



Technical Support for Assessment, TMDL Tracking and Implementation System (ATTAINS) Redesign Planning (EP-C-12-054, TO 1)

Workgroup 3 'Performance Measures Evaluation'

Recommendations Report

FINAL

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Acronym List

Acronym	Description
ADB	Assessment Database
ACWA	Association of Clean Water Administrators
ASIWPCA	Association of State and Interstate Water Pollution Control Administrators
ATTAINS	Assessment TMDL Tracking & Implementation System
AU	Assessment Unit
CWA	Clean Water Act
DEM	Digital Elevation Model
EPA	Environmental Protection Agency
FY	Fiscal Year
GRTS	Grants Reporting and Tracking System
IR	Integrated Reporting
NPDES	National Pollutant Discharge Elimination System
NHD	National Hydrography Dataset
NPS	Non-Point Source
NTTS	National TMDL Tracking System
STORET	STORage and RETrieval Data Warehouse
TMDL	Total Maximum Daily Load
WG	Workgroup
WQ	Water Quality
WQX	Water Quality Exchange Network
WQS	Water Quality Standards

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Executive Summary

The ATTAINS redesign project is part of the larger Water Quality Framework, which seeks to better integrate EPA’s existing data systems (ATTAINS, NHDPlus, STORET/WQX, GRTS). The Framework will first focus on the ATTAINS data system. This project seeks to leverage state and EPA Regional staff knowledge to refine the process used to submit Integrated Reporting (IR) data to EPA and then make that data visible to the public. The purpose of this Workgroup (WG) was to develop new strategic measures to propose for replacing current strategic measures (SP-10 and SP-11) in the next EPA Strategic Plan.

Timeline for new ATTAINS system:

- Late 2014 – Begin designing new system (Oct/Nov)
- Early 2015 – Begin system development
- Late 2015 – New system is ready to use
- 2016 – States can continue to use current system to submit data; however, EPA will be looking for approximately 10 states to volunteer to use the new system. Lessons learned from the volunteer states will be used to tweak the system.
- Compile lessons learned and list of needed changes from 2016 release of ATTAINS system
- 2018 – Finalize system and transition all states to new system

This project consists of four WGs: WG1 – Data Elements and Schema, WG2 – Data Exchange Methodology, WG3 – Performance Measure Evaluation, and WG4 – Improved Assessment Methods.

WG3 evaluated the existing performance measures (SP-10 and SP-11) as described in the [2014 National Water Program Guidance](#)¹ that can be reported on using IR data. The WG held 11 meetings, which were held via conference call and webinar, in which three EPA regions and 14 States participated. Based on the discussion, the WG developed proposed draft measure language (see Table 1).

Table 1 – Proposed Draft Measure Language Developed by WG¹

Proposed Draft Measure Language
Extent of area within a state where all assessed causes of impairment and/or designated uses ⁴ are now meeting water quality standards
Extent of area within a state where one or more of the assessed causes of impairment and/or designated uses (a) have activities that are being implemented ² ; and/or (b) are now meeting water quality standards
Extent of area within a state where unimpaired waters have been identified for protection activities and continue to support water quality standards (i.e., designated uses) ³ .

Identify exemptions from the measures: mercury, PCBs, fish consumption advisories

² The activities implemented piece of this measure would be optional

³ Think about adding language about implementation activities to this measure

⁴ Designated uses is meant to be a generic term for the use applied to a waterbody by a states WQS document (e.g. beneficial uses)

¹ http://water.epa.gov/resource_performance/planning/FY-2014-National-Water-Program-Guidance.cfm

The WG also made several key recommendations (the full recommendations are discussed in further detail in this report):

- A rolling baseline should be used for tracking progress (recommendation 3.1.1)
- States should get credit for actions that occur between when a water has a TMDL approved and when a water is restored (recommendation 3.4.4)
- EPA needs to define what is meant by ‘protection’ (recommendation 3.5.1)
- New measure should focus on efforts throughout the entire state, not only in priority areas (recommendation 3.6.1)
- *NHDPplus* catchments could be used for reporting progress, but EPA needs to communicate what the measures mean when described by the catchments. There must also be a method for dealing with areas of the country where there aren’t catchments (i.e., coastal areas), as well as approaches for making corrections to catchments (recommendations 4.0.1, 4.0.2, 4.0.3)

These new measures would not be in place any earlier than Fiscal Year (FY) 2018 because they need to be included as part of the next EPA Strategic Plan. So, should EPA and states be interested, there is an opportunity to pilot these measures to test the mechanics and to ensure that they do not present an increased reporting burden.

