



John R. Kasich, Governor  
Mary Taylor, Lt. Governor  
Craig W. Butler, Director

March 6, 2018

David P. Ross  
Assistant Administrator  
Office of Water  
United States Environmental Protection Agency  
Washington, DC 20460

Dear David,

Thank you for your January 12, 2018, letter on Ohio's 2016 Integrated Report, including our CWA Section 303(d) list of impaired waters. In your letter, you request that Ohio "assemble and evaluate all existing and readily available data and information regarding nutrients in the open waters of Lake Erie, consistent with applicable statutory and regulatory requirements by April 9, 2018, and submit to EPA the results of that evaluation for EPA's consideration."

In response, I am providing a listing of all the data sources Ohio EPA has and will continue to use as part of our ongoing analysis of Ohio's waters to determine if they are impaired under the Clean Water Act. Please note that the data used in our analysis is all data we consider "credible data" per Ohio statute. Our credible data requirements in Ohio are robust, ensuring that we are using sound scientific principles and the best data possible.

Before I provide you with details on how Ohio is assessing the open waters of Lake Erie, it is important for me to share with you an overview of the significant legislative, policy, program and financial investments since 2010 to address nutrient and algae issues and its harmful impacts in Ohio. While some may wish to disagree with our approach, Ohio is without challenge in how we have advanced a comprehensive program to reduce nutrient impacts to Lake Erie and other Ohio waters.

Our efforts on nutrient reduction began with Ohio leading the charge to bring stakeholders and scientists together in the Phosphorous Reduction Taskforce 1 and Taskforce 2 to develop a phosphorous reduction strategy. Critically important, this process developed the 40% phosphorous reduction goal that Ohio uses as a target in its recently submitted draft Domestic Action Plan 1.0, required by the Great Lakes Water Quality Agreement (GLWQA) Annex 4 that details our short-term and long-term plans and practices that will/may be employed in the years to come. This target has also been adopted by other states and organizations, most notably the International Joint Commission and the United States and Canada as part of the Binational Water Quality Agreement. Based on this target, Ohio developed a strategy to focus on all sources of nutrients contributing to the algae issue, including point sources and nonpoint sources, such as agriculture, failing residential septic systems and dredge materials.

With the leadership of Governor Kasich, the Ohio General Assembly passed Ohio Senate Bill 1 and Senate Bill 150. Senate Bill 1 became effective July 3, 2015, and requires major publicly owned treatment works (POTWs) to conduct technical and financial capability studies to achieve 1.0 mg/L total phosphorus; establishes regulations for fertilizer or manure application for persons in the Western Basin<sup>1</sup>; designates the Ohio EPA Director as coordinator of harmful algae management and response; and requires the director to implement actions that protect against cyanobacteria in the Western Basin and public water supplies; prohibits the Ohio EPA Director from issuing permits for sludge management that allow placement of sewage sludge on frozen ground; and prohibits the deposit of dredged material in Lake Erie on or after July 1, 2020, with some exceptions. Senate Bill 150, effective August 21, 2014, requires that beginning September 31, 2017, fertilizer applicators must be certified and educated on the handling and application of fertilizer, and authorizes a person who owns or operates agricultural land to develop a voluntary nutrient management plan or request that one be developed for him or her.

Additionally, House Bill 64, effective June 30, 2015, includes a provision that requires the development of a biennial report on mass loading of nutrients delivered to Lake Erie and the Ohio River from Ohio's point and nonpoint sources. This has been a very valuable tool to identify nutrient sources and their contribution to the overall loading to Lake Erie and other Ohio waters. Moreover, it is allowing Ohio to develop even more specific, targeted nutrient reduction strategies and focus limited state and federal resources on practices that will produce the most significant reductions.

