

HAWAII BIENNIAL WATERBIRD SURVEY INSTRUCTIONS (Dec. 2017 revision)

General Instructions:

1. Surveys are conducted the 3rd Wednesdays of January and August. Counts should begin ½ hour after sunset and be completed before noon.
2. Use the revised waterbird survey form (revision date Aug. 2017) to record all wetland and waterbird data. Data from 4 survey sites can be recorded on each datasheet.
3. Contact private landowners prior to the survey for permission to access the survey site.
4. Visit all survey sites on your current assigned list and shown on survey route maps.
5. If storm events or heavy rainfall and winds inhibits accurate observations of waterbirds, the survey may be completed on the following day (3rd Thursdays of January and August are alternate survey days if needed).
6. **If you visit a ‘new’ survey site that has not been previously surveyed:**
 - a. Record it is a new site in the comments.
 - b. Submit a map and/or GPS points showing the boundary of the new survey site.
 - c. Contact DOFAW Island Biologist and Waterbird Survey Coordinator to ensure the site is added to the database, polygon shapefile, and distribution list for future surveys.
7. If a site is no longer suitable habitat (e.g., drained reservoir), include relevant information in the comments so it can be determined if the site should be ‘discontinued’ from the survey until further notice.
8. Use binoculars and/or spotting scopes to identify species at a distance and to accurately read band numbers.
9. Bring a bird identification book and the photo guide for waterbirds in Hawaii to assist with identification, especially for migrant and/or vagrant species.
10. **KEEP A COPY OF THE DATASHEET FOR YOUR RECORDS.**
11. Send the original datasheet (or legible scanned copy) to *DOFAW Island Biologists* on or before the 4th Wednesdays of January and August (within 1 week of the survey).
 - a. Original datasheets are preferred.
 - b. If you transcribe your data to a fillable pdf after the survey, please also submit your original datasheet from the field.
 - c. Summary forms may be submitted, but are not required.
12. *DOFAW Island Biologists*: Ensure you have datasheets for ALL wetlands surveyed, scan and send electronically to the *DOFAW Waterbird Coordinator* by February 1st and September 1st. Keep copies of all datasheets. In case data are lost or misplaced, this ensures a duplicate set is available!!

Survey Instructions:

13. PRINT LEGIBLY.
14. **Record the site name as completely as possible, using the site name on the survey route maps (revision December 2017).**
 - a. Please do not change the site name or use a ‘nickname’ for the survey site.
 - b. Do not use the abbreviation “R” for reservoir or river as some reservoirs and rivers have the same name.
15. Record the weather and wetland condition for each site using codes on top of the field datasheet. If weather conditions change while surveying a site, record average conditions during the time at the survey site.
16. Record start and end time for each survey site.
17. **Count and record all waterbirds at and surrounding the survey site.**
 - a. Minimize disturbance to birds as you approach the survey site.
 - b. Move around the survey site as needed to view all areas of the site to identify and count all waterbirds present.
 - c. Keep track of bird movements and do not double-count birds if they leave and then re-enter the survey site.
 - d. If counting multiple survey sites near each other, do not count birds that fly into the survey site from the direction of a previously surveyed site.
 - e. Do not record birds in flight that do not land at the survey site.
18. Observe a survey site for at least 10 minutes, even if no birds are immediately visible.
19. If no birds are observed, record the survey site name, weather, wetland condition, start time, end time, and write ‘no birds’ or 0 in the appropriate column.
20. If a site is not accessible, write the survey site name, ‘no access,’ and the reason why (e.g., locked gate, muddy road, etc).

Waterbird Guild Instructions:

Endangered Hawaiian Waterbirds

(Hawaiian stilt [HAST], Hawaiian coot [HACO], Hawaiian gallinule [HAGA], & Hawaiian duck [HAWD])

- Count and record all birds observed and heard.
- Record the number of adults and subadults separately.
 - Subadults include juveniles and chicks.
 - Do not separate males and females – record all as adults.
 - Hawaiian gallinules (previously moorhens) are secretive and detection is improved if more time is spent quietly watching a location.
 - Do not separate Hawaiian coots by frontal shield coloration; record coloration in comments if applicable.
- Record any nests and eggs observed in the comments.
- ***Check for leg and neck bands (called a collar) and record band color and alphanumeric code combinations in the comments.***
 - Different leg bands and neck collars in use include:

- Metal (aluminum) bands and solid color bands on HAST, HACO, HAGA, & HAWD.
- Solid color flags on HAST
- Coded color bands on HAWD
- Coded color neck collars on HACO
- Leg bands are read from the bird's perspective (e.g., left is the bird's left leg) as if reading a book from the left top to bottom then right top to bottom.
 - 1st example, red over aluminum on left leg and green over yellow on right leg should be recorded as **RA:GY**
 - 2nd example, no band on left leg, metal band on right leg should be recorded as **--:-A**
- Consult band reporting fliers for additional information, including photos of band colors.
- The list of band combinations in use is available from USFWS Pacific Islands Fish and Wildlife Service Office (808-792-9400; current contact is Jiny Kim jiny_kim@fws.gov) or the Hawaiian Waterbird Banders Group (hawaiianwaterbirdbanders-owner@yahoogroups.com).

Hawaiian Goose (Nēnē)

- Count and record all birds observed and heard by adding nēnē to blank row(s).
- Separate by age (e.g., adult, subadult).
- Check for bands and record band colors and alpha-numeric code combinations.

All Other Waterbirds

- Count and record all birds observed and heard.
- Add species names to blank rows for those not already listed on the datasheet.
- Do not separate by age (e.g., adult, subadult).

Koloa, Koloa/Mallard hybrids, Feral/domestic Mallards, and Migratory Mallards

- *We are attempting to increase the accuracy of distinguishing and recording these species during the waterbird survey.*
- Record numbers for each of the 4 species/types above (note: record adults and subadults for koloa). To facilitate this, all 4 species/types are listed on the datasheet.
- **Do not record data for just 'Mallard;' specify if it's migratory or feral/domestic.**
- Please take time to accurately observe, identify, count, and record birds.
- Although similar with wide ranges of morphological variation, many birds can be distinguished by careful observation of body size, bill size and color, and feather plumage (e.g., head, speculum, tail).
- See identification tips and photo guide for distinguishing characteristics.
- Please include any comments that will help identify species/type observed.

Other Domestic Ducks

- Count and record all birds observed and heard.

- Count and record the species in the comments, if known.
- Count and record domestic geese and swans separately.

Migratory shorebirds

- Count and record all birds observed and heard.
- Pacific golden plover, ruddy turnstone, sanderling, and wandering tattler are included on the datasheet.
- Add species names in blank rows for additional species and record number observed.
- In addition to the photo guide of commonly observed shorebirds in Hawaii, several field guides are available to aid in identification.
- If you are unable to identify a shorebird to species, take photos and notes on its appearance and behavior that can be used later to help identify it, including relative size (e.g. smaller than a Pacific golden plover, but larger than a sanderling), bill length (e.g. bill 1.5 times length of head), leg length, coloration of different body parts (legs, head, back, eye-stripe, breast, whether breast is streaked), behavior (e.g. walking on exposed mud, wading in shallow water, probing with bill) and describe any vocalizations.

Migratory waterfowl

- Count and record the number of each species of migratory waterfowl.
- Migratory mallards, northern pintail, and lesser scaup are included on the datasheet.
- Add species names in blank rows for other species and record number observed.
- In addition to the photo guide of commonly observed waterfowl species in Hawaii, several field guides are available to aid in identification.
- If you are unable to identify a waterfowl species, take photos and notes on its appearance and behavior that can be used later to help identify it.