

# Inventory of Alabama Irrigated Acreage Based on NAIP Imagery

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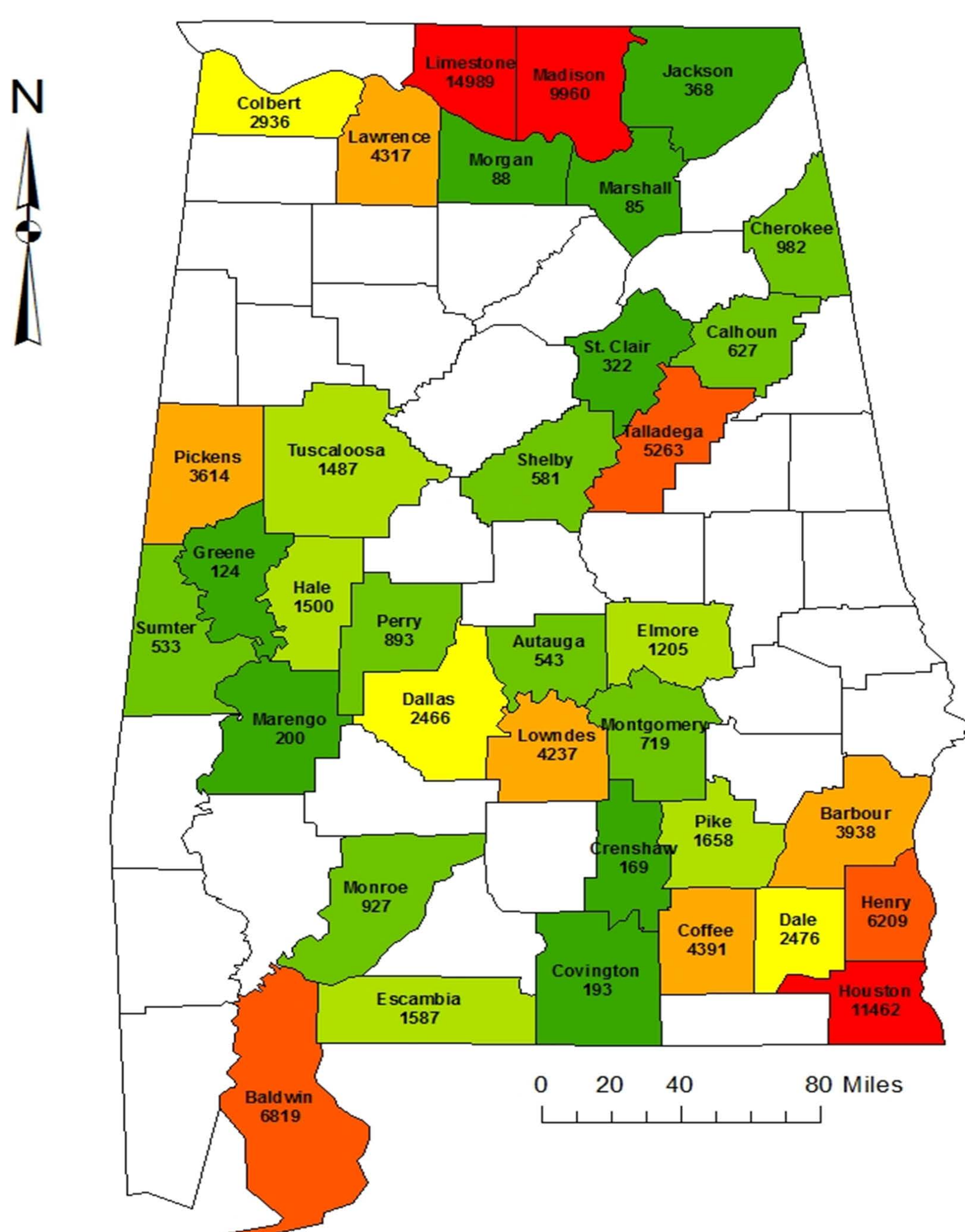
## Overview

When determining the water usage from pivot irrigation systems, it can be quite difficult to find both locations and amount of water used due to incomplete recording of such systems. In response, the ESSC decided to use satellite data and search for these irrigation systems manually. Utilizing two independent researchers, the entirety of Alabama was scanned, with both location and area covered of each system being recorded.

## Key Findings

The findings from both researchers showed some consistency. After some quality checking, the final tally was 1,235 systems with a total irrigated acreage of 119,647 acres. This compares rather well with data from the USDA NASS inventory. The scans also showed a general increase of irrigated acreage from 2006 to 2013.