Finally, relative to Ohio's legislative actions, I will mention that in 2012 the Departments of Natural Resources, Agriculture and Ohio EPA created the Ohio Clean Lakes Initiative. The Ohio General Assembly provided more than \$3.5 million for projects to reduce nutrient runoff in the Western Lake Erie Basin. In 2014, the Ohio General Assembly provided \$10 million to the Healthy Lake Erie Fund to reduce the open lake placement of dredge material into Lake Erie. These sediments often contain high levels of nutrients or other contaminants so finding alternative use or disposal options is a priority. Ohio has targeted these funds for projects that will reduce future dredging needs, as well as develop projects to protect the Lake Erie shoreline and recreate wetlands.

In addition to these critical legislative actions, Ohio has implemented several state-specific policy initiatives to reduce nutrients. Most notably, I highlight the Western Basin of Lake Erie Collaborative. This agreement between Ohio, Michigan and the Canadian Province of Ontario predated by two years Ohio's Great Lakes Water Quality Agreement, Domestic Action Plan. The Collaborative established an implementation framework with the goal to achieve the 40% reduction for total and dissolved reactive phosphorus from entering Lake Erie by 2025. This Framework was developed at the request of Ohio Governor Kasich to speed up our collective efforts to implement programs and practices to reduce nutrients to Lake Erie.

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1. "Western basin" is defined in this Senate Bill as consisting of the following 11 watersheds: Ottawa watershed, HUC 04100001; River Raisin watershed, HUC 04100002; St. Joseph watershed, HUC 04100003; St. Mary's watershed, HUC 04100004; Upper Maumee watershed, HUC 04100005; Tiffin watershed, HUC 04100006; Auglaize watershed, HUC 04100007; Blanchard watershed, HUC 04100008; Lower Maumee watershed, HUC 04100009; Cedar-Portage watershed, HUC 04100010; and Sandusky watershed, HUC 04100011.



We have also made powerful changes to our State Revolving Fund drinking water and wastewater programs. For example, as a portion of the more than \$3 billion Ohio has invested comprehensively in the Lake Erie watershed, we have made more than \$150 million available starting in 2014 to help public water systems keep drinking water safe and wastewater treatment plants reduce the amount of phosphorus they discharge into the Lake Erie watershed. As of June 2016, more than \$61 million had been awarded for this work and most of the remainder has been allocated for specific projects. In addition, we continue to target millions of dollars to support local health departments to find and fix faulty residential septic systems that are contributing nutrients to Ohio waters.

Let me assure you that this is not a comprehensive list of legislative/policy actions taken in Ohio, and we are currently engaged in working with stakeholders on additional legislative and policy proposals which we believe will accelerate our progress to reach the 40% phosphorus reduction goal by 2025. We are proud of our work with all of our stakeholders, the Ohio General Assembly, and others including U.S. EPA, and I look forward to sharing the new initiatives with you as they take shape in 2018.

Moving back to the request in your January 12, 2018, letter on Ohio's 2016 Integrated Report, I'll remind you Ohio has listed portions of Lake Erie as impaired as far back as 2004. The Lake Erie shorelines were listed as impaired for aquatic life use, recreation (bacteria), and human health (fish tissue). More recently, in 2014 Ohio began assessing and listing portions of the Lake Erie shoreline for public drinking water supply impairment based on cyanotoxins. Further, in 2016, several additional drinking water intakes were assessed and found to be impaired.

Ohio also has been discussing the open water listing of Lake Erie with U.S. EPA Region 5 for several years (*see enclosed letters dated 3/23/2012 and 9/30/16*). Uninformed critics, or those with alternative agendas may say otherwise, but the record is clear that Ohio takes seriously our obligation in the CWA relative to impairment designations, including the open waters of Lake Erie. However, it is also clear that in 2012 and again in 2016, U.S. EPA was unable to provide Ohio with a science-based assessment tool to make a determination about the open waters of Lake Erie.

Over the past year, Ohio has been working with researchers from The Ohio State University, the University of Toledo, Bowling Green State University and the National Oceanic and Atmospheric Administration (NOAA) to develop a science-based approach that uses satellite data to determine when algae blooms exceed the GLWQA Annex 4 goals. At our request, U.S. EPA staff have participated in some of those discussions as well. I recently was provided with a series of briefings on this work and am confident that after we complete our internal review, it will serve as a credible model for Ohio (and we would expect other Lake Erie states) to use in assessing the open waters of Lake Erie in our upcoming 2018 Integrated Report. We will be refining our Lake Erie assessment unit definitions to better reflect the variable characteristics, ecosystems, and behavior of the Lake and have provided you with a working draft of this for your information (*see enclosed map*).

