

STANDARD OPERATING PROCEDURE FOR WETLAND BIRD SURVEYS

WILLARD SPUR 2011 MONITORING ACTIVITIES

State of Utah
Department of Environmental Quality
Division of Water Quality

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Effective 09/09/2011

Utah Division of Water Quality (DWQ) Standard Operating Procedures (SOPs) are adapted from published methods, or developed by in-house technical experts. The primary purpose of this document is for internal DWQ use. This SOP should not replace any official published methods.

Any references within this document to specific equipment, manufacturers, or supplies is only for descriptive purposes and does not constitute an endorsement of a particular product or service by the author or by DWQ. Additionally, any distribution of this SOP does not constitute an endorsement of a particular procedure or method.

Although DWQ will follow this SOP in most instances, there may be instances in which DWQ will use an alternative methodology, procedure, or process.

REVISION PAGE

Date	Revision #	Summary of Changes	Sections	Other Comments
09/09/2011	1	NA	NA	New SOP

TABLE OF CONTENTS

1.0	Scope and Applicability	5
2.0	Summary of Method.....	5
3.0	Definitions	5
4.0	Health and Safety Warnings	6
5.0	Cautions	6
6.0	Interferences	6
7.0	Personnel Qualifications/Responsibilities.....	7
8.0	Equipment and Supplies	7
9.0	Procedure	7
10.0	Data and Records Management	8
11.0	Quality Assurance and Quality Control.....	8
12.0	References	8

1.0 SCOPE AND APPLICABILITY

This document presents the standard operating procedure (SOP) for completing a bird survey during routine Utah Division of Water Quality (DWQ) sampling at wetland sites. A brief survey of the types of birds seen and their behavior paired with data collected during routine DWQ sampling can help establish the link between bird use and various wetland habitat parameters. Currently, DWQ measures the following parameters: water quality, submerged aquatic vegetation, algal mats, macroinvertebrates, phytoplankton, zooplankton, sediment chemistry, sediment diatoms, and chlorophyll-a.

This SOP applies to any DWQ monitor, non-DWQ cooperators, or volunteer filling out a DWQ bird survey. A field guide for identification of birds can be found in the appendix.

2.0 SUMMARY OF METHOD

The bird survey should be performed at the end of routine sampling and data collection at the sample site. Scan the area within an approximate 200 meter radius for shore birds, water birds, and wading birds. Record the number of birds within each guild exhibiting the following behaviors: feeding, nesting, flying, or other. Continue a routine 360 degree scan of the area for 10 minutes, recording new birds and their activity as they arrive into the area.

3.0 DEFINITIONS

Bird Guild: A group of species that exploit the same type of resources or habitat in a similar manner.

Waterbirds: Species that have specific adaptations for swimming through the water, and diving below the surface to pursue prey or avoid predators. Commonly seen waterbirds at DWQ sample locations include but are not limited to: ducks, pelicans, grebes, cormorants, and coots (**Appendix B**).

Wading Birds: For DWQ purposes, wading birds will be defined as birds with long thin legs with little or no webbing, and thin beaks of various lengths. They are typically found feeding in shallow waters. Commonly seen wading birds at DWQ sample locations include but are not limited to: herons, ibises, avocets, curlews, and stilts (**Appendix C**).

Shorebirds: For DWQ purposes, the shorebird guild will include birds that are often seen flying across open water, and can also feed on prey items found on or near the surface of the water. Shorebirds

commonly seen at DWQ sample sites include: gulls and terns (**Appendix D**).

4.0 HEALTH AND SAFETY WARNINGS

Field personnel should take appropriate precautions when operating watercraft and working on, in, or around water. All boats should be equipped with safety equipment such as personal flotation devices (PFDs), oars, air horn, etc. Utah's Boating Laws and Rules shall be followed by all field personnel.

Field personnel should be aware that hazardous conditions potentially exist at every waterbody. If unfavorable conditions are present at the time of sampling, the sample visit is recommended to be rescheduled. If hazardous weather conditions arise during sampling, such as lightning or high winds, personnel should cease sampling and move to a safe location.

5.0 CAUTIONS

This bird survey is meant to exclusively capture the number and activity of birds falling into the following guilds only: shorebirds, waterbirds, and wading birds. Birds that do not reside in these guilds (songbirds, birds of prey, etc) should not be counted or included in the survey in any capacity.