1. Purpose and Background for WG3

The purpose of WG3 was to evaluate the existing performance measures (SP-10 and SP-11) as described in the [2014 National Water Program Guidance](#)² that can be reported on using IR data. See also Table 2. The WG was tasked with making recommendations on new approaches for how these measures can be reported, as well as how the new ATTAINS system can be used to report on these measures.

The WG focused on two approaches: 1) change the baseline for the SP-10 and SP-11 measures, and 2) replace the SP-10 and SP-11 measures with new measures that accurately capture the work states are doing to attain water quality standards in impaired waters. The WG had some initial discussion on SP-12, but decided not to address this measure as part of this WG.

The WG discussed adding the ability to track actions and developing a protection measure. In order to tell the water quality restoration story, the WG suggested the development of a tiered measure to allow states to get credit for steps taken toward restoring water quality.

Table 2 - Current Suite of Measures Discussed by the WG

Current Suite of Measures	
SP 10	Number of water bodies identified in 2002 as not attaining water quality standards where standards are now fully attained. [Target measure: cumulatively reported]
SP 11	Remove the specific causes of water body impairment identified by states in 2002. [Target measure: cumulatively reported].
SP 12	Improve water quality conditions in impaired watersheds nationwide using the watershed approach. [Target measure: cumulatively reported]

This WG leveraged work already done under the 303(d) Program Vision effort and IR Georeferencing Pilot. The 303(d) measures process was presented by EPA to the WG to see if the process would work

² http://water.epa.gov/resource_performance/planning/FY-2014-National-Water-Program-Guidance.cfm

for discussing the update or replacement of SP-10 and SP-11. The Clean Water Act (CWA) Impaired Waters Restoration pipeline (Figure 1) was presented to the group to help them visualize the linkages to the strategic measures both before and after the new strategic measures would be put in place. The new 303(d) measures will fall under Planning, while the updated or replacement measures would be able to capture state work from Implementing to Recovery.



Figure 1 – CWA Impaired Waters Restoration Pipeline

2. Methodology

To evaluate the SP-10 and SP-11 measures and to determine whether to change or replace these measures, the WG held 11 meetings, which were held via conference call and webinar, in which three EPA regions and 14 States participated. A Microsoft SharePoint site was used to exchange information and post shared documents. As a starting point, the WG used the new 303(d) measures Guiding Principles, and modified them to meet the goals of these measures discussions, such as useful to the public, simple, and valuable 10 years from now (Table 3).

Table 3 - WG3 Guiding Principles

#	Principle
1	Links to values
2	Visual
3	Incremental
4	Links to strategy for improvement
5	Identifies meaningful targets
6	Useful to states
7	Useful to Public*
8	Reflects ultimate goal of CWA, but bounded by what program has control over
9	Outcome oriented*
10	Reflects counter pressure
11	Integrates with other CWA program measures
12	Acknowledges alternative benefits of TMDLs
13	Involves lower reporting burden
14	Considers variable baseline (non-2002)
15	Simple and valuable 10 years from now*
16	Links to WQS within a State and assessment methodology*
17	In terms of IR data submittal (national data standard compliant)*: <ul style="list-style-type: none"> 1) Error reduction through automated data validation flagging, and 2) Validation error logs

#	Principle
18	Improve automated cycle to cycle comparison*
19	Legacy data compatibility* 1) Automated measures reporting, and 2) data review tools
20	New 303(d) measures*: 1) Protected waters would be included along with impaired waters, and 2) Waterbody assessment results expressed concurrently with where the assessment unit (AU) or catchment are in the restoration pipeline, from first listed through restoration.
21	Incorporate Healthy Watersheds Initiative Approach*
22	Emphasis on protection*
23	All impairments not created equally*
24	“Equalization” reflected somewhere in the data system for AU size differentiation (i.e., 1 mile vs. 50 miles). Also to reflect that not all impairments created equally—and how to portray attainment of a SP-10 vs. SP-11 measure*
25	Pre-and post- (pipeline) data assessments linked/displayable in the system. From “discovery” to “recovery”*
26	Historical data retention capabilities combined with assessment and TMDL data audit trails to more clearly illustrate what happened over time

Note: The initial source for these guiding principles was from the 303(d) Program Measures Effort. Guiding Principles marked with a ‘*’ were added by the WG.