If Ohio does declare the open waters of Lake Erie impaired in the upcoming Integrated Report, we are fully committed to address all the lake impairments associated with nutrients/algae through GLWQA Annex 4 efforts and Ohio's Domestic Action Plan (submitted to U.S. EPA on February 7, 2018). It is our belief that the GLWQA

Annex 4 process of developing loading targets and Domestic Action Plans are essentially the same as the TMDL process but have the added advantage of being binationally managed. The substantial work we've already completed through the TMDL process has contributed to understanding the nature and extent of the problems in the Lake Erie watershed, as well as what policies and practices will be needed to address already known problems. Suggesting that if the open waters of Lake Erie are declared impaired, Ohio must start from scratch and begin a multi-year TMDL process would be a colossal waste of time and resources that are far better spent implementing the plans we currently have in place.

David, I hope this letter provides you with a full understanding of the issues and limitations we have surrounding the open water assessment status of Lake Erie in Ohio. I also hope that you are reassured by our work to date and our steadfast commitment to working with to fulfill our obligations under the Clean Water Act so that Ohioans can continue to proudly call Lake Erie a "jewel of Ohio."

Thank you for your consideration.

Sincerely,

A handwritten signature in black ink, appearing to read "C. Butler", written in a cursive style.

Craig W. Butler, Director

cc: Tiffani Kavalec, Chief, Division of Surface Water



Data collected in Ohio water of Lake Erie that is level 3 credible data or could be approved as level 3 credible data with study plan and data review

