APPENDIX A

Great Salt Lake Wetlands Synoptic Survey,
1997-2000

Table A-1. Summary of Samples Collected by Site and by Year, Great Salt Lake Contaminants Assessment, 1996-2000 (*page 1 of 4*).

Location	Loc. Code	Year	# Samples	Matrix	Analytes
Great Salt Lake Open Water					
Gilbert Bay USGS Sites	**GU**	1996	10	SED	MET
			12	INVERT (brine shrimp)	MET
			4	INVERT (brine shrimp cysts)	MET
Gilbert Bay FWS Sites	**GG**	1997	3	EAGR liver (comp)	MET, D/F, OC
		1998	16	EAGR liver (indiv)	MET
		1999	28	SED	MET
			28	INVERT (brine shrimp)	MET
			4	INVERT (brine shrimp cysts)	MET
		2000	28	INVERT (brine shrimp)	MET
			24	EAGR (indiv)	MET
C7 Ditch "Delta"	**GC**	**2000**	9	SED	MET
Goggin Drain "Delta"	**GG**	**2000**	4	SED	MET
Lee Creek "Delta	**GL**	**2000**	5	SED	MET
Antelope Island					
Antelope Island East	**AE**	1996	1	SED	MET, OC, TPH
			1	INVERT (brine fly larvae)	MET, OC
			3	EGG	MET (3), OC (1)
Antelope Island Offshore	**AO**	1996	1	SED	MET, D/F, OC, TPH
			1	INVERT (brine fly)	MET, OC
Antelope Island South	**AS**	1996	1	SED	MET, OC, TPH
			1	INVERT (anisoptera)	MET, OC
			1	EGG	MET, OC
Great Salt Lake South Shore					
Saltair/GSL State Park	**LS**	1996	1	INVERT (m-benth)	MET, OC
			3	EGG	MET (3), OC (1)
		1997	2	SED	MET, OC, TPH
			3	INVERT (m-benth+Chiron)	MET
			9	EGG	MET
C-7 Ditch	**LC**	1996	1	SED	MET, OC, TPH
			1	INVERT (Chiron)	MET, OC
			3	FISH (carp, comp)	MET, OC
			6	FISH (carp, indiv)	AChE, EROD
			13	FISH (Carp, 8F, 5M)	ENDOCRINE
		1997	1	SED	MET
			1	INVERT (m-benth)	MET
			3	FISH (carp, comp)	MET (3), OC (1)
			6	FISH (carp, indiv)	AChE
			7	FISH (Carp, 5F, 2M)	ENDOCRINE

Location	Loc. Code	Year	# Samples	Matrix	Analytes
GSL South Shore Wetlands					
Inland Sea Shorebird	**SI**	1996	1	INVERT (Chiron)	MET, OC
Reserve		1997	1	EGG	MET, OC
Gilmore Sancturary	**SG**	1996	3	SED	MET, OC, TPH
			1	INVERT (Chiron)	Se only
			1	EGG	MET, OC
		1997	2	SED	MET, OC
Airport Mitigation Site	**SA**	1997	2	SED	MET, OC, TPH
			2	INVERT (chiron+anisopetera)	MET
			3	FISH (carp, comp)	MET (3), OC (2)
			6	FISH (carp, indiv)	AChE, EROD
			3	FISH (Carp, indiv)	PAH
			19	FISH (Carp, 9F, 10M)	ENDOCRINE
			6	EGG	MET (6) OC (3)
Goggin Drain (Inflow)	**SD**	1996	1	SED	MET, OC, TPH
			1	INVERT (m-benth)	MET, OC
			3	FISH (carp, comp)	MET (3), OC (3)
			6	FISH (carp, indiv)	AChE, EROD
			3	FISH (Carp, indiv)	PAH metab.
			11	FISH (Carp, 6F, 5M)	ENDOCRINE
North Point Canal	**SN**	1996	2	SED	MET, OC, TPH
(Inflow)		1997	1	INVERT (m-benth)	MET
GSL Industrial Area Wetlands					
Petrochem Ponds	**IP**	1997	1	SED	MET, OC, TPH
			1	INVERT (chiron)	MET, OC
			2	EGG	MET, OC
Beck Hotsprings	**IB**	1996	1	SED	MET, OC, TPH
			1	INVERT (corixids)	MET, OC
			3	EGG	MET (3), OC (1)
Northwest Oil Drain	**IO**	1996	2	SED	MET, OC, TPH
			1	INVERT (chiron)	OC
			1	FISH (Gambusia,comp)	MET, OC
			3	FISH (Carp, comp)	MET (2), OC (1)
Salt Lake City	**IS**	1996	1	SED	MET, OC, TPH
Wastewater Treatment			1	INVERT (m-benth)	MET, OC
Plant Wetlands			3	EGG	MET (3), OC (1)
		1997	1	SED	MET, OC, TPH
			1	INVERT (chiron)	MET, OC
			3	EGG	MET, OC

Table A-1. Summary of Samples Collected by Site and by Year, Great Salt Lake Contaminants Assessment, 1996-2000 (*page 3 of 4*).

Location	Loc. Code	Year	# Samples	Matrix	Analytes
Farmington Bay Wetlands- South					
New State Duck Club	**FN**	1996	5	EGG	MET (5), OC (2)
Bountiful Ponds	**FP**	1997	1	SED	MET, OC, TPH
			1	INVERT (chiron)	MET
			3	FISH (carp, comp)	MET (3), OC (2)
			6	FISH (carp, indiv)	AChE, EROD
			13	FISH (Carp, 3F, 10M)	ENDOCRINE
			3	EGG	MET (3), OC (1)
State Canal	**FS**	1996	1	SED	MET, D/F, OC, TPH
			1	INVERT (m-benth)	MET, OC
			3	FISH (carp, comp)	MET, OC
			6	FISH (carp, indiv)	AChE, EROD
			20	FISH (Carp, 10F, 10M)	ENDOCRINE
			7	EGG	MET
		1997	3	FISH (carp, indiv)	AChE, PAH metab.
			6	FISH (carp, indiv)	EROD
			20	FISH (Carp, 10F, 10M)	ENDOCRINE
Farmington Bay WMA-	**FC**	1996	1	SED	MET, OC, TPH
Crystal Unit			1	INVERT (m-benth)	MET, OC
			6	EGG	MET (6) OC (3)
		1997	3	FISH (carp, comp)	MET (3), OC (1)
			4	Fish (Carp,indiv)	AChE, EROD
			3	Fish (Carp,indiv)	PAH metab.
			4	FISH (Carp, 2F, 2M)	ENDOCRINE
			6	EGG	MET (6) OC (2)
		2000	14	EGG	T-Hg , MeHg
			2	bird carcass	T-Hg, MeHg
Farmington Bay WMA-	**FU**	1997	3	FISH (carp, comp)	MET (3), OC (1)
Unit 1			6	FISH (carp, indiv)	AChE, EROD
			14	FISH (Carp, 6F, 8M)	ENDOCRINE
Oil Drain Delta	**FO**	1997	1	SED	MET, OC, TPH
			1	INVERT (chiron)	MET, OC, TPH
			3	EGG	MET (2), OC (1)
		2000	20	SED	MET, OC, PAH, TOC
Baer Creek	**FB**	1997	1	SED	MET, OCs, TPH
			1	INVERT (m-benth)	MET
Kaysville Marsh	**FK**	1996	1	SED	MET, OC, TPH
			1	INVERT (chiron)	MET, OC
			1	FISH (Gambusia,comp)	MET
			7	EGG	MET (7), OCs (2)
		1997	1	SED	OC
			3	EGG	OC

Location	Loc. Code	Year	# Samples	Matrix	Analytes
Ogden Bay					
Howard Slough	**OH**	1997	1	SED	MET, OC, TPH
			1	INVERT (chiron)	MET, OC
			3	FISH (carp, comp)	MET (3), OC (2)
			6	FISH (Carp, indiv)	AChE, EROD
			3	FISH (Carp, indiv)	PAH metab.
			17	FISH (Carp, 9F, 8M)	ENDOCRINE
			6	EGG	MET (6), OC (2)
Ogden Bay- South Canal	**OC**	1996	1	SED	MET, D/F, OC, TPH
			3	FISH (carp, comp)	MET (3), OC (2)
			6	FISH (Carp, indiv)	AChE, EROD
Ogden Bay WMA-	**OS**	1996	1	SED	MET, OC, TPH
South			1	INVERT (m-benth)	MET, OC
			6	EGG	MET (6), OC (2)
			9	FISH (Carp, 5F, 4M)	ENDOCRINE
Ogden Bay WMA-	**ON**	1996	2	SED	MET, OC, TPH
North			1	INVERT (chiron)	MET, OC
			5	EGG	MET (5), OC (1)
		1997	1	FISH (carp, comp)	MET, OC
			12	FISH (Carp, 7F, 5M)	ENDOCRINE
		2000	3	SED	PAH, TOC
			2	INVERT (Chiron)	PAH
			15	EGG (BASW, comp)	PAH
			14	Nestling (BASW, comp)	PAH
			1	GI (BASW, comp)	PAH
Bear River					
Bear River Migratory	**BR**	2000	3	SED	PAH, TOC
Bird Refuge			4	INVERT (m-benth)	PAH
(Reference site for			15	EGG (BASW, comp)	PAH
ON 2000 samples)			16	Nestling (BASW, comp)	PAH

ABBREVIATIONS:

Matrices/Species sampled

SED= Sediments

INVERT= Invertebrate
m-benth=Mixed Benthic
Chiron=Chironomids
EGG= Avian Egg
EAGR= Eared Grebe
BASW=Barn Swallow

Sample Types

Comp=Composite Sample
Indiv= Individual Sample

(#F, #M)=Number of females, number of males

GI= Gastrointestinal Tract Contents

Analytes

D/F=Dioxins & Furans

OC=Organochlorines

TPH= Total Petroleum Hydrocarbons

PAH=Polyaromatic Hydrocarbons
T-Hg=Total Mercury

MeHg=Methyl Mercury
Se= Selenium

Biomarkers

AChE= Acetyl Cholinesterase (in brain)
EROD= ethoxyresorufin-O-deethylase (in liver)
ENDOCRINE= Endocrine endpoints (E2, 11KT, VIT, Gonad wgt.) (in blood)
E2=17β-estradiol
11KT=11-ketotestosterone
VIT= Vitellogenin

PAH metab= PAH metabolites (in bile)

Table A-2. Trace Elements in Sediments, Great Salt Lake Wetlands Synoptic Survey, 1996-1997. Concentrations reported in milligrams per kilogram (mg/kg, ppm) dry weight; non-detected elements in samples shown in *italics*. *(Page 1 of 3)*

Sample Number	Sample Site Description	Sample Weight (grams)	Collection Date	% moisture	Al	As	B	Ba
Area #2: Antelope Island								
AISE2	Antelope Isl. Offshore (GA)	747	6/26/1996	69.8	2789	14.	175.	185.
AISE3	Antelope Island South (AS)	1062	6/26/1996	26.8	6743	1.8	11.3	32.4
AISE4	Antelope Island East (AE)	433	7/18/1996	50.5	6251	9.1	45.4	116.
Area #3: GSL South Shore								
C7SE1	C7 Ditch (LC)	877	5/5/1996	58.5	16260	46.7	51.7	182.
97C7SE1	C7 Ditch (LC)	1040	7/24/1997	38.1	11428	50.8	52.1	204.
97GSSE1	Saltair/GSL State Park (LS)	892	6/16/1997	63.2	4806	46.3	115.	198.
97SPSE2	Saltair/GSL State Park (LS)	808	6/23/1997	78.3	7320	44.6	46.	159.
Area #4: South Shore Wetlands								
97AMSE1	Airport Mitigation Site (SA)	945	6/18/1997	49.6	11252	6.34	33.3	129.
97AMSE2	Airport Mitigation Site (SA)	1107	6/18/1997	28.7	12839	7.63	36.	133.
NGSE1	Gillmor Sanctuary (SG)	1005	6/11/1996	38.9	15711	22.3	140.	196.
AUSE1	Gillmor Sanctuary (SG)	900	6/27/1996	45.0	18061	16.8	86.6	162.
AUSE2	Gillmor Sanctuary (SG)	610	6/27/1996	34.3	16499	25.7	268.	149.
97AUSE1	Gillmor Sanctuary (SG)	947	7/18/1997	38.7	17890	31.1	269.	149.
97AUSE2	Gillmor Sanctuary (SG)	888	7/22/1997	51.9	13469	18.	156.	118.
GDSE1	Goggin Drain (SD)	1018	6/11/1996	30.1	5683	8.4	< *10*	92.
NPSE1	North Point Canal (SN)	1033	6/27/1996	33.9	13148	11.2	38.6	125.
GSASE1	North Point Canal (SN)	790	7/29/1996	64.6	3807	49.6	151.	198.
Area #5: South Shore Industrially Impacted Wetlands								
BHSE1	Beck Hot Springs (IB)	819	6/11/1996	66.9	8268	16.8	74.	153.
ODSE1	Oil Drain Canal (IO)	766	8/21/1996	73.4	9125	12.3	31.8	379.
ODSE2	Oil Drain Canal (IO)	744	8/21/1996	70.5	11891	13.2	24.3	351.
WPSE1	SLC Sewage Treatment Plant (IS)	682	6/13/1996	81.6	10791	16.3	47.3	603.
97WPSE1	SLC Sewage Treatment Plant (IS)	888	6/24/1997	41.2	5402	5.74	13.3	91.1
97PCSE1	Petrochem Ponds (IP)	847	6/10/1997	51.4	7209	20.7	29.	124.
Area #6: Farmington Bay South								
CUSE1	FBWMA- Crystal Unit (FC)	927	6/10/1996	47.4	10956	22.2	129.	239.
SCSE1	State Canal (FS)	843	6/17/1996	60.7	16524	14.3	30.9	190.
97BPSE1	Bountiful Pond (FP)	913	8/8/1997	33.9	10875	3.47	15.8	100.
97OMSE1	NW Oil Drain Delta (FO)	1028	7/1/1997	41.0	7994	11.1	36.8	213.
Area #7: Farmington BayNorth								
KCSE1	Kaysville Marsh (FK)	957	8/20/1996	46.6	18360	9.7	28.3	173.
97BCSE1	Bair Creek (FB)	1118	7/7/1997	29.7	6645	2.15	12.5	54.2
Area #8: Ogden Bay								
97HSSE1	Howard Slough (OH)	803	6/30/1997	66.4	13311	14.2	25.8	246.
OSSE1	Ogden Bay WMA- So. (OS)	875	6/24/1996	50.8	10840	12.6	46.5	145.
OSSE2	Ogden Bay WMA- So. (OS)	854	6/7/1996	48.7	14213	10.3	34.1	168.
OBSE1	Ogden Bay WMA- N.h (ON)	769	6/7/1996	61.3	7279	9.4	13.5	138.
OBSE2	Ogden Bay WMA- N. (ON)	385	7/17/1996	73.6	12185	15.5	31.8	148.

Sample	Be	Cd	Cr	Cu	Fe	Hg	Mg	Mn	Mo	Ni
Area #2: Antelope Island										
AISE2	0.25	0.6	8.26	55.5	4034	0.07	16847	291	< *5.0*	18.4
AISE3	1.22	< *0.2*	22.6	58.8	18062	0.02	4456	182	< *5.0*	9.62
AISE4	0.77	0.4	13.7	36.6	14383	0.05	11817	285	< *5.0*	13.1
Area #3: GSL South Shore										
C7SE1	1.54	3.6	46.1	990.	19057	0.08	18366	397	48.8	30.3
97C7SE1	1.46	3.58	40.7	1205.	13514	0.201	18612	278	73.4	23.
97GSSE1	0.61	0.4	15.2	519.	6396	< *0.2*	20701	281	24.6	8.22
97SPSE2	0.906	1.09	21.8	1131.	12421	0.258	16771	234	77.5	12.1
Area #4: South Shore Wetlands										
97AMSE1	1.23	0.69	14.9	35.6	12401	< *0.2*	12105	293	< *5.0*	12.2
97AMSE2	1.38	0.35	15.3	27.9	13695	< *0.2*	18931	367	< *5.0*	14.7
NGSE1	1.46	0.8	20.8	89.7	16603	0.06	61689	440	< *5.0*	18.4
AUSE1	1.49	0.9	25.8	98.6	18405	0.08	39560	406	< *5.0*	19.2
AUSE2	1.36	0.6	21.3	149.	14953	0.06	64584	339	< *5.0*	16.4
97AUSE1	1.91	0.95	21.4	128.	16545	< *0.2*	64913	346	5.61	16.4
97AUSE2	1.56	0.78	17.5	90.3	13147	< *0.2*	54570	295	7.32	14.7
GDSE1	0.57	0.9	15.6	44.7	10506	0.04	9842	184	< *5.0*	9.61
NPSE1	1.3	0.9	22.2	60.4	16237	0.03	16892	379	< *5.0*	17.8
GSASE1	0.39	0.5	14.1	356.	5463	0.07	15048	226	16.7	12.1
Area #5: South Shore Industrially Impacted Wetlands										
BHSE1	1.18	1.2	16.3	68.9	9845	0.06	6975	520	< *5.0*	11.5
ODSE1	3.09	1.2	43.8	126.	12217	0.15	11202	312	< *5.0*	17.7
ODSE2	1.51	4	160.	306.	16290	1.52	11119	259	6.92	39.
WPSE1	0.91	8.1	183.	426.	14030	1.46	8500	236	101	56.
97WPSE1	0.691	1.06	24.5	52.3	8684	< *0.2*	7187	170	12.3	12.2
97PCSE1	2.37	2.77	22.4	162.	12450	0.208	21511	277	5.34	14.1
Area #6: Farmington Bay South										
CUSE1	0.92	1.3	25.	98.5	10513	0.31	45823	403	< *5.0*	13.9
SCSE1	1.74	1.2	41.8	124.	21527	0.28	18621	349	< *5.0*	26.6
97BPSE1	1.32	0.29	29.7	28.6	16255	< 0.2	11017	237	< *5.0*	21.1
97OMSE1	1.03	1.24	23.7	53.1	10252	0.232	18371	253	< *5.0*	13.5
Area #7: Farmington BayNorth										
KCSE1	1.77	1.2	30.	42.2	20577	0.08	12730	522	< *5.0*	21.
97BCSE1	0.782	<0.2	11.9	9.98	11919	< 0.2	6153	274	< *5.0*	9.58
Area #8: Ogden Bay										
97HSSE1	1.59	0.78	20.	28.7	13871	< 0.2	18817	452	< *5.0*	16.
OSSE1	1.07	2.9	18.5	58.1	12415	0.48	14387	499	< *5.0*	14.3
OSSE2	1.49	1.4	25.2	45.7	16705	0.27	14413	413	< *5.0*	18.4
OBSE1	0.8	2.2	14.5	36.	10846	0.46	9447	302	< *5.0*	12.2
OBSE2	1.33	2.3	20.	44.7	16315	0.47	14928	579	< *5.0*	19.1

Table A-2. Trace Elements in Sediments, Great Salt Lake Wetlands Synoptic Survey, 1996-1997. Concentrations reported in milligrams per kilogram (mg/kg, ppm) dry weight; non-detected elements in samples shown in italics. ***(Page 3 of 3)***

Sample Number	Sample Site Description	Pb		Se	Sr	V	Zn
Area #2: Antelope Island							
AISE2	Antelope Island Offshore (GA)	34.	<	*1*	1903.	9.21	58.9
AISE3	Antelope Island South (AS)	10.	<	*1*	75.4	17.2	49.8
AISE4	Antelope Island East (AE)	28.	<	*1*	570.	14.5	65.4
	Area #3: GSL South Shore						
C7SE1	C7 Ditch (LC)	58.		4	346.	45.6	407.
97C7SE1	C7 Ditch (LC)	62.6		6.48	1303.	33.9	342.
97GSSE1	Saltair/GSL State Park (LS)	46.7		2.17	2759.	13.	80.7
97SPSE2	Saltair/GSL State Park (LS)	108.		3.56	1001.	17.9	126.
Area #4: South Shore Wetlands							
97AMSE1	Airport Mitigation Site (SA)	38.1	<	*1*	235.	18.6	88.7
97AMSE2	Airport Mitigation Site (SA)	13.2	<	*1*	207.	21.8	61.3
NGSE1	Gillmor Sanctuary (SG)	99.	<	*1*	269.	32.3	138.
AUSE1	Gillmor Sanctuary (SG)	104.	<	*1*	343.	33.8	180.
AUSE2	Gillmor Sanctuary (SG)	62.	<	*1*	265.	30.9	106.
97AUSE1	Gillmor Sanctuary (SG)	44.1		1.79	138.	29.7	99.7
97AUSE2	Gillmor Sanctuary (SG)	57.5		2.79	249.	23.8	92.5
GDSE1	Goggin Drain (SD)	63.	<	*1*	109.	18.4	159.
NPSE1	North Point Canal (SN)	46.	<	*1*	217.	28.4	111.
GSASE1	North Point Canal (SN)	39.		1	2394.	13.1	75.1
Area #5: South Shore Industrially Impacted Wetlands					1903.	9.21	58.9
BHSE1	Beck Hot Springs (IB)	106.	<	*1*	1503.	16.5	154.
ODSE1	Oil Drain Canal (IO)	162.		1	1129.	19.1	289.
ODSE2	Oil Drain Canal (IO)	155.		2	357.	24.4	394.
WPSE1	SLC Sewage Treatment Plant (IS)	116.		5	560.	24.1	611.
97WPSE1	SLC Sewage Treatment Plant (IS)	37.4		1.2	205.	14.5	98.9
97PCSE1	Petrochem Ponds (IP)	364.		1.29	676.	16.8	588.
Area #6: Farmington Bay South							
CUSE1	FBWMA- Crystal Unit (FC)	126.	<	*1*	1172.	27.6	160.
SCSE1	State Canal (FS)	171.		1	253.	33.6	354.
97BPSE1	Bountiful Pond (FP)	19.5	<	*1*	164.	25.9	73.6
97OMSE1	NW Oil Drain Delta (FO)	59.7		1.78	1316.	15.5	147.
Area #7: Farmington BayNorth							
KCSE1	Kaysville Marsh (FK)	45.	<	*1*	112.	30.1	113.
97BCSE1	Bair Creek (FB)	5.	<	*1*	22.4	14.	40.4
Area #8: Ogden Bay							
97HSSE1	Howard Slough (OH)	38.		1.43	222.	17.4	105.
OSSE1	Ogden Bay WMA- South (OS)	386.	<	*1*	131.	17.2	516.
OSSE2	Ogden Bay WMA- South (OS)	134.	<	*1*	99.8	22.7	224.
OBSE1	Ogden Bay WMA- North (ON)	255.	<	*1*	86.6	14.4	313.
OBSE2	Ogden Bay WMA- North (ON)	229.	<	*1*	117.	21.5	288.

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Table A-3. Organic Chemicals in Sediments, Great Salt Lake Wetlands Synoptic Survey, 1996-1997. Non-DDT and DDT Organochlorines, Polychlorinated Biphenyls (PCBs), Total Petroleum Hydrocarbons (TPH), and Dioxins/Furans. *(Page 1 of 6)*

Sample Number	Sample Site Description	Collection Date	Sample Weight (grams)	% moisture	Aldrin	dieldrin
	Area #2: Antelope Island:					
AISE2	Antelope Island offshore (GA)	06/26/96	747	73.6	< 0.000187	**0.0004**
AISE4	Antelope Island East (AE)	07/18/96	433	52.9	< 0.000106	< 0.000106
AISE3	Antelope Island South (AS)	06/26/96	1062	28.3	< 6.85E-05	< 6.85E-05
	Area #3: GSL South Shore:					
C7SE1	C7 Ditch (LC)	05/05/96	877	59.5	< 0.000122	**0.0002**
97GSSE1	Saltair/GSL State Park (LS)	06/16/97	892	63.2	< 0.000677	< 0.000677
97SPSE2	Saltair/GSL State Park (LS)	06/23/97	808	78.3	< 0.00115	< 0.00115
	Area #4: South Shore Wetlands:					
97AMSE1	Airport Mitigation Site (SA)	06/18/97	945	49.6	< 0.000491	< 0.000491
97AMSE2	Airport Mitigation Site (SA)	06/18/97	1107	28.7	< 0.000346	< 0.000346
AUSE1	Gillmor Sanctuary (SG)	06/27/96	900	46.2	< 9.27E-05	0.000186
AUSE2	Gillmor Sanctuary (SG)	06/27/96	610	33.6	< 0.000075	< 0.000075
NGSE1	Gillmor Sanctuary (SG)	06/11/96	1005	42.1	< 8.57E-05	**0.0002**
97AUSE1	Gillmor Sanctuary (SG)	07/18/97	947	38.3	< 0.000404	< 0.000404
97AUSE2	Gillmor Sanctuary (SG)	07/22/97	888	51.9	< 0.000519	< 0.000519
GDSE1	Goggin Drain (SD)	06/11/96	1018	31.1	< 7.14E-05	**0.0001**
GSASE1	North Point Canal (SN)	07/29/96	790	65.1	< 0.000143	**0.0003**
NPSE1	North Point Canal (SN)	06/27/96	1033	39.4	< 8.13E-05	**0.0003**
	Area #5: South Shore Industrially Impacted Wetlands:					
BHSE1	Beck Hot Springs (IB)	06/11/96	819	70.9	< 0.000171	**0.0003**
ODSE1	Oil Drain Canal (IO)	08/21/96	766	77	< 0.00216	**0.0235**
ODSE2	Oil Drain Canal (IO)	08/21/96	744	66.4	< 0.00148	**0.0137**
97PCSE1	Petrochem Ponds (IP)	06/10/97	847	51.4	< 0.000509	< 0.000509
WPSE1	SLC Sewage Treatment Plant (IS)	06/13/96	682	89	< 0.00447	**0.0664**
97WPSE1	SLC Sewage Treatment Plant (IS)	06/24/97	888	41.2	< 0.000421	**0.0008**
	Area #6: Farmington Bay South:					
97BPSE1	Bountiful Pond (FP)	08/08/97	913	33.9	**0.0005**	**0.0009**
CUSE1	FBWMA- Crystal Unit (FC)	06/10/96	927	48.7	< 9.61E-05	**0.0002**
97OMSE1	NW Oil Drain Delta (FO)	07/01/97	1028	41	< 0.000423	**0.0016**
SCSE1	State Canal (FS)	06/17/96	843	69.5	< 0.000162	**0.0111**
	Area #7: Farmington BayNorth:					
97BCSE1	Bair Creek (FB)	07/07/97	1118	29.7	< 0.000354	< 0.000354
KCSE1	Kaysville Marsh (FK)	08/20/96	957	54.2	< 0.000107	**0.0011**
97KCSE1	Kaysville Marsh (FK)	06/04/97	871	50.5	< 0.000501	**0.0006**
	Area #8: Ogden Bay:					
97HSSE1	Howard Slough (OH)	06/30/97	803	66.4	< 0.000741	< 0.000741
OBSE1	Ogden Bay WMA- North (ON)	06/07/96	769	67.2	**0.0003**	**0.0003**
OBSE2	Ogden Bay WMA- North (ON)	07/17/96	385	74	< 0.000192	**0.0008**
OSSE1	Ogden Bay WMA- South (OS)	06/24/96	875	57	< 0.000116	**0.0005**
OSSE2	Ogden Bay WMA- South Canal (OC)	06/07/96	854	46.7	< 9.36E-05	**0.0004**

All values milligram per kilogram (parts per million) on a dry-weight basis

detected values are in presented in bold face type.

