A Newly Constructed Spring Fed Pond in Ohio: Two Consecutive Years of Near Zero Nutrients and No Problematic Algae, All Without Chemicals

Albany, Ohio | Private pond, newly constructed | 2025 and 2026 seasons

In a newly constructed, spring-fed pond of about three quarters of an acre, phytoplankton shipped live from Colorado to inoculate the pond held ammonia and nitrate at zero against a nutrient-carrying spring inflow in 2025. Another single spring inoculation of phytoplankton administered in 2026 carried every measured nutrient to zero for the duration of the growing season. For both years, the pond had no problematic algae and was a productive aquatic ecosystem which gained the attention and preference of wildlife.

1. Site overview

Water body	Newly constructed private pond, about 12 feet deep in the middle.
Size	About 0.75 surface acre holding more than 1,000,000 gallons, roughly 3.1 acre-feet.
Water source	Spring fed. Two pipes deliver about 1 gallon per minute of spring water, with a matching outflow.
Use	Training pond for valuable dogs. The owner breeds and trains dogs and chose a natural approach so that no chemical treatments would be in the water her dogs swim in and so that her dogs were protected from toxic algae blooms.
The problem	A new pond starts with no established biology, and the spring inflow carries measurable ammonia and nitrate. Without a beneficial culture of microalgae in place, those nutrients are available for nuisance algae and cyanobacteria to utilize and establish themselves with.
Notable	Hydralife's first out-of-state project. The order was concentrated, packed with an air pump and airstone, and shipped with instructions to aerate on arrival so the culture landed alive until inoculation could take place.

2. Approach

- Early April 2025: the pond was established with 25 gallons of Hydralife Compete, concentrated phytoplankton, plus beneficial zooplankton, shipped live from Denver.
- April 6, 2026: a single spring inoculation of 25 gallons to re-establish the culture for the new season.
- Testing at the start of each season and again in summer, including a side-by-side sample of the spring inflow and the pond in 2025. No algaecides or other chemical treatments were used.

3. Results, 2025

Date	NH4	NO2	NO3	PO4	Notes
April 17 (baseline)	0.5	0	0	0.25	Baseline prior to initial inoculation. pH 7.8.

Date	NH4	NO2	NO3	PO4	Notes
June 30, measurement of the spring water inflow into the pond	0.25	0	5	0.25	Spring water entering the pond carries ammonia and nitrate.
June 30, measurement of the pond water	0	0	0	0 to 0.25	Pond held at zero ammonia and nitrate against the inflow.

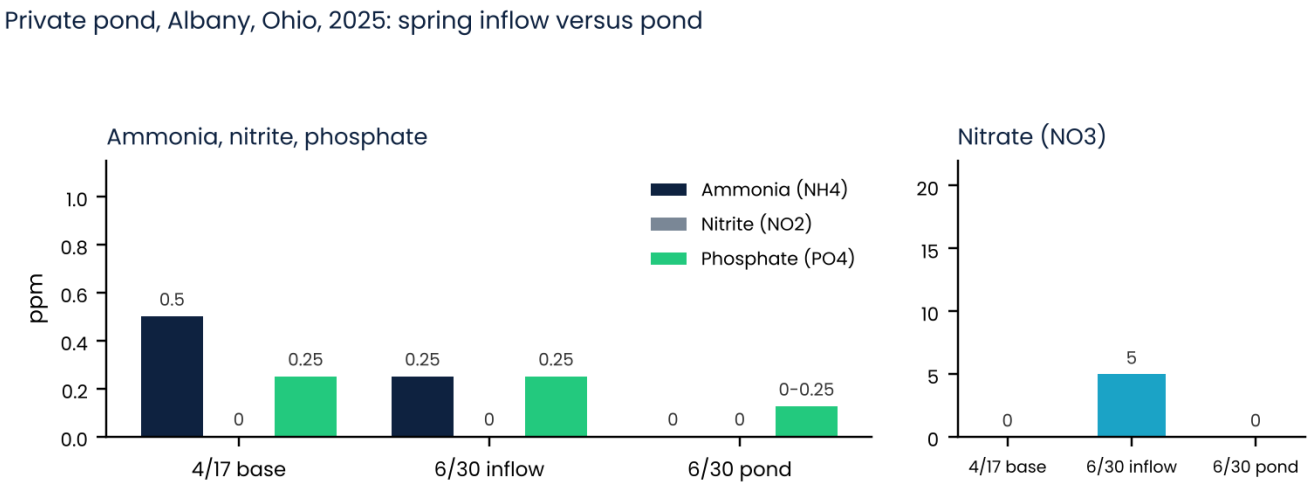


Figure 1. 2025 readings in ppm, comparing the spring inflow with the pond on the same day.