Agency/ Collector	Geographic Location	Time Scale Start/End Date	Sampling Frequency	Parameters analyzed	Basin: West, SB or Central	Limitations/Notes	Eligible for IR use?
US EPA	Offshore/nearshore 9 sites in central basin; only 3-7 in OH waters	1983-present	Spring, Summer	Phytoplankton, zooplankton, <b>nutrients</b> , chlorophyll, water quality parameters	central	2 samples/year unless intense survey year	potential
US EPA	Offshore/nearshore 3 sites in western basin OH waters	1983-present	Spring, Summer	Phytoplankton, zooplankton, <b>nutrients</b> , chlorophyll, water quality parameters	west	2 samples/year unless intense survey year	potential
NOAA	All Lake Erie	2002-present	clear days	cyanobacterial chlorophyll	all	may need action of director to establish L3 status	TBD
ODNR-Sandusky	South of Middle Sister	May - September	bi-weekly	Chl-A, Species, <b>Phosphorus</b>	west	only P data is confirmed level 3	yes for P, rest potential
ODNR-Sandusky	Toledo Water Intake	May - September	bi-weekly	Chl-A, Species, <b>Phosphorus</b>	west	only P data is confirmed level 3	yes for P, rest potential
ODNR-DOW Sandusky	Western basin Offshore	May-September	Bi-weekly	Phytoplankton, Zooplankton, Chlorophyll, DO/Temperature profile, <b>Phosphorus</b>	west	only P data is confirmed level 3	yes for P, rest potential
ODNR-DOW Sandusky	Western basin Nearshore	May-September	Bi-weekly	Phytoplankton, Zooplankton, Chlorophyll, DO/Temperature profile, <b>Phosphorus</b>	west	only P data is confirmed level 3	yes for P, rest potential
NOAA GLERL	Toledo Shipping Channel	2012-present	weekly June - October	biovolume, taxa, picoplankton, chl-a, PC, toxins, <b>nutrients</b> , phys-chem, DNA	west		potential
NOAA GLERL	Western basin Offshore	2012-present	weekly June - October	biovolume, taxa, picoplankton, chl-a, PC, toxins, <b>nutrients</b> , phys-chem, DNA	west		potential
NOAA GLERL	Maumee Bay	2012-present	weekly June - October	biovolume, taxa, picoplankton, chl-a, PC, toxins, <b>nutrients</b> , phys-chem, DNA	west	in bay	potential
NOAA GLERL	Mouth of Maumee River	2016-present	weekly June - October	biovolume, taxa, picoplankton, chl-a, PC, toxins, <b>nutrients</b> , phys-chem, DNA	west	in bay, just started 2016	potential
NOAA GLERL	Toledo Water Intake	2014-present	weekly June - October	biovolume, taxa, picoplankton, chl-a, PC, toxins, <b>nutrients</b> , phys-chem, DNA	west	started 2014	potential
NOAA GLERL	West Sister Island	2014-present	weekly June - October	biovolume, taxa, picoplankton, chl-a, PC, toxins, <b>nutrients</b> , phys-chem, DNA	west	started 2014	potential
NOAA GLERL	Southeastern Western Basin	2015-present	weekly June - October	biovolume, taxa, picoplankton, chl-a, PC, toxins, <b>nutrients</b> , phys-chem, DNA	west	started 2015	potential
NEORS	Lake Erie - Cleveland area 8 sites	2012-present	1/mo May-July 2/mo Aug-Oct	<b>nutrients</b> , chl-a, microcystin, alkalinity, TSS and field parameters	central	mostly along shore, one site 7 miles out	yes through 2016
Ohio EPA	Maumee Bay near Woodtick Peninsula	2012-present	phytoplankton 3/yr, chemistry/field monthly	<b>nutrients</b> , for more see list in footnote (1)	west	in bay	yes
Ohio EPA	Maumee Bay near State Park	2013-present	phytoplankton 3/yr, chemistry/field monthly	<b>nutrients</b> , for more see list in footnote (1)	west	in bay	yes
Ohio EPA	Lake Erie near Toledo Lighthouse	2011-present	phytoplankton 3/yr, chemistry/field monthly	<b>nutrients</b> , for more see list in footnote (1)	west	close to shore	yes
Ohio EPA	Lake Erie between Toledo/Oregon WTP Intakes	2015-present	phytoplankton 3/yr, chemistry/field monthly	<b>nutrients</b> , for more see list in footnote (1)	west	close to shore	yes
Ohio EPA	Lake Erie near West Sister Island	2011-2015	phytoplankton 3/yr, chemistry/field monthly	<b>nutrients</b> , for more see list in footnote (1)	west	data no longer being collected	yes
Ohio EPA	Lake Erie near Middle Sister Island	2013-2015	phytoplankton 3/yr, chemistry/field monthly	<b>nutrients</b> , for more see list in footnote (1)	west	data no longer being collected	yes
Ohio EPA	Lake Erie near Middle Bass Island	2011-2015	phytoplankton 3/yr, chemistry/field monthly	<b>nutrients</b> , for more see list in footnote (1)	west	data no longer being collected	yes
Ohio EPA	Lake Erie North of Port Clinton	2014-present	phytoplankton 3/yr, chemistry/field monthly	<b>nutrients</b> , for more see list in footnote (1)	west	close to shore	yes
Ohio EPA	Lake Erie near Lake Side	2016-present	phytoplankton 3/yr, chemistry/field monthly	<b>nutrients</b> , for more see list in footnote (1)	west	very close to shore, data started 2016	yes

Data collected in Ohio water of Lake Erie that is level 3 credible data or could be approved as level 3 credible data with study plan and data review