NA: Constituent not analyzed

Sample Number		endrin		alpha BHC		beta BHC		delta BHC		gamma BHC		alpha chlordane		gamma chlordane
AISE2	<	0.000187	<	0.000187	<	0.000187	<	0.000187		**0.0004**		**0.0042**	<	0.000187
AISE4	<	0.000106	<	0.000106	<	0.000106	<	0.000106		**0.0004**		**0.0013**		**0.0002**
AISE3	<	6.85E-05	<	6.85E-05	<	6.85E-05	<	6.85E-05		**0.0001**		**0.0001**	<	6.85E-05
C7SE1	<	0.000122	<	0.000122	<	0.000122	<	0.000122	<	0.000122		**0.0010**		**0.0005**
97GSSE1	<	0.000677	<	0.000677	<	0.000677	<	0.000677	<	0.000677	<	0.000677	<	0.000677
97SPSE2	<	0.00115	<	0.00115		**0.0090**	<	0.00115	<	0.00115	<	0.00115		**0.0012**
97AMSE1	<	0.000491	<	0.000491	<	0.000491	<	0.000491	<	0.000491	<	0.000491	<	0.000491
97AMSE2	<	0.000346	<	0.000346	<	0.000346	<	0.000346	<	0.000346	<	0.000346	<	0.000346
AUSE1	<	9.27E-05	<	9.27E-05	<	9.27E-05		**0.0002**		**0.0002**		**0.0006**		**0.0009**
AUSE2	<	0.000075	<	0.000075	<	0.000075	<	0.000075		**0.0002**		**0.0002**		**0.0002**
NGSE1	<	8.57E-05	<	8.57E-05	<	8.57E-05	<	8.57E-05	<	8.57E-05		**0.0002**		**0.0003**
97AUSE1	<	0.000404	<	0.000404	<	0.000404	<	0.000404	<	0.000404	<	0.000404	<	0.000404
97AUSE2	<	0.000519	<	0.000519	<	0.000519	<	0.000519	<	0.000519	<	0.000519	<	0.000519
GDSE1	<	7.14E-05	<	7.14E-05	<	7.14E-05	<	7.14E-05		**0.0001**		**0.0001**		**0.0001**
GSASE1	<	0.000143	<	0.000143		**0.0003**	<	0.000143		**0.0003**	<	0.000143	<	0.000143
NPSE1	<	8.13E-05	<	8.13E-05	<	8.13E-05	<	8.13E-05	<	8.13E-05		**0.0002**		**0.0003**
BHSE1	<	0.000171	<	0.000171		**0.0038**	<	0.000171		**0.0003**		**0.0017**		**0.0003**
ODSE1	<	0.00216	<	0.00216	<	0.00216	<	0.00216	<	0.00216		**0.0113**		**0.0117**
ODSE2		**0.0042**	<	0.00148	<	0.00148	<	0.00148	<	0.00148		**0.0125**		**0.0107**
97PCSE1		**0.0006**	<	0.000509		**0.0009**	<	0.000509	<	0.000509	<	0.000509		**0.0010**
WPSE1	<	0.00447	<	0.00447	<	0.00447		**0.0200**		**0.0082**		**0.0500**		**0.0591**
97WPSE1	<	0.000421	<	0.000421		**0.0004**	<	0.000421	<	0.000421		**0.0016**		**0.0017**
97BPSE1	<	0.000378	<	0.000378	<	0.000378	<	0.000378	<	0.000378		**0.0011**		**0.0015**
CUSE1	<	9.61E-05	<	9.61E-05	<	9.61E-05	<	9.61E-05	<	9.61E-05		**0.0016**		**0.0008**
97OMSE1	<	0.000423	<	0.000423	<	0.000423	<	0.000423	<	0.000423		**0.0019**		**0.0027**
SCSE1	<	0.000162	<	0.000162	<	0.000162	<	0.000162	<	0.000162		**0.0052**		**0.0069**
97BCSE1	<	0.000354	<	0.000354	<	0.000354	<	0.000354	<	0.000354	<	0.000354	<	0.000354
KCSE1	<	0.000107	<	0.000107	<	0.000107	<	0.000107		**0.0002**		**0.0018**		**0.0026**
97KCSE1	<	0.000501	<	0.000501	<	0.000501	<	0.000501	<	0.000501		**0.0015**		**0.0023**
97HSSE1	<	0.000741	<	0.000741	<	0.000741	<	0.000741	<	0.000741		**0.0014**		**0.0025**
OBSE1	<	0.000153	<	0.000153		**0.0003**	<	0.000153	<	0.000153		**0.0006**		**0.0012**
OBSE2	<	0.000192	<	0.000192		**0.0008**	<	0.000192	<	0.000192		**0.0008**		**0.0023**
OSSE1	<	0.000116	<	0.000116		**0.0002**	<	0.000116	<	0.000116		**0.0005**		**0.0005**
OSSE2	<	9.36E-05	<	9.36E-05	<	9.36E-05	<	9.36E-05	<	9.36E-05		**0.0009**		**0.0015**

Table A-3. Organic Chemicals in Sediments, Great Salt Lake Wetlands Synoptic Survey, 1996-1997. Non-DDT and DDT Organochlorines, Polychlorinated Biphenyls (PCBs), Total Petroleum Hydrocarbons (TPH), and Dioxins/Furans. ***(Page 3 of 6)***

Sample Site Description	oxy chlordane	Heptachlor	heptachlor epoxide	cis-nonachlor	trans-nonachlor	endosulfan II
Area #2: Antelope Island:						
Antelope Island offshore (GA)	< 0.000187	< 0.000187	< 0.000187	< 0.000187	**0.0004**	< 0.000374
Antelope Island East (AE)	< 0.000106	< 0.000106	< 0.000106	< 0.000106	**0.0002**	**0.0002**
Antelope Island South (AS)	< 6.85E-05	< 6.85E-05	< 6.85E-05	< 6.85E-05	< 6.85E-05	< 0.000137
Area #3: GSL South Shore:						
C7 Ditch (LC)	< 0.000122	< 0.000122	< 0.000122	**0.0002**	**0.0005**	**0.0002**
Saltair/GSL State Park (LS)	< 0.000677	< 0.000677	< 0.000677	< 0.000677	< 0.000677	< 0.000677
Saltair/GSL State Park (LS)	< 0.00115	0.00195	< 0.00115	< 0.00115	< 0.00115	< 0.00115
Area #4: South Shore Wetlands:						
Airport Mitigation Site (SA)	< 0.000491	< 0.000491	< 0.000491	< 0.000491	< 0.000491	< 0.000491
Airport Mitigation Site (SA)	< 0.000346	< 0.000346	< 0.000346	< 0.000346	< 0.000346	< 0.000346
Gillmor Sanctuary (SG)	< 9.27E-05	< 9.27E-05	< 9.27E-05	**0.0002**	0.000557	**0.0002**
Gillmor Sanctuary (SG)	< 0.000075	< 0.000075	< 0.000075	< 0.000075	< 0.000075	< 0.00015
Gillmor Sanctuary (SG)	< 8.57E-05	< 8.57E-05	< 8.57E-05	**0.0002**	**0.0002**	< 0.000171
Gillmor Sanctuary (SG)	< 0.000404	< 0.000404	< 0.000404	< 0.000404	< 0.000404	< 0.000404
Gillmor Sanctuary (SG)	< 0.000519	< 0.000519	< 0.000519	< 0.000519	< 0.000519	< 0.000519
Goggin Drain (SD)	< 7.14E-05	< 7.14E-05	< 7.14E-05	**0.0001**	**0.0003**	< 0.000143
North Point Canal (SN)	< 0.000143	**0.0003**	< 0.000143	< 0.000143	< 0.000143	< 0.000286
North Point Canal (SN)	< 8.13E-05	< 8.13E-05	< 8.13E-05	**0.0002**	**0.0002**	**0.0002**
Area #5: South Shore Industrially Impacted Wetlands:						
Beck Hot Springs (IB)	< 0.000171	< 0.000171	< 0.000171	**0.0003**	**0.0003**	**0.0003**
Oil Drain Canal (IO)	**0.0174**	**0.0026**	< 0.00216	**0.0343**	**0.0078**	**0.0061**
Oil Drain Canal (IO)	**0.0033**	< 0.00148	< 0.00148	**0.0045**	**0.0074**	**0.0104**
Petrochem Ponds (IP)	**0.0005**	< 0.000509	< 0.000509	< 0.000509	< 0.000509	< 0.000509
SLC Sewage Treatment Plant (IS)	< 0.00447	**0.0209**	**0.0082**	**0.0136**	**0.0473**	< 0.00893
SLC Sewage Treatment Plant (IS)	< 0.000421	< 0.000421	< 0.000421	**0.0005**	**0.0010**	< 0.000421
Area #6: Farmington Bay South:						
Bountiful Pond (FP)	< 0.000378	< 0.000378	< 0.000378	**0.0004**	**0.0012**	< 0.000378
FBWMA- Crystal Unit (FC)	< 9.61E-05	< 9.61E-05	< 9.61E-05	**0.0004**	**0.0006**	**0.0004**
NW Oil Drain Delta (FO)	< 0.000423	< 0.000423	< 0.000423	**0.0006**	**0.0011**	< 0.000423
State Canal (FS)	**0.0007**	< 0.000162	**0.0003**	**0.0020**	**0.0039**	**0.0007**
Area #7: Farmington BayNorth:						
Bair Creek (FB)	< 0.000354	< 0.000354	< 0.000354	< 0.000354	< 0.000354	< 0.000354
Kaysville Marsh (FK)	**0.0002**	< 0.000107	**0.0004**	**0.0009**	**0.0020**	< 0.000215
Kaysville Marsh (FK)	< 0.000501	< 0.000501	< 0.000501	**0.0006**	**0.0014**	< 0.000501
Area #8: Ogden Bay:						
Howard Slough (OH)	< 0.000741	< 0.000741	< 0.000741	< 0.000741	**0.0011**	< 0.000741
Ogden Bay WMA- North (ON)	< 0.000153	< 0.000153	< 0.000153	**0.0003**	**0.0003**	< 0.000305
Ogden Bay WMA- North (ON)	< 0.000192	< 0.000192	< 0.000192	**0.0004**	**0.0004**	**0.0004**
Ogden Bay WMA- South (OS)	**0.0002**	< 0.000116	**0.0002**	**0.0002**	< 0.000116	**0.0002**
Ogden Bay WMA- South Canal (OC)	**0.0002**	< 9.36E-05	< 9.36E-05	**0.0006**	**0.0009**	**0.0006**

Sample Number		HCB		mirex		toxaphene		o,p'-DDD		p,p'-DDD		o,p'-DDE		p,p'-DDE
AISE2	<	0.000187		**0.0004**		NA	<	0.000187		**0.0004**	<	0.000187		**0.0004**
AISE4	<	0.000106		**0.0002**		NA	<	0.000106		**0.0002**		**0.0002**		**0.0002**
AISE3	<	6.85E-05		**0.0001**		NA	<	6.85E-05	<	6.85E-05	<	6.85E-05		**0.0001**
C7SE1		**0.0002**	<	0.000122		NA		**0.0002**		**0.0007**		**0.0002**		**0.0015**
97GSSE1	<	0.000677	<	0.000677	<	0.00339	<	0.000677	<	0.000677	<	0.000677	<	0.000677
97SPSE2	<	0.00115		**0.0038**	<	0.00574	<	0.00115	<	0.00115	<	0.00115	<	0.00115
97AMSE1	<	0.000491	<	0.000491	<	0.00246	<	0.000491		**0.0014**	<	0.000491		**0.0074**
97AMSE2	<	0.000346	<	0.000346	<	0.00173	<	0.000346	<	0.000346	<	0.000346	<	0.000346
AUSE1		**0.0004**		**0.0002**		NA		**0.0004**		**0.0006**	<	9.27E-05		**0.0013**
AUSE2		**0.0005**		**0.0002**		NA		**0.0002**		**0.0003**	<	0.000075		**0.0002**
NGSE1		**0.0003**	<	8.57E-05		NA		**0.0002**		**0.0002**	<	8.57E-05		**0.0005**
97AUSE1	<	0.000404	<	0.000404	<	0.00202	<	0.000404	<	0.000404	<	0.000404	<	0.000404
97AUSE2	<	0.000519	<	0.000519	<	0.00259	<	0.000519	<	0.000519	<	0.000519	<	0.000519
GDSE1	<	7.14E-05	<	7.14E-05		NA		**0.0001**		**0.0004**	<	7.14E-05		**0.0004**
GSASE1		**0.0003**	<	0.000143		NA	<	0.000143	<	0.000143	<	0.000143		**0.0003**
NPSE1		**0.0002**	<	8.13E-05		NA		**0.0002**		**0.0005**		**0.0002**		**0.0017**
BHSE1	<	0.000171		**0.0003**		NA		**0.0007**		**0.0010**		**0.0003**		**0.0010**
ODSE1		**0.0057**	<	0.00216		NA		**0.0096**		**0.0143**	<	0.00216		**0.0109**
ODSE2		**0.0068**		**0.0027**		NA		**0.0071**	<	0.00148	<	0.00148		**0.0161**
97PCSE1	<	0.000509	<	0.000509	<	0.00255		**0.0015**		**0.0016**	<	0.000509		**0.0024**
WPSE1		**0.0182**	<	0.00447		NA		**0.0191**	<	0.00447	<	0.00447		**0.0436**
97WPSE1	<	0.000421		**0.0004**	<	0.00211	<	0.000421		**0.0009**	<	0.000421		**0.0027**
97BPSE1	<	0.000378	<	0.000378	<	0.00189		**0.0016**		**0.0032**		**0.0008**		**0.0327**
CUSE1		**0.0002**		**0.0002**		NA		**0.0006**		**0.0010**		**0.0002**		**0.0008**
97OMSE1	<	0.000423	<	0.000423	<	0.00211		**0.0006**	<	0.000423	<	0.000423		**0.0025**
SCSE1		**0.0007**	<	0.000162		NA		**0.0043**		**0.0121**		**0.0007**		**0.0187**
97BCSE1	<	0.000354	<	0.000354	<	0.00177	<	0.000354	<	0.000354	<	0.000354	<	0.000354
KCSE1		**0.0022**	<	0.000107		NA		**0.0007**		**0.0011**		**0.0002**		**0.0094**
97KCSE1	<	0.000501	<	0.000501	<	0.0025	<	0.000501		**0.0009**	<	0.000501		**0.0036**
97HSSE1	<	0.000741	<	0.000741	<	0.0037	<	0.000741		**0.0015**	<	0.000741		**0.0043**
OBSE1	<	0.000153	<	0.000153		NA		**0.0018**		**0.0052**		**0.0003**		**0.0073**
OBSE2	<	0.000192	<	0.000192		NA		**0.0066**		**0.0108**		**0.0012**		**0.0347**
OSSE1		**0.0002**	<	0.000116		NA		**0.0009**		**0.0012**		**0.0002**		**0.0030**
OSSE2		**0.0004**	<	9.36E-05		NA		**0.0006**		**0.0011**		**0.0002**		**0.0024**

Table A-3. Organic Chemicals in Sediments, Great Salt Lake Wetlands Synoptic Survey, 1996-1997. Non-DDT and DDT Organochlorines, Polychlorinated Biphenyls (PCBs), Total Petroleum Hydrocarbons (TPH), and Dioxins/Furans. ***(Page 5 of 6)***

Sample Site Description	o,p'-DDT	p,p'-DDT	Total DDTs[1]	total PCBs	TPH
Area #2: Antelope Island:					
Antelope Island offshore (GA)	< 0.000187	< 0.000187	**0.0008**	**0.545**	**2412**
Antelope Island East (AE)	**0.0002**	**0.0004**	**0.0013**	**0.034**	**1173**
Antelope Island South (AS)	< 6.85E-05	< 6.85E-05	**0.0001**	**0.035**	**360**
Area #3: GSL South Shore:					
C7 Ditch (LC)	< 0.000122	**0.0002**	**0.0030**	**0.098**	**1204**
Saltair/GSL State Park (LS)	< 0.000677	< 0.000677	ND	**0.011**	**952**
Saltair/GSL State Park (LS)	< 0.00115	< 0.00115	ND	**0.056**	**247**
Area #4: South Shore Wetlands:					
Airport Mitigation Site (SA)	< 0.000491	< 0.000491	**0.0088**	**0.009**	**457**
Airport Mitigation Site (SA)	< 0.000346	< 0.000346	ND	**0.002**	**116**
Gillmor Sanctuary (SG)	< 9.27E-05	< 9.27E-05	**0.0023**	**0.028**	**334**
Gillmor Sanctuary (SG)	< 0.000075	**0.0002**	**0.0008**	**0.033**	**382**
Gillmor Sanctuary (SG)	< 8.57E-05	**0.0005**	**0.0015**	**0.030**	**154**
Gillmor Sanctuary (SG)	< 0.000404	< 0.000404	ND	**0.002**	**NS**
Gillmor Sanctuary (SG)	< 0.000519	< 0.000519	ND	**0.003**	**NS**
Goggin Drain (SD)	< 7.14E-05	**0.0001**	**0.0012**	**0.015**	**246**
North Point Canal (SN)	< 0.000143	< 0.000143	**0.0003**	**0.159**	**1221**
North Point Canal (SN)	**0.0012**	**0.0035**	**0.0071**	**0.007**	**207**
Area #5: South Shore Industrially Impacted Wetlands:					
Beck Hot Springs (IB)	< 0.000171	**0.0003**	**0.0035**	**0.611**	**1564**
Oil Drain Canal (IO)	< 0.00216	< 0.00216	**0.0348**	**0.388**	**28906**
Oil Drain Canal (IO)	**0.0482**	< 0.00148	**0.0737**	**0.887**	**13792**
Petrochem Ponds (IP)	< 0.000509	< 0.000509	**0.0057**	**0.098**	**713**
SLC Sewage Treatment Plant (IS)	**0.1380**	< 0.00447	**0.2074**	**4.14**	**96560**
SLC Sewage Treatment Plant (IS)	< 0.000421	< 0.000421	**0.004**	**0.044**	**577**
Area #6: Farmington Bay South:					
Bountiful Pond (FP)	**0.0009**	**0.0027**	**0.0419**	**0.018**	**197**
FBWMA- Crystal Unit (FC)	**0.0002**	**0.0002**	**0.0029**	**0.085**	**922**
NW Oil Drain Delta (FO)	< 0.000423	< 0.000423	**0.0035**	**0.074**	**205**
State Canal (FS)	**0.0010**	**0.0026**	**0.0393**	**0.214**	**6042**
Area #7: Farmington BayNorth:					
Bair Creek (FB)	< 0.000354	< 0.000354	ND	**0.003**	**28.4**
Kaysville Marsh (FK)	**0.0007**	**0.0024**	**0.0144**	**0.037**	**1240**
Kaysville Marsh (FK)	< 0.000501	< 0.000501	**0.0050**	**0.036**	
Area #8: Ogden Bay:					
Howard Slough (OH)	< 0.000741	< 0.000741	**0.0065**	**0.029**	**787**
Ogden Bay WMA- North (ON)	< 0.000153	**0.0024**	**0.0172**	**0.063**	**1305**
Ogden Bay WMA- North (ON)	< 0.000192	**0.0035**	**0.0568**	**0.211**	**3280**
Ogden Bay WMA- South (OS)	< 0.000116	**0.0016**	**0.0070**	**0.110**	**1058**
Ogden Bay WMA- South Canal (OC)	**0.0008**	**0.0013**	**0.0064**	**0.082**	**899**

All values mg/kg dry-weight basis; detected values are in presented in bold type.

(1) Total DDTs: Summed DDT residues in cases where at least one isomer was detected; non-detected isomers included in sum as 0.5 x Detection limit

Sample Number	1,2,3,4,6,7,8 -HpCDD	1,2,3,4,6,7,8- HpCDF	1,2,3,6,7,8- HxCDD	2,3,7,8- TCDD	2,3,7,8-TCDF	OCDD	OCDF
AISE2	< 0.000003	< 0.000003	< 0.000003	< 0.000001	< 0.000001	**0.000014**	**0.000009**
AISE4	NA	NA	NA	NA	NA	NA	NA
AISE3	NA	NA	NA	NA	NA	NA	NA
C7SE1	**0.000059**	**0.000015**	**0.000003**	< 0.000001	**0.000001**	**0.000368**	**0.000034**
97GSSE1	NA	NA	NA	NA	NA	NA	NA
97SPSE2	NA	NA	NA	NA	NA	NA	NA
97AMSE1	NA	NA	NA	NA	NA	NA	NA
97AMSE2	NA	NA	NA	NA	NA	NA	NA
AUSE1	NA	NA	NA	NA	NA	NA	NA
AUSE2	NA	NA	NA	NA	NA	NA	NA
NGSE1	NA	NA	NA	NA	NA	NA	NA
97AUSE1	NA	NA	NA	NA	NA	NA	NA
97AUSE2	NA	NA	NA	NA	NA	NA	NA
GDSE1	NA	NA	NA	NA	NA	NA	NA
GSASE1	NA	NA	NA	NA	NA	NA	NA
NPSE1	NA	NA	NA	NA	NA	NA	NA
BHSE1	NA	NA	NA	NA	NA	NA	NA
ODSE1	NA	NA	NA	NA	NA	NA	NA
ODSE2	NA	NA	NA	NA	NA	NA	NA
97PCSE1	NA	NA	NA	NA	NA	NA	NA
WPSE1	NA	NA	NA	NA	NA	NA	NA
97WPSE1	NA	NA	NA	NA	NA	NA	NA
97BPSE1	NA	NA	NA	NA	NA	NA	NA
CUSE1	NA	NA	NA	NA	NA	NA	NA
97OMSE1	NA	NA	NA	NA	NA	NA	NA
SCSE1	**0.000059**	**0.000012**	**0.000003**	**0.000015**	**0.000001**	**0.000551**	**0.000025**
97BCSE1	NA	NA	NA	NA	NA	NA	NA
KCSE1	NA	NA	NA	NA	NA	NA	NA
97KCSE1	NA	NA	NA	NA	NA	NA	NA
97HSSE1	NA	NA	NA	NA	NA	NA	NA
OBSE1	NA	NA	NA	NA	NA	NA	NA
OBSE2	NA	NA	NA	NA	NA	NA	NA
OSSE1	NA	NA	NA	NA	NA	NA	NA
OSSE2	**0.000036**	**0.000011**	**0.000002**	**0.000000**	**0.000001**	**0.000270**	**0.000020**

TCDD: Tetrachlorodibenzo-p-dioxin
HxCDD: Hexachlorodibenzo-p-dioxin
HpCDD: Heptachlorodibenzo-p-dioxin
OCDD: Octachlorodibenzo-p-dioxin
OCDF: Octachlorodibenzofuran
NA: Constituent not analyzed

Table A-4. Trace Elements in Macroinvertebrates, Great Salt Lake Wetlands Synoptic Survey, 1996-1997. Concentrations reported in milligrams per kilogram (mg/kg, ppm) dry weight; non-detected elements in samples shown in italics. *(Page 1 of 3)*

Sample Number	Sample Site Description	Species Code[a]	Collection Date	Sample Weight (grams)	% moisture	Al	As	B
	Area #2: Antelope Island							
AIBF1	Antelope Island Offshore (GA)	BFL	7/18/1996	12	64.5	162	2.3	26.7
AIBF2	Antelope Island East (AE)	BFL	7/18/1996	12	86.1	1348	10.5	49.
AIBI1	Antelope Island South (AS)	OD	7/18/1996	13	84.3	85.4	2.4	2.67
	Area #3: GSL South Shore							
C7CH1	C7 Ditch (LC)	CH	7/29/1996	11	84.1	8262	20.9	30.4
97C7CI2	C7 Ditch (LC)	BMI	7/24/1997	6	85.6	672	6.46	11.1
GSABI1	Saltair/GSL State Park (LS)	BMI	7/19/1996	12	85.1	581	24.2	32.
97GSCH1	Saltair/GSL State Park (LS)	CH	6/25/1997	12	85.5	535	5.	36.3
97SPCH1	Saltair/GSL State Park (LS)	CH	7/8/1997	10	80.0	2981	51.1	18.4
97SPCI2	Saltair/GSL State Park (LS)	BMI	8/4/1997	11	81.4	16.8	3.17	2.27
	Area #4: South Shore Wetlands							
97AMCH1	Airport Mitigation Site (SA)	CH	6/18/1997	15	86.7	8698	2.57	16.2
97AMDM1	Airport Mitigation Site (SA)	DF	6/18/1997	16	86.4	607	1.84	9.83
AUCH1	Gillmor Sanctuary (SG)	CH	6/27/1996	2	70.9			
GDCI1	Goggin Drain (SD)	BMI	7/10/1996	16	84.7	2901	4.	5.59
NGCH1	Inland Sea Shorebird Reserve (SI)	CH	7/1/1996	11	80.6	10707	9.3	53.
97NPBI1	North Point Canal (SN)	BMI	7/22/1997	12	79.9	758	< *0.5*	4.07
	Area #5: South Shore Industrially Impacted Wetlands							
BHCO2	Beck Hot Springs (IB)	CO	7/10/1996	28	85.7	115	2.7	35.6
97PCCH1	Petrochem Ponds (IP)	CH	6/10/1997	11	82.9	1765	1.04	20.4
STBI1	SLC Sewage Treatment Plant (IS)	BMI	7/16/1996	12	87.5	1472	1.8	16.
97WPCH1	SLC Sewage Treatment Plant (IS)	CH	6/17/1997	10	87.3	2822	1.47	11.
	Area #6: Farmington Bay South							
97BPCH1	Bountiful Pond (FP)	CH	7/15/1997	10	86.2	6009	2.31	2.48
CUBI1	FBWMA- Crystal Unit (FC)	BMI	7/15/1996	12	84.6	1138	4.4	12.7
97OMCH1	NW Oil Drain Delta (FO)	CH	7/1/1997	18	87.5	2833	1.66	15.2
SCBI1	State Canal (FS)	BMI	7/15/1996	12	83.9	2568	4.2	2.34
	Area #7: Farmington BayNorth							
97BCCI1	Bair Creek (FB)	BMI	7/10/1997	14	84.9	2281	2.22	2.04
KCBI1	Kaysville Marsh (FK)	CH	8/20/1996	10	82.6	9888	8.4	13.7
	Area #8: Ogden Bay							
97HSCH1	Howard Slough (OH)	CH	6/30/1997	19	90.2	8312	5.64	20.7
OBCH1	Ogden Bay WMA- North (ON)	CH	7/17/1996	14	87.0	5259	4.5	12.4
OSBI1	Ogden Bay WMA- South (OS)	BMI	7/17/1996	13	84.0	519	4.9	2.24

NOTES:

(a) Invertebrate Species Codes:

BFL= Brine Fly Larvae
BMI = Benthic Macroinvertebrates
CH = Chironomid
CO = Corixids
DF = Damselfly
OD = Odonates

Sample Number	Ba	Be	Cd	Cr	Cu	Fe	Hg	Mg	Mn	Mo
AIBF1	13.9	< *0.1*	0.2	1.61	8.21	155	0.19	5659	53.5	< *2*
AIBF2	38.3	0.2	0.3	3.59	17.9	2423	0.08	5820	53.3	< *2*
AIBI1	8.92	< *0.1*	< 0.1	0.95	15.6	172	0.17	977	44.5	< *2*
C7CH1	73.4	0.78	1.6	23.6	377.	6763	0.09	6569	129.	17.1
97C7CI2	11.5	< *0.1*	0.41	3.16	61.3	764	< *0.2*	2544	259.	5.1
GSABI1	17.4	< *0.1*	0.3	4.4	67.8	840	0.08	3014	43.7	2.84
97GSCH1	21.4	< *0.1*	< 0.1	4.35	50.6	783	< *0.2*	2947	43.	3.19
97SPCH1	53.5	0.311	0.31	9.97	228.	2900	< *0.2*	6868	108.	4.53
97SPCI2	3.12	< *0.1*	0.13	2.05	16.6	215	< *0.2*	976	16.5	2.14
97AMCH1	70.2	0.85	0.5	14.7	29.4	7485	< *0.2*	6740	173.	< *2*
97AMDM1	28.9	< *0.1*	1.14	3.37	13.6	568	< *0.2*	1726	38.7	< *2*
AUCH1										
GDCI1	38.2	0.26	0.6	5.72	45.7	2707	< *0.05*	2323	177.	< *2*
NGCH1	75.6	1	1	14.9	60.4	7149	0.07	13199	147.	< *2*
97NPBI1	7.63	< *0.1*	0.8	3.21	23.8	677	< *0.2*	1574	44.4	< *2*
BHCO2	2.94	0.19	0.2	1.78	32.4	202	< *0.05*	1749	15.1	< *2*
97PCCH1	36.2	0.971	0.55	7.07	41.8	2056	< *0.2*	3223	54.7	< *2*
STBI1	37.8	0.25	0.6	11.5	39.2	1521	0.11	1870	24.	7.02
97WPCH1	95.9	0.284	0.85	28.1	73.4	2498	< *0.2*	2310	47.7	7.38
97BPCH1	91.	0.67	0.35	19.5	24.5	8121	< *0.2*	4296	135.	< *2*
CUBI1	22.9	0.13	0.9	6.27	41.4	834	1.13	3425	36.2	< *2*
97OMCH1	55.	0.311	1.3	12.2	40.8	2815	< *0.2*	3671	57.8	< *2*
SCBI1	21.8	0.46	0.2	4.69	14.5	2434	0.08	1992	48.9	< *2*
97BCCI1	37.7	0.241	0.22	8.01	17.2	3344	< *0.2*	2290	507.	< *2*
KCBI1	119.	0.81	1.5	16.9	26.6	7131	0.09	5106	210.	< *2*
97HSCH1	92.6	0.833	0.37	31.9	53.1	6775	< *0.2*	7090	178.	< *2*
OBCH1	33.1	0.46	0.5	7.01	15.7	3540	0.12	3602	123.	< *2*
OSBI1	17.4	0.35	0.2	5.97	12.8	692	0.23	1431	128.	< *2*

Table A-4. Trace Elements in Macroinvertebrates, Great Salt Lake Wetlands Synoptic Survey, 1996-1997. Concentrations reported in milligrams per kilogram (mg/kg, ppm) dry weight; non-detected elements in samples shown in italics. *(page 3 of 3)*

Sample Number	Sample Site Description	Species Code[a]	Ni	Pb	Se	Sr	V	Zn
	Area #2: Antelope Island							
AIBF1	Antelope Island Offshore (GA)	BFL	1.01	1.7	1.3	148.	< *0.5*	47.5
AIBF2	Antelope Island East (AE)	BFL	2.91	10.1	0.7	329.	3.62	74.8
AIBI1	Antelope Island South (AS)	OD	1.05	< *0.5*	1.4	59.9	1.02	60.4
	Area #3: GSL South Shore							
C7CH1	C7 Ditch (LC)	CH	11.3	26.5	4.5	204.	20.	282.
97C7CI2	C7 Ditch (LC)	BMI	0.83	6.74	5.99	110.	1.06	99.
GSABI1	Saltair/GSL State Park (LS)	BMI	0.64	4.9	1.2	141.	< *0.5*	86.1
97GSCH1	Saltair/GSL State Park (LS)	CH	1.03	4.75	< *0.5*	318.	2.96	50.8
97SPCH1	Saltair/GSL State Park (LS)	CH	3.47	12.6	1.74	287.	5.91	107.
97SPCI2	Saltair/GSL State Park (LS)	BMI	< *0.5*	< *0.5*	3.74	30.2	< *0.5*	102.
	Area #4: South Shore Wetlands							
97AMCH1	Airport Mitigation Site (SA)	CH	8.21	13.2	5.13	102.	14.7	103.
97AMDM1	Airport Mitigation Site (SA)	DF	0.69	0.69	1.54	31.	< *0.5*	65.7
AUCH1	Gillmor Sanctuary (SG)	CH			1.9			
GDCI1	Goggin Drain (SD)	BMI	4.21	19.5	2.8	95.8	6.85	169.
NGCH1	Inland Sea Shorebird Reserve (SI)	CH	7.36	74.2	2.7	144.	17.6	108.
97NPBI1	North Point Canal (SN)	BMI	1.72	3.35	2.19	41.	1.98	120.
	Area #5: South Shore Industrially Impacted Wetlands							
BHCO2	Beck Hot Springs (IB)	CO	0.65	2.5	0.9	199.	1.	156.
97PCCH1	Petrochem Ponds (IP)	CH	4.83	53.6	< *0.5*	253.	5.42	136.
STBI1	SLC Sewage Treatment Plant (IS)	BMI	2.79	7.6	5.2	43.9	2.64	104.
97WPCH1	SLC Sewage Treatment Plant (IS)	CH	5.84	12.7	6.46	90.8	4.3	128.
	Area #6: Farmington Bay South							
97BPCH1	Bountiful Pond (FP)	CH	10.1	3.24	0.966	25.2	14.1	120.
CUBI1	FBWMA- Crystal Unit (FC)	BMI	1.03	11.5	3.5	111.	3.46	101.
97OMCH1	NW Oil Drain Delta (FO)	CH	3.8	33.9	4.31	82.5	6.18	128.
SCBI1	State Canal (FS)	BMI	3.73	11.2	4.1	18.3	3.98	175.
	Area #7: Farmington BayNorth							
97BCCI1	Bair Creek (FB)	BMI	3.59	3.45	1.83	12.3	3.33	134.
KCBI1	Kaysville Marsh (FK)	CH	7.04	22.6	1.1	52.2	14.1	93.2
	Area #8: Ogden Bay							
97HSCH1	Howard Slough (OH)	CH	7.04	13.5	6.35	92.1	13.3	101.
OBCH1	Ogden Bay WMA- North (ON)	CH	3.28	49.3	1.2	23.5	7.21	92.2
OSBI1	Ogden Bay WMA- South (OS)	BMI	1.38	7.9	1.4	45.3	1.06	150.

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Table A-5. Organic Chemicals in Invertebrates, Great Salt Lake Wetlands Synoptic Survey, 1996-1997. Non-DDT and DDT Organochlorines and Polychlorinated Biphenyls (PCBs) *(Page 1 of 5)*

Sample Number	Sample Site Description	Species Composition (Common Name)	Collection Date	Sample Weight (grams)	% Lipid	% Moisture
	Area #2: Antelope Island					
AIBF1	Antelope Island offshore (GA)	Brine Fly Larvae	7/18/1996	12	5.5	66
AIBF2	Antelope Island East (AE)	Brine Fly Larvae	7/18/1996	12	0.06	87.6
AIBI1	Antelope Island South (AS)	Odonates	7/18/1996	13	0.76	86.6
	Area #3: GSL South Shore					
C7CH1	C7 Ditch (LC)	Chironomids	7/29/1996	11	0.5	82.7
GSABI1	Saltair/GSL State Park (LS)	Benthic Macroinverts	7/19/1996	12	0.4	86.4
	Area #4: South Shore Wetlands					
GDCI1	Goggin Drain (SD)	Benthic Macroinverts	7/10/1996	16	0.8	84.9
NGCH1	Inland Sea Shorebird Reserve (SI)	Chironomids	7/1/1996	11	0.3	81.4
	Area #5: South Shore Industrially Impacted Wetlands					
BHCO2	Beck Hot Springs (IB)	Corixids	7/10/1996	28	1.2	87.2
ODCH2	Oil Drain Canal (IO)	Chironomids	7/11/1996	4	1.1	83.5
97PCCH1	Petrochem Ponds (IP)	Chironomid	6/10/1997	11	0.76	85.9
97WPCH1	SLC Sewage Treatment Plant (IS)	Chironomid	6/17/1997	10	0.59	90.4
STBI1	SLC Sewage Treatment Plant (IS)	Benthic Macroinverts	7/16/1996	12	0.8	87.7
	Area #6: Farmington Bay South					
CUBI1	FBWMA- Crystal Unit (FC)	Benthic Macroinverts	7/15/1996	12	1.7	86.5
SCBI1	State Canal (FS)	Benthic Macroinverts	7/15/1996	12	1	85
	Area #7: Farmington Bay North					
97KCCH1	Kaysville Marsh (FK)	Chironomid	6/4/1997	19	0.67	83
KCBI1	Kaysville Marsh (FK)	Chironomid,Leech	8/20/1996	10	0.6	83.8
	Area #8: Ogden Bay					
97HSCH1	Howard Slough (OH)	Chironomid	6/30/1997	19	0.28	91.9
OBCH1	Ogden Bay WMA- North (ON)	Chironomids	7/17/1996	14	0.6	87.5
OSBI1	Ogden Bay WMA- South (OS)	Benthic Macroinverts	7/17/1996	13	0.9	84.9

All values milligram per kilogram (parts per million) on a wet-weight basis
detected values are in presented in bold face type.

Analyzed but not detected (not shown on table): Aldrin, Heptachlor, Endosulfan II, Mirex, o,p'-DDE, Toxaphene

Not analyzed: pentachloro-anisole

Sample Number	dieldrin	endrin	alpha BHC	beta BHC	delta BHC	gamma BHC	alpha chlordane
AIBF1	< 0.00048	< 0.00048	).0006	.0009	< 0.00048	< 0.00048	<).00048
AIBF2	< 0.000818	< 0.000818	<).000818	< .000818	< 0.000818	0.009	<).000818
AIBI1	< 0.000478	< 0.000478	<).000478	< .000478	< 0.000478	< 0.000478	<).000478
C7CH1	< 0.000883	< 0.000883	<).000883	< .000883	< 0.000883	< 0.000883	<).000883
GSABI1	< 0.000923	< 0.000923	<).000923	.0019	< 0.000923	< 0.000923	<).000923
GDCI1	0.0024	< 0.000476	<).000476	< .000476	< 0.000476	< 0.000476	).0015
NGCH1	< 0.000813	0.0009	<).000813	< .000813	< 0.000813	< 0.000813	<).000813
BHCO2	< 0.0005	< 0.0005	<).0005	< .0005	< 0.0005	< 0.0005	<).0005
ODCH2	0.0019	< 0.000893	<).000893	.0025	0.001	< 0.000893	).0012
97PCCH1	< 0.00476	< 0.00476	<).00476	< .00476	< 0.00476	< 0.00476	<).00476
97WPCH1	< 0.00485	< 0.00485	<).00485	< .00485	< 0.00485	< 0.00485	<).00485
STBI1	0.0028	0.0024	<).000952	< .000952	< 0.000952	< 0.000952	<).000952
CUBI1	< 0.000842	< 0.000842	<).000842	< .000842	< 0.000842	< 0.000842	<).000842
SCBI1	0.0042	< 0.000498	<).000498	.0005	< 0.000498	< 0.000498	).0023
97KCCH1	< 0.00472	< 0.00472	<).00472	< .00472	< 0.00472	< 0.00472	<).00472
KCBI1	0.004	< 0.000858	<).000858	< .000858	< 0.000858	< 0.000858	).0018
97HSCH1	< 0.00472	< 0.00472	<).00472	< .00472	< 0.00472	< 0.00472	<).00472
OBCH1	< 0.000933	0.0012	<).000933	< .000933	< 0.000933	< 0.000933	<).000933
OSBI1	< 0.000799	< 0.000799	<).000799	< .000799	< 0.000799	< 0.000799	).001

Table A-5. Organic Chemicals in Invertebrates, Great Salt Lake Wetlands Synoptic Survey, 1996-1997. Non-DDT and DDT Organochlorines and Polychlorinated Biphenyls (PCBs) ***(Page 3 of 5)***

Sample Number	Sample Site Description	gamma chlordane	oxy chlordane	heptachlor epoxide	cis-nonachlor
	Area #2: Antelope Island				
AIBF1	Antelope Island offshore (GA)	< 0.00048	**0.0009**	< 0.00048	< 0.00048
AIBF2	Antelope Island East (AE)	< 0.000818	**0.0009**	< 0.000818	< 0.000818
AIBI1	Antelope Island South (AS)	< 0.000478	< 0.000478	< 0.000478	< 0.000478
	Area #3: GSL South Shore				
C7CH1	C7 Ditch (LC)	< 0.000883	**0.0012**	< 0.000883	< 0.000883
GSABI1	Saltair/GSL State Park (LS)	< 0.000923	< 0.000923	< 0.000923	< 0.000923
	Area #4: South Shore Wetlands				
GDCI1	Goggin Drain (SD)	**0.0005**	**0.0016**	< 0.000476	**0.0008**
NGCH1	Inland Sea Shorebird Reserve (SI)	< 0.000813	< 0.000813	< 0.000813	< 0.000813
	Area #5: South Shore Industrially Impacted Wetlands				
BHCO2	Beck Hot Springs (IB)	< 0.0005	**0.0012**	< 0.0005	< 0.0005
ODCH2	Oil Drain Canal (IO)	**0.0012**	**0.0017**	< 0.000893	< 0.000893
97PCCH1	Petrochem Ponds (IP)	< 0.00476	< 0.00476	< 0.00476	< 0.00476
97WPCH1	SLC Sewage Treatment Plant (IS)	< 0.00485	< 0.00485	< 0.00485	< 0.00485
STBI1	SLC Sewage Treatment Plant (IS)	< 0.000952	**0.0023**	< 0.000952	< 0.000952
	Area #6: Farmington Bay South				
CUBI1	FBWMA- Crystal Unit (FC)	< 0.000842	< 0.000842	< 0.000842	< 0.000842
SCBI1	State Canal (FS)	**0.0022**	**0.0011**	< 0.000498	**0.0011**
	Area #7: Farmington Bay North				
97KCCH1	Kaysville Marsh (FK)	< 0.00472	< 0.00472	< 0.00472	< 0.00472
KCBI1	Kaysville Marsh (FK)	**0.0022**	**0.0022**	**0.0021**	**0.0013**
	Area #8: Ogden Bay				
97HSCH1	Howard Slough (OH)	< 0.00472	< 0.00472	< 0.00472	< 0.00472
OBCH1	Ogden Bay WMA- North (ON)	< 0.000933	< 0.000933	< 0.000933	< 0.000933
OSBI1	Ogden Bay WMA- South (OS)	< 0.000799	< 0.000799	< 0.000799	< 0.000799

Sample Number	trans-nonachlor	HCB	o,p'-DDD	o,p'-DDT	p,p'-DDD	p,p'-DDE
AIBF1	< 0.00048	< 0.00048	< 0.00048	< 0.00048	**0.0011**	**0.0005**
AIBF2	< 0.000818	< 0.000818	< 0.000818	< 0.000818	< 0.000818	< 0.000818
AIBI1	< 0.000478	< 0.000478	< 0.000478	< 0.000478	< 0.000478	< 0.000478
C7CH1	< 0.000883	< 0.000883	**0.0013**	< 0.000883	**0.0024**	**0.0039**
GSABI1	< 0.000923	< 0.000923	< 0.000923	< 0.000923	< 0.000923	< 0.000923
GDCI1	**0.0017**	< 0.000476	< 0.000476	< 0.000476	**0.0007**	**0.0093**
NGCH1	**0.001**	< 0.000813	< 0.000813	< 0.000813	**0.0014**	**0.0029**
BHCO2	< 0.0005	< 0.0005	< 0.0005	< 0.0005	< 0.0005	**0.0013**
ODCH2	**0.0009**	**0.0011**	**0.0042**	< 0.000893	**0.0039**	**0.002**
97PCCH1	< 0.00476	< 0.00476	< 0.00476	< 0.00476	< 0.00476	< 0.00476
97WPCH1	< 0.00485	< 0.00485	< 0.00485	< 0.00485	< 0.00485	< 0.00485
STBI1	< 0.000952	**0.002**	< 0.000952	**0.0066**	< 0.000952	**0.0011**
CUBI1	< 0.000842	< 0.000842	< 0.000842	< 0.000842	< 0.000842	**0.0011**
SCBI1	**0.0032**	**0.0005**	**0.0023**	< 0.000498	**0.0052**	**0.0098**
97KCCH1	< 0.00472	< 0.00472	< 0.00472	< 0.00472	< 0.00472	**0.00685**
KCBI1	**0.0039**	**0.0031**	**0.0024**	< 0.000858	**0.0029**	**0.0152**
97HSCH1	< 0.00472	< 0.00472	< 0.00472	< 0.00472	< 0.00472	**0.00564**
OBCH1	< 0.000933	< 0.000933	**0.0105**	< 0.000933	**0.011**	**0.0269**
OSBI1	< 0.000799	< 0.000799	< 0.000799	< 0.000799	**0.003**	**0.0059**

Table A-5. Organic Chemicals in Invertebrates, Great Salt Lake Wetlands Synoptic Survey, 1996-1997. Non-DDT and DDT Organochlorines and Polychlorinated Biphenyls (PCBs) *(Page 5 of 5)*

Sample Number	Sample Site Description	p,p'-DDT	Total DDTs [1]	Total PCBs
	Area #2: Antelope Island			
AIBF1	Antelope Island offshore (GA)	< 0.00048	0.0016	**0.0124**
AIBF2	Antelope Island East (AE)	< 0.000818		**0.0696**
AIBI1	Antelope Island South (AS)	< 0.000478		< 0.00478
	Area #3: GSL South Shore			
C7CH1	C7 Ditch (LC)	< 0.000883	0.0076	**0.0359**
GSABI1	Saltair/GSL State Park (LS)	< 0.000923		**0.0231**
	Area #4: South Shore Wetlands			
GDCI1	Goggin Drain (SD)	**0.0011**	0.0111	**0.0571**
NGCH1	Inland Sea Shorebird Reserve (SI)	< 0.000813	0.0043	**0.0261**
	Area #5: South Shore Industrially Impacted Wetlands			
BHCO2	Beck Hot Springs (IB)	< 0.0005	0.0013	**0.0289**
ODCH2	Oil Drain Canal (IO)	< 0.000893	0.0101	**0.0907**
97PCCH1	Petrochem Ponds (IP)	< 0.00476		< 0.0238
97WPCH1	SLC Sewage Treatment Plant (IS)	< 0.00485		**0.0254**
STBI1	SLC Sewage Treatment Plant (IS)	< 0.000952	0.0077	**0.0618**
	Area #6: Farmington Bay South			
CUBI1	FBWMA- Crystal Unit (FC)	< 0.000842	0.0011	**0.0264**
SCBI1	State Canal (FS)	< 0.000498	0.0173	**0.0485**
	Area #7: Farmington Bay North			
97KCCH1	Kaysville Marsh (FK)	< 0.00472	0.00685	< 0.0236
KCBI1	Kaysville Marsh (FK)	< 0.000858	0.0205	**0.0313**
	Area #8: Ogden Bay			
97HSCH1	Howard Slough (OH)	< 0.00472	0.00564	< 0.0236
OBCH1	Ogden Bay WMA- North (ON)	< 0.000933	0.0484	**0.0329**
OSBI1	Ogden Bay WMA- South (OS)	< 0.000799	0.0089	**0.0178**

(1) Total DDTs: Summed DDT residues in cases where at least one isomer was detected; non-detected isomers included in sum as 0.5 x Detection limit

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Table A-6. Trace Elements in Fish from Freshwater Inflows, Great Salt Lake Wetlands Synoptic Survey, 1996-1997. Concentrations reported in milligrams per kilogram (mg/kg, ppm) dry weight; non-detected elements shown in italics. ***(Page 1 of 3)***

Sample Number	Sample Site Description	Species Code[a]	Sample Weight (grams)	Collection Date	% moisture	Al	As	B
	Area #3: GSL South Shore							
C7CW1	C7 Ditch (LC)	CC	1103	7/30/1996	76.0	287.	0.5	*< 2.0*
C7CW2	C7 Ditch (LC)	CC	3900	7/30/1996	72.6	36.5	1.3	*< 2.0*
C7CW3	C7 Ditch (LC)	CC	10762	7/30/1996	75.3	33.9	0.8	*< 2.0*
97C7CW1	C7 Ditch (LC)	CC	1829	7/23/1997	75.0	14.6	*< 0.5*	*< 2.0*
97C7CW2	C7 Ditch (LC)	CC	6771	7/23/1997	74.6	12.2	*< 0.5*	*< 2.0*
97C7WB3	C7 Ditch (LC)	UC	95	7/23/1997	73.3	27.3	*< 0.5*	*< 2.0*
	Area #4: South Shore Wetlands							
GDCW1	Goggin Drain (SD)	CC	2359	8/15/1996	73.1	188.	0.7	*< 2.0*
GDCW2	Goggin Drain (SD)	CC	1657	8/16/1996	74.2	28.9	*< 0.5*	*< 2.0*
GDCW3	Goggin Drain (SD)	CC	1288	8/16/1996	74.4	65.5	*< 0.5*	*< 2.0*
97AMCW1	Airport Mitigation Site (SA)	CC	4734	7/16/1997	73.8	53.4	*< 0.5*	*< 2.0*
97AMCW2	Airport Mitigation Site (SA)	CC	10322	7/16/1997	72.0	64.4	*< 0.5*	*< 2.0*
97AMCW3	Airport Mitigation Site (SA)	CC	9295	7/16/1997	69.3	45.1	*< 0.5*	*< 2.0*
	Area #5: South Shore Industrially Impacted Wetlands							
ODCW1	NW Oil Drain (IO)	CC	262	8/13/1996	75.4	59.6	*< 0.5*	*< 2.0*
ODCW2	NW Oil Drain (IO)	CC	142	8/13/1996	75.3	56.8	*< 0.5*	*< 2.0*
ODGM2	NW Oil Drain (IO)	WM	32	7/11/1996	77.8	121.	*< 0.5*	*< 2.0*
	Area #6: Farmington Bay South							
SCCW1	State Canal (FS)	CC	1837	8/5/1996	78.8	185.	*< 0.5*	*< 2.0*
SCCW2	State Canal (FS)	CC	1831	8/6/1996	76.6	76.9	*< 0.5*	*< 2.0*
SCCW3	State Canal (FS)	CC	1371	8/7/1996	74.6	42.	*< 0.5*	*< 2.0*
97BPCW1	Bountiful Pond (FP)	CC	4449	7/15/1997	76.0	346.	*< 0.5*	*< 2.0*
97BPCW2	Bountiful Pond (FP)	CC	5886	7/15/1997	71.6	79.3	*< 0.5*	*< 2.0*
97BPCW3	Bountiful Pond (FP)	CC	6469	7/15/1997	70.0	206.	*< 0.5*	*< 2.0*
97CUCW1	FBWMA- Crystal Unit (FC)	CC	2074	8/19/1997	76.9	11.4	*< 0.5*	*< 2.0*
97CUCW2	FBWMA- Crystal Unit (FC)	CC	1773	8/19/1997	77.2	13.1	*< 0.5*	*< 2.0*
97CUCW3	FBWMA- Crystal Unit (FC)	CC	1338	8/19/1997	80.7	17.5	*< 0.5*	*< 2.0*
97F1CW1	FBWMA- Unit 1 (FU)	CC	6994	7/31/1997	72.8	62.3	*< 0.5*	*< 2.0*
97F1CW2	FBWMA- Unit 1 (FU)	CC	5386	7/31/1997	70.6	107.	*< 0.5*	*< 2.0*
97F1CW3	FBWMA- Unit 1 (FU)	CC	5624	7/31/1997	75.5	121.	*< 0.5*	*< 2.0*
	Area #7: Farmington BayNorth							
KCFI1	Kaysville Marsh (FK)	WM	16	8/20/1996	75.3	1092.	1.0	*< 2.0*
	Area #8: Ogden Bay							
97HSCW1	Howard Slough (OH)	CC	7278	8/22/1997	70.2	61.7	*< 0.5*	*< 2.0*
97HSCW2	Howard Slough (OH)	CC	4983	8/22/1997	70.9	64.5	*< 0.5*	*< 2.0*
97HSCW3	Howard Slough (OH)	CC	2142	8/22/1997	77.6	263.	*< 0.5*	*< 2.0*
OBCW1	Ogden Bay WMA- South (OS)	CC	4378	8/26/1996	73.4	132.	0.5	*< 2.0*
OBCW2	Ogden Bay WMA- South (OS)	CC	9811	8/27/1996	73.5	187.	*< 0.5*	*< 2.0*
OBCW3	Ogden Bay WMA- South (OS)	CC	13782	8/27/1996	72.8	131.	*< 0.5*	*< 2.0*
97OBCW1	Ogden Bay WMA- North (ON)	CC	8778	8/26/1997	68.7	62.5	*< 0.5*	*< 2.0*

NOTES:

(a) Fish Species Codes: CC = common carp UC = Utah Chub WM = Western Mosquitofish

