

Appendix 4: Survey Area Descriptions

The following accounts detail by mean, peak and density (birds per hectare) each survey area for habitat type, the number of seasons it was surveyed, visibility quality, and numbers of birds. Some of the larger wetland complex areas were not completely covered by survey effort, and therefore density figures were calculated by the area size (hectares) actually surveyed rather than the total area outlined by survey boundaries. These areas are identified with an asterisk (*) after the area name or number.

At times, surveyors were not able to identify birds to the species level and instead recorded counts at the suite level (see Appendix 1 for suite designations). In some cases those counts were large numbers (i.e., flocks of waterfowl viewed at great distance). Suite counts are not included in the following Survey Area Descriptions and, therefore, the data presented may be regarded as conservative.

1 *Timpie Springs WMA**

Description: This small, UDWR managed, wetland complex is surveyed from a vehicle on dike roads. The area was treated as a total count, recording all birds within the peripheral and internal dike systems.

Primary Habitat: Fresh Water; Salt Marsh

Area Size (ha): 556.7

Estimated Area Covered by Survey (ha): 445.5

Years Surveyed: 5

Detection Rates: Visibility is generally unobstructed. Some corners of the ponds are difficult to see. Vegetation beyond ponds can flood and subsequently be used by waterbirds. Viewing birds in these areas can be difficult.

Species	Mean	Peak	Birds/ha	Species	Mean	Peak	Birds/ha
AGWT	6.4	83.0	0.0	GTBH	3.7	7.8	0.0
AMAV	87.2	237.8	0.2	KILL	1.9	6.4	0.0
AMCO	211.9	1232.8	0.5	LBCU	0.1	1.4	0.0
AMWI	6.0	30.0	0.0	LBDO	0.3	2.3	0.0
AWPE	5.3	6.3	0.0	LESA	1.1	6.0	0.0
BASA	0.3	1.6	0.0	LESC	6.3	14.7	0.0
BBPL	0.0	1.3	0.0	LEYE	0.9	8.2	0.0
BCNH	3.1	9.3	0.0	MAGO	0.4	1.0	0.0
BLTE	0.0	0.0	0.0	MALL	40.2	83.0	0.1
BNST	25.7	153.5	0.1	NOPI	103.1	261.5	0.2
BUFF	0.6	1.7	0.0	NSHO	6.9	30.0	0.0
BWTE	1.7	6.0	0.0	PBGR	0.5	1.0	0.0
CAEG	0.0	0.0	0.0	RBGU	0.5	59.5	0.0
CAGO	17.6	61.2	0.0	REDH	10.8	28.4	0.0
CAGU	112.5	619.0	0.3	RPHA	10.6	41.0	0.0
CANV	0.1	4.0	0.0	RUDU	1.8	2.8	0.0
CATE	1.2	10.0	0.0	SACR	0.2	1.0	0.0
CITE	1.5	46.3	0.0	SAND	12.0	50.0	0.0
CLGR	0.0	0.3	0.0	SNEG	1.6	4.0	0.0
COGO	0.4	0.8	0.0	SNPL	1.1	4.3	0.0
DCCO	0.3	1.8	0.0	SPSA	1.2	3.3	0.0
EAGR	0.2	26.0	0.0	WEGR	0.1	0.5	0.0
FOTE	4.5	13.8	0.0	WESA	0.2	1.0	0.0
FRGU	0.0	2.0	0.0	WFIB	13.7	21.8	0.0
GADW	18.3	90.6	0.0	WILL	9.0	13.6	0.0
GRYE	2.3	23.8	0.0	WIPH	5.5	48.0	0.0

2 *Stansbury Island North*

Description: Facing east, this narrow, privately owned, shoreline runs from the north tip of Stansbury Island to the pumping station gate at the south end. Because land access was denied the survey was not completed in 1997 or 1998. In 1999, the shoreline stretch was included as an aerial survey alternating with the Farmington Bay aerial survey every third period.

Primary Habitat: Rocky Shorelines and Levees; Great Salt Lake Islands

Area Size (ha): 785.6

Estimated Area Covered by Survey (ha): 785.6

Years Surveyed: 3

Detection Rates: Visibility is not obstructed, but rapid travel by airplane can make counting and identification difficult. However, because total numbers were always generally low in this area, it is likely counts are reliable.

<u>Species</u>	<u>Mean</u>	<u>Peak</u>	<u>Birds/ha</u>	<u>Species</u>	<u>Mean</u>	<u>Peak</u>	<u>Birds/ha</u>
AGWT	0.0	0.0	0.0	GTBH	0.0	0.0	0.0
AMAV	669.7	2082.5	0.9	KILL	0.0	0.0	0.0
AMCO	0.0	0.0	0.0	LBCU	0.0	0.0	0.0
AMWI	0.0	0.0	0.0	LBDO	0.0	0.0	0.0
AWPE	0.0	0.0	0.0	LESA	0.0	0.0	0.0
BASA	0.0	0.0	0.0	LESC	0.0	0.0	0.0
BBPL	0.0	0.0	0.0	LEYE	0.0	0.0	0.0
BCNH	0.0	0.0	0.0	MAGO	0.0	0.0	0.0
BLTE	0.0	0.0	0.0	MALL	0.0	0.0	0.0
BNST	0.0	4.7	0.0	NOPI	0.0	0.0	0.0
BUFF	0.0	0.0	0.0	NSHO	0.0	0.0	0.0
BWTE	0.0	0.0	0.0	PBGR	0.0	0.0	0.0
CAEG	0.0	0.0	0.0	RBGU	3.9	11.7	0.0
CAGO	0.2	1.3	0.0	REDH	0.0	0.0	0.0
CAGU	1261.3	2535.7	1.6	RPHA	0.0	0.0	0.0
CANV	0.0	0.0	0.0	RUDU	0.0	0.0	0.0
CATE	0.0	0.0	0.0	SACR	0.0	0.0	0.0
CITE	0.0	0.0	0.0	SAND	0.1	0.3	0.0
CLGR	0.0	0.0	0.0	SNEG	0.0	0.0	0.0
COGO	0.0	0.0	0.0	SNPL	0.0	0.0	0.0
DCCO	0.0	0.3	0.0	SPSA	0.0	0.0	0.0
EAGR	85.2	206.7	0.1	WEGR	0.0	0.0	0.0
FOTE	0.0	0.3	0.0	WESA	0.0	0.0	0.0
FRGU	1.3	7.3	0.0	WFIB	0.0	0.0	0.0
GADW	0.0	0.0	0.0	WILL	0.8	4.0	0.0
GRYE	0.0	0.0	0.0	WIPH	0.0	3.3	0.0

3 *Stansbury Island South*

Description: The stretch of mudflat between the pumping station on the south end of Stansbury Island to the railroad is a shoreline survey that has been divided into two sections by the secondary canal (3a = north section, 3b = south section). Each section has a randomly selected point sample and is managed by UDWR.

Primary Habitat: Saltwater Shorelines, Beaches and Playas

Area Size (ha): 3a = 1003.5; 3b = 722.3

Estimated Area Covered by Survey (ha): 3a = 1003.5; 3b = 722.3

Years Surveyed: 5

Detection Rates: Visibility is good, though at certain times mud consistencies may prohibit access to the shoreline by some distance, making detection and identification of small sandpipers and plovers difficult.

3a

Species	Mean	Peak	Birds/ha	Species	Mean	Peak	Birds/ha
AGWT	0.0	0.0	0.0	GTBH	0.0	0.2	0.0
AMAV	4062.9	8039.8	4.0	KILL	0.1	1.0	0.0
AMCO	0.0	0.0	0.0	LBCU	1.2	10.6	0.0
AMWI	0.0	0.0	0.0	LBDO	28.4	170.2	0.0
AWPE	0.0	0.0	0.0	LESA	229.6	1290.0	0.2
BASA	53.2	217.8	0.1	LESC	0.0	0.0	0.0
BBPL	2.7	12.0	0.0	LEYE	0.3	5.4	0.0
BCNH	0.0	0.0	0.0	MAGO	1.3	7.6	0.0
BLTE	0.0	0.0	0.0	MALL	0.0	0.0	0.0
BNST	0.0	1.0	0.0	NOPI	0.0	0.0	0.0
BUFF	0.0	0.0	0.0	NSHO	0.0	0.5	0.0
BWTE	0.0	0.0	0.0	PBGR	0.0	0.0	0.0
CAEG	0.1	2.3	0.0	RBGU	2.8	14.0	0.0
CAGO	0.0	0.0	0.0	REDH	0.0	0.0	0.0
CAGU	2868.7	12430.4	2.9	RPHA	0.0	0.0	0.0
CANV	0.0	0.0	0.0	RUDU	0.0	0.0	0.0
CATE	0.0	0.0	0.0	SACR	0.0	0.0	0.0
CITE	0.0	0.0	0.0	SAND	0.0	0.6	0.0
CLGR	0.0	0.0	0.0	SNEG	0.0	0.0	0.0
COGO	0.0	0.0	0.0	SNPL	72.8	132.0	0.1
DCCO	0.0	0.0	0.0	SPSA	0.0	0.0	0.0
EAGR	170.5	846.5	0.2	WEGR	0.0	0.0	0.0
FOTE	0.0	0.0	0.0	WESA	1182.2	2821.4	1.2
FRGU	884.5	2343.8	0.9	WFIB	0.0	4.0	0.0
GADW	0.0	0.0	0.0	WILL	0.4	2.0	0.0
GRYE	0.0	0.0	0.0	WIPH	385.4	2280.4	0.4

3b

Species	Mean	Peak	Birds/ha	Species	Mean	Peak	Birds/ha
AGWT	0.0	0.0	0.0	GTBH	0.0	0.4	0.0
AMAV	1166.9	1930.8	1.6	KILL	0.5	2.5	0.0
AMCO	0.0	0.0	0.0	LBCU	0.8	4.0	0.0
AMWI	0.0	0.0	0.0	LBDO	0.0	0.0	0.0
AWPE	0.1	0.4	0.0	LESA	0.0	1.0	0.0
BASA	0.7	4.0	0.0	LESC	0.0	0.0	0.0
BBPL	0.0	0.0	0.0	LEYE	0.0	0.0	0.0
BCNH	0.0	0.0	0.0	MAGO	0.0	2.0	0.0
BLTE	0.0	0.0	0.0	MALL	0.0	0.8	0.0
BNST	1.1	3.0	0.0	NOPI	0.0	0.0	0.0
BUFF	0.0	0.0	0.0	NSHO	0.0	0.0	0.0
BWTE	0.0	0.0	0.0	PBGR	0.0	0.0	0.0
CAEG	0.0	0.0	0.0	RBGU	0.0	0.0	0.0
CAGO	0.0	0.5	0.0	REDH	0.0	0.0	0.0
CAGU	992.6	2448.8	1.4	RPHA	0.0	0.0	0.0
CANV	0.0	0.5	0.0	RUDU	0.0	0.0	0.0
CATE	0.0	0.0	0.0	SACR	0.0	0.0	0.0
CITE	0.0	0.0	0.0	SAND	0.0	13.0	0.0
CLGR	0.0	0.0	0.0	SNEG	0.0	0.0	0.0
COGO	0.0	0.0	0.0	SNPL	38.3	96.2	0.1
DCCO	0.0	0.0	0.0	SPSA	0.0	0.0	0.0
EAGR	0.0	13.3	0.0	WEGR	0.0	0.0	0.0
FOTE	0.0	0.0	0.0	WESA	176.0	693.4	0.2
FRGU	2067.8	4181.8	2.9	WFIB	0.0	0.5	0.0
GADW	0.0	0.4	0.0	WILL	3.1	11.8	0.0
GRYE	0.0	0.0	0.0	WIPH	56.3	827.4	0.1

4 Interstate 80 South

Description: These unsurveyed ponds reside south of Interstate 80, cut off from south end of lake by the railroad dike and Interstate 80.

Years Surveyed: 0

Detection Rates: Visibility is probably very good in this area.

5 Interstate 80 North

Description: This area includes ponds between Interstate 80 and the railroad dike (5b) and a 'shoreline like' count along the railroad dike from Burmester to Black Rock (5a). The ponds were surveyed as a total count. The 'shoreline' was surveyed from the tracks counting out ¼ mile into the lake and included 2 randomly selected, semicircle point samples with ¼ mile radius cut off at the railroad. The access road is owned by Union Pacific Railroad.

Primary Habitat: Fresh Water; Rocky Shorelines and Levees

Area Size (ha): 5a = 697.1; 5b = 658.2

Estimated Area Covered by Survey (ha): 5a = 697.1; 5b = 559.5

Years Surveyed: 5

Detection Rates: Visibility is good for 5a. Viewing distances at the ponds of 5b made some waterfowl identification difficult even with a spotting scope.

5a

<u>Species</u>	<u>Mean</u>	<u>Peak</u>	<u>Birds/ha</u>	<u>Species</u>	<u>Mean</u>	<u>Peak</u>	<u>Birds/ha</u>
AGWT	0.1	0.7	0.0	GTBH	0.8	3.3	0.0
AMAV	624.8	1729.2	0.9	KILL	42.3	568.8	0.1
AMCO	0.1	69.5	0.0	LBCU	0.0	1.4	0.0
AMWI	0.0	0.2	0.0	LBDO	0.0	0.0	0.0
AWPE	0.0	0.4	0.0	LESA	0.0	1.0	0.0
BASA	0.0	0.0	0.0	LESC	0.1	0.3	0.0
BBPL	0.0	0.0	0.0	LEYE	0.0	0.0	0.0
BCNH	0.0	0.3	0.0	MAGO	0.0	1.0	0.0
BLTE	0.0	0.0	0.0	MALL	0.1	13.0	0.0
BNST	9.4	38.0	0.0	NOPI	0.0	0.7	0.0
BUFF	0.0	0.0	0.0	NSHO	0.3	1.4	0.0
BWTE	0.0	4.2	0.0	PBGR	0.0	0.0	0.0
CAEG	0.0	0.3	0.0	RBGU	316.8	1455.0	0.5
CAGO	1.5	11.3	0.0	REDH	0.0	0.0	0.0
CAGU	12312.2	17710.3	17.7	RPHA	0.0	0.0	0.0
CANV	0.0	0.0	0.0	RUDU	0.0	0.0	0.0
CATE	0.1	1.0	0.0	SACR	0.0	0.0	0.0
CITE	0.0	0.0	0.0	SAND	2.1	8.3	0.0
CLGR	0.0	0.0	0.0	SNEG	0.0	0.0	0.0
COGO	0.3	1.7	0.0	SNPL	0.3	1.8	0.0
DCCO	0.0	0.0	0.0	SPSA	1.1	2.3	0.0
EAGR	2105.8	7063.8	3.0	WEGR	0.2	2.5	0.0
FOTE	0.2	1.8	0.0	WESA	0.0	5.8	0.0
FRGU	2302.4	6650.8	3.3	WFIB	0.8	4.6	0.0
GADW	0.0	5.3	0.0	WILL	16.3	23.4	0.0
GRYE	0.0	0.0	0.0	WIPH	5.3	18.6	0.0

5b*

Species	Mean	Peak	Birds/ha	Species	Mean	Peak	Birds/ha
AGWT	3.3	15.3	0.0	GTBH	1.8	3.7	0.0
AMAV	127.6	395.8	0.2	KILL	2.8	17.3	0.0
AMCO	37.4	150.3	0.1	LBCU	0.0	0.8	0.0
AMWI	5.9	21.8	0.0	LBDO	0.1	0.8	0.0
AWPE	95.5	141.3	0.2	LESA	0.0	0.0	0.0
BASA	0.0	0.0	0.0	LESC	0.0	0.0	0.0
BBPL	0.0	0.0	0.0	LEYE	0.1	1.2	0.0
BCNH	0.2	2.0	0.0	MAGO	0.4	2.6	0.0
BLTE	0.0	0.4	0.0	MALL	112.1	172.6	0.2
BNST	55.9	234.0	0.1	NOPI	140.2	467.2	0.3
BUFF	0.0	0.0	0.0	NSHO	8.1	36.0	0.0
BWTE	0.0	0.0	0.0	PBGR	0.7	1.4	0.0
CAEG	0.0	0.0	0.0	RBGU	6.2	30.0	0.0
CAGO	55.2	101.3	0.1	REDH	38.3	233.3	0.1
CAGU	9039.6	18914.8	16.2	RPHA	0.0	2.3	0.0
CANV	1.5	23.6	0.0	RUDU	0.5	2.3	0.0
CATE	0.5	4.3	0.0	SACR	0.0	0.0	0.0
CITE	2.0	5.4	0.0	SAND	1.0	5.0	0.0
CLGR	0.0	0.3	0.0	SNEG	12.8	35.2	0.0
COGO	0.0	0.0	0.0	SNPL	0.5	2.6	0.0
DCCO	3.2	11.3	0.0	SPSA	0.4	0.8	0.0
EAGR	0.7	249.3	0.0	WEGR	11.3	27.0	0.0
FOTE	21.3	300.0	0.0	WESA	1.2	4.8	0.0
FRGU	1744.0	4705.0	3.1	WFIB	20.5	67.3	0.0
GADW	29.3	100.5	0.1	WILL	5.4	18.2	0.0
GRYE	0.8	4.4	0.0	WIPH	17.4	61.2	0.0

6 Saltair

Description: A shoreline survey from Black Rock to the old Saltair railroad grade. Three point samples are included with the two outside points being randomly selected, and the middle point located at the drainage east of the boat harbor. The area has public access.

Primary Habitat: Saltwater Shorelines, Beaches and Playas; Saltwater-Freshwater Interface

Area Size (ha): 737.9

Estimated Area Covered by Survey (ha): 737.9

Years Surveyed: 5

Detection Rates: Some emergent vegetation and structures associated with the marina and resort inhibit visibility.