Agency/ Collector	Geographic Location	Time Scale Start/End Date	Sampling Frequency	Parameters analyzed	Basin: West, SB or Central	Limitations/Notes	Eligible for IR use?
Ohio EPA	Lake Erie Near Crane Reef	2016-present	phytoplankton 3/yr, chemistry/field monthly	nutrients, for more see list in footnote (1)	west	data started 2016	yes
Ohio EPA	Sandusky Bay near Johnsons Island	2010-present	phytoplankton 3/yr, chemistry/field monthly	nutrients, for more see list in footnote (1)	sb	in bay	yes
Ohio EPA	Lake Erie near Cedar Point	2011-2015	phytoplankton 3/yr, chemistry/field monthly	nutrients, for more see list in footnote (1)	sb	close to shore, no longer being collected	yes
Ohio EPA	Lake Erie near City of Sandusky WTP Intake	2016-present	phytoplankton 3/yr, chemistry/field monthly	nutrients, for more see list in footnote (1)	sb	very close to shore, data started 2016	yes
Ohio EPA	Lake Erie near City of Huron WTP Intake	2016-present	phytoplankton 3/yr, chemistry/field monthly	nutrients, for more see list in footnote (1)	sb	in shoreline area, data started 2016	yes
Ohio EPA	Lake Erie near Huron	2011-2015	phytoplankton 3/yr, chemistry/field monthly	nutrients, for more see list in footnote (1)	sb	close to shore, no longer being collected	yes
Ohio EPA	Lake Erie near City of Vermilion WTP Intake	2016-present	phytoplankton 3/yr, chemistry/field monthly	nutrients, for more see list in footnote (1)	sb	in shoreline area, data started 2016	yes
Ohio EPA	Lake Erie near Lorain	2011-present	phytoplankton 3/yr, chemistry/field monthly	nutrients, for more see list in footnote (1)	sb	close to shore	yes
Ohio EPA	Lake Erie near Rocky River	2010-present	phytoplankton 3/yr, chemistry/field monthly	nutrients, for more see list in footnote (1)	central	close to shore	yes
Ohio EPA	Lake Erie near Wildwood	2010-present	phytoplankton 3/yr, chemistry/field monthly	nutrients, for more see list in footnote (1)	central	close to shore	yes
Ohio EPA	Lake Erie near Fairport	2011-present	phytoplankton 3/yr, chemistry/field monthly	nutrients, for more see list in footnote (1)	central	close to shore	yes
Ohio EPA	Lake Erie near Geneva	2011-present	phytoplankton 3/yr, chemistry/field monthly	nutrients, for more see list in footnote (1)	central	close to shore	yes
Ohio EPA	Lake Erie near Conneaut	2010-present	phytoplankton 3/yr, chemistry/field monthly	nutrients, for more see list in footnote (1)	central	close to shore	yes

(1) Ohio EPA Parameters: Alkalinity, Bicarbonate, Carbonate, Chloride, Sulfate, Solids, TDS, TSS, Ammonia, Nitrite, Nitrate-Nitrite, Kjeldahl, Total, Phosphorus Total, Orthophosphate, Chlorophyll a, Microcystins, Field Parameters (water depth, secchi depth, pH, dissolved oxygen, temperature, fluorescence, conductivity, and specific conductance), phytoplankton as noted

NOTES:

Ohio EPA Fish and Mayfly sites were not included since no chemistry or phytoplankton samples are typically collected there. That information can be found in the study plan at: [http://epa.ohio.gov/Portals/35/lakeerie/2017\\_Erie\\_Study\\_Plan.pdf](http://epa.ohio.gov/Portals/35/lakeerie/2017_Erie_Study_Plan.pdf).

Ohio EPA transects for dissolved oxygen and other field parameters are not included in the table. These are collected in the central basin at various depths and locations to assist in defining/tracking the hypoxic zone - but do not include nutrients.



**Environmental  
Protection Agency**

**Governor  
Lt. Governor  
Director**

March 23, 2012

Tinka Hyde, Acting Director  
Water Division  
U.S. EPA Region 5  
77 West Jackson Blvd. (W-15J)  
Chicago, Illinois 60604-3507

Dear Ms. Hyde:

I am pleased to submit the final Ohio 2012 Integrated Water Quality Monitoring and Assessment Report for U.S. EPA's review and approval under Section 303(d) of the Clean Water Act. The report incorporates the integrated approach to Sections 305(b), 303(d), and 314 reporting, as suggested in U.S. EPA guidance.

