEQ will conduct an extensive study of the waterbody and its watershed. During this analysis, all existing projects, BMPs, NPDES permitted facilities, and other activities within the watershed will be taken into consideration. Each waterbody studied as a potential Outstanding Mississippi Water will have unique characteristics. Protection needs for each waterbody will be evaluated on a case-by-case. Any revisions to waterbody classifications, will require a change to Mississippi's Water Quality Standards which must meet specific public participation requirements as seen in this triennial review process including a 45-day public comment period and a public hearing.

MFA Comment #5:

MFA supports the BMPs in current form and would ask for significant stakeholder input before MDEQ suggests any changes or modifications.

MDEQ Response #5:

Any revisions to waterbody classifications or water quality standards variances, will require a change to Mississippi's Water Quality Standards which must meet specific public participation requirements as seen in this triennial review process including a 45-day public comment period and a public hearing. Therefore, Mississippi's stakeholders will have an opportunity to review and comment on any of these revisions if made in the future. In addition, any waterbody classification change or water quality standards variance will require an extensive study of the waterbody and its watershed. MDEQ recognizes that all stakeholders associated with the waterbody or watershed being evaluated are an essential part of this effort. The MDEQ Water Quality Standards Program has no plan to initiate any changes to forestry BMPs in their current form.

MFA Comment #6:

Additionally, MFA member, Weyerhaeuser NR Company, has submitted comments, and we would like to note our support and agreement with their statements.

MDEQ Response #6:

MDEQ did receive comments from the Weyerhaeuser NR Company. A separate responsiveness summary has been developed responding to their comments. All comments received by MDEQ during the public comment period and MDEQ's responses to those comments can be found on the MDEQ Water Quality Standards webpage.

MFA Comment #7:

We appreciate the opportunity to provide additional comments on this topic after more data and information is released following the public hearing and any subsequent meetings of stakeholders.

MDEQ Response #7:

MDEQ acknowledges and appreciates this comment. As described earlier, a 10-day extension to the public comment period was requested and approved by MDEQ. This extension allowed written comments to be submitted until Friday, April 9, 2021. MDEQ received modified/expanded comments from one entity (Healthy

Gulf) during the extended comment period. No additional comments were received during the extended time. No additional public notices or public comment period are planned regarding the proposed triennial review modifications.

Comments from Mississippi Manufacturers Association (MMA)

MMA Comment #1:

Page 3, E. Site-Specific Modified Criteria: this condition states that modified aquatic life criteria must be based on natural conditions. That is a rather vague specification and, because all that is seemingly required is "scientifically defensible methods," is perhaps not a necessary specification.

MDEQ Response #1:

Rule 2.1 E. does not apply only to modified criteria based upon natural conditions. Language within Rule 2.1.E. states that if the statewide aquatic life criteria for one or more parameters is not appropriate for a specific waterbody, MDEQ can establish site-specific modified criteria for the protection of aquatic life in that waterbody. It further states that this modified criteria must be based on natural conditions, EPA's recalculation procedure for aquatic life criteria, <u>or</u> other scientifically defensible methods. The intent of this language is to authorize the development of site-specific modified aquatic life criteria and to specify that this modified criteria must be based on scientifically defensible methods, including but not limited to, natural conditions.

MMA Comment #2:

Page 7, (23), Waters of the State: There appears to be a new definition for Waters of the State, which is rather inclusive, and specifically includes underground waters. That said, it does exclude "lakes, ponds, or other surface waters which are wholly landlocked and privately owned, and which are not regulated under the Clean Water Act."

MDEQ Response #2:

The definition for "Waters of the State" is an addition to these particular regulations, however, the definition itself for "Waters of the State" is not new. "Waters of the State" are defined by the state legislature as referenced in MS Code § 49-17-5 (1)(f). Waters of the State that are also Waters of the US are regulated under the Clean Water Act. For these waters, the State must receive US EPA approval regarding changes to any water quality standards for the waterbody, including but not limited to, designated uses, water quality standards variances, and modified criteria. However, if a waterbody is a Water of the State, but the waterbody does not meet the definition of Water of the US, US EPA does not have regulatory authority over the waterbody. However, the State of Mississippi has regulatory authority over this waterbody since it is a Water of the State.

MMA Comment #3:

Page 8, B.: states that all Waters of the State default to the Fish and Wildlife Classification (which includes aquatic life, fish consumption, and secondary contact recreation). It is unclear if or how this would apply to underground waters.

MDEQ Response #3:

Although the definition for "Waters of the State" includes underground waters, Title 11, Part 6, Chapter 2: Mississippi Commission on Environmental Quality Regulations for Water Quality Criteria for Intrastate, Interstate, and Coastal Waters apply only to surface waters. Modifications were made to the draft revisions to help reduce confusion on this issue. A definition for "Surface Waters of the State" was added to the definitions and language has been updated throughout Mississippi's Water Quality Standards to more accurately refer to "Surface Waters of the State" instead of "Waters of the State."

MMA Comment #4:

Page 9, Table 1 and Page 23: The proposed rule adds three new water classifications: Modified Fish and Wildlife, Drainage Waters, and Outstanding Mississippi Water. Drainage waters "share the same water quality criteria as Fish and Wildlife waters with the exception of any modified criteria...established for a waterbody...." This could be troublesome for many drainage waters and seems at odds with the discussion earlier in the paragraph where it is stated that "typical conditions within these waters are not adequate to support the reproductive cycles of fish and other aquatic life."

MDEQ Response #4:

All Waters of the State default to the Fish and Wildlife Classification along with all associated narrative and numeric criteria. The designated uses of fish consumption, aquatic life support, and secondary contact recreation already apply to these waterbodies by default. The addition of the new Modified Fish and Wildlife Classification and Drainage Waters Classification will allow the option for a waterbody to be reclassified where appropriate along with any modified criteria necessary to protect the new classification. To move waters into the Drainage Waters Classification a use attainability analysis will be required. When the use attainability analysis is performed, the highest attainable use for a waterbody will be identified and characterized. For all existing water quality criteria that are determined to be inappropriate, the use attainability process must establish the new, modified criteria. Waterbodies that are considered as candidates for either the Modified Fish and Wildlife Classification or the Drainage Waters Classification, will each have unique characteristics that may represent a range of conditions. The use attainability analysis will identify the level of aquatic life a waterbody can support and then determine the criteria needed for protection on a case-by-case basis.

MMA Comment #5:

Page 22, (2) and (3): the proposed rule indicates a "correction" of criteria for specific conductance and Total Dissolved Solids, lowering the conductivity criteria and raising the TDS criteria. These criteria could be problematic for discharges to drainage or other waters.

MDEQ Response #5:

After further evaluation, MDEQ determined that these values did not need to be modified. The modifications to the criteria for Total Dissolved Solids and Specific Conductivity have been removed. The existing criteria for these parameters will remain in effect.

MMA Comment #6:

Page 23, as regards Drainage Waters, as written, this suggests that forest roadside ditches could be included in the Drainage Waters category and, therefore, ditches could be subject to water quality standards. Whether this is indeed intended should be clarified.

MDEQ Response #6:

All Waters of the State default to the Fish and Wildlife Classification. If a roadside ditch meets the definition of Waters of the State, then by default that roadside ditch is classified as Fish and Wildlife and is subject to all water quality standards associated with that classification. The proposed additions of new waterbody classifications does not expand or increase the number of waterbodies subject to water quality standards regulations. Additional waterbody classification options will allow waterbodies to be more accurately classified with more appropriate water quality criteria, when needed.

MMA Comment #7:

Pages 28-34, D, E, F: The proposed rule lays out new language for Compliance Schedules, Variances, and Use Attainability Analysis. Having such provisions in a water quality standards package is usually considered helpful and is becoming common in state programs. However, it may be advisable to have an attorney familiar with such language review these provisions for content and coverage.

MDEQ Response #7:

Comment noted. MDEQ added definitions to Rule 2.1.H. in response to this comment.

Comments from Mississippi River Collaborative (MRC)

MRC Comment #1:

It must be made clear that no waters may receive classifications or criteria that are less than that necessary to protect all fishable/swimmable uses without following the UAA or variance procedures of 40 CFR 131.10(g) or 40 CFR 131.14 and obtaining US EPA approval of the change.

MDEQ Response #1:

MDEQ agrees that specific procedures must be followed to reclassify a waterbody or to issue a water quality standards variance. These procedures are outlined in the Clean Water Act and are also included as part of the draft revisions to Mississippi's Water Quality Standards (see *Rule 2.5 Implementation of Water Quality Criteria*). Language included within Rule 2.5 of the draft revisions defines when and where a change to a designated use or a water quality standards variance can be considered along with the evaluation requirements associated for each of these procedures. It should also be noted that these regulations, the *Mississippi Commission on Environmental Quality Regulations for Water Quality Criteria for Intrastate, Interstate, and Coastal Waters*, apply to all Waters of the State. If a Water of the State is also a Water of the US, the State must receive US EPA approval regarding any water quality standards for that waterbody including changes in designated use, water quality standards variances for the specific waterbody, or any change to numeric or narrative water quality criteria. However, if the waterbody is a Water of the State, but does not meet the definition of Water of the US, US EPA does not have regulatory authority over the waterbody, thus US EPA approval is not required for changes to the waterbody's water quality standards.

