

## APPENDIX D—HABITAT BIBLIOGRAPHY

This appendix provides supporting data for the references used to develop the WaQSP Habitat Planning Element. Additionally, a CD is found in the back of the appendices that contains PDFs of habitat studies and a searchable spreadsheet that is linked to the respective PDFs.



Trail to Ensign Peak, Salt Lake City, UT

Table REF1. Published documentation characterizing existing habitat conditions in Salt Lake County including Aquatic (A), Riparian (R), and Wetland (W) habitat.							
ID	Title	Author	Publication Year	Wasatch Mtns.	Oquirrh Mtns.	Jordan River	Great Salt Lake
1	Level II Stream Morphology Classification of the Jordan River	R. Fillmore and S. Jensen	1997			A	
2	Final Draft Environmental Statement: Jordan River Bank Assessment	S. Jensen	1996	A		A R	
3	Jordan River Wetland Acquisition & Management Plan	S. Jensen	1995			W	
4	Jordan River Nonpoint Source Management Plan For Hydrologic Modifications	S. Jensen	1995			A R	
5	Section 305b Water Quality Assessment Update for the Jordan River Sub-basin	S. Jensen	1994	A		A	
6	Jordan River Stability Study	CH2MHill	1992			A R	
7	Jordan River Stability Study: Attachment 1	CH2MHill	1992			A	
8	Jordan River Corridor: A proposal prepared for the CUP Completion Act Section 8 Advisory Team	UT Div. of Parks and Recreation	1993			A R	
9	Jordan River Corridor Conceptual Master Plan for the Narrows	C. Johnson	1993			R W	
10	The Jordan River Nature Park: A plan for Urban Wildlife Habitat	K. Collins	1990			R	
11	Fishery and Macroinvertebrate Studies of the Jordan River in Salt Lake County	P. Holden and L. Crist	1986			A	
12	Jordan River Wetland Wildlife Evaluation	M. Halpin	1987			R W	
13	Jordan River Wetlands: Macroinvertebrates and Water Quality	F. Nabrotzky	1986			A	
14	Jordan River Fisheries Evaluation	M. Wilson	1987			A	
15	Jordan River Channel Stability Evaluation	S. Jensen	1986			A R	
16	Jordan River Wetland Advance Identification Study (WAIDS)	S. Jensen	1987			R W	
17	Jordan River Terrestrial Wildlife Inventory for Proposed Lampton Reservoir Area	R. Smith and C. Greenwood	1984			R	
18	Jordan River Fishery	T. Way	1980			A	
19	Area-Wide Water Quality Management Plan	SL Co Water Quality and Water Pollution Control	1978	A R	A	A R	
20	The Utah Lake-Jordan River Hydrologic Basins Water Quality Management Planning Study	Utah Division of Health Bureau of Water Quality	1975			A	
21	Jordan River Utah Study	U.S. EPA	1973			A R	
22	Annual Summary Report – 1988 Fishery Investigations of the Lower Jordan River	BIO/WEST Inc. 1989	1988			A	
23	Jordan River Drainage Management Plan	C. Thompson et al.	2003	A R		A R	
24	Selected Aquatic Biological Investigations in the Great Salt Lake Basins, 1875-1998, National Water Quality Assessment Program	E. Giddings and D. Stephens	1999			A R W	
25	The Jordan River Natural Conservation Corridor Report	National Audobon Society	2002			A R W	
26	Utah Lake – Jordan River Watershed Management Unit Stream Assessment	T. Toole	2002			A R	
27	Salt Lake County Level III Channel Stability Study	Salt Lake County	2005	A R W			
28	Mill Creek Fish Species	P. Cowley	2005	A			
29	Big Cottonwood Creek Stream Survey Report	K. Schwager and P. Cowley	2000	A R			
30	Little Cottonwood Creek Stream Survey	K. Schwager and P. Cowley	2001	A R			
31	Ecological Characterization and Functional Evaluation of Subalpine and lower Montane Wetlands in the Albion Basin Region of Utah	S. Jensen	1993	R W			
32	The Montane & Sub-alpine Wetlands of Brighton Basin, Utah	S. Jensen	2000	R W			
33	Wasatch-Cache Riparian Inventory Report	Wasatch Cache NF	2006	A R			
34	Salt Lake County Area Wide Water Study chapters I-IV	Coon, King and Knowlton Engineers	1982	A R	A R	A R	
35	Utah GAP Vegetation data	Lowry et al.	2005	R	R	R	
36	National Wetlands Inventory	USFS	2001	A R	A R	A R	
37	Salt Lake County Shorelands Plan	Envision Utah	2003				R W
38	Wetland Resources of Salt Lake County Report Update	P. West	1984	W	W	W	W
39	Central Valley Water Reuse Project EIS Wildlife Technical Report	D. Branson and E. Davies	2007			R W	R W
40	Central Valley Water Reuse Project EIS Aquatic Resources Technical Report	M. Petersen	2007			A	
41	Central Valley Water Reuse Project EIS Wetland and Riparian Resources Technical Report	E. Davies and J. Stewart	2007			R W	R W
42	Great Salt Lake Draft Comprehensive Management Plan	Utah Dept. of Natural Resources	1999				A R W
43	Lee Creek Area Audubon Brochure	E. Sorenson	2006		A R		A R
44	Kersey Creek Assessment Phase One: Data Report	SL Co Water Quality and Water Pollution Control	1981		A R		A R

45	Salt Lake City Watershed Management Plan	Salt Lake City Dept. of Public Utilities	1999	A R			
46	Decker Lake Clean Lakes Grant	Salt Lake County	1999		A		
47	Eutrophication in Farmington Bay, GSL, Utah 2005 Annual Report	W. Wurtsbaugh and A. Marcarelli	2006				A
48	Plant and Vertebrate Inventories of Jordan River State Park	Utah Division of Wildlife Resources	2003			R	
49	Avian Use of Riparian Habitats in an Urban to Rural Gradient, SL Valley, UT	R. E. Norvell	1997			R	
50	Estimate of riparian corridor area in Salt Lake Valley areas.	Salt Lake County	2007	R		R	
51	Required Environmental Monitoring at Snowbird	Cirrus Ecological Solutions LC	2006	A			

Table BCC1. Habitat features documented in the Big Cottonwood Creek watershed.

