

NPDES Program Update

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Topics

- SB1
- Nutrient mass balance study
- Stream Nutrient Assessment Procedure (SNAP)
- New ammonia WQS and current survey
- New E-coli standards
- Priority Pollutant Scanning for NPDES renewal
- Updated Permit to Install rule
- Biosolids rule update
- USEPA Nutrient ICR

Senate Bill 1

- Signed by Gov. Kasich on April 2, 2015; effective July 1, 2015.
 - Restricts application of manure and fertilizer in Western Basin of Lake Erie
 - Designates Director of OEPA to coordinate HAB management and response
 - All WWTPs with design flow of 1.0 MGD or more or designated a major need to monitor for TP and dissolved reactive P (ortho P) no later than December 1, 2016.

Senate Bill 1 (cont)

- All WWTPs with design flow of 1.0 MGD or more or designated a major that do not have a P limit as of July 3, 2015 need to complete a technical and financial capability study to get down to 1 mg/L.
- Prohibits open lake disposal of dredge material by July 1, 2020.
- Provisions of the bill were incorporated into ORC 6111.03 (U)

Senate Bill 1 – Effects on WWTTPs

- TP and Ortho P monitoring no later than December 1, 2016.
 - Sent out letters to effected WWTTPs in July 2016.
 - Agency initiated minor mod to include Ortho P in outfall tables and amend Part II.
 - Affected permits have been modified and permittee's should be monitoring.

Senate Bill 1 – Dissolved Ortho P Sampling

- Part II condition: The permittee shall filter the grab sample within 15 minutes of collection using a 0.45-micron filter. The filtered sample must be analyzed within 48 hours.
 - No digestion of Dissolved Ortho P sample
 - Separate samples for dissolved Ortho P and TP

Senate Bill 1 – Effects on WWTTPs

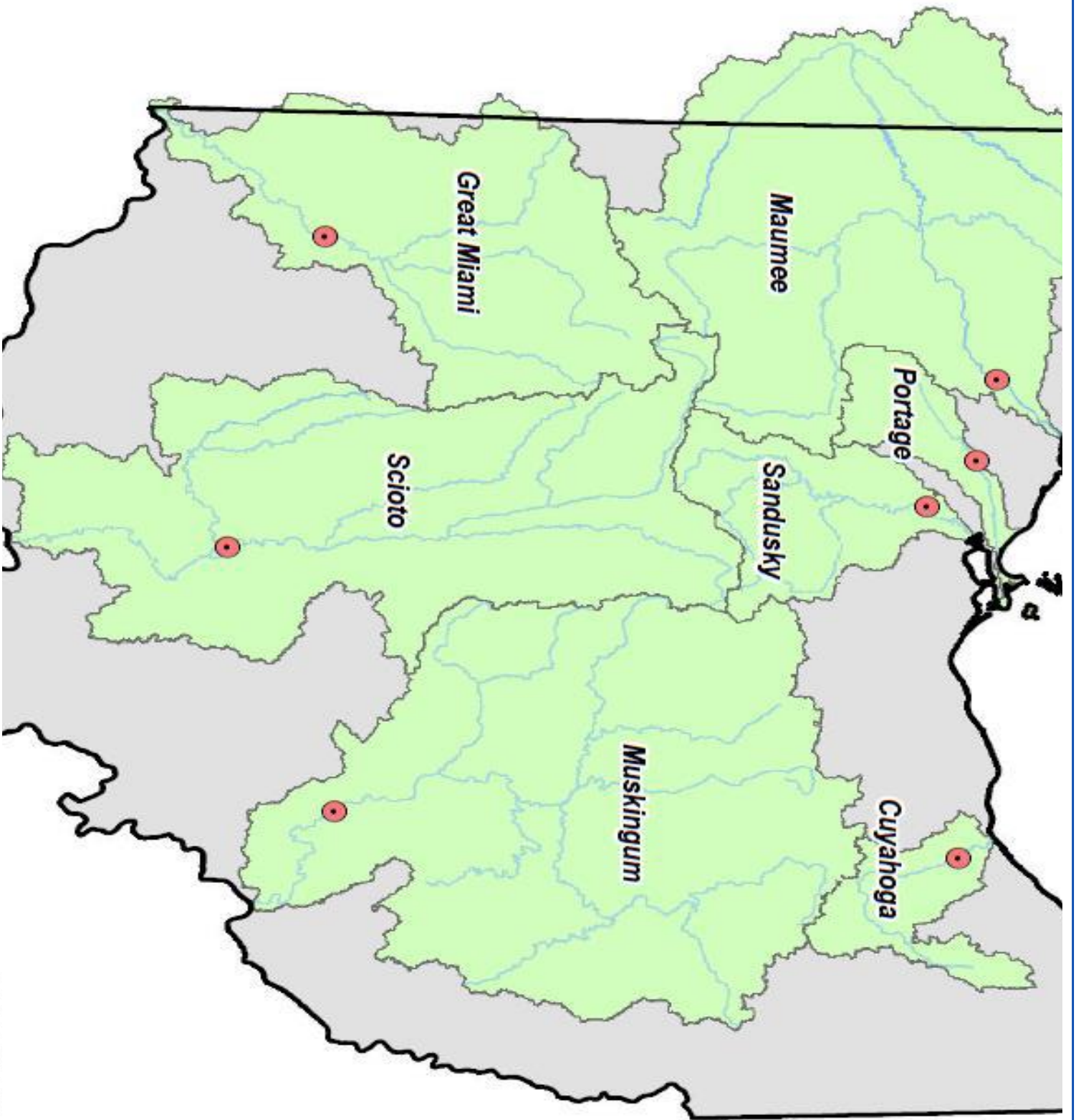
- Study evaluating technical and financial capability of reducing TP to 1 mg/L by December 1, 2017
 - Only for plants who don't already have a TP limit
 - OEPA estimates this requirement to effect 112 WWTTPs, only 2 of these are in the WLEB
- Template for the study is available on Ohio EPA's website
 - Designed to be completed by POTW staff
 - Letters sent to potential facilities

