

HWBS Questions
Final, 19 March 2019
Where “skip logic” will be used

BACKGROUND INFORMATION

1. What is your role in waterbird conservation? (Choose one)
 - a. Education
 - b. Habitat Management (including predator control)
 - c. Policy or Advocacy
 - d. Regulatory
 - e. Research
 - f. Other (Please briefly describe)

2. What is your affiliation? (Choose one)
 - a. Federal
 - b. State
 - c. University
 - d. Private (including non-profit)
 - e. Other (Please specify)

3. What island or island group do you primarily work on? (Choose one)
 - a. Hawaii Island
 - b. Maui
 - c. Lanai
 - d. Kahoolawe
 - e. Maui Nui
 - f. Molokai
 - g. Oahu
 - h. Kauai
 - i. Niihau
 - j. All main Hawaiian Islands
 - k. NW Hawaiian Islands
 - l. Other (Please specify)

4. Do you work at a site where any four of the endangered waterbird species (Hawaiian duck, gallinule, coot, and/or stilt) are present?
 - a. Yes [go to #5]
 - b. No [go to #7]

5. [If yes to #4] Do you have habitat and/or population objectives for resident endangered waterbirds (Hawaiian duck, gallinule, coot &/or stilt) at the site(s) where you work.
 - a. Yes [go to #6]
 - b. No [go to #7]

6. [If yes to #5] Please list all habitat and population objectives and applicable species/species groups for each site.
7. How many years have you conducted the State of Hawaii Biannual Waterbird Survey?
 - a. 0
 - b. 1-3
 - c. 4-7
 - d. 8-10
 - e. 11+
8. Do you currently use and/or have you previously used data collected on the State of Hawaii Biannual Waterbird Survey?
 - a. Yes [go to #9]
 - b. No [go to #10]
9. How do (or did) you use data collected on the State of Hawaii Biannual Waterbird Survey? (Briefly describe, but be specific).

DATA & INFORMATION NEEDS

10. What questions would you like to answer using data from the State of Hawaii Biannual Waterbird Survey?
11. What are the most important attributes or indicators to be monitored in your assigned role in waterbird conservation? Select and rank the top 3 where 1 is the highest.
 - a. Breeding success (e.g., nesting, fledging)
 - b. Distribution
 - c. Habitat use (including response to management actions)
 - d. Index of abundance
 - e. Population size
 - f. Population trend
 - g. Species composition, diversity, and/or richness
 - h. Survival
 - i. Other (Briefly describe)
12. What other information you would like to know about endangered waterbird species (Hawaiian duck, gallinule, coot, and/or stilt) that would help you do your job? (Be specific for each species).
13. Are there additional sites that you would like added to the State of Hawaii Biannual Waterbird Survey?
 - a. Yes [go to #14]
 - b. No [go to #16]

14. [If yes to #13] Do you have the capacity to survey the additional sites you would like to add to the State of Hawaii Biannual Waterbird Survey?
 - a. Yes [go to #16]
 - b. No [go to #15]

15. [if no to #14] What resources would you need to implement surveys at additional sites over time?
 - a. Staff
 - b. Funding
 - c. Both staff and funding
 - d. Other

IMPROVEMENTS & CAPACITY

16. What are the **most important** survey improvements suggested by Camp et al. (2014) “*Monitoring Hawaiian waterbirds: evaluation of sampling methods to produce reliable estimates.*” Select and rank the top 5 where 1 is the highest.
 - a. Additional training of observers.
 - b. Double observer sampling, including mapping locations of all birds observed.
 - c. End surveys at 11am.
 - d. Reconnaissance ground truthing of wetland survey sites prior to each survey.
 - e. Repeat visit surveys.
 - f. Quantify waterbird movement between wetland sites to determine if survey can be conducted over longer time (e.g., multiple days).
 - g. Install staff gauges or other landmarks to denote average, low, and high water levels.
 - h. Standardize definitions of weather and wetland condition variables.
 - i. Survey random subset of wetland survey sites.
 - j. Survey prioritized subset of wetland survey sites.

17. What are the **most feasible** survey improvements suggested by Camp et al. (2014) “*Monitoring Hawaiian waterbirds: evaluation of sampling methods to produce reliable estimates.*” Select and rank the top 5 where 1 is the highest.
 - a. Additional training of observers.
 - b. Double observer sampling, including mapping locations of all birds observed.
 - c. End surveys at 11am.
 - d. Reconnaissance ground truthing of wetland survey sites prior to each survey.
 - e. Repeat visit surveys.
 - f. Quantify waterbird movement between wetland sites to determine if survey can be conducted over longer time (e.g., multiple days).
 - g. Install staff gauges or other landmarks to denote average, low, and high water levels.

- h. Standardize definitions of weather and wetland condition variables.
 - i. Survey random subset of wetland survey sites.
 - j. Survey prioritized subset of wetland survey sites.
18. Count data show that endangered waterbirds are concentrated at a subset of survey sites (USGS, unpublished data; Underwood et al. 2013, "*Managing conservation reliant species: Hawaii's endangered endemic waterbirds*"). If it is not feasible to implement sampling methods that produce reliable population and trend estimates at all survey sites, should only a subset of sites be surveyed, at the cost of no information from other sites.
- a. Yes
 - b. No
- Briefly explain why.
19. If it is possible to improve population and trend estimates of resident endangered waterbirds (Hawaiian duck, coot, gallinule, and stilt) with changes to survey methods that increase survey effort, do you have the capacity to provide additional resources (e.g., funding, staff time, etc.) to support these surveys.
- a. Yes
 - b. No
- If yes, describe the additional resources you can provide.
20. What information currently collected during the Biannual Waterbird Survey do you feel is not useful for habitat and/or population management? (Briefly explain).

ADDITIONAL INFORMATION

21. Do you have any additional comments or information you want to share about survey methods, data management, and or other aspects of the State of Hawaii Biannual Waterbird Survey? (If yes, please describe below).

Paperwork Reduction Act Statement: We are collecting this information subject to the Paperwork Reduction Act (44 U.S.C. 3501) to prioritize information needs for endangered Hawaiian waterbird conservation, inform waterbird survey objectives, and explore options to enhance the survey protocol. Your response is voluntary and we will not share your response publicly. We may not conduct or sponsor and you are not required to respond to a collection of information unless it displays a currently valid OMB Control Number. OMB has reviewed and approved this focus group and assigned OMB Control Number 1090-0011.

Estimated Burden Statement: We estimate it will take 30 minutes to complete this survey, including time to read instructions and gather information. You may submit comments on any aspect of this information collection to the Service Information Collection Clearance Officer, U.S. Fish and Wildlife Service, 5275 Leesburg Pike, MS: AMAD-ARM-PPM, Falls Church, VA 22041-3803, or via email at Info_Coll@fws.gov. Please do not send your completed survey to this address.