SAFMC Citizen Science Program
Citizen Science Research Needs

1. **Age Sampling:**
   a. Target volunteers: Recreational
   b. Data needed: otolith collection
   c. Target species: cobia, greater amberjack, scamp, snowy grouper, gag
   d. Anticipated outcome: characterize the age of catches
   e. Potential cost: $$

2. **Maturity Data:**
   a. Target volunteers: Recreational and commercial
   b. Data needed: gonad collection (either actual biological samples or pictures)
   c. Target species: cobia, red porgy, snowy grouper
   d. Anticipated outcome: improved reproductive information
   e. Potential cost: $$

3. **Discard information:**
   a. Target volunteers: Recreational and commercial
   b. Data needed: length of fish; depth caught/released; number of fish; reason for discard; devices used
   c. Target species: scamp grouper, red snapper, deepwater groupers, red porgy, greater amberjack, cobia
   d. Anticipated outcome: improved discard removals estimates, ability to characterize size composition of discards
   e. Potential cost: $-$$

4. **Genetic Sampling:**
   a. Target volunteers: Recreational and commercial
   b. Data needed: fin clips
   c. Target species: cobia
   d. Anticipated outcome: stock identification
   e. Potential cost: $-$$

5. **Bottom Habitat Mapping:**
   a. Target volunteers: Recreational and for-hire captains
   b. Data needed: mapping data using multi-beam or side scan sonar equipped on fishing vessels
   c. Anticipated outcome: improved habitat maps, improved resolution
   d. Potential cost: $$-$$$

6. **Monitoring in Managed Areas (MPAs, Spawning Special Management Zones):**
   a. Target volunteers: Recreational
   b. Data needed: species, length, depth
   c. Target species: deepwater snapper and grouper
   d. Anticipated outcome: changes in fish abundance over time
   e. Potential cost: $$

7. **Fishing Infrastructure:**
   a. Target volunteers: Recreational; commercial; community members/citizens
   b. Data needed: GPS location of fishing-related infrastructure (commercial fishing facilities, marinas, bait/tackle shops, ice house, fuel docks, boat ramps, piers, roadside seafood stands, retail markets, etc.)
   c. Anticipated outcome: Baseline for fishing-related infrastructure to help document potential impacts from regulations
   d. Potential cost: $

8. **Historical Fishing Photos:**
   a. Target volunteers: Recreational and for-hire
   b. Data needed: digitized images (will need to scan print photos into digital format)
   c. Target species: commonly caught charter/headboat species
   d. Anticipated outcome: length comps for certain species; improved historical information
   e. Potential cost: $-$$

9. **Fishery Oral Histories**:
   a. Target volunteers: For-hire and commercial captains
   b. Data needed: interviews with fishermen to learn about the history of a fishery; possibly pair interviews with topic #8 (Historical Fishing Photos)
   c. Anticipated outcome: documentation of how fisheries operated over time (catchability changes over time with improvements in technology; markets; clients; species distribution; size of fish; weather; etc.) and other observational data
   d. Potential cost: $

10. **Oceanographic/Environmental/Weather Conditions:**
    a. Target volunteers: Recreational and commercial
    b. Data needed: Bottom temperature; weather impacts to fishing
    c. Anticipated outcome: building database on climate and conditions
    d. Potential cost: $-$$

11. **Rare Species Observations:**
    a. Target volunteers: Recreational and commercial
    b. Data needed: point observations of unusual or rarely encountered species
    c. Anticipated outcome: baseline for species shift
    d. Potential cost: $-$$