We appreciate your providing data collected in the open waters of Lake Erie. After careful consideration, we decided not to add Lake Erie to the 2012 303(d) list because the data were not received by the submission date for consideration of external data and no methodology exists for considering the data. A new public review period would also be needed for the new listing, and there would not be time to do so before the April 1 submittal deadline.

We will consider listing Lake Erie on the 303(d) list in 2014, taking into consideration the many factors about data quantity and quality, methodology and authority and shared responsibility with other contributing states. Please note that we have listed the Lake Erie shoreline on all recent and current 303(d) lists and these listings could serve as a basis for a Lake Erie TMDL.

The draft integrated report was available for public review and comment from December 28, 2011 to February 6, 2012. Copies of the draft report were available on Ohio EPA's web page and by mail upon request. A summary of the comments received and Ohio EPA's responses are included in Section D6 of the final report.

Please contact Trinkka Mount (614-644-2146) of the Division of Surface Water if you need additional information. We look forward to your approval.

Sincerely,



Scott J. Nally  
Director

cc: Peter Swenson, Chief, Watersheds and Wetlands Branch, U.S. EPA Region 5

Enclosure



John R. Kasich, Governor  
Mary Taylor, Lt. Governor  
Craig W. Butler, Director

September 30, 2016

Mr. Peter Swenson, Chief  
Watersheds and Wetlands Branch  
U.S. EPA Region V  
77 West Jackson Blvd.  
Chicago, Illinois 60604

Dear Mr. Swenson:

I am writing in response to your August 29, 2016 comments on Ohio's draft 2016 Integrated Report, including our CWA Section 303(d) list of impaired waters. Responses will follow the same order as your comments.

#### **Lake Erie/Nutrients/HABs**

In your letter you note that Ohio is responsible for assessing and listing all waters in our jurisdiction, including the State's open waters of Lake Erie, and EPA's role is to review and either approve or disapprove our list of impaired waters. You also state that Ohio needs to assess all of our waters in Lake Erie against all applicable water quality standards, in particular our narrative standard for nutrients and algae. Additionally, you state that Ohio should assemble and evaluate information such as algal coverage, impacts to recreation, impacts to industry, businesses, aquatic life, etc.

Nutrients and algae in Lake Erie are multi-jurisdictional and bi-national issues. It is our firm and consistent position that while we are making significant investments in Ohio waters and watersheds to combat this issue locally, all states and countries surrounding and contributing to problems in Lake Erie should, with leadership from our national EPA, develop a coordinated response.

In my opinion, this is best addressed through a formalized partnership with all the parties involved, and should be handled in a consistent, uniform manner, starting with the assessment and listing process. This reality was recognized in a letter dated November 17, 2015 to the National Wildlife Federation and Clear Water 2 and in press statements announcing the approval of Ohio's 2014, 303(d) list, where US EPA acknowledged that protecting the open waters of Lake Erie is a shared responsibility among the United States, Great Lake states and Ontario.

Part of that shared responsibility starts within CWA section 118(c)(2)(A) that requires USEPA, by 1991, to specify numerical limits on pollutants in ambient Great Lakes waters to protect human health,



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aquatic life and wildlife and shall provide guidance to the Great Lakes States on minimum water quality standards, antidegradation policies, and implementation procedures for the Great Lakes System.

Unfortunately, even though well past expectations of congress, USEPA has not proposed a nutrient water quality standard for the waters of Lake Erie. In addition, the International Joint Commission (IJC) has authority to develop recommendations for water quality improvements if requested by USEPA or Environment Canada. I am not aware of any such request of your agency to the IJC, or if so, any resultant recommendations from them.

In the absence of uniform standards that would apply to the open waters of Lake Erie, requiring Ohio to unilaterally develop assessment methods is absurd. This absurdity is compounded when there is no clear process or standard to de-list. Single state assessment and impairment designations are complicated and of questionable value in that the algae is seasonal, transient, spatially and temporally unpredictable, and variable in species make-up, toxicity and bio-accumulation. These issues and others call for an assessment methodology that is devoid of state boundaries and looks at Lake Erie for what it is, one ecological system in which the water flows regardless of state or national borders.