MRC Comment #2:

Specific to antidegradation, a Tier 3 category should be created, and it should be clear that existing uses must always be protected.

MDEQ Response #2:

Mississippi's Antidegradation Implementation Methodology is included within a separate chapter of Mississippi's water regulations: Title 11, Part 6, Chapter 1: Mississippi Commission on Environmental Quality National Pollutant Discharge Elimination System (NPDES) Permits, Underground Injection Control (UIC) Permits, State Permits, Water Quality Based Effluent Limitations and Water Quality Certification. Mississippi's antidegradation tiers (Tier 1, Tier 2, and Tier 3) are established within this portion of Mississippi's water regulations.

The draft revisions to Mississippi's Water Quality Standards include clear, direct language related to the removal of existing uses. Rule 2.5.F.(6) of the draft revisions states, "The State may designate a use, or remove a use that is *not* an existing use..." In addition, Rule 2.5.F.(6)* also says, "The State may not remove designated uses if: (a) They are existing uses, as defined in 40 CFR 131.3, unless requiring more stringent criteria is added."

*Note: MDEQ also recognizes that there is a duplication in the numbering within Rule 2.5.F.(6). This error has been corrected.

MRC Comment #3:

Mississippi should establish numeric nutrient standards.

MDEQ Response #3:

MDEQ continues its work towards establishing numeric nutrient criteria for Mississippi's surface waters. Development of appropriate, protective, and scientifically defensible criteria are being advanced based on waterbody type. Numeric nutrient criteria will be developed in the following order: (1) Lakes and Reservoirs

(outside the MS Alluvial Plain), (2) Coastal and Estuarine Waters, (3) Wadeable Streams, and (4) Delta Waters (waterbodies within the MS Alluvial Plain). Numeric nutrient criteria for large (non-wadeable) rivers requires site-specific study and analysis. Therefore, numeric nutrient criteria for non-wadeable rivers will be established as determined by agency priority and available resources. Development of numeric nutrient criteria is a complex and lengthy process, but MDEQ is not waiting on numeric nutrient criteria to be in place before addressing nutrient issues. Although MDEQ does not yet have numeric nutrient criteria within its Water Quality Standards, excess nutrients and the impacts of excess nutrients are covered by narrative criteria within these regulations. MDEQ is actively addressing excess nutrients through various surface water programs including TMDLs, NPDES permitting, the 319 program, and through the implementation of the State's nutrient reduction strategies.

MRC Comment #4:

Mississippi should reconsider its Human Health Standard for arsenic.

MDEQ Response #4:

Comment noted. MDEQ will evaluate the current Mississippi human health criteria for arsenic as part of the next triennial review process. The latest scientific information, research, and EPA recommendations for arsenic will be reviewed and evaluated at that time.

Comments from Weyerhaeuser NR Company

Weyerhaeuser Comment #1:

Our review indicated significant modifications and changes from the current rule. However, no statement of basis was provided with the public notice, within the draft rule or made available on the MDEQ website that clarifies the purpose, intent and reasoning for the significant changes proposed.

MDEQ Response #1:

MDEQ acknowledges that this triennial review included numerous revisions and updates. Each state's process is unique regarding their state's statutory requirements for conducting a triennial review. Within Mississippi, MDEQ is not required to provide a statement of basis for proposed changes to Mississippi's Water Quality Standards. Historically, MDEQ has not provided a statement of basis with triennial review materials released for public review and comment. MDEQ wants to be helpful and responsive to our stakeholders providing any assistance we can for Mississippi's citizens and stakeholders. Our approach for this triennial review, as well as past triennial reviews, has been to provide the draft revisions along with contact information for MDEQ staff available to answer any questions and provide any additional information requested pertaining to the draft revisions. Contact information for MDEQ staff within the Water Quality Standards Program was provided on the MDEQ webpage, in the public notice language, and within the MDEQ newsletter articles. MDEQ's Water Quality Standards staff are happy to provide support to any stakeholder by providing further information, answering questions, setting up a conference call, scheduling a face-to-face discussion, and/or making presentations at meetings or conferences. MDEQ's Water Quality Standards program tries to be open and transparent, to keep our stakeholders informed, and to encourage ongoing stakeholder engagement and feedback.

Weyerhaeuser Comment #2:

In several sections of the proposed rule, MDEQ states that rules which apply to Waters of the US are subject to approval by the US Environmental Protection Agency (EPA), while those rules specific to the Waters of Mississippi are not subject to EPA approval. Weyerhaeuser requests that those conditions not subject to EPA approval be specifically identified within the rule or by some other method to ensure transparency in the rule development and approval process.

MDEQ Response #2:

The Mississippi Commission on Environmental Quality Regulations for Water Quality Criteria for Intrastate, Interstate, and Coastal Waters apply to all Waters of the State. "Waters of the State" are defined by the state legislature as referenced in MS Code § 49-17-5 (1)(f). If a Water of the State is also a Water of the US, the State must receive US EPA approval regarding changes to any water quality standards for the waterbody, including but not limited to, designated uses, water quality standards variances, and modified criteria. However, if the waterbody is a Water of the State, but does not meet the definition of Water of the US, US EPA does not have regulatory authority over the waterbody, thus US EPA approval is not required for changes to water quality standards within the waterbody.

Weyerhaeuser Comment #3:

The Clean Water Act only allows the addition of new uses after a Use Attainability Analysis under 40 CFR 131.10(g) is completed. In these new classifications, new uses of Aquatic Life Use- Modified, Secondary Contact Recreation, and Aquatic Life – Drainage Waters are not identified as designated uses outlined in the Clean Water Act. We request the opportunity to review and provided comment on the Use Attainability Analysis methodology that will be used to classify any Waters of the State under one of these new designated uses.

MDEQ Response #3:

MDEQ is currently working on guidance materials related to the methodology and requirements for performing studies related to changing a waterbody's classification (a use attainability analysis). These guidance materials will not be included as part of regulation. Therefore, the guidance materials will not go through the formal public review and comment process. However, for any waterbody that is being evaluated for a potential classification change, an extensive study of the waterbody and its watershed will be conducted. During this study, all existing projects, BMPs, NPDES permitted facilities, and other activities within the watershed will be taken into consideration. Each waterbody studied will have unique characteristics and will be evaluated on a case-by-case. All stakeholders associated with the waterbody or watershed being evaluated are an essential part of this analysis. In addition, any revisions to waterbody classifications, will require a change to Mississippi's Water Quality Standards. All changes to Water Quality Standards must meet specific public participation requirements as seen in this triennial review process including a 45-day public comment period and a public hearing.

Weyerhaeuser Comment #4:

For the proposed Drainage Waters classification, we request additional information to support assigning the designated uses of fish consumption, secondary contact recreation and aquatic life use to agricultural irrigation, drainage and industrial cooling & process waters. Further, we recommend that forest lands be clearly exempted from these descriptions.

MDEQ Response #4:

The designated uses of fish consumption, aquatic life support, and secondary contact recreation already apply to these waterbodies. According to Mississippi's Water Quality Standards, all Waters of the State default to the Fish and Wildlife Classification along with all associated narrative and numeric criteria. Waterbodies with the Fish and Wildlife Classification must meet the designated uses of Fish Consumption, Secondary Contact Recreation, and Aquatic Life Support. The addition of the new Modified Fish and Wildlife Classification and Drainage Waters Classification will allow the option for a waterbody to be reclassified where appropriate along with any modified criteria necessary to protect the new classification. To move waters into the Drainage Waters Classification a use attainability analysis will be required. When the use attainability analysis is performed, the highest attainable use for a waterbody will be identified and characterized. For all existing water quality criteria that are determined to be inappropriate, the use attainability process must establish the new, modified criteria. Waterbodies that are considered as candidates for either the Modified Fish and Wildlife Classification or the Drainage Waters Classification, will each have unique characteristics that may represent a range of conditions. Any changes to waterbody classifications will be evaluated on a case-by-case basis. MDEQ cannot exempt forest lands from these descriptions or evaluations.

Weyerhaeuser Comment #5:

Specific to the requirements to implement Best Management Practices for the Outstanding Mississippi Waters classification, the Mississippi Forestry Commission (MFC) regularly monitors the implementation of forestry BMPs across the state. In the 2019 survey, the MFC found that forestry BMPs were implemented at a 95% overall compliance rate, and critical sites, such as wetlands, stream crossings, and streamside management zones had compliance scores of 97%, 97% and 94%, respectively. This would be particularly important in implementation of Rule 2.5.E(2)(b)(iii) "Water Quality Standard Variances." Weyerhaeuser recommends that while analyzing forestry-related activities, that MDEQ clearly indicates the use of MFC forestry best management practices, and prioritizes the results of the MFC implementation surveys in the decision-making process.