<u>Species</u>	<u>Mean</u>	<u>Peak</u>	<u>Birds/ha</u>	<u>Species</u>	<u>Mean</u>	<u>Peak</u>	<u>Birds/ha</u>
AGWT	112.5	247.5	0.2	GTBH	0.7	3.3	0.0
AMAV	1733.8	3613.0	2.3	KILL	12.3	27.0	0.0
AMCO	31.1	60.8	0.0	LBCU	0.0	0.3	0.0
AMWI	0.0	0.0	0.0	LBDO	0.6	3.6	0.0
AWPE	0.8	11.0	0.0	LESA	1.2	3.3	0.0
BASA	0.0	8.8	0.0	LESC	0.8	1.5	0.0
BBPL	10.9	50.8	0.0	LEYE	0.5	8.3	0.0
BCNH	0.2	1.0	0.0	MAGO	0.3	1.6	0.0
BLTE	0.0	0.0	0.0	MALL	24.2	45.0	0.0
BNST	91.5	163.8	0.1	NOPI	0.6	2.7	0.0
BUFF	0.0	0.0	0.0	NSHO	0.9	43.5	0.0
BWTE	0.4	1.8	0.0	PBGR	0.9	2.0	0.0
CAEG	0.0	0.0	0.0	RBGU	4.1	12.2	0.0
CAGO	2.9	12.3	0.0	REDH	10.7	65.5	0.0
CAGU	1884.5	6967.3	2.6	RPHA	0.2	0.8	0.0
CANV	0.0	0.0	0.0	RUDU	10.1	21.3	0.0
CATE	0.9	2.0	0.0	SACR	0.0	0.0	0.0
CITE	0.4	2.2	0.0	SAND	8.0	40.0	0.0
CLGR	0.1	0.5	0.0	SNEG	11.6	18.8	0.0
COGO	0.0	0.0	0.0	SNPL	5.3	15.8	0.0
DCCO	3.4	10.0	0.0	SPSA	0.7	1.5	0.0
EAGR	206.7	1033.3	0.3	WEGR	0.2	1.0	0.0
FOTE	6.0	13.3	0.0	WESA	26.4	78.0	0.0
FRGU	34.4	178.6	0.0	WFIB	5.1	10.2	0.0
GADW	0.2	2.0	0.0	WILL	7.9	22.4	0.0
GRYE	1.2	7.3	0.0	WIPH	3.1	12.6	0.0

7 *Associated Duck Club**

Description: This survey area includes all accessible Ambassador Duck Club and Harrison Duck Club properties, and any other property where access is obtained within the Associated Duck Club area.

Primary Habitat: Fresh Water; Lakeside Uplands; Freshwater Wetlands

Area Size (ha): 5910.5

Estimated Area Covered by Survey (ha): 886.6

Years Surveyed: 5

Detection Rates: This area is large and not completely covered by the survey route. Emergent vegetation obstructs visibility in some places.

Species	Mean	Peak	Birds/ha	Species	Mean	Peak	Birds/ha
AGWT	1417.6	3056.0	1.6	GTBH	26.4	71.3	0.0
AMAV	657.9	1702.3	0.7	KILL	17.3	56.3	0.0
AMCO	615.0	1963.4	0.7	LBCU	16.2	21.8	0.0
AMWI	966.0	4337.8	1.1	LBDO	22.5	184.5	0.0
AWPE	263.1	410.2	0.3	LESA	1.0	5.0	0.0
BASA	0.0	0.0	0.0	LESC	155.6	467.8	0.2
BBPL	28.2	114.8	0.0	LEYE	4.6	24.5	0.0
BCNH	8.9	25.8	0.0	MAGO	3.4	75.3	0.0
BLTE	9.4	28.5	0.0	MALL	821.5	1706.0	0.9
BNST	162.4	432.5	0.2	NOPI	1045.3	2204.3	1.2
BUFF	2.1	6.3	0.0	NSHO	60.9	203.6	0.1
BWTE	5.6	23.2	0.0	PBGR	4.2	8.4	0.0
CAEG	1.3	7.3	0.0	RBGU	10.8	26.5	0.0
CAGO	206.1	358.8	0.2	REDH	9.4	167.5	0.0
CAGU	51.8	148.8	0.1	RPHA	17.3	67.5	0.0
CANV	1.8	4.0	0.0	RUDU	65.3	144.3	0.1
CATE	3.6	25.8	0.0	SACR	1.0	2.8	0.0
CITE	70.6	119.6	0.1	SAND	0.0	0.0	0.0
CLGR	1.5	4.8	0.0	SNEG	69.5	124.0	0.1
COGO	0.1	0.3	0.0	SNPL	0.7	2.5	0.0
DCCO	10.8	26.6	0.0	SPSA	1.0	2.6	0.0
EAGR	0.3	24.0	0.0	WEGR	2.6	10.0	0.0
FOTE	23.3	58.8	0.0	WESA	0.3	11.3	0.0
FRGU	43.2	188.3	0.0	WFIB	487.1	706.2	0.5
GADW	460.0	1475.8	0.5	WILL	4.9	139.5	0.0
GRYE	1.1	7.0	0.0	WIPH	3.4	67.5	0.0

8 *Kennecott*

Description: This survey includes the section of shoreline between the old Saltair railroad grade and the Goggin Drain, with two randomly selected point samples and one drainage point sample at the Goggin Drain (8a). In addition a total count survey covers all ponds on the Kennecott Inland Sea Shorebird Reserve (8c). Two independent teams surveyed area 8a. The raw data is separated accordingly in the database (areas 8a and 8b), but for simplicity the data is combined and named area 8a throughout this report.

Primary Habitat: Saltwater Shorelines, Beaches and Playas; Saltwater-Freshwater Interface

Area Size (ha): 8a = 580.3; 8c = 2763.2

Estimated Area Covered by Survey (ha): 8a = 580.3; 8c = 1105.3

Years Surveyed: 5

Detection Rates: Visibility is good for all of the shoreline section except at the Goggin Drain where emergent vegetation blocks a good view of the entire point sample. In 1999, surveyors from the adjacent survey area (9a) began recording half of the point sample that could be seen from the other side of the drain, but the numbers were not kept separately from the rest of the survey at 9a and, therefore, not added in to the Goggin point sample.

8a

Species	Mean	Peak	Birds/ha	Species	Mean	Peak	Birds/ha
AGWT	36.6	217.4	0.1	GTBH	1.2	4.2	0.0
AMAV	3952.0	5556.2	6.8	KILL	1.7	5.2	0.0
AMCO	3.2	16.4	0.0	LBCU	0.8	5.0	0.0
AMWI	0.0	2.4	0.0	LBDO	0.8	16.4	0.0
AWPE	0.1	3.2	0.0	LESA	0.3	3.0	0.0
BASA	7.3	38.6	0.0	LESC	0.0	0.8	0.0
BBPL	96.1	267.6	0.2	LEYE	0.2	2.0	0.0
BCNH	0.2	0.6	0.0	MAGO	5.4	25.4	0.0
BLTE	0.0	0.0	0.0	MALL	4.7	25.8	0.0
BNST	66.8	252.4	0.1	NOPI	37.2	97.2	0.1
BUFF	0.0	0.0	0.0	NSHO	110.7	184.8	0.2
BWTE	3.6	18.0	0.0	PBGR	0.0	0.0	0.0
CAEG	0.0	0.0	0.0	RBGU	0.1	0.4	0.0
CAGO	22.5	46.8	0.0	REDH	2.1	14.4	0.0
CAGU	3677.5	13363.8	6.3	RPHA	2.8	10.8	0.0
CANV	0.1	1.2	0.0	RUDU	0.2	0.8	0.0
CATE	0.1	0.6	0.0	SACR	0.0	0.0	0.0
CITE	1.5	7.8	0.0	SAND	17.0	59.8	0.0
CLGR	0.0	0.0	0.0	SNEG	0.4	2.6	0.0
COGO	0.0	0.2	0.0	SNPL	45.1	132.0	0.1
DCCO	1.9	7.0	0.0	SPSA	0.5	1.6	0.0
EAGR	55.8	190.0	0.1	WEGR	35.5	602.8	0.1
FOTE	0.3	3.4	0.0	WESA	476.9	879.8	0.8
FRGU	578.7	2000.6	1.0	WFIB	11.2	37.4	0.0
GADW	51.4	202.8	0.1	WILL	39.9	86.2	0.1
GRYE	0.4	3.0	0.0	WIPH	8.4	39.6	0.0

8c*

Species	Mean	Peak	Birds/ha	Species	Mean	Peak	Birds/ha
AGWT	62.2	133.2	0.1	GTBH	2.3	5.8	0.0
AMAV	1251.6	2678.2	1.1	KILL	26.0	69.8	0.0
AMCO	2.5	32.8	0.0	LBCU	8.1	12.5	0.0
AMWI	1.5	19.8	0.0	LBDO	3.2	63.3	0.0
AWPE	1.4	11.8	0.0	LESA	0.0	3.3	0.0
BASA	0.1	0.4	0.0	LESC	2.0	10.0	0.0
BBPL	36.0	104.5	0.0	LEYE	0.4	2.0	0.0
BCNH	0.2	1.0	0.0	MAGO	0.3	45.0	0.0
BLTE	0.0	0.0	0.0	MALL	53.6	127.4	0.0
BNST	126.0	305.3	0.1	NOPI	43.6	87.0	0.0
BUFF	0.8	3.8	0.0	NSHO	119.0	462.0	0.1
BWTE	5.1	12.8	0.0	PBGR	0.2	1.2	0.0
CAEG	0.0	0.0	0.0	RBGU	0.0	0.0	0.0
CAGO	188.4	481.6	0.2	REDH	2.9	29.3	0.0
CAGU	57.9	137.0	0.1	RPHA	89.6	315.5	0.1
CANV	0.0	0.0	0.0	RUDU	0.5	1.0	0.0
CATE	0.2	0.8	0.0	SACR	0.0	0.4	0.0
CITE	35.6	89.6	0.0	SAND	0.4	7.6	0.0
CLGR	0.0	0.4	0.0	SNEG	3.9	9.0	0.0
COGO	0.3	1.5	0.0	SNPL	8.8	41.2	0.0
DCCO	0.4	4.0	0.0	SPSA	0.7	1.8	0.0
EAGR	1.3	233.3	0.0	WEGR	0.1	0.5	0.0
FOTE	0.5	3.5	0.0	WESA	60.8	136.0	0.1
FRGU	15.6	51.8	0.0	WFIB	205.2	290.6	0.2
GADW	33.4	121.3	0.0	WILL	22.9	76.5	0.0
GRYE	1.6	20.5	0.0	WIPH	9.5	253.3	0.0

9 Audubon

Description: The Audubon site includes a shoreline survey from the Goggin Drain to the first major drainage of the Crystal Unit of Farmington Bay WMA, divided in two pieces by the old Antelope Island causeway. The southern portion (9a) was traveled by foot and included a randomly selected point sample. The northern portion (9b) was traveled by ATV and included a randomly selected point sample. The inland portion (9c) of the Audubon property includes several playas and a pond fed by canal water. An ephemeral pond called “Church Pond” was surveyed as an area count. Access is through Kennecott Inland Sea Shorebird Reserve and National Audubon Society private property.

Primary Habitat: Saltwater Shorelines, Beaches and Playas; Saltwater-Freshwater Interface

Area Size (ha): 9a = 435.6; 9b = 1092.4; 9c = 3164.6

Estimated Area Covered by Survey (ha): 9a = 435.6; 9b = 1092.4; 9c = 791.2

Years Surveyed: 5 (except 9c surveyed only in 2001)

Detection Rates: Visibility is good along the shoreline, although at some times mud consistencies prohibit travel at 100 yards from the water. Species identification may be difficult if viewing distances are too great.

9a

<u>Species</u>	<u>Mean</u>	<u>Peak</u>	<u>Birds/ha</u>	<u>Species</u>	<u>Mean</u>	<u>Peak</u>	<u>Birds/ha</u>
AGWT	15.2	76.0	0.0	GTBH	0.3	1.0	0.0
AMAV	547.6	1424.5	1.3	KILL	0.9	2.3	0.0
AMCO	0.1	2.7	0.0	LBCU	3.0	9.3	0.0
AMWI	0.0	0.0	0.0	LBDO	0.1	0.8	0.0
AWPE	0.0	1.2	0.0	LESA	0.0	1.7	0.0
BASA	0.0	3.3	0.0	LESC	0.0	0.0	0.0
BBPL	61.4	164.3	0.1	LEYE	0.0	0.3	0.0
BCNH	0.2	3.0	0.0	MAGO	0.0	3.5	0.0
BLTE	0.0	0.0	0.0	MALL	0.1	2.8	0.0
BNST	6.0	37.8	0.0	NOPI	0.0	2.0	0.0
BUFF	0.0	0.0	0.0	NSHO	20.0	100.0	0.0
BWTE	0.0	0.5	0.0	PBGR	0.0	0.0	0.0
CAEG	0.0	0.3	0.0	RBGU	16.6	81.3	0.0
CAGO	7.2	39.8	0.0	REDH	0.0	0.0	0.0
CAGU	608.7	1376.3	1.4	RPHA	0.0	0.0	0.0
CANV	0.0	0.0	0.0	RUDU	0.0	0.0	0.0
CATE	0.1	1.0	0.0	SACR	0.0	0.8	0.0
CITE	0.4	4.0	0.0	SAND	17.4	53.0	0.0
CLGR	0.0	0.0	0.0	SNEG	0.1	0.5	0.0
COGO	0.0	0.0	0.0	SNPL	0.1	0.5	0.0
DCCO	1.4	5.3	0.0	SPSA	0.0	0.3	0.0
EAGR	0.0	62.5	0.0	WEGR	0.0	0.0	0.0
FOTE	0.0	0.0	0.0	WESA	3.1	16.7	0.0
FRGU	30.7	220.0	0.1	WFIB	0.5	15.0	0.0
GADW	3.4	11.0	0.0	WILL	6.1	19.0	0.0
GRYE	0.0	0.3	0.0	WIPH	14.8	65.0	0.0

9b

Species	Mean	Peak	Birds/ha	Species	Mean	Peak	Birds/ha
AGWT	0.0	0.7	0.0	GTBH	0.3	1.8	0.0
AMAV	2253.3	7579.8	2.1	KILL	0.2	1.0	0.0
AMCO	0.0	0.0	0.0	LBCU	1.1	3.0	0.0
AMWI	0.5	2.4	0.0	LBDO	0.0	12.3	0.0
AWPE	0.0	24.0	0.0	LESA	1.3	7.8	0.0
BASA	8.8	48.0	0.0	LESC	0.0	0.0	0.0
BBPL	107.0	291.7	0.1	LEYE	0.1	1.4	0.0
BCNH	0.0	0.0	0.0	MAGO	0.4	4.7	0.0
BLTE	0.2	1.0	0.0	MALL	0.1	1.0	0.0
BNST	131.3	581.0	0.1	NOPI	1.5	4.6	0.0
BUFF	0.0	0.0	0.0	NSHO	170.5	306.8	0.2
BWTE	0.0	4.0	0.0	PBGR	0.0	0.0	0.0
CAEG	0.0	0.0	0.0	RBGU	146.0	511.5	0.1
CAGO	1.7	22.0	0.0	REDH	3.7	19.8	0.0
CAGU	304.8	1267.0	0.3	RPHA	4.6	18.3	0.0
CANV	0.0	0.0	0.0	RUDU	0.0	0.0	0.0
CATE	0.2	0.6	0.0	SACR	0.0	0.0	0.0
CITE	0.0	0.0	0.0	SAND	262.3	695.0	0.2
CLGR	0.0	0.0	0.0	SNEG	0.0	0.0	0.0
COGO	0.0	0.0	0.0	SNPL	34.3	97.2	0.0
DCCO	0.1	1.0	0.0	SPSA	0.0	0.3	0.0
EAGR	92.8	375.8	0.1	WEGR	0.0	0.0	0.0
FOTE	1.2	18.2	0.0	WESA	233.1	1217.5	0.2
FRGU	78.1	148.0	0.1	WFIB	0.1	0.7	0.0
GADW	4.1	20.0	0.0	WILL	9.4	35.0	0.0
GRYE	0.0	0.2	0.0	WIPH	37.1	177.5	0.0

10 *Crystal Lakeside*

Description: The Crystal Lakeside site includes area from the southernmost major drainage on the Crystal Unit of Farmington Bay WMA to the southwest elbow of the Turpin dike. This survey is a total count done from an airboat via a public access boat ramp in Farmington Bay WMA.

Primary Habitat: Saltwater Shorelines, Beaches and Playas; Freshwater Wetlands

Area Size (ha): 786.1

Estimated Area Covered by Survey (ha): 786.1

Years Surveyed: 5

Detection Rates: Emergent vegetation may obscure visibility in some areas.