Sample Number	Ba	Be	Cd	Cr	Cu	Fe	Hg	Mg	Mn	Mo
C7CW1	6.48	< *0.1*	0.3	1.51	16.2	340.	0.31	1431	15.6	< *2.0*
C7CW2	4.87	< *0.1*	0.4	0.77	16.3	119.	0.31	1472	10.4	< *2.0*
C7CW3	5.34	< *0.1*	0.1	0.65	5.39	222.	0.34	1372	5.39	< *2.0*
97C7CW1	3.44	< *0.1*	0.15	4.26	9.2	114.	< *0.20*	1488	7.29	< *2.0*
97C7CW2	5.95	< *0.1*	0.23	3.05	9.08	126.	< *0.20*	1620	9.1	< *2.0*
97C7WB3	3.85	< *0.1*	< *0.1*	0.854	16.2	59.4	< *0.20*	1645	6.07	< *2.0*
GDCW1	5.44	0.3	< *0.1*	1.39	4.89	192.	0.13	1468	9.26	< *2.0*
GDCW2	2.94	< *0.1*	< *0.1*	< *0.5*	3.89	100.	0.12	1217	4.32	< *2.0*
GDCW3	3.91	0.22	< *0.1*	0.87	3.37	111.	0.18	1230	5.69	< *2.0*
97AMCW1	7.29	< *0.1*	< *0.1*	2.28	2.23	131.	< *0.20*	1377	5.79	< *2.0*
97AMCW2	3.45	< *0.1*	< *0.1*	2.89	2.27	136.	< *0.20*	1039	3.23	< *2.0*
97AMCW3	3.39	< *0.1*	< *0.1*	5.51	2.96	140.	0.26	1138	4.23	< *2.0*
ODCW1	3.75	< *0.1*	< *0.1*	0.53	3.79	138.	0.08	1324	4.38	< *2.0*
ODCW2	2.74	0.22	< *0.1*	0.74	4.27	120.	0.06	967	3.65	< *2.0*
ODGM2	3.87	< *0.1*	< *0.1*	1.49	5.51	141.	0.06	1470	12.	< *2.0*
SCCW1	7.64	0.18	< *0.1*	1.09	2.2	178.	0.1	1384	4.54	< *2.0*
SCCW2	4.65	< *0.1*	< *0.1*	0.73	2.65	127.	0.08	1223	3.21	< *2.0*
SCCW3	4.15	< *0.1*	< *0.1*	1.13	3.89	112.	0.1	1221	4.63	< *2.0*
97BPCW1	8.38	< *0.1*	< *0.1*	3.76	5.98	415.	< *0.20*	1439	8.59	< *2.0*
97BPCW2	3.96	< *0.1*	< *0.1*	3.63	1.98	157.	< *0.20*	1103	5.2	< *2.0*
97BPCW3	4.75	< *0.1*	< *0.1*	4.75	2.4	304.	< *0.20*	982	7.35	< *2.0*
97CUCW1	6.87	< *0.1*	< *0.1*	1.76	5.06	113.	0.259	1339	3.34	< *2.0*
97CUCW2	9.55	< *0.1*	< *0.1*	2.73	4.99	98.7	0.233	1622	5.62	< *2.0*
97CUCW3	7.38	< *0.1*	< *0.1*	1.21	4.56	109.	0.233	1468	4.49	< *2.0*
97F1CW1	4.64	< *0.1*	< *0.1*	2.94	2.07	147.	< *0.20*	1275	4.27	< *2.0*
97F1CW2	6.	< *0.1*	< *0.1*	2.82	2.18	160.	< *0.20*	1141	4.61	< *2.0*
97F1CW3	2.99	< *0.1*	< *0.1*	1.31	2.25	151.	< *0.20*	865	4.06	< *2.0*
KCFI1	21.3	0.2	0.1	7.08	4.83	823.	0.14	1831	33.4	< *2.0*
97HSCW1	8.14	< *0.1*	< *0.1*	2.65	2.39	127.	< *0.20*	972	4.36	< *2.0*
97HSCW2	6.97	< *0.1*	< *0.1*	3.61	1.86	139.	< *0.20*	955	3.88	< *2.0*
97HSCW3	15.1	< *0.1*	< *0.1*	2.91	3.67	288.	< *0.20*	1383	8.52	< *2.0*
OBCW1	6.71	< *0.1*	< *0.1*	0.8	3.79	185.	0.23	1163	9.04	< *2.0*
OBCW2	4.78	< *0.1*	< *0.1*	1.21	3.32	230.	0.21	1078	8.64	< *2.0*
OBCW3	9.05	< *0.1*	< *0.1*	1.27	2.79	175.	0.37	1291	10.3	< *2.0*
97OBCW1	7.21	< *0.1*	< *0.1*	2.87	2.8	162.	< *0.20*	1048	8.06	< *2.0*

Table A-6. Trace Elements in Fish from Freshwater Inflows, Great Salt Lake Wetlands Synoptic Survey, 1996-1997. Concentrations reported in milligrams per kilogram (mg/kg, ppm) dry weight; non-detected elements shown in italics. ***(Page 3 of 3)***

Sample Number	Sample Site Description	Species Code[a]	Ni	Pb	Se	Sr	V	Zn
	Area #3: GSL South Shore							
C7CW1	C7 Ditch (LC)	CC	< *0.5*	1.4	7.8	136.	< *0.5*	312.
C7CW2	C7 Ditch (LC)	CC	< *0.5*	1.5	9.1	331.	0.98	341.
C7CW3	C7 Ditch (LC)	CC	1.29	< *0.5*	3.5	210.	1.08	360.
97C7CW1	C7 Ditch (LC)	CC	0.899	0.98	5.93	199.	< *0.5*	299.
97C7CW2	C7 Ditch (LC)	CC	0.748	2.13	5.61	311.	< *0.5*	221.
97C7WB3	C7 Ditch (LC)	UC	< *0.5*	< *0.5*	8.03	211.	< *0.5*	72.9
	Area #4: South Shore Wetlands							
GDCW1	Goggin Drain (SD)	CC	< *0.5*	1.5	2.1	194.	0.76	262.
GDCW2	Goggin Drain (SD)	CC	2.1	0.6	2.	133.	0.81	250.
GDCW3	Goggin Drain (SD)	CC	1.61	0.9	1.7	157.	< *0.5*	221.
97AMCW1	Airport Mitigation Site (SA)	CC	0.634	< *0.5*	1.44	317.	< *0.5*	165.
97AMCW2	Airport Mitigation Site (SA)	CC	< *0.5*	< *0.5*	1.71	153.	< *0.5*	150.
97AMCW3	Airport Mitigation Site (SA)	CC	< *0.5*	< *0.5*	1.29	211.	< *0.5*	261.
	Area #5: South Shore Industrially Impacted Wetlands							
ODCW1	NW Oil Drain (IO)	CC	< *0.5*	< *0.5*	3.3	131.	< *0.5*	199.
ODCW2	NW Oil Drain (IO)	CC	< *0.5*	< *0.5*	3.	103.	< *0.5*	169.
ODGM2	NW Oil Drain (IO)	WM	< *0.5*	1.5	1.4	219.	< *0.5*	130.
	Area #6: Farmington Bay South							
SCCW1	State Canal (FS)	CC	< *0.5*	1	2.2	135.	< *0.5*	187.
SCCW2	State Canal (FS)	CC	< *0.5*	1.3	2.7	108.	< *0.5*	247.
SCCW3	State Canal (FS)	CC	< *0.5*	0.6	2.2	120.	< *0.5*	222.
97BPCW1	Bountiful Pond (FP)	CC	1.28	1.43	1.51	115.	< *0.5*	245.
97BPCW2	Bountiful Pond (FP)	CC	0.59	1.4	1.89	118.	< *0.5*	170.
97BPCW3	Bountiful Pond (FP)	CC	1.45	< *0.5*	1.41	36.7	< *0.5*	203.
97CUCW1	FBWMA- Crystal Unit (FC)	CC	< *0.5*	< *0.5*	1.65	144.	< *0.5*	209.
97CUCW2	FBWMA- Crystal Unit (FC)	CC	< *0.5*	< *0.5*	1.69	245.	0.569	208.
97CUCW3	FBWMA- Crystal Unit (FC)	CC	< *0.5*	< *0.5*	1.83	185.	< *0.5*	197.
97F1CW1	FBWMA- Unit 1 (FU)	CC	< *0.5*	0.51	2.04	106.	0.533	184.
97F1CW2	FBWMA- Unit 1 (FU)	CC	< *0.5*	0.8	1.14	121.	1.16	186.
97F1CW3	FBWMA- Unit 1 (FU)	CC	0.619	0.78	1.49	77.3	0.504	152.
	Area #7: Farmington BayNorth							
KCFI1	Kaysville Marsh (FK)	WM	3.08	1.5	1.7	62.2	1.79	151.
	Area #8: Ogden Bay							
97HSCW1	Howard Slough (OH)	CC	0.536	< *0.5*	0.94	79.5	1.05	172.
97HSCW2	Howard Slough (OH)	CC	0.531	< *0.5*	1.47	57.	< *0.5*	176.
97HSCW3	Howard Slough (OH)	CC	1.2	0.73	1.37	87.	1.61	179.
OBCW1	Ogden Bay WMA- South (OS)	CC	1.84	1.2	1.4	48.	< *0.5*	318.
OBCW2	Ogden Bay WMA- South (OS)	CC	1.39	1.2	1.5	24.8	< *0.5*	512.
OBCW3	Ogden Bay WMA- South (OS)	CC	1.56	3.2	1.2	75.6	< *0.5*	185.
97OBCW1	Ogden Bay WMA- North (ON)	CC	2.25	1.46	1.91	52.5	1.21	271.

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Table A-7. Organic Chemicals in Composite Fish Samples, Great Salt Lake Wetlands Synoptic Survey, 1996-1997. Non-DDT and DDT Organochlorines and Polychlorinated Biphenyls (PCBs) *(Page 1 of 5)*

Sample Number	Sample Site Description [1]	Collection Date	Sample Weight	% Lipid	% Moisture	dieldrin	alpha BHC
	Area #3- GSL South Shore						
97C7CW2	C7 Ditch (LC)	7/23/1997	6771	3.46	71	**0.0013**	< 0.0010
C7CW1	C7 Ditch (LC)	7/30/1996	1103	3.18	76	**0.0043**	< 0.0002
C7CW2	C7 Ditch (LC)	7/30/1996	3900	4.38	73.9	**0.0054**	0.0005
C7CW3	C7 Ditch (LC)	7/30/1996	10762	1.35	29.7	**0.0026**	0.0003
	Area #4- S. Shore Conservation Wetlands						
97AMCW2	Airport Mitigation Site (SA)	7/16/1997	10322	7.14	70.4	< 0.0010	< 0.0010
97AMCW3	Airport Mitigation Site (SA)	7/16/1997	9295	7.96	67.9	< 0.0009	< 0.0009
GDCW1	Goggin Drain (SD)	8/15/1996	2359	5.27	74.1	**0.0059**	**0.0002**
GDCW2	Goggin Drain (SD)	8/16/1996	1657	5.13	75.8	**0.0064**	**0.0003**
GDCW3	Goggin Drain (SD)	8/16/1996	1288	4.55	75.6	**0.0063**	**0.0003**
	Area #5- SE Shore Industrially Impacted Wetlands						
ODCW3	Oil Drain Canal (IO)	8/13/1996	242	3.52	75.9	**0.0118**	< 0.0002
ODGM2	Oil Drain Canal (IO)- *Mosquito Fish*	7/11/1996	32	2.48	78.5	**0.0073**	< 0.0002
	Area #6- Farmington Bay South						
97BPCW2	Bountiful Pond (FP)	7/15/1997	5886	6.27	70.7	**0.0131**	< 0.0009
97BPCW3	Bountiful Pond (FP)	7/15/1997	6469	6.31	68.8	**0.0131**	< 0.0010
97CUCW1	FBWMA- Crystal Unit (FC)	8/19/1997	2074	2.95	76.3	< 0.000925	< 0.0009
97F1CW1	FBWMA- Unit 1 (FU)	7/31/1997	6994	6.23	70.9	**0.0039**	< 0.0009
SCCW1	State Canal (FS)	8/5/1996	1837	1.09	80.1	**0.0102**	**0.0002**
SCCW2	State Canal (FS)	8/6/1996	1831	2.74	75.4	**0.0227**	**0.0002**
SCCW3	State Canal (FS)	8/7/1996	1371	3.18	77.5	**0.0235**	**0.0002**
	Area #8- Ogden Bay						
97HSCW1	Howard Slough (OH)	8/22/1997	7278	7.91	69.6	**0.0022**	< 0.0010
97HSCW2	Howard Slough (OH)	8/22/1997	4983	5.84	71.6	**0.0013**	< 0.0009
97OBCW1	Ogden Bay WMA North (ON)	8/26/1997	8778	6.07	67.5	**0.0035**	< 0.0009
OBCW2	Ogden Bay WMA South Canal (OC)	8/27/1996	9811	3.73	76.1	**0.0053**	**0.0002**
OBCW3	Ogden Bay WMA South Canal (OC)	8/27/1996	13782	2.79	74.1	**0.0041**	**0.0002**

All values milligram per kilogram (parts per million) on a wet-weight basis
detected values are in presented in bold face type.

(1) All fish evaluated were Common Carp (*Cyprinio carpius)* unless noted

Analyzed but not detected (not shown on table): Aldrin, Endrin
Not analyzed: pentachloro-anisole, toxaphene

Sample Number	beta BHC	delta BHC	gamma BHC	alpha chlordane	gamma chlordane	oxy chlordane	Heptachlor
97C7CW2	< 0.0010	< 0.0010	**0.0014**	**0.0023**	**0.0019**	< 0.00097	< 0.0010
C7CW1	< 0.0002	< 0.0002	**0.0002**	**0.0052**	**0.0042**	**0.0019**	< 0.0002
C7CW2	< 0.0002	< 0.0002	**0.0003**	**0.0059**	**0.0054**	**0.002**	< 0.0002
C7CW3	< 0.0002	< 0.0002	**0.0002**	**0.0034**	**0.0021**	**0.0007**	< 0.0002
97AMCW2	< 0.0010	< 0.0010	< 0.000991	< 0.0010	< 0.000991	< 0.000991	< 0.0010
97AMCW3	< 0.0009	< 0.0009	< 0.000945	< 0.0009	< 0.000945	< 0.000945	< 0.0009
GDCW1	< 0.0002	< 0.0002	**0.0011**	**0.0043**	**0.0033**	**0.0021**	< 0.0002
GDCW2	< 0.0002	< 0.0002	**0.0012**	**0.004**	**0.0029**	**0.0023**	< 0.0002
GDCW3	< 0.0002	< 0.0002	**0.001**	**0.0038**	**0.0033**	**0.0021**	< 0.0002
ODCW3	**0.0002**	**0.0003**	**0.0022**	**0.0045**	**0.0038**	**0.0021**	< 0.0002
ODGM2	< 0.0002	< 0.0002	**0.0002**	**0.0023**	**0.0011**	**0.0017**	< 0.0002
		0.0002					
97BPCW2	< 0.0009	< 0.0009	**0.0015**	**0.0131**	**0.0123**	**0.0029**	< 0.0009
97BPCW3	< 0.0010	< 0.0010	**0.0012**	**0.0098**	**0.0096**	**0.0028**	< 0.0010
97CUCW1	< 0.0009	< 0.0009	< 0.000925	< 0.0009	< 0.000925	< 0.000925	< 0.0009
97F1CW1	< 0.0009	< 0.0009	< 0.000858	**0.0041**	**0.0059**	**0.0013**	< 0.0009
SCCW1	< 0.0002	< 0.0002	**0.0003**	**0.0073**	**0.0073**	**0.0013**	< 0.0002
SCCW2	< 0.0002	< 0.0002	**0.0006**	**0.0131**	**0.0137**	**0.0024**	**0.0006**
SCCW3	< 0.0002	< 0.0002	**0.0006**	**0.015**	**0.0142**	**0.0035**	**0.0004**
97HSCW1	< 0.0010	< 0.0010	< 0.000966	**0.0072**	**0.0104**	**0.002**	< 0.0010
97HSCW2	< 0.0009	< 0.0009	< 0.000874	**0.0079**	**0.0107**	**0.002**	< 0.0009
97OBCW1	< 0.0009	< 0.0009	< 0.00093	**0.012**	**0.0151**	**0.003**	< 0.0009
OBCW2	< 0.0002	< 0.0002	**0.0003**	**0.0087**	**0.008**	**0.0032**	**0.0002**
OBCW3	< 0.0002	< 0.000194	**0.0002**	**0.0082**	**0.008**	**0.0024**	**0.0003**

Table A-7. Organic Chemicals in Composite Fish Samples, Great Salt Lake Wetlands Synoptic Survey, 1996-1997. Non-DDT and DDT Organochlorines and Polychlorinated Biphenyls (PCBs) ***(page 3 of 5)***

Sample Number	Sample Site Description [1]	heptachlor epoxide	cis-nonachlor	trans-nonachlor	endosulfan II	HCB
	Area #3- GSL South Shore					
97C7CW2	C7 Ditch (LC)	< 0.00097	**0.0014**	**0.0022**	< 0.00097	**0.001**
C7CW1	C7 Ditch (LC)	**0.0009**	**0.0026**	**0.0065**	**0.0005**	**0.002**
C7CW2	C7 Ditch (LC)	**0.0013**	**0.0027**	**0.0066**	**0.0005**	**0.002**
C7CW3	C7 Ditch (LC)	**0.0009**	**0.0034**	**0.0033**	< 0.000383	**0.001**
	Area #4- S. Shore Conservation Wetlands					
97AMCW2	Airport Mitigation Site (SA)	< 0.000991	< 0.0010	0.0011	< 0.000991	0.001
97AMCW3	Airport Mitigation Site (SA)	< 0.000945	< 0.0009	0.0011	< 0.000945	0.001
GDCW1	Goggin Drain (SD)	0.0006	0.0022	0.0046	0.0005	0.002
GDCW2	Goggin Drain (SD)	0.0006	0.0021	0.0044	< 0.000384	0.001
GDCW3	Goggin Drain (SD)	0.0006	0.002	0.0043	0.0004	0.001
	Area #5- SE Shore Industrially Impacted Wetlands					
ODCW3	Oil Drain Canal (IO)	**0.0017**	**0.0017**	**0.0044**	**0.0005**	**0.006**
ODGM2	Oil Drain Canal (IO)- *Mosquito Fish*	**0.0003**	**0.0012**	**0.0032**	< 0.000398	**0.001**
	Area #6- Farmington Bay South					
97BPCW2	Bountiful Pond (FP)	0.0029	0.0062	0.0162	< 0.00093	0.003
97BPCW3	Bountiful Pond (FP)	0.0026	0.0053	0.0135	< 0.000961	0.003
97CUCW1	FBWMA- Crystal Unit (FC)	< 0.000925	< 0.0009	**0.0012**	< 0.000925	< 0.001
97F1CW1	FBWMA- Unit 1 (FU)	< 0.000858	**0.0039**	**0.0055**	< 0.000858	< 0.001
SCCW1	State Canal (FS)	**0.0007**	**0.003**	**0.0072**	**0.0006**	**0.001**
SCCW2	State Canal (FS)	**0.0012**	**0.0047**	**0.0118**	**0.0006**	**0.002**
SCCW3	State Canal (FS)	**0.0015**	**0.0052**	**0.0133**	< 0.000398	**0.002**
	Area #8- Ogden Bay					
97HSCW1	Howard Slough (OH)	**0.0022**	**0.0035**	**0.009**	< 0.000966	**0.002**
97HSCW2	Howard Slough (OH)	**0.0022**	**0.0037**	**0.0086**	< 0.000874	**0.002**
97OBCW1	Ogden Bay WMA- North (ON)	**0.002**	**0.0078**	**0.013**	< 0.00093	**0.002**
OBCW2	Ogden Bay WMA South Canal (OC)	**0.002**	**0.0058**	**0.0118**	< 0.000394	**0.002**
OBCW3	Ogden Bay WMA South Canal (OC)	**0.0014**	**0.0053**	**0.0099**	**0.0004**	**0.001**

Sample Number		mirex		o,p'-DDD		o,p'-DDE		o,p'-DDT		p,p'-DDD		p,p'-DDE		p,p'-DDT
97C7CW2	<	0.00097		**0.001**	<	0.001	<	0.001		**0.007**		**0.028**	<	0.001
C7CW1		**0.0002**		**0.004**		**0.001**		**0.002**		**0.014**		**0.038**		**0.001**
C7CW2	<	0.000195		**0.005**		**0.001**		**0.003**		**0.018**		**0.036**		**0.001**
C7CW3		**0.0003**		**0.002**		**0.000**		**0.002**		**0.011**		**0.052**		**0.000**
97AMCW2	<	0.000991	<	0.001	<	0.001	<	0.001		**0.001**		**0.007**	<	0.001
97AMCW3	<	0.000945	<	0.001	<	0.001	<	0.001		**0.002**		**0.009**	<	0.001
GDCW1	<	0.00019		**0.003**		**0.001**		**0.002**		**0.011**		**0.036**		**0.001**
GDCW2	<	0.000192		**0.003**		**0.001**		**0.002**		**0.010**		**0.033**	<	0.000
GDCW3	<	0.000186		**0.003**		**0.001**		**0.002**		**0.011**		**0.036**		**0.001**
ODCW3	<	0.000197		**0.005**		**0.001**		**0.005**		**0.015**		**0.011**		**0.001**
ODGM2	<	0.000199		**0.001**		**0.000**		**0.001**		**0.008**		**0.005**		**0.000**
97BPCW2	<	0.00093		**0.019**		**0.005**		**0.006**		**0.054**	<	0.001		**0.015**
97BPCW3	<	0.000961		**0.021**		**0.004**		**0.006**		**0.059**	<	0.001		**0.012**
97CUCW1	<	0.000925	<	0.001	<	0.001	<	0.001		**0.002**		**0.004**	<	0.001
97F1CW1	<	0.000858		**0.007**		**0.002**		**0.001**		**0.029**		**0.058**	<	0.001
SCCW1	<	0.000188		**0.011**		**0.002**		**0.001**		**0.029**		**0.068**		**0.001**
SCCW2	<	0.000196		**0.016**		**0.002**		**0.003**		**0.043**		**0.077**		**0.001**
SCCW3	<	0.000199		**0.021**		**0.002**		**0.003**		**0.030**		**0.072**		**0.002**
97HSCW1	<	0.000966		**0.004**		**0.001**	<	0.001		**0.019**		**0.054**	<	0.001
97HSCW2	<	0.000874		**0.003**		**0.001**	<	0.001		**0.016**		**0.049**	<	0.001
97OBCW1	<	0.00093		**0.035**		**0.006**		**0.003**		**0.095**		**0.099**	<	0.001
OBCW2		**0.0004**		**0.010**		**0.001**		**0.005**		**0.029**		**0.045**		**0.000**
OBCW3		**0.0002**		**0.013**		**0.002**		**0.004**		**0.022**		**0.065**		**0.000**

Table A-7. Organic Chemicals in Composite Fish Samples, Great Salt Lake Wetlands Synoptic Survey, 1996-1997. Non-DDT and DDT Organochlorines and Polychlorinated Biphenyls (PCBs) ***(page 5 of 5)***

Sample Number	Sample Site Description [1]	Total DDTs [2]	Total PCBs
	Area #3- GSL South Shore		
97C7CW2	C7 Ditch (LC)	**0.038**	**0.070**
C7CW1	C7 Ditch (LC)	**0.061**	**0.188**
C7CW2	C7 Ditch (LC)	**0.063**	**0.192**
C7CW3	C7 Ditch (LC)	**0.068**	**0.202**
	Area #4- S. Shore Conservation Wetlands		
97AMCW2	Airport Mitigation Site (SA)	**0.010**	**0.033**
97AMCW3	Airport Mitigation Site (SA)	**0.013**	**0.033**
GDCW1	Goggin Drain (SD)	**0.053**	**0.173**
GDCW2	Goggin Drain (SD)	**0.048**	**0.183**
GDCW3	Goggin Drain (SD)	**0.052**	**0.189**
	Area #5- SE Shore Industrially Impacted Wetlands		
ODCW3	Oil Drain Canal (IO)	**0.038**	**0.281**
ODGM2	Oil Drain Canal (IO)- *Mosquito Fish*	**0.015**	**0.136**
	Area #6- Farmington Bay South		
97BPCW2	Bountiful Pond (FP)	**0.099**	**0.158**
97BPCW3	Bountiful Pond (FP)	**0.102**	**0.109**
97CUCW1	FBWMA- Crystal Unit (FC)	**0.008**	**0.051**
97F1CW1	FBWMA- Unit 1 (FU)	**0.097**	**0.253**
SCCW1	State Canal (FS)	**0.110**	**0.100**
SCCW2	State Canal (FS)	**0.141**	**0.177**
SCCW3	State Canal (FS)	**0.129**	**0.156**
	Area #8- Ogden Bay		
97HSCW1	Howard Slough (OH)	**0.079**	**0.090**
97HSCW2	Howard Slough (OH)	**0.070**	**0.076**
97OBCW1	Ogden Bay WMA- North (ON)	**0.238**	**0.640**
OBCW2	Ogden Bay WMA- South Canal (OC)	**0.089**	**0.550**
OBCW3	Ogden Bay WMA- South Canal (OC)	**0.105**	**0.409**

(1) All fish evaluated were Common Carp (*Cyprinio carpius)* unless noted
(2) Total DDTs: Summed DDT residues in samples where at least one isomer was detected; non-detected isomers included in sum as 0.5 x Detection limit

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Table A-8. Trace Elements in Avian Eggs, Great Salt Lake Wetlands Synoptic Survey, 1996-1997. Concentrations reported in milligrams per kilogram (mg/kg, ppm) dry weight; non-detected elements shown in italics. ***(Page 1 of 9)***