MDEQ Response #5:

For any waterbody that is being evaluated for a potential classification change, an extensive study of the waterbody and its watershed will be conducted. During this study, all existing projects, BMPs, NPDES permitted facilities, and other activities within the watershed will be taken into consideration. Each waterbody studied will have unique characteristics and will be evaluated on a case-by-case. All available data and information as well as feedback from stakeholders associated with the waterbody being evaluated will be an essential part of this process. All active projects and BMPs within the watershed will be included in the decision-making process.

Weyerhaeuser Comment #6:

Rule 2.3.H describes the existing classification for Ephemeral Stream Classification. This classification includes "natural watercourses that have been modified by channelization or a manmade drainage ditch, that without the contribution of point source discharges, flow only in direct response to precipitation or irrigation return-water discharge in the immediate vicinity and whose channels are normally above the groundwater table." Further, the rule specifies that "aquatic habitat in these streams is not adequate to support a reproductive cycle for fish and other aquatic life." Please explain how the proposed Drainage Ditch classification is separate and different from the drainage ditches that are included within the Ephemeral Stream Classification.

MDEQ Response #6:

While MDEQ recognizes that there may be some overlap between the Drainage Waters Classification and the Ephemeral Stream Classification, there are significant differences between the two classifications. The Ephemeral Streams Classification includes a very specific definition that results in limited application when classifying waterbodies. The new Drainage Waters Classification has a broader definition allowing for a wider application as needed to address certain waterbodies. In addition, there are many differences in criteria that apply to waterbodies within these two waterbody classifications. Waterbodies within the Drainage Waters Classification will have the same criteria as the Fish and Wildlife Classification with the exception of any modified criteria established for the waterbody. All numeric and narrative criteria for the protection of both acute and chronic toxicity for the protection of aquatic life, human health criteria, and bacteria criteria will apply to the Drainage Waters Classification many of which do not apply to the Ephemeral Waters Classification.

Weyerhaeuser Comment #7:

According to the public notice, made available through MDEQ only newsletters, the public comment period began on February 11, 2021. The first notification received by Weyerhaeuser was through an article contained in the MDEQ February Newsletter, Volume 18 Issue 2 emailed to subscribers on February 22, 2021. A subsequent article was published in MDEQ March Newsletter, Volume 18, Issue 3 emailed to subscribers on March 18, 2021. There is no indication that the public notice was published in any newspaper. Additionally, the public notice was not included in any of the emailed list of public notices between February 3, 2021 and March 17, 2021.

MDEQ Response #7:

MDEQ's Water Quality Standards Program has been working towards many of these revisions for numerous years and has encouraged transparency and stakeholder feedback all along the way. Expanding Mississippi's Waterbody Classification system has been a work in progress for over 10 years. More focused efforts to refine waterbody classifications in Mississippi has been well underway since at least 2015 when the agency first began presenting

concepts for how the modifications to our classification system might look. During this past 6 years, MDEQ has provided updates to numerous groups and stakeholders across that state regarding the efforts and expressed that revising this classification system was a high priority for the agency. Although more recent opportunities for stakeholder updates have been limited due to COVID, this topic has been presented and discussed many times prior to the COVID pandemic.

Pursuant to regulatory requirements MDEQ held a 45-day public comment period and a public hearing to accept comments regarding the draft revisions. A notice announcing the public comment period and public hearing was published in a newspaper with statewide coverage, the Clarion Ledger, for 3 consecutive weeks on February 11, February 18, and February 25, 2021. Due to concerns regarding COVID-19, the public hearing was held via conference call on March 30, 2021. In addition to the required public notification requirements, MDEQ's external newsletters for February and March provided information and reminders regarding the triennial review and the public comment period. The public notice for comments and the public hearing along with the proposed revisions were posted on the MDEQ website. Direct contact information for MDEQ's Water Quality Standards staff was provided in all announcements, public notices, newsletter articles, and the MDEQ Water Quality Standards webpage for any stakeholder or member of the public to contact if they needed further information or had any questions regarding the revisions. A 10-day extension to the public comment period was requested by stakeholders and granted by MDEQ. MDEQ received modified/expanded comments from one entity (Healthy Gulf) during the extended comment period. No additional comments were received during the extended time.

The "emailed list of public notices" referenced above is managed by a separate division at MDEQ, the Environmental Permits Division (EPD). The public notice information provided in those weekly emails pertains to permitting only. It is not an agency-wide, comprehensive list.

Comments from the Tulane Environmental Law Clinic

Tulane Comment #1:

MDEQ should narrow and clarify the language in the Water Quality Standard Variances section on participation.

MDEQ Response #1:

MDEQ's language within the Water Quality Standards Variance section directly reference multiple portions of 40 CFR 131. This language provides sufficient information within regulations regarding public participation and other requirements for developing and implementing a water quality standards variance. MDEQ is currently working on guidance materials for water quality standards variances which will provide additional information that will be included as part of the regulations themselves.

Tulane Comment #2:

MDEQ should include an upper limit on the length of a variance.

MDEQ Response #2:

MDEQ is not including an upper limit on the length of a water quality standards variance. MDEQ understands that these variances should be time-limited and only in place for as long as necessary to achieve the required water quality criteria. The length of time needed for a variance will depend on numerous factors, including but not limited to, the waterbody characteristics, the pollutant(s) of concern, and current state of technology. Because each application will be unique, MDEQ will determine the length of a variance on a case-by-case basis. Each water quality standards variance must also be re-evaluated no less than every five years. Documentation required for this re-evaluation should include but not be limited to information showing progress towards pollutant reduction during the variance thus far and updated information on the latest science and technology available for control, treatment, or reduction of the pollutant of concern.

Tulane Comment #3:

The public participation requirement for variance implementation should be expounded upon for clarity

MDEQ Response #3:

MDEQ's language within the Water Quality Standards Variance section directly reference multiple portions of 40 CFR 131. This language provides sufficient information regarding public participation. The MDEQ Water Quality Standards Program strives to be as transparent as possible. Establishing a water quality standards variance will require a change to Mississippi's Water Quality Standards which must meet specific public participation requirements as seen in this triennial review process including a 45-day public comment period and a public hearing.

Tulane Comment #4:

Ambiguous Language should be clarified and similar terms should be differentiated.

MDEQ Response #4:

MDEQ added definitions to Rule 2.1.H. in response to this comment.

Tulane Comment #5:

MDEQ should restrict the application of Modified Fish and Wildlife classification and explicitly require a Use Attainability Analysis to determine the highest attainable use.

MDEQ Response #5:

Rule 2.5.F. clearly outlines when a use attainability analysis must be conducted. When the use attainability analysis is performed, the highest attainable use for a waterbody will be identified and characterized. For all existing water quality criteria that are determined to be inappropriate, the use attainability process must establish the new, modified criteria. Waterbodies that are considered as candidates for either the Modified Fish and Wildlife Classification or the Drainage Waters Classification, will each have unique characteristics that may represent a range of conditions. The use attainability analysis will identify the level of aquatic life a waterbody can support and then determine the criteria needed for protection on a case-by-case basis. Any change in waterbody classifications is a change to Water Quality Standards. All changes to Water Quality Standards must meet specific public participation requirements as seen in this triennial review process including a 45-day public comment period and a public hearing.

Tulane Comment #6:

MDEQ must specify that waters falling within the Modified Fish and Wildlife classification must protect existing uses.

MDEQ Response #6:

The draft revisions to the Water Quality Standards include clear, direct language related to the removal of existing uses. Rule 2.5.F.(6) of the draft revisions states, "The State may designate a use, or remove a use that is *not* an existing use..." In addition, Rule 2.5.F.(6) also states, "The State may not remove designated uses if: (a) They are existing uses, as defined in 40 CFR 131.3, unless requiring more stringent criteria is added."

Note: MDEQ also recognizes that there is a duplication in the numbering within Rule 2.5.F.(6). This error has been corrected.

Tulane Comment #7:

MDEQ should require public participation prior to any decision to downgrade waters into the Modified Fish and Wildlife Classification.

MDEQ Response #7:

When any waterbody is being evaluated for a potential classification change, an extensive study of the waterbody and its watershed will be conducted. During this study, all existing projects, BMPs, NPDES permitted facilities, and

other activities within the watershed will be taken into consideration. Each waterbody studied will have unique characteristics and will be evaluated on a case-by-case. All stakeholders associated with the waterbody or watershed being evaluated are an essential part of this analysis. In addition, any revisions to waterbody classifications, will require a change to Mississippi's Water Quality Standards. All changes to Water Quality Standards must meet specific public participation requirements as seen in this triennial review process including a 45-day public comment period and a public hearing. MDEQ does not agree with the use of the term "downgrading" to describe reclassification of waterbodies that fall within this category. Waterbodies assigned to this classification are being more accurately classified and assigned appropriate criteria for protection of the waterbody's use(s).

Tulane Comment #8:

MDEQ should specify whether the Modified Fish and Wildlife Classification is a Sub-category or a new Designated Use.

MDEQ Response #8:

The new waterbody classification categories of Outstanding Mississippi Waters, Modified Fish and Wildlife Waters, and Drainage Waters are new classifications. They are not considered sub-classes or sub-categories.