Habitat Type	Reference ID	Elevation (ft.)	Dominant Substrate	Channel Entrenchment	Slope (%)	Rosgen type	Bank Stability	Pool:Riffle ratio	Macro species	Habitat Quality Index (lb/acre)	Fish Species
AQUATIC - MOUNTAIN	Wasatch Cache NF 2006	5,060-8,280	Bedrock-boulder	Low-High	1-10	A1a+-G3	45-100%	na	na	na	na
	SL Co Water Quality and Water Pollution Control 1978	Not elevation specific.	Gravel	na	Steep	na	Very Good Excellent	na	Substantial; ephemeroptera and trichoptera dominant.	na	Brown trout, rainbow trout, brook trout.
	K. Schwager and P. Cowley 2000.	5,760-7,360	Cobble and small cobble (25-27%), Surface fines (7-15%).	na	1.9-5.3	A-B	77-87% with undercut banks 1-32%.	1:0.5-2.5	na	na	Brown trout, rainbow trout, brook trout.
	C. Thompson et al. 2003	4,998-9,300	na	na	na	na	na	na	na	69 (elevation 5805-6860), 3 (elevation 6860-7698), 126 (elevation 7698-8088), 155 (elevation 8088-8713)	Brown trout, rainbow trout, brook trout.
	Coon et al. 1982	Not elevation specific.	na	na	Moderate-variable	na	na	na	na	na	Brown trout, rainbow trout, brook trout.
AQUATIC - VALLEY	SL Co Water Quality and Water Pollution Control 1978	Not elevation specific.	na	na	na	na	Fair	na	Abundant; ephemeroptera and trichoptera dominant.	na	Brown trout, rainbow trout.
	Salt Lake County 2005	4,235-4,711	Silt-Boulder	Mod-High	0.04-4	A2-G6	Poor-Excellent	na	na	na	na
	C. Thompson et al. 2003	4,235-4,998	na	na	na	na	na	na	na	na	Brown trout, common carp, speckled dace, longnose dace, mountain sucker, Utah sucker.
	Coon et al. 1982	Not elevation specific.	na	na	Gentle	na	na	na	na	na	Trout.
Habitat Type	Reference ID	Elevation (ft.)	Area	Vegetation Community							Canopy Cover (%)
	Wasatch Cache NF 2006	5,060-8,280	na	Conifer/mountain alder, willow, red osier dogwood, twinberry (5-60%), logs (5%), willow/mesic forbs, mesic graminoid, bare (2.5-75%), mountain alder/common horsetail, red osier dogwood (2.5-40%), twinberry/mesic forbs (2.5-10%), common horsetail (2.5-5%), cottonwood/aspens/willow, red osier dogwood, bigtooth maple, rock water birch, bare (2.5-100%), red osier dogwood/willow, common horsetail, bare (10-62.5%), water birch/red osier dogwood, bare (10-50%), box elder/red osier dogwood (15%), bare (5-40%), bigtooth maple/water birch (5%), rock (5%), sand and gravel (2.5%), bridge/rock (2/5%).							na

RIPARIAN - MOUNTAIN	SL Co Water Quality and Water Pollution Control 1978	Not elevation specific.	na	Conifers, aspen, oak, birch, alder, willow, cottonwood, dogwood and grasses.	Inadequate-Good
	K. Schwager and P. Cowley 2000.	5,760-7,360	na	Small trees, large trees, shrub/seedling.	14-21%
	Coon et al. 1982	Not elevation specific.	na	Aspen, fir, and spruce trees, mountain lover, mountain juniper, alpine herbs, conifers, aspen, maple, sage brush, scrub oak, and various grasses.	na
	Lowry 2005	Not elevation specific.	na	Rocky Mountain Lower Montane Riparian Woodland and Shrubland (0.2 mi., 1.2 %), Rocky Mountain Subalpine-Montane Riparian Shrubland (0.6 mi., 4.1 %)	na
RIPARIAN - VALLEY	SL Co Water Quality and Water Pollution Control 1978	Not elevation specific.	na	Willow, cottonwood, scrub oak, grasses, exotic plants, birch, dogwood, rose, and grasses.	Adequate for fish.
	Salt Lake County 2005	4,235-4,711	na	Willows, cottonwood, river birch, cheatgrass, russian olive, and other grasses, shrubs, and trees.	na
	Coon et al. 1982	Not elevation specific.	na	Much of the native vegetation has been displaced.	na
	Lowry 2005	Not elevation specific.	na	Rocky Mountain Lower Montane Riparian Woodland and Shrubland (0.7 mi., 7.1 %).	na
<b>Habitat Type</b>	<b>Reference ID</b>	<b>Total Acreage</b>	<b>Wetland Type (acres)</b>		
WETLAND - MOUNTAIN	US Fish and Wildlife Service 2001	187	Lacustrine Limnetic (30.0), Palustrine Aquatic Bed (86.8), Palustrine Emergent (8.4), Palustrine Scrub-Shrub (59.1), Palustrine Unconsolidated (2.7).		
	P. West 1984	na	Palustrine Scrub-Shrub dominant.		
	S. Jensen 2000	na	Riverine, Scrub-Shrub, Palustrine Forested, Palustrine Emergent, Palustrine Shrub, Riverine/Shrub, Lacustrine/Limnetic.		
WETLAND - VALLEY	US Fish and Wildlife Service 2001	55.9	Palustrine Aquatic Bed (28.1), Palustrine Emergent (20.7), Palustrine Scrub-Shrub (1.8), Palustrine Unconsolidated Shore (5.3), Riverine Lower Perennial (<0.1).		

Table BG1. Habitat features documented in the Bingham Creek watershed.

Habitat Type	Reference ID	Elevation (ft.)	Dominant Substrate	Channel Entrenchment	Slope (%)	Rosgen type	Bank Stability	Pool:Riffle ratio	Macro species	Habitat Quality Index (lb/acre)	Fish Species
AQUATIC	Coon et al. 1982	Not elevation specific.	na	na	Slight	na	na	na	na	na	na
	C. Thompson et al. 2003	5,288-5,813	na	na	na	na	na	na	na	1	na
Habitat Type	Reference ID	Elevation (ft.)	Area	Vegetation Community							Canopy Cover (%)
RIPARIAN	Coon et al. 1982	Not elevation specific.	na	Displaced, but some spruce, firs, shrubs, and grasses exist (in canyon), Irrigated and dry crop land (in valley).							na
	Lowry 2005	Not elevation specific.	na	na							na
	Salt Lake County 2007	Not elevation specific.	na	na							na
Habitat Type	Reference ID	Total Acreage	Wetland Type (acres)								
WETLAND	US Fish and Wildlife Service 2001	119	Lacustrine Limnetic (34.5), Lacustrine Littoral (12.3), Palustrine Aquatic Bed (10.8), Palustrine Emergent (14.6), Palustrine Scrub-Shrub (3.6), Palustrine Unconsolidated Bottom (23.9), Palustrine Unconsolidated Shore (0.4), Riverine Intermittent (18.9).								

Table BN1. Habitat features documented in the Barney's Creek watershed.

Habitat Type	Reference ID	Elevation (ft.)	Dominant Substrate	Channel Entrenchment	Slope (%)	Rosgen type	Bank Stability	Pool:Riffle ratio	Macro species	Habitat Quality Index (lb/acre)	Fish Species
AQUATIC	Coon et al. 1982	Not elevation specific.	na	na	Moderate	na	na	na	na	na	na
Habitat Type	Reference ID	Elevation (ft.)	Area	Vegetation Community							Canopy Cover (%)
RIPARIAN	Coon et al. 1982	Not elevation specific.	na	Shrubs and grasses (in canyon), irrigated and dry crop land (in valley).							na
	Lowry 2005	Not elevation specific.	na	Great Basin Foothill and Lower Montane Riparian Woodland and Shrubland (0.7 mi., 6.5%).							na
	Salt Lake County 2007	Not elevation specific.	na	na							na
Habitat Type	Reference ID	Total Acreage	Wetland Type (acres)								
WETLAND	US Fish and Wildlife Service 2001	18.4	Palustrine Aquatic Bed (4.5), Palustrine Emergent (11.2), Palustrine Scrub-Shrub (2.2), Palustrine Unconsolidated Bottom (0.5).								

Table CC1. Habitat features identified in the City Creek watershed.