3. Development of Draft Measures

As a starting point, the WG discussed the SP-10 and SP-11 measures. During this discussion, four major issues with the existing strategic measures were identified:

- 1) The measures do not track incremental progress.
- 2) The 2002 Baseline is out of date.
- 3) The measures are burdensome to report on.
- 4) The measures are not transparent.

Based on these issues the WG decided to develop new measures to replace SP-10 and SP-11. The sections below summarize the WG discussions that led to the development of the draft measures language.

3.1 Summary of WG discussion on Existing Strategic Measures

The SP-10 measure is focused on full waterbody restoration. This measure does not show trends and/or improvements in water quality. All assessed uses must be attaining water quality standards for a water to be reported under this measure (refer to appendix D for full measure definition).

The SP-11 measure is used to demonstrate incremental success in achieving water quality standards on impaired waters. So as long as one of the causes of impairment is now attaining water quality standards, the waterbody may be reported under this measure (refer to appendix D for full measure definition).

The major issue the WG identified with the SP-10 and SP-11 measures was the 2002 baseline. The WG members expressed frustration with water quality impairments identified as impaired post 2002 and subsequently restored. Currently, there is no way to get credit for the restoration of these waterbodies. However, the WG noted that a specific baseline (e.g., 2002) gave EPA and states a known universe to track against, which makes tracking these measures easier. Other issues with the 2002 baseline included: 1) does not reflect the current focus and priorities in the state due to changes in state WQS since 2002, 2) states have performed more assessments since 2002, 3) does not reflect the number of waterbodies assessed through the watershed planning process, 4) some restorations might not really have occurred due to the fact that the water was never really impaired.

The WG then discussed what baseline would be more useful. Three ideas were considered: 1) rolling baseline, 2) priority areas, and 3) choose a different cycle. For the rolling baseline approach, progress would be measured against the most recent Integrated Reporting cycle data submitted by a state; however, the challenge with this approach is that it can become difficult to track improvements over time. You also lose the ability to see trends with this approach. However, even with these challenges the WG still felt that the rolling baseline was most appropriate for these measures. The concept of priority areas comes from the 303(d) Vision process. As defined by the 303(d) Vision process, the States prioritize and report priority watersheds or waters for planning, restoration, and protection in their biennial Integrated Reports to facilitate State strategic planning for achieving water quality goals. The new 303(d) program measures will track planning and protection. The WG members expressed concern with using “priority area” due to the fact that the states have different definitions of a “priority area” by program; see section 3.6 for a complete discussion of this topic. The last baseline option discussed was to choose a more recent cycle to use as a baseline. The WG was not in favor of this approach, as an updated static baseline would just create issues similar to what states currently have with the 2002 baseline.

Tracking Number	Final Decision / Recommendation
3.1.1	Utilize a rolling baseline approach for tracking progress in the new measures.

3.1.1 General Comments on SP-10 and SP-11

Based on input from the Regions and states, the SP-10 and SP-11 measures only show when a water moves from being impaired to attaining water quality standards, and as a result, they don’t accurately reflect the work being done on the ground. Often the attainment of water quality standards may take years or decades to remediate some impairments. The WG identified two scenarios not adequately captured by the current strategic measures. The ability to capture these scenarios in the replacement measures would be helpful for states.

1) Waterbodies with multiple impairments: A state reports on a waterbody with multiple impairments and is able to make incremental progress toward restoration by restoring one or more impairments. However, the waterbodies still have some remaining impairments that are not yet restored. States want to be able to measure this progress toward restoration.