Tulane Comment #10:

MDEQ's proposed Drainage Waters use classification shares many of the Issues with the proposed Modified fish and Wildlife use classification.

MDEQ Response #10:

As stated earlier, Rule 2.5.F. clearly outlines when a use attainability analysis must be conducted. When the use attainability analysis is performed, the highest attainable use for a waterbody will be identified and characterized. For all existing water quality criteria that are determined to be inappropriate, the use attainability process must establish the new, modified criteria. Waterbodies that are considered as candidates for either the Modified Fish and Wildlife Classification or the Drainage Waters Classification, will each have unique characteristics that may represent a range of conditions. The use attainability analysis will identify the level of aquatic life a waterbody can support and then determine the criteria needed for protection on a case-by-case basis. In addition, any revisions to waterbody classifications, will require a change to Mississippi's Water Quality Standards. All changes to Water Quality Standards must meet specific public participation requirements as seen in this triennial review process including a 45-day public comment period and a public hearing.

Comments from Healthy Gulf

Opening Comments

Healthy Gulf Comment #1:

Mississippi Department of Environmental Quality (MDEQ) has not adequately involved the public in the subclassification of waters within Fish and Wildlife Classification, the sub-classification of uses, codification of variances, or site-specific criteria development, despite having drafted guidance documents for all these over the last three years and given presentations on these subjects to selected audiences.

MDEQ Response #1:

MDEQ's Water Quality Standards Program has been working towards many of these revisions for numerous years and has encouraged transparency and stakeholder feedback all along the way. Expanding Mississippi's Waterbody Classification system has been a work in progress for over 10 years. More focused efforts to refine waterbody classifications in Mississippi has been well underway since at least 2015 when the agency first began presenting concepts for how the modifications to our classification system might look. During this past 6 years, MDEQ has provided updates to numerous groups and stakeholders across that state regarding the efforts and expressed that

revising this classification system was a high priority for the agency. Although more recent opportunities for stakeholder updates have been limited due to COVID, this topic has been presented and discussed many times prior to the COVID pandemic. In addition, MDEQ has not chosen only selected audiences to present this information to over the past few months. MDEQ was invited to present an overview and update of the triennial review at virtual conferences held by the Mississippi Manufacturers Association and the American Council of Engineering Companies of Mississippi. The MDEQ Water Quality Standards Program will gladly provide a presentation or program to any group that makes the request. In addition, MDEQ may not be aware of meetings, conferences, or other opportunities to engage with a broader range of stakeholders. When these opportunities are available, the MDEQ Water Quality Standards Program would be happy to participate, present, etc.

Pursuant to regulatory requirements MDEQ held a 45-day public comment period and a public hearing to accept comments regarding the draft revisions. A notice announcing the public comment period and public hearing was published in a newspaper with statewide coverage, the Clarion Ledger, for 3 consecutive weeks on February 11, February 18, and February 25, 2021. Due to concerns regarding COVID-19, the public hearing was held via conference call on March 30, 2021. In addition to the required public notification requirements, MDEQ's external newsletters for February and March provided information and reminders regarding the triennial review and the public comment period. The public notice for comments and the public hearing along with the proposed revisions were posted on MDEQ website. Direct contact information for MDEQ's Water Quality Standards staff was provided in all announcements, public notices, newsletter articles, and the MDEQ Water Quality Standards webpage for any stakeholder or member of the public to contact if they needed further information or had any questions regarding the revisions. A 10-day extension to the public comment period was requested by stakeholders and granted by MDEQ. MDEQ received modified/expanded comments from one entity (Healthy Gulf) during the extended comment period. No additional comments were received during the extended time.

Healthy Gulf Comment #2:

MDEQ has deviated from EPA's suggestions from Annie Godfrey in 2018 at the "kickoff" of the current Triennial Review process.

MDEQ Response #2:

MDEQ receives a "kickoff" letter from EPA Region 4 at the beginning of each triennial review process. This letter includes EPA recommendations for what they would like MDEQ to consider for the upcoming review. The recommendations are suggestions for our consideration not requirements. MDEQ coordinates closely with EPA Region 4 throughout the triennial review process regarding all modifications to Mississippi's Water Quality Standards. All draft modifications to these regulations were reviewed by EPA Region 4 staff. Any revisions needed based on EPA review were made by MDEQ prior to the public comment period.

General Comments

Healthy Gulf Comment #3:

The format of the document released for the Triennial Review was a red-line strikeout edited version of the state's WQS. In that format it was painful to read. MDEQ should have also released a clean version of the document for the sake of people's eyes

MDEQ Response #3:

MDEQ acknowledges that the redline version can be difficult to read at times. However, the redline version of the document is the format MDEQ has always provided for public review of triennial review modifications. This supports full transparency between MDEQ and the citizens and stakeholders reviewing the modified document allowing the reviewer to see every change that has been made to the document as part of the triennial review process. The redline version is also the format required for submittal to the Mississippi Secretary of State as part of the codification process. However, MDEQ can provide a clean version in addition to the redline version for the public to review in future triennial reviews.

Healthy Gulf Comment #4:

MDEQ is trying to define and adapt the water quality standards to "better match" current conditions in Mississippi's waters. By creating two new classifications that do not meet the Clean Water Act basic goals of Section 101(a)(2), the agency is adding avenues for limited coverage of uses in the state to the existing Ephemeral Waters Classification that US EPA expressed concerns about (Annie Godfrey letter, 3/21/18). If approved, Mississippi will boast three such classifications to address problems that could instead be addressed through impaired waters listing, TMDLs, site-specific criteria, and time-limited variances.

MDEQ Response #4:

The Clean Water Act provides states and tribal entities numerous tools to use in the protection of state and tribal waters. Staff within MDEQ's Office of Pollution Control work to protect and restore water quality through numerous programs including monitoring, assessments, impaired water listings, TMDLs, site-specific criteria, nonpoint source reductions, NPDES permits, etc. The proposed revisions to Mississippi's WQS include the addition of two additional tools supported by the Clean Water Act: (1) water quality standards variances and (2) revisions to designated uses. These additions provide MDEQ with further flexibilities to address waterbody-specific issues. Federal regulations along with Mississippi's revised Water Quality Standards outline very clearly when and where these tools may be applied. Further, guidance materials and information are currently being developed by MDEQ and will be provided to stakeholders when finalized. This documentation will provide more detail regarding procedures and requirements for conducting evaluations for variances and changes to designated uses/classifications.

Healthy Gulf Comment #5:

Putting waters into the new classifications and developing variances will be dependent on Use Attainability Analyses (UAA), yet no procedures or guidance have been shared or referenced. We have seen drafts of guidance in the FOIA request, however, without an established and publicly vetted UAA procedure, how many proposed changes to these water quality standards will be implemented is unclear and impossible to comment on.

MDEQ Response #5:

MDEQ is currently working on guidance materials related to the methodology and requirements for performing studies related to establishing a water quality standards variance or revising a waterbody's classification. These guidance materials will not be included as part of regulation. Therefore, the guidance materials will not go through the formal public review and comment process. However, for any waterbody that is being evaluated for a potential classification change, an extensive study of the waterbody and its watershed will be conducted. Each waterbody studied will have unique characteristics and will be evaluated on a case-by-case. All stakeholders associated with the waterbody or watershed being evaluated are an essential part of this analysis. In addition, any water quality standards variance or revision to waterbody classifications, will require a change to Mississippi's Water Quality Standards. All changes to Water Quality Standards must meet specific public participation requirements as seen in this triennial review process including a 45-day public comment period and a public hearing.

Healthy Gulf Comment #6:

There needs to be a clarification among the different references to "highest attainable" use, "highest attainable" condition, "highest attainable" interim use and "highest attainable" interim condition. (Definitions and Rule 2.5.E.) While MDEQ has included the federal definition for highest attainable use in the definitions, the other terms are not necessarily synonymous nor interchangeable.

MDEQ Response #6:

MDEQ added definitions to Rule 2.1.H. in response to this comment.

Healthy Gulf Comment #7:

When "natural conditions" are used as part of a criterion, it is necessary to clearly define who determines what conditions are natural, how that determination is made, and what alternative criteria are used in place of the standard criteria.

MDEQ Response #7:

"Natural conditions" is defined within Mississippi's Water Quality Standards in Rule 2.1.D. Site-specific modified criteria can be developed for the protection of aquatic life when a unique natural condition precludes attainment of the statewide aquatic life criteria for one or more parameters. When these criteria are developed, essential components of the process are for MDEQ to characterize the waterbody, define natural conditions for the waterbody, and determine the appropriate criteria for the protection of aquatic life in that waterbody. These tasks must all be performed by applying scientifically defensible methods and must be outlined in documentation to support the establishment of the revised criteria. Revision of a water quality criteria based on natural conditions is considered a change to Water Quality Standards and must meet specific public participation requirements as seen in this triennial review process including a 45-day public comment period and a public hearing.