Field readings are taken on site with a color-comparison freshwater test kit and reported in parts per million (ppm). Text readings such as "under 0.25" or "almost 0" are shown as recorded; in the charts they are drawn at an approximate height and labeled with the recorded wording. Weather, water temperature and irrigation schedules influence individual readings. The trend across the season is the measure of the work.

The result is the difference between the water flowing in and the pond itself. The spring carried measurable ammonia and nitrate, yet the pond read zero for both, because the established phytoplankton consumed the incoming nutrients as fast as they arrived. By midsummer the owner reported a pond full of life and no surface algae.

> *"No scum on the surface at all. And there are so many living things in the pond. Bugs, frogs, tadpoles, and a turtle."*
>
> Pond owner, Albany, Ohio, July 2025

4. Results, 2026

Date	NH4	NO2	NO3	PO4	Notes
April 3 (baseline)	0.25 to 0.5	0	0	0.5	Measurements a day before the spring inoculation. These nutrients carried over from the winter and the spring.
July 20	0	0	0	0	All nutrients at zero more than three months later.
October 13					Owner reported the pond doing and looking great at season's end.

Private pond, Albany, Ohio, 2026

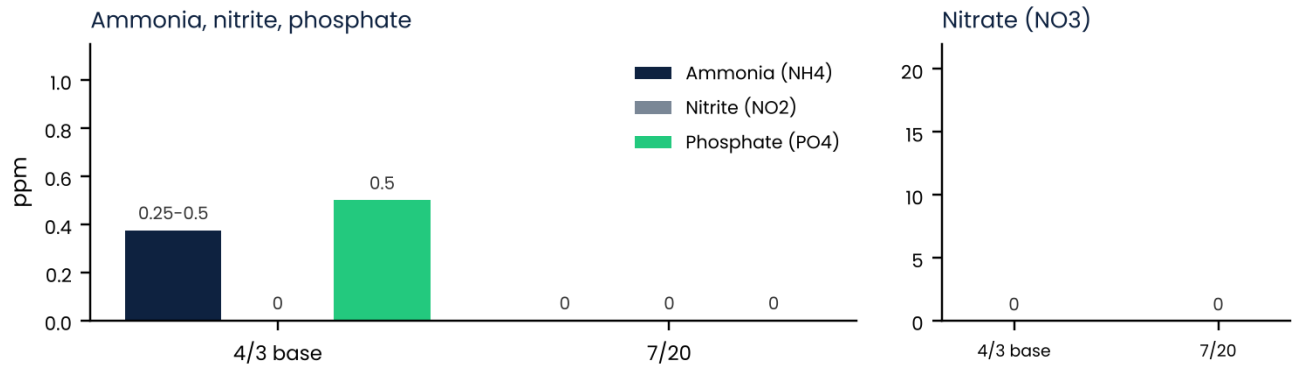


Figure 2. 2026 readings in ppm. The baseline ammonia reading fell between the 0.25 and 0.5 ppm color bands of the test kit and is shown as that range. Source: Hydralife field testing.

A single spring inoculation carried the pond through more than three months of the growing season with ammonia, nitrite, nitrate and phosphate all reading zero. Phosphate that started the season at 0.5 ppm was fully consumed, and the owner reported in October that the pond remained in great condition, with no algae problems and thriving wildlife.

5. Takeaways for similar sites

- Utilize beneficial phytoplankton on day one. Inoculating a newly built pond lets the beneficial culture claim the nutrients before nuisance algae can utilize nutrients and establish dominance.
- Spring-fed and inflow-fed ponds need a culture that keeps pace. Measuring the inflow and the pond side by side shows the phytoplankton working in real time.
- A small spring inoculation each year can carry a season once the phytoplankton in the pond establishes itself.
- Live phytoplankton ships well direct to location. The culture performed on arrival more than 1,000 miles from where it was grown.
- Natural solutions and management suit ponds used by animals and people since it does not incorporate copper, peroxide or other chemicals that tend to have adverse effects on aquatic ecosystems.

6. About Hydralife Solutions

Hydralife Solutions Inc. is a Denver, Colorado company that grows and ships live, multi-species beneficial phytoplankton for lakes, ponds, reservoirs and irrigation water. Hydralife Compete, concentrated phytoplankton, works by competitive exclusion: the excess nitrogen and phosphorus that feed nuisance algae and cyanobacteria become the food source for a beneficial culture that consumes them 24-7 and outcompetes bloom-forming organisms for the nutrients they need. It thrives in high-nutrient water, where most alternatives struggle, and it feeds the zooplankton and fish that depend on a healthy food web.

Hydralife was founded by Ryan Philipsborn, who brings nearly 30 years of work in aquatics, from reef keeping and coral propagation to commercial phytoplankton, copepod and macroalgae production.

To discuss a water body of your own: service@hydralifesolutions.com, 303.219.0623, or visit hydralife.org.