<u>Species</u>	<u>Mean</u>	<u>Peak</u>	<u>Birds/ha</u>	<u>Species</u>	<u>Mean</u>	<u>Peak</u>	<u>Birds/ha</u>
AGWT	44.9	145.5	0.1	GTBH	3.4	13.0	0.0
AMAV	2340.5	3922.0	3.0	KILL	0.0	0.7	0.0
AMCO	43.1	348.0	0.1	LBCU	0.6	3.0	0.0
AMWI	0.6	5.7	0.0	LBDO	4.5	14.7	0.0
AWPE	136.1	363.8	0.2	LESA	0.0	8.0	0.0
BASA	0.0	8.0	0.0	LESC	0.0	0.0	0.0
BBPL	209.4	400.3	0.3	LEYE	0.4	4.2	0.0
BCNH	12.5	90.8	0.0	MAGO	1.5	31.0	0.0
BLTE	51.1	229.4	0.1	MALL	21.2	83.8	0.0
BNST	713.2	2197.8	0.9	NOPI	11.2	78.3	0.0
BUFF	0.0	0.0	0.0	NSHO	1102.6	2818.0	1.4
BWTE	3.3	6.4	0.0	PBGR	0.5	1.6	0.0
CAEG	0.0	0.0	0.0	RBGU	393.8	595.5	0.5
CAGO	75.1	493.5	0.1	REDH	9.7	55.0	0.0
CAGU	125.1	405.3	0.2	RPHA	0.0	0.0	0.0
CANV	0.0	0.0	0.0	RUDU	0.4	15.0	0.0
CATE	0.9	7.0	0.0	SACR	0.0	0.0	0.0
CITE	0.1	4.7	0.0	SAND	0.0	1.5	0.0
CLGR	0.0	0.3	0.0	SNEG	3.1	48.8	0.0
COGO	0.0	0.0	0.0	SNPL	0.1	1.2	0.0
DCCO	7.4	44.4	0.0	SPSA	0.1	0.3	0.0
EAGR	30.3	362.5	0.0	WEGR	0.1	1.3	0.0
FOTE	29.8	103.0	0.0	WESA	524.9	2767.7	0.7
FRGU	622.0	1511.8	0.8	WFIB	61.6	128.7	0.1
GADW	1.7	79.7	0.0	WILL	35.3	131.3	0.0
GRYE	9.6	150.0	0.0	WIPH	854.7	3140.4	1.1

11 Farmington Bay Lakeside

Description: This is a ‘shoreline’ survey done from a WMA dike road. The stretch includes lakeside area from the southwest elbow of the Turpin dike to the Egg Island observation point, one randomly selected point sample and two drainage point samples. The point samples are semi-circles of ¼ mile radius and cut off by the dike. There is public access on UDWR managed site.

Primary Habitat: Saltwater Shorelines, Beaches and Playas; Saltwater-Freshwater Interface

Area Size (ha): 522.2

Estimated Area Covered by Survey (ha): 522.2

Years Surveyed: 5

Detection Rates: Visibility is clear.

<u>Species</u>	<u>Mean</u>	<u>Peak</u>	<u>Birds/ha</u>	<u>Species</u>	<u>Mean</u>	<u>Peak</u>	<u>Birds/ha</u>
AGWT	0.0	1.0	0.0	GTBH	1.6	8.2	0.0
AMAV	170.1	418.6	0.3	KILL	0.5	2.0	0.0
AMCO	23.2	94.3	0.0	LBCU	0.0	1.0	0.0
AMWI	0.0	0.0	0.0	LBDO	0.0	0.0	0.0
AWPE	21.8	87.0	0.0	LESA	0.0	5.0	0.0
BASA	0.0	0.0	0.0	LESC	0.0	3.0	0.0
BBPL	0.0	0.0	0.0	LEYE	0.0	0.0	0.0
BCNH	0.5	2.0	0.0	MAGO	2.0	11.0	0.0
BLTE	1.8	10.0	0.0	MALL	0.1	2.5	0.0
BNST	160.1	373.8	0.3	NOPI	0.4	1.8	0.0
BUFF	0.0	0.0	0.0	NSHO	376.7	638.4	0.7
BWTE	0.0	1.8	0.0	PBGR	0.1	0.4	0.0
CAEG	0.0	0.2	0.0	RBGU	38.1	178.6	0.1
CAGO	6.9	20.4	0.0	REDH	0.2	4.5	0.0
CAGU	154.9	404.6	0.3	RPHA	0.0	0.0	0.0
CANV	0.0	0.0	0.0	RUDU	0.8	29.0	0.0
CATE	0.9	4.5	0.0	SACR	0.0	0.0	0.0
CITE	0.0	8.5	0.0	SAND	0.0	1.6	0.0
CLGR	0.0	0.0	0.0	SNEG	8.2	37.6	0.0
COGO	0.0	0.0	0.0	SNPL	0.6	10.0	0.0
DCCO	1.4	10.6	0.0	SPSA	0.0	0.0	0.0
EAGR	65.3	436.4	0.1	WEGR	4.7	15.8	0.0
FOTE	5.0	22.0	0.0	WESA	1.1	3.8	0.0
FRGU	76.4	188.3	0.1	WFIB	19.2	57.0	0.0
GADW	0.2	5.8	0.0	WILL	4.8	44.0	0.0
GRYE	0.0	0.0	0.0	WIPH	3348.0	20086.0	6.4

12 Farmington Bay WMA*

Description: The area is a total count of all Farmington Bay WMA impoundments including Turpin.

Primary Habitat: Freshwater Wetlands; Freshwater Shorelines

Area Size (ha): 4544.5

Estimated Area Covered by Survey (ha): 2953.9

Years Surveyed: 5

Detection Rates: Visibility rates vary as a result of emergent vegetation and large viewing distances in some Units.

Species	Mean	Peak	Birds/ha	Species	Mean	Peak	Birds/ha
AGWT	11279.6	16184.3	3.8	GTBH	51.6	94.6	0.0
AMAV	9354.3	13292.8	3.2	KILL	5.8	18.2	0.0
AMCO	6841.1	14827.0	2.3	LBCU	0.0	0.3	0.0
AMWI	1410.0	2624.3	0.5	LBDO	1666.1	3336.8	0.6
AWPE	554.7	960.0	0.2	LESA	18.5	86.0	0.0
BASA	0.0	0.0	0.0	LESC	1349.0	3706.0	0.5
BBPL	5.8	16.8	0.0	LEYE	15.6	233.0	0.0
BCNH	30.4	89.3	0.0	MAGO	0.7	125.8	0.0
BLTE	94.0	236.8	0.0	MALL	3033.8	3987.8	1.0
BNST	1854.1	2691.0	0.6	NOPI	12162.3	16981.3	4.1
BUFF	39.7	159.0	0.0	NSHO	9359.5	12682.0	3.2
BWTE	0.0	19.0	0.0	PBGR	33.2	56.8	0.0
CAEG	1.9	7.8	0.0	RBGU	110.4	216.8	0.0
CAGO	507.1	733.4	0.2	REDH	1054.7	1779.6	0.4
CAGU	3328.2	5385.0	1.1	RPHA	1213.3	2640.8	0.4
CANV	36.0	148.3	0.0	RUDU	7004.0	14152.3	2.4
CATE	1.1	4.5	0.0	SACR	1.1	2.5	0.0
CITE	2581.4	4624.8	0.9	SAND	0.0	0.0	0.0
CLGR	2.1	20.2	0.0	SNEG	138.3	192.0	0.0
COGO	0.0	0.0	0.0	SNPL	0.0	0.0	0.0
DCCO	73.3	131.8	0.0	SPSA	2.9	8.2	0.0
EAGR	194.5	2732.4	0.1	WEGR	21.4	146.7	0.0
FOTE	72.1	191.3	0.0	WESA	884.8	2611.6	0.3
FRGU	789.0	1195.8	0.3	WFIB	862.4	1193.6	0.3
GADW	4084.4	8275.8	1.4	WILL	6.7	26.5	0.0
GRYE	0.8	7.8	0.0	WIPH	1633.1	5623.0	0.6

13 West Farmington

Description: The shoreline is surveyed from the Egg Island Observation point to the drainage due west of the north end of the Davis County Sewer Plant. It includes one randomly placed point sample and two drainage point samples. Access is public from Farmington Bay WMA.

Primary Habitat: Saltwater Shorelines, Beaches and Playas; Saltwater-Freshwater Interface

Area Size (ha): 305.6

Estimated Area Covered by Survey (ha): 305.6

Years Surveyed: 5 (Many periods were not surveyed in 2001.)

Detection Rates: Visibility is good.

<u>Species</u>	<u>Mean</u>	<u>Peak</u>	<u>Birds/ha</u>	<u>Species</u>	<u>Mean</u>	<u>Peak</u>	<u>Birds/ha</u>
AGWT	0.3	122.3	0.0	GTBH	2.0	6.5	0.0
AMAV	641.4	1926.0	2.1	KILL	7.0	55.0	0.0
AMCO	8.1	704.5	0.0	LBCU	0.0	3.5	0.0
AMWI	0.0	54.3	0.0	LBDO	0.0	2.0	0.0
AWPE	12.1	38.0	0.0	LESA	3.6	21.8	0.0
BASA	0.0	0.0	0.0	LESC	2.0	8.0	0.0
BBPL	9.4	44.0	0.0	LEYE	0.3	3.3	0.0
BCNH	0.5	2.7	0.0	MAGO	0.4	2.3	0.0
BLTE	0.0	0.0	0.0	MALL	5.0	21.7	0.0
BNST	183.8	419.0	0.6	NOPI	41.7	201.3	0.1
BUFF	1.7	6.0	0.0	NSHO	426.6	1237.0	1.4
BWTE	0.0	0.3	0.0	PBGR	0.0	1.0	0.0
CAEG	1.7	11.3	0.0	RBGU	156.0	566.7	0.5
CAGO	31.1	95.7	0.1	REDH	1.3	12.5	0.0
CAGU	662.5	2169.3	2.2	RPHA	229.8	2275.0	0.8
CANV	0.0	0.3	0.0	RUDU	5.0	76.0	0.0
CATE	1.2	17.8	0.0	SACR	0.2	1.0	0.0
CITE	4.7	23.3	0.0	SAND	0.0	0.0	0.0
CLGR	0.6	3.0	0.0	SNEG	3.2	15.5	0.0
COGO	0.1	1.3	0.0	SNPL	0.2	1.5	0.0
DCCO	23.0	76.5	0.1	SPSA	0.3	1.3	0.0
EAGR	56.2	591.5	0.2	WEGR	1.4	7.0	0.0
FOTE	4.4	28.8	0.0	WESA	1.0	5.3	0.0
FRGU	1037.0	3385.7	3.4	WFIB	34.9	117.8	0.1
GADW	68.3	194.3	0.2	WILL	10.6	25.0	0.0
GRYE	1.9	16.7	0.0	WIPH	2.5	179.7	0.0

14 *Antelope Island East*

Description: The east side of Antelope Island State Park from the triangle intersection at the north causeway to the mainland gate at the south causeway is a total count.

Primary Habitat: Saltwater Shorelines, Beaches and Playas; Salt Marsh; Rocky Shorelines and Levees; Great Salt Lake Islands

Area Size (ha): 2417.1

Estimated Area Covered by Survey (ha): 2417.1

Years Surveyed: 5

Detection Rates: The survey is conducted from the east side road, and in some places the viewing distance can compromise identification. Vegetation and land configuration also block viewing in many places.

<u>Species</u>	<u>Mean</u>	<u>Peak</u>	<u>Birds/ha</u>	<u>Species</u>	<u>Mean</u>	<u>Peak</u>	<u>Birds/ha</u>
AGWT	9.0	38.8	0.0	GTBH	0.4	2.0	0.0
AMAV	3078.9	8774.5	1.3	KILL	2.8	7.3	0.0
AMCO	0.1	0.7	0.0	LBCU	1.2	4.0	0.0
AMWI	0.0	2.0	0.0	LBDO	0.0	0.0	0.0
AWPE	0.0	7.5	0.0	LESA	0.0	0.0	0.0
BASA	0.0	0.0	0.0	LESC	1.3	5.0	0.0
BBPL	8.3	20.0	0.0	LEYE	0.0	0.0	0.0
BCNH	0.0	0.0	0.0	MAGO	0.2	0.8	0.0
BLTE	0.0	0.0	0.0	MALL	60.1	180.3	0.0
BNST	127.6	667.8	0.1	NOPI	5.2	21.5	0.0
BUFF	3.3	9.3	0.0	NSHO	120.0	461.2	0.0
BWTE	0.2	1.0	0.0	PBGR	0.0	0.0	0.0
CAEG	0.0	0.0	0.0	RBGU	0.0	51.0	0.0
CAGO	43.9	141.6	0.0	REDH	0.0	17.7	0.0
CAGU	855.6	3023.2	0.4	RPHA	0.0	62.5	0.0
CANV	0.3	1.3	0.0	RUDU	0.0	0.2	0.0
CATE	0.0	0.5	0.0	SACR	0.0	0.0	0.0
CITE	0.0	1.3	0.0	SAND	15.1	74.0	0.0
CLGR	0.0	0.0	0.0	SNEG	0.0	0.0	0.0
COGO	0.0	0.0	0.0	SNPL	0.0	0.3	0.0
DCCO	0.0	0.0	0.0	SPSA	0.0	0.0	0.0
EAGR	1238.1	1786.8	0.5	WEGR	0.5	6.0	0.0
FOTE	0.0	0.0	0.0	WESA	0.6	50.3	0.0
FRGU	676.7	1717.0	0.3	WFIB	0.0	5.0	0.0
GADW	37.6	188.0	0.0	WILL	11.7	57.5	0.0
GRYE	0.1	1.7	0.0	WIPH	54.9	166.0	0.0

15 *Antelope Island West*

Description: The shoreline in White Rock Bay from Buffalo Point to Elephant head is surveyed with two randomly placed point samples. Access is in Antelope Island State Park.

Primary Habitat: Saltwater Shorelines, Beaches and Playas; Salt Marsh; Great Salt Lake Islands

Area Size (ha): 440.6

Estimated Area Covered by Survey (ha): 440.6

Years Surveyed: 5

Detection Rates: Tall emergent vegetation blocks viewing in some places.

<u>Species</u>	<u>Mean</u>	<u>Peak</u>	<u>Birds/ha</u>	<u>Species</u>	<u>Mean</u>	<u>Peak</u>	<u>Birds/ha</u>
AGWT	0.0	1.3	0	GTBH	0.1	1.0	0.0
AMAV	111.6	227.0	0.3	KILL	2.9	7.0	0.0
AMCO	0.0	0.7	0.0	LBCU	5.6	10.5	0.0
AMWI	0.0	0.0	0.0	LBDO	0.0	0.0	0.0
AWPE	0.0	6.3	0.0	LESA	0.0	0.0	0.0
BASA	0.0	0.0	0.0	LESC	0.0	0.0	0.0
BBPL	0.1	0.3	0.0	LEYE	0.0	0.3	0.0
BCNH	0.0	0.0	0.0	MAGO	0.0	1.3	0.0
BLTE	0.0	0.0	0.0	MALL	0.4	13.3	0.0
BNST	20.2	49.8	0.0	NOPI	0.0	1.0	0.0
BUFF	0.0	0.0	0.0	NSHO	0.2	3.3	0.0
BWTE	0.0	0.7	0.0	PBGR	0.0	0.0	0.0
CAEG	0.0	0.0	0.0	RBGU	0.0	44.8	0.0
CAGO	1.4	8.5	0.0	REDH	0.1	0.4	0.0
CAGU	407.4	875.6	0.9	RPHA	1.8	7.0	0.0
CANV	0.2	0.8	0.0	RUDU	0.8	4.0	0.0
CATE	0.0	0.0	0.0	SACR	0.0	0.0	0.0
CITE	0.0	3.3	0.0	SAND	0.0	60.0	0.0
CLGR	0.0	0.0	0.0	SNEG	0.0	0.0	0.0
COGO	0.0	0.0	0.0	SNPL	0.1	0.8	0.0
DCCO	0.0	0.0	0.0	SPSA	0.0	0.0	0.0
EAGR	794.4	1133.0	1.8	WEGR	0.7	11.3	0.0
FOTE	0.0	0.0	0.0	WESA	0.0	0.2	0.0
FRGU	20.3	89.0	0.0	WFIB	1.2	10.8	0.0
GADW	0.9	15.0	0.0	WILL	30.7	68.7	0.1
GRYE	0.0	0.0	0.0	WIPH	83.5	259.0	0.2

16 Antelope Island Causeway

Description: The north and south sides of the north causeway, from where the water first occurs against the causeway by the entrance station to the three-way intersection on the Island, are a total count. Only birds directly associated with the causeway are recorded. Public access is on a Davis County road.

Primary Habitat: Rocky Shorelines and Levees; Salt Water

Area Size (ha): 120.4

Estimated Area Covered by Survey (ha): 120.4

Years Surveyed: 5

Detection Rates: Visibility is good for most of the route. In some places, large rocks may obscure birds. It is possible to see the entire area on foot.