2) Waterbodies with incremental progress: The state reports on a waterbody with one or more impairments and has made progress on some but not all impairments. The waterbody is not yet meeting

water quality standards but the water quality is getting better. The WG likened the process of restoring water quality to a pyramid (see Figure 2); once a state has identified a waterbody that is not meeting water quality standards, there is a lot of work that takes place at the bottom that leads to water quality standards attainment at the top. A tiered approach was suggested to more accurately reflect the process of restoration.

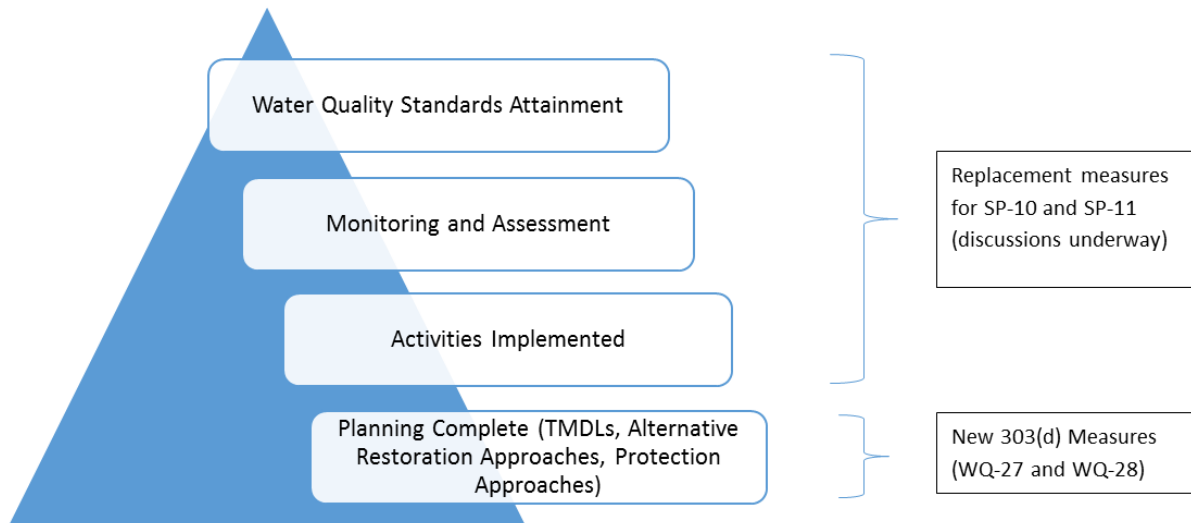


Figure 2 - Water Quality Restoration Pyramid

The WG suggested that the new measures should include tiers or some way to show incremental progress toward water quality standards attainment. This approach would require the identification of milestones that states would be given credit for as a waterbody moves toward an SP-10 outcome. The WG noted similarities between SP-10 and WQ-10³ (see Appendix C for the definition of WQ-10). These measures could be merged into one measure that captures the whole gamut of water quality impairments and/or protection. There is also the need to track all the actions that are necessary to achieve water quality standards attainment. For example, a state may have a temperature impairment and the state has implemented a watershed plan to remediate this impairment. However, the impairment may take many years to show improvement. So by tracking implementation activities, a state would receive credit for this water under the tiered measure.

3.2 Draft Measures Language

EPA developed proposed draft measures language to replace for the SP-10 and SP-11 measures (see Table 1). The draft language was developed using ideas submitted by and discussed with WG members. In general, the WG thought that the proposed draft measures are better than the current measures.

³ Number of waterbodies identified by States (in 2000 or subsequent years) as being primarily nonpoint source (NPS)-impaired that are partially or fully restored. (cumulative)

Table 4 – Draft Suggested Replacement Measures Language

Proposed Draft Measure Language
Extent of area within a state where all assessed causes of impairment and/or designated uses are now meeting water quality standards
Extent of area within a state where one or more of the assessed causes of impairment and/or designated uses (a) have activities that are being implemented; and/or (b) are now meeting water quality standards
Extent of area within a state where unimpaired waters have been identified for protection activities and continue to support water quality standards (i.e., designated uses).

3.3 Discussion on Issues Raised on Draft Measures Language

Two year IR cycle: This can be problematic in states that operate on a five year rotating basin approach. This creates a situation where some years there is no information to report for certain basins. A state may also have to shift priorities based on local media coverage for a certain area. The WG noted that there are a lot of moving pieces that don't work on a two year cycle. In many cases, it takes longer than two years to plan, implement, and observe recovery for a waterbody.

