



Independent Laboratory Results Confirm Bioremediation Dramatically Reduced Nitrite and Nitrates Affecting Fish And Fowl at Jacksonville Zoo

Location: Jacksonville Zoo, Jacksonville, FL

Background: The ½ acre swan pond at Jacksonville Zoo was contaminated with unacceptable high levels of various pollutants. Well known for the leading pond maintenance technology, **Ecological Laboratories Inc. (ELI)** was called in to help remediate the pond.

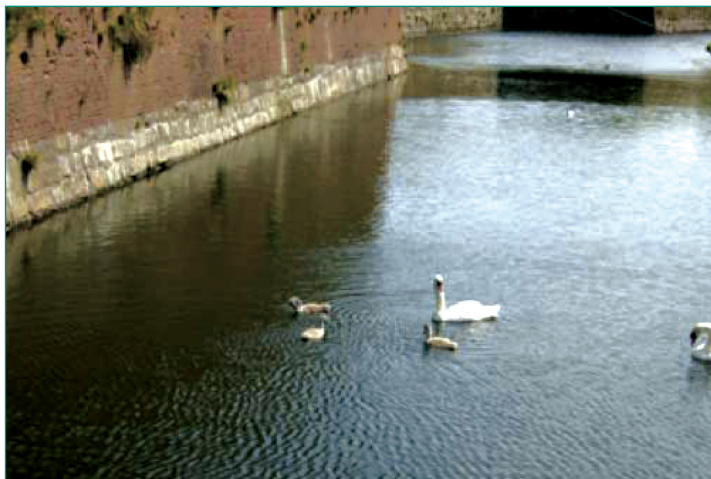


Fig. 1: Shows the very popular swan pond at Jacksonville Zoo.

Objective: **ELI** first evaluated the water quality assaying pH, organic and nutrient loading, and accumulated pond bottom solids, and then **MICROBE-LIFT®** was dosed according to protocol.

MICROBE-LIFT® products were applied to improve the water quality and to reduce fish and fowl kills.

Analyte	Method	Units	Pretest 15 Jan	Test 1 5 Feb	Test 2 10 Feb	Test 3 18 Feb	Reduction Improvement
BOD	SM 185210E	mg/L	16	9.7	1	1	94%
COD	SM 5220D	mg/L	240	85	120	35	85%
Nitrate N	EPA 300.0	mg/L	60	.31	BDL	BDL	100%
Nitrite N	EPA 300.0	mg/L	.23	.13	BDL	BDL	100%
TSS	SM 2540D	mg/L	62	56	106	25	60%
Fecal Coliform	SM 9222D	CFU/ 100ml	36,000	10,000	14,000	1,200	96%

Fig. 2: Analysis validates reduction in fecal coliforms plus increased cleanliness of the pond water.

The lab report summary above shows the nitrates and nitrites have been reduced to below detectible limits and the water is much cleaner with BOD/COD/TSS levels significantly lowered.

In addition to providing cleaner water, **MICROBE-LIFT®** technology has reduced the bottom sludge by some 4 to 6 inches. There was a noticeable visual difference in the water quality and the zoo caretakers see an improvement in the general health of the swans.

For more information on **MICROBE-LIFT®** Technology contact

Ecological Laboratories Inc.

www.EcologicalLabs.com

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