Healthy Gulf Comment #8:

In many cases, when Waters of the State are mentioned, it is stated that no EPA review or approval occurs if they are not also Waters of the US. When is that likely to be a concern? Has Mississippi evaluated which waters were removed from WOTUS with the Navigable Waters Protection Rule? How is MDEQ addressing any point sources or 404 permits in those waters? These answers should be explained in this update of the water quality standards because many of the changes proposed call out this distinction. It is important for the public to understand which waters will not receive EPA review and approval as their classifications are changed or variances are proposed for them.

MDEQ Response #8:

The Mississippi Commission on Environmental Quality Regulations for Water Quality Criteria for Intrastate, Interstate, and Coastal Waters apply to all Waters of the State. "Waters of the State" are defined by the state legislature as referenced in MS Code § 49-17-5 (1)(f). Mississippi's definition of Waters of the State is very broad and more inclusive than the current definition of Waters of the US. The intent for adding language regarding Waters of the State and Waters of the US within these regulations is to clarify that a waterbody which does not meet the definition of Waters of the US is still regulated by MDEQ if that waterbody meets the definition of Waters of the State. If a Water of the State is also a Water of the US, the State must receive US EPA approval regarding changes to any water quality standards for the waterbody, including but not limited to, designated uses, water quality standards variances, and modified criteria. However, if the waterbody is a Water of the State, but does not meet the definition of Water of the US, US EPA does not have regulatory authority over the waterbody, thus US EPA approval is not required for changes to water quality standards within the waterbody. MDEQ has not developed a comprehensive list of waterbodies that do not meet the Waters of the US definition. This evaluation will be performed on a case-by-case basis as part of any water quality standards program activity. Implementation and evaluation of Waters of the US within MDEQ permitting activities falls outside the scope of these regulations.

Healthy Gulf Comment #9:

Despite appearing in Annie Godfrey's 2018 Triennial Review "kickoff letter" the 2021 changes to the WQS have not squarely addressed streamflow. The Godfrey EPA letter to MDEQ stated: "The EPA is encouraging the states and tribes to consider the development of hydrologic WQS using the information outlined in this report" (EPA-USGS Technical Report: Protecting Aquatic Life from Effects of Hydrologic Alteration. 2016.) Many of the prospective changes to the Fish and Wildlife stream classification, including the new or sub-classifications Modified Fish and Wildlife, and Drainage Waters, have intersections with low flow issues. Many of the streams that will probably be submitted in the future for inclusion in these two classifications are also streams in which MDEQ and Mississippi Department of Wildlife, Fisheries and Parks (MDWFP) already see low flow problems seasonally, or because streams are disconnected from shallow groundwater sources. MDEQ should join the states

that have protected their aquatic life with better streamflow low flow schemes than Mississippi's 7Q10. It is not considered to be a hydrologic flow standard. Currently, there are NPDES discharges that put effluent into streams with 7Q10 flow measurements of zero. This practice looks bad on paper and must be terrible for the aquatic life actually affected by it.

MDEQ Response #9:

MDEQ receives a "kickoff" letter from EPA Region 4 at the beginning of each triennial review process. This letter includes EPA recommendations for what they would like MDEQ to consider for the upcoming review. The recommendations are suggestions for our consideration, not requirements. In addition, MDEQ agrees with EPA regarding the need for the protection of aquatic life through water of sufficient quantity and quality. However, the supporting information provided by EPA at this time does not provide MDEQ with the tools necessary to evaluate the level of protection provided by current methodologies nor determine alternative hydrologic flow approaches. MDEQ does not currently have the resources available to develop a scientifically defensible relationship between various hydrologic conditions and their effects on aquatic life. MDEQ does allow NPDES discharges into waterbodies with a zero 7Q10 flow. However, permit limitations for these facilities are determined through water quality modeling to ensure that all water quality standards are met providing protection of aquatic life and human health.

Healthy Gulf Comment #10:

In the Variance section, the variances refer to "if no additional feasible pollutant control technology can be identified," the default is to the installed technology with a pollutant minimization plan. How do we drive innovation, test new ideas, push beyond current technologies?

MDEQ Response #10:

Water quality standards variances must be re-evaluated at least every five years. Reviewing and evaluating new and emerging technologies and best available treatments are a key component of the re-evaluation process.

Healthy Gulf Comment #11:

The multiple references to the protection of downstream waters are legally correct and appreciated.

MDEQ Response #11:

Comment noted.

Section Specific Comments

Healthy Gulf Comment #12:

Rule 2.1.A. Antidegradation

Antidegradation section needs clarification of Tiers 1-3, clear Tier II procedures for alternatives analysis and socioeconomic justification of degradation, reference to Mississippi's ONRW guidance (2011), and clear explanation of how the new Outstanding Mississippi Waters Classification fits in to the overall Antidegradation Policy and Procedures. Without clear implementation procedures, EPA should not approve this water quality standards package.

The State shall develop methods for implementing the antidegradation policy that are, at a minimum, consistent with the State's policy and with paragraph (a) of this section. The State shall provide an opportunity for public involvement during the development and any subsequent revisions of the implementation methods and shall make the methods available to the public. 40 CFR §131.12(b)

MDEQ Response #12:

Mississippi's Antidegradation Implementation Methodology is included within a separate chapter of Mississippi's water regulations: Title 11, Part 6, Chapter 1: Mississippi Commission on Environmental Quality National Pollutant Discharge Elimination System (NPDES) Permits, Underground Injection Control (UIC) Permits, State Permits, Water

Quality Based Effluent Limitations and Water Quality Certification. Mississippi's antidegradation tiers (Tier 1, Tier 2, and Tier 3) are established within this portion of Mississippi's water regulations.

Healthy Gulf Comment #13:

Rule 2.1.C. Waterbody Classifications, Designated Uses, and Attainment

We recognize this language is directly from the federal regulations. We recommend that MDEQ include here the list of uses that Mississippi has chosen to protect in its waters through classification. Missing from that list are aesthetic or ceremonial classifications or designations that reflect the existing uses in Mississippi public waterways that flow through tribal lands or that occur in streams and lakes where churches perform baptisms. We recommend the third paragraph be deleted. There is not enough explanation of how the exceptions or alternatives will be implemented. Since this is the focus of the new classifications and the variance section, it doesn't appear necessary to introduce this in the general conditions.

MDEQ Response #13:

Comment noted. MDEQ has no regulatory authority over waterbodies that lie within tribal lands. Although Mississippi does not have a ceremonial classification, waterbodies with supporting evidence, such as those used by churches to perform baptisms, can be reclassified to Primary Recreation Classification.

Healthy Gulf Comment #14:

Rule 2.1.D. Natural Conditions

There needs to be a clear, transparent, and publicly vetted process for who determines natural conditions and how that determination is made. (repeated in Rule 2.5.A.) Many following sections and criteria refer to natural conditions.

MDEQ Response #14:

"Natural conditions" is defined within Mississippi's Water Quality Standards in Rule 2.1.D. MDEQ will determine natural conditions by applying scientifically defensible methods and utilizing all available data and information.

Healthy Gulf Comment #15:

Rule 2.1.E. Site-Specific Modified Criteria

There needs to be a clear explanation of several terms in this section: "sound scientific rationale," "adequate" scientific evidence, and what exactly are criteria that are "more appropriate for the waterbody." The process of developing site-specific modified criteria, whether associated with the new classifications or not, needs to be clear, transparent, and publicly vetted.

MDEQ Response #15:

The terms referenced in this comment would be difficult to clarify further. When establishing site-specific modified criteria, evaluations are performed on a case-by-case basis. There are numerous factors that will be unique depending on each case: waterbody size, waterbody location, pollutant or parameter being evaluated, etc. The process and information used to evaluate and establish a site-specific modified criteria must be documented and used to support the change to the regulations. Establishing a site-specific modified criteria is a change to Water Quality Standards and must meet specific public participation requirements as seen in this triennial review process including a 45-day public comment period and a public hearing.

Healthy Gulf Comment #16:

Rule 2.1.H. Definitions

There are several terms that are used in Mississippi's water quality standards without explanation. This can lead to confusion and difficulty in implementation. We recommend adding definitions in this section for the following terms: existing uses, highest attainable condition, highest attainable interim use, highest attainable interim criterion, mixing zone, natural conditions, pollutant minimization program, and use attainability analysis. Suggestions for some of these definitions can be found at 40 CFR §131.3, as was the case for highest attainable use.

- (e) Existing uses are those uses actually attained in the water body on or after November 28, 1975, whether or not they are included in the water quality standards.
- (p) Pollutant Minimization Program, in the context of § 131.14, is a structured set of activities to improve processes and pollutant controls that will prevent and reduce pollutant loadings.
- (g) Use attainability analysis is a structured scientific assessment of the factors affecting the attainment of the use which may include physical, chemical, biological, and economic factors as described in § 131.10(g).

MDEQ Response #16:

MDEQ added definitions to Rule 2.1.H. in response to this comment.

Healthy Gulf Comment #16:

Rule 2.1.H. Definitions

(15) Modified criterion – We recommend the following edit to the second sentence, "The criterion shall be supported by the findings of the respective waterbody's use attainability analysis..."

MDEQ Response #16:

MDEQ worked with US EPA Region 4 staff to establish the definition for "modified criteria" as included in the draft modifications. Therefore, MDEQ will maintain the definition in its current form.