Focusing solely on recovery: This can be problematic. Some states may report zero improvement for a long time. The WG would like to see states get credit for protection of water quality for a waterbody that is not impaired. To address this issue, the WG suggested a tiered approach. This approach would allow states to get credit for steps taken toward protecting good water quality as well as restoring impaired waters. EPA would need to determine what types of water quality protection activities would qualify for credit.

Gathering information from different agencies. The WG members noted that obtaining information required to show interim restoration activities for the purposes of a tiered measure could be difficult. One way to address this issue would be to have better integration with the Nonpoint Source Grants Reporting and Tracking System (GRTS) system. For example, the GRTS system could be used to track remediation activities that have been put in place for impaired waterbodies.

Actions: Reporting on these measures could be difficult since states will need to gather data at different scales from multiple agencies.

Tiered Approach: The additional tracking presents a problem for states with reduced budgets.

Increased Reporting Burden: Some states felt that gathering additional information on remediation efforts would be difficult.

Tracking Number	Final Decision / Recommendation
3.3.1	Develop the measure with a tiered approach.
3.3.2	Allow states to receive credit for water quality protection activities.
3.3.3	Better integration with Non-Point Source (NPS) GRTS system.

3.4 Discussion on the Tracking of Actions Taken to Restore Water Quality

The WG1 discussions, Data Elements and Schema, led to the development of new data elements for ATTAINS to capture actions that states take to restore water quality. These data elements will provide states with the ability to track the actions that take place after a water is listed as impaired all the way to restoration. The actions envisioned being tracked by WG1 would be general in nature (see Table 4), and would allow for states to report on and get credit for the progress they are making towards waters meeting water quality standards. It often takes a significant amount of time for a water to meet water quality standards even after the state has implemented all of the corrective actions necessary to restore a water. This concept allows states to get credit for those waters where actions have taken place that will lead toward restoration. The WG was interested in including this concept in the draft measures. The proposed draft measures developed by EPA with input from the WG did include this concept.

Tracking Number	Final Decision / Recommendation
3.4.1	Track actions by pollutant.
3.4.2	Give credit for more than one action for a pollutant.
3.4.3	Provide input on the universe of activities that qualify for credit under the new measure.
3.4.4	Receive credit for actions that occur between when a water has a TMDL approved and when a water is restored.

EPA provided the group with a suggested list of actions to facilitate discussion. In the actions Domain list (see Table 5) many of these actions would be used to identify progress for the existing 303(d) program measures, while other actions would identify progress for the proposed draft measures discussed by the WG. Other actions are merely informational and would not be used for measuring progress. In general, the WG liked the suggested domain list and agreed that the implementation actions should be kept very broad.

The WG expressed concern that reporting on various actions would be difficult. The state staff members responsible for the ATTAINS data flow do not always have access to this information. To address this concern, actions could be provided by “other” users of the ATTAINS system, and not expected as part of the Integrated Report.

Table 5 - Actions Domain List

Action Type	Description	Measure Indicator	Measure Type
TMDL Planned	TMDL planning has been initiated for this waterbody/pollutant combination	Y	303(d) Measure
TMDL Under Development	A TMDL is under development for this waterbody/pollutant combination	Y	303(d) Measure
TMDL Complete	A TMDL has been completed for this waterbody/pollutant combination	Y	303(d) Measure
Alternative Restoration Approach Planned	Planning for alternative restoration approach (other than a TMDL) has been initiated for this waterbody/pollutant combination	Y	303(d) Measure

Action Type	Description	Measure Indicator	Measure Type
Alternative Restoration Approach Under Development	Alternative restoration approach (other than a TMDL) under development for this waterbody/pollutant combination	Y	303(d) Measure
Alternative Restoration Approach Complete	Alternative restoration approach (other than a TMDL) has been completed for this waterbody/pollutant combination	Y	303(d) Measure
Implementation Initiated	Implementation of activities identified in the plan have been initiated	Y	new draft measure
NPS Funding in Place	NPS funding has been allocated for restoration activities for this water	N	Informational
Permits Revised	National Pollutant Discharge Elimination System (NPDES) permits have been revised based on the TMDL	N	Informational
Public Meeting Held	A public meeting was held	N	Informational
Implementation Completed	Implementation of all activities identified in the plan have been implemented	Y	new draft measure
Water Identified for Protection	The waterbody has been identified as a water where water quality should be protected	Y	new draft measure
Follow-up monitoring conducted	Follow-up monitoring has been conducted at a water that has a plan in place or restoration measures in place	N	Informational

