

Integrating science and management for managing invasive species



**PRESENTERS: DANIEL, WESLEY; HUNTER, MARGARET;
JOHNSON, FRED; UDELL, BRADLEY, WADDLE, HARDIN
SESSION ORGANIZER: JULIEN MARTIN**

GEER CONFERENCE 04/23/19



**U.S. Department of the Interior
U.S. Geological Survey**

Traditional approach



- Traditional approach for research and management
 - Conduct research that informs management
 - ✦ PVA and listing decisions
 - ✦ Brown tree snakes (acetaminophen and snakes)
 - *Dr. Margaret Hunter: Population Genetics and Environmental DNA to Inform Management Decisions*
 - *Dr. Wesley Daniel: Tools for Predicting and Communicating Risk of Aquatic Species Invasion*

Structured decision making



- **Structured decision making**
 - Formal approach to decision making
 - The learning is folded explicitly in the decision making process
 - Learning is not the ultimate objective but a means to achieving management goals.
 - *Dr. Hardin Waddle: A Daily Capture Probability Model for Management of an Invasive Reptile*
 - *Bradley Udell (PhD student): Decision Analysis for the Optimal Control of Invasive Plants*
 - *Dr. Fred Johnson: From Detection to Action: A Decision-analytic Approach for Controlling Invasive Species*