Healthy Gulf Comment #17:

Rule 2.1.H. Definitions

(18) 7Q10 and (19) 7Q2 – These flow assumptions need to be updated to reflect changing precipitation patterns associated with climate change. These assumptions are used in many ways including on p.12 when calculating acute and chronic toxicity, and when developing NPDES effluent limitations.

MDEQ Response #17:

The use of 7Q10 and 7Q2 flows is recommended by US EPA for the referenced applications. MDEQ uses the latest data and information provided by the US Geological Survey (USGS) for 7Q10 and 7Q2 flows.

Healthy Gulf Comment #18:

Rule 2.1.H. Definitions

(23) Waters of the state – Has Mississippi released to the public documentation of which waters no longer meet the criteria for Waters of the US? Which waters are wholly landlocked and privately owned and are not regulated under CWA?

MDEQ Response #18:

MDEQ has not developed a comprehensive list of waterbodies that do not meet the Waters of the US Rule. This evaluation will be done on a case-by-case basis as part of any water quality standards program activity.

Healthy Gulf Comment #19:

Rule 2.2.B. Waterbody Classifications and Designated Uses

We recommend that descriptions of all the classifications and designated uses in Table 1 be extracted from the sections in Rule 2.3 (where they exist) and included below Table 1 to assist in the interpretation of Table 1. To those existing descriptions should be added descriptions of listed designated uses that do not appear anywhere in the standards such as for Aquatic Life Use – Modified and Aquatic Life Use – Drainage Waters.

We question the pairing of Secondary Contact Recreation designated use with Fish and Wildlife Classification rather than Primary Contact Recreation designated use because all waters default to Fish and Wildlife Classification and should also default to Primary Contact Recreation, as was intended in the Clean Water Act Section 101(a)(2). In addition, the bacteria criteria in Rule 2.3.D. for Fish and Wildlife Classification are the same as in Rule 2.3.C. for Recreation Classification and are established to support Primary Contact Recreation – activities such as swimming and water skiing.

We agree with the default that all Public Water Supply, Recreation or Shellfish Harvesting shall also meet Fish and Wildlife Use. We recommend that Table 1 reflect that by including the Fish and Wildlife Classification and the associated designated uses in each of those cells of the table as depicted below, including the change to Primary Contact Recreation.

We recommend that Outstanding Mississippi Waters be put at the top of the table, signifying the exceptional waters status. We also recommend that these waters be assigned Primary Contact Recreation because of the description in Rule 2.3.G. that says "Waters in this classification can include... waters of high recreational or aesthetic value." High recreational value should signify an associated Primary Contact Recreation designated use and associated criteria. And it says that these waters meet the same water quality criteria as Fish and Wildlife waters, which, as explained above, include the most protective bacteria criteria.

Proposed changes to Table 1

MS Waterbody Classification	US EPA Associated Designated Uses
WATERS MEETING CLEAN WATER ACT	
Outstanding Mississippi Water	Aquatic Life Use
	Fish Consumption
	Primary Contact Recreation
Fish and Wildlife	Aquatic Life Use
	Fish Consumption
	Primary Contact Recreation
Recreation, Fish and Wildlife	Primary Contact Recreation
	Aquatic Life Use
	Fish Consumption
Public Water Supply, Fish and Wildlife	Drinking Water Supply
	Aquatic Life Use
	Fish Consumption
	Primary Contact Recreation
Shellfish Harvesting, Fish and Wildlife	Shellfish Consumption
	Aquatic Life Use
	Fish Consumption
	Primary Contact Recreation
WATERS NOT MEETING CLEAN WATER ACT G	OALS
Modified Fish and Wildlife	Aquatic Life Use-Modified
	Fish Consumption
	Secondary Contact Recreation
Drainage Waters	Aquatic Life Use-Drainage Waters
	Fish Consumption
	Secondary Contact Recreation
Ephemeral Waters	Aquatic Life Use
	Fish Consumption
	Secondary Contact Recreation

In addition, we recommend that the Ephemeral Waters be included in this table and, if both the Modified Fish and Wildlife and Drainage Waters classifications are adopted, they should all be appropriately labeled as not meeting Clean Water Act basic goals. In our opinion, there is no need for one such classification if other Clean Water Act tools are appropriately applied to water quality challenges, not to mention three. Perhaps Mississippi could makedo with only one of these categories. As mentioned above, no aesthetic or ceremonial uses are listed as designated uses despite Mississippi having public waterways that flow through tribal lands and are used for baptisms. We recommend that MDEQ define and include Aesthetic Use and Ceremonial Use in Outstanding Mississippi Waters, Fish and Wildlife, Recreation, Public Water Supply and Shellfish Harvesting classifications. Other states create better tables than Mississippi. Look at Kentucky's tables of classifications, uses and criteria.

They are complete and don't leave the reader guessing about how these subjects fit together. Mississippi's working documents in 2018 and 2019 spelled out criteria and uses within classifications. If it helped MDEQ's engineers to write clear guidance documents, it will help the public too.

MDEQ Response #19:

Comment noted. MDEQ will consider these recommendations and look for ways to improve clarity in the future.

Healthy Gulf Comment #20:

Rule 2.2.E. Temperature

There is extensive reference to natural conditions in this section. As mentioned in the General Comments, there needs to be a process defined for determining each "natural condition" and seasonal temperature situation.

MDEQ Response #20:

As previously stated, "natural conditions" is defined within Mississippi's Water Quality Standards in Rule 2.1.D. MDEQ will determine natural conditions by applying scientifically defensible methods and utilizing all available data and information.

Healthy Gulf Comment #21:

Rule 2.2.F. Toxic Substances

- (4)(b) As mentioned in the definition section above, there needs to me more clarity about data on which the streamflow assumptions depend and the regular process of update given such variability related to climate change.
- (6) The fish consumption rate is likely too low at 17.5 gm/person-day in a region that is heavily dependent on fish and shellfish in their diet.

MDEQ Response #21:

Comment noted. The fish consumption rate of 17.5 gm per person per day is based on EPA recommendations. If there is evidence that this rate is not protective, MDEQ could reevaluate the fish consumption rate in future triennial reviews.

Healthy Gulf Comment #22:

Rule 2.3.B. Shellfish Harvesting Classification

We recommend that MDEQ explain what is meant by "most unfavorable hydrographic and pollutive conditions" and which agency determines these conditions.

MDEQ Response #22:

Water quality criteria for the Shellfish Harvesting Classification, including the terminology referenced above, adheres to the language and recommendations of the National Shellfish Sanitation Program (NSSP). The NSSP is based on public health principles and controls to provide a uniform program to prevent illnesses and outbreaks from the consumption of molluscan shellfish products.

Healthy Gulf Comment #23:

Rule 2.3.C. Recreational Uses

The 90-day geometric mean in marine and estuarine coastal waters would appear to mask any shorter-term bacterial spikes that could harm recreational uses.

MDEQ Response #23:

The 90-day geometric mean in marine and estuarine coastal waters is the format recommended by US EPA for these criteria. For protection of coastal recreational, MDEQ's Beach Monitoring Program monitors recreational coastal waters for elevated levels of bacteria. Data collected by MDEQ's Beach Monitoring Program provides information that is used to issue beach water contact advisories when needed as well as lift the advisories when samples show that bacteria concentrations have returned to acceptable levels.

Healthy Gulf Comment #24:

Rule 2.3.C. Recreational Uses

As mentioned above, it would provide much-needed transparency to have an explanatory document that helps the public understand the significant increase of the Total Dissolved Solids criterion to 1000mg/L, rather than just labeling it as a "correction."

MDEQ Response #24:

After further evaluation, MDEQ determined that these values did not need to be modified. The modifications to the criteria for Total Dissolved Solids and Specific Conductance have been removed. The existing criteria for these parameters will remain in effect.

Healthy Gulf Comment #25:

Rule 2.3.D. Fish and Wildlife Classification

The 90-day geometric mean in marine and estuarine coastal waters would appear to mask any shorter-term bacterial spikes that could harm fish and wildlife uses.

MDEQ Response #25:

The 90-day geometric mean in marine and estuarine coastal waters is the format recommended by US EPA for these criteria. For protection of coastal recreational, MDEQ's Beach Monitoring Program monitors recreational coastal waters for elevated levels of bacteria. Data collected by MDEQ's Beach Monitoring Program provides information that is used to issue beach water contact advisories when needed as well as lift the advisories when samples show that bacteria concentrations have returned to acceptable levels.

Healthy Gulf Comment #26:

Rule 2.3.D. Fish and Wildlife Classification

As mentioned above, it would provide much-needed transparency to have an explanatory document that helps the public understand the significant increase of the Total Dissolved Solids criterion to 1000mg/L, rather than just labeling it as a "correction."

MDEQ Response #26:

After further evaluation, MDEQ determined that these values did not need to be modified. The modifications to the criteria for Total Dissolved Solids and Specific Conductivity have been removed. The existing criteria for these parameters will remain in effect.