**Total Irrigated Acreage in 2013**

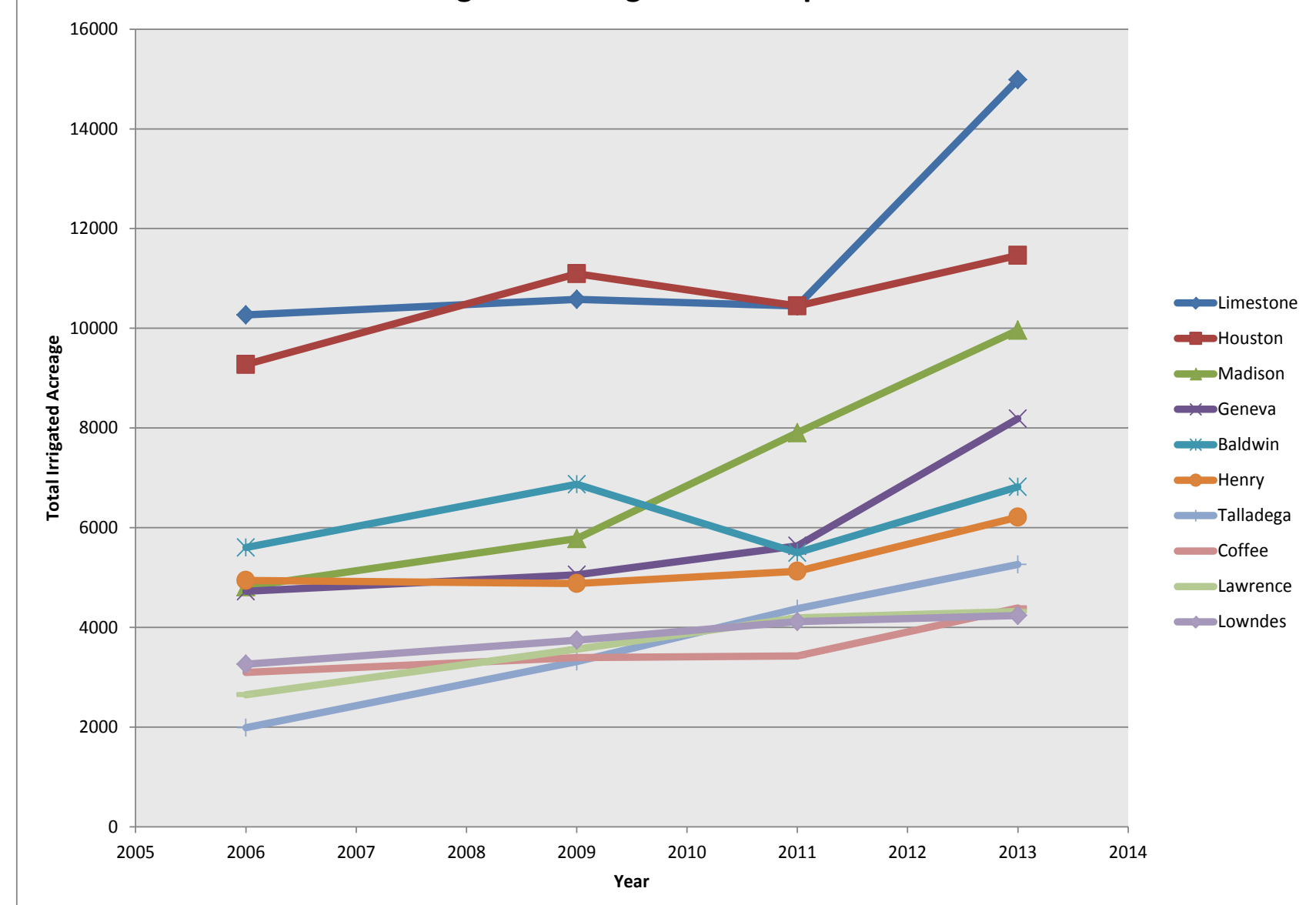


Map created on August 2014 by Roger Allen, UAH



County	UAH Acreage (2013)	USDA Acreage (NASS 2012)
Limestone	14,989	13,128
Houston	12,521	9,138
Madison	9,960	5,089
Geneva	8,277	2,735
Baldwin	6,819	7,678
Henry	6,359	8,142
Talladega	5,304	4,771
Coffee	4,557	3,267
Lawrence	4,317	4,702
Lowndes	4,284	3,788

**Total Irrigated Acreage for the Top 10 Counties**



## Explanation

The experiment required the use of extremely high resolution data to see the features of such irrigation systems. The images were gathered from the NAIP imagery provided by the USDA. These were then brought into ArcGIS to not only catalogue, but use the available tools to calculate the area on the Earth's surface.

## Impact

As irrigated agriculture expands in Alabama, it becomes more important that stakeholders and decision makers have the tools necessary to monitor and manage our water resources for beneficial use. This irrigated agriculture inventory will be a critical asset in developing these tools.

## Acknowledgements

I would like to thank Cameron Handyside and Dr. Richard McNider for help on this experiment. Also would like to thank Donn Rodekohr from Auburn University for his contributions.