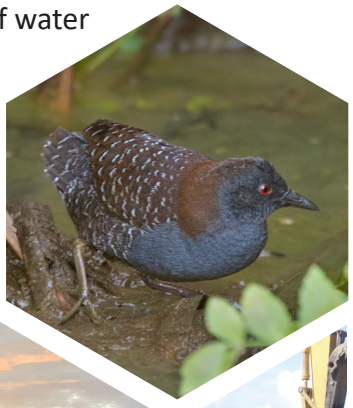
Black Rail Adaptive Management Project
Background Document

Project Summary

This project will combine data about wetland management (e.g., timing and depth of water levels, burning, etc.) with Black Rail (BLRA) occupancy or abundance and vegetation response across many different project sites from NJ to FL. The data will be used to build and update statistical models that predict BLRA responses to management actions. Over time, these models will be used to test assumptions and improve predictions about what management techniques result in suitable habitat for BLRA across their ACJV range. As a top model is identified and refined, it will improve decision-making for managers who want to support BLRA populations.



How is an adaptive management framework developed?

The adaptive management framework consists of two parts: 1) development of a decision support tool and 2) development of on-the-ground projects. Partners will convene via workshops and webinars to identify the research questions we would like to answer, the objectives we are working toward and the management strategies we wish to test. USGS facilitators will transform these conversations into a decision support tool that gathers management, bird and habitat data and uses it to make predictions about which strategies are most effective in supporting BLRA. Interested partners will then test and monitor the effectiveness of these management strategies across the ACJV BLRA range. Predictions will be informed and strengthened by the results of the on-the-ground management projects.

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Who Should Be Involved?

In order to create the best tool, we need participation from a diversity of land managers, biologists, modelers and species and habitat experts.

How Will This Tool Help Inform My Decision-Making?

The decision support tool will synthesize bird and habitat data from an array of on the ground management actions taken by partners across the ACJV region. It will use these data to generate predictions of how various management actions translate into bird outcomes. These predictions will help land managers better understand which management actions most effectively create the habitat features that BLRA prefer. The predictive ability of the tool will continue to strengthen as more data and projects are added over time.

How Does The Tool Evaluate The Wide Diversity Of Management Actions And Potential Variability In Their Success Across The ACJV Geography?

In order to maximize our ability to learn, project participants will develop a list of distinct management actions that they believe are most important to test through the adaptive management

Black Rail, Sergio Bitran; coastal marsh, Craig Watson, ACJV; water control structure, Joe Cockrell, USFWS; fire management, Joachim Treptow

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project. The more replicates of each kind the better, although we can still learn from just one project. If necessary, separate models can be created for geographically distinct regions where we might expect the outcome of similar management actions to differ.

Will The Tool Tell Me What To Do Where?

Given the scarcity of data on Black Rails, their habitat and the performance of various management actions, this tool will not be able to prescribe a particular management action to a particular location. Rather, the tool will provide general predictions of how well a given management action is likely to perform to aid managers in making decisions about potential actions to take on the ground.

What Are The Monitoring Requirements?

Monitoring is an essential feature of this project. We need a diversity of on-the-ground projects across the ACJV range to inform model results. The more projects we develop, the better the model predictions will be. Both bird and habitat response to management actions must be assessed according to standardized protocols. These protocols will be developed by the project participants.

Are Funds Provided For Management Projects Or Monitoring?

No, grant funds acquired thus far are to develop the adaptive management framework, monitoring protocols and a long-term database. We have not acquired funding for habitat management, monitoring, or other project-related expenses.

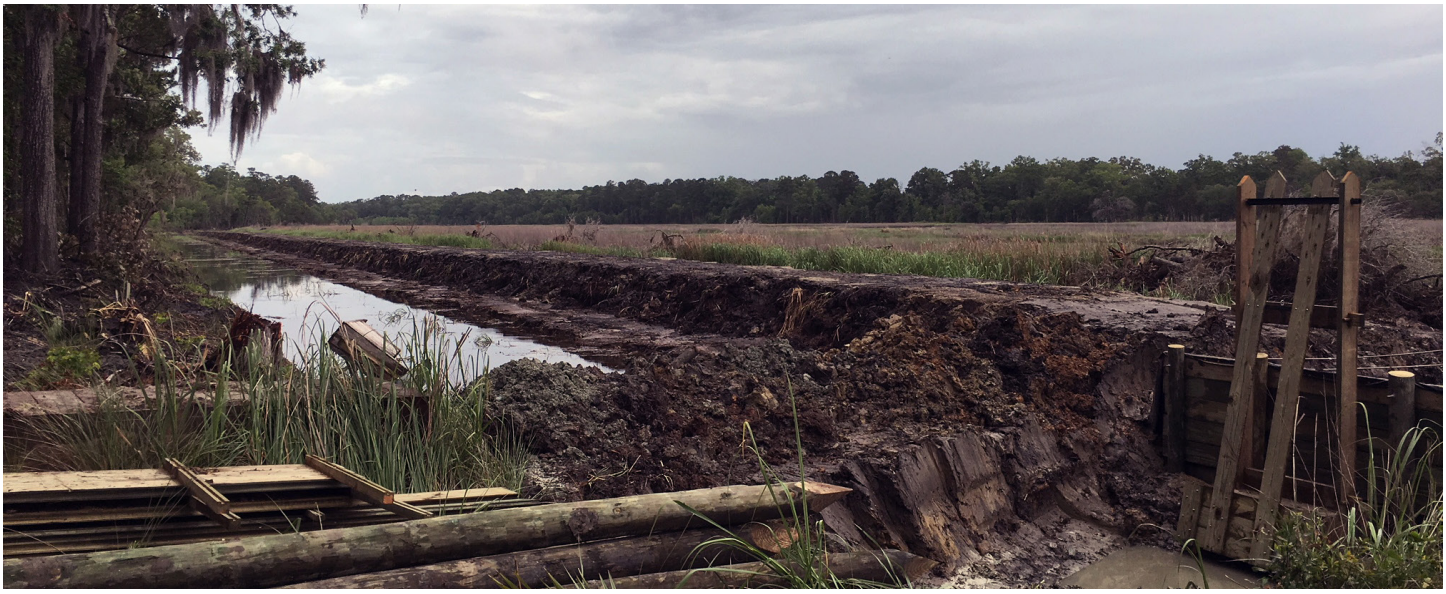
What Products Can I Expect From This Project?

This project will result in the following products:

- Standardized protocols for bird surveys and habitat response.
- List of priority management activities/strategies to test.
- List of priority research questions.
- A publicly accessible database to enter and track data related to management action.
- A modeling framework to inform decision-making.

Who Is Leading This Effort?

This project is a collaboration between the Atlantic Coast Joint Venture and the United States Geological Survey through a Federally funded Science Support Partnership (SSP) grant.



An example of management techniques for Black Rail: Installation of rice trunk and canals to manage water levels, and construction of dikes. Jason Ayers