

Upper Wakulla River and Wakulla Springs Basin Management Action Plan
Draft List of Research Items
June 25, 2013

Based on discussions during past meetings, the Florida Department of Environmental Protection prepared a draft list of research items that are of interest to the stakeholders in the Upper Wakulla River and Wakulla Springs Basin. This list of research items, once finalized with input from the stakeholders, will be included in the basin management action plan (BMAP) as items that could be pursued to improve understanding of the basin, if funding from the entities in the basin becomes available.

The research items that could be listed in the BMAP include:

- Determine the nitrate contributions to Wakulla Springs during the reverse flow scenario where Spring Creek flows to Wakulla Springs.
- Identify potential sources of loading entering the basin from Georgia, and determine if any are significant enough that they should be addressed to help meet the nitrate target.
- Evaluate the drinking water well data to identify wells with high nitrate concentrations and conduct further research to determine the source(s) of these high concentrations.
- Expand the Department’s Wakulla Springs Basin Nitrogen Sourcing Inventory to include the entire BMAP basin.
- Update the potentiometric surface data for the basin to better define the boundary.
- Run the Aquifer Vulnerability Assessment (AVA) model for the entire BMAP basin.
- Collect Light Detecting and Ranging (LIDAR) data in Wakulla County to better identify karst features to help with the AVA model update.
- Verify the effectiveness of agricultural best management practices (BMPs) in the Upper Wakulla River and Wakulla Springs Basin.
- Monitor before and after project implementation to determine the nitrate reduction benefits of the projects.
- Add two additional sampling events per year to increase the frequency of the linear vegetation survey (LVS) and rapid periphyton survey (RPS) at each site (upper bridge and recreation area boat dock) to quarterly.
- Add nitrate data loggers to the river water quality sampling locations (upper bridge and recreation area boat dock) to obtain better information about how nitrate concentrations change in the river.
- Determine the effects of ground water withdrawals on the nitrate concentrations in the Upper Wakulla River and Wakulla Springs.
- Determine the effects of saltwater intrusion on the biological community in the Upper Wakulla River and Wakulla Springs.