Ohio Nutrient Mass Balance Study

- SFY 2016-2017 Operating budget requires director to “study, examine, and calculate nutrient loading from point and nonpoint sources...to determine the most environmentally beneficial and cost effective mechanisms to reduce nutrient loadings to Lake Erie and the Ohio River.”
- Director is required to report and update the results with release of “Integrated Water Quality Report” every two years beginning spring 2016.

Ohio Nutrient Mass Balance Study

- 2016 Loading study published and available on OEPA website.
- Includes loadings for seven of the major watersheds in the state.
- Looked at both total P and total N.
- Scioto and Maumee highest in total P load; 2200 metric tons each
- Maumee highest in total N load; 41,000 metric tons



Ohio Nutrient Mass Balance Study

Table 6 — Total phosphorus and total nitrogen contributions from household sewage treatment systems (HSTS), NPDES permitted sources (NPDES) and nonpoint sources (NPS) relative to the total load at the watershed outlet (expressed as percent). Values reported for wy13.

Watershed	Total P (percent of total)			Total N (percent of total)		
	HSTS	NPDES	NPS	HSTS	NPDES	NPS
Maumee	4	9	87	1	10	89
Portage	5	11	84	2	8	86
Sandusky	2	5	93	1	3	95
Cuyahoga	11	29	60	6	62	32
Great Miami	6	37	56	3	17	80
Scioto	4	30	66	3	16	81
Muskingum	10	49	41	7	25	68

Stream Nutrient Assessment Procedure (SNAP)

- Ohio's proposal to develop statewide nutrient water quality standards
- Uses Ohio's existing data on stream impairments to determine if nutrients are the cause
- Looks at biological indicators, DO swings, and chlorophyll concentrations to determine causes of impairments

Stream Nutrient Assessment Procedure (SNAP)

- Ohio EPA solicited comments in 2013 through an external stakeholder outreach and USEPA.
- Currently working on adjustments based on comments and recommendations from external Technical Advisory Group.
- Hope to have a new draft or criteria out for review in the coming months.

New Federal Ammonia WQS

- In 2013 USEPA adopted new aquatic life ammonia criteria based on the protection of freshwater mussels.
- Ohio needs to move to be equal to or below these new criteria.
- Currently in information gathering phase of rulemaking.