3.5 Discussion on Protection

Protection is another concept that is not addressed in the current measures, and the WG was interested in including this concept into the conversation. The following draft language was proposed for a protection measure: *Extent of area within a state where unimpaired waters have been identified for protection activities and continue to support water quality standards (i.e., designated uses).* The WG did not define protection due to time constraints. As a starting point, EPA will follow-up with the Nonpoint Source Program to see how they define protection.

Tracking Number	Final Decision / Recommendation
3.5.1	Need to define what qualifies as protection: <ul style="list-style-type: none"> a) Threatened waters on 303(d) list. b) Waterbody was meeting use in prior cycle and continues to meet use. c) State does some activity and is proactive in protecting. d) TMDL or other water quality protection plan (unlisted water).

3.6 Discussion on why “Priorities” was not included in the Draft Measures

The initial language reviewed by the WG contained language about state defined Priority areas. Priority areas are a concept from the “*Long-Term Vision for Assessment, Restoration, and Protection under the CWA Section 303(d) Program*” process⁴. As defined by the 303(d) Vision process, the States prioritize

⁴ <http://water.epa.gov/lawsregs/lawsguidance/cwa/tmdl/programvision.cfm>

and report priority watersheds or waters for planning, restoration, and protection in their biennial integrated reports to facilitate State strategic planning for achieving water quality goals. The new 303(d) program measures will track planning and protection.

The WG members expressed concern with using “priority area” due to the fact that the states have different definitions of a “priority area” by program. For example, the monitoring program, assessment program, TMDL program, and NPS program may all have different priorities. Another concern raised was that if priority area was used, states would not receive credit for activities happening in other areas of the state. For example, a state may define one area as a high priority, but then need to stop activity at that location and work on another issue in a different area in the state. This could happen for a variety of reasons.

The WG suggested that the new measure focus on efforts throughout the entire state and not only in priority areas. It also gives states the opportunity to get credit for activities happening in the entire state instead of just in defined priority areas.

Tracking Number	Final Decision / Recommendation
3.6.1	Remove “Priority Area” from the draft measures language.

4. Catchment-based Indexing

EPA proposed using catchment-based indexing to provide a common unit of measure to report on these measures. Under this proposed approach, states would continue to prepare their Integrated Report geospatial layers to meet the state needs, and submit this information to EPA. EPA would take the state geospatial layers and conflate the state AUs to catchments to report on these measures, and the state geospatial layers would be used for display. The use of catchments as the unit of measure to report on strategic measures is a paradigm shift for the EPA and the CWA 303(d) and 305(b) programs.

The new measures would also move away from calculating the number of waterbodies that have achieved full water quality attainment and instead use *NHDP* catchments to report on the extent of area within the state that is now attaining water quality standards, and this information would be reported as a percentage.

Tracking Number	Final Decision / Recommendation
4.0.1	EPA needs to communicate how catchments will be used to report on the measures
4.0.2	EPA needs to develop a method for dealing with areas of the country where there aren’t catchments (i.e. coastal areas, and Alaska)
4.0.3	EPA needs to communicate the process that states should follow to make corrections to catchments

4.1 Discussion on issues with the Catchment-based Indexing approach

The WG raised several issues during the discussion of the catchment-based indexing approach, which include:

Catchment Resolution: Catchments are based on 30 meter Digital Elevation Models (DEMs) which is not a fine enough resolution to adequately display catchments for all states.

Water Density/Topography: Density of waters in catchments could cause disparity between states. Catchment sizes depend on topography and amount of water (on average 1.1 sq miles). Catchments are larger in the central /western US (because this area is flat and dry).