6.0 INTERFERENCES

Variation in eyesight and counting methods between field personnel can lead to inaccurate data collection. Therefore, only one person should carry out the bird survey to avoid duplicate counting of the same birds.

Loud noises should be minimized at the sample site, especially during the bird survey. Truck and boat motors should be turned off during bird observation. The survey should take place at the end of the routine DWQ sampling to allow birds sufficient time to return to the area after initial disturbance upon arrival of the sampling crew.

The surveyor should be outside the vehicle with an unobstructed 360 degree view of the area to ensure that the full 200 m radius can be seen clearly from sample site.

7.0 PERSONNEL QUALIFICATIONS/RESPONSIBILITIES

All personnel completing the bird survey must read this SOP annually and acknowledge they have done so via a signature page (see **Appendix E**). New field personnel must also demonstrate successful performance of the method, and be able to accurately classify birds according to guild. The signature page will be signed by both trainee and trainer to confirm that training was successfully completed and that the new monitor is competent in carrying out his SOP. The signature page will be kept on file at DWQ along with official hard copy of the SOP.

8.0 EQUIPMENT AND SUPPLIES

- Copy of this SOP
- Bird survey field form (**Appendix A**)
- Writing utensil
- Watch, clock, or other timer
- Field glasses

9.0 PROCEDURE

- 1) The bird survey should be started after all other samples and data have been collected from the sample site, and should take place outside of the vehicle.
- 2) Retrieve the bird field form (**Appendix A**) and a writing utensil. Move to an open area with an unobstructed 360 degree view if possible.
- 3) Fill out appropriate information on the field form, and start a timer for 10 minutes.
- 4) Scan the area within an approximate 200 meter radius for shorebirds, waterbirds, and wading birds. Record the numbers of bird within each guild exhibiting the following behaviors: feeding, nesting, flying, or other. If birds are observed displaying “other” behavior, be sure to describe the behavior on the field form.
- 5) Continue a routine scan of the survey area for 10 minutes, recording new birds and their activity as they arrive into the area.

10.0 DATA AND RECORDS MANAGEMENT

Bird observations will be recorded on the bird survey form. Once field personnel return to the office, all field forms will be scanned and an electronic copy shall be saved in the DWQ Monitoring Section shared folder under the appropriate sub folder. Data management staff will review these sheets on a bi-weekly basis.

Hard paper copies of field forms shall be stored in the QA manager's office in the appropriate file.

11.0 QUALITY ASSURANCE AND QUALITY CONTROL

There are limited QA/QC procedures for bird surveys. For quality control, bird surveys should be taken by one person for an entire sampling trip.

12.0 REFERENCES

- Photos taken from: www.utahbirds.org and www.onthewingphotography.com

13.0 Appendix A

Bird survey field form

<i>Willard Spur: Bird Survey Forms</i>	
Trip Name (mmddyyyy): WS _____	Collectors Initials: _____
Sampling Date:	Sample Time: Start: End:
Site STORET #:	Site Name:
Field Observations:	
Wind (mph):	Cloud (%):
Temperature (° F)	
Sampling Distance: Within 200m radius of GPS boat/ Airboat Location	
BIRD OBSERVATIONS	
Water Birds:	Waders :
Feeding:	Feeding:
Resting:	Resting:
Flying:	Flying:
Other:	Other:
Shorebird	
Feeding:	
Resting:	
Flying:	
Other:	
Other Notes (e.g., Behavior/Predation/etc.):	
Reviewed:	
Monitor: _____ Date: _____	
Data Manager: _____ Date: _____	

Appendix B

WATERBIRDS commonly Seen at DWQ sample locations



Mallard Duck © Mia McPherson 2010



White Pelican © Shon Reed 2005



Western grebe © Mia McPherson 2010



Neotropic cormorant © Pomera France 2009



American Coot © Mia McPherson 2010

Appendix C

WADING BIRDS commonly Seen at DWQ sample locations



Black Necked Stilt © Jim Huddle 2006



Long Billed Curlew © Mia McPherson 2010



White Faced Ibis © Jack Binch 2003



Great Blue Heron © Jack Binch 2003



American Avocet © Jim Huddle 2006

Appendix D

SHORE BIRDS commonly Seen at DWQ sample locations



California gull © Jack Binch 2003



Forsters Tern © Ted Steinke 2004