Sample Number	Sample Site Description	Species Code[a]	Collection Date	Sample Weight (grams)	% moisture	Al	As	B
	Area #2: Antelope Island							
AICT1	Antelope Island South (AS)	AMCO	6/21/1996	23	74.8	< *5.0*	< *0.5*	3.4
AIST1	Antelope Island East (AE)	BNST	6/21/1996	19	83.1	< *5.0*	< *0.5*	2.77
AIST2	Antelope Island East (AE)	BNST	6/21/1996	18	77.3	< *5.0*	< *0.5*	8.84
AIST3	Antelope Island East (AE)	BNST	6/21/1996	19	73.6	< *5.0*	< *0.5*	4.34
	Area #3: GSL South Shore							
GSAST1	Saltair/GSL State Park (LS)	BNST	5/14/1996	19	75.7	< *5.0*	< *0.5*	< *2.0*
GSAST2	Saltair/GSL State Park (LS)	BNST	5/29/1996	20	81.4	< *5.0*	< *0.5*	< *2.0*
GSAST3	Saltair/GSL State Park (LS)	BNST	6/13/1996	19	73.6	< *5.0*	< *0.5*	< *2.0*
97GSST1	Saltair/GSL State Park (LS)	BNST	6/23/1997	20	74.6	< *5.0*	0.54	< *2.0*
97GSST2	Saltair/GSL State Park (LS)	BNST	6/23/1997	17	74.5	< *5.0*	< *0.5*	< *2.0*
97GSST3	Saltair/GSL State Park (LS)	BNST	6/25/1997	20	76.4	< *5.0*	1.1	< *2.0*
97SPAV1	Saltair/GSL State Park (LS)	AMAV	5/19/1997	24	76.0	< *5.0*	< *0.5*	< *2.0*
97SPST1	Saltair/GSL State Park (LS)	BNST	5/19/1997	19	72.0	< *5.0*	< *0.5*	< *2.0*
97SPST3	Saltair/GSL State Park (LS)	BNST	5/19/1997	17	76.2	< *5.0*	< *0.5*	< *2.0*
97SPCT1	Saltair/GSL State Park (LS)	AMCO	5/19/1997	20	80.3	5.4	< *0.5*	< *2.0*
97GSMA1	Saltair/GSL State Park (LS)	MALL	6/25/1997	41	64.3	< *5.0*	0.93	< *2.0*
97SPMA1	Saltair/GSL State Park (LS)	MALL	5/19/1997	49	66.2	< *5.0*	< *0.5*	< *2.0*
	Area #4: South Shore Wetlands							
97AMST1	Airport Mitigation Site (SA)	BNST	5/21/1997	16	67.9	< *5.0*	< *0.5*	< *2.0*
97AMST2	Airport Mitigation Site (SA)	BNST	5/21/1997	19	76.3	< *5.0*	< *0.5*	< *2.0*
97AMST3	Airport Mitigation Site (SA)	BNST	5/21/1997	18	74.0	< *5.0*	< *0.5*	< *2.0*
97AMDC1	Airport Mitigation Site (SA)	DCCO	5/21/1997	42	77.5	< *5.0*	< *0.5*	< *2.0*
97AMMA2	Airport Mitigation Site (SA)	MALL	5/21/1997	36	66.7	< *5.0*	< *0.5*	< *2.0*
97AMMA3	Airport Mitigation Site (SA)	MALL	6/3/1997	49	69.4	< *5.0*	< *0.5*	< *2.0*
NGAV1	Goggin Drain (SD)	AMAV	6/11/1996	26	72.0	< *5.0*	< *0.5*	< *2.0*
97LCSP2	Inland Sea Shorebird Reserve (SI)	SNPL	7/22/1997	7	69.6	5.78	< *0.5*	< *2.0*
	Area #5: South Shore Industrially Impacted Wetlands							
BHAV1	Beck Hot Springs (IB)	AMAV	6/11/1996	21	70.1	< *5.0*	< *0.5*	8.61
BHAV2	Beck Hot Springs (IB)	AMAV	6/11/1996	25	73.8	< *5.0*	< *0.5*	15.8
BHAV3	Beck Hot Springs (IB)	AMAV	6/11/1996	23	73.5	< *5.0*	< *0.5*	< *2.0*
WPCT1	SLC Sewage Treatment Plant (IS)	AMCO	6/13/1996	24	76.0	< *5.0*	0.7	< *2.0*
WPCT2	SLC Sewage Treatment Plant (IS)	AMCO	6/13/1996	24	74.3	< *5.0*	< *0.5*	< *2.0*
WPCT3	SLC Sewage Treatment Plant (IS)	AMCO	6/13/1996	25	74.8	< *5.0*	< *0.5*	< *2.0*
97WPCT1	SLC Sewage Treatment Plant (IS)	AMCO	6/17/1997	26	75.2	< *5.0*	< *0.5*	< *2.0*
97WPCT2	SLC Sewage Treatment Plant (IS)	AMCO	6/17/1997	28	78.6	< *5.0*	< *0.5*	< *2.0*
97WPMA1	SLC Sewage Treatment Plant (IS)	MALL	6/12/1997	55	69.3	< *5.0*	< *0.5*	< *2.0*
97PCCT1	Petrochem Ponds (IP)	AMCO	5/28/1997	24	75.2	< *5.0*	< *0.5*	< *2.0*
97PCMA1	Petrochem Ponds (IP)	MALL	6/10/1997	38	67.6	< *5.0*	< *0.5*	< *2.0*

(a) Avian Species Codes

AMAV = American avocet
AMCO= American Coot
BNST = Black necked stilt
CITE = Cinnamon teal
DCCO = Double-crested cormorant
MALL = Mallard
SNPL = Snowy plover

Sample Number	Ba	Be	Cd	Cr	Cu	Fe	Hg	Mg	Mn	Mo
AICT1	< *1.*	< *0.1*	< *0.1*	< *0.5*	1.63	59.1	0.45	423	1.09	< *2.0*
AIST1	1.69	< *0.1*	< *0.1*	< *0.5*	2.99	93.4	1.11	402	1.33	< *2.0*
AIST2	1.65	< *0.1*	< *0.1*	< *0.5*	2.63	73.1	0.61	385	1.42	< *2.0*
AIST3	1.43	< *0.1*	< *0.1*	< *0.5*	2.36	85.2	0.7	376	< *1.0*	< *2.0*
GSAST1	1.58	< *0.1*	< *0.1*	< *0.5*	2.57	119.	1.05	403	1.05	< *2.0*
GSAST2	2.05	< *0.1*	< *0.1*	< *0.5*	3.22	108.	0.25	426	1.62	< *2.0*
GSAST3	1.76	< *0.1*	< *0.1*	0.64	3.24	116.	1.19	494	1.22	< *2.0*
97GSST1	2.44	< *0.1*	< *0.1*	< *0.5*	3.24	115.	0.48	400	1	< *2.0*
97GSST2	5.87	< *0.1*	< *0.1*	< *0.5*	3.57	108.	0.49	445	1.42	< *2.0*
97GSST3	2.65	< *0.1*	< *0.1*	< *0.5*	3.28	113.	0.29	367	< *1.0*	< *2.0*
97SPAV1	< *1.*	< *0.1*	< *0.1*	0.55	3.75	117.	0.23	457	2.53	< *2.0*
97SPST1	2.24	< *0.1*	< *0.1*	< *0.5*	7.15	95.7	0.35	359	< *1.0*	< *2.0*
97SPST3	1.96	< *0.1*	< *0.1*	0.62	4.95	102.	0.9	612	1.26	< *2.0*
97SPCT1	3.17	< *0.1*	< *0.1*	1.41	7.3	158.	0.23	789	3.69	< *2.0*
97GSMA1	3.42	< *0.1*	< *0.1*	< *0.5*	5.7	105.	0.33	324	< *1.0*	4.34
97SPMA1	4.2	< *0.1*	< *0.1*	< *0.5*	4.14	94.1	< *0.20*	432	1.01	< *2.0*
97AMST1	1.74	< *0.1*	< *0.1*	< *0.5*	3.16	85.6	1.13	332	1.62	< *2.0*
97AMST2	2.19	< *0.1*	< *0.1*	< *0.5*	2.88	79.5	0.4	386	1.54	< *2.0*
97AMST3	1.22	< *0.1*	< *0.1*	0.65	3.27	74.4	0.66	368	1.41	< *2.0*
97AMDC1	< *1.*	< *0.1*	< *0.1*	0.62	3.14	135.	0.38	525	2.02	< *2.0*
97AMMA2	12.9	< *0.1*	< *0.1*	< *0.5*	2.93	107.	< *0.20*	366	1.43	< *2.0*
97AMMA3	17.3	< *0.1*	< *0.1*	< *0.5*	4.16	116.	0.21	537	2.09	< *2.0*
NGAV1	4.3	< *0.1*	< *0.1*	< *0.5*	2.59	106.	0.15	434	2.41	< *2.0*
97LCSP2	2.7	< *0.1*	< *0.1*	1.3	3.55	104.	0.94	418	< *1.0*	< *2.0*
BHAV1	1.35	< *0.1*	< *0.1*	0.59	3.12	144.	0.13	410	2.02	< *2.0*
BHAV2	2.13	< *0.1*	< *0.1*	< *0.5*	2.86	124.	0.29	390	< *1.0*	< *2.0*
BHAV3	< *1.*	< *0.1*	< *0.1*	0.53	2.73	106.	0.24	358	1.73	< *2.0*
WPCT1	2.7	< *0.1*	< *0.1*	< *0.5*	2.82	113.	0.1	387	1.05	< *2.0*
WPCT2	1.37	< *0.1*	< *0.1*	< *0.5*	3.79	104.	0.1	421	< *1.0*	3.38
WPCT3	1.12	< *0.1*	< *0.1*	< *0.5*	2.89	98.4	0.24	480	< *1.0*	< *2.0*
97WPCT1	3.33	< *0.1*	< *0.1*	0.58	3.37	94.1	< *0.20*	379	1.71	< *2.0*
97WPCT2	2.	< *0.1*	0.23	< *0.5*	3.46	79.6	0.3	686	2.64	< *2.0*
97WPMA1	3.09	< *0.1*	< *0.1*	< *0.5*	2.93	114.	< *0.20*	299	1.74	< *2.0*
97PCCT1	1.62	< *0.1*	< *0.1*	0.57	3.04	90.7	< *0.20*	530	2.03	< *2.0*
97PCMA1	1.11	< *0.1*	< *0.1*	< 0.5	4.23	99.2	< *0.20*	355	3.09	< *2.0*

Table A-8. Trace Elements in Avian Eggs, Great Salt Lake Wetlands Synoptic Survey, 1996-1997. Concentrations reported in milligrams per kilogram (mg/kg, ppm) dry weight; non-detected elements shown in italics. ***(Page 3 of 9)***

Sample Number	Sample Site Description	Species Code[a]	Ni	Pb	Se	Sr	V	Zn
	Area #2: Antelope Island							
AICT1	Antelope Island South (AS)	AMCO	< *0.5*	< *0.5*	1.5	5.8	< *0.5*	46.5
AIST1	Antelope Island East (AE)	BNST	< *0.5*	< *0.5*	2.8	19.3	< *0.5*	43.7
AIST2	Antelope Island East (AE)	BNST	< *0.5*	< *0.5*	3.2	18.5	< *0.5*	42.7
AIST3	Antelope Island East (AE)	BNST	< *0.5*	< *0.5*	3.6	23.8	< *0.5*	38.6
	Area #3: GSL South Shore							
GSAST1	Saltair/GSL State Park (LS)	BNST	< *0.5*	< *0.5*	5.3	11.6	< *0.5*	43.
GSAST2	Saltair/GSL State Park (LS)	BNST	0.89	< *0.5*	5.4	15.8	0.65	53.1
GSAST3	Saltair/GSL State Park (LS)	BNST	0.79	< *0.5*	7.5	27.	0.68	50.7
97GSST1	Saltair/GSL State Park (LS)	BNST	< *0.5*	< *0.5*	4.12	27.	< *0.5*	55.7
97GSST2	Saltair/GSL State Park (LS)	BNST	< *0.5*	< *0.5*	4.11	31.8	< *0.5*	48.2
97GSST3	Saltair/GSL State Park (LS)	BNST	< *0.5*	< *0.5*	3.67	20.	< *0.5*	46.5
97SPAV1	Saltair/GSL State Park (LS)	AMAV	< *0.5*	< *0.5*	5.9	23.3	< *0.5*	38.8
97SPST1	Saltair/GSL State Park (LS)	BNST	< *0.5*	< *0.5*	6.39	20.5	0.69	50.5
97SPST3	Saltair/GSL State Park (LS)	BNST	< *0.5*	< *0.5*	4.42	50.2	0.68	59.2
97SPCT1	Saltair/GSL State Park (LS)	AMCO	< *0.5*	< *0.5*	3.14	44.6	< *0.5*	82.1
97GSMA1	Saltair/GSL State Park (LS)	MALL	< *0.5*	< *0.5*	5.21	20.6	< *0.5*	72.
97SPMA1	Saltair/GSL State Park (LS)	MALL	< *0.5*	< *0.5*	4.44	45.	0.7	43.2
	Area #4: South Shore Wetlands							
97AMST1	Airport Mitigation Site (SA)	BNST	1.54	< *0.5*	4.12	14.6	< *0.5*	42.5
97AMST2	Airport Mitigation Site (SA)	BNST	< *0.5*	< *0.5*	3.5	10.4	< *0.5*	36.8
97AMST3	Airport Mitigation Site (SA)	BNST	0.95	< *0.5*	4.21	9.14	< *0.5*	37.9
97AMDC1	Airport Mitigation Site (SA)	DCCO	2.93	< *0.5*	3.18	10.8	< *0.5*	53.
97AMMA2	Airport Mitigation Site (SA)	MALL	0.95	< *0.5*	2.86	15.3	< *0.5*	52.9
97AMMA3	Airport Mitigation Site (SA)	MALL	< *0.5*	< *0.5*	2.86	19.8	< *0.5*	59.7
NGAV1	Goggin Drain (SD)	AMAV	< *0.5*	< *0.5*	3.2	11.1	< *0.5*	47.5
97LCSP2	Inland Sea Shorebird Reserve (SI)	SNPL	< *0.5*	< *0.5*	5.34	35.5	< *0.5*	46.1
	Area #5: South Shore Industrially Impacted Wetlands							
BHAV1	Beck Hot Springs (IB)	AMAV	< *0.5*	< *0.5*	4.4	22.7	0.51	48.7
BHAV2	Beck Hot Springs (IB)	AMAV	0.94	< *0.5*	2.5	9.25	0.64	45.6
BHAV3	Beck Hot Springs (IB)	AMAV	< *0.5*	< *0.5*	3.5	9.92	0.87	46.3
WPCT1	SLC Sewage Treatment Plant (IS)	AMCO	0.55	< *0.5*	4.8	12.1	< *0.5*	53.2
WPCT2	SLC Sewage Treatment Plant (IS)	AMCO	0.78	< *0.5*	3.8	10.8	< *0.5*	57.8
WPCT3	SLC Sewage Treatment Plant (IS)	AMCO	0.71	< *0.5*	4.1	6.29	< *0.5*	50.6
97WPCT1	SLC Sewage Treatment Plant (IS)	AMCO	< *0.5*	< *0.5*	3.69	12.5	1.03	49.5
97WPCT2	SLC Sewage Treatment Plant (IS)	AMCO	< *0.5*	< *0.5*	3.65	16.1	< *0.5*	42.9
97WPMA1	SLC Sewage Treatment Plant (IS)	MALL	< *0.5*	< *0.5*	2.38	22.6	< *0.5*	44.6
97PCCT1	Petrochem Ponds (IP)	AMCO	< *0.5*	< *0.5*	1.17	26.2	< *0.5*	57.5
97PCMA1	Petrochem Ponds (IP)	MALL	< *0.5*	0.55	3.37	19.3	< *0.5*	51.7

(a) Avian Species Codes

AMAV = American avocet
AMCO= American Coot
BNST = Black necked stilt
CITE = Cinnamon teal
DCCO = Double-crested cormorant
MALL = Mallard
SNPL = Snowy plover

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Table A-8. Trace Elements in Avian Eggs, Great Salt Lake Wetlands Synoptic Survey, 1996-1997. Concentrations reported in milligrams per kilogram (mg/kg, ppm) dry weight; non-detected elements shown in italics. ***(Page 4 of 9)***

Sample Number	Sample Site Description	Species Code[a]	Collection Date	Sample Weight (grams)	% moisture	Al	As	B
	Area #6: Farmington Bay South							
NSCT1	New State Duck Club (FN)	AMCO	5/30/1996	27	82.5	< *5.0*	< *0.5*	< *2.0*
NSCT2	New State Duck Club (FN)	AMCO	5/30/1996	24	81.8	< *5.0*	< *0.5*	< *2.0*
NSST1	New State Duck Club (FN)	BNST	5/30/1996	18	73.8	< *5.0*	< *0.5*	< *2.0*
NSST2	New State Duck Club (FN)	BNST	5/30/1996	21	74.1	< *5.0*	< *0.5*	< *2.0*
NSST3	New State Duck Club (FN)	BNST	5/30/1996	18	74.7	< *5.0*	< *0.5*	< *2.0*
97BPST2	Bountiful Pond (FP)	BNST	6/12/1997	21	75.6	6.36	< *0.5*	< *2.0*
97BPST3	Bountiful Pond (FP)	BNST	6/12/1997	16	75.2	< *5.0*	0.76	< *2.0*
97BPST4	Bountiful Pond (FP)	BNST	6/12/1997	22	74.1	< *5.0*	< *0.5*	< *2.0*
SCCT1	State Canal (FS)	AMCO	6/12/1996	26	76.1	< *5.0*	< *0.5*	< *2.0*
SCCT2	State Canal (FS)	AMCO	6/12/1996	23	75.4	< *5.0*	0.8	< *2.0*
SCCT3	State Canal (FS)	AMCO	6/12/1996	25	81.3	< *5.0*	0.7	< *2.0*
SCST1	State Canal (FS)	BNST	6/12/1996	19	74.6	< *5.0*	0.7	< *2.0*
SCST2	State Canal (FS)	BNST	6/17/1996	20	74.5	< *5.0*	0.6	< *2.0*
SCST3	State Canal (FS)	BNST	6/24/1996	20	74.6	< *5.0*	< *0.5*	< *2.0*
SCTE1	State Canal (FS)	CITE	6/12/1996	25	75.3	< *5.0*	< *0.5*	< *2.0*
CUCT1	FBWMA- Crystal Unit (FC)	AMCO	6/4/1996	26	78.4	< *5.0*	< *0.5*	< *2.0*
CUCT2	FBWMA- Crystal Unit (FC)	AMCO	6/4/1996	25	87.5	< *5.0*	< *0.5*	< *2.0*
CUCT3	FBWMA- Crystal Unit (FC)	AMCO	6/4/1996	22	73.0	< *5.0*	< *0.5*	< *2.0*
97CUCT3	FBWMA- Crystal Unit (FC)	AMCO	6/5/1997	28	73.7	< *5.0*	< *0.5*	< *2.0*
97CUCT4	FBWMA- Crystal Unit (FC)	AMCO	6/5/1997	22	74.3	< *5.0*	1.1	2.91
97CUCT6	FBWMA- Crystal Unit (FC)	AMCO	6/5/1997	25	77.3	< *5.0*	0.89	< *2.0*
CUST1	FBWMA- Crystal Unit (FC)	BNST	6/4/1996	18	78.2	< *5.0*	< *0.5*	< *2.0*
CUST2	FBWMA- Crystal Unit (FC)	BNST	6/4/1996	16	72.1	< *5.0*	< *0.5*	< *2.0*
CUST3	FBWMA- Crystal Unit (FC)	BNST	6/4/1996	17	73.0	< *5.0*	< *0.5*	< *2.0*
97CUST1	FBWMA- Crystal Unit (FC)	BNST	6/19/1997	19	84.8	< *5.0*	< *0.5*	< *2.0*
97CUST4	FBWMA- Crystal Unit (FC)	BNST	7/1/1997	16	76.6	< *5.0*	1.38	< *2.0*
97CUST5	FBWMA- Crystal Unit (FC)	BNST	7/1/1997	14	74.0	9.72	0.57	< *2.0*
97OMST1	NW Oil Drain Delta (FO)	BNST	6/19/1997	21	75.2	< *5.0*	< *0.5*	< *2.0*
97OMST4	NW Oil Drain Delta (FO)	BNST	6/19/1997	16	74.1	5.13	< *0.5*	< *2.0*
	Area #7: Farmington BayNorth							
KCCT1	Kaysville Marsh (FK)	AMCO	5/21/1996	28	83.2	< *5.0*	< *0.5*	< *2.0*
KCCT2	Kaysville Marsh (FK)	AMCO	5/21/1996	24	73.6	< *5.0*	< *0.5*	< *2.0*
KCCT3	Kaysville Marsh (FK)	AMCO	5/21/1996	25	84.2	< *5.0*	< *0.5*	< *2.0*
KCCT4	Kaysville Marsh (FK)	AMCO	5/21/1996	24	80.7	< *5.0*	< *0.5*	< *2.0*
KCST1	Kaysville Marsh (FK)	BNST	5/21/1996	17	74.8	< *5.0*	< *0.5*	< *2.0*
KCST2	Kaysville Marsh (FK)	BNST	5/21/1996	20	72.6	< *5.0*	< *0.5*	< *2.0*
KCST3	Kaysville Marsh (FK)	BNST	5/21/1996	19	74.4	< *5.0*	< *0.5*	< *2.0*

(a) Avian Species Codes

AMAV = American avocet
AMCO= American Coot
BNST = Black necked stilt
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DCCO = Double-crested cormorant
MALL = Mallard
SNPL = Snowy plover

Sample Number	Ba	Be	Cd	Cr	Cu	Fe	Hg	Mg	Mn	Mo	Ni
NSCT1	4.42	< *0.1*	< *0.1*	< *0.5*	2.85	118.	0.1	467	< *1.0*	< *2.0*	< *0.5*
NSCT2	3.85	< *0.1*	< *0.1*	< *0.5*	1.77	99.	0.11	461	1.23	< *2.0*	< *0.5*
NSST1	2.25	< *0.1*	< *0.1*	< *0.5*	2.68	89.4	0.68	448	1.33	< *2.0*	< *0.5*
NSST2	1.38	< *0.1*	< *0.1*	< *0.5*	2.88	119.	0.75	368	1	< *2.0*	< *0.5*
NSST3	1.86	< *0.1*	< *0.1*	< *0.5*	2.63	105.	0.19	432	1.46	< *2.0*	< *0.5*
97BPST2	6.97	< *0.1*	< *0.1*	< *0.5*	3.44	119.	0.628	362	1.66	< *2.0*	< *0.5*
97BPST3	1.32	< *0.1*	< *0.1*	0.56	3.48	83.4	0.377	326	1.7	< *2.0*	0.7
97BPST4	2.09	< *0.1*	< *0.1*	< *0.5*	2.49	91.	0.296	381	1.05	< *2.0*	< *0.5*
SCCT1	3.38	< *0.1*	< *0.1*	< *0.5*	2.98	103.	0.16	436	1.25	< *2.0*	< *0.5*
SCCT2	4.75	< *0.1*	< *0.1*	< *0.5*	2.83	104.	0.21	747	1.22	< *2.0*	< *0.5*
SCCT3	3.49	< *0.1*	< *0.1*	< *0.5*	2.55	113.	0.12	504	1.62	< *2.0*	< *0.5*
SCST1	2.36	< *0.1*	< *0.1*	< *0.5*	3.15	105.	0.58	390	1.43	< *2.0*	< *0.5*
SCST2	4.21	< *0.1*	< *0.1*	< *0.5*	2.61	124.	0.32	351	< *1.0*	< *2.0*	0.53
SCST3	4.23	< *0.1*	< *0.1*	< *0.5*	2.41	116.	0.62	422	1.01	< *2.0*	< *0.5*
SCTE1	11.5	< *0.1*	< *0.1*	< *0.5*	1.34	107.	0.31	288	1.97	< *2.0*	< *0.5*
CUCT1	3.27	< *0.1*	< *0.1*	< *0.5*	2.74	100.	5.99	495	1.11	< *2.0*	< *0.5*
CUCT2	3.85	< *0.1*	< *0.1*	< *0.5*	2.37	109.	3.76	401	< *1.0*	< *2.0*	< *0.5*
CUCT3	4.57	< *0.1*	< *0.1*	< *0.5*	2.11	105.	2.78	513	1.41	< *2.0*	< *0.5*
97CUCT3	4.17	< *0.1*	< *0.1*	< *0.5*	2.83	102.	1.11	415	1.36	< *2.0*	< *0.5*
97CUCT4	7.99	< *0.1*	0.48	0.66	3.83	89.7	1.26	563	2.23	< *2.0*	< *0.5*
97CUCT6	3.67	< *0.1*	< *0.1*	< *0.5*	2.82	60.1	1.32	521	< *1.0*	< *2.0*	< *0.5*
CUST1	2.18	< *0.1*	< *0.1*	< *0.5*	2.65	99.3	4.6	391	1.05	< *2.0*	< *0.5*
CUST2	1.57	< *0.1*	< *0.1*	< *0.5*	3.04	92.2	2.11	351	< *1.0*	< *2.0*	< *0.5*
CUST3	1.59	< *0.1*	< *0.1*	< *0.5*	2.62	67.7	0.86	298	1.02	< *2.0*	< *0.5*
97CUST1	3.05	< *0.1*	< *0.1*	< *0.5*	3.13	89.2	1.37	368	1.38	< *2.0*	< *0.5*
97CUST4	4.12	< *0.1*	0.43	< *0.5*	3.19	91.6	1.4	447	1.71	< *2.0*	< *0.5*
97CUST5	3.77	< *0.1*	< *0.1*	0.77	3.02	89.	0.94	415	1.45	< *2.0*	< *0.5*
97OMST1	2.45	< *0.1*	< *0.1*	< *0.5*	3.2	109.	0.739	365	1.14	< *2.0*	< *0.5*
97OMST4	4.39	< *0.1*	< *0.1*	0.79	2.92	104.	0.377	346	1.21	< *2.0*	< *0.5*
KCCT1	4.7	< *0.1*	< *0.1*	< *0.5*	2.18	85.6	0.19	476	1.14	< *2.0*	< *0.5*
KCCT2	2.29	< *0.1*	< *0.1*	< *0.5*	2.03	94.3	0.24	455	1.68	< *2.0*	< *0.5*
KCCT3	5.99	< *0.1*	< *0.1*	< *0.5*	2.11	105.	0.28	379	1.22	< *2.0*	< *0.5*
KCCT4	5.28	< *0.1*	< *0.1*	< *0.5*	1.77	92.9	0.27	428	1.63	< *2.0*	< *0.5*
KCST1	2.92	0.19	< *0.1*	< *0.5*	2.95	128.	1.47	377	1.11	< *2.0*	< *0.5*
KCST2	5.46	< *0.1*	< *0.1*	< *0.5*	2.5	99.6	0.37	385	< *1.0*	< *2.0*	< *0.5*
KCST3	5.69	< *0.1*	< *0.1*	< *0.5*	2.8	107.	0.25	334	< *1.0*	< *2.0*	< *0.5*

Table A-8. Trace Elements in Avian Eggs, Great Salt Lake Wetlands Synoptic Survey, 1996-1997. Concentrations reported in milligrams per kilogram (mg/kg, ppm) dry weight; non-detected elements shown in italics. ***(Page 6 of 9)***

Sample Number	Sample Site Description	Species Code[a]	Pb	Se	Sr	V	Zn
	Area #6: Farmington Bay South						
NSCT1	New State Duck Club (FN)	AMCO	< *0.5*	2.8	11.4	< *0.5*	66.6
NSCT2	New State Duck Club (FN)	AMCO	< *0.5*	2.1	11.5	< *0.5*	47.9
NSST1	New State Duck Club (FN)	BNST	< *0.5*	4.6	8.61	< *0.5*	43.8
NSST2	New State Duck Club (FN)	BNST	< *0.5*	4.7	7.	< *0.5*	50.2
NSST3	New State Duck Club (FN)	BNST	< *0.5*	3.9	8.13	< *0.5*	46.3
97BPST2	Bountiful Pond (FP)	BNST	< *0.5*	2.73	10.2	< *0.5*	63.6
97BPST3	Bountiful Pond (FP)	BNST	< *0.5*	3.1	6.33	< *0.5*	38.9
97BPST4	Bountiful Pond (FP)	BNST	< *0.5*	4.05	7.27	< *0.5*	44.6
SCCT1	State Canal (FS)	AMCO	< *0.5*	2.3	5.62	< *0.5*	57.
SCCT2	State Canal (FS)	AMCO	< *0.5*	4.	8.43	< *0.5*	45.4
SCCT3	State Canal (FS)	AMCO	*0.6*	2.9	5.46	< *0.5*	60.8
SCST1	State Canal (FS)	BNST	< *0.5*	4.6	8.09	< *0.5*	52.8
SCST2	State Canal (FS)	BNST	< *0.5*	4.1	7.26	< *0.5*	49.6
SCST3	State Canal (FS)	BNST	< *0.5*	4.5	9.1	< *0.5*	47.4
SCTE1	State Canal (FS)	CITE	< *0.5*	2.9	6.55	< *0.5*	48.5
CUCT1	FBWMA- Crystal Unit (FC)	AMCO	< *0.5*	2.4	10.8	0.95	58.
CUCT2	FBWMA- Crystal Unit (FC)	AMCO	< *0.5*	2.9	10.1	< *0.5*	62.2
CUCT3	FBWMA- Crystal Unit (FC)	AMCO	< *0.5*	2.3	12.2	< *0.5*	52.3
97CUCT3	FBWMA- Crystal Unit (FC)	AMCO	< *0.5*	1.9	14.2	< *0.5*	78.4
97CUCT4	FBWMA- Crystal Unit (FC)	AMCO	< *0.5*	2.55	29.3	< *0.5*	76.
97CUCT6	FBWMA- Crystal Unit (FC)	AMCO	< *0.5*	1.99	12.	< *0.5*	52.3
CUST1	FBWMA- Crystal Unit (FC)	BNST	< *0.5*	4.1	9.8	< *0.5*	44.9
CUST2	FBWMA- Crystal Unit (FC)	BNST	< *0.5*	3.8	7.81	< *0.5*	44.
CUST3	FBWMA- Crystal Unit (FC)	BNST	< *0.5*	2.9	8.92	< *0.5*	36.2
97CUST1	FBWMA- Crystal Unit (FC)	BNST	< *0.5*	3.42	16.4	< *0.5*	43.7
97CUST4	FBWMA- Crystal Unit (FC)	BNST	< *0.5*	3.36	18.1	< *0.5*	50.7
97CUST5	FBWMA- Crystal Unit (FC)	BNST	< *0.5*	2.13	18.6	< *0.5*	57.
97OMST1	NW Oil Drain Delta (FO)	BNST	< *0.5*	2.58	18.2	< *0.5*	41.7
97OMST4	NW Oil Drain Delta (FO)	BNST	< *0.5*	2.67	12.5	< *0.5*	48.8
	Area #7: Farmington BayNorth						
KCCT1	Kaysville Marsh (FK)	AMCO	< *0.5*	1.6	5.51	< *0.5*	49.8
KCCT2	Kaysville Marsh (FK)	AMCO	< *0.5*	1.7	4.21	< *0.5*	48.2
KCCT3	Kaysville Marsh (FK)	AMCO	< *0.5*	1.4	4.66	< *0.5*	53.8
KCCT4	Kaysville Marsh (FK)	AMCO	< *0.5*	1.5	5.52	< *0.5*	48.2
KCST1	Kaysville Marsh (FK)	BNST	< *0.5*	3.1	8.46	< *0.5*	51.8
KCST2	Kaysville Marsh (FK)	BNST	< *0.5*	2.4	6.69	< *0.5*	45.5
KCST3	Kaysville Marsh (FK)	BNST	< *0.5*	2.5	6.85	< *0.5*	48.