Catchment approach could reduce the number of SP-10 declarations: The WG raised this concern about the catchment approach. EPA responded that this is not necessarily true. Catchments are very small, and even large AUs could receive SP-10 credit for completely restored catchments.

HUC 12 / Sub-watershed Reporting: The WG wanted to be sure the catchment approach could be used by states that report at the HUC 12 or sub-watershed level. EPA responded that the catchment approach will work with AUs defined at HUC 12 or sub-watershed level.

Define alternative approaches: There is a need to define alternate approaches for some states (for example Ohio – spatial indeterminacy). EPA responded that even if an AU is large, and the conclusion is the same for the entire AU, then we can associate that decision with all of the catchments corresponding to that AU. States do not need to define their AUs at the catchment level or their assessment decisions at the catchment level.

Impaired Waters: WG members noted that there can be impaired waters where the impairment is not located in that catchment. For NPS stories, the success story could be in catchments that are marked as not impaired.

Landscape association: The WG raised concerns that the general public may associate a catchment that is identified as a catchment containing an impaired water with an impaired landscape. EPA notes that it will be important to stress these catchments that contain impaired water don't necessarily mean that the landscape associated with the catchment is impaired or that the catchment is contributing to that impairment. EPA is not making any claim on the relationship between the status of the water and the impact on that water from the catchment. The NHD segment to which that catchment belongs is impaired. Landscape is not considered in this process. The catchment is just used as a reporting mechanism.

5. Conclusion and Next Steps

Based on input from the WG, the draft measures language was presented to Regions and The Association of Clean Water Administrators (ACWA) in June 2014. In general, the reaction has been positive in designing measures that more meaningfully capture the work being done by states, as well as automating the calculation of these measures. Upon completion of the draft report, EPA will seek input on the document. In addition, EPA will coordinate with states to pilot these draft measures in either Fiscal Year 2016 or 2017, and to begin work on the draft computational guidance.

List of References

A Long-Term Vision for Assessment, Restoration, and Protection under the Clean Water Act
Section 303(d) Program:

http://water.epa.gov/lawsregs/lawsguidance/cwa/tmdl/upload/vision_303d_program_dec_2013.pdf

Final Report on TMDL Interim Measures of Progress – The Association of State and Interstate Water
Pollution Control Administrators (ASIWPCA)

Measuring Water Quality Improvements: TMDL Implementation Progress, Indicators and Tracking –
Kent State University

Appendix A

Meeting minutes from WG 3 conference calls.

Appendix B

List of Presentations

- 1) Dwane Young (EPA – HQ): Provided an overview of EPA’s proposed approach to improving the process for tracking WQ improvements.
- 2) Tom Stiles (KS DHE): Provided an overview of the ASIWPCA report and the Kent State Study.
- 3) Shera Reems (EPA – HQ): Provided a walk through the suite of program measures spreadsheet developed by the 303(d) Program Measure WG, 303_d_matrix_measure_options_top.xls.
- 4) Shera Reems (EPA – HQ) Demo of the ATTAINS data system (January 16, 2014).
- 5) Meghan Klasic (EPA, NPS Program): Ms. Klasic gave a presentation on the Grants Reporting and Tracking System (GRTS). GRTS Website: <http://iaspub.epa.gov/apex/grts/f?p=GRTS:199>

Appendix C

Definitions for existing strategic measures.

SP – 10: Number of water bodies identified in 2002 as not attaining water quality standards where standards are now fully attained.

Type of Measure: Target measure; Cumulatively Reported

Universe: The universe consists of an estimated 39,978 water bodies identified by states or EPA as not meeting water quality standards in 2002. Thus, 2002 is the baseline year for this measure. This universe is sometimes referred to as the “fixed base” or “SP-10 baseline.” The universe includes all waters in categories 5, 4a, 4b, and 4c in 2002. Of these waters, 1,703 are impaired by multiple pollutants including mercury, and 6,501 are impaired by mercury alone (see discussion of mercury in Methodology above). Impairments identified after 2002 are not considered in counting waters under this measure; such impairments may be considered when revising this measure for future updates of the Strategic Plan.

