



Predictive

# Solution Report

**Client:** Salkow Steve  
Winsome Forrest  
431 Hush Hickory Trace  
Reidsville, NC 27320

**Advisor:** Rockingham CES  
525 NC Hwy 65 Suite 200  
Reidsville, NC 27320

Sampled County : Rockingham

Sampled: 05/27/2015 Received: 08/31/2015 Completed: 09/03/2015 Farm: 1

Links to Helpful Information

**Sample Information**

**Sample ID:** 00001

**Solution Code:** AP

**Description:**  
Pond Water

**Nutrient Measurements**

|             | N (ppm) | P (ppm)                       | K (ppm)       | Ca (ppm) | Mg (ppm)       | S (ppm)         | Fe (ppm)                        | Mn (ppm)                         | Zn (ppm)                | Cu (ppm) | B (ppm) | Na (ppm) | Cl (ppm) |
|-------------|---------|-------------------------------|---------------|----------|----------------|-----------------|---------------------------------|----------------------------------|-------------------------|----------|---------|----------|----------|
| Inorganic N | 0.24    | 0.02                          | 2.74          | 3.92     | 2.25           | 0.84            | 0.13                            | 0.01                             | 0.08                    | 0        | 0.02    | 5.30     | 7.68     |
| NH4-N       | 0.07    |                               |               |          |                |                 |                                 |                                  |                         |          |         |          |          |
| NO3-N       | 0.17    |                               |               |          |                |                 |                                 |                                  |                         |          |         |          |          |
| Organic N   |         | SS<br>(10 <sup>-5</sup> S/cm) | EC<br>(mS/cm) | pH       | CO3<br>(meq/L) | HCO3<br>(meq/L) | Total Alkalinity<br>(ppm CaCO3) | Acid Requirement<br>(oz/100 gal) | Hardness<br>(ppm CaCO3) |          |         |          |          |
| Urea        | 0.02    | 9                             | 0.09          | 6.84     | 0              | 0.40            | 20.0                            |                                  | 19.0                    |          |         |          |          |

**Other Results (continued)**

**Agronomist's Comments:**

The general desired ranges for aquaculture/fish pond water are as follows (acceptable ranges in parentheses): pH 6.5-9.0 (5.5-10.0); alkalinity 50-150 ppm CaCO3 (20 - 400 ppm); hardness 50-150 ppm CaCO3 (>20); EC 6-100 10-5 S/cm (3-500); Ca > 20 ppm (>5); Fe 0-0.1 ppm (fry) or 1.0 ppm (general fish); Mn 0-0.01 ppm (<1); Cl < 100 ppm for catfish; NO3 <90 ppm; P 0.01-3.0 ppm. The Agronomic Division does not analyze water samples for parameters (such as dissolved oxygen or carbon dioxide concentrations) that may be important for good quality fish pond / aquaculture water. Please contact your county extension office if you would like additional information. Kristin A. Hicks 9/2/2015 4:47 PM

**Understanding the Solution Report** \* - additional information: [www.ncagr.gov/agronomi/pdf/files/usoln.pdf](http://www.ncagr.gov/agronomi/pdf/files/usoln.pdf)

This report provides data on chemical properties relevant to use of water or nutrient solutions for a specific agricultural purpose such as crop, livestock & poultry production, aquaculture or pond management and indicates whether they pose a concern for that use. If you need to identify microorganisms, pesticides or organic chemical contaminants, contact a commercial laboratory or the county health department.

**SS** (soluble salts) & **EC** (electrical conductivity) are both measures of salinity, or total dissolved salts (ions) in solution, expressed in different units; **pH** is a measure of basicity/acidity; **Total Alkalinity** is measure of carbonates & bicarbonates; **Acid Requirement** is the amount of battery acid (35% sulfuric acid) needed to neutralize alkalinity by 80%; **Hardness** is calculated from Ca & Mg levels and indicates tendency to form scale or salt deposits; **SAR** (sodium adsorption ratio; no units) indicates relative balance among Ca, Mg & Na ions, which can predict tendency for Na to accumulate in substrates or on surfaces. The designations **VL, L, M, H & VH** indicate Very Low, Low, Medium, High & Very High, respectively.

\* **ppm** = parts per million; **S** = siemens; **mS** = millisiemens; **CaCO3** = calcium carbonate; **meq/L** = milliequivalent per liter



Reprogramming of the laboratory-information-management system that makes this report possible is being funded through a grant from the North Carolina Tobacco Trust Fund Commission.

Thank you for using agronomic services to manage nutrients and safeguard environmental quality.  
- Steve Troxler, Commissioner of