Habitat Type	Reference ID	Elevation (ft.)	Dominant Substrate	Channel Entrenchment	Slope (%)	Rosgen type	Bank Stability	Pool:Riffle ratio	Macro species	Habitat Quality Index (lb/acre)	Fish Species
AQUATIC - MOUNTAIN	Salt Lake County 1978	Not elevation specific.	Sandstone	na	Steep	na	na	na	Sparse	na	na
	Thompson et al. 2003	6,123 - 7,691	na	na	na	na	na	na	na	65	Brown trout, Bonneville cutthroat trout, rainbow trout, rainbow-cutthroat crosses.
	Coon et al. 1982	Not elevation specific.	na	na	Upper elevation: moderately steep. Lower elevation: relatively flat.	na	na	na	na	na	Small; dominated by brown trout.
AQUATIC - VALLEY	Salt Lake County 1978	Not elevation specific.	na	na	Slight	na	na	na	na	na	Small; dominated by brown trout.
	Thompson et al. 2003	4,394 - 6,123	na	na	na	na	na	na	na	na	Brown trout, Bonneville cutthroat trout
Habitat Type	Reference ID	Elevation (ft.)	Area	Vegetation Community							Canopy Cover (%)
RIPARIAN - MOUNTAIN	Salt Lake County 1978	Not elevation specific.	na	Fir, maple, birch, dogwood, chokecherry, and currant.							na
	Coon et al. 1982	Not elevation specific.	na	Upper canyon: lower montane ecosystem with fir, maple, birch, dogwood, chokecherry, and currant. Lower canyon: valley grassland: cottonwoods, maple, birch, boxelder, and grasses.							na
	Lowry 2005	Not elevation specific.	na	Rocky Mountain Lower Montane Riparian Woodland and Shrubland (3.4 mi., 34.5% of total), Rocky Mountain Subalpine-Montane Riparian Shrubland (0.1 mi., 0.8% of total).							na



RIPARIAN - VALLEY	Salt Lake County 1978	Not elevation specific.	na	Cottonwood, elm, maple, birch, boxelder, and grasses.	na
	Lowry 2005	Not elevation specific.	na	Rocky Mountain Lower Montane Riparian woodland and Shrubland (0.83 mi., 25.7 %).	na
	Salt Lake County 2007	Not elevation specific.	40	na	na
Habitat Type	Reference ID	Total Acreage	Wetland Type (acres)		
WETLAND - MOUNTAIN	US Fish and Wildlife Service 2001	23.2	Palustrine Aquatic Bed (1.1), Palustrine Emergent (9.8), Palustrine Forested (6.6), Palustrine Scrub-Shrub (4.7), Palustrine Unconsolidated (1.0).		
WETLAND - VALLEY	US Fish and Wildlife Service 2001	0	None identified.		

Table CN1. Habitat features documented in the Coon Creek watershed.

Habitat Type	Reference ID	Elevation (ft.)	Dominant Substrate	Channel Entrenchment	Slope (%)	Rosgen type	Bank Stability	Pool:Riffle ratio	Macro species	Habitat Quality Index (lb/acre)	Fish Species
AQUATIC	Coon et al. 1982	Not elevation specific.	na	na	Moderate	na	na	na	na	na	na
Habitat Type	Reference ID	Elevation (ft.)	Area	Vegetation Community							Canopy Cover (%)
RIPARIAN	Coon et al. 1982	Not elevation specific.	na	Oak brush, sage brush, bitterbrush, mountain brome, maple and various grasses.							na
	Lowry 2005	Not elevation specific.	na	Great Basin Foothill and Lower Montane Riparian Woodland and Shrubland (1.3 mi., 16.8 %).							na

Table CY1. Habitat features documented in the Corner Canyon Creek watershed.

Habitat Type	Reference ID	Elevation (ft.)	Dominant Substrate	Channel Entrenchment	Slope (%)	Rosgen type	Bank Stability	Pool:Riffle ratio	Macro species	Habitat Quality Index (lb/acre)	Fish Species
AQUATIC	Coon et al. 1982	Not elevation specific.	na	na	Steep in headwater areas; gradual near canyon mouth.	na	na	na	na	na	na
Habitat Type	Reference ID	Elevation (ft.)	Area	Vegetation Community							Canopy Cover (%)
RIPARIAN	Coon et al. 1982	Not elevation specific.	na	Grass and shrubs including bunch wheat grass, bluegrass, oakbrush, and bitterbrush.							na
	Lowry 2005	Not elevation specific.	na	Rocky Mountain Lower Montane Riparian Woodland and Shrubland (0.6 mi., 8.2 %).							na
	Salt Lake County 2007	Not elevation specific.	53	na							na
Habitat Type	Reference ID	Total Acreage	Wetland Type (acres)								
WETLAND	US Fish and Wildlife Service 2001	16.6	Palustrine Aquatic Bed (9.5), Palustrine Emergent (4.8), Palustrine Scrub-Shrub (1.0), Palustrine Unconsolidated Shore (1.3).								

Table DC1. Habitat features documented in the Dry Creek watershed.

Habitat Type	Reference ID	Elevation (ft.)	Dominant Substrate	Channel Entrenchment	Slope (%)	Rosgen type	Bank Stability	Pool:Riffle ratio	Macro species	Habitat Quality Index (lb/acre)	Fish Species
AQUATIC - MOUNTAIN	Coon et al. 1982	Not elevation specific.	na	na	Generally steep (Middle Fork); upper elevation: steep, lower elevation: gradual (South Fork).	na	na	na	na	na	na
AQUATIC - VALLEY	Salt Lake County 2005	4,300-5,220	Boulder-sand	Low-High	0.2-13.3	A2-F4	Poor-Excellent	na	na	na	na
Habitat Type	Reference ID	Elevation (ft.)	Area	Vegetation Community							Canopy Cover (%)
RIPARIAN - MOUNTAIN	Coon et al. 1982	Not elevation specific.	na	Upper elevations: conifer, aspen, lower elevations: oakbrush, sage brush, shrubs and grasses (Middle Fork); upper elevations: conifers and aspens, lower elevations: grasses and shrubs (South Fork).							na
	Lowry 2005	Not elevation specific.	na	Rocky Mountain Lower Montane Riparian Woodland and Shrubland (0.2 mi., 6.3 %).							na
RIPARIAN - VALLEY	Salt Lake County 2005	4,300-5,220	na	Oak, willow, Russian olive, cottonwood, Siberian elm, and grasses.							na
	Salt Lake County 2007	Not elevation specific.	141	na							na
	Lowry 2005	Not elevation specific.	na	Rocky Mountain Lower Montane Riparian Woodland and Shrubland (3.7 mi., 41.6 %).							na
Habitat Type	Reference ID	Total Acreage	Wetland Type (acres)								
WETLAND - MOUNTAIN	US Fish and Wildlife Service 2001	24.2	Palustrine Aquatic Bed (19.9), Palustrine Emergent (4.3).								
WETLAND - VALLEY	US Fish and Wildlife Service 2001	34.2	Palustrine Aquatic Bed (7.9), Palustrine Emergent (15.9), Palustrine Scrub-Shrub (5.5), Riverine Intermittent (4.9).								

Table DL1. Habitat features documented in the Decker Lake watershed.

