

# Northeast Ohio Phosphorus Task Force 2016 Executive Summary



## Task Force Background

The Northeast Ohio Phosphorus Task Force was initiated by Dr. John Patterson, Ohio House of Representative for District 99, in collaboration with the OSU Extension Offices in Northeast Ohio and the Northeast Ohio Counties of the Ohio Farm Bureau Federation. The committee was formed to take a proactive approach to the Senate Bill 1 legislation passed in 2015 which created new rules for manure and fertilizer application specifically for Northwest Ohio due to toxic algae blooms in Lake Erie. A concern of this committee was the parameters of this legislation could eventually be expanded state-wide in the future which could hamper animal agriculture in Northeast Ohio. The committee held task force meetings on November 16 and December 14 in 2015 and on February 8, March 7, and November 21 in 2016. Committee membership included farmers, Extension personnel, Farm Bureau and Farmers Union members, and agricultural cooperative members.

## Research & Education

At each of the task force meetings, the committee brought in speakers and published reports to educate themselves about the water quality issues in Lake Erie as well as the specific regulatory details of the Senate Bill 1 legislation. Even though the legislation was written specifically for northwest Ohio, the committee felt it imperative to conduct proactive research on the potential impact the new rules would have if it would be implemented state-wide in the future. As a long term goal, the task force will examine ways in which the farm community can adapt to help improve water quality in both the Lake Erie and Ohio River watersheds.

In 2016, the committee conducted its first research project. Farmers were asked to monitor the weather & soil conditions which were present each day from January through the end of March. Cooperators were asked to track two questions each day #1: Is your ground snow covered or frozen? #2: Is the top two inches of the soil saturated?

According to the new legislation from Senate Bill 1, no manure or fertilizer can be applied (without incorporation) if these conditions exist in Northwest Ohio. This research was completed to ascertain the percentage of days in our watersheds when it would be permissible for manure or fertilizer application if the legislation was expanded state wide. Seventeen producers in Ashtabula, Geauga, and Trumbull Counties participated in this research project.

January 2016						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
					1	2
					Show or Frozen Ground? ---Yes---No	Show or Frozen Ground? ---Yes---No
					Top 2" of Soil Saturated? ---Yes---No	Top 2" of Soil Saturated? ---Yes---No
3	4	5	6	7	8	9
Show or Frozen Ground? ---Yes---No	Show or Frozen Ground? ---Yes---No	Show or Frozen Ground? ---Yes---No	Show or Frozen Ground? ---Yes---No	Show or Frozen Ground? ---Yes---No	Show or Frozen Ground? ---Yes---No	Show or Frozen Ground? ---Yes---No
Top 2" of Soil Saturated? ---Yes---No	Top 2" of Soil Saturated? ---Yes---No	Top 2" of Soil Saturated? ---Yes---No	Top 2" of Soil Saturated? ---Yes---No	Top 2" of Soil Saturated? ---Yes---No	Top 2" of Soil Saturated? ---Yes---No	Top 2" of Soil Saturated? ---Yes---No
10	11	12	13	14	15	16
Show or Frozen Ground? ---Yes---No	Show or Frozen Ground? ---Yes---No	Show or Frozen Ground? ---Yes---No	Show or Frozen Ground? ---Yes---No	Show or Frozen Ground? ---Yes---No	Show or Frozen Ground? ---Yes---No	Show or Frozen Ground? ---Yes---No
Top 2" of Soil Saturated? ---Yes---No	Top 2" of Soil Saturated? ---Yes---No	Top 2" of Soil Saturated? ---Yes---No	Top 2" of Soil Saturated? ---Yes---No	Top 2" of Soil Saturated? ---Yes---No	Top 2" of Soil Saturated? ---Yes---No	Top 2" of Soil Saturated? ---Yes---No
17	18	19	20	21	22	23
Show or Frozen Ground? ---Yes---No	Show or Frozen Ground? ---Yes---No	Show or Frozen Ground? ---Yes---No	Show or Frozen Ground? ---Yes---No	Show or Frozen Ground? ---Yes---No	Show or Frozen Ground? ---Yes---No	Show or Frozen Ground? ---Yes---No
Top 2" of Soil Saturated? ---Yes---No	Top 2" of Soil Saturated? ---Yes---No	Top 2" of Soil Saturated? ---Yes---No	Top 2" of Soil Saturated? ---Yes---No	Top 2" of Soil Saturated? ---Yes---No	Top 2" of Soil Saturated? ---Yes---No	Top 2" of Soil Saturated? ---Yes---No
24	25	26	27	28	29	30
Show or Frozen Ground? ---Yes---No	Show or Frozen Ground? ---Yes---No	Show or Frozen Ground? ---Yes---No	Show or Frozen Ground? ---Yes---No	Show or Frozen Ground? ---Yes---No	Show or Frozen Ground? ---Yes---No	Show or Frozen Ground? ---Yes---No
Top 2" of Soil Saturated? ---Yes---No	Top 2" of Soil Saturated? ---Yes---No	Top 2" of Soil Saturated? ---Yes---No	Top 2" of Soil Saturated? ---Yes---No	Top 2" of Soil Saturated? ---Yes---No	Top 2" of Soil Saturated? ---Yes---No	Top 2" of Soil Saturated? ---Yes---No
31	Northeast Ohio Phosphorus Task Force - 2016 Pilot Study Return Completed Sheet to: David Marrison @ OSU Extension Ashtabula County, 39 Wall Street, Jefferson, OH 44047 440-576-9038 (phone), 440-576-9821 (fax) or marrison.2@osu.edu					
Show or Frozen Ground? ---Yes---No	Cooperator's Name _____ Township _____ GPS Coordinates _____					
Top 2" of Soil Saturated? ---Yes---No						