Healthy Gulf Comment #27:

Rule 2.3.E. Modified Fish and Wildlife Classification

The process for downgrading waters to this classification is not explained. We recommend MDEQ add specific reference to Use Attainability Analysis in addition to the reference to 40 CFR §131.10(g) factors.

MDEQ Response #27:

Rule 2.5.F. clearly outlines when a use attainability analysis must be conducted. When the use attainability analysis is performed, the highest attainable use for a waterbody will be identified and characterized. For all existing water quality criteria that are determined to be inappropriate, the use attainability process must establish the new, modified criteria. The use attainability analysis will identify the level of aquatic life a waterbody can support and then determine the criteria needed for protection on a case-by-case basis. All changes to Water Quality Standards, including changes to waterbody classifications, must meet specific public participation requirements as seen in this triennial review process including a 45-day public comment period and a public hearing. MDEQ does not agree with the use of the term "downgrading" to describe reclassification of waterbodies that fall within this category. Waterbodies assigned to this classification are being more accurately classified and assigned appropriate criteria for protection of the waterbody's use(s).

Healthy Gulf Comment #28.

Rule 2.3.E. Modified Fish and Wildlife Classification

There is no reason given why these waters could not support primary contact recreation given that it is written that "Waters within this classification share the same water quality criteria as Fish and Wildlife waters" until specific criteria are modified, and Fish and Wildlife Classification criteria support primary contact recreation as explained above.

MDEQ Response #28:

All Waters of the State default to the Fish and Wildlife Classification which includes support for Secondary Contact Recreation. When sufficient evidence is available to support the revision, a waterbody can be reclassified to the Primary Recreation Classification.

Healthy Gulf Comment #29.

Rule 2.3.E. Modified Fish and Wildlife Classification

We appreciate the consistent reference to protection of downstream waters.

MDEQ Response #29:

Comment noted.

Healthy Gulf Comment #30.

Rule 2.3.E. Modified Fish and Wildlife Classification

We recommend language that clearly states the requirement that any waters downgraded into this classification will require evaluation of their condition every 3 years based on 40 CFR §131.20(a):

...The State shall also re-examine any waterbody segment with water quality standards that do not include the uses specified in section 101(a)(2) of the Act every 3 years to determine if any new information has become available. If such new information indicates that the uses specified in section 101(a)(2) of the Act are attainable, the State shall revise its standards accordingly. Procedures States establish for identifying and reviewing water bodies for review should be incorporated into their Continuing Planning Process.

MDEQ Response #30:

Waters moved to the Modified Fish and Wildlife Classification will require evaluation of their condition every three years. Language was added to Rule 2.5.F. for clarification. However, MDEQ does not agree with the use of the term "downgrading" to describe reclassification of waterbodies that fall within this category. Waterbodies assigned to this classification are being more accurately classified and assigned appropriate criteria for protection of the waterbody's use(s).

Healthy Gulf Comment #31.

Rule 2.3.F. Drainage Waters

Drainage Waters... should add "Classification"

MDEQ Response #31:

The word "Classification" was added in response to this comment.

Healthy Gulf Comment #32.

Rule 2.3.F. Drainage Waters

It is not clear from this section what the process may be for downgrading waters to this classification. There should be specific reference to Use Attainability Analysis in addition to the reference to 40 CFR 131.10(g) factors.

MDEQ Response #32:

Rule 2.5.F. clearly outlines when a use attainability analysis must be conducted. When the use attainability analysis is performed, the highest attainable use for a waterbody will be identified and characterized. For all existing water quality criteria that are determined to be inappropriate, the use attainability process must establish

the new, modified criteria. The use attainability analysis will identify the level of aquatic life a waterbody can support and then determine the criteria needed for protection on a case-by-case basis. All changes to Water Quality Standards, including changes to waterbody classifications, must meet specific public participation requirements as seen in this triennial review process including a 45-day public comment period and a public hearing. However, MDEQ does not agree with the use of the term "downgrading" to describe reclassification of waterbodies that fall within this category. Waterbodies assigned to this classification are being more accurately classified and assigned appropriate criteria for protection of the waterbody's use(s).

Healthy Gulf Comment #33.

Rule 2.3.F. Drainage Waters

There is no reason given why these waters could not support primary contact recreation given that it is written that "Waters within this classification share the same water quality criteria as Fish and Wildlife waters" until specific criteria are modified, and Fish and Wildlife Classification criteria support primary contact recreation as explained above.

MDEQ Response #33:

All Waters of the State default to the Fish and Wildlife Classification which includes support for Secondary Contact Recreation. When sufficient evidence is available to support the revision, a waterbody can be reclassified to the Primary Recreation Classification.

Healthy Gulf Comment #34.

Rule 2.3.F. Drainage Waters

We recommend language that clearly states the requirement that any waters downgraded into this classification will require evaluation of their condition every 3 years based on 40 CFR §131.20(a):

...The State shall also re-examine any waterbody segment with water quality standards that do not include the uses specified in section 101(a)(2) of the Act every 3 years to determine if any new information has become available. If such new information indicates that the uses specified in section 101(a)(2) of the Act are attainable, the State shall revise its standards accordingly. Procedures States establish for identifying and reviewing water bodies for review should be incorporated into their Continuing Planning Process.

MDEQ Response #34:

Waters moved to the Drainage Waters Classification will require evaluation of their condition every three years. Language was added to Rule 2.5.F. for clarification. However, MDEQ does not agree with the use of the term "downgrading" to describe reclassification of waterbodies that fall within this category. Waterbodies assigned to this classification are being more accurately classified and assigned appropriate criteria for protection of the waterbody's use(s).

Healthy Gulf Comment #35.

Rule 2.3.F. Drainage Waters

There is an unnecessary phrase that should be removed in the 4th to last line. "Waters in this classification."

MDEQ Response #35:

Comment noted. This unnecessary phrase has been removed from the document.

Healthy Gulf Comment #36.

G. Outstanding Mississippi Water Classification

This section needs to clarify what the process is to designate waters as OMWs. The ONRW process is incredibly expensive and proved to be quite difficult. If MDEQ really wants OMW to be a useful category it should lend its community engagement staff, and water quality standards staff to anyone trying to rally the local support for a

nomination and gather the data necessary to write up a nomination. This should be able to be accomplished using existing data, land use mapping, indexes of biological integrity, etc. already in MDEQ records. It should not be a prohibitively expensive or time-consuming task to nominate a waterbody to OMW.

MDEQ Response #36:

MDEQ is currently working on guidance materials regarding the process and requirements to classify a waterbody as Outstanding Mississippi Water. These guidance materials will be made available to the public when complete.

Healthy Gulf Comment #37.

G. Outstanding Mississippi Water Classification

We recommend the difference between ONRWs and OMWs be further clarified in this section.

MDEQ Response #37:

Comment noted. The distinction between ONRWs and OMWs will be clarified within guidance materials.

Healthy Gulf Comment #38.

G. Outstanding Mississippi Water Classification

We recommend that the procedures referenced in this section be explained in a procedural guidance document that can be incorporated into the Continuing Planning Process. The guidance should include required processes for determinations on alternatives analysis and development of effluent limitations for new or expanded point source discharges upstream.

MDEQ Response #38:

Comment noted.

Healthy Gulf Comment #39.

G. Outstanding Mississippi Water Classification

Also having the Permit Board as the final arbiter of whether "a permit applicant has conducted a thorough evaluation of all practicable treatment and disposal alternatives" is something that opens up the decision to Permit Board politics. Seven of the eight Board members work for executive agencies, and if a permit applicant goes straight to the Governor with a grievance over a permit on an Outstanding Mississippi Water, the Permit Board decision will be skirted or over-ridden. MDEQ has a little-used regulation allowing the Executive Director of MDEQ, in his or her discretion, to take over any Permit Board decision for solitary action. Having the permit board make this decision (above) as contemplated by Rule 2.3 G (2), or asking the Board to establish in 2.3 G (3) what effluent limitations are protective of the downstream OMW are both simply pure fantasy. **Putting the protection of OMW streams into the hands of the Permit Board will not work.** We recommend using the MDEQ Commission for this process and related decisions is a slightly better plan if difficult conflicts arise when permit applicants want to discharge to OMW protected streams or waterbodies.

MDEQ Response #39:

The Environmental Permits Division writes permits to ensure that water quality criteria are maintained within Mississippi's surface waters. The Mississippi Environmental Quality Permit Board takes action on permits administered through MDEQ. The Permit Board issues, reissues, modifies, denies, transfers, and revokes Mississippi permits and certifications administered under the Clean Water Act, the Clean Air Act, the Resource Conservation and Recovery Act, the Surface Mining Control and Reclamation Act, state mining laws, and state water resource control laws. The Commission on Environmental Quality is authorized to formulate department policy, to enforce rules and regulations, to receive funding, to conduct studies for using the state's resources, and to discharge duties, responsibilities, and powers, as necessary. All revisions to Mississippi's Water Quality Standards must be reviewed and adopted by the Commission. Water permits presented to the Permit Board have been written to comply with all applicable water quality standards.

Healthy Gulf Comment #40.