Methodology for Computation of Results: This measure counts water bodies (segments). Two impairments removed on the same water body (assuming there were no other impairments on that water body) would count as one water body for Measure SP-10. This measure is designed to demonstrate cumulative successes of the surface water program in achieving water quality standards in waters formerly assessed as not meeting water quality standards. If a water body in the 2002 universe is subsequently re-segmented, it cannot be counted under SP-10 unless all the new segments meet the requirements for counting. A water body in the universe may be counted under this measure when it attains water quality standards for all pollutants and impairment causes identified in 2002, as reflected in subsequent state-submitted assessments, EPA-approved 303(d) lists, and Integrated Reports. Pollutants or impairments that are identified subsequently in later assessments and lists are not considered for this measure. In Integrated Report terminology, to count toward this measure a water body must be placed in Categories 1 or 2 for all the pollutants and impairments that were identified in 2002 as not attaining standards.

Delisting Reasons in ATTAINS that can be used for Reporting under SP-10:

- Applicable WQS attained; due to restoration activities
- Applicable WQS attained; due to change in WQS
- Applicable WQS attained; according to new assessment method.
- Applicable WQS attained; threatened water no longer threatened.
- Applicable WQS attained; reason for recovery unspecified.
- Applicable WQS attained; original basis for listing was incorrect.
- Data and/or information lacking to determine water quality status; original basis for listing was incorrect.

SP – 11: Remove the specific causes of waterbody impairment identified by states in 2002. (cumulative)

Type of Measure: Target measure; Cumulatively Reported

Universe: The universe consists of an estimated 69,677 waterbody impairments, as identified by states or EPA in the 2002 reporting cycle. Thus, 2002 is the baseline year for this measure. This universe is sometime referred to as the “fixed base” or “SP-11 baseline.”

Methodology for Computation of Results: This measure counts impairment causes. This measure is closely related to measure SP 10, except that it counts impairments rather than water bodies. Two impairments removed on the same water body would count as two under this measure. This measure is designed to demonstrate cumulative incremental successes of the surface water program in achieving water quality standards in waters formerly assessed as not meeting water quality standards. If a water body with an impairment in the 2002 universe is subsequently re-segmented, the impairment cannot be counted under SP-11 unless the impairment has been removed throughout the originally-listed water body (i.e., in each of the new segments).

Delisting Reasons in ATTAINS that can be used for Reporting under SP-11:

- Applicable WQS attained; due to restoration activities
- Applicable WQS attained; due to change in WQS
- Applicable WQS attained; according to new assessment method.
- Applicable WQS attained; threatened water no longer threatened.
- Applicable WQS attained; reason for recovery unspecified.
- Applicable WQS attained; original basis for listing was incorrect.
- Data and/or information lacking to determine water quality status; original basis for listing was incorrect.

SP – 12: Improve water quality conditions in impaired watersheds nationwide using the watershed approach. (cumulative)

Type of Measure: Target measure; Cumulatively Reported

Universe: 4,767 watersheds of focus. *Watersheds of focus* are HUC 12 watersheds in which Regions and states will be focusing application of the watershed approach to attain this measure.

Methodology for Computation of Results: For a watershed to be counted under SP-12, the state and Region must demonstrate that the watershed approach was applied, and that water quality improved. An individual watershed may be counted only once under this measure. That is, a watershed may be counted only when it initially meets the definition. Subsequent actions, such as having additional impairment causes removed or additional water quality parameters showing watershed-wide improvement, would not enable the watershed to be counted again in a subsequent reporting period.

WQ – 10: Number of waterbodies identified by States (in 2000 or subsequent years) as being primarily nonpoint source (NPS)-impaired that are partially or fully restored. (cumulative)

Type of Measure: Target measure; Cumulatively Reported

Methodology for Computation of Results: Since the main referent for this measure will be State 303(d) or Integrated Reports, States which did not submit 2000 303(d) lists may substitute the 1998 list for their base year. "Waterbodies" therefore refer to 303(d)-listed segments or category 4 or 5 waters on the Integrated Report. **The measure is meant to include not only waterbodies restored by 319-funded projects, but instead counts all primarily NPS-impaired waterbodies that a state fully or partially restores, regardless of funding source.** Although restoration efforts may have begun prior to the 1998/2000 base year, the waterbody must have been impaired as of the year 1998/2000.