(a) Avian Species Codes

AMAV = American avocet
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DCCO = Double-crested cormorant
MALL = Mallard
SNPL = Snowy plover

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Table A-8. Trace Elements in Avian Eggs, Great Salt Lake Wetlands Synoptic Survey, 1996-1997. Concentrations reported in milligrams per kilogram (mg/kg, ppm) dry weight; non-detected elements shown in italics. ***(Page 7 of 9)***

Sample Number	Sample Site Description	Species Code[a]	Collection Date	Sample Weight (grams)	% moisture	Al	As	B
	Area #8: Ogden Bay							
97HSCT1	Howard Slough (OH)	AMCO	6/2/1997	24	75.7	< *5.0*	0.5	< *2.0*
97HSCT2	Howard Slough (OH)	AMCO	6/2/1997	28	75.5	< *5.0*	< *0.5*	< *2.0*
97HSCT3	Howard Slough (OH)	AMCO	6/2/1997	23	75.2	894	< *0.5*	< *2.0*
97HSST1	Howard Slough (OH)	BNST	6/11/1997	19	74.8	< *5.0*	< *0.5*	< *2.0*
97HSST2	Howard Slough (OH)	BNST	6/30/1997	17	74.3	< *5.0*	0.84	< *2.0*
97HSST3	Howard Slough (OH)	BNST	6/30/1997	20	73.5	< *5.0*	< *0.5*	< *2.0*
OSCT1	Ogden Bay WMA- South (OS)	AMCO	6/25/1996	27	81.0	< *5.0*	< *0.5*	< *2.0*
OSCT2	Ogden Bay WMA- South (OS)	AMCO	6/25/1996	27	75.3	< *5.0*	0.6	< *2.0*
OSCT3	Ogden Bay WMA- South (OS)	AMCO	6/25/1996	22	74.6	< *5.0*	0.6	< *2.0*
OSST1	Ogden Bay WMA- South (OS)	BNST	6/25/1996	19	71.2	< *5.0*	< *0.5*	< *2.0*
OSST2	Ogden Bay WMA- South (OS)	BNST	6/25/1996	20	73.6	< *5.0*	< *0.5*	< *2.0*
OSST3	Ogden Bay WMA- South (OS)	BNST	6/25/1996	18	74.5	< *5.0*	< *0.5*	< *2.0*
OBCT1	Ogden Bay WMA- North (ON)	AMCO	6/6/1996	25	74.7	< *5.0*	0.7	< *2.0*
OBCT2	Ogden Bay WMA- North (ON)	AMCO	6/6/1996	25	74.6	< *5.0*	< *0.5*	< *2.0*
OBCT3	Ogden Bay WMA- North (ON)	AMCO	6/7/1996	26	75.7	< *5.0*	< *0.5*	< *2.0*
OBMA1	Ogden Bay WMA- North (ON)	MALL	6/6/1996	50	85.0	< *5.0*	< *0.5*	< *2.0*
OBMA2	Ogden Bay WMA- North (ON)	MALL	6/6/1996	44	75.7	< *5.0*	< *0.5*	< *2.0*

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MALL = Mallard
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Sample Number	Ba	Be	Cd	Cr	Cu	Fe	Hg	Mg	Mn	Mo	Ni
97HSCT1	4.59	< *0.1*	< *0.1*	0.53	2.19	98.5	< *0.20*	616	1.25	< *2.0*	< *0.5*
97HSCT2	2.08	< *0.1*	< *0.1*	< *0.5*	2.17	68.1	0.25	360	1.46	< *2.0*	< *0.5*
97HSCT3	9.6	< *0.1*	< *0.1*	12.3	4.97	286.	0.268	401	2.48	< *2.0*	3.52
97HSST1	10.9	< *0.1*	< *0.1*	1.61	3.03	179.	0.712	425	1.88	< *2.0*	< *0.5*
97HSST2	2.95	< *0.1*	< *0.1*	< *0.5*	3.36	99.1	1.49	353	1.36	< *2.0*	< *0.5*
97HSST3	4.62	< *0.1*	< *0.1*	< *0.5*	3.67	97.8	0.601	437	1.63	< *2.0*	< *0.5*
OSCT1	8.44	< *0.1*	< *0.1*	< *0.5*	2.12	91.5	0.7	415	2.35	< *2.0*	< *0.5*
OSCT2	5.26	< *0.1*	< *0.1*	< *0.5*	2.42	82.5	0.71	411	1.18	< *2.0*	< *0.5*
OSCT3	9.43	< *0.1*	< *0.1*	0.75	2.22	107.	0.72	419	1.63	< *2.0*	< *0.5*
OSST1	3.14	0.21	< *0.1*	< *0.5*	3.73	112.	0.62	360	1.89	< *2.0*	< *0.5*
OSST2	5.43	< *0.1*	< *0.1*	< *0.5*	3.12	96.3	1.14	394	< *1.0*	< *2.0*	< *0.5*
OSST3	2.7	< *0.1*	< *0.1*	< *0.5*	2.81	119.	0.75	375	< *1.0*	< *2.0*	0.55
OBCT1	12.8	< *0.1*	< *0.1*	0.54	2.22	96.7	0.11	401	< *1.0*	< *2.0*	< *0.5*
OBCT2	4.79	< *0.1*	< *0.1*	< *0.5*	3.	79.3	0.1	437	< *1.0*	< *2.0*	< *0.5*
OBCT3	8.17	< *0.1*	< *0.1*	0.52	1.64	121.	0.05	476	< *1.0*	< *2.0*	< *0.5*
OBMA1	5.31	< *0.1*	< *0.1*	< *0.5*	3.13	101.	0.33	329	1.1	< *2.0*	< *0.5*
OBMA2	17.2	< *0.1*	< *0.1*	< *0.5*	3.13	106.	0.19	350	1.51	< *2.0*	< *0.5*

Table A-8. Trace Elements in Avian Eggs, Great Salt Lake Wetlands Synoptic Survey, 1996-1997. Concentrations reported in milligrams per kilogram (mg/kg, ppm) dry weight; non-detected elements shown in italics. ***(Page 9 of 9)***

Sample Number	Sample Site Description	Species Code[a]	Ni	Pb	Se	Sr	V	Zn
	Area #8: Ogden Bay							
97HSCT1	Howard Slough (OH)	AMCO	< *0.5*	< *0.5*	1.37	7.16	< *0.5*	52.9
97HSCT2	Howard Slough (OH)	AMCO	< *0.5*	< *0.5*	1.16	3.47	0.79	34.9
97HSCT3	Howard Slough (OH)	AMCO	3.52	< *0.5*	1.49	7.26	< *0.5*	59.
97HSST1	Howard Slough (OH)	BNST	< *0.5*	< *0.5*	1.65	20.3	< *0.5*	43.8
97HSST2	Howard Slough (OH)	BNST	< *0.5*	< *0.5*	2.13	9.74	< *0.5*	37.
97HSST3	Howard Slough (OH)	BNST	< *0.5*	< *0.5*	2.26	17.8	< *0.5*	41.9
OSCT1	Ogden Bay WMA- South (OS)	AMCO	< *0.5*	< *0.5*	1.1	5.1	< *0.5*	65.8
OSCT2	Ogden Bay WMA- South (OS)	AMCO	< *0.5*	< *0.5*	1.2	3.14	< *0.5*	60.
OSCT3	Ogden Bay WMA- South (OS)	AMCO	< *0.5*	< *0.5*	0.9	3.12	< *0.5*	62.3
OSST1	Ogden Bay WMA- South (OS)	BNST	< *0.5*	< *0.5*	2.8	8.55	< *0.5*	55.4
OSST2	Ogden Bay WMA- South (OS)	BNST	< *0.5*	< *0.5*	2.6	7.84	< *0.5*	49.3
OSST3	Ogden Bay WMA- South (OS)	BNST	0.55	< *0.5*	3.2	7.81	0.55	54.8
OBCT1	Ogden Bay WMA- North (ON)	AMCO	< *0.5*	< *0.5*	1.6	4.05	< *0.5*	50.
OBCT2	Ogden Bay WMA- North (ON)	AMCO	< *0.5*	< *0.5*	1.3	4.71	< *0.5*	48.2
OBCT3	Ogden Bay WMA- North (ON)	AMCO	< *0.5*	< *0.5*	1.3	4.9	< *0.5*	54.2
OBMA1	Ogden Bay WMA- North (ON)	MALL	< *0.5*	< *0.5*	1.7	3.84	< *0.5*	52.
OBMA2	Ogden Bay WMA- North (ON)	MALL	< *0.5*	< *0.5*	1.4	5.34	< *0.5*	64.9

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CITE = Cinnamon teal
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MALL = Mallard
SNPL = Snowy plover

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Table A-9. Organic Chemicals in Avian Eggs: Non-DDT and DDT Organochlorines and Polychlorinated Biphenyls (PCBs), Great Salt Lake Wetlands Synoptic Survey, 1996-1997. Concentrations reported in milligrams per kilogram (mg/kg, ppm) wet weight; detected concentations shown in bold type. ***(Page 1 of 5)***

Sample Number	Location Description	Species Code[(a)]	Collection Date	Sample Weight (grams)	% Lipid	% Moisture		Aldrin
	Area #2- Antelope Island							
AIST3	Antelope Island East (AE)	BNST	6/21/1996	19	0.92	73	<	0.000928
AICT1	Antelope Island South (AS)	AMCO	6/21/1996	23	0.53	76.6	<	0.000942
	Area #3- GSL-South Shore							
GSAST1	Saltair/GSL State Park (LS)	BNST	5/14/1996	19	0.64	75.9		**0.0012**
	Area #4- South Shore Wetlands							
97AMDC1	Airport Mitigation Site (SA)	DCCO	5/21/1997	42	5.37	77.6	<	0.00185
97AMMA2	Airport Mitigation Site (SA)	MALL	5/21/1997	36	11.6	66.7	<	0.00166
97AMST1	Airport Mitigation Site (SA)	BNST	5/21/1997	16	8.5	70.7	<	0.0019
NGAV1	Gillmor Sanctuary (SG)	AMAV	6/11/1996	26	0.6	76.2	<	0.000989
97LCSP2	Inland Sea Shorebird Reserve (SI)	SNPL	7/22/1997	7	9.79	70	<	0.00181
	Area #5- SE Shore Industrially Impacted Wetlands							
BHAV2	Beck Hot Springs (IB)	AMAV	6/11/1996	25	0.73	75.2	<	0.000946
97PCCT1	Petrochem Ponds (IP)	AMCO	5/28/1997	24	7.18	75.7	<	0.00172
97PCMA1	Petrochem Ponds (IP)	MALL	6/10/1997	38	11	66.8	<	0.00193
97WPCT1	SLC Sewage Treatment Plant (IS)	AMCO	6/17/1997	26	7.08	75.4	<	0.00186
97WPCT2	SLC Sewage Treatment Plant (IS)	AMCO	6/17/1997	28	5.15	77.6	<	0.00185
97WPMA1	SLC Sewage Treatment Plant (IS)	AMCO	6/12/1997	55	10.6	69.4	<	0.00187
WPCT3	SLC Sewage Treatment Plant (IS)	AMCO	6/13/1996	25	0.56	76	<	0.00098
	Area #6- Farmington Bay South							
97BPST3	Bountiful Pond (FP)	BNST	6/12/1997	16	6.85	74.5	<	0.00198
97CUCT6	FBWMA- Crystal Unit (FC)	AMCO	6/5/1997	25	5.29	77.9	<	0.00191
97CUST5	FBWMA- Crystal Unit (FC)	BNST	7/1/1997	14	7.92	73.9	<	0.00183
CUCT3	FBWMA- Crystal Unit (FC)	AMCO	6/4/1996	22	0.63	76.2	<	0.000863
CUST2	FBWMA- Crystal Unit (FC)	BNST	6/4/1996	16	1.08	73.4	<	0.000748
CUST3	FBWMA- Crystal Unit (FC)	BNST	6/4/1996	17	0.99	72.6	<	0.000855
NSCT3	FBWMA- Crystal Unit (FC)	AMCO	5/30/1996	29	0.57	77.3	<	0.000892
NSST3	New State Duck Club (FN)	BNST	5/30/1996	18	0.94	74.1	<	0.000885
97OMST3	NW Oil Drain Delta (FO)	BNST	6/19/1997	18	7.83	73.4	<	0.00192
SCCT1	State Canal (FS)	AMCO	6/12/1996	26	0.65	75.3	<	0.000948
SCST3	State Canal (FS)	BNST	6/24/1996	20	0.6	75	<	0.000997
	Area #7- Farmington Bay North							
97KCCT1	Kaysville Marsh (FK)	AMCO	6/4/1997	29	7.92	73.4	<	0.0019
97KCST1	Kaysville Marsh (FK)	BNST	6/4/1997	23	7.87	75.4	<	0.00185
97KCST2	Kaysville Marsh (FK)	BNST	6/4/1997	22	7.36	73	<	0.00193
KCCT2	Kaysville Marsh (FK)	AMCO	5/21/1996	24	0.64	76.7	<	0.000939
KCST2	Kaysville Marsh (FK)	BNST	5/21/1996	20	0.66	76.7	<	0.000951
	Area #8- Ogden Bay							
97HSCT2	Howard Slough (OH)	AMCO	6/2/1997	28	6.83	74.7	<	0.00192
97HSST2	Howard Slough (OH)	BNST	6/30/1997	17	7.92	74.8	<	0.00186
OBCT1	Ogden Bay WMA- North (ON)	AMCO	6/6/1996	25	0.73	76.5	<	0.000794
OSCT3	Ogden Bay WMA- South (OS)	AMCO	6/25/1996	22	0.82	75	<	0.00088
OSST2	Ogden Bay WMA- South (OS)	BNST	6/25/1996	20	0.9	74.1	<	0.000915

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Analyzed but not detected (not shown on table): Heptachlor, alpha BHC, delta BHC

Sample Number		dieldrin		endrin		beta BHC		gamma BHC		alpha chlordane		gamma chlordane		oxy chlordane
AIST3		**0.0024**	<	0.00093	<	0.000928	<	0.000928	<	0.000928	<	0.00093		**0.008**
AICT1	<	0.000942	<	0.00094	<	0.000942	<	0.000942	<	0.000942	<	0.00094	<	0.000942
GSAST1		**0.0256**		**0.0014**	<	0.000976	<	0.000976		**0.0017**	<	0.00098		**0.0121**
97AMDC1	<	0.00185		**0.0025**		**0.0031**	<	0.00185	<	0.00185		**0.002**		**0.0025**
97AMMA2		**0.0038**		**0.0041**	<	0.00166	<	0.00166	<	0.00166		**0.0022**		**0.0085**
97AMST1		**0.0088**		**0.0061**		**0.0299**	<	0.0019	<	0.0019	<	0.0019		**0.0115**
NGAV1		**0.0198**	<	0.00099		**0.0013**	<	0.000989		**0.0026**	<	0.00099		**0.0149**
97LCSP2		**0.0031**		**0.0021**	<	**0.00181**	<	0.00181		**0.0025**	<	0.00181		**0.0055**
BHAV2		**0.106**	<	0.00095		**0.001**	<	0.000946		**0.0039**		**0.0033**		**0.0124**
97PCCT1		**0.0038**		**0.0025**	<	0.00172	<	0.00172	<	0.00172	<	0.00172		**0.0024**
97PCMA1	<	0.00193	<	0.00193	<	0.00193	<	0.00193	<	0.00193	<	0.00193		**0.0033**
97WPCT1		**0.0111**		**0.0172**	<	0.00186	<	0.00186	<	0.00186	<	0.00186		**0.0082**
97WPCT2		**0.0059**		**0.0036**	<	0.00185	<	0.00185		**0.0023**	<	0.00185		**0.006**
97WPMA1	<	0.00187	<	0.00187	<	0.00187	<	0.00187	<	0.00187	<	0.00187	<	0.00187
WPCT3		**0.0071**	<	0.00098	<	0.00098	<	0.00098	<	0.00098	<	0.00098		**0.013**
97BPST3		**0.0039**		**0.0033**	<	0.00198	<	0.00198	<	0.00198	<	0.00198		**0.0029**
97CUCT6	<	0.00191		**0.0037**	<	0.00191	<	0.00191		**0.0021**	<	0.00191		**0.002**
97CUST5	<	0.00183		**0.0023**	<	0.00183	<	0.00183	<	0.00183	<	0.00183	<	0.00183
CUCT3		**0.0201**	<	0.00086	<	0.000863	<	0.000863		**0.0018**	<	0.00086		**0.011**
CUST2		**0.0092**		**0.0009**		**0.0045**	<	0.000748		**0.0008**	<	0.00075		**0.0102**
CUST3		**0.0105**	<	0.00086		**0.0018**	<	0.000855		**0.0018**	<	0.00086		**0.0085**
NSCT3		**0.0124**	<	0.00089	<	0.000892	<	0.000892	<	0.000892	<	0.00089		**0.01**
NSST3		**0.0262**	<	0.00089		**0.0022**	<	0.000885		**0.0042**	<	0.00089		**0.0228**
97OMST3	<	0.00192	<	0.00192	<	0.00192	<	0.00192	<	0.00192	<	0.00192	<	0.00192
SCCT1		**0.013**	<	0.00095	<	0.000948	<	0.000948	<	0.000948	<	0.00095		**0.0121**
SCST3	<	0.000997	<	0.001	<	0.000997	<	0.000997	<	0.000997	<	0.001		**0.0031**
97KCCT1	<	0.0019		**0.0042**	<	0.0019	<	0.0019	<	0.0019	<	0.0019		**0.0041**
97KCST1	<	0.00185		**0.0029**		**0.0032**	<	0.00185	<	0.00185	<	0.00185		**0.0028**
97KCST2		**0.0064**	<	0.00193	<	0.00193	<	0.00193	<	0.00193	<	0.00193		**0.0054**
KCCT2		**0.0031**	<	0.00094	<	0.000939	<	0.000939	<	0.000939	<	0.00094		**0.007**
KCST2		**0.041**	<	0.00095		**0.0122**		**0.0014**		**0.005**	<	0.00095		**0.0119**
97HSCT2	<	0.00192		**0.0039**	<	0.00192	<	0.00192	<	0.00192	<	0.00192		**0.004**
97HSST2		**0.0022**		**0.0019**	<	0.00186	<	0.00186	<	0.00186	<	0.00186		**0.0024**
OBCT1		**0.0021**	<	0.00079	<	0.000794	<	0.000794	<	0.000794	<	0.00079		**0.0061**
OSCT3	<	0.00088	<	0.00088	<	0.00088	<	0.00088	<	0.00088	<	0.00088		**0.0036**
OSST2		**0.0077**	<	0.00092		**0.0027**	<	0.000915	<	0.000915	<	0.00092		**0.0051**

Table A-9. Organic Chemicals in Avian Eggs: Non-DDT and DDT Organochlorines and Polychlorinated Biphenyls (PCBs), Great Salt Lake Wetlands Synoptic Survey, 1996-1997. Concentrations reported in milligrams per kilogram (mg/kg, ppm) wet weight; detected concentations shown in bold type. ***(Page 3 of 5)***

Sample Number	Location Description	Species Code[a]	heptachlor epoxide	cis-nonachlor	trans-nonachlor	endosulfan II
	Area #2- Antelope Island					
AIST3	Antelope Island East (AE)	BNST	< **0.0015**	< 0.000928	**0.0017**	< 0.00186
AICT1	Antelope Island South (AS)	AMCO	< 0.000942	< 0.000942	< 0.00094	< 0.00188
	Area #3- GSL-South Shore					
GSAST1	Saltair/GSL State Park (LS)	BNST	< **0.0032**	**0.0022**	**0.0045**	< 0.00195
	Area #4- South Shore Wetlands					
97AMDC1	Airport Mitigation Site (SA)	DCCO	**0.0019**	**0.01**	**0.0169**	< 0.0037
97AMMA2	Airport Mitigation Site (SA)	MALL	0.00166	**0.0027**	**0.0072**	< 0.00332
97AMST1	Airport Mitigation Site (SA)	BNST	< **0.0043**	**0.0041**	**0.0032**	< 0.0038
NGAV1	Gillmor Sanctuary (SG)	AMAV	< **0.0024**	**0.0112**	**0.0049**	**0.0024**
97LCSP2	Inland Sea Shorebird Reserve (SI)	SNPL	< 0.00181	< 0.00181	**0.0028**	< 0.00363
	Area #5- SE Shore Industrially Impacted Wetlands					
BHAV2	Beck Hot Springs (IB)	AMAV	**0.0031**	**0.0069**	**0.0086**	**0.0029**
97PCCT1	Petrochem Ponds (IP)	AMCO	< 0.00172	< 0.00172	< 0.00172	< 0.00344
97PCMA1	Petrochem Ponds (IP)	MALL	< 0.00193	< 0.00193	**0.0021**	< 0.00385
97WPCT1	SLC Sewage Treatment Plant (IS)	AMCO	< **0.002**	< 0.00186	< 0.00186	< 0.00372
97WPCT2	SLC Sewage Treatment Plant (IS)	AMCO	< 0.00185	< 0.00185	< 0.00185	< 0.0037
97WPMA1	SLC Sewage Treatment Plant (IS)	MALL	< 0.00187	< 0.00187	**0.0021**	< 0.00374
WPCT3	SLC Sewage Treatment Plant (IS)	AMCO	< **0.0037**	< 0.00098	< 0.00098	< 0.00196
	Area #6- Farmington Bay South					
97BPST3	Bountiful Pond (FP)	BNST	< 0.00198	< 0.00198	< 0.00198	< 0.00397
97CUCT6	FBWMA- Crystal Unit (FC)	AMCO	< 0.00191	< 0.00191	< 0.00191	< 0.00382
97CUST5	FBWMA- Crystal Unit (FC)	BNST	< 0.00183	< 0.00183	< 0.00183	< 0.00366
CUCT3	FBWMA- Crystal Unit (FC)	AMCO	< **0.0048**	**0.0042**	**0.007**	**0.0018**
CUST2	FBWMA- Crystal Unit (FC)	BNST	< **0.0044**	**0.0025**	**0.0033**	**0.0023**
CUST3	FBWMA- Crystal Unit (FC)	BNST	< **0.0026**	**0.0042**	**0.0059**	**0.0025**
NSCT3	FBWMA- Crystal Unit (FC)	AMCO	< **0.0012**	< 0.000892	< 0.00089	< 0.00178
NSST3	New State Duck Club (FN)	BNST	< **0.0025**	**0.0073**	**0.0143**	**0.0044**
97OMST3	NW Oil Drain Delta (FO)	BNST	< 0.00192	< 0.00192	< 0.00192	< 0.00385
SCCT1	State Canal (FS)	AMCO	< **0.0015**	**0.0013**	< 0.00095	< 0.0019
SCST3	State Canal (FS)	BNST	< **0.0012**	< 0.000997	< 0.001	< 0.00199
	Area #7- Farmington Bay North					
97KCCT1	Kaysville Marsh (FK)	AMCO	< 0.0019	< 0.0019	< 0.0019	< 0.00381
97KCST1	Kaysville Marsh (FK)	BNST	< 0.00185	< 0.00185	< 0.00185	< 0.0037
97KCST2	Kaysville Marsh (FK)	BNST	< 0.00193	< 0.00193	< 0.00193	< 0.00387
KCCT2	Kaysville Marsh (FK)	AMCO	< **0.0021**	**0.001**	< 0.00094	< 0.00188
KCST2	Kaysville Marsh (FK)	BNST	< **0.0067**	**0.0298**	< 0.00095	0.0429
	Area #8- Ogden Bay					
97HSCT2	Howard Slough (OH)	AMCO	< 0.00192	< 0.00192	< 0.00192	< 0.00383
97HSST2	Howard Slough (OH)	BNST	< 0.00186	< 0.00186	< 0.00186	< 0.00372
OBCT1	Ogden Bay WMA- North (ON)	AMCO	< **0.0016**	**0.0008**	< 0.00079	< 0.00159
OSCT3	Ogden Bay WMA- South (OS)	AMCO	< **0.0018**	< 0.00088	< 0.00088	< 0.00176
OSST2	Ogden Bay WMA- South (OS)	BNST	< **0.0016**	**0.0013**	**0.0019**	< 0.00183

(a) Avian Species Codes

AMAV = American avocet
AMCO= American Coot
BNST = Black necked stilt
CITE = Cinnamon teal
DCCO = Double-crested cormorant
MALL = Mallard
SNPL = Snowy plover