Habitat Type	Reference ID	Elevation (ft.)	Dominant Substrate	Channel Entrenchment	Slope (%)	Rosgen type	Bank Stability	Pool:Riffle ratio	Macro species	Habitat Quality Index (lb/acre)	Fish Species
AQUATIC	Bio/West Inc. 1989	Not elevation specific.	Silt & debris common; some cobble/rubble.	na	na	na	na	Slow, shallow runs dominant; small riffle present.	na	na	na
Habitat Type	Reference ID	Elevation (ft.)	Area	Vegetation Community							Canopy Cover (%)
RIPARIAN	Lowry 2005	Not elevation specific.	na	na							na
	Salt Lake County 2007	Not elevation specific.	na	na							na
Habitat Type	Reference ID	Total Acreage	Wetland Type (acres)								
WETLAND	US Fish and Wildlife Service 2001	26.2	Lacustrine Littoral (<0.1), Palustrine Aquatic Bed (0.5), Palustrine Emergent (21.7), Palustrine Unconsolidated Shore (4.0).								

Table EM1. Habitat features documented in the Emigration Creek watershed.

Habitat Type	Reference ID	Elevation (ft.)	Dominant Substrate	Channel Entrenchment	Slope (%)	Rosgen type	Bank Stability	Pool:Riffle ratio	Macro species	Habitat Quality Index (lb/acre)	Fish Species
AQUATIC - MOUNTAIN	SL Co Water Quality and Water Pollution Control 1978	Not elevation specific.	na	na	Moderate	na	Adequate	na	na	na	na
	C. Thompson et al. 2003	4,852-5,903	na	na	na	na	na	na	na	112-320	Bonneville cutthroat trout, rainbow trout, rainbow-cutthroat crosses.
	Coon et al. 1982	5,000-8,900	na	na	Moderate	na	na	na	na	na	Some trout; many scarce or totally displaced.
	Salt Lake County 2005	5,000-6,000	Boulder-silt	Low-High	1.2-8	B3-G4	na	na	na	na	Trout.
AQUATIC - VALLEY	C. Thompson et al. 2003	4,852-5,342	na	na	na	na	na	na	na	na	Bonneville cutthroat trout.
	Salt Lake County 2005	4,300-4,917	Cobble-sediment	Moderate	2.3-4.4	B4-5	Very Poor-Fair	na	na	na	na
Habitat Type	Reference ID	Elevation (ft.)	Area	Vegetation Community							Canopy Cover (%)
RIPARIAN - MOUNTAIN	SL Co Water Quality and Water Pollution Control 1978	Not elevation specific.	na	Box elder, cottonwood, mustard, clover, and June grass.							Adequate for fish.
	Coon et al. 1982	5,000-8,900	na	Box elder and cottonwood trees, mustard, clover, and grasses.							na
	Salt Lake County 2005	5,000-6,000	na	Willow, dogwood, grasses, narrow leaf cottonwood, alder, river birch, box elder, maple, serviceberry.							na
	Lowry 2005	Not elevation specific.	na	Rocky Mountain Alpine-Montane Wet Meadow (<0.1 mi., 0.2 %), Rocky Mountain Lower Montane Riparian Woodland and Shrubland (0.7 mi., 7.3 %).							na
RIPARIAN - VALLEY	SL Co Water Quality and Water Pollution Control 1978	Not elevation specific.	na	Box elder, scrub oak, and June grass.							na
	Coon et al. 1982	Not elevation specific.	na	na							na
	Salt Lake County 2005	4,917-4,300	na	Oak, ivy, willow, occasional shrub.							na
	Lowry 2005	Not elevation specific.	na	na							na
	Salt Lake County 2007	Not elevation specific.	84	na							na
Habitat Type	Reference ID	Total Acreage	Wetland Type (acres)								

WETLAND - MOUNTAIN	US Fish and Wildlife Service 2001	11	Palustrine Aquatic Bed (2.3), Palustrine Emergent (4.5), Palustrine Scrub-Shrub (4.2).
WETLAND - VALLEY	US Fish and Wildlife Service 2001	1	Palustrine Aquatic Bed (1.0).

Table EM1. Habitat features documented in the Emigration Creek watershed.

Habitat Type	Reference ID	Elevation (ft.)	Dominant Substrate	Channel Entrenchment	Slope (%)	Rosgen type	Bank Stability	Pool:Riffle ratio	Macro species	Habitat Quality Index (lb/acre)	Fish Species
AQUATIC - MOUNTAIN	SL Co Water Quality and Water Pollution Control 1978	Not elevation specific.	na	na	Moderate	na	Adequate	na	na	na	na
	C. Thompson et al. 2003	4,852-5,903	na	na	na	na	na	na	na	112-320	Bonneville cutthroat trout, rainbow trout, rainbow-cutthroat crosses.
	Coon et al. 1982	5,000-8,900	na	na	Moderate	na	na	na	na	na	Some trout; many scarce or totally displaced.
	Salt Lake County 2005	5,000-6,000	Boulder-silt	Low-High	1.2-8	B3-G4	na	na	na	na	Trout.
AQUATIC - VALLEY	C. Thompson et al. 2003	4,852-5,342	na	na	na	na	na	na	na	na	Bonneville cutthroat trout.
	Salt Lake County 2005	4,300-4,917	Cobble-sediment	Moderate	2.3-4.4	B4-5	Very Poor-Fair	na	na	na	na
Habitat Type	Reference ID	Elevation (ft.)	Area	Vegetation Community							Canopy Cover (%)
RIPARIAN - MOUNTAIN	SL Co Water Quality and Water Pollution Control 1978	Not elevation specific.	na	Box elder, cottonwood, mustard, clover, and June grass.							Adequate for fish.
	Coon et al. 1982	5,000-8,900	na	Box elder and cottonwood trees, mustard, clover, and grasses.							na
	Salt Lake County 2005	5,000-6,000	na	Willow, dogwood, grasses, narrow leaf cottonwood, alder, river birch, box elder, maple, serviceberry.							na
	Lowry 2005	Not elevation specific.	na	Rocky Mountain Alpine-Montane Wet Meadow (<0.1 mi., 0.2 %), Rocky Mountain Lower Montane Riparian Woodland and Shrubland (0.7 mi., 7.3 %).							na
RIPARIAN - VALLEY	SL Co Water Quality and Water Pollution Control 1978	Not elevation specific.	na	Box elder, scrub oak, and June grass.							na
	Coon et al. 1982	Not elevation specific.	na	na							na
	Salt Lake County 2005	4,917-4,300	na	Oak, ivy, willow, occasional shrub.							na
	Lowry 2005	Not elevation specific.	na	na							na
	Salt Lake County 2007	Not elevation specific.	84	na							na
Habitat Type	Reference ID	Total Acreage	Wetland Type (acres)								



WETLAND - MOUNTAIN	US Fish and Wildlife Service 2001	11	Palustrine Aquatic Bed (2.3), Palustrine Emergent (4.5), Palustrine Scrub-Shrub (4.2).
WETLAND - VALLEY	US Fish and Wildlife Service 2001	1	Palustrine Aquatic Bed (1.0).

Table GSL1. Habitat features identified in the Great Salt Lake watershed.