## Research Results

The data from each cooperating farmer was returned to the Ashtabula County Extension office to be summarized. Each day, the cooperator indicated whether the ground was **snow covered** or **frozen** or if the top two inches of the ground was **saturated**. The committee defined these conditions as the following:

- **Snow covered** – when crop ground has any measureable snow accumulation, it is considered snow covered.
- **Frozen**- when the crop ground is frozen in that no water can penetrate move through/down the soil profile.
- **Soil Saturation**- when the soil has reached its maximum water content; if any more is added, it will either drain downward or turn the soil into mud. In practical terms, the soil is not conducive to be worked with tillage equipment and planting cannot occur.

For January, 17 cooperators completed and returned tracking data. In aggregate, only 1.33% of the days available for the reporting group allowed for the field application of manure. Fifteen of the seventeen producers (88.2%) reported there were no days in January in which they could have spread manure based on the restrictions provided by the Senate Bill 1 legislation.

Month	Number of Sites Reporting	Days Available to Spread from All Reporters	Applicators Who Could Not Spread Manure Any Day During Month	Percentage of Days in Northeast Ohio Which Manure Could Have Been Applied <sup>1</sup>	Range of Days For Number of Days Each Farmer Could Have Applied Manure
January	17	7	88.2%	1.33%	0-4 days
February	15	5	93.3%	1.15%	0-5 days
March	12	120	8.3%	32.26%	0-21days
<b>Summary</b>	<b>14</b>	<b>132</b>		<b>10.3%</b>	<b>0-26 days</b>

<sup>1</sup>Total Days Available in Aggregate for Month / (Days in month \* number of reporters)

For February, 15 cooperators completed and returned tracking data. In aggregate, only 1.15% of the days available for the reporting group allowed for the field application of manure. Fourteen of the fifteen reporters (93.3%) reported there were no days in February in which they could have spread manure based on the restrictions provided by the Senate Bill 1 legislation.

For March, 12 cooperators completed and returned tracking data. In aggregate, 32.26% of the days available for the reporting group allowed for the field application of manure. Only one of the twelve reporters (8.3%) reported there were no days in March in which they could have spread manure based on the restrictions provided by the Senate Bill 1 legislation.

In aggregate, fourteen producers had a combined 132 days out of 1,274 days (10.4%) to spread manure following the restrictions of Senate Bill 1. The average number of days which each reporter had available to spread manure during the winter of 2016 was 9.4 days out of available 91 days (January through March) or 10.3% of the days. The total days available ranged from 0 to 26 days for the reporting farmers.

## Implications

Given the data, especially from January and February, a concern arose for livestock producers who have no on-farm storage for manure and have to rely on every-day application of their manure. In 2016, very few days were available during the first 10 weeks of the year for manure application in Northeast, Ohio. It is recommended this research be conducted again in 2017 and include the month of December 2016. Additional research is needed to determine how many producers would need to build manure storage structures if the Senate Bill 1 legislation were to be expanded state wide.

## For Additional Information

More information about the Northeast Ohio Phosphorus Task Force can be obtained by contacting David Marrison (Task Force Secretary) at 440-576-9008 or [marrison.2@osu.edu](mailto:marrison.2@osu.edu). Farmers interested in tracking these conditions for 2017 should contact David Marrison at 440-576-9008 or [marrison.2@osu.edu](mailto:marrison.2@osu.edu) so your name can be added to our cooperator list.

Summary compiled by David Marrison, OSU Extension Educator-Ashtabula County