Analyzed but not detected (not shown on table): Heptachlor, alpha BHC, delta BHC

Sample Number	HCB	mirex	o,p'-DDD	p,p'-DDD	o,p'-DDE	p,p'-DDE	o,p'-DDT	p,p'-DDT
AIST3	**0.0015**	< 0.000928	< 0.001	< 0.001	< 0.001	**0.068**	**0.005**	< 0.001
AICT1	< 0.000942	< 0.000942	< 0.001	< 0.001	< 0.001	**0.035**	< 0.001	< 0.001
GSAST1	**0.0049**	< 0.000976	< 0.001	**0.009**	**0.002**	**0.261**	**0.003**	**0.035**
97AMDC1	**0.005**	< 0.00185	**0.005**	**0.088**	< 0.002	**0.694**	**0.005**	**0.005**
97AMMA2	**0.0035**	< 0.00166	< 0.002	**0.010**	< 0.002	**0.194**	< 0.002	**0.003**
97AMST1	**0.0088**	< 0.0019	< 0.002	**0.007**	< 0.002	**1.870**	**0.002**	**0.006**
NGAV1	**0.0054**	**0.001**	**0.002**	**0.014**	< 0.001	**0.324**	**0.010**	**0.002**
97LCSP2	**0.0025**	< 0.00181	< 0.002	**0.008**	< 0.002	**0.039**	< 0.002	< 0.002
BHAV2	**0.004**	< 0.000946	**0.008**	**0.053**	**0.002**	**0.197**	**0.007**	< 0.001
97PCCT1	< 0.00172	< 0.00172	< 0.002	< 0.002	< 0.002	**0.008**	< 0.002	< 0.002
97PCMA1	< 0.00193	< 0.00193	< 0.002	< 0.002	< 0.002	**0.101**	< 0.002	< 0.002
97WPCT1	**0.0036**	< 0.00186	< 0.002	< 0.002	< 0.002	**0.021**	**0.002**	**0.007**
97WPCT2	**0.0033**	< 0.00185	< 0.002	< 0.002	< 0.002	**0.016**	< 0.002	< 0.002
97WPMA1	< 0.00187	< 0.00187	< 0.002	< 0.002	< 0.002	**0.009**	< 0.002	< 0.002
WPCT3	**0.0054**	< 0.00098	< 0.001	< 0.001	< 0.001	**0.043**	**0.001**	< 0.001
97BPST3	< 0.00198	< 0.00198	< 0.002	**0.004**	< 0.002	**0.147**	< 0.002	**0.003**
97CUCT6	< 0.00191	< 0.00191	< 0.002	< 0.002	< 0.002	**0.028**	< 0.002	< 0.002
97CUST5	**0.0027**	< 0.00183	< 0.002	< 0.002	< 0.002	**0.098**	< 0.002	< 0.002
CUCT3	**0.0074**	< 0.000863	< 0.001	**0.008**	**0.001**	**0.243**	**0.005**	**0.001**
CUST2	**0.0068**	< 0.000748	**0.001**	**0.003**	**0.001**	**0.213**	**0.004**	**0.003**
CUST3	**0.0034**	< 0.000855	< 0.001	**0.010**	**0.001**	**0.474**	**0.005**	**0.039**
NSCT3	**0.0022**	< 0.000892	**0.001**	< 0.001	< 0.001	**0.079**	< 0.001	< 0.001
NSST3	**0.007**	**0.0009**	**0.004**	**0.033**	**0.001**	**0.422**	**0.010**	**0.074**
97OMST3	< 0.00192	< 0.00192	< 0.002	< 0.002	< 0.002	**0.044**	< 0.002	< 0.002
SCCT1	**0.0016**	< 0.000948	**0.001**	**0.009**	< 0.001	**0.225**	**0.001**	< 0.001
SCST3	**0.0018**	< 0.000997	< 0.001	< 0.001	< 0.001	**0.077**	< 0.001	< 0.001
97KCCT1	**0.0059**	< 0.0019	< 0.002	< 0.002	< 0.002	**0.067**	< 0.002	< 0.002
97KCST1	< 0.00185	< 0.00185	< 0.002	< 0.002	< 0.002	**0.160**	< 0.002	**0.003**
97KCST2	**0.0047**	< 0.00193	< 0.002	< 0.002	< 0.002	**0.220**	< 0.002	< 0.002
KCCT2	**0.0024**	< 0.000939	< 0.001	**0.001**	< 0.001	**0.136**	< 0.001	**0.002**
KCST2	**0.0134**	< 0.000951	**0.025**	**0.042**	**0.022**	**1.190**	**0.167**	**0.011**
97HSCT2	**0.0022**	< 0.00192	< 0.002	< 0.002	< 0.002	**0.135**	< 0.002	**0.002**
97HSST2	**0.0029**	< 0.00186	< 0.002	**0.003**	< 0.002	**0.167**	< 0.002	< 0.002
OBCT1	**0.0018**	< 0.000794	**0.001**	**0.016**	< 0.001	**0.265**	**0.001**	**0.002**
OSCT3	**0.0017**	< 0.00088	< 0.001	< 0.001	**0.001**	**0.070**	< 0.001	< 0.001
OSST2	**0.0028**	< 0.000915	< 0.001	**0.002**	< 0.001	**0.172**	**0.003**	< 0.001

Table A-9. Organic Chemicals in Avian Eggs: Non-DDT and DDT Organochlorines and Polychlorinated Biphenyls (PCBs), Great Salt Lake Wetlands Synoptic Survey, 1996-1997. Concentrations reported in milligrams per kilogram (mg/kg, ppm) wet weight; detected concentations shown in bold type. ***(Page 5 of 5)***

Sample Number	Location Description	Species Code[a]	Total DDTs [b]	Total PCBs
	Area #2- Antelope Island			
AIST3	Antelope Island East (AE)	BNST	**0.075**	**0.172**
AICT1	Antelope Island South (AS)	AMCO	**0.037**	**0.040**
	Area #3- GSL-South Shore			
GSAST1	Saltair/GSL State Park (LS)	BNST	**0.311**	**0.132**
	Area #4- South Shore Wetlands			
97AMDC1	Airport Mitigation Site (SA)	DCCO	**0.798**	**0.699**
97AMMA2	Airport Mitigation Site (SA)	MALL	**0.209**	**0.282**
97AMST1	Airport Mitigation Site (SA)	BNST	**1.887**	**0.138**
NGAV1	Gillmor Sanctuary (SG)	AMAV	**0.352**	**0.480**
97LCSP2	Inland Sea Shorebird Reserve (SI)	SNPL	**0.050**	**0.205**
	Area #5- SE Shore Industrially Impacted Wetlands			
BHAV2	Beck Hot Springs (IB)	AMAV	**0.266**	**0.338**
97PCCT1	Petrochem Ponds (IP)	AMCO	**0.012**	**0.114**
97PCMA1	Petrochem Ponds (IP)	MALL	**0.106**	**0.294**
97WPCT1	SLC Sewage Treatment Plant (IS)	AMCO	**0.034**	**0.303**
97WPCT2	SLC Sewage Treatment Plant (IS)	AMCO	**0.020**	**0.264**
97WPMA1	SLC Sewage Treatment Plant (IS)	MALL	**0.014**	**0.112**
WPCT3	SLC Sewage Treatment Plant (IS)	AMCO	**0.045**	**0.325**
	Area #6- Farmington Bay South			
97BPST3	Bountiful Pond (FP)	BNST	**0.157**	**0.119**
97CUCT6	FBWMA- Crystal Unit (FC)	AMCO	**0.033**	**0.127**
97CUST5	FBWMA- Crystal Unit (FC)	BNST	**0.102**	**0.058**
CUCT3	FBWMA- Crystal Unit (FC)	AMCO	**0.259**	**0.246**
CUST2	FBWMA- Crystal Unit (FC)	BNST	**0.224**	**0.193**
CUST3	FBWMA- Crystal Unit (FC)	BNST	**0.529**	**0.305**
NSCT3	FBWMA- Crystal Unit (FC)	AMCO	**0.082**	**0.172**
NSST3	New State Duck Club (FN)	BNST	**0.543**	**0.484**
97OMST3	NW Oil Drain Delta (FO)	BNST	**0.049**	**0.056**
SCCT1	State Canal (FS)	AMCO	**0.238**	**0.182**
SCST3	State Canal (FS)	BNST	**0.080**	**0.142**
	Area #7- Farmington Bay North			
97KCCT1	Kaysville Marsh (FK)	AMCO	**0.071**	**0.093**
97KCST1	Kaysville Marsh (FK)	BNST	**0.166**	**0.081**
97KCST2	Kaysville Marsh (FK)	BNST	**0.225**	**0.109**
KCCT2	Kaysville Marsh (FK)	AMCO	**0.140**	**0.076**
KCST2	Kaysville Marsh (FK)	BNST	**1.457**	**1.390**
	Area #8- Ogden Bay			
97HSCT2	Howard Slough (OH)	AMCO	**0.141**	**0.093**
97HSST2	Howard Slough (OH)	BNST	**0.173**	**0.071**
OBCT1	Ogden Bay WMA- North (ON)	AMCO	**0.286**	**0.182**
OSCT3	Ogden Bay WMA- South (OS)	AMCO	**0.073**	**0.142**
OSST2	Ogden Bay WMA- South (OS)	BNST	**0.178**	**0.117**

(a) Avian Species Codes AMAV = American avocet CITE = Cinnamon teal SNPL = Snowy plover
AMCO= American Coot DCCO = Double-crested cormorant
BNST = Black necked stilt MALL = Mallard

(b) Total DDTs: *Summed DDT residues in samples where at least one isomer was detected non-detected isomers included in sum as 0.5 x Detection limit*

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Table A-10. Brain Acetylcholinesterase Activity in Common Carp (*Cyprinus carpio*) and Evaluation of Exposure to Carbamate ("Carb") and Organophosphate ("OP") Insecticides, Great Salt Lake Wetlands Synoptic Survey, 1996-1997. *(Page 1 of 4)*

Sample Number	Sample Site Description	Collection Date	Sex	DIRECT (µg/mg/min)	CVD	REACT (µg/mg/min)	CVR	% C-DIFF	CARB
	Area #3- GSL South Shore								
C7CR1	C7 Ditch (LC)	7/31/1996	M	14.21	6.63	14.06	1.43	-1.06	--
C7CR5	C7 Ditch (LC)	8/1/1996	M	15.37	6.75	16.18	1.65	5.23	--
C7CR3	C7 Ditch (LC)	7/31/1996	F	12.00	9.24	12.14		1.14	--
C7CR4	C7 Ditch (LC)	7/31/1996	F	14.57	3.39	14.50	0.55	-0.47	--
C7CR6	C7 Ditch (LC)	8/1/1996	F	12.10	2.34	12.26	4.14	1.29	--
C7CR9	C7 Ditch (LC)	8/15/1996	F	10.15	0.31	10.27	1.94	1.21	--
97C7CR1	C7 Ditch (LC)	7/23/1997	M	14.19	3.01	13.13	6.70	-7.48	--
97C7CR4	C7 Ditch (LC)	7/23/1997	M	18.30	1.52	17.81	1.37	-2.70	--
97C7CR6	C7 Ditch (LC)	7/23/1997	M	16.53	2.99	16.14	1.67	-2.34	--
97C7CR5	C7 Ditch (LC)	7/23/1997	F	12.57	5.08	13.44	5.55	6.95	--
97C7CR7	C7 Ditch (LC)	7/23/1997	F	13.60	4.18	14.25	1.90	4.81	--
97C7CR8	C7 Ditch (LC)	7/23/1997	F	12.94	3.80	12.86	3.07	-0.58	--
	Area #4- S. Shore Conservation Wetlands								
97AMCR1	Airport Mitigation Site (SA)	7/29/1997	M	11.16	4.21	9.87	1.26	-11.58	--
97AMCR2	Airport Mitigation Site (SA)	7/29/1997	M	10.00	2.96	8.98	6.84	-10.20	--
97AMCR3	Airport Mitigation Site (SA)	7/29/1997	M	12.09	4.47	11.17	2.25	-7.64	--
97AMCR4	Airport Mitigation Site (SA)	7/29/1997	M	15.64	0.26	14.19	1.19	-9.31	--
97AMCR11	Airport Mitigation Site (SA)	7/29/1997	F	18.33	0.87	17.29	1.29	-5.67	--
97AMCR6	Airport Mitigation Site (SA)	7/29/1997	F	14.27	1.28	13.78	1.57	-3.44	--
GDCR1	Goggin Drain (SD)	8/16/1996	M	13.84	0.47	13.27	3.42	-4.11	--
GDCR5	Goggin Drain (SD)	8/16/1996	M	13.76	3.44	12.00	0.38	-12.77	--
GDCR2	Goggin Drain (SD)	8/16/1996	F	9.23	6.28	9.56	3.03	3.60	--
GDCR3	Goggin Drain (SD)	8/16/1996	F	14.96	1.89	14.29	2.03	-4.48	--
GDCR6	Goggin Drain (SD)	8/16/1996	F	13.96	3.37	13.91	2.09	-0.40	--
GDCR7	Goggin Drain (SD)	8/16/1996	F	15.00	3.02	13.50	5.38	-10.00	--
	Area #6- Farmington Bay South								
97BPCR1	Bountiful Pond (FP)	7/25/1997	M	10.51	4.43	9.96	5.30	-5.24	--
97BPCR3	Bountiful Pond (FP)	7/25/1997	M	8.60	2.81	8.12	1.65	-5.51	--
97BPCR4	Bountiful Pond (FP)	7/25/1997	M	15.33	1.59	14.30	2.91	-6.75	--
97BPCR6	Bountiful Pond (FP)	7/25/1997	M	12.67	3.24	11.99	0.83	-5.34	--
97BPCR10	Bountiful Pond (FP)	7/25/1997	F	12.38	5.01	12.08	2.86	-2.43	--
97BPCR8	Bountiful Pond (FP)	7/25/1997	F	8.32	0.14	8.07	5.29	-2.99	--
97CUCR4	FBWMA- Crystal Unit (FC)	8/27/1997	M	10.59	2.82	10.83	2.63	2.25	--
97CUCR1	FBWMA- Crystal Unit (FC)	8/20/1997	F	9.70	1.75	9.73	3.71	0.33	--
97CUCR2	FBWMA- Crystal Unit (FC)	8/20/1997	F	14.37	1.60	14.59	1.32	1.56	--
97CUCR3	FBWMA- Crystal Unit (FC)	8/20/1997	F	10.39	4.37	10.63	3.29	2.35	--
97F1CR1	FBWMA- Unit 1 (FU)	7/30/1997	M	10.37	1.00	11.02	1.75	6.26	--
97F1CR7	FBWMA- Unit 1 (FU)	7/30/1997	M	11.05	0.79	11.14	1.80	0.75	--
97F1CR3	FBWMA- Unit 1 (FU)	7/30/1997	F	8.35	4.25	8.21	0.95	-1.59	--
97F1CR4	FBWMA- Unit 1 (FU)	7/30/1997	F	7.98	3.31	7.36	4.95	-7.82	--
97F1CR5	FBWMA- Unit 1 (FU)	7/30/1997	F	8.03	0.77	7.97	1.09	-0.66	--
97F1CR6	FBWMA- Unit 1 (FU)	7/30/1997	F	8.78	2.78	8.25	1.85	-6.03	--

µg/mg/min: µmol assay substrate (Acetylthiocholine) hydrolyzed per milligram brain tissue per minute

KEY: CARB: A %C-DIFF value $\geq$ 10% is diagnostic of AChE inhibition by carbamate compounds

DIRECT: Basic (untreated) rate of AChE activity % C-DIFF: Percent difference in rates with or without reactivation

REACT: AChE activity after heat incubation (to induce spontaneous reactivation of inhibited enzyme

CVD, CVR: Coefficient of variation for assay run in triplicate

Sample Number	Sample Site Description	Collection Date	Sex	PLUS (µg/mg/min)	MINUS (µg/mg/min)	% OPDIFF	OP
	Area #3- GSL South Shore						
C7CR1	C7 Ditch (LC)	7/31/1996	M	13.31	14.69	-9.39	--
C7CR5	C7 Ditch (LC)	8/1/1996	M	14.64	15.17	-3.53	--
C7CR3	C7 Ditch (LC)	7/31/1996	F	11.96	11.02	8.53	--
C7CR4	C7 Ditch (LC)	7/31/1996	F	13.83	13.88	-0.40	--
C7CR6	C7 Ditch (LC)	8/1/1996	F	13.06	11.63	12.30	**Y**
C7CR9	C7 Ditch (LC)	8/15/1996	F	9.30	10.04	-7.32	--
97C7CR1	C7 Ditch (LC)	7/23/1997	M	14.42	13.05	10.51	**Y**
97C7CR4	C7 Ditch (LC)	7/23/1997	M	18.77	19.15	-1.96	--
97C7CR6	C7 Ditch (LC)	7/23/1997	M	13.64	15.19	-10.22	--
97C7CR5	C7 Ditch (LC)	7/23/1997	F	11.87	11.95	-0.62	--
97C7CR7	C7 Ditch (LC)	7/23/1997	F	12.35	13.85	-10.85	--
97C7CR8	C7 Ditch (LC)	7/23/1997	F	13.15	12.75	3.12	--
	Area #4- S. Shore Conservation Wetlands						--
97AMCR1	Airport Mitigation Site (SA)	7/29/1997	M	10.10	10.60	-4.69	--
97AMCR2	Airport Mitigation Site (SA)	7/29/1997	M	9.27	8.76	5.81	--
97AMCR3	Airport Mitigation Site (SA)	7/29/1997	M	10.15	10.76	-5.63	--
97AMCR4	Airport Mitigation Site (SA)	7/29/1997	M	14.22	13.53	5.10	--
97AMCR11	Airport Mitigation Site (SA)	7/29/1997	F	15.56	15.62	-0.43	--
97AMCR6	Airport Mitigation Site (SA)	7/29/1997	F	13.18	14.66	-10.09	--
GDCR1	Goggin Drain (SD)	8/16/1996	M	13.40	12.88	4.02	--
GDCR5	Goggin Drain (SD)	8/16/1996	M	10.34	12.01	-13.93	--
GDCR2	Goggin Drain (SD)	8/16/1996	F	8.95	9.37	-4.43	--
GDCR3	Goggin Drain (SD)	8/16/1996	F	12.79	13.97	-8.49	--
GDCR6	Goggin Drain (SD)	8/16/1996	F	12.95	13.42	-3.50	--
GDCR7	Goggin Drain (SD)	8/16/1996	F	12.20	12.40	-1.63	--
	Area #6- Farmington Bay South						
97BPCR1	Bountiful Pond (FP)	7/25/1997	M	10.22	10.30	-0.80	--
97BPCR3	Bountiful Pond (FP)	7/25/1997	M	7.56	7.90	-4.27	--
97BPCR4	Bountiful Pond (FP)	7/25/1997	M	13.74	13.77	-0.22	--
97BPCR6	Bountiful Pond (FP)	7/25/1997	M	11.53	11.20	2.98	--
97BPCR10	Bountiful Pond (FP)	7/25/1997	F	12.06	11.35	6.22	--
97BPCR8	Bountiful Pond (FP)	7/25/1997	F	7.73	8.25	-6.35	--
97CUCR4	FBWMA- Crystal Unit (FC)	8/27/1997	M	10.03	10.61	-5.41	--
97CUCR1	FBWMA- Crystal Unit (FC)	8/20/1997	F	9.43	9.39	0.45	--
97CUCR2	FBWMA- Crystal Unit (FC)	8/20/1997	F	13.05	13.89	-6.08	--
97CUCR3	FBWMA- Crystal Unit (FC)	8/20/1997	F	9.90	10.12	-2.22	--
97F1CR1	FBWMA- Unit 1 (FU)	7/30/1997	M	9.85	10.24	-3.75	--
97F1CR7	FBWMA- Unit 1 (FU)	7/30/1997	M	10.16	10.39	-2.15	--
97F1CR3	FBWMA- Unit 1 (FU)	7/30/1997	F	7.53	7.69	-2.09	--
97F1CR4	FBWMA- Unit 1 (FU)	7/30/1997	F	6.76	7.81	-13.44	--
97F1CR5	FBWMA- Unit 1 (FU)	7/30/1997	F	6.91	7.42	-6.83	--
97F1CR6	FBWMA- Unit 1 (FU)	7/30/1997	F	7.74	7.80	-0.68	--

Table A-10. Brain Acetylcholinesterase Activity in Common Carp (*Cyprinus carpio*) and Evaluation of Exposure to Carbamate ("Carb") and Organophosphate ("OP") Insecticides, Great Salt Lake Wetlands Synoptic Survey, 1996-1997. ***(Page 3 of 4)***

Sample Number	Sample Site Description	Collection Date	Sex	DIRECT	CVD	REACT	CVR	% CADIFF	CARB
	Area #6- Farmington Bay South								
SCCR3	State Canal (FS)	8/5/1996	M	14.30	4.84	13.48	4.11	-5.68	--
SCCR8	State Canal (FS)	8/6/1996	F	19.95	4.94	19.28	1.53	-3.37	--
SCCCR17	State Canal (FS)	8/7/1996	M	13.08	5.47	13.88	5.26	6.19	--
SCCCR18	State Canal (FS)	8/7/1996	M	13.79	3.04	13.37	3.40	-3.05	--
SCCCR14	State Canal (FS)	8/7/1996	F	9.16	0.18	8.14	4.88	-11.09	--
SCCCR19	State Canal (FS)	8/7/1996	F	12.92	0.96	11.22	2.51	-13.12	--
97SCCR2	State Canal (FS)	8/13/1997	F	8.43	2.43	8.12	1.07	-3.75	--
97SCCR5	State Canal (FS)	8/13/1997	F	9.78	0.31	8.50	1.34	-13.09	--
97SCCR6	State Canal (FS)	8/13/1997	F	10.16	3.58	9.77	0.31	-3.77	--
	Area #8- Ogden Bay								
97HSCR10	Howard Slough (OH)	8/25/1997	M	10.64	3.52	10.71	3.16	0.62	--
97HSCR11	Howard Slough (OH)	8/25/1997	M	11.56	1.20	11.69	1.94	1.06	--
97HSCR15	Howard Slough (OH)	8/25/1997	M	10.30	4.13	9.82	2.80	-4.68	--
97HSCR4	Howard Slough (OH)	8/25/1997	M	9.97	3.07	9.82	1.37	-1.57	--
97HSCR9	Howard Slough (OH)	8/25/1997	M	10.04	0.50	9.01	1.66	-10.20	--
97HSCR8	Howard Slough (OH)	8/25/1997	F	9.89	2.44	9.27	1.67	-6.26	--
OBCR6	Ogden Bay WMA- South Canal (OC)	8/27/1997	M	9.39	2.60	9.38	5.86	-0.06	--
OBCR1	Ogden Bay WMA- South Canal (OC)	8/26/1997	F	4.68	5.12	4.60	8.06	-1.70	--
OBCR3	Ogden Bay WMA- South Canal (OC)	8/26/1997	F	7.95	9.41	7.14	5.51	-10.26	--
OBCR4	Ogden Bay WMA- South Canal (OC)	8/26/1997	F	10.65	5.65	10.39	1.02	-2.42	--
OBCR5	Ogden Bay WMA- South Canal (OC)	8/27/1997	F	6.74	1.90	6.14	4.97	-8.95	--
97OBCR12	Ogden Bay WMA- North (ON)	8/28/1997	M	13.00	5.81	13.47	8.23	3.62	--
97OBCR4	Ogden Bay WMA- North (ON)	8/21/1997	M	13.50	4.96	13.96	1.73	3.42	--
97OBCR9	Ogden Bay WMA- North (ON)	8/28/1997	M	15.56	2.84	16.60	0.93	6.70	--
97OBCR2	Ogden Bay WMA- North (ON)	8/21/1997	F	15.60	3.53	14.35	1.25	-8.01	--
97OBCR3	Ogden Bay WMA- North (ON)	8/21/1997	F	11.88	3.51	12.45	1.98	4.76	--
97OBCR6	Ogden Bay WMA- North (ON)	8/21/1997	F	13.71	2.56	13.45	2.65	-1.89	--

µg/mg/min: µmol assay substrate (Acetylthiocholine) hydrolyzed per milligram brain tissue per minute

KEY:

DIRECT: Basic (untreated) rate of AChE activity

REACT: AChE activity after heat incubation (to induce spontaneous reactivation of inhibited enzyme

CVD, CVR: Coefficient of variation for assay run in triplicate

% C-DIFF: Percent difference in rates with or without reactivation

CARB: A %C-DIFF value > 10% is diagnostic of AChE inhibition by carbamate compounds

Sample Number	Sample Site Description	Collection Date	Sex	PLUS	MINUS	% OPDIFF	OP
	Area #6- Farmington Bay South						
SCCR3	State Canal (FS)	8/5/1996	M	13.11	14.25	-7.97	--
SCCR8	State Canal (FS)	8/6/1996	F	19.32	19.82	-2.53	--
SCCCR17	State Canal (FS)	8/7/1996	M	13.75	14.49	-5.12	--
SCCCR18	State Canal (FS)	8/7/1996	M	13.65	14.86	-8.11	--
SCCCR14	State Canal (FS)	8/7/1996	F	8.49	9.15	-7.19	--
SCCCR19	State Canal (FS)	8/7/1996	F	11.02	11.67	-5.58	--
97SCCR2	State Canal (FS)	8/13/1997	F	8.00	8.46	-5.40	--
97SCCR5	State Canal (FS)	8/13/1997	F	8.08	8.42	-4.01	--
97SCCR6	State Canal (FS)	8/13/1997	F	8.94	8.98	-0.45	--
	Area #8- Ogden Bay						
97HSCR10	Howard Slough (OH)	8/25/1997	M	9.67	9.74	-0.68	--
97HSCR11	Howard Slough (OH)	8/25/1997	M	11.33	11.22	0.97	--
97HSCR15	Howard Slough (OH)	8/25/1997	M	8.86	9.52	-6.92	--
97HSCR4	Howard Slough (OH)	8/25/1997	M	9.40	9.89	-4.97	--
97HSCR9	Howard Slough (OH)	8/25/1997	M	9.09	8.65	5.09	--
97HSCR8	Howard Slough (OH)	8/25/1997	F	9.10	8.81	3.29	--
OBCR6	Ogden Bay WMA- South Canal (OC)	8/27/1997	M	9.10	9.00	1.22	--
OBCR1	Ogden Bay WMA- South Canal (OC)	8/26/1997	F	3.97	3.83	3.52	--
OBCR3	Ogden Bay WMA- South Canal (OC)	8/26/1997	F	6.95	7.35	-5.40	--
OBCR4	Ogden Bay WMA- South Canal (OC)	8/26/1997	F	10.09	10.57	-4.55	--
OBCR5	Ogden Bay WMA- South Canal (OC)	8/27/1997	F	5.87	6.56	-10.50	--
97OBCR12	Ogden Bay WMA- North (ON)	8/28/1997	M	12.13	12.40	-2.23	--
97OBCR4	Ogden Bay WMA- North (ON)	8/21/1997	M	13.65	13.72	-0.48	--
97OBCR9	Ogden Bay WMA- North (ON)	8/28/1997	M	14.70	14.44	1.77	--
97OBCR2	Ogden Bay WMA- North (ON)	8/21/1997	F	14.53	17.53	-17.11	--
97OBCR3	Ogden Bay WMA- North (ON)	8/21/1997	F	10.93	11.84	-7.72	--
97OBCR6	Ogden Bay WMA- North (ON)	8/21/1997	F	13.92	13.82	0.69	--