<u>Species</u>	<u>Mean</u>	<u>Peak</u>	<u>Birds/ha</u>	<u>Species</u>	<u>Mean</u>	<u>Peak</u>	<u>Birds/ha</u>
AGWT	0.1	0.3	0.0	GTBH	0.0	0.3	0.0
AMAV	51.5	147.8	0.4	KILL	2.4	12.7	0.0
AMCO	0.3	2.0	0.0	LBCU	0.0	0.0	0.0
AMWI	0.0	0.0	0.0	LBDO	0.1	0.4	0.0
AWPE	2.8	13.8	0.0	LESA	0.0	0.5	0.0
BASA	0.1	0.6	0.0	LESC	9.9	45.0	0.1
BBPL	0.2	0.8	0.0	LEYE	0.0	0.4	0.0
BCNH	0.0	0.0	0.0	MAGO	0.0	1.3	0.0
BLTE	0.0	0.0	0.0	MALL	0.1	0.3	0.0
BNST	123.0	382.4	1.0	NOPI	0.0	0.0	0.0
BUFF	0.0	0.0	0.0	NSHO	59.1	183.5	0.5
BWTE	0.0	0.0	0.0	PBGR	0.0	0.3	0.0
CAEG	0.0	0.0	0.0	RBGU	1022.1	1199.6	8.5
CAGO	0.6	8.4	0.0	REDH	0.1	0.3	0.0
CAGU	719.7	1955.3	6.0	RPHA	71.1	125.3	0.6
CANV	0.0	0.0	0.0	RUDU	0.0	2.3	0.0
CATE	0.2	2.8	0.0	SACR	0.0	0.0	0.0
CITE	0.0	0.0	0.0	SAND	59.4	247.5	0.5
CLGR	0.8	14.3	0.0	SNEG	0.2	1.3	0.0
COGO	0.0	0.3	0.0	SNPL	0.1	1.0	0.0
DCCO	0.0	0.0	0.0	SPSA	0.1	0.8	0.0
EAGR	344.5	662.8	2.9	WEGR	0.1	1.6	0.0
FOTE	0.0	0.0	0.0	WESA	0.0	8.5	0.0
FRGU	140.4	431.8	1.2	WFIB	1.1	5.0	0.0
GADW	0.0	0.0	0.0	WILL	12.8	29.2	0.1
GRYE	4.5	75.8	0.0	WIPH	182.0	1017.0	1.5

17 West Kaysville

Description: This area has two sections: the interior wetlands (17a) where we did a total count; and mudflat (17b) where we did a shoreline survey. Both areas are between the drainage due west of the north end of the Davis County Sewer Plant and the peregrine hawk tower. This area is the Great Salt Lake Shorelands Preserve owned by The Nature Conservancy. Surveys were conducted from an airboat. In 1997, three point samples were designated as part of survey 17b, but the increased lake elevation in 1998 prohibited access to these points, and the area was treated as a total count for the duration of this project.

Primary Habitat: Saltwater-Freshwater Interface; Freshwater Wetlands; Saltwater Shorelines, Beaches and Playas

Area Size (ha): 17a = 1770.7; 17b = 1331.8

Estimated Area Covered by Survey (ha): 17a = 1770.7; 17b = 1331.8

Years Surveyed: 5

Detection Rates: Visibility is good along the shoreline section. However, the interior wetlands have much vegetation that can obstruct viewing.

17a

Species	Mean	Peak	Birds/ha	Species	Mean	Peak	Birds/ha
AGWT	56.2	92.6	0.0	GTBH	1.9	4.2	0.0
AMAV	1264.7	3482.0	0.7	KILL	0.0	0.4	0.0
AMCO	56.8	1817.3	0.0	LBCU	0.1	0.7	0.0
AMWI	2.8	12.5	0.0	LBDO	239.4	357.4	0.1
AWPE	5.0	18.8	0.0	LESA	0.0	0.0	0.0
BASA	0.0	0.0	0.0	LESC	4.1	15.7	0.0
BBPL	4.2	20.7	0.0	LEYE	0.3	2.3	0.0
BCNH	4.6	13.3	0.0	MAGO	1.2	5.4	0.0
BLTE	0.0	4.5	0.0	MALL	332.0	1625.6	0.2
BNST	1218.9	3621.4	0.7	NOPI	63.6	224.2	0.0
BUFF	1.4	3.3	0.0	NSHO	1272.8	2981.3	0.7
BWTE	0.6	2.8	0.0	PBGR	0.0	0.0	0.0
CAEG	3.1	13.6	0.0	RBGU	49.0	194.8	0.0
CAGO	49.3	260.2	0.0	REDH	21.9	91.0	0.0
CAGU	115.6	458.2	0.1	RPHA	141.3	557.0	0.1
CANV	0.4	2.0	0.0	RUDU	24.0	49.4	0.0
CATE	0.2	1.0	0.0	SACR	0.2	1.0	0.0
CITE	22.9	128.8	0.0	SAND	0.0	0.0	0.0
CLGR	0.0	0.0	0.0	SNEG	13.8	57.3	0.0
COGO	0.0	0.0	0.0	SNPL	0.0	0.0	0.0
DCCO	0.4	1.3	0.0	SPSA	0.0	0.3	0.0
EAGR	76.4	1177.0	0.0	WEGR	0.0	0.0	0.0
FOTE	10.8	42.0	0.0	WESA	14.5	90.2	0.0
FRGU	358.9	795.2	0.2	WFIB	471.4	935.3	0.3
GADW	9.6	29.0	0.0	WILL	15.6	30.2	0.0
GRYE	0.0	0.3	0.0	WIPH	2981.5	5434.2	1.7

17b

Species	Mean	Peak	Birds/ha	Species	Mean	Peak	Birds/ha
AGWT	91.6	353.6	0.1	GTBH	2.2	6.0	0.0
AMAV	7313.6	14827.8	5.5	KILL	0.4	3.8	0.0
AMCO	64.5	545.7	0.0	LBCU	0.1	0.4	0.0
AMWI	0.0	0.0	0.0	LBDO	86.4	322.5	0.1
AWPE	2.7	35.6	0.0	LESA	0.0	0.0	0.0
BASA	0.2	5.0	0.0	LESC	37.3	148.0	0.0
BBPL	96.3	185.7	0.1	LEYE	0.1	0.6	0.0
BCNH	2.6	8.5	0.0	MAGO	3.1	8.5	0.0
BLTE	9.7	35.2	0.0	MALL	98.0	461.6	0.1
BNST	3194.6	6087.0	2.4	NOPI	20.0	238.3	0.0
BUFF	1.0	3.7	0.0	NSHO	422.2	707.7	0.3
BWTE	0.6	2.8	0.0	PBGR	0.0	0.0	0.0
CAEG	6.6	23.8	0.0	RBGU	12.4	43.0	0.0
CAGO	18.8	65.0	0.0	REDH	13.3	62.8	0.0
CAGU	517.1	1844.6	0.4	RPHA	34.8	137.7	0.0
CANV	0.3	1.3	0.0	RUDU	5.5	61.5	0.0
CATE	0.8	6.0	0.0	SACR	0.6	6.2	0.0
CITE	29.0	131.8	0.0	SAND	0.7	3.3	0.0
CLGR	0.2	2.8	0.0	SNEG	10.0	29.4	0.0
COGO	0.0	0.0	0.0	SNPL	0.8	4.0	0.0
DCCO	1.1	5.3	0.0	SPSA	0.0	0.0	0.0
EAGR	83.2	1603.7	0.1	WEGR	0.1	1.0	0.0
FOTE	20.3	56.8	0.0	WESA	309.5	979.2	0.2
FRGU	1295.5	2355.8	1.0	WFIB	923.4	1699.2	0.7
GADW	5.6	42.0	0.0	WILL	49.1	124.0	0.0
GRYE	0.0	0.5	0.0	WIPH	432.6	1132.0	0.3

18 West Layton

Description: The West Layton area is the shoreline between the peregrine hawk tower at the Layton Preserve and the northern Antelope Island causeway. Three point samples were designated in this survey, one randomly selected and two at drainage points. Access is by permission of The Nature Conservancy.

Primary Habitat: Saltwater-Freshwater Interface; Saltwater Shorelines, Beaches and Playas

Area Size (ha): 525.9

Estimated Area Covered by Survey (ha): 525.9

Years Surveyed: 5

Detection Rates: The shoreline viewing is clear. In some years, access through the southern end was difficult because of extremely soft mud consistencies, so counts were not complete.

<u>Species</u>	<u>Mean</u>	<u>Peak</u>	<u>Birds/ha</u>	<u>Species</u>	<u>Mean</u>	<u>Peak</u>	<u>Birds/ha</u>
AGWT	492.8	2463.8	0.9	GTBH	0.2	1.3	0.0
AMAV	1217.9	3419.3	2.3	KILL	1.9	11.3	0.0
AMCO	0.5	53.7	0.0	LBCU	0.7	1.3	0.0
AMWI	0.6	9.5	0.0	LBDO	0.2	16.7	0.0
AWPE	0.0	8.8	0.0	LESA	2.4	13.5	0.0
BASA	0.0	0.0	0.0	LESC	13.0	24.7	0.0
BBPL	35.2	141.0	0.1	LEYE	0.0	0.3	0.0
BCNH	0.0	0.5	0.0	MAGO	0.6	3.8	0.0
BLTE	0.0	0.0	0.0	MALL	55.3	135.5	0.1
BNST	88.5	327.8	0.2	NOPI	6.0	24.7	0.0
BUFF	0.2	0.8	0.0	NSHO	1065.4	3284.5	2.0
BWTE	0.0	2.0	0.0	PBGR	0.0	0.0	0.0
CAEG	0.1	1.5	0.0	RBGU	150.9	284.8	0.3
CAGO	43.6	159.5	0.1	REDH	0.5	5.7	0.0
CAGU	182.2	634.0	0.3	RPHA	0.8	59.7	0.0
CANV	0.0	2.0	0.0	RUDU	0.0	14.0	0.0
CATE	0.0	0.5	0.0	SACR	0.4	2.3	0.0
CITE	14.4	22.5	0.0	SAND	0.1	0.3	0.0
CLGR	0.0	0.3	0.0	SNEG	0.2	1.3	0.0
COGO	0.0	0.0	0.0	SNPL	12.9	66.7	0.0
DCCO	0.1	0.8	0.0	SPSA	0.3	0.8	0.0
EAGR	101.4	180.0	0.2	WEGR	0.0	0.3	0.0
FOTE	0.4	2.7	0.0	WESA	9.3	23.3	0.0
FRGU	772.2	1708.8	1.5	WFIB	27.9	48.8	0.1
GADW	115.0	367.5	0.2	WILL	39.6	84.0	0.1
GRYE	0.2	1.5	0.0	WIPH	358.4	1770.8	0.7

19 Howard Slough WMA

Description: Howard Slough WMA consists of three sections: shoreline, dike, and ponds. The shoreline section (19a) extends between the northern Antelope Island causeway and the southernmost Howard Slough WMA dike. It includes two point samples. In 1997, one point was designated in a drainage and the other randomly selected. During the following four years both points were classified as randomly selected. The dike section (19b) is a total count survey of a section of Great Salt Lake shoreline west of the WMA dikes. It is bounded between the north end of 19a and the south fork of the Weber River on the Ogden Bay WMA. The pond section (19c) is an area count and consists of the drivable impoundments in Howard Slough WMA. This section was included as part of the Ogden Bay WMA survey in 1997.

Primary Habitat: Saltwater Shorelines, Beaches and Playas; Saltwater-Freshwater Interface

Area Size (ha): 19a = 300.4; 19b = 394.2; 19c = 569.3

Estimated Area Covered by Survey (ha): 19a = 300.4; 19b = 335.1; 19c = 483.9

Years Surveyed: 5

Detection Rates: Restricted access on the mudflat beach and on the WMA dikes makes viewing distances greater. Due to extreme distances, bird identification and counts may be compromised.

19a

<u>Species</u>	<u>Mean</u>	<u>Peak</u>	<u>Birds/ha</u>	<u>Species</u>	<u>Mean</u>	<u>Peak</u>	<u>Birds/ha</u>
AGWT	39.3	139.0	0.1	GTBH	1.0	3.3	0.0
AMAV	1661.3	4476.0	5.5	KILL	2.0	15.0	0.0
AMCO	3.4	25.7	0.0	LBCU	0.7	4.0	0.0
AMWI	0.0	2.3	0.0	LBDO	0.2	52.0	0.0
AWPE	2.3	29.0	0.0	LESA	0.0	2.8	0.0
BASA	0.0	0.0	0.0	LESC	4.5	16.8	0.0
BBPL	122.5	435.0	0.4	LEYE	0.1	1.8	0.0
BCNH	0.3	1.3	0.0	MAGO	0.5	2.3	0.0
BLTE	0.2	1.0	0.0	MALL	0.3	4.0	0.0
BNST	183.4	445.5	0.6	NOPI	61.3	143.0	0.2
BUFF	0.2	0.7	0.0	NSHO	568.4	1051.3	1.9
BWTE	1.9	5.8	0.0	PBGR	0.0	0.7	0.0
CAEG	0.0	0.3	0.0	RBGU	957.9	1114.4	3.2
CAGO	60.2	177.6	0.2	REDH	0.3	16.8	0.0
CAGU	441.7	2434.7	1.5	RPHA	0.0	0.0	0.0
CANV	0.3	1.3	0.0	RUDU	4.7	19.8	0.0
CATE	0.0	0.7	0.0	SACR	0.4	2.0	0.0
CITE	27.3	98.5	0.1	SAND	0.0	82.0	0.0
CLGR	0.0	0.0	0.0	SNEG	0.4	2.4	0.0
COGO	0.0	0.0	0.0	SNPL	0.0	0.0	0.0
DCCO	0.6	5.0	0.0	SPSA	0.0	0.2	0.0
EAGR	119.3	1541.7	0.4	WEGR	0.0	0.3	0.0
FOTE	0.3	3.0	0.0	WESA	8.1	43.7	0.0
FRGU	6621.2	21437.3	22.0	WFIB	47.5	131.8	0.2
GADW	11.3	48.0	0.0	WILL	45.3	119.7	0.1
GRYE	0.3	2.0	0.0	WIPH	296.3	1500.0	1.0

19b*

Species	Mean	Peak	Birds/ha	Species	Mean	Peak	Birds/ha
AGWT	111.0	367.8	0.3	GTBH	1.6	5.3	0.0
AMAV	1867.5	5299.3	5.6	KILL	0.9	6.8	0.0
AMCO	1.8	159.5	0.0	LBCU	1.0	2.0	0.0
AMWI	0.3	2.8	0.0	LBDO	0.3	31.3	0.0
AWPE	46.4	117.8	0.1	LESA	0.0	0.5	0.0
BASA	0.1	41.7	0.0	LESC	33.0	106.0	0.1
BBPL	26.7	100.3	0.1	LEYE	0.2	1.4	0.0
BCNH	0.5	4.5	0.0	MAGO	0.7	4.0	0.0
BLTE	0.0	0.0	0.0	MALL	40.8	163.3	0.1
BNST	185.8	561.0	0.6	NOPI	41.9	130.8	0.1
BUFF	0.0	0.0	0.0	NSHO	460.0	1489.3	1.4
BWTE	4.5	19.3	0.0	PBGR	96.0	480.0	0.3
CAEG	0.0	0.0	0.0	RBGU	1675.5	3404.3	5.0
CAGO	89.4	280.0	0.3	REDH	4.2	141.4	0.0
CAGU	1641.3	4517.8	4.9	RPHA	17.6	54.0	0.1
CANV	0.6	2.0	0.0	RUDU	3.8	26.8	0.0
CATE	0.5	1.8	0.0	SACR	0.5	4.5	0.0
CITE	18.2	57.5	0.1	SAND	0.7	2.3	0.0
CLGR	0.0	0.0	0.0	SNEG	0.7	2.7	0.0
COGO	0.4	1.0	0.0	SNPL	0.3	2.6	0.0
DCCO	5.4	23.0	0.0	SPSA	0.4	1.8	0.0
EAGR	296.5	1289.0	0.9	WEGR	0.2	1.0	0.0
FOTE	2.4	10.0	0.0	WESA	0.0	1.8	0.0
FRGU	4227.3	8740.0	12.6	WFIB	55.7	117.2	0.2
GADW	5.0	32.7	0.0	WILL	45.1	125.2	0.1
GRYE	0.0	0.3	0.0	WIPH	808.7	2878.0	2.4

19c*

Species	Mean	Peak	Birds/ha	Species	Mean	Peak	Birds/ha
AGWT	811.5	1521.8	1.7	GTBH	11.6	21.4	0.0
AMAV	718.7	1536.6	1.5	KILL	3.8	8.8	0.0
AMCO	371.7	1308.4	0.8	LBCU	3.9	9.3	0.0
AMWI	111.2	524.4	0.2	LBDO	61.7	129.6	0.1
AWPE	47.6	186.0	0.1	LESA	0.6	44.0	0.0
BASA	0.0	1.7	0.0	LESC	552.8	987.0	1.1
BBPL	12.1	57.0	0.0	LEYE	2.4	13.8	0.0
BCNH	6.2	10.6	0.0	MAGO	2.2	85.5	0.0
BLTE	0.2	2.5	0.0	MALL	308.1	682.0	0.6
BNST	167.0	320.2	0.3	NOPI	876.8	2819.0	1.8
BUFF	2.2	8.3	0.0	NSHO	1139.2	4253.2	2.4
BWTE	2.5	23.3	0.0	PBGR	15.7	26.2	0.0
CAEG	1.7	10.2	0.0	RBGU	285.9	438.2	0.6
CAGO	99.1	160.4	0.2	REDH	71.3	313.3	0.1
CAGU	400.6	1225.8	0.8	RPHA	0.1	237.5	0.0
CANV	0.3	21.0	0.0	RUDU	159.6	941.5	0.3
CATE	0.4	2.4	0.0	SACR	5.6	17.0	0.0
CITE	550.2	924.6	1.1	SAND	0.0	0.0	0.0
CLGR	0.3	2.0	0.0	SNEG	12.9	30.8	0.0
COGO	1.1	5.0	0.0	SNPL	0.1	1.0	0.0
DCCO	9.0	29.7	0.0	SPSA	1.3	2.5	0.0
EAGR	11.3	513.8	0.0	WEGR	3.4	11.0	0.0
FOTE	8.2	24.3	0.0	WESA	1.4	8.6	0.0
FRGU	440.0	1443.5	0.9	WFIB	226.6	345.0	0.5
GADW	403.5	1262.8	0.8	WILL	11.4	37.2	0.0
GRYE	2.8	14.2	0.0	WIPH	280.1	1000.6	0.6

20 Ogden Bay WMA*

Description: This area includes all of the impoundments and drivable interior dikes of the Ogden Bay WMA. It is a total count survey.