G. Outstanding Mississippi Water Classification

We recommend MDEQ define what is meant by "appropriate water pollution reduction plans" in subsection (6).

MDEQ Response #40:

Comment noted. Water pollution reduction plans will be developed on a case-by-case basis and will be unique to each waterbody and situation. Any additional detail about requirements for water pollution reduction plans will be provided within guidance materials.

Healthy Gulf Comment #41:

G. Outstanding Mississippi Water Classification

We recommend a specific list of criteria that apply to this classification. "Waters within this classification must meet the same water quality criteria as Fish and Wildlife waters with the exception of any site-specific modified criteria that have been established to protect the outstanding features of the waterbody." As mentioned above, there should be no reason why this classification should not support Primary Contact Recreation uses as is reflected in the description of "waters of high recreational value."

MDEQ Response #41:

The intention of the OMW Classification is to protect waterbodies with "outstanding features." The site-specific modified criteria is dependent on the "outstanding features" identified for the individual waterbodies. For example, a waterbody with endangered or endemic species of aquatic life that may be more sensitive to ammonia, so a more stringent ammonia criteria would be applied. There would be no need in this example to adjust the criteria for temperature, pH, or bacteria. For this reason, MDEQ chose to apply all Fish and Wildlife Classification criteria with the exception of any site-specific modified criteria. All Waters of the State default to the Fish and Wildlife Classification with includes support for Secondary Contact Recreation. When sufficient evidence is available to support the revision, a waterbody can be reclassified to the Primary Recreation Classification.

Healthy Gulf Comment #42.

H. Ephemeral Stream Classification

It is not clear that existing uses in ephemeral streams are protected based on the criteria and conditions listed. We recommend language that clearly states that to downgrade waters into this classification requires a Use Attainability Analysis, and that all waters in this classification require evaluation of their condition every 3 years based on 40 CFR §131.20(a):

...The State shall also re-examine any waterbody segment with water quality standards that do not include the uses specified in section 101(a)(2) of the Act every 3 years to determine if any new information has become available. If such new information indicates that the uses specified in section 101(a)(2) of the Act are attainable, the State shall revise its standards accordingly. Procedures States establish for identifying and reviewing water bodies for review should be incorporated into their Continuing Planning Process.

MDEQ Response #42:

Comment noted. Waters moved to the Drainage Waters Classification will require evaluation of their condition every three years. Language was added to Rule 2.5.F. for clarification. However, MDEQ does not agree with the use of the term "downgrading" to describe reclassification of waterbodies that fall within this category. Waterbodies assigned to this classification are being more accurately classified and assigned appropriate criteria for protection of the waterbody's use(s).

Healthy Gulf Comment #43.

Rule 2.4 Waterbody-Specific Water Quality Criteria

We recommend greater explanation of the purpose of this section upfront. Will all these site-specific criteria be moved into the Modified Fish and Wildlife or Drainage Classification? Will all the modified criteria that are

developed for the new classifications for Modified Fish and Wildlife and Drainage Waters end up in this section? Or will the site-specific criteria cease to be codified when they are supporting a Modified Fish and Wildlife or Drainage Waters Classification?

MDEQ Response #43:

The purpose for the addition of Rule 2.4 was to compile all Waterbody-Specific Water Quality Criteria into one central location within the Water Quality Standards. Prior to these revisions, waterbody-specific criteria were located in various places throughout the document. There is no plan to change the classification of waterbodies listed in this section. The waterbody-specific criteria listed within this section will be maintained in this section. In the future, any waterbody-specific criteria or site-specific modified criteria will be included in this section.

Healthy Gulf Comment #44.

Rule 2.5 Implementation of Water Quality Criteria

We recommend that MDEQ begin this section with subsection F. Designation of Uses and Use Attainability Analysis, and that the current opening paragraph of Rule 2.5 follow that section.

MDEQ Response #44:

Comment noted.

Healthy Gulf Comment #45.

Rule 2.5.C. Mixing zones

We recommend a clarification of, or process to determine what a "large" surface waterbody is and what a "long" distance or a "large" area means for the required mixing zone.

MDEQ Response #45:

The terms referenced in this comment would be difficult to clarify further. When conducting a mixing zone study, evaluations are performed on a case-by-case basis. There are numerous factors that will be dependent on the individual situation: waterbody size, waterbody location, facility's discharge, pollutant or parameter being evaluated, etc.

Healthy Gulf Comment #46.

Rule 2.5.E. Water Quality Standards Variances

Public participation requirements must be met in development of a water quality standards variance. For transparency, we recommend that you highlight the different places that public participation is necessary in this process.

- 1. Pollutant Minimization Program (CFR131.3)
- 2. Re-evaluation of variance term (2)(a)(v)
- 3. Documentation of any cost-effective and reasonable best management practices for nonpoint source controls related to the pollutant(s) or water quality parameter(s) and waterbody or waterbody segment(s) specified in the variance (2)(b)(iii)

MDEQ Response #46:

Establishing a water quality standards variance will require a change to Mississippi's Water Quality Standards. All changes to Water Quality Standards must meet specific public participation requirements as seen in this triennial review process including a 45-day public comment period and a public hearing.

Healthy Gulf Comment #47:

Rule 2.5.E. Water Quality Standards Variances

There is some awkwardness in this section because the language was appropriated almost verbatim from the 40 CFR §131.14.

MDEQ Response #47:

Comment noted.

Healthy Gulf Comment #48:

Rule 2.5.E. Water Quality Standards Variances

Differentiation between Waters of the State and Waters of the United States. Has MDEQ done any analysis to determine which Waters of the State are no longer Waters of the US? The references to where variances will not require EPA review and approval need to include any analysis that MDEQ has done.

MDEQ Response #48:

MDEQ has not developed a comprehensive list of waterbodies that do not meet the Waters of the US Rule. This evaluation will be done on a case-by-case basis as part of any water quality standards program activity.

Healthy Gulf Comment #49:

Rule 2.5.E. Water Quality Standards Variances

References to length of the variance based on Commission and/or US EPA approval. As we all know, those actions are sometimes separated by years. We recommend using the official approval of the variance which might be different for discharger-specific and waterbody variances.

MDEQ Response #49:

Comment noted. MDEQ is currently working on guidance materials regarding the process and requirements to establish a water quality standards variance. These guidance materials will provide more detailed information regarding development and implementation of these variances. These guidance materials will be made available to the public when complete.

Healthy Gulf Comment #50.

Rule 2.5.E. Water Quality Standards Variances

Pollutant Minimization Program – We have already recommended that the definition of this term from the CFR be added to the definitions for these water quality standards. In this section, there needs to be an explanation of what is required in discharger-specific or waterbody variances.

MDEQ Response #50:

MDEQ is currently working on guidance materials regarding the process and requirements to establish a water quality standards variance. These guidance materials will provide more specific information regarding development and implementation of these variances. These guidance materials will be made available to the public when complete.

Healthy Gulf Comment #51.

Rule 2.5.E. Water Quality Standards Variances

Highest attainable condition - This term is the focus of the development of the length of the variance (subsection (2)(a)(iv). It and related terms (highest attainable interim use and criterion) need to be defined, as mentioned earlier. We recommend that the Use Attainability Analysis guidance explains the process for determining the highest attainable condition and be publicly vetted.

MDEQ Response #51:

MDEQ added definitions to Rule 2.1.H. in response to this comment. In addition, MDEQ is currently working on guidance materials regarding the process and requirements to establish a water quality standards variance and to conduct a use attainability analysis. These guidance materials will provide more detailed information regarding development and implementation of these variances. These guidance materials will be made available to the public when complete.

Healthy Gulf Comment #52.

Rule 2.5.E. Water Quality Standards Variances

(2)(a)(iv) We recommend that MDEQ clarify an upper limit for the "time-limited" variances.

MDEQ Response #52:

MDEQ is not including an upper limit on the length of a water quality standards variance. MDEQ understands that variances should be time-limited and only in place for as long as necessary to achieve the desired water quality criteria. The length of time needed for a variance will depend on numerous factors, including but not limited to, the waterbody characteristics, the pollutant(s) of concern, and current state of technology. Because each application will be unique, MDEQ will determine the length of a variance on a case-by-case basis. Each water quality standards variance must also be re-evaluated no less than every five years. Documentation required for this re-evaluation should include but not be limited to information showing progress towards pollutant reduction during the variance thus far and updated information on the latest science and technology available for control, treatment, or reduction of the pollutant of concern.

Healthy Gulf Comment #53.

Rule 2.5.E. Water Quality Standards Variances

(2)(a)(v) We recommend language be added that addresses administrative continuances of permits. Even when the permit is administratively continued, the re-evaluation of the variance needs to occur no less frequently than every 5 years. Section (vi) may be setting up consequences if that doesn't happen, but the language is awkward because it is verbatim from the CFR.

MDEQ Response #53:

Comment noted. Details related to the re-evaluation of water quality standards variances will be included within guidance materials.

Healthy Gulf Comment #54.

Rule 2.5.E. Water Quality Standards Variances

(2)(a)(vi) We recommend removing the first words "A provision that".

MDEQ Response #54:

Comment noted. No change was made based on this comment.