Table A-11. Brain Ethoxyresorufin-O-deethylase (EROD) Activity in Common Carp (*Cyprinus carpio*), Great Salt Lake Wetlands Synoptic Survey, 1996-1997. *(Page 1 of 2)*

Sample Number	Sample Site Description	Collection Date	Sex	Average fluorescence units	pmol product• mg protein^{-1}• min^{-1} (a)	mg microsomal protein• g liver tissue^{-1}	pmol product• min^{-1}• g liver tissue^{-1}
	Area #3- GSL South Shore						
C7CL1	C7 Ditch (LC)	07/31/96	M	8.0	2.1	21.3	44
C7CL3	C7 Ditch (LC)	07/31/96	F	310.0	61.2	22.1	1355
C7CL4	C7 Ditch (LC)	07/31/96	F	4.0	1.7	11.4	20
C7CL5	C7 Ditch (LC)	08/01/96	M	84.0	18.8	19.3	362
C7CL6	C7 Ditch (LC)	08/01/96	F	145.0	22.2	28.3	630
C7CL9	C7 Ditch (LC)	08/15/96	F	16.0	6.4	10.3	65
	Area #4- S. Shore Conservation Wetlands						
GDCL1	Goggin Drain (SD)	08/16/96	M	72.0	20.5	15.1	309
GDCL2	Goggin Drain (SD)	08/16/96	F	33.0	7.7	17.6	136
GDCL3	Goggin Drain (SD)	08/16/96	F	46.0	12.3	14.8	182
GDCL5	Goggin Drain (SD)	08/16/96	M	204.0	43.2	20.6	887
GDCL6	Goggin Drain (SD)	08/16/96	F	90.0	17.5	20.3	357
GDCL7	Goggin Drain (SD)	08/16/96	F	15.0	4.3	13.4	58
97AMCL1	Airport Mitigation Site (SA)	07/29/97	M	31.0	29.70	2.97	176.48
97AMCL2	Airport Mitigation Site (SA)	07/29/97	M	9.0	8.55	2.96	50.55
97AMCL3	Airport Mitigation Site (SA)	07/29/97	M	10.7	13.65	2.20	60.08
97AMCL4	Airport Mitigation Site (SA)	07/29/97	F	24.3	20.03	3.45	138.38
97AMCL5	Airport Mitigation Site (SA)	07/29/97	M	20.3	23.55	2.45	115.43
97AMCL6	Airport Mitigation Site (SA)	07/29/97	F	13.7	10.05	3.86	77.25
	Area #6- Farmington Bay South						
97BPCL1	Bountiful Pond (FP)	07/25/97	M	84.7	58.35	4.15	483.75
97BPCL2	Bountiful Pond (FP)	07/25/97	F	5.3	6.83	2.16	29.55
97BPCL3	Bountiful Pond (FP)	07/25/97	M	3.7	3.08	3.23	20.03
97BPCL4	Bountiful Pond (FP)	07/25/97	M	120.0	83.93	3.32	556.95
97BPCL5	Bountiful Pond (FP)	07/25/97	M	5.0	6.15	2.25	27.68
97BPCL6	Bountiful Pond (FP)	07/25/97	M	206.0	139.13	3.38	939.98
SCCL14	State Canal (FS)	08/07/96	F	33.0	13.2	9.9	131
SCCL17	State Canal (FS)	08/07/96	M	52.0	11.9	18.4	219
SCCL18	State Canal (FS)	08/07/96	M	290.0	47.4	24.0	1139
SCCL19	State Canal (FS)	08/07/96	F	15.0	3.5	26.4	91
SCCL3	State Canal (FS)	08/05/96	M	310.0	109.6	11.1	1217
SCCL8	State Canal (FS)	08/06/96	F	258.0	72.5	15.5	1126
97SCCL1	State Canal (FS)	08/13/97	M	60.3	1.13	3.99	5.40
97SCCL2	State Canal (FS)	08/13/97	F	7.0	2.18	4.69	14.85
97SCCL3	State Canal (FS)	08/13/97	M	261.0	47.78	2.81	314.85
97SCCL4	State Canal (FS)	08/13/97	F	100.3	2.93	2.82	16.43
97SCCL5	State Canal (FS)	08/13/97	F	323.0	4.58	3.71	29.03
97SCCL6	State Canal (FS)	08/13/97	F	58.7	2.70	2.90	18.00

(a) picomoles of enzymatic reaction product per milligram of liver protein per minute: This is the measure of EROD enzyme activity per minute, standardized to microsomal protein mass in the liver, which can vary and can be induced by the presence of compounds that are metabolized by these enzymes.

Sample Number	Sample Site Description	Collection Date	Sex	Average fluorescence units	pmol product• mg protein^{-1}• min^{-1} (a)	mg microsomal protein• g liver tissue^{-1}	pmol product• min^{-1}• g liver tissue^{-1}
	Area #6- Farmington Bay South						
97CUCL1	FBWMA- Crystal Unit (FC)	08/20/97	F	10.0	10.13	2.78	56.25
97CUCL2	FBWMA- Crystal Unit (FC)	08/20/97	F	15.7	14.63	3.03	88.73
97CUCL3	FBWMA- Crystal Unit (FC)	08/20/97	M	59.3	43.35	3.91	338.70
97CUCL4	FBWMA- Crystal Unit (FC)	08/27/97	M	103.3	73.80	3.27	482.70
97F1CL1	FBWMA- Unit 1 (FU)	07/30/97	M	101.0	87.30	2.70	472.28
97F1CL2	FBWMA- Unit 1 (FU)	07/30/97	M	37.5	37.80	2.82	213.75
97F1CL3	FBWMA- Unit 1 (FU)	07/30/97	F	74.0	89.25	2.37	422.70
97F1CL4	FBWMA- Unit 1 (FU)	07/30/97	F	57.3	58.20	2.81	327.30
97F1CL5	FBWMA- Unit 1 (FU)	07/30/97	F	102.3	93.68	2.33	436.73
97F1CL6	FBWMA- Unit 1 (FU)	07/30/97	F	58.7	70.58	2.00	281.70
	Area #8- Ogden Bay						
97HSCL1	Howard Slough (OH)	08/20/97	F	8.7	7.58	2.97	44.85
97HSCL2	Howard Slough (OH)	08/22/97	F	4.3	5.78	2.10	24.30
97HSCL3	Howard Slough (OH)	08/22/97	F	1.7	2.33	2.50	11.70
97HSCL4	Howard Slough (OH)	08/25/97	M	137.0	102.15	2.84	579.38
97HSCL5	Howard Slough (OH)	08/25/97	F	1.7	2.25	2.61	11.70
97HSCL6	Howard Slough (OH)	08/25/97	F	17.3	20.40	2.10	85.88
OBCL1	Ogden Bay WMA- South Canal (OC)	08/26/96	F	86.0	23.3	14.6	341
OBCL2	Ogden Bay WMA- South Canal (OC)	08/26/96	F	100.0	17.9	22.1	396
OBCL3	Ogden Bay WMA- South Canal (OC)	08/26/96	F	173.0	46.0	16.3	751
OBCL4	Ogden Bay WMA- South Canal (OC)	08/26/96	F	10.0	4.3	9.7	42
OBCL5	Ogden Bay WMA- South Canal (OC)	08/27/96	F	51.0	16.7	12.2	204
OBCL6	Ogden Bay WMA- South Canal (OC)	08/27/96	M	254.0	67.4	16.4	1106
97OBCL1	Ogden Bay WMA- Weber River (OW)	08/21/97	F	0.3	1.13	2.36	5.40
97OBCL3	Ogden Bay WMA- Weber River (OW)	08/21/97	F	2.3	2.18	3.46	14.85
97OBCL4	Ogden Bay WMA- Weber River (OW)	08/21/97	M	65.6	47.78	3.29	314.85
97OBCL5	Ogden Bay WMA- Weber River (OW)	08/21/97	F	2.7	2.93	2.78	16.43
97OBCL7	Ogden Bay WMA- Weber River (OW)	08/28/97	F	5.3	4.58	3.20	29.03
97OBCL8	Ogden Bay WMA- Weber River (OW)	08/28/97	F	3.0	2.70	3.37	18.00

(a) picomoles of enzymatic reaction product per milligram of liver protein per minute: This is the measure of EROD enzyme activity per minute, standardized to microsomal protein mass in the liver, which can vary and can be induced by the presence of compounds that are metabolized by these enzymes.

Table A-12. Concentrations (pg/ml) of 17β-estradiol (E), 11-keto-testosterone (T), and vitellogenin (V) (mg/ml) in common carp (Cyprinus carpio) and reproductive status based on gonad histology. (*page 1 of 4*)

Sample	Weight (g)	Sex	E	T	E/T Ratio	V	Gonad (g)	GSI[1]	Reproductive Status
GSL-South Shore: C7 Ditch									
C7CB7	568	F	626	1740	0.36	0.915	13	2.3	early vitellogenic
C7CB9	2807	F	1911	486	3.93	1.63	205	7.3	early vitellogenic
C7CB2	3379	F	677	1311	0.52	3.26	204	6.0	late vitellogenic
C7CB4	2356	F	604	2026	0.30	2.38	367	15.6	late vitellogenic
C7CB6	2051	F	418	1431	0.29	0.31	154	7.5	late vitellogenic
C7CB8	969	F	998	1092	0.91	1.67	65	6.7	late vitellogenic
C7CB10	1378	F	512	733	0.70	4.35	121	8.8	late vitellogenic
97C7CB5	684	F	1079	723	1.49	3.07	97	14.2	late vitellogenic
97C7CB3	1738	F	545	470	1.16	0.928	275	15.8	late vitellogenic
97C7CB1	802	F	464	371	1.25	3.82	39	4.9	mid vitellogenic
97C7CB2	1854	F	441	347	1.27	3.35	112	6.0	mid vitellogenic
C7CB3	2700	F	827	1002	0.83	0.153	36	1.3	pre vitellogenic
97C7CB7	524	F	567	605	0.94	0.	13	2.5	pre vitellogenic
C7CB1	1907	M	656	1993	0.33	0.	126	6.6	high spermatogenic
C7CB5	1920	M	406	2133	0.19	0.	116	6.0	high spermatogenic
C7CB11	1555	M	407	543	0.75	0.	74	4.8	high spermatogenic
C7CB12	529	M	549	2046	0.27	0.	9	1.7	high spermatogenic
C7CB13	737	M	518	2409	0.22	0.	57	7.7	high spermatogenic
97C7CB6	620	M	354	167	2.12	0.004	33	5.3	high spermatogenic
97C7CB4	1330	M	497	615	0.81	0.	67	5.0	high spermatogenic
97AMCB12	2174	F	552	314	1.76	2.82	94	4.3	early vitellogenic
97AMCB19	3810	F	388	257	1.51	0.834	272	7.1	late vitellogenic
97AMCB4	1041	F	730	320	2.28	16.1	53	5.1	mid vitellogenic
97AMCB15	2158	F	552	134	4.12	1.27	76	3.5	mid vitellogenic
97AMCB16	3001	F	643	124	5.19	1.5	131	4.4	mid vitellogenic
97AMCB6	2614	F	1248	552	2.26	1.67	78	3.0	mid vitellogenic
97AMCB17	2217	F	570	141	4.04	6.17	300	13.5	mid vitellogenic
97AMCB18	2290	F	219	177	1.24	4.62	132	5.8	mid vitellogenic
97AMCB11	1314	F	478	265	1.80	7.86	53	4.0	mid vitellogenic
97AMCB7	2082	M	431	828	0.52	0.	99	4.8	high spermatogenic
97AMCB1	2179	M	508	2138	0.24	0.	129	5.9	high spermatogenic
97AMCB2	3400	M	593	942	0.63	0.	137	4.0	high spermatogenic
97AMCB13	1617	M	455	783	0.58	0.	86	5.3	high spermatogenic
97AMCB10	2626	M	531	1215	0.44	0.	132	5.0	high spermatogenic
97AMCB5	2689	M	320	405	0.79	0.	150	5.6	high spermatogenic
97AMCB3	831	M	419	591	0.71	0.	27	3.2	high spermatogenic
97AMCB9	2175	M	400	451	0.89	0.	110	5.1	high spermatogenic
97AMCB14	1561	M	315	942	0.33	0.	99	6.3	high spermatogenic
97AMCB8	1943	M	459	933	0.49	0.	80	4.1	high spermatogenic

Sample	Weight (g)	Sex	E	T	E/T	V	Gonad (g)	GSI[1]	Reproductive Status
South Shore Wetlands: Goggin Drain									
GDCB8	1734	F	1543	745	2.07	2.36	62	3.6	early vitellogenic
GDCB2	4164	F	631	673	0.94	2.76	760	18.3	late vitellogenic
GDCB3	5688	F	1046	477	2.19	2.53	791	13.9	late vitellogenic
GDCB6	1567	F	3125	603	5.18	3.84	171	10.9	late vitellogenic
GDCB7	3522	F	419	1135	0.37	2.1	382	10.8	late vitellogenic
GDCB11	1700	F	2335	525	4.45	1.74	177	10.4	late vitellogenic
GDCB1	1310	M	442	3087	0.14	0.	52	4.0	high spermatogenic
GDCB4	739	M	1002	1587	0.63	0.	46	6.2	high spermatogenic
GDCB5	2315	M	1904	1728	1.10	0.	150	6.5	high spermatogenic
GDCB9	2100	M	437	1245	0.35	0.	171	8.1	high spermatogenic
GDCB10	2222	M	1979	4076	0.49	0.	161	7.2	high spermatogenic
Farmington Bay South: Bountiful Pond									
97BPCB9	851	F	488	281	1.74	0.141	4	0.5	early pre-vitellogenic
97BPCB8	884	F	325	131	2.48	0.	20	2.3	gonad not present
97BPCB2	2997	F	392	61	6.43	5.51	190	6.3	late vitellogenic
97BPCB14	772	M	1293	720	1.80	0.	2	0.3	high spermatogenic
97BPCB11	860	M	396	281	1.41	0.	4	0.5	high spermatogenic
97BPCB1	1995	M	445	1170	0.38	0.016	99	5.0	high spermatogenic
97BPCB7	2405	M	231	1303	0.18	0.	145	6.0	high spermatogenic
97BPCB10	1309	M	422	1180	0.36	0.	27	2.1	high spermatogenic
97BPCB4	1605	M	323	1253	0.26	0.	58	3.6	high spermatogenic
97BPCB13	2247	M	381	1143	0.33	0.	151	6.7	high spermatogenic
97BPCB5	1052	M	402	854	0.47	0.	29	2.8	high spermatogenic
97BPCB12	3442	M	292	1597	0.18	0.	88	2.6	high spermatogenic
97BPCB3	1607	M	246	1148	0.21	0.	62	3.9	high spermatogenic
Farmington Bay South: Crystal Unit									
97CUCB2	830	F	244	843	0.29	0.27	5	0.6	early pre-vitellogenic
97CUCB1	4074	F	869	661	1.31	7.75	331	8.1	late vitellogenic
97CUCB3	1156	M	72	1978	0.04	0.	95	8.2	high spermatogenic
97CUCB4	1151	M	227	1596	0.14	0.	61	5.3	high spermatogenic
Farmington Bay South: Unit 1									
97F1CB5	1126	F	128	492	0.26	0.468	8	0.7	early pre-vitellogenic
97F1CB4	1336	F	186	679	0.27	0.232	13	1.0	early pre-vitellogenic
97F1CB9	1723	F	831	576	1.44	1.47	15	0.9	early pre-vitellogenic
97F1CB6	1682	F	143	370	0.39	0.164	7	0.4	early pre-vitellogenic
97F1CB12	1538	F	162	363	0.45	0.355	3	0.2	undeveloped oocytes
97F1CB3	1539	F	231	484	0.48	0.748	7	0.5	undeveloped oocytes
97F1CB11	1337	M	144	684	0.21	0.007	65	4.9	high spermatogenic
97F1CB7	1353	M	96	520	0.18	0.	35	2.6	high spermatogenic
97F1CB2	2078	M	143	1409	0.10	0.	134	6.4	high spermatogenic
97F1CB8	1797	M	90	607	0.15	0.	102	5.7	high spermatogenic
97F1CB1	1608	M	92	648	0.14	0.	88	5.5	high spermatogenic
97F1CB10	1489	M	40	1064	0.04	0.	103	6.9	high spermatogenic
97F1CB13	990	M	341	2204	0.15	0.	22	2.2	high spermatogenic
97F1CB14	2393	M	137	1624	0.08	0.	139	5.8	high spermatogenic

Table A-12. Concentrations (pg/ml) of 17β-estradiol (E), 11-keto-testosterone (T), and vitellogenin (V) (mg/ml) in common carp (Cyprinus carpio) and reproductive status based on gonad histology. (*page 3 of 4*)

Sample	Weight (g)	Sex	E	T	E/T Ratio	V	Gonad (g)	GSI[1]	Reproductive Status
Farmington Bay South: State Canal									
SCCB8	1486	F	876	1084	0.81	3.65	51	3.4	early vitellogenic
SCCB14	2846	F	606	398	1.52	4.57	86	3.0	early vitellogenic
SCCB2	4101	F	534	244	2.19	1.63	560	13.7	late vitellogenic
SCCB5	3056	F	542	953	0.57	4.78	204	6.7	late vitellogenic
SCCB6	5363	F	384	1123	0.34	4.11	532	9.9	late vitellogenic
SCCB7	4725	F	619	555	1.12	4.25	607	12.8	late vitellogenic
SCCB9	3213	F	648	472	1.37	0.839	265	8.2	late vitellogenic
SCCB19	2091	F	486	2036	0.24	2.29	237	11.3	late vitellogenic
97SCCB7	2295	F	264	178	1.48	2.57	116	5.1	late vitellogenic
97SCCB4	3260	F	511	115	4.44	3.28	138	4.2	mid vitellogenic
97SCCB2	2280	F	218	274	0.80	1.63	237	10.4	mid vitellogenic
97SCCB12	1095	F	428	301	1.42	2.02	14	1.3	mid vitellogenic
97SCCB17	2532	F	552	431	1.28	4.87	98	3.9	mid vitellogenic
97SCCB9	2348	F	1243	912	1.36	1.42	108	4.6	mid vitellogenic
97SCCB6	3035	F	1090	582	1.87	1.7	253	8.3	mid vitellogenic
97SCCB11	4390	F	248	136	1.82	3.51	298	6.8	mid vitellogenic
97SCCB5	1676	F	282	108	2.61	6.4	64	3.8	mid vitellogenic
SCCB10	1074	F	755	994	0.76	0.427	20	1.9	pre vitellogenic
SCCB13	1397	F	539	914	0.59	0.72	23	1.6	pre vitellogenic
97SCCB14	1130	F	372	174	2.14	0.1	3	0.3	pre vitellogenic
SCCB1	2920	M	382	1898	0.20	0.	103	3.5	high spermatogenic
SCCB3	2546	M	475	936	0.51	0.	72	2.8	high spermatogenic
SCCB4	3362	M	419	2461	0.17	0.	226	6.7	high spermatogenic
SCCB11	1207	M	824	731	1.13	0.	32	2.7	high spermatogenic
SCCB12	956	M	545	886	0.62	0.	34	3.6	high spermatogenic
SCCB15	4168	M	707	1596	0.44	0.	225	5.4	high spermatogenic
SCCB16	4194	M	954	495	1.93	0.01	222	5.3	high spermatogenic
SCCB17	1782	M	1504	627	2.40	0.	73	4.1	high spermatogenic
SCCB18	2326	M	2010	2594	0.77	0.	169	7.3	high spermatogenic
SCCB20	1094	M	445	849	0.52	0.	28	2.6	high spermatogenic
97SCCB15	1599	M	316	196	1.61	0.	44	2.8	high spermatogenic
97SCCB18	2357	M	486	434	1.12	0.	192	8.1	high spermatogenic
97SCCB16	2029	M	500	588	0.85	0.	66	3.3	high spermatogenic
97SCCB8	2127	M	224	628	0.36	0.	120	5.6	high spermatogenic
97SCCB19	2325	M	513	1028	0.50	0.	124	5.3	high spermatogenic
97SCCB13	3520	M	266	739	0.36	0.	270	7.7	high spermatogenic
97SCCB3	3052	M	297	967	0.31	0.	129	4.2	high spermatogenic
97SCCB1	3895	M	477	1110	0.43	0.	248	6.4	high spermatogenic
97SCCB10	3402	M	523	1196	0.44	0.	106	3.1	high spermatogenic
97SCCB20	1511	M	500	1285	0.39	0.	125	8.3	high spermatogenic

Sample	Weight (g)	Sex	E	T	E/T Ratio	V	Gonad (g)	GSI[1]	Reproductive Status
Ogden Bay: Howard Slough									
97HSCB5	4504	F	1435	985	1.46	7.12	612	13.6	late vitellogenic
97HSCB2	5941	F	721	826	0.87	9.26	873	14.7	late vitellogenic
97HSCB3	4271	F	478	145	3.30	9.37	636	14.9	late vitellogenic
97HSCB8	2462	F	892	160	5.58	1.36	236	9.6	late vitellogenic
97HSCB14	4554	F	273	172	1.59	2.44	635	13.9	late vitellogenic
97HSCB12	6147	F	1631	336	4.85	10.2	1091	17.7	late vitellogenic
97HSCB13	3436	F	1257	396	3.17	6.91	420	12.2	late vitellogenic
97HSCB6	3803	F	1292	551	2.34	1.87	550	14.5	late vitellogenic
97HSCB11	1716	F	411	179	2.30	2.88	106	6.2	late vitellogenic
97HSCB10	2297	M	70	81	0.86	0.	199	8.7	high spermatogenic
97HSCB16	1735	M	209	700	0.30	0.	177	10.2	high spermatogenic
97HSCB15	1590	M	153	177	0.86	0.	145	9.1	high spermatogenic
97HSCB9	2208	M	87	184	0.47	0.	206	9.3	high spermatogenic
97HSCB18	2092	M	100	132	0.76	0.	163	7.8	high spermatogenic
97HSCB17	590	M	185	333	0.56	0.	21	3.6	high spermatogenic
97HSCB4	3349	M	107	1373	0.08	0.	265	7.9	high spermatogenic
97HSCB7	3667	M	108	310	0.35	0.	285	7.8	high spermatogenic
Ogden Bay: Ogden Bay WMA- S Canal									
OBCB5	2623	F	2842	1501	1.89	0.832	74	2.8	early vitellogenic
OBCB1	4623	F	1932	723	2.67	1.35	332	7.2	late vitellogenic
OBCB3	5275	F	2512	379	6.63	1.16	449	8.5	late vitellogenic
OBCB4	5916	F	2247	276	8.14	3.59	389	6.6	late vitellogenic
OBCB2	4924	F	2787	579	4.81	0.046	112	2.3	pre vitellogenic
OBCB6	2430	M	1559	2851	0.55	0.	89	3.7	high spermatogenic
OBCB7	3058	M	3996	923	4.33	0.	190	6.2	high spermatogenic
OBCB8	1380	M	2954	1270	2.33	0.	17	1.2	high spermatogenic
OBCB9	2345	M	2138	1706	1.25	0.	159	6.8	high spermatogenic
Ogden Bay: Ogden Bay WMA- Weber River									
97OBCB2	1677	F	775	1560	0.50	9.	99	5.9	late vitellogenic
97OBCB6	873	F	166	1013	0.16	0.	3	0.3	late vitellogenic
97OBCB3	3373	F	597	1028	0.58	1.27	276	8.2	late vitellogenic
97OBCB5	5413	F	602	1099	0.55	3.9	470	8.7	late vitellogenic
97OBCB1	5602	F	837	998	0.84	5.17	553	9.9	mid vitellogenic
97OBCB8	5246	F	344	1771	0.19	0.932	617	11.8	mid vitellogenic
97OBCB7	4156	F	831	1034	0.80	3.99	316	7.6	mid vitellogenic
97OBCB4	2844	M	205	1098	0.19	0.	212	7.5	high spermatogenic
97OBCB11	2531	M	281	1376	0.20	0.	198	7.8	high spermatogenic
97OBCB12	1939	M	272	1205	0.23	0.	124	6.4	high spermatogenic
97OBCB10	3588	M	203	2191	0.09	0.	326	9.1	high spermatogenic
97OBCB9	2426	M	72	1068	0.07	0.	219	9.0	high spermatogenic

Table A-13. Polynuclear Aromatic Hydrocarbon (PAH) Metabolites (milligrams/Liter, wet weight) in Bile from Common Carp (*Cyprinus carpio*), Great Salt Lake Wetlands Synoptic Survey, 1996-1997.

Sample Number	Sample Site Description	Collection Date	Sex	Benzo(a) pyrene	Naph-thalene	Phenan-threne
	Area #3- GSL South Shore					
97C7C5	C7 Ditch (LC)	07/23/97	F	1.7	850	190
97C7C6	C7 Ditch (LC)	07/23/97	M	1.4	750	160
97C7C8	C7 Ditch (LC)	07/23/97	F	0.5	260	62
	Area #4- South Shore Conservation Wetlands					
97AMC1	Airport Mitigation Site (SA)	07/29/97	M	0.2	110	70
97AMC12	Airport Mitigation Site (SA)	07/29/97	F	0.1	60	34
97AMC9	Airport Mitigation Site (SA)	07/29/97	M	0.1	48	36
	Area #6- Farmington Bay South					
97BPC1	Bountiful Ponds (FP)	07/25/97	M	0.2	71	24
97BPC4	Bountiful Ponds (FP)	07/25/97	M	0.3	150	46
97BPC7	Bountiful Ponds (FP)	07/25/97	M	0.4	230	73
97CUC1	FBWMA- Crystal Unit (FC)	08/20/97	F	0.2	82	16
97CUC2	FBWMA- Crystal Unit (FC)	08/20/97	F	0.1	52	10
97CUC4	FBWMA- Crystal Unit (FC)	08/27/97	M	0.2	94	20
97SCC3	State Canal (FS)	08/13/97	M	0.7	370	94
97SCC4	State Canal (FS)	08/13/97	F	1.3	570	210
97SCC6	State Canal (FS)	08/13/97	F	2.8	1300	340
97F1C6	FBWMA- Unit 1 (FU)	07/30/97	F	0.3	150	140
97F1C8	FBWMA- Unit 1 (FU)	07/30/97	M	0.2	130	140
97F1C9	FBWMA- Unit 1 (FU)	07/30/97	F	0.3	110	100
	Area #8- Ogden Bay					
97HSC3	Howard Slough (OH)	08/22/97	F	0.2	67	31
97HSC5	Howard Slough (OH)	08/25/97	F	0.3	100	40
97HSC6	Howard Slough (OH)	08/25/97	F	0.4	150	45
97OBC1	Ogden Bay North (ON)	08/21/97	F	1.0	210	61
97OBC5	Ogden Bay North (ON)	08/21/97	F	1.4	420	100
97OBC7	Ogden Bay North (ON)	08/21/97	F	1.1	300	73

NOTES:

Detection Limits (mg/L, wet weight)

Benzo(a)pyrene: 0.1

Naphthalene: 0.6

Phenanthrene: 0.1