In the 2014 IR, Ohio did provide a planned approach for assessing impairment in the open waters. However, that plan was based on the expectation that the Great Lakes Water Quality Agreement Annex 4 task team would develop concentration thresholds for nutrients, chlorophyll-a or a related parameter which could be used to assess the open lake attainment of our narrative water quality standard - and that did not happen. Instead, the recommendations are to focus on reducing loads from the tributaries, which is where our focus has been and will continue to be.

If the impairment issue was of importance to the jurisdictions and USEPA, then it should have been part of the Annex 4 deliberations – it was not. A lake TMDL was not even discussed as part of the Annex 4 process. The Annex 4 is focused on load reduction, to be addressed through individual state and province Domestic Action Plans. Ohio has, along with Michigan have gone even further than the expectations of Annex 4 by developing our own Collaborative Agreement to meet these international goals and to start far sooner than even Annex 4 is demanding of other states.

To help with consistency, clarity and to provide a path forward that would benefit us all, Ohio suggests the following;

1. USEPA should finalize the recreation standard for algal toxins (microcystin), or at a minimum a threshold that could be used to consistently interpret narrative water quality standards. Once that level is established, it would provide Ohio and other states with at least one common parameter and value to use for assessing and listing the open waters for harmful algal blooms.
2. Ohio in collaboration with USEPA will explore one of the existing processes (GLNPO or IJC) to facilitate a multi-state and Ontario discussion on establishing standards and methods to assess aquatic life use and other standards for use in assessing impairments in Lake Erie.



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3. USEPA should recognize and validate that any efforts which will ultimately remove the nutrient impairment from the shoreline and algae toxin impairment from the drinking water in-takes will most likely address water quality issues resulting from excessive nutrients and algae in the open-waters. We are committed to addressing those impairments through Annex 4.
4. USEPA should develop de-listing criteria.

Ohio is not opposed to making impairment designations, evidenced by those already done in Lake Erie, but only when a science based process for designation and de-listing is available. We simply do not believe that the tools and measures are available yet to do so in a manner that is consistent, defensible and appropriate, beyond the shoreline and drinking water in-takes and we will not discuss or propose further listings until there are scientific tools, not political pressure, driving this debate.

### **Ohio River and ORSANCO**

In your letter you stated that Ohio should use ORSANCO data to assess and list the Ohio River. While we acknowledge that the language needs updated since ORSANCO's 2016 report is now available, we respectfully disagree with your request to do our own assessment for the following reasons:

1. We have included the same language related to the Ohio River and ORSANCO in at least our last two Integrated Reports and they were approved by USEPA (see section D of Ohio's 2012 and 2014 Integrated Reports). In fact, the language in those reports was included in the approval documents. It is our understanding that at least one other Region 5 state, Illinois, also defers to ORSANCO in listing the Ohio River as impaired.
2. Ohio's large river assessment procedures were not developed for a river like the Ohio. Of even more importance, biological criteria in the Ohio Water Quality Standards (Table 7-15 in OAC [3745-1-07](#)) recognize this difference and clearly and specifically state that "these criteria do not apply to the Ohio river, lakes or Lake Erie river mouths". Those criteria are what we use to assess our waters for aquatic life use attainment.
3. Ohio EPA and U.S. EPA have both participated on ORSANCO's Technical Committee and the Biological and Water Quality Subcommittee and have had staff actively involved with the development of the monitoring and assessment procedures. The current suite of ORSANCO's procedures, including the definition of Ohio River assessment units and the biological criteria thresholds set to ascertain status of the Ohio River aquatic life use, have been fully vetted and approved by the Technical Committee. Water quality criteria adopted by ORSANCO are approved by the Commission, which Ohio EPA also serves on. As Ohio EPA has a similar aquatic life use assessment philosophy as ORSANCO and has a level of comfort with ORSANCO staff capabilities to assess the Ohio River aquatic life use, Ohio EPA, for the last several Integrated Report assessment cycles, has accepted their determination of assessment unit status and condition and incorporated these into Ohio's Integrated Water Quality Monitoring and Assessment reports.