Habitat Type	Reference ID	Elevation (ft.)	Length (ft)	Width (ft)	Mean Depth (ft)	Surface Area (sq mi)	Trophic State	Aquatic Species	Macro species	Habitat Quality Index (lb/acre)
AQUATIC	Coon et al. 1982	Not elevation specific.	369,600 (=70 miles)	211,200 (=40 miles)	13	1,500	na	Pre-adult brine fly, corixids, brine shrimp, algae, bacteria.	na	na
	Utah DNR 1999	Not elevation specific.	na	na	14	1,500	na	Pre-adult brine fly, corixids, brine shrimp, algae, bacteria.	na	na
Habitat Type	Reference ID	Elevation (ft.)	Area	Vegetation Community						Canopy Cover (%)
RIPARIAN	Lowry 2005	na	na	Great Basin Foothill and Lower Montane Riparian Woodland and Shrubland (1.6 mi.,						na
Habitat Type	Reference ID	Total Acreage	Wetland Type (acres)							
WETLAND	P. West 1984	70,000	Lacustrine unconsolidated bottom, lacustrine emergent, palustrine unconsolidated shore, palustrine emergent.							
	D. Branson and E. Davies 2007, M. Petersen 2007, E. Davies and J. Stewart 2007	Near 400,000 near entire GSL	Open saline/fresh open water, marshes, saline mudflats & playas, saline meadows, and saline plains.							
	US Fish and Wildlife Service 2001	61,453.80	Lacustrine Limnetic (7917.1), Lacustrine Littoral (38,033.2), Palustrine Aquatic Bed (166.4), Palustrine Emergent (13,634.8), Palustrine Forested (7.1), Palustrine Scrub Shrub (26.8), Palustrine Unconsolidated Bottom (435.5), Palustrine Unconsolidated Shore (1,069.4), Riverine Lower Perennial (151.4), Riverine Intermittent (12.1)							
	Utah DNR 1999	Near 400,000 near entire GSL	Open water, saline island and upland, freshwater lacustrine, brackish water, spring fed isolated, and mudflat/playa.							

Table GSL1. Habitat features identified in the Great Salt Lake watershed.

Habitat Type	Reference ID	Elevation (ft.)	Length (ft)	Width (ft)	Mean Depth (ft)	Surface Area (sq mi)	Trophic State	Aquatic Species	Macro species	Habitat Quality Index (lb/acre)
AQUATIC	Coon et al. 1982	Not elevation specific.	369,600 (=70 miles)	211,200 (=40 miles)	13	1,500	na	Pre-adult brine fly, corixids, brine shrimp, algae, bacteria.	na	na
	Utah DNR 1999	Not elevation specific.	na	na	14	1,500	na	Pre-adult brine fly, corixids, brine shrimp, algae, bacteria.	na	na
Habitat Type	Reference ID	Elevation (ft.)	Area	Vegetation Community						Canopy Cover (%)
RIPARIAN	Lowry 2005	na	na	Great Basin Foothill and Lower Montane Riparian Woodland and Shrubland (1.6 mi.,						na
Habitat Type	Reference ID	Total Acreage	Wetland Type (acres)							
WETLAND	P. West 1984	70,000	Lacustrine unconsolidated bottom, lacustrine emergent, palustrine unconsolidated shore, palustrine emergent.							
	D. Branson and E. Davies 2007, M. Petersen 2007, E. Davies and J. Stewart 2007	Near 400,000 near entire GSL	Open saline/fresh open water, marshes, saline mudflats & playas, saline meadows, and saline plains.							
	US Fish and Wildlife Service 2001	61,453.80	Lacustrine Limnetic (7917.1), Lacustrine Littoral (38,033.2), Palustrine Aquatic Bed (166.4), Palustrine Emergent (13,634.8), Palustrine Forested (7.1), Palustrine Scrub Shrub (26.8), Palustrine Unconsolidated Bottom (435.5), Palustrine Unconsolidated Shore (1,069.4), Riverine Lower Perennial (151.4), Riverine Intermittent (12.1)							
	Utah DNR 1999	Near 400,000 near entire GSL	Open water, saline island and upland, freshwater lacustrine, brackish water, spring fed isolated, and mudflat/playa.							

Table JR1. Habitat features documented in the Jordan River Corridor.

Habitat Type	Reference ID	Location	Dominant Substrate	Channel Entrenchment	Slope (%)	Rosgen type	Bank Stability	Pool:Riffle ratio	Macro species	Habitat Quality Index (lb/acre)	Fish Species
	R. Fillmore and S. Jensen 1997	Turner Dam-2100 S	Gravel (35-68%), sand (30-50%), silt/clay (1-15%).	Low-High	0.2-0.7	B4c-F5	Poor-Good	na	na	na	na
	S. Jensen 1996	Turner Dam-2100 S	na	na	0.2-0.7	na	na	na	Wide and diverse; Diptera, Oligochaeta, Coleoptera, Isopoda, Ephemeroptera, and Trichoptera dominant.	na	Utah sucker, carp dominate; fathead minnow, walleye, white bass, green sunfish, channel catfish, black bullhead, rainbow, brown, and cutthroat trout, bluegill sunfish, yellow perch, black crappie, large and smallmouth bass present.
	S. Jensen 1995	Turner Dam-2100 S	Gravel-sand	Low-High	<0.001-0.02	B4c-G5c	12.2 of 21.7 stream miles Fair/Poor	na	na	na	na
	CH2MHill 1992	Turner Dam-2100 S	5.1-19.1mm, boulder-sand	na	0.2-0.7	na	na	na	na	na	na
	C. Johnson 1993	SL/Utah Cty line-9000 S	na	na	na	na	na	na	na	na	Carp, brown trout (rare), black crappie, black bullhead, fathead minnow, mountain sucker, rainbow trout, Utah sucker, walleye, white bass, yellow perch, bluegill sunfish, green sunfish, and channel catfish.
	P. Holden and L. Crist 1986	Bluffdale-Surplus Canal	Cobble-clay/silt	na	na	na	Cutbank/no cover (0-21%), riparian vegetation (<1-58%), grassbank (49-97%), riprap (0-90%).	Riffle (0-21%), run (64-99%), eddy (<1-9%), backwater (0-17%).	34 different taxa found; oligochaetes, chironomid larvae, and Hydropsyche sp. most abundant.	na	Carp, Utah Sucker most abundant; mountain sucker, black crappie, white bass, largemouth bass, fathead minnow, redbreast shiner, gambusia, green sunfish, bluegill sunfish, walleye, rainbow trout, cutthroat trout, brown trout, channel catfish, black bullhead, yellow perch, Utah chub.

AQUATIC

M. Wilson 1987	Utah Lake- Great Salt Lake	na	na	na	na	na	na	na	na	Carp, Utah sucker, mountain sucker, Utah chub, fathead minnow, mosquitofish, Black crappie, white bass, green sunfish, largemouth bass, walleye, channel catfish, black bullhead, yellow perch, cutthroat trout, rainbow trout, rainbow/cutthroat trout crosses, and brown trout.
S. Jensen 1986	Jordan Narrows- 2100 south	Boulder-silt	na	na	na	Poor- Good	na	na	na	Bass, walleye, catfish.
SL Co Water Quality and Water Pollution Control 1978	General Jordan River	Poor-good	na	na	na	Poor- Good	Low-Good	na	na	Rainbow trout, brown trout, carp, black bullheads, longnose dace, mountain suckers, Utah suckers, Utah chub, bluegill, channel catfish, fathead minnows, and white bass
US EPA 1973	Utah Lake- Great Salt Lake	Cobble- silt/sludge	na	na	na	na	na	Ephemero ptera, tirchoptera , plecoptera , porifera, coelentera ta, mollusca, coleoptera , hemiptera, odonata, amphipod a, diptera, mollusca, annelida, miscellane ous.	na	Carp, Utah sucker, reddsie shiner, Utah chub, goldfish, white bass, and Mountain sucker, green sunfish, yellow perch, black bullhead, brown trout, and reddside shiner

	BIO/WEST Inc. 1988	3300 S-Surplus Canal, Goggin Canal	Cobble-silt	na	na	na	Bare-vegetated banks	Runs dominate; pools & riffles occur intermittently.	na	na	Walleye, yellow perch, white bass, largemouth bass, green sunfish, black crappie, rainbow trout, cutthroat trout, brown trout, mountain whitefish, channel catfish, black bullhead, Utah sucker, mountain sucker, Utah chub, carp, goldfish, fathead minnow, gambusia, mottled sculpin, longnose dace.
	C. Thompson et al. 2003	SL/Utah Cty line-Great Salt Lake	na	na	na	na	na	na	na	na	Common carp, Utah sucker, Utah chub, rainbow trout, brown trout, bluegill sunfish, black bullhead, mountain sucker, fathead minnow, channel catfish, white bass, walleye.
<b>Habitat Type</b>	<b>Reference ID</b>	<b>Location</b>	<b>Area</b>	<b>Vegetation Community</b>						<b>Canopy Cover (%)</b>	
RIPARIAN	S. Jensen 1996	2100 south to Turner Dam, elevation 4220-4480	na	na						na	
	CH2MHill 1992	Turner Dam-2100 S	na	na						na	
	C. Johnson 1993	General Jordan River	9,560	Barren (256 acres), aquatic (99), wetlands (1,067), riparian (92), grassland (2,417), shrubland (1,092), woodland (83), managed open space (230), agricultural (2,755), buildings (1,469).						na	
	K. Collins 1990	Murray Parkway area	na	Tamarisk, grasses, cottonwood, rose, Russian olive, cattail, etc.						na	
	S. Jensen 1986	Jordan Narrows-2100 S	na	Cottonwood, oak brush, tamarisk, box elder, cattail, Russian olive, grasses, willow, bulrush, and elm.						na	
	R. Smith and C. Greenwood 1984	9400 South Jordan Narrows	99.9	Alfalfa (19.4), small grains (1.6), other crops (2.6), cattail-bulrush (1), mixed wetlands (8.5), willow (0.4), pasture-hay meadows (26.4), sagebrush-rabbitbrush (18.1), deciduous woodlands (1.8), strip cover (4.3), waste areas (2.4), urban (6.9), river channel-canal (6.5).						na	
	SL Co Water Quality and Water Pollution Control 1978	JR in SL Cty	na	Bank cover: mid section - poor; upper section - good.						Stream shading: Mid section: Poor, Upper section: Good	
	BIO/WEST Inc. 1988	3300 S-Surplus Canal, Goggin Canal	na	Grass, woody riparian vegetation, bare banks.						na	

	National Audubon Society 2002	General Jordan River	na	Orchard grass, Kentucky bluegrass, redtop bentgrass, quack grass, fescues and wheatgrass. Russian olive dominant, tamarisk, some native willow stands remain; exotics dominate.	na
	D. Branson and E. Davies 2007	Jordan Narrows-Great Salt Lake	na	Russian olive, narrow-leaf cottonwood, willow, box elder, sandbar willow and reed canary grass.	na
	E. Davies and J. Stewart 2007	Jordan Narrows-Great Salt Lake	na	Willows, tamarisk, Russian olive, Fremont cottonwood, narrow-leaf cottonwood, reed canary grass, arctic rush, cheatgrass, gumweed, whitetop, box elder, and sandbar willow.	na
	Lowry 2005	na	na	Great Basin Foothill and Lower Montane Riparian Woodland and Shrubland (10.6	na
<b>Habitat Type</b>	<b>Reference ID</b>	<b>Total Acreage</b>	<b>Wetland Type (acres)</b>		
WETLAND	S. Jensen 1995	~ 2,000	Riverine and Palustrine.		
	M. Halpin 1987	na	1. Riverine 2. Palustrine: Unconsolidated shore, Aquatic Bed, Emergent, Scrub-Shrub, Forested.		
	F. Nabrotzky 1986	na	Riverine and Palustrine.		
	S. Jensen 1987	~ 2,000	Majority Palustrine emergent.		
	P. West 1984	1,650-2,500	Palustrine emergent and Lacustrine emergent.		
	D. Branson and E. Davies 2007	na	Wet meadow and emergent marshes.		
	E. Davies and J. Stewart 2007	na	Open water, open water—aquatic bed, emergent marsh, wet meadow, playas/mudflats, and riparian communities.		
	US Fish and Wildlife Service 2001	1,232	Lacustrine Littoral (33.0), Palustrine Emergent (693.0), Riverine Lower Perennial (159.2), Palustrine Aquatic Bed (162.2), Palustrine Forested (11.1), Palustrine Scrub-Shrub (105.8), Palustrine Unconsolidated Shore (13.9), Riverine Intermittent (53.7).		

Table LC1. Habitat features documented in the Little Cottonwood Creek watershed.

Habitat Type	Reference ID	Elevation (ft.)	Dominant Substrate	Channel Entrenchment	Slope (%)	Rosgen type	Bank Stability	Pool:Riffle ratio	Macro species	Habitat Quality Index (lb/acre)	Fish Species
AQUATIC - MOUNTAIN	K. Schwager & P. Cowley 2001	5,600 - 7,400	Small boulder (22%), Cobble (26%-29%), Fines (3% - 5%).	na	Map (10.9 7.4) Observed (11.3 - 4.8)	A	98% - 84% with undercut banks 6%-8%	1.0:2.3-0.78	na	na	Rainbow trout, brook trout, cutthroat trout.
	C. Thompson et al. 2003	5,320 - 9,464	na	na	na	na	na	na	na	24 (elevation: 5320-7200), 161 (elevation: 8573-9464).	Cutthroat trout and bonnevillie cutthroat trout. Some segments no fish identified.
	Wasatch Cache NF 2006	6,425 - 9,100	Bedrock - Gravel	High - Low	11.7 - 2.5	A2a+ - F3	95% - 65%	na	na	na	na
AQUATIC - VALLEY	Salt Lake County 2005	4,237-5,346	Sand-Boulder	Low-High	0.4-5.5	A2-F5	Poor-Excellent	na	na	na	na
	C. Thompson et al. 2003	4,350-5,320	na	na	na	na	na	na	na	na	Brown, rainbow trout, black bullhead, channel catfish, common carp, longnose dace, Utah sucker.
Habitat Type	Reference ID	Elevation (ft.)	Area	Vegetation Community							Canopy Cover (%)
RIPARIAN - MOUNTAIN	K. Schwager & P. Cowley 2001	5,600 - 7,400	na	Small trees, sapling/pole, shrub/seedling.							40% - 49%
	Wasatch Cache NF 2006	6,250 - 9,215	na	Drummond willow/mesic forbs, water sedge, Baltic rush (5-90%), willows/mesic forbs (85%), mesic forbs (15%), water birch/red osier dogwood, rock (1%), bare (10-20%), conifer/mountain alder, red osier dogwood, rock, cottonwood/aspen, water birch (1-60%), mountain alder/Drummond willow, red osier dogwood, bare (10-75%), rough bluegrass/mountain alder, mesic forbs, red osier dogwood, rock, phragmites (1-40%), cottonwood/aspen/mountain alder, willow, Drummond willow, red osier dogwood, rock, water birch (1-75%), red osier dogwood/willow (100%), fragmental soils (20-48%)							na
	Coon et al. 1982	Not elevation specific.	na	Streamside vegetation includes fir, dogwood, cottonwood, aspens, grasses.							Poor
	Lowry 2005	Not elevation specific.	na	Rocky Mountain Lower Montane Riparian Woodland and Shrubland (1.3 mi., 11.5 %), Rocky Mountain Subalpine-Montane Riparian Shrubland (0.2 mi., 1.4 %).							na
RIPARIAN - VALLEY	Salt Lake County 2005	4,237-5,346	na	Water birch, horsetail, cottonwood, willow, and alder.							Bare to excellent.
	Coon et al. 1982	Not elevation specific.	na	Native vegetation displaced.							na
	Salt Lake County 2007	Not elevation specific.	233	na							na
	Lowry 2005	Not elevation specific.	na	Rocky Mountain Lower Montane Riparian Woodland and Shrubland (0.2 mi., 2.1%).							na



Habitat Type	Reference ID	Total Acreage	Wetland Type (acres)
WETLAND - MOUNTAIN	US Fish and Wildlife Service 2001	71.2	Palustrine Aquatic Bed (41.2), Palustrine Emergent (4.0), Palustrine Scrub-Shrub (26.1).
	S. Jensen 2000	200	Scrub-Shrub (101), Emergent-persistent (59), forested (27), aquatic beds (7), moss-lichen (6).
WETLAND - VALLEY	US Fish and Wildlife Service 2001	37.3	Palustrine Aquatic Bed (4.5), Palustrine Emergent (24.6), Palustrine Unconsolidated Shore (8.2).

Table LC1. Habitat features documented in the Little Cottonwood Creek watershed.

Habitat Type	Reference ID	Elevation (ft.)	Dominant Substrate	Channel Entrenchment	Slope (%)	Rosgen type	Bank Stability	Pool:Riffle ratio	Macro species	Habitat Quality Index (lb/acre)	Fish Species
AQUATIC - MOUNTAIN	K. Schwager & P. Cowley 2001	5,600 - 7,400	Small boulder (22%), Cobble (26%-29%), Fines (3% - 5%).	na	Map (10.9 7.4) Observed (11.3 - 4.8)	A	98% - 84% with undercut banks 6%-8%	1.0:2.3-0.78	na	na	Rainbow trout, brook trout, cutthroat trout.
	C. Thompson et al. 2003	5,320 - 9,464	na	na	na	na	na	na	na	24 (elevation: 5320-7200), 161 (elevation: 8573-9464).	Cutthroat trout and bonnevillie cutthroat trout. Some segments no fish identified.
	Wasatch Cache NF 2006	6,425 - 9,100	Bedrock - Gravel	High - Low	11.7 - 2.5	A2a+ - F3	95% - 65%	na	na	na	na
AQUATIC - VALLEY	Salt Lake County 2005	4,237-5,346	Sand-Boulder	Low-High	0.4-5.5	A2-F5	Poor-Excellent	na	na	na	na
	C. Thompson et al. 2003	4,350-5,320	na	na	na	na	na	na	na	na	Brown, rainbow trout, black bullhead, channel catfish, common carp, longnose dace, Utah sucker.
Habitat Type	Reference ID	Elevation (ft.)	Area	Vegetation Community							Canopy Cover (%)
RIPARIAN - MOUNTAIN	K. Schwager & P. Cowley 2001	5,600 - 7,400	na	Small trees, sapling/pole, shrub/seedling.							40% - 49%
	Wasatch Cache NF 2006	6,250 - 9,215	na	Drummond willow/mesic forbs, water sedge, Baltic rush (5-90%), willows/mesic forbs (85%), mesic forbs (15%), water birch/red osier dogwood, rock (1%), bare (10-20%), conifer/mountain alder, red osier dogwood, rock, cottonwood/aspen, water birch (1-60%), mountain alder/Drummond willow, red osier dogwood, bare (10-75%), rough bluegrass/mountain alder, mesic forbs, red osier dogwood, rock, phragmites (1-40%), cottonwood/aspen/mountain alder, willow, Drummond willow, red osier dogwood, rock, water birch (1-75%), red osier dogwood/willow (100%), fragmental soils (20-48%)							na
	Coon et al. 1982	Not elevation specific.	na	Streamside vegetation includes fir, dogwood, cottonwood, aspens, grasses.							Poor
	Lowry 2005	Not elevation specific.	na	Rocky Mountain Lower Montane Riparian Woodland and Shrubland (1.3 mi., 11.5 %), Rocky Mountain Subalpine-Montane Riparian Shrubland (0.2 mi., 1.4 %).							na
RIPARIAN - VALLEY	Salt Lake County 2005	4,237-5,346	na	Water birch, horsetail, cottonwood, willow, and alder.							Bare to excellent.
	Coon et al. 1982	Not elevation specific.	na	Native vegetation displaced.							na
	Salt Lake County 2007	Not elevation specific.	233	na							na
	Lowry 2005	Not elevation specific.	na	Rocky Mountain Lower Montane Riparian Woodland and Shrubland (0.2 mi., 2.1%).							na

Habitat Type	Reference ID	Total Acreage	Wetland Type (acres)
WETLAND - MOUNTAIN	US Fish and Wildlife Service 2001	71.2	Palustrine Aquatic Bed (41.2), Palustrine Emergent (4.0), Palustrine Scrub-Shrub (26.1).
	S. Jensen 2000	200	Scrub-Shrub (101), Emergent-persistent (59), forested (27), aquatic beds (7), moss-lichen (6).
WETLAND - VALLEY	US Fish and Wildlife Service 2001	37.3	Palustrine Aquatic Bed (4.5), Palustrine Emergent (24.6), Palustrine Unconsolidated Shore (8.2).

Table MBC1. Habitat features documented in the Midas/Butterfield Creek watershed.

Habitat Type	Reference ID	Elevation (ft.)	Dominant Substrate	Channel Entrenchment	Slope (%)	Rosgen type	Bank Stability	Pool:Riffle ratio	Macro species	Habitat Quality Index (lb/acre)	Fish Species
AQUATIC	Coon et al. 1982	Not elevation specific.	na	na	Moderately steep, but becomes more gradual as it nears the valley, slight slope in valley.	na	na	na	na	na	na
Habitat Type	Reference ID	Elevation (ft.)	Area	Vegetation Community							Canopy Cover (%)
RIPARIAN	Coon et al. 1982	Not elevation specific.	na	Grasses and shrubs including: big sage, wheatgrass, bitterbrush, oak brush, maple, bluegrass, and mountain brome (in canyon), much of the native vegetation displaced; replaced by irrigated and dry crops (in valley).							na
	Lowry 2005	Not elevation specific.	na	Midas - Great Basin Foothill and Lower Montane Riparian Woodland and Shrubland (0.1 mi., 1.8%), Butterfield - Great Basin Foothill and Lower Montane Riparian Woodland and Shrubland (1.9 mi., 23.5%).							na
	Salt Lake County 2007	Not elevation specific.	64	na							na
Habitat Type	Reference ID	Total Acreage	Wetland Type (acres)								
WETLAND	P. West 1984	na	Palustrine Scrub-Shrub dominant.								
	US Fish and Wildlife Service 2001	116.2	Palustrine Aquatic Bed (8.3), Palustrine Emergent (39.4), Palustrine Scrub-Shrub (0.1), Palustrine Unconsolidated Bottom (12.3), Palustrine Unconsolidated Shore (18.0), Riverine Intermittent (38.0), Riverine Lower Perennial (0.1).								

Table MC1. Habitat features documented in the Mill Creek watershed.

Habitat Type	Reference ID	Elevation (ft.)	Dominant Substrate	Channel Entrenchment	Slope (%)	Rosgen type	Bank Stability	Pool:Riffle ratio	Macro species	Habitat Quality Index (lb/acre)	Fish Species
AQUATIC - MOUNTAIN	SL Co Water Quality and Water Pollution Control 1978	Not elevation specific.	na	na	Moderate.	na	Poor-Excellent	na	Abundant; ephemeroptera and trichoptera common.	na	Rainbow trout, cutthroat trout.
	Cowley 2005	6,000-7,600	na	na	na	na	na	na	na	na	Rainbow trout (0-8), cutthroat trout (0-11), rainbow-cutthroat trout crosses (0-1), brown trout (0-6).
	C. Thompson et al. 2003	4,892-6,685	na	na	na	na	na	na	na	34	Rainbow trout, brown trout, cutthroat trout.
	Coon et al. 1982	Not elevation specific.	na	na	Moderate	na	Poor-Excellent	na	na	na	Rainbow trout, cutthroat trout.
AQUATIC - VALLEY	SL Co Water Quality and Water Pollution Control 1978	Not elevation specific.	Excessively silted	na	Moderate	na	na	na	Abundant; ephemeroptera and trichoptera common.	na	Rainbow trout, cutthroat trout.
	Salt Lake County 2005	4,221-4,983	Gravel-Sand	na	0.2-10	A-F4	na	na	na	na	Rainbow trout (0-8), cutthroat trout (0-11), rainbow-cutthroat trout crosses (0-1), brown trout (0-6).
	C. Thompson et al. 2003	4,243-6,685	na	na	na	na	na	na	na	34	Rainbow trout, brown trout, cutthroat trout.
	Coon et al. 1982	Not elevation specific.	na	na	Gradual	na	na	na	na	na	Rainbow trout, cutthroat trout.
<b>Habitat Type</b>	<b>Reference ID</b>	<b>Elevation (ft.)</b>	<b>Area</b>	<b>Vegetation Community</b>							<b>Canopy Cover (%)</b>

RIPARIAN - MOUNTAIN	SL Co Water Quality and Water Pollution Control 1978	General Canyon Area	na	Boxelder, birch, dogwood, maple, willow, grasses, white and Douglas fir, and cow parsnip.	Poor-Excellent
	Coon et al. 1982	General Canyon Area	na	White and Douglas fir, dogwood, cow parsnip, grasses, box elder, birch, dogwood, maple, and willow.	na
	Lowry 2005	Not elevation specific.	na	Rocky Mountain Lower Montane Riparian Woodland and Shrubland (0.7 mi., 6.9 %).	na
RIPARIAN - VALLEY	SL Co Water Quality and Water Pollution Control 1978	Not elevation specific.	na	Box elder, birch, dogwood, maple, willow, grasses, and exotic plants.	Very Poor-Adequate
	Coon et al. 1982	Not elevation specific.	na	na	na
	Lowry 2005	Not elevation specific.	na	Great Basin Foothill and Lower Montane Riparian Woodland and Shrubland (0.1 mi., 0.7 %), Rocky Mountain Lower Montane Riparian Woodland and Shrubland (0.7 mi., 8.1 %).	na
<b>Habitat Type</b>	<b>Reference ID</b>	<b>Total Acreage</b>	<b>Wetland Type (acres)</b>		
WETLAND - MOUNTAIN	US Fish and Wildlife Service 2001	9.3	Palustrine Aquatic Bed (1.6), Palustrine Emergent (7.7).		
	P. West 1984	na	Palustrine Scrub-Shrub dominant.		
WETLAND - VALLEY	US Fish and Wildlife Service 2001	51.3	Palustrine Aquatic Bed (11.3), Palustrine Emergent (24.7), Palustrine Forested (2.0), Palustrine Scrub-Shrub (2.0), Palustrine Unconsolidated (11.3).		

Table PC1. Habitat features documented in the Parley Creek watershed.

Habitat Type	Reference ID	Elevation (ft.)	Dominant Substrate	Channel Entrenchment	Slope (%)	Rosgen type	Bank Stability	Pool:Riffle ratio	Macro species	Habitat Quality Index (lb/acre)	Fish Species
AQUATIC - MOUNTAIN	SL Co Water Quality and Water Pollution Control 1978	Not elevation specific.	Suitable for aquatic organisms.	na	na	na	Excellent above reservoir.	na	Present	na	Trout.
	C. Thompson et al. 2003	4,411-6,052	na	na	na	na	na	na	na	110	Bonneville cutthroat trout.
	Coon et al. 1982	4,700-9,400	na	na	na	na	na	na	na	na	Trout.
AQUATIC - VALLEY	SL Co Water Quality and Water Pollution Control 1978	Not elevation specific.	Good for insects.	na	na	na	Fair	Excellent	Present	na	na
	C. Thompson et al. 2003	4,411-5,420	na	na	na	na	na	na	na	na	Bonneville cutthroat trout.
	Salt Lake County 2005	4,300-4,677	Rock-sediment	Moderate	1.6-2.5	B4	Fair	na	na	na	na
Habitat Type	Reference ID	Elevation (ft.)	Area	Vegetation Community							Canopy Cover (%)
RIPARIAN - MOUNTAIN	SL Co Water Quality and Water Pollution Control 1978	Not elevation specific.	na	Birch, willow, hawthorne, and grasses.							Excellent
	Coon et al. 1982	4,700-9,400	na	Conifer, aspen, scrub oak, birch, willow, grasses, hawthorne.							na
	Lowry 2005	Not elevation specific.	na	Rocky Mountain Lower Montane Riparian Woodland and Shrubland (1.0 mi., 9.7 %).							na
RIPARIAN - VALLEY	SL Co Water Quality and Water Pollution Control 1978	Not elevation specific.	na	Cottonwood, hawthorne, russian olive, and grasses.							Adequate
	Salt Lake County 2005	4,375-4,677	na	Cottonwood, willow, box elder, trees, shrubs.							na
	Coon et al. 1982	Not elevation specific.	na	Birch, willow, hawthorne, and grasses.							na
	Lowry 2005	Not elevation specific.	na	Rocky Mountain Lower Montane Riparian Woodland and Shrubland (0.6 mi., 15.7 %).							na
	Salt Lake County 2007	Not elevation specific.	36	na							na
Habitat Type	Reference ID	Total