



International organization serving over 300 organizations throughout the world. Great Lakes – Grand Traverse Bay, Detroit River, Buffalo River, Yellow Dog Watershed, St. Lawrence, St. Clair River, Lake Ontario, Milwaukee watershed

SERVING THE LAKE ERIE WATERSHED SINCE 2005:

- FISHABLE
- DRINKABLE
- SWIMMABLE WATERS

LAKE ERIE

The Great Lakes Canary in the Coal Mine

LAKE ERIE PHOSPHOROUS BALANCE

1950 - 1985



Green OK

Red Too Much

FERTILIZER
MANURE

WASTEWATER PLANTS
LAUNDRY DETERGENT

1985 - 2000



FERTILIZER
MANURE

WASTEWATER PLANTS
PHOS BANNED IN DETERGENT

2000 - PRESENT



MANURE

WASTEWATER PLANTS
FERTLIZER

LAKE ERIE RECOVERS WITH PHOSPHORUS SOURCE REDUCTION

1972 Great Lakes Water Quality Agreement

Reduce Phosphorus from 29,000 Tons to 14,600 Tons (50%)

1978 Great Lakes Water Quality Agreement

Additional Phosphorus Reduction To 11,000 Tons

Achieved < 10 years – Phos. Ban Laundry Detergent & Wastewater Plant Source Reductions

2012 Great Lakes Water Quality Agreement 2012 Annex 4

**Reduce Phosphorous from 11,000 tons to 6,000 tons in Western Lake Erie &
40% Soluble Phosphorus Reduction in West Erie Watersheds**

12 Years Later No Target Reduction Number Reporting – Targets not met

H2Ohio fails to target big phosphorus runoff HUC 12 areas Fails to Tally Source Reductions

Reports on Numbers Failure to Reduce:

- **Zero progress to date Jeff Reuter Retired OSU Ohio Sea Grant Director May 2024**
- **We have yet to see nutrient reductions in the Maumee River Basin. Overall loads remain well above the target levels White paper, NWF, Nature's Conservancy**
- **Env. Working Group Reports 2019 and 2022 – Too many CAFO's – Too Much Manure**

**Laundry Detergent Phosphorus increases caused
Lake Erie Harmful Algae -Laws banned,
Sources Reduced Lake Erie recovered**

**Excess Untreated Land Applied Manure from
massive increases in
Confined Animal Operations
Main cause of
Lake Erie Harmful Algae today
No Source Reduction**

Estimated Animal Unit Growth in Maumee Basin in Ohio

■ Swine ■ Cattle & Calves incl. Dairy ■ Chickens ■ Turkeys



**Slide from Ohio
Department of
Agriculture May 2021**

ODA estimates an
88% increase in
animal units from
2002 to 2017

ODA estimates are a
combination of USDA
Census of Agriculture
and ODA DLEP permit
numbers

COMMERCIAL FERTILIZER

PHOSPHORUS USE/SOURCE DOWN 33%

MANURE SOURCE INCREASED

Commercial fertilizer use trending down since highest use in 1990's - reported by Ohio State University

The most recent five-year period (2018-2022)

33% decrease in purchased fertilizer.

The amount of available manure in NW Ohio has increased in the same five-year time period



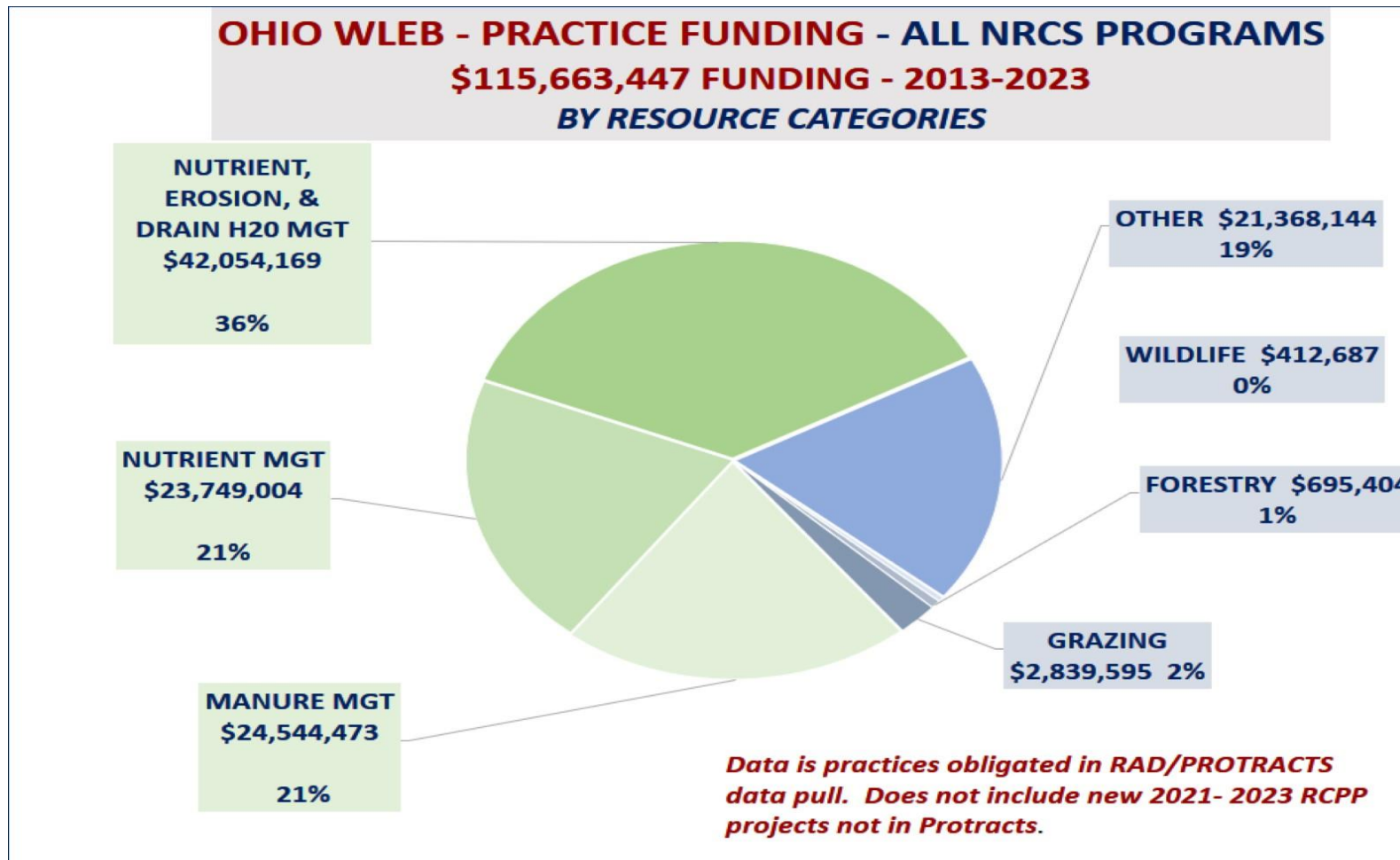
- **35% cropland enrolled in Western Lake Erie**
- **1.4 million acres enrolled with Voluntary Nutrient Management Plans**
- **2.2 million acres enrolled in overwintering cover, manure incorporation and placement practices.**