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**Minor Corrections**

Thank you for pointing out these edits. We will make those changes before submitting the final report in a couple of weeks along with our response to comments from the public.

Please contact Cathy Alexander (614-644-2021) of the Division of Surface Water if you need additional information.

Sincerely,

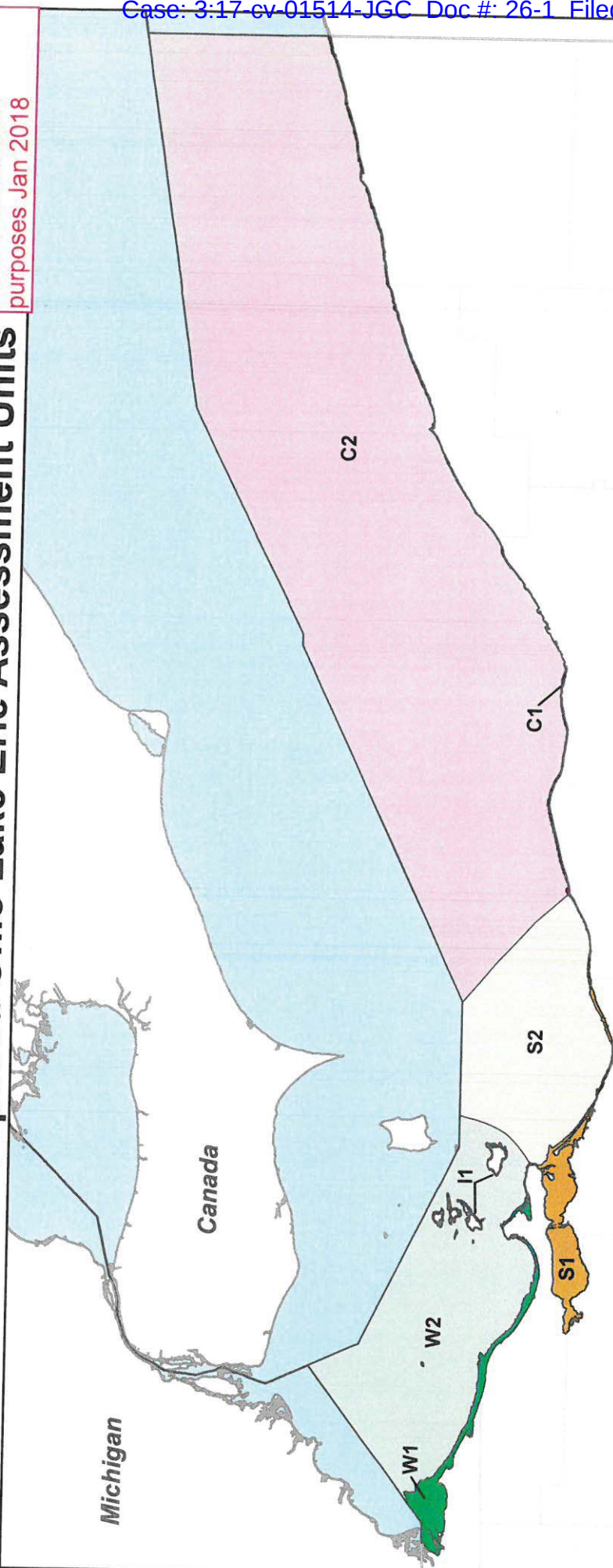


Tiffani Kavalec, Chief  
Division of Surface Water  
Ohio EPA








cc: Chris Korleski, Director, Water Division, U.S. EPA Region 5

# Proposed Ohio Lake Erie Assessment Units

draft for discussion  
purposes Jan 2018



## Lake Erie Assessment Units

-  W1 - Western Basin Shoreline (<3m)
-  W2 - Western Basin Open Water (>3m)
-  I1 - Islands Shoreline (<3m)
-  S1 - Sandusky Basin Shoreline (<3m)
-  S2 - Sandusky Basin Open Water (>3m)
-  C1 - Central Basin Shoreline (<3m)
-  C2 - Central Basin Open Water (>3m)