Primary Habitat: Freshwater Wetlands; Riparian Systems; Fresh Water

Area Size (ha): 2495.6

Estimated Area Covered by Survey (ha): 1497.4

Years Surveyed: 5

Detection Rates: Emergent vegetation obstructs viewing in several areas.

Species	Mean	Peak	Birds/ha	Species	Mean	Peak	Birds/ha
AGWT	20305.3	33272.2	13.6	GTBH	52.6	80.0	0.0
AMAV	1872.0	4416.4	1.3	KILL	11.5	31.5	0.0
AMCO	3935.7	12066.8	2.6	LBCU	2.4	6.3	0.0
AMWI	1840.3	4374.5	1.2	LBDO	232.1	2250.8	0.2
AWPE	125.7	282.6	0.1	LESA	12.0	71.0	0.0
BASA	7.6	35.2	0.0	LESC	693.1	2025.5	0.5
BBPL	61.3	286.0	0.0	LEYE	56.1	475.8	0.0
BCNH	26.1	43.6	0.0	MAGO	93.5	1031.5	0.1
BLTE	1.4	64.3	0.0	MALL	5086.5	7048.8	3.4
BNST	1276.0	1930.8	0.9	NOPI	11559.5	21550.2	7.7
BUFF	17.5	64.8	0.0	NSHO	5188.7	10083.2	3.5
BWTE	0.0	28.4	0.0	PBGR	27.7	35.2	0.0
CAEG	3.8	27.2	0.0	RBGU	915.5	1703.8	0.6
CAGO	478.6	1159.4	0.3	REDH	438.4	1154.6	0.3
CAGU	2752.0	6005.6	1.8	RPHA	321.1	1061.3	0.2
CANV	278.6	756.3	0.2	RUDU	961.2	2132.5	0.6
CATE	0.2	0.8	0.0	SACR	11.1	25.2	0.0
CITE	4218.3	7643.4	2.8	SAND	9.3	19.0	0.0
CLGR	6.2	16.8	0.0	SNEG	79.8	122.6	0.1
COGO	1.1	5.0	0.0	SNPL	0.1	1.8	0.0
DCCO	47.4	71.0	0.0	SPSA	5.3	14.2	0.0
EAGR	9.6	3183.8	0.0	WEGR	26.2	67.0	0.0
FOTE	74.9	515.4	0.1	WESA	62.7	360.0	0.0
FRGU	2344.8	4896.4	1.6	WFIB	1636.6	2156.4	1.1
GADW	8025.7	20811.3	5.4	WILL	126.5	185.2	0.1
GRYE	40.9	162.6	0.0	WIPH	3838.7	5821.0	2.6

21 Ogden Bay Lakeside*

Description: This area is surveyed by airboat as a total count and includes the Pintail Flats portion of Ogden Bay WMA between the north and south forks of the Weber River.

Primary Habitat: Saltwater-Freshwater Interface; Freshwater Wetlands

Area Size (ha): 811.4

Estimated Area Covered by Survey (ha): 649.1

Years Surveyed: 5

Detection Rates: The easternmost part of the area is covered with emergent vegetation and not all birds are detectable. The noise of the airboat flushes many birds, but it is likely that many hide in the vegetation. Further west visibility is good, but it can be difficult to separate flocks for counting when the airboat causes birds to flush, blending in with other groups farther down the route. Also, flock sizes can be very large and the viewing perspective from the airboat when birds are clumped on the ground isn't as favorable as an aerial view might be. Accordingly, counts may be skewed.

Species	Mean	Peak	Birds/ha	Species	Mean	Peak	Birds/ha
AGWT	969.8	2058.2	1.5	GTBH	2.8	6.8	0.0
AMAV	4858.5	11414.0	7.5	KILL	0.6	6.3	0.0
AMCO	5.4	165.0	0.0	LBCU	10.8	86.5	0.0
AMWI	52.5	142.0	0.1	LBDO	37.2	1554.8	0.1
AWPE	6.8	68.0	0.0	LESA	8.2	123.3	0.0
BASA	1.4	5.8	0.0	LESC	1.5	7.3	0.0
BBPL	82.2	239.0	0.1	LEYE	0.9	8.8	0.0
BCNH	2.1	7.0	0.0	MAGO	4.9	114.0	0.0
BLTE	2.1	8.4	0.0	MALL	27.9	215.8	0.0
BNST	758.2	1996.4	1.2	NOPI	132.8	1200.5	0.2
BUFF	0.0	0.0	0.0	NSHO	1023.8	3083.4	1.6
BWTE	0.4	3.8	0.0	PBGR	0.0	0.0	0.0
CAEG	0.9	6.0	0.0	RBGU	507.3	883.8	0.8
CAGO	13.1	41.0	0.0	REDH	9.5	104.8	0.0
CAGU	3057.9	9416.2	4.7	RPHA	1010.6	4016.8	1.6
CANV	0.0	0.0	0.0	RUDU	2.7	12.0	0.0
CATE	0.7	7.6	0.0	SACR	0.5	2.0	0.0
CITE	32.2	250.3	0.0	SAND	451.0	2093.8	0.7
CLGR	0.0	0.0	0.0	SNEG	20.3	43.0	0.0
COGO	0.1	0.3	0.0	SNPL	0.4	6.4	0.0
DCCO	4.8	12.2	0.0	SPSA	0.2	1.0	0.0
EAGR	4.4	338.5	0.0	WEGR	0.1	0.8	0.0
FOTE	18.2	55.0	0.0	WESA	985.9	5739.0	1.5
FRGU	4834.9	11203.2	7.4	WFIB	224.2	651.0	0.3
GADW	20.4	199.5	0.0	WILL	254.1	396.5	0.4
GRYE	0.5	4.4	0.0	WIPH	32876.9	69469.4	50.7

22 *Ogden Bay North*

Description: This is a shoreline piece from the north fork of the Weber River to the railroad tracks surveyed from an airboat. Counts do not include gulls, etc., that are directly associated with Landing Rocks. The area has public access.

Primary Habitat: Saltwater Shorelines, Beaches and Playas

Area Size (ha): 389.4

Estimated Area Covered by Survey (ha): 389.4

Years Surveyed: 4

Detection Rates: Visibility is clear. The mudflat is only viewed from the airboat. Often snowy plovers and small sandpipers are viewed along the water edge. However, the more inland parts of the mudflat are not searched so snowy plover numbers are likely very conservative. Also, it can be difficult to separate flocks for counting when the airboat causes birds to flush and blend with others farther down the route.

<u>Species</u>	<u>Mean</u>	<u>Peak</u>	<u>Birds/ha</u>	<u>Species</u>	<u>Mean</u>	<u>Peak</u>	<u>Birds/ha</u>
AGWT	2.3	11.5	0.0	GTBH	0.6	2.5	0.0
AMAV	830.0	1630.8	2.1	KILL	0.1	1.5	0.0
AMCO	0.0	1.3	0.0	LBCU	0.1	0.7	0.0
AMWI	0.0	0.0	0.0	LBDO	0.0	0.7	0.0
AWPE	3.2	18.8	0.0	LESA	1.3	12.5	0.0
BASA	0.3	1.8	0.0	LESC	0.3	1.3	0.0
BBPL	9.2	37.8	0.0	LEYE	0.0	0.0	0.0
BCNH	0.0	0.8	0.0	MAGO	1.3	14.3	0.0
BLTE	0.0	0.0	0.0	MALL	0.0	0.0	0.0
BNST	114.3	360.5	0.3	NOPI	16.4	79.3	0.0
BUFF	0.0	0.0	0.0	NSHO	2.3	8.8	0.0
BWTE	0.0	0.0	0.0	PBGR	0.0	0.0	0.0
CAEG	0.0	0.0	0.0	RBGU	110.1	336.3	0.3
CAGO	0.4	4.5	0.0	REDH	0.8	25.0	0.0
CAGU	1131.9	5203.8	2.9	RPHA	0.0	0.3	0.0
CANV	0.0	0.0	0.0	RUDU	0.0	0.0	0.0
CATE	0.1	1.3	0.0	SACR	0.0	0.5	0.0
CITE	0.0	0.0	0.0	SAND	7.4	28.5	0.0
CLGR	0.0	0.0	0.0	SNEG	0.0	0.0	0.0
COGO	0.0	0.0	0.0	SNPL	4.9	31.8	0.0
DCCO	1.6	4.5	0.0	SPSA	0.0	0.0	0.0
EAGR	0.0	153.3	0.0	WEGR	0.0	0.0	0.0
FOTE	18.7	300.0	0.0	WESA	2.1	60.8	0.0
FRGU	2097.3	4816.7	5.4	WFIB	0.0	0.0	0.0
GADW	1.0	5.0	0.0	WILL	23.0	43.0	0.1
GRYE	0.0	0.0	0.0	WIPH	9353.3	43837.5	24.0

23 Rainbow

24 South Harold Crane

25 Harold Crane WMA

Description: These three areas are adjacent to one another and have been typically surveyed as one route. All are managed by UDWR. The Rainbow site includes the George East Duck Club and Rainbow pond and is a total count survey from existing roads. South Harold Crane is also a total count within the gravel road through the UDWR gate on the east, the GSL Minerals Company canal on the north and west, and the railroad tracks on the south. Harold Crane WMA is a total count from all drivable interior dikes within the WMA.

Primary Habitat: Freshwater Wetlands; Lakeside Uplands

Area Size (ha): 23 = 1799.7; 24 = 1439.8; 25 = 1773.4

Estimated Area Covered by Survey (ha): 23 = 593.9; 24 = 475.1; 25 = 585.2

Years Surveyed: 4 (area 25 surveyed all 5 years)

Detection Rates: Some ponds are obstructed from view by tall emergent vegetation. By leaving the dike roads, all ponds could be accessed on foot for better viewing.

23*

Species	Mean	Peak	Birds/ha	Species	Mean	Peak	Birds/ha
AGWT	618.2	1261.7	1.0	GTBH	8.6	14.5	0.0
AMAV	239.7	580.0	0.4	KILL	3.3	9.0	0.0
AMCO	128.1	261.7	0.2	LBCU	3.9	6.0	0.0
AMWI	57.4	110.7	0.1	LBDO	38.2	100.0	0.1
AWPE	13.0	67.5	0.0	LESA	0.0	0.0	0.0
BASA	0.0	0.0	0.0	LESC	0.6	2.7	0.0
BBPL	0.0	0.0	0.0	LEYE	2.0	21.3	0.0
BCNH	2.6	8.0	0.0	MAGO	1.7	18.8	0.0
BLTE	0.0	0.0	0.0	MALL	400.1	558.3	0.7
BNST	87.4	202.8	0.1	NOPI	455.7	615.5	0.8
BUFF	0.0	0.0	0.0	NSHO	254.2	616.0	0.4
BWTE	0.0	6.0	0.0	PBGR	0.1	0.5	0.0
CAEG	0.4	1.5	0.0	RBGU	1.9	68.8	0.0
CAGO	117.4	287.8	0.2	REDH	19.9	62.3	0.0
CAGU	229.5	1021.7	0.4	RPHA	0.0	1.3	0.0
CANV	0.5	2.0	0.0	RUDU	7.0	16.3	0.0
CATE	0.4	4.3	0.0	SACR	2.7	9.0	0.0
CITE	74.9	127.3	0.1	SAND	0.0	0.0	0.0
CLGR	0.0	0.0	0.0	SNEG	24.1	81.3	0.0
COGO	0.0	0.0	0.0	SNPL	0.3	2.5	0.0
DCCO	0.6	2.0	0.0	SPSA	0.0	0.0	0.0
EAGR	0.0	4.8	0.0	WEGR	0.6	4.0	0.0
FOTE	8.2	23.3	0.0	WESA	0.0	0.0	0.0
FRGU	38.0	96.3	0.1	WFIB	478.8	720.5	0.8
GADW	116.5	172.5	0.2	WILL	3.3	12.3	0.0
GRYE	0.0	0.0	0.0	WIPH	12.3	40.3	0.0

24*

Species	Mean	Peak	Birds/ha	Species	Mean	Peak	Birds/ha
AGWT	960.2	1612.0	2.0	GTBH	6.7	12.5	0.0
AMAV	3029.9	4524.3	6.4	KILL	2.1	5.0	0.0
AMCO	254.2	1556.3	0.5	LBCU	2.5	5.3	0.0
AMWI	100.5	171.3	0.2	LBDO	105.6	304.5	0.2
AWPE	22.5	33.5	0.0	LESA	0.1	0.8	0.0
BASA	0.0	0.3	0.0	LESC	5.7	136.3	0.0
BBPL	0.6	1.3	0.0	LEYE	4.1	33.8	0.0
BCNH	3.3	10.5	0.0	MAGO	49.9	129.5	0.1
BLTE	0.0	0.0	0.0	MALL	683.1	1348.5	1.4
BNST	349.7	709.5	0.7	NOPI	544.9	909.5	1.1
BUFF	0.0	0.0	0.0	NSHO	297.5	612.5	0.6
BWTE	0.0	1.0	0.0	PBGR	0.2	0.5	0.0
CAEG	0.1	1.5	0.0	RBGU	19.7	57.0	0.0
CAGO	142.6	360.0	0.3	REDH	56.6	95.0	0.1
CAGU	127.9	211.7	0.3	RPHA	0.0	0.0	0.0
CANV	0.3	2.0	0.0	RUDU	2.3	21.5	0.0
CATE	0.3	3.0	0.0	SACR	9.3	24.5	0.0
CITE	234.1	393.8	0.5	SAND	0.0	0.0	0.0
CLGR	0.0	0.0	0.0	SNEG	16.7	46.5	0.0
COGO	0.0	0.0	0.0	SNPL	0.7	1.8	0.0
DCCO	3.6	16.0	0.0	SPSA	0.0	0.0	0.0
EAGR	0.6	38.0	0.0	WEGR	0.5	2.5	0.0
FOTE	17.9	43.3	0.0	WESA	0.0	0.0	0.0
FRGU	60.9	100.3	0.1	WFIB	392.2	577.8	0.8
GADW	231.6	431.5	0.5	WILL	4.3	10.5	0.0
GRYE	0.2	3.8	0.0	WIPH	32.4	66.7	0.1

25*

Species	Mean	Peak	Birds/ha	Species	Mean	Peak	Birds/ha
AGWT	2802.3	4406.6	4.8	GTBH	32.1	53.0	0.1
AMAV	1670.9	3088.0	2.9	KILL	5.7	10.8	0.0
AMCO	925.0	1514.6	1.6	LBCU	1.0	35.0	0.0
AMWI	369.1	1141.0	0.6	LBDO	1156.7	1797.6	2.0
AWPE	250.0	895.4	0.4	LESA	0.0	0.0	0.0
BASA	0.0	0.0	0.0	LESC	98.9	271.3	0.2
BBPL	9.9	47.5	0.0	LEYE	16.9	49.0	0.0
BCNH	35.7	72.0	0.1	MAGO	217.1	895.0	0.4
BLTE	0.2	34.8	0.0	MALL	2507.4	3354.4	4.3
BNST	803.5	1391.8	1.4	NOPI	2472.0	3927.2	4.2
BUFF	0.0	0.0	0.0	NSHO	1092.8	1570.4	1.9
BWTE	0.0	1.7	0.0	PBGR	1.0	2.8	0.0
CAEG	0.4	4.0	0.0	RBGU	27.4	37.8	0.0
CAGO	548.4	1419.8	0.9	REDH	342.6	586.8	0.6
CAGU	315.4	731.0	0.5	RPHA	0.0	1.2	0.0
CANV	8.5	40.3	0.0	RUDU	161.2	312.5	0.3
CATE	5.6	18.3	0.0	SACR	5.1	18.6	0.0
CITE	671.3	846.2	1.1	SAND	0.0	0.0	0.0
CLGR	0.0	0.0	0.0	SNEG	64.0	103.8	0.1
COGO	0.0	0.0	0.0	SNPL	0.5	2.3	0.0
DCCO	27.3	71.4	0.0	SPSA	0.0	0.5	0.0
EAGR	7.1	266.5	0.0	WEGR	10.6	30.4	0.0
FOTE	77.3	167.3	0.1	WESA	0.0	0.0	0.0
FRGU	328.8	809.6	0.6	WFIB	1520.2	2147.0	2.6
GADW	691.2	1205.6	1.2	WILL	7.9	13.2	0.0
GRYE	2.2	11.0	0.0	WIPH	314.4	676.2	0.5

26 *West Harold Crane Mud Bar*

Description: West Harold Crane Mud Bar is mainly mudflat with some vegetation to the south and along its eastern border with Harold Crane WMA. Bear River Bay and Willard Spur lie to the west and north, respectively. In periods of low lake levels the area dries up reducing bird use in this area.

Primary Habitat: Freshwater Wetlands; Freshwater Shorelines

Area Size (ha): 2169.2

Years Surveyed: 0

Detection Rates: Visibility is probably very good in this area.

27 *South Bear River**

Description: South Bear River is a large wetland complex south of the D-line dike in the Bear River Migratory Bird Refuge. The area is managed by USFWS.

Primary Habitat: Freshwater Wetlands; Freshwater Shorelines

Area Size (ha): 8272.3

Estimated Area Covered by Survey (ha): 4136.1

Years Surveyed: 5

Detection Rates: Due to emergent vegetation and viewing distances, visibility is considerably limited.