The 35-40% of fields in northwest and north central Ohio enrolled in H2Ohio may or may not be the fields of greatest phosphorus run-off.

100% voluntary program - percent high phosphorus fields enrolled unknown.

NO SOURCE REDUCTION TARGETING OR TRACKING

OHIO USDA NRCS FUNDS FOR LAKE ERIE PHOSPHORUS REDUCTIONS



No Phosphorus Source Reduction Reporting

Manure Funding goes to one under CAFO's with no state permits –

No Enforcement – No Disclosure on No. Animals, Manure Plans



Beginning in early 2023 SCHMUCKER AND JBS

(based in Brazil – World’s Largest Beef Producer) **CAFO’s in Western Lake Erie Watershed
Near Edon, Ohio @ the intersection of Ohio, Indiana and Michigan
Continuing to GROW**

Manure runoff to Fish Creek, St. Joe’s River/Maumee/Lake Erie

- *NO PERMIT- 3,000 calves a week 3,000 600 lb. cattle/week to JBS plant in Plainwell, Michigan*
- *76,000 CATTLE – all divided in > 50 parcels to avoid a PERMIT – (This is about 1 million peoples sewage)*
- *Runoff, water quality testing violations reported no action by Ohio or Indiana or USEPA*

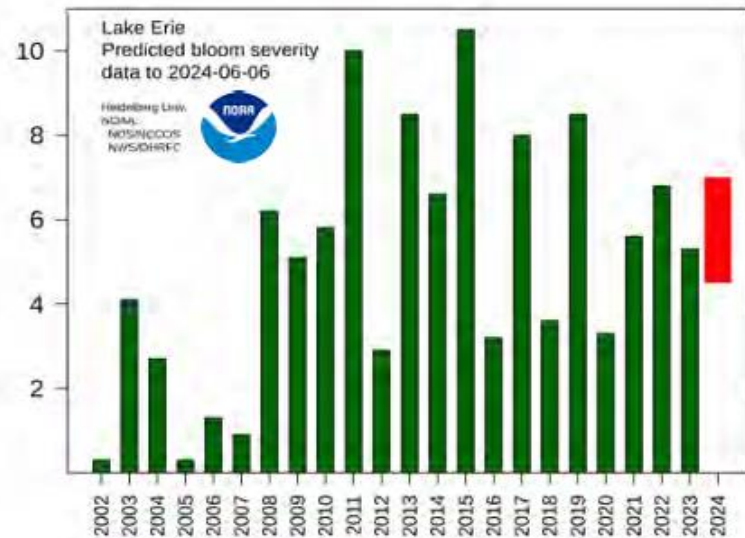
Increased Unregulated SOURCE of runoff into streams, rivers & Lake Erie

*Ohio requiring Curtice & Williston population 2000 to have sewage
treatment - Cost \$18 million – SOURCE REDUCTION*

Ohio allowed for over five years Campbell phosphorus SOURCE violations



Predicted Bloom Severity



Lake Erie Recovery Today Needs:

- Targeting \$'s to Phosphorus **SOURCE** Reductions, Primarily Manure
- Targeting \$'s and incentives to **SOURCES** with greatest water and soil phosphorous concentrations
- Connect NRCS Manure **SOURCE** funds with state permits with enforcement
- Determine **SOURCE** manure/large animal concentration limits in impaired phosphorus watersheds and do not allow more
- Stop manure phosphorus **SOURCE** over application – treat and or transport
- Measure & Report **Phosphorus SOURCE REDUCTION AMOUNTS**



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