A GIS Web Application for Ag Water Management in Georgia

Albany State University
Faculty Research Symposium
April 2, 2009

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What’s Going On in GA?

• High concentration of irrigated agriculture production in southwest Georgia
• Drought conditions increased concerns about water quality and quantity from many fronts
  – Ecological
  – Municipal
  – “Water Wars”
• Legislation
  – HB 237
  – HB 579
Field Mapping of Ag Permits

• Didn’t know a lot about on-farm ag water use, largest consumptive use in Georgia
• Need background information to make use of metering data for policy and planning
• Under contract with GA Soil and Water Conservation Commission, ASU mapped every agricultural withdrawal point below Fall Line
• Most comprehensive database of irrigated agriculture in Southeast, possibly U.S.
One to One, GW at center of pivot
Life is good!
Well to Pond
A89-045-0085 is a GW source for the pond
A89-045-0067 is a SW source from the pond
Well to Pond A92-045-0333 is both a GW source for the pond and a surface withdrawal. Each permit is appended with a letter denoting the number of withdrawals for the permit.
A Step Further: The Georgia *Farmer Portal*

- Free, secure, web-based interface
- Incorporates latest available aerial imagery with multiple GIS data layers
- May be pre-loaded with existing data so long as a unique identifier is established
- Designed with dial-up users in mind
- Built for moderate traffic volume with capabilities of handling 30,000+ “field” entries over multiple years
**New User Registration**

Follow these easy steps to create a User ID and save your irrigation report.

**STEP 1: Create Your User ID**

We recommend using something unique and easy to remember, like your email address.

User ID:

**STEP 2: Create Your Password**

Make sure to use a password that you will remember. Must be between 6 and 12 characters.

Password:

Re-enter Password:

**STEP 3: Personal Information**

If you forget your User ID or password, we will use this information to send you the account details.

Email Address:

First Name:

Last Name:

Company Name:

Address 1:

Address 2:

City:

State: GA

Zip Code:

Telephone:

Submit
Crop Data:

To enter detailed cropping information for this field, fill in the spaces to the left. You may enter Harvest Date and Yield at a later time. If a field has more than one crop, enter the information for the first crop and select the Add button. Repeat for any additional crops.

Crop Type:  
Irrigated Area: (Acres)  
Plant Date:  
Harvest Date:  
Seed Type:  DPL 455 BG/RR  
Tillage:  
Yield:  
Did you irrigate this crop?  Yes  No  

Crop Year: 2006  

Crop Type: COTTON  
Plant Date: 5/26/2006  
Harvest Date:  
Seed Type: DPL 555 BG/RR  
Tillage: Conventional  
Yield: 0  

Acres Planted: 60  
Crop Irrigated: Yes  
Irrigation: (Inches) 3.25  
Rainfall: (Inches) 3.1
### Report Options

Please Select a Region:
- State Wide
- Basin
- County

Ichawaynochaway

Please Select a Crop:
- Cotton

Please Select a Year:
- 2006

Please Select a Report Type:
- Water Use

Show Report

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**REPORT: WATERUSE (COTTON - 2006)**

<table>
<thead>
<tr>
<th>MY FIELDS: COTTON</th>
<th>BASIN ICHAWAYNOCHAWAY: COTTON</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acres</td>
<td>Average Yield</td>
</tr>
<tr>
<td>-------</td>
<td>---------------</td>
</tr>
<tr>
<td>620</td>
<td>940</td>
</tr>
</tbody>
</table>

Printer Friendly Report
So why the Portal©?

• New web-based system will provide significant added-value to the meter data
  – Provide a farm-level management tool
  – Capture the data behind the use (what, why, how)
  – Link use to farm-level, regional and state economies
  – Detailed background for “reasonable use”
  – Clearinghouse for info on conservation research, programs and ag water news
  – Can be easily adapted or incorporated
  – Because Georgia needs MORE information for meaningful water planning, not LESS
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