New Federal Ammonia WQS

Ohio Ammonia Criteria vs New National Criteria at pH 8

Temp (°C)	USEPA 7 day	Ohio WWH 7 day		USEPA 30 day	Ohio WWH 30 day
5	8.8	9.9		1.8	3.3 / ----
10	8.8	9.5		1.5	3.3 / 1.4
15	5.9	9.2		1.1	2.3 / 1.4
20	3.9	9.1		0.78	1.6 / 1.4
25	2.6	9.1		0.56	---- / 1.0
30	1.7	6.6		0.41	--- / 0.70

Dec-Feb / Mar-Nov

New Federal Ammonia WQS

- What's this mean to you
 - Should Ohio adopt these criteria, WWTPs that have a water quality based ammonia limit may see there limit decrease, possibly in a significant way.
 - WWTPs with BADCT limits for ammonia may see these limits reduced as well.

New Federal Ammonia WQS

- OWDA funded project for GLEEC study of ammonia removal at the Johnstown, Pataskala, Canal Winchester and Southwest Licking Sewer District.
- Instream evaluation of effluent ammonia and total N.
- All four plants showed ability to meet proposed new criteria.

E-coli Water Quality Standards

- Ohio revised its bacteria water quality standards on January 4, 2016.
- USEPA approved of the new standards on April 8, 2016.
- We have begun to include the new E-coli limits in renewal NPDES permits.

E-coli Water Quality Standards

- Big change in rule was elimination of Class A, B, and C primary contact waters.
- All just “primary contact” now. Still have Bathing water and secondary standards.
- Approximately 1450 permits that incorporated limits from Class B and C. All will be facing lower E-coli limits.

E-coli Water Quality Standards

	7 day average	30 day average
Previous Class B & C	362 #/100 ml	161 #/100 ml
New Primary Contact	284 #/100 ml	126 #/100 ml

- Estimate only 70 plants will not be able to immediately comply.

Priority Pollutant Scans for NPDES Permit Renewals

- Federal rules require POTWs with design flow of > 1.0 MGD to provide the results of three priority pollutant scans with NPDES renewal applications
- Ohio has not traditionally required these scans as part of the application
- Permits expiring after March 1, 2018, will now need to include these scans with the application

Priority Pollutant Scans for NPDES Permit Renewals

- POTWs with pretreatment programs are already completing these scans as part of their annual report
- Major POTWs with no pretreatment program will have to complete additional sampling for the priority pollutant scans

Permit to Install rule updates

3745-42

- Allows for pretreatment local limit reviews that do not include any new or revised limits to be submitted without P.E. stamp.
- Other program changes still require a P.E.
- Effective 3/31/2017

Biosolids rule update 3745-40

- Will be out for Interested Party Review soon
 - SOUR test must be mean of at least 7 tests
 - Site authorizations must include potential stockpile locations
 - Isolation distances for stockpiles, site storage needs authorized
 - Prohibit night time application 11 PM to 5 AM, unless GIS used to map location

USEPA Nutrient Information Collection Request

- USEPA National Study of Nutrient Removal and Secondary Technologies: POTW Screener Questionnaire
 - Posted in federal register September 19, 2016
 - Proposed mailing list includes 210 Majors, and 1101 Minors in Ohio
- Completing questionnaire would be mandatory

USEPA Nutrient Information Collection Request

- Working in Partnership with States to Address Phosphorus and Nitrogen Pollution through Use of a Framework for State Nutrient Reductions (March 2011 EPA Memo)
- Renewed Call to Action to Reduce Nutrient Pollution and Support for Incremental Actions to Protect Water Quality and Public Health (September 2016 EPA Memo)

USEPA Nutrient Information Collection Request

“...An important tool under the CWA continues to be issuing NPDES permits for point sources that limit nutrient discharges into priority waters. States have set end-of-pipe limits and used innovative approaches (e.g., trading) to reduce nutrient loads.. The EPA will work with states to move towards the goal of including monitoring requirements for both total nitrogen and total phosphorus in NPDES permits for major municipal wastewater facilities”

Questions ?

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