Species	Mean	Peak	Birds/ha	Species	Mean	Peak	Birds/ha
AGWT	29678.9	39723.3	7.2	GTBH	37.7	65.0	0.0
AMAV	11289.8	18975.3	2.7	KILL	2.7	14.5	0.0
AMCO	6192.9	11937.2	1.5	LBCU	0.0	0.3	0.0
AMWI	489.6	860.0	0.1	LBDO	5086.4	8245.0	1.2
AWPE	6524.9	8197.8	1.6	LESA	0.0	0.0	0.0
BASA	1.6	4.8	0.0	LESC	162.2	545.5	0.0
BBPL	15.5	74.8	0.0	LEYE	0.0	0.0	0.0
BCNH	12.7	60.0	0.0	MAGO	4547.9	6918.4	1.1
BLTE	127.2	383.8	0.0	MALL	12683.3	36119.3	3.1
BNST	2466.1	7536.6	0.6	NOPI	10417.7	15209.5	2.5
BUFF	49.5	245.8	0.0	NSHO	9266.1	11870.0	2.2
BWTE	0.3	51.0	0.0	PBGR	0.6	7.3	0.0
CAEG	2.0	13.8	0.0	RBGU	18.4	92.0	0.0
CAGO	198.5	407.0	0.0	REDH	97.1	564.0	0.0
CAGU	1059.4	3186.0	0.3	RPHA	0.1	0.3	0.0
CANV	130.9	480.5	0.0	RUDU	481.0	1168.0	0.1
CATE	9.9	37.5	0.0	SACR	0.6	1.7	0.0
CITE	976.7	1797.3	0.2	SAND	0.0	0.0	0.0
CLGR	0.0	0.0	0.0	SNEG	98.9	204.3	0.0
COGO	6.8	32.3	0.0	SNPL	0.0	0.0	0.0
DCCO	97.6	253.8	0.0	SPSA	0.3	0.8	0.0
EAGR	31.8	4055.0	0.0	WEGR	206.0	1541.5	0.0
FOTE	79.4	217.8	0.0	WESA	4952.5	14004.0	1.2
FRGU	2327.4	9575.7	0.6	WFIB	4799.1	8120.2	1.2
GADW	13547.7	37483.7	3.3	WILL	10.7	42.8	0.0
GRYE	5.6	26.3	0.0	WIPH	1237.0	5572.5	0.3

28 Willard Spur

Description: This area is bounded by emergent marsh or sandbar fringe on the north, the Willard Bay reservoir dike on the east, the North Harold Crane dike and emergent marsh on the south, and a line from the northwest corner of GSL Minerals Company north to the mud bar spit on the west. It is surveyed from an airplane in four transects running in an east-west orientation. In 1997, this area was surveyed on the ground by airboat. The area is managed by USFWS.

Primary Habitat: Freshwater Wetlands; Fresh Water; Freshwater Shorelines

Area Size (ha): 6590.3

Estimated Area Covered by Survey (ha): 6590.3

Years Surveyed: 5

Detection Rates: Because this area is rich in numbers and diversity of species, it is difficult to count and identify birds while flying at speeds of 80+ mph. It is also very difficult to see small birds. Survey accuracy in this important area is not good. An observer counts out 1/8 mile on either side of the plane. Four transects were surveyed and data were extrapolated to reflect total coverage. Due to high variability in habitat types within each transect, this extrapolation is not a good technique. The true birds/ha is most likely much greater than the data listed here.

Species	Mean	Peak	Birds/ha	Species	Mean	Peak	Birds/ha
AGWT	2538.4	5099.0	0.4	GTBH	18.9	57.8	0.0
AMAV	2032.8	3547.0	0.3	KILL	0.0	0.0	0.0
AMCO	1773.4	3995.6	0.3	LBCU	0.0	0.0	0.0
AMWI	54.4	468.0	0.0	LBDO	1994.5	4382.4	0.3
AWPE	2877.8	3938.2	0.4	LESA	0.0	0.0	0.0
BASA	0.0	10.0	0.0	LESC	11.1	19.3	0.0
BBPL	0.0	0.0	0.0	LEYE	0.0	0.0	0.0
BCNH	5.3	21.3	0.0	MAGO	1269.9	1560.2	0.2
BLTE	3.5	34.3	0.0	MALL	469.5	1161.4	0.1
BNST	528.6	1038.8	0.1	NOPI	2733.2	3753.6	0.4
BUFF	9.3	43.7	0.0	NSHO	1349.5	2377.8	0.2
BWTE	0.0	1.0	0.0	PBGR	0.0	0.2	0.0
CAEG	5.0	41.5	0.0	RBGU	164.2	287.4	0.0
CAGO	174.0	533.8	0.0	REDH	458.1	1391.8	0.1
CAGU	316.5	541.8	0.0	RPHA	0.0	10.0	0.0
CANV	87.3	369.3	0.0	RUDU	773.7	1493.3	0.1
CATE	8.5	23.0	0.0	SACR	0.2	1.0	0.0
CITE	81.3	290.0	0.0	SAND	0.2	1.0	0.0
CLGR	0.0	0.0	0.0	SNEG	187.5	368.4	0.0
COGO	3.3	16.3	0.0	SNPL	0.0	0.0	0.0
DCCO	51.5	110.6	0.0	SPSA	0.0	0.0	0.0
EAGR	64.1	1285.0	0.0	WEGR	167.2	266.0	0.0
FOTE	168.4	337.8	0.0	WESA	2.0	12.0	0.0
FRGU	300.5	2305.3	0.0	WFIB	1762.3	3592.5	0.3
GADW	522.3	737.0	0.1	WILL	9.0	33.3	0.0
GRYE	0.2	4.0	0.0	WIPH	1151.4	4210.3	0.2

29 *Bear River Refuge**

Description: The area includes all impounded units and any appropriate habitat with established dike units, within the Bear River Bird Refuge. The area is managed by USFWS.

Primary Habitat: Freshwater Wetlands; Fresh Water

Area Size (ha): 10449.4

Estimated Area Covered by Survey (ha): 3134.8

Years Surveyed: 5

Detection Rates: Due to emergent vegetation and viewing distances, visibility is considerably limited.

Species	Mean	Peak	Birds/ha	Species	Mean	Peak	Birds/ha
AGWT	32951.2	52584.7	10.5	GTBH	40.7	81.6	0.0
AMAV	13626.0	23240.0	4.3	KILL	5.0	14.3	0.0
AMCO	7560.4	10778.7	2.4	LBCU	0.1	1.0	0.0
AMWI	2148.6	2929.0	0.7	LBDO	1087.8	5580.3	0.3
AWPE	2119.2	3902.0	0.7	LESA	0.7	4.0	0.0
BASA	5.2	18.0	0.0	LESC	304.7	1271.0	0.1
BBPL	17.7	53.3	0.0	LEYE	5.5	62.4	0.0
BCNH	11.8	33.8	0.0	MAGO	8866.7	16956.5	2.8
BLTE	122.6	263.0	0.0	MALL	12256.8	18838.0	3.9
BNST	8351.8	14582.4	2.7	NOPI	14614.8	18840.0	4.7
BUFF	18.4	80.8	0.0	NSHO	12630.1	16674.2	4.0
BWTE	0.0	4.0	0.0	PBGR	12.0	25.0	0.0
CAEG	0.5	4.8	0.0	RBGU	22.3	868.8	0.0
CAGO	788.5	2874.3	0.3	REDH	643.9	1647.5	0.2
CAGU	1330.3	3569.0	0.4	RPHA	0.7	1600.0	0.0
CANV	26.9	119.3	0.0	RUDU	1116.0	2130.5	0.4
CATE	9.3	78.2	0.0	SACR	0.5	2.0	0.0
CITE	3609.1	5145.6	1.2	SAND	0.0	0.0	0.0
CLGR	1.3	20.8	0.0	SNEG	155.1	312.8	0.0
COGO	3.8	10.0	0.0	SNPL	0.0	0.8	0.0
DCCO	215.6	372.2	0.1	SPSA	2.4	7.6	0.0
EAGR	3.7	3932.0	0.0	WEGR	101.2	253.8	0.0
FOTE	70.3	201.0	0.0	WESA	11597.8	52396.0	3.7
FRGU	2806.7	9903.2	0.9	WFIB	8396.1	16006.8	2.7
GADW	9960.1	13450.0	3.2	WILL	16.0	60.5	0.0
GRYE	15.7	121.3	0.0	WIPH	5590.0	26541.8	1.8

30 *Bear River Club**

Description: Bear River Club is a total count survey including the area north of the Bear River access road, west of the road connecting Goose Island, and east of Public Shooting Grounds WMA. This area is private property.

Primary Habitat: Freshwater Wetlands; Freshwater Shorelines; Lakeside Uplands

Area Size (ha): 5183.8

Estimated Area Covered by Survey (ha): 2073.5

Years Surveyed: 5

Detection Rates: It is likely that emergent vegetation inhibits visibility in some places.

<u>Species</u>	<u>Mean</u>	<u>Peak</u>	<u>Birds/ha</u>	<u>Species</u>	<u>Mean</u>	<u>Peak</u>	<u>Birds/ha</u>
AGWT	2.0	399.0	0.0	GTBH	7.9	14.8	0.0
AMAV	490.3	958.6	0.2	KILL	5.9	12.3	0.0
AMCO	92.9	354.4	0.0	LBCU	0.5	1.5	0.0
AMWI	12.4	62.0	0.0	LBDO	89.8	272.8	0.0
AWPE	74.5	129.4	0.0	LESA	0.1	4.3	0.0
BASA	0.1	4.3	0.0	LESC	25.3	67.3	0.0
BBPL	0.0	0.0	0.0	LEYE	7.9	31.0	0.0
BCNH	4.9	9.0	0.0	MAGO	24.8	68.4	0.0
BLTE	0.3	2.0	0.0	MALL	14.7	60.0	0.0
BNST	152.0	314.4	0.1	NOPI	90.3	498.2	0.0
BUFF	3.1	9.0	0.0	NSHO	79.6	330.3	0.0
BWTE	0.2	8.4	0.0	PBGR	4.9	8.3	0.0
CAEG	6.3	21.2	0.0	RBGU	54.4	107.2	0.0
CAGO	270.9	896.6	0.1	REDH	1.2	48.0	0.0
CAGU	38.1	117.3	0.0	RPHA	2.6	10.3	0.0
CANV	1.7	14.4	0.0	RUDU	7.2	18.8	0.0
CATE	1.4	10.5	0.0	SACR	17.9	68.0	0.0
CITE	18.0	122.0	0.0	SAND	0.0	0.0	0.0
CLGR	0.3	1.8	0.0	SNEG	59.3	313.8	0.0
COGO	0.0	0.2	0.0	SNPL	0.3	2.2	0.0
DCCO	5.5	22.0	0.0	SPSA	0.1	0.4	0.0
EAGR	3.1	132.5	0.0	WEGR	1.5	7.0	0.0
FOTE	12.4	41.6	0.0	WESA	0.1	5.0	0.0
FRGU	81.6	214.6	0.0	WFIB	457.1	1378.8	0.2
GADW	26.7	313.5	0.0	WILL	3.5	9.8	0.0
GRYE	5.5	49.0	0.0	WIPH	5.4	47.3	0.0

31 *Chesapeake*

Description: The area is east of the road from Goose Island North, and west and north of the Bear River. It is private property.

Primary Habitat: Freshwater Wetland; Riparian Systems; Lakeside Upland

Area Size (ha): 3731.8

Years Surveyed: 0

Detection Rates: Unknown.

32 *Public Shooting Grounds WMA**

Description: The area includes all accessible sites within the Public Shooting Grounds WMA with emphasis on the impoundments. An area count is included. It is managed by UDWR.

Primary Habitat: Freshwater Wetlands; Fresh Water

Area Size (ha): 3248.7

Estimated Area Covered by Survey (ha): 649.7

Years Surveyed: 5

Detection Rates: Detection rate for shorebirds is 100%--mostly avocets and stilts. There is a large expanse of potholes that is not visible from the dike roads and probably hides waterfowl and other waterbirds.

Species	Mean	Peak	Birds/ha	Species	Mean	Peak	Birds/ha
AGWT	6205.1	12126.3	9.6	GTBH	18.4	33.3	0.0
AMAV	271.4	873.7	0.4	KILL	2.3	6.3	0.0
AMCO	1731.4	5912.0	2.7	LBCU	0.1	2.0	0.0
AMWI	2111.1	5511.5	3.2	LBDO	1.0	43.0	0.0
AWPE	194.4	261.5	0.3	LESA	0.0	0.0	0.0
BASA	0.0	0.0	0.0	LESC	76.5	227.3	0.1
BBPL	0.0	0.0	0.0	LEYE	7.5	47.5	0.0
BCNH	8.7	18.3	0.0	MAGO	0.0	2.2	0.0
BLTE	0.2	0.8	0.0	MALL	2128.7	4032.3	3.3
BNST	407.4	942.8	0.6	NOPI	18732.7	36420.5	28.8
BUFF	17.5	71.0	0.0	NSHO	951.5	2578.5	1.5
BWTE	1.5	7.5	0.0	PBGR	18.4	25.3	0.0
CAEG	0.0	0.0	0.0	RBGU	84.2	146.3	0.1
CAGO	312.0	723.0	0.5	REDH	66.8	254.0	0.1
CAGU	99.9	339.8	0.2	RPHA	0.0	0.0	0.0
CANV	12.3	31.5	0.0	RUDU	84.3	215.0	0.1
CATE	0.2	1.3	0.0	SACR	4.8	11.3	0.0
CITE	759.9	1450.0	1.2	SAND	0.0	0.0	0.0
CLGR	12.1	30.3	0.0	SNEG	69.2	119.0	0.1
COGO	0.0	0.0	0.0	SNPL	0.0	0.0	0.0
DCCO	10.0	32.5	0.0	SPSA	0.0	0.8	0.0
EAGR	0.6	119.3	0.0	WEGR	42.4	65.3	0.1
FOTE	57.0	165.0	0.1	WESA	0.4	1.0	0.0
FRGU	121.0	212.0	0.2	WFIB	534.3	849.0	0.8
GADW	1144.7	1840.8	1.8	WILL	7.9	10.7	0.0
GRYE	7.3	35.6	0.0	WIPH	33.3	120.7	0.1

33 *Salt Creek WMA**

Description: The area includes all accessible sites within the Salt Creek WMA with emphasis on the impoundments. An area count is included. This site is managed by UDWR.

Primary Habitat: Freshwater Wetlands; Lakeside Uplands

Area Size (ha): 863.4

Estimated Area Covered by Survey (ha): 302.2

Years Surveyed: 5

Detection Rates: Detection rate for larger shorebirds is 99% (dowitchers, stilts, avocets). Tall vegetation is a barrier however. Of total WMA, 35% is surveyed, but 55% is good waterbird habitat.

Species	Mean	Peak	Birds/ha	Species	Mean	Peak	Birds/ha
AGWT	2343.6	3818.8	7.8	GTBH	9.0	22.0	0.0
AMAV	502.1	927.2	1.7	KILL	4.9	19.2	0.0
AMCO	245.3	960.3	0.8	LBCU	1.1	4.0	0.0
AMWI	222.0	567.5	0.7	LBDO	7.8	278.0	0.0
AWPE	92.2	187.4	0.3	LESA	0.0	0.0	0.0
BASA	0.0	0.0	0.0	LESC	16.3	37.0	0.1
BBPL	0.0	0.0	0.0	LEYE	9.2	55.5	0.0
BCNH	5.1	15.8	0.0	MAGO	0.9	63.0	0.0
BLTE	0.2	1.0	0.0	MALL	950.1	1373.4	3.1
BNST	284.7	577.0	0.9	NOPI	4977.9	7238.0	16.5
BUFF	4.1	11.7	0.0	NSHO	463.7	714.8	1.5
BWTE	173.4	867.0	0.6	PBGR	3.6	9.5	0.0
CAEG	0.1	0.8	0.0	RBGU	24.6	52.0	0.1
CAGO	301.3	819.8	1.0	REDH	40.2	116.8	0.1
CAGU	146.4	499.0	0.5	RPHA	7.3	16.7	0.0
CANV	3.0	42.3	0.0	RUDU	29.1	167.8	0.1
CATE	0.0	0.8	0.0	SACR	24.2	66.8	0.1
CITE	445.2	689.3	1.5	SAND	0.0	0.6	0.0
CLGR	1.1	4.5	0.0	SNEG	32.0	43.0	0.1
COGO	0.0	0.0	0.0	SNPL	0.0	0.0	0.0
DCCO	9.4	27.5	0.0	SPSA	0.7	3.8	0.0
EAGR	0.7	31.7	0.0	WEGR	6.0	14.8	0.0
FOTE	6.0	20.8	0.0	WESA	3.6	6.8	0.0
FRGU	26.2	125.0	0.1	WFIB	664.0	1304.2	2.2
GADW	437.1	633.8	1.4	WILL	6.3	13.5	0.0
GRYE	8.3	32.4	0.0	WIPH	61.3	242.8	0.2

34 East Promontory

Description: The eastern shore of the Promontory peninsula is surveyed between the UDWR waterfowl hunter access road and Pokes Point where the GSL Minerals Company dike access road still exists. The area is surveyed in two parts divided by the Booth Valley Hill. The northern part (34a) has three point samples, two of them located in drainages (access to shoreline through private property); the southern part (34b) is surveyed from the road (public access) that parallels the shoreline.

Primary Habitat: Freshwater Shorelines; Freshwater Wetlands

Area Size (ha): 34a = 425.8; 34b = 1062.1

Estimated Area Covered by Survey (ha): 34a = 425.8; 34b = 1062.1

Years Surveyed: 5

Detection Rates: It is not possible to see around Booth Valley Hill, and the north side of Booth Bay is too far from the road for accurate species identification and counting. A few other spots along the driving portion of the survey are difficult to see and may hide small numbers of birds.

34a

Species	Mean	Peak	Birds/ha	Species	Mean	Peak	Birds/ha
AGWT	1080.1	3881.3	2.5	GTBH	2.7	11.8	0.0
AMAV	181.4	427.8	0.4	KILL	3.1	13.0	0.0
AMCO	233.0	833.0	0.5	LBCU	17.0	30.3	0.0
AMWI	611.5	1900.8	1.4	LBDO	0.0	0.0	0.0
AWPE	330.5	946.0	0.8	LESA	0.0	0.0	0.0
BASA	0.0	0.0	0.0	LESC	4.6	11.0	0.0
BBPL	0.0	0.0	0.0	LEYE	0.0	0.0	0.0
BCNH	0.3	1.0	0.0	MAGO	0.0	5.3	0.0
BLTE	0.0	0.0	0.0	MALL	45.0	180.4	0.1
BNST	6.4	25.2	0.0	NOPI	237.4	722.8	0.6
BUFF	0.1	0.5	0.0	NSHO	654.5	1647.2	1.5
BWTE	0.0	0.5	0.0	PBGR	0.1	0.3	0.0
CAEG	0.6	5.0	0.0	RBGU	203.1	675.3	0.5
CAGO	254.5	682.3	0.6	REDH	1.5	152.5	0.0
CAGU	170.3	343.0	0.4	RPHA	0.5	2.0	0.0
CANV	0.2	0.7	0.0	RUDU	16.0	30.0	0.0
CATE	8.9	38.3	0.0	SACR	1.8	3.3	0.0
CITE	8.8	30.3	0.0	SAND	0.0	0.0	0.0
CLGR	1.9	8.7	0.0	SNEG	8.1	25.0	0.0
COGO	0.0	0.0	0.0	SNPL	0.2	1.3	0.0
DCCO	1.4	7.3	0.0	SPSA	0.0	0.0	0.0
EAGR	0.2	19.7	0.0	WEGR	13.6	77.7	0.0
FOTE	9.3	42.8	0.0	WESA	0.2	1.2	0.0
FRGU	97.4	216.5	0.2	WFIB	53.5	284.8	0.1
GADW	195.6	673.8	0.5	WILL	18.5	51.8	0.0
GRYE	0.7	8.7	0.0	WIPH	0.1	18.0	0.0

34b

Species	Mean	Peak	Birds/ha	Species	Mean	Peak	Birds/ha
AGWT	184.2	430.8	0.2	GTBH	1.0	7.0	0.0
AMAV	998.6	4122.4	0.9	KILL	2.3	8.5	0.0
AMCO	243.5	1293.2	0.2	LBCU	11.5	44.5	0.0
AMWI	232.0	645.5	0.2	LBDO	0.0	0.2	0.0
AWPE	31.9	208.3	0.0	LESA	0.0	0.0	0.0
BASA	0.0	0.0	0.0	LESC	57.7	67.5	0.1
BBPL	0.0	0.0	0.0	LEYE	0.1	0.5	0.0
BCNH	0.0	0.0	0.0	MAGO	0.0	3.0	0.0
BLTE	0.0	0.0	0.0	MALL	16.7	29.8	0.0
BNST	6.7	33.0	0.0	NOPI	80.7	325.0	0.1
BUFF	0.3	1.3	0.0	NSHO	232.8	771.0	0.2
BWTE	0.0	8.0	0.0	PBGR	0.0	2.0	0.0
CAEG	0.0	0.8	0.0	RBGU	176.0	209.6	0.2
CAGO	1897.4	5990.0	1.8	REDH	266.3	649.3	0.3
CAGU	2072.1	8236.5	2.0	RPHA	0.0	0.0	0.0
CANV	0.3	1.7	0.0	RUDU	84.4	467.6	0.1
CATE	4.4	37.0	0.0	SACR	0.2	1.0	0.0
CITE	56.7	181.4	0.1	SAND	0.0	0.0	0.0
CLGR	0.3	2.0	0.0	SNEG	4.1	17.5	0.0
COGO	4.1	7.7	0.0	SNPL	0.0	0.0	0.0
DCCO	0.3	2.8	0.0	SPSA	0.2	1.0	0.0
EAGR	165.1	561.8	0.2	WEGR	4.3	30.3	0.0
FOTE	2.6	21.0	0.0	WESA	0.0	0.0	0.0
FRGU	980.1	2911.5	0.9	WFIB	66.5	172.7	0.1
GADW	17.3	56.0	0.0	WILL	7.5	44.5	0.0
GRYE	0.0	0.0	0.0	WIPH	0.0	80.8	0.0

35 *Locomotive Springs WMA**

Description: The survey area includes all established management units and outflow areas that are a part of Locomotive Springs WMA. It is managed by UDWR.

Primary Habitat: Freshwater Wetlands; Saltwater Shorelines, Beaches and Playas; Salt Marsh

Area Size (ha): 7607.9

Estimated Area Covered by Survey (ha): 304.3

Years Surveyed: 2

Detection Rates: Approximately 80% of this area has good visibility. Some marshy areas are inaccessible, and some large ponds are difficult to see across from the dike. Of 20,000 acres, 4% was covered by survey, and 17% is good waterbird habitat. The mudflat is where snowy plovers have been observed in large numbers in other studies, but were not surveyed here.

Species	Mean	Peak	Birds/ha	Species	Mean	Peak	Birds/ha
AGWT	114.0	437.0	0.4	GTBH	8.9	12.5	0.0
AMAV	20.2	343.0	0.1	KILL	15.2	73.0	0.1
AMCO	9.2	755.0	0.0	LBCU	15.8	55.0	0.1
AMWI	15.4	560.0	0.1	LBDO	5.8	188.0	0.0
AWPE	5.4	129.0	0.0	LESA	0.0	0.0	0.0
BASA	1.8	11.0	0.0	LESC	36.0	120.0	0.1
BBPL	7.0	29.0	0.0	LEYE	4.9	23.5	0.0
BCNH	4.4	21.0	0.0	MAGO	3.5	17.5	0.0
BLTE	0.5	3.0	0.0	MALL	194.5	260.0	0.6
BNST	13.1	193.0	0.0	NOPI	217.3	366.0	0.7
BUFF	7.8	22.0	0.0	NSHO	27.1	169.0	0.1
BWTE	2.7	22.0	0.0	PBGR	2.0	6.0	0.0
CAEG	0.0	0.5	0.0	RBGU	4.5	16.0	0.0
CAGO	10.7	90.0	0.0	REDH	156.1	927.5	0.5
CAGU	33.3	133.0	0.1	RPHA	14.3	48.0	0.0
CANV	23.6	530.5	0.1	RUDU	8.2	21.0	0.0
CATE	2.2	8.0	0.0	SACR	0.7	4.0	0.0
CITE	27.5	314.0	0.1	SAND	0.2	46.5	0.0
CLGR	0.0	0.0	0.0	SNEG	1.6	4.0	0.0
COGO	0.0	0.0	0.0	SNPL	59.5	130.0	0.2
DCCO	6.0	35.0	0.0	SPSA	1.5	4.5	0.0
EAGR	0.6	4.0	0.0	WEGR	0.5	3.0	0.0
FOTE	10.8	42.0	0.0	WESA	62.1	120.0	0.2
FRGU	0.3	48.0	0.0	WFIB	54.8	110.5	0.2
GADW	24.6	262.0	0.1	WILL	76.3	170.0	0.3
GRYE	3.9	11.0	0.0	WIPH	117.4	272.0	0.4

36 Salt Wells Flat WHA*

Description: The survey area includes all established management units and outflow areas that are a part of Salt Wells Flat WHA. Managed by BLM.

Primary Habitat: Salt Marsh; Saltwater Shorelines, Beaches and Playas

Area Size (ha): 1659.8

Estimated Area Covered by Survey (ha): 663.9

Years Surveyed: 5

Detection Rates: Visibility on the open mud flats is 100%. At the ponds tall, emergent vegetation blocked visibility—could only see 65%. Access is good and visibility could be increased from an observation tower. Mud is very soft so it is difficult to walk out into the area.

Species	Mean	Peak	Birds/ha	Species	Mean	Peak	Birds/ha
AGWT	6.0	35.5	0.0	GTBH	1.2	4.0	0.0
AMAV	16.1	318.0	0.0	KILL	9.5	20.0	0.0
AMCO	0.0	13.5	0.0	LBCU	10.7	19.8	0.0
AMWI	0.5	4.0	0.0	LBDO	1.7	151.0	0.0
AWPE	0.2	9.5	0.0	LESA	0.4	2.0	0.0
BASA	1.2	25.0	0.0	LESC	1.8	4.0	0.0
BBPL	0.2	0.5	0.0	LEYE	0.9	8.0	0.0
BCNH	0.1	1.0	0.0	MAGO	0.0	2.0	0.0
BLTE	0.0	6.0	0.0	MALL	4.2	67.0	0.0
BNST	8.0	98.0	0.0	NOPI	6.9	62.8	0.0
BUFF	0.5	1.5	0.0	NSHO	1.6	327.0	0.0
BWTE	1.4	35.0	0.0	PBGR	0.0	0.3	0.0
CAEG	0.0	0.0	0.0	RBGU	0.0	10.0	0.0
CAGO	5.4	18.0	0.0	REDH	1.5	14.5	0.0
CAGU	164.8	1715.3	0.2	RPHA	0.0	49.0	0.0
CANV	0.6	3.0	0.0	RUDU	0.6	3.0	0.0
CATE	0.0	0.5	0.0	SACR	0.3	2.0	0.0
CITE	5.6	60.0	0.0	SAND	0.0	0.0	0.0
CLGR	0.0	0.0	0.0	SNEG	0.2	0.7	0.0
COGO	0.8	4.0	0.0	SNPL	72.2	140.3	0.1
DCCO	0.0	0.0	0.0	SPSA	0.1	0.5	0.0
EAGR	0.3	1.0	0.0	WEGR	0.0	0.0	0.0
FOTE	0.0	0.0	0.0	WESA	24.3	73.0	0.0
FRGU	0.4	31.5	0.0	WFIB	17.4	106.0	0.0
GADW	10.5	38.0	0.0	WILL	34.5	92.5	0.1
GRYE	1.7	12.0	0.0	WIPH	21.8	119.5	0.0

37 *Bear River Bay*

Description: Bear River Bay in an open water area between the railroad causeway on the south and Bear River NWR on the north. It was surveyed from an airplane in east-west running transects spaced one mile apart. Observers counted birds on both sides of the plane out to 1/8 mile. To extrapolate to the whole area, transect counts were multiplied by four. Public access.

Primary Habitat: Fresh Water; Freshwater Wetlands

Area Size (ha): 16467.3

Estimated Area Covered by Survey (ha): 16467.3

Years Surveyed: 5

Detection Rates: It is difficult to count and identify birds while flying at speeds of 80+ mph. It is also very difficult to see small birds. Survey accuracy in this area is not good.

<u>Species</u>	<u>Mean</u>	<u>Peak</u>	<u>Birds/ha</u>	<u>Species</u>	<u>Mean</u>	<u>Peak</u>	<u>Birds/ha</u>
AGWT	3029.8	7492.8	0.2	GTBH	13.2	83.2	0.0
AMAV	2628.8	5318.4	0.2	KILL	0.0	0.0	0.0
AMCO	2325.8	5819.2	0.1	LBCU	0.0	2.0	0.0
AMWI	125.7	268.0	0.0	LBDO	2248.5	12535.0	0.1
AWPE	11465.8	26230.4	0.7	LESA	0.0	0.0	0.0
BASA	0.0	0.0	0.0	LESC	212.3	744.0	0.0
BBPL	9.3	46.7	0.0	LEYE	0.0	0.0	0.0
BCNH	4.4	42.4	0.0	MAGO	16.6	323.2	0.0
BLTE	1.3	6.4	0.0	MALL	373.4	935.0	0.0
BNST	890.2	4986.4	0.1	NOPI	6211.9	17669.6	0.4
BUFF	6.9	32.0	0.0	NSHO	2937.8	6927.2	0.2
BWTE	0.0	0.0	0.0	PBGR	0.0	0.0	0.0
CAEG	0.0	0.0	0.0	RBGU	803.2	1556.0	0.0
CAGO	2355.8	8499.2	0.1	REDH	3032.9	7720.8	0.2
CAGU	8340.1	13740.0	0.5	RPHA	8.3	1027.0	0.0
CANV	8.3	26.7	0.0	RUDU	653.2	1038.7	0.0
CATE	29.8	118.4	0.0	SACR	0.1	1.6	0.0
CITE	59.6	236.8	0.0	SAND	1.3	6.7	0.0
CLGR	0.0	0.0	0.0	SNEG	54.3	110.4	0.0
COGO	365.3	1798.7	0.0	SNPL	0.0	0.0	0.0
DCCO	130.6	302.4	0.0	SPSA	0.1	0.8	0.0
EAGR	1342.0	3213.3	0.1	WEGR	804.7	3024.0	0.0
FOTE	62.4	257.0	0.0	WESA	0.0	0.0	0.0
FRGU	1412.7	3752.8	0.1	WFIB	787.1	2121.6	0.0
GADW	413.0	1580.0	0.0	WILL	1.9	6.7	0.0
GRYE	0.0	0.0	0.0	WIPH	6945.6	33638.4	0.4

38 *Ogden Bay*

Description: We surveyed the open water area of the bay between Antelope Island State Park causeway to the south and the railroad causeway to the north. WBS areas bound Ogden Bay to the east (areas 19, 20, 21, and 22); and lines connecting Promontory Point, Fremont Island, and Antelope Island bound this area to the west. The survey was done from an airplane in east-west running transects spaced one mile apart. Observers counted birds on both sides of the plane out to 1/8 mile. To extrapolate to the whole area, transect counts were multiplied by four. This area provides public access.

Primary Habitat: Salt Water

Area Size (ha): 20679.6

Estimated Area Covered by Survey (ha): 20679.6

Years Surveyed: 5

Detection Rates: It is difficult to count and identify birds while flying at speeds of 80+ mph. It is also very difficult to see small birds. Survey accuracy in this important area is not good. An observer counts out 1/8 mile on either side of the plane.

<u>Species</u>	<u>Mean</u>	<u>Peak</u>	<u>Birds/ha</u>	<u>Species</u>	<u>Mean</u>	<u>Peak</u>	<u>Birds/ha</u>
AGWT	0.2	0.8	0.0	GTBH	2.0	10.7	0.0
AMAV	475.6	1949.6	0.0	KILL	0.0	0.0	0.0
AMCO	0.8	10.0	0.0	LBCU	0.0	1.0	0.0
AMWI	0.0	0.0	0.0	LBDO	0.0	0.0	0.0
AWPE	13.4	64.0	0.0	LESA	0.0	0.0	0.0
BASA	0.0	0.0	0.0	LESC	62.1	169.3	0.0
BBPL	0.3	1.3	0.0	LEYE	0.0	0.0	0.0
BCNH	0.0	0.0	0.0	MAGO	0.9	9.0	0.0
BLTE	0.4	1.6	0.0	MALL	0.2	0.8	0.0
BNST	32.1	240.0	0.0	NOPI	121.5	573.0	0.0
BUFF	0.3	1.3	0.0	NSHO	681.6	1964.0	0.0
BWTE	0.0	0.0	0.0	PBGR	0.0	0.0	0.0
CAEG	0.0	0.0	0.0	RBGU	551.4	1418.4	0.0
CAGO	636.8	8019.2	0.0	REDH	13.5	98.4	0.0
CAGU	14645.4	56801.6	0.7	RPHA	309.7	794.7	0.0
CANV	0.0	0.0	0.0	RUDU	14.7	68.0	0.0
CATE	0.1	1.0	0.0	SACR	0.0	0.0	0.0
CITE	0.5	4.0	0.0	SAND	0.0	0.0	0.0
CLGR	0.0	0.0	0.0	SNEG	1.3	12.0	0.0
COGO	2.1	10.7	0.0	SNPL	0.0	0.0	0.0
DCCO	0.8	13.0	0.0	SPSA	0.0	0.0	0.0
EAGR	85164.2	149604.0	4.1	WEGR	10.1	131.0	0.0
FOTE	1.1	5.0	0.0	WESA	0.0	0.0	0.0
FRGU	3714.3	8890.4	0.2	WFIB	21.7	100.0	0.0
GADW	0.3	21.3	0.0	WILL	0.2	6.7	0.0
GRYE	0.0	0.0	0.0	WIPH	17084.8	26650.4	0.8

39 Farmington Bay

Description: We surveyed the open water area of the bay between the old Antelope Island causeway on the south and the new Antelope Island State Park causeway on the north. The survey was done from an airplane in east-west running transects spaced one mile apart. Observers counted birds on both sides of the plane out to 1/8 mile. To extrapolate to the whole area, transect counts were multiplied by four. The area has public access.

Primary Habitat: Salt Water; Saltwater-Freshwater Interface

Area Size (ha): 28719.6

Estimated Area Covered by Survey (ha): 28719.6

Years Surveyed: 5

Detection Rates: It is difficult to count and identify birds while flying at speeds of 80+ mph. It is also very difficult to see small birds. Survey accuracy in this important area is not good. An observer counts out 1/8 mile on either side of the plane. During 1999-2001 this area was surveyed only every 3rd period, alternating with Stansbury Island North.

<u>Species</u>	<u>Mean</u>	<u>Peak</u>	<u>Birds/ha</u>	<u>Species</u>	<u>Mean</u>	<u>Peak</u>	<u>Birds/ha</u>
AGWT	37.5	173.6	0.0	GTBH	1.5	9.3	0.0
AMAV	12441.4	51606.0	0.4	KILL	0.0	0.0	0.0
AMCO	12.9	80.0	0.0	LBCU	0.0	0.0	0.0
AMWI	13.5	50.0	0.0	LBDO	0.0	0.0	0.0
AWPE	22.0	100.0	0.0	LESA	0.0	0.0	0.0
BASA	0.0	0.0	0.0	LESC	15.1	45.3	0.0
BBPL	0.0	50.0	0.0	LEYE	0.0	0.0	0.0
BCNH	0.0	0.0	0.0	MAGO	4.3	26.0	0.0
BLTE	3.9	23.2	0.0	MALL	179.7	377.6	0.0
BNST	1033.1	4023.2	0.0	NOPI	513.6	2178.7	0.0
BUFF	0.0	0.0	0.0	NSHO	17278.7	34049.3	0.6
BWTE	0.0	0.0	0.0	PBGR	0.0	0.0	0.0
CAEG	0.0	0.0	0.0	RBGU	1248.4	2754.0	0.0
CAGO	48.4	200.0	0.0	REDH	171.7	769.6	0.0
CAGU	5927.2	37620.0	0.2	RPHA	268.4	805.3	0.0
CANV	0.0	0.0	0.0	RUDU	2.7	3054.7	0.0
CATE	1.8	24.0	0.0	SACR	0.0	0.0	0.0
CITE	0.8	4.0	0.0	SAND	0.0	0.0	0.0
CLGR	0.0	0.0	0.0	SNEG	1.4	8.0	0.0
COGO	1.8	5.3	0.0	SNPL	0.0	0.0	0.0
DCCO	6.4	56.0	0.0	SPSA	0.0	0.0	0.0
EAGR	10168.5	16476.0	0.4	WEGR	4.8	24.0	0.0
FOTE	11.2	57.3	0.0	WESA	0.0	0.0	0.0
FRGU	9679.7	30230.0	0.3	WFIB	80.7	220.0	0.0
GADW	22.0	41.3	0.0	WILL	0.0	5.3	0.0
GRYE	0.0	0.0	0.0	WIPH	1231.0	10481.6	0.0

40 *Magcorp*

Description: This area runs along the Magcorp (currently called US Magnesium Corporation of Salt Lake City) dike road from the west GSL shoreline to Badger and Stansbury Islands. Pond 1N designates Magcorp’s solar pond “1 North.” It is the first pond to receive brine from the GSL and has approximately twice the salinity of the lake. The survey was conducted by driving the 11-mile length of the dike (western margin to Stansbury Island) and counting birds on the south side to the distance where species may be identified. Pond 0 designates the GSL immediately north of the Magcorp dike and is the source of water drawn into Magcorp’s solar ponds. Birds are counted on the north side along the length of the dike. There is no public access.

Primary Habitat: Rocky Shorelines and Levees; Saltwater Shorelines, Beaches and Playas

Area Size (ha): 752.0

Estimated Area Covered by Survey (ha): 752.0

Years Surveyed: 4

Detection Rates: Visibility is generally good.

<u>Species</u>	<u>Mean</u>	<u>Peak</u>	<u>Birds/ha</u>	<u>Species</u>	<u>Mean</u>	<u>Peak</u>	<u>Birds/ha</u>
AGWT	0.4	1.8	0.0	GTBH	0.2	1.3	0.0
AMAV	2323.5	8908.0	3.1	KILL	0.4	3.0	0.0
AMCO	0.0	0.0	0.0	LBCU	1.8	7.3	0.0
AMWI	0.0	0.0	0.0	LBDO	0.0	0.0	0.0
AWPE	0.0	0.0	0.0	LESA	285.4	1180.8	0.4
BASA	0.0	14.3	0.0	LESC	0.9	2.3	0.0
BBPL	0.1	0.7	0.0	LEYE	0.0	0.0	0.0
BCNH	0.1	0.8	0.0	MAGO	0.0	7.7	0.0
BLTE	0.0	0.0	0.0	MALL	0.8	4.0	0.0
BNST	0.7	6.0	0.0	NOPI	0.0	0.0	0.0
BUFF	0.0	0.0	0.0	NSHO	0.0	0.0	0.0
BWTE	0.0	6.0	0.0	PBGR	0.0	0.0	0.0
CAEG	0.0	0.0	0.0	RBGU	0.0	0.0	0.0
CAGO	0.1	2.5	0.0	REDH	0.0	0.0	0.0
CAGU	2437.4	8174.0	3.2	RPHA	1258.9	2400.7	1.7
CANV	0.0	0.0	0.0	RUDU	0.8	2.0	0.0
CATE	0.0	0.0	0.0	SACR	0.0	0.0	0.0
CITE	0.5	2.7	0.0	SAND	12.9	50.0	0.0
CLGR	0.0	0.0	0.0	SNEG	0.0	0.0	0.0
COGO	0.0	0.0	0.0	SNPL	0.0	0.7	0.0
DCCO	0.0	0.0	0.0	SPSA	0.0	0.0	0.0
EAGR	376.6	1353.3	0.5	WEGR	1.3	10.0	0.0
FOTE	0.0	0.0	0.0	WESA	311.5	1078.0	0.4
FRGU	92.9	821.0	0.1	WFIB	1.0	5.0	0.0
GADW	0.7	4.7	0.0	WILL	0.1	3.3	0.0
GRYE	0.2	3.0	0.0	WIPH	36082.1	119789.0	48.0

41 *New State Duck Club**

Description: The area is within property boundaries of New State Inc., bounded by the outer dike on the north, the east channel, Margetts dike on the south and the Salt Lake City sewage canal on the west. A total count was made during travel on the canals, and at ponds along the route.

Primary Habitat: Freshwater Wetlands

Area Size (ha): 1200.2

Estimated Area Covered by Survey (ha): 600.1

Years Surveyed: 2

Detection Rates: Visibility is not good. There is much emergent vegetation obstructing vision and some ponds are very large with difficult viewing distances. Counts from this area are very conservative.

<u>Species</u>	<u>Mean</u>	<u>Peak</u>	<u>Birds/ha</u>	<u>Species</u>	<u>Mean</u>	<u>Peak</u>	<u>Birds/ha</u>
AGWT	3419.0	8985.0	5.7	GTBH	16.5	39.0	0.0
AMAV	380.6	1236.0	0.6	KILL	4.4	40.0	0.0
AMCO	1490.7	3988.0	2.5	LBCU	0.0	0.0	0.0
AMWI	107.2	415.0	0.2	LBDO	157.9	485.0	0.3
AWPE	100.7	325.0	0.2	LESA	0.0	0.0	0.0
BASA	0.0	0.0	0.0	LESC	163.7	560.0	0.3
BBPL	0.1	18.5	0.0	LEYE	0.1	2.0	0.0
BCNH	7.7	32.0	0.0	MAGO	0.0	11.5	0.0
BLTE	0.0	0.0	0.0	MALL	2489.1	5579.5	4.1
BNST	84.7	197.0	0.1	NOPI	910.7	2115.0	1.5
BUFF	1.6	5.0	0.0	NSHO	2944.8	7830.0	4.9
BWTE	1.0	8.0	0.0	PBGR	10.9	19.5	0.0
CAEG	0.0	0.0	0.0	RBGU	4.2	21.0	0.0
CAGO	100.0	323.0	0.2	REDH	299.7	1290.5	0.5
CAGU	132.1	421.0	0.2	RPHA	302.0	1204.0	0.5
CANV	12.7	26.0	0.0	RUDU	873.8	2150.0	1.5
CATE	0.2	2.0	0.0	SACR	1.2	9.0	0.0
CITE	2151.7	5402.0	3.6	SAND	0.0	0.0	0.0
CLGR	0.0	0.0	0.0	SNEG	72.6	131.5	0.1
COGO	0.2	1.0	0.0	SNPL	0.0	0.0	0.0
DCCO	17.5	53.0	0.0	SPSA	0.0	0.0	0.0
EAGR	0.9	613.5	0.0	WEGR	6.4	33.0	0.0
FOTE	12.1	33.0	0.0	WESA	17.5	51.0	0.0
FRGU	27.2	831.5	0.0	WFIB	198.8	297.0	0.3
GADW	5454.7	17207.0	9.1	WILL	10.8	50.0	0.0
GRYE	7.5	78.5	0.0	WIPH	8.3	516.5	0.0

42 *East Farmington Bay*

Description: In this survey area we conducted a total count of all waterbird use areas visible from the following route. Travel south from Glover Lane and 650 West to dead end, return back to Glover Lane and Pipeline Road, and travel south along the Pipeline Road to Parrish Lane. This road parallels the railroad tracks on the west side. At Parrish Lane, travel east to 1250 West, then turn north and continue on to dead end pond. Return back to Pipeline Road and travel south to Porter Lane. Turn west at the landfill (some of this section will be residential and for travel purposes only). We surveyed upland drainages here, but not the large pond to the west and north. We turned west at 1600 North and continued along South Canal Road, bordering the South Bountiful Landfill to the large pond. The pond and associated wetlands were counted, and we returned back to the 1600 North and 1100 West intersection and traveled north on 1100 West to 1200 North. Wetlands near the road leading west to the sewer plant were surveyed and we returned back to 1100 West and 1200 North and traveled south on 1100 West to 500 South, and then west to New State Duck Club road. We turned north at the gate on to berm to dead end while counting both sides of the berm road. There is public access.

Primary Habitat: Lakeside Uplands; Freshwater Wetlands

Area Size (ha): 2035.6

Estimated Area Covered by Survey (ha): 2035.6

Years Surveyed: 3

Detection Rates: Visibility is obstructed in some areas.

<u>Species</u>	<u>Mean</u>	<u>Peak</u>	<u>Birds/ha</u>	<u>Species</u>	<u>Mean</u>	<u>Peak</u>	<u>Birds/ha</u>
AGWT	3.0	7.3	0.0	GTBH	4.9	57.0	0.0
AMAV	10.0	107.0	0.0	KILL	8.0	25.7	0.0
AMCO	0.1	64.5	0.0	LBCU	0.1	0.7	0.0
AMWI	0.0	2.7	0.0	LBDO	3.5	24.3	0.0
AWPE	30.2	109.7	0.0	LESA	0.8	31.7	0.0
BASA	0.0	0.0	0.0	LESC	8.3	30.0	0.0
BBPL	0.9	3.0	0.0	LEYE	0.7	6.7	0.0
BCNH	0.1	0.5	0.0	MAGO	0.0	1.0	0.0
BLTE	0.0	0.0	0.0	MALL	8.6	41.5	0.0
BNST	4.4	20.0	0.0	NOPI	1.6	9.3	0.0
BUFF	0.0	0.0	0.0	NSHO	0.0	40.5	0.0
BWTE	0.0	4.5	0.0	PBGR	0.2	1.0	0.0
CAEG	1.6	17.7	0.0	RBGU	0.0	0.0	0.0
CAGO	64.9	195.7	0.0	REDH	0.0	15.0	0.0
CAGU	129.4	496.0	0.1	RPHA	0.0	0.7	0.0
CANV	7.8	27.0	0.0	RUDU	0.5	2.0	0.0
CATE	0.1	1.7	0.0	SACR	0.9	4.0	0.0
CITE	3.0	46.0	0.0	SAND	0.0	0.0	0.0
CLGR	0.0	0.3	0.0	SNEG	5.8	54.5	0.0
COGO	0.1	0.7	0.0	SNPL	1.0	10.3	0.0
DCCO	1.4	4.5	0.0	SPSA	0.0	0.7	0.0
EAGR	0.2	25.3	0.0	WEGR	1.1	2.7	0.0
FOTE	2.6	9.7	0.0	WESA	0.3	7.0	0.0
FRGU	0.6	34.0	0.0	WFIB	33.6	619.3	0.0
GADW	0.0	12.5	0.0	WILL	0.9	4.0	0.0
GRYE	0.6	5.0	0.0	WIPH	0.0	550.0	0.0

43 *Deardens Knoll*

Description: Three points were identified on the western shore, south of the railroad dike. In 1999, some bird counts outside of the points were included. In 2000 and 2001 only the point samples were surveyed. As most of the shoreline between points was unsuitable for waterbirds, these points were grouped together and regarded as a total count as viewed from three vantage points. Access is restricted through US Air Force property.

Primary Habitat: Saltwater Shorelines, Beaches and Playas; Salt Water

Area Size (ha): 475.6

Estimated Area Covered by Survey (ha): 475.6

Years Surveyed: 3

Detection Rates: Several places along the transect it is necessary to drive around rock outcrops that prevent visibility of the water, but viewing is good at the point samples.

<u>Species</u>	<u>Mean</u>	<u>Peak</u>	<u>Birds/ha</u>	<u>Species</u>	<u>Mean</u>	<u>Peak</u>	<u>Birds/ha</u>
AGWT	0.0	0.0	0.0	GTBH	0.0	0.7	0.0
AMAV	835.7	2621.0	1.8	KILL	0.2	1.0	0.0
AMCO	0.0	0.0	0.0	LBCU	0.2	1.0	0.0
AMWI	0.0	0.0	0.0	LBDO	0.1	0.5	0.0
AWPE	0.4	1.0	0.0	LESA	0.0	0.0	0.0
BASA	0.0	0.0	0.0	LESC	0.0	0.0	0.0
BBPL	0.0	0.0	0.0	LEYE	0.0	0.0	0.0
BCNH	0.0	0.0	0.0	MAGO	0.0	0.0	0.0
BLTE	0.0	0.0	0.0	MALL	0.0	0.0	0.0
BNST	0.8	3.7	0.0	NOPI	0.1	0.7	0.0
BUFF	0.0	0.0	0.0	NSHO	0.0	0.0	0.0
BWTE	0.0	0.0	0.0	PBGR	0.0	0.0	0.0
CAEG	0.0	0.0	0.0	RBGU	0.0	1.0	0.0
CAGO	0.0	0.0	0.0	REDH	0.0	0.0	0.0
CAGU	453.4	1331.0	1.0	RPHA	0.0	1500.0	0.0
CANV	0.0	0.0	0.0	RUDU	0.0	0.0	0.0
CATE	0.0	0.0	0.0	SACR	0.0	0.0	0.0
CITE	0.0	0.0	0.0	SAND	0.0	0.0	0.0
CLGR	0.0	0.0	0.0	SNEG	0.0	0.3	0.0
COGO	0.0	0.0	0.0	SNPL	0.0	0.3	0.0
DCCO	0.0	0.0	0.0	SPSA	0.0	1.0	0.0
EAGR	916.7	3333.3	1.9	WEGR	0.0	0.0	0.0
FOTE	0.0	0.0	0.0	WESA	45.0	270.0	0.1
FRGU	4.7	28.3	0.0	WFIB	0.0	0.0	0.0
GADW	0.0	0.0	0.0	WILL	1.0	5.0	0.0
GRYE	0.0	0.0	0.0	WIPH	1796.9	3600.0	3.8

44 *Jordan River*

Description: This area consists of agricultural land that can be flooded and used by waterbirds when lake elevations are high. Since the property is private, access is restricted. It was surveyed by transect from an airplane.

Primary Habitat: Lakeside Uplands

Area Size (ha): 290.7

Estimated Area Covered by Survey (ha): 230.7

Years Surveyed: 2

Detection Rates: It is difficult to count and identify birds while flying at speeds of 80+ mph. It is also very difficult to see small birds. Survey accuracy is moderate, as there are few birds. An observer counts out 1/8 mile on either side of the plane. This area was surveyed only every 3rd period, alternating with Stansbury Island North.

<u>Species</u>	<u>Mean</u>	<u>Peak</u>	<u>Birds/ha</u>	<u>Species</u>	<u>Mean</u>	<u>Peak</u>	<u>Birds/ha</u>
AGWT	0.0	0.0	0.0	GTBH	0.0	0.0	0.0
AMAV	1.0	5.0	0.0	KILL	0.0	0.0	0.0
AMCO	30.8	145.0	0.1	LBCU	0.0	0.0	0.0
AMWI	3.1	25.0	0.0	LBDO	0.0	0.0	0.0
AWPE	0.6	3.0	0.0	LESA	0.0	0.0	0.0
BASA	0.0	0.0	0.0	LESC	0.0	0.0	0.0
BBPL	0.0	0.0	0.0	LEYE	0.0	0.0	0.0
BCNH	0.0	0.0	0.0	MAGO	0.0	0.0	0.0
BLTE	0.0	0.0	0.0	MALL	5.3	31.0	0.0
BNST	0.0	0.0	0.0	NOPI	0.1	1.0	0.0
BUFF	0.0	0.0	0.0	NSHO	2.5	20.0	0.0
BWTE	0.0	0.0	0.0	PBGR	0.0	0.0	0.0
CAEG	0.8	5.0	0.0	RBGU	0.0	0.0	0.0
CAGO	25.5	74.0	0.1	REDH	0.9	7.0	0.0
CAGU	1.0	4.0	0.0	RPHA	0.0	0.0	0.0
CANV	0.0	0.0	0.0	RUDU	0.0	0.0	0.0
CATE	0.0	0.0	0.0	SACR	0.0	0.0	0.0
CITE	1.0	7.0	0.0	SAND	0.0	0.0	0.0
CLGR	0.0	0.0	0.0	SNEG	0.8	4.0	0.0
COGO	0.0	0.0	0.0	SNPL	0.0	0.0	0.0
DCCO	0.0	0.0	0.0	SPSA	0.0	0.0	0.0
EAGR	3.8	30.0	0.0	WEGR	0.3	1.0	0.0
FOTE	0.0	0.0	0.0	WESA	0.0	0.0	0.0
FRGU	0.4	2.0	0.0	WFIB	7.1	43.0	0.0
GADW	2.3	15.0	0.0	WILL	0.1	1.0	0.0
GRYE	0.0	0.0	0.0	WIPH	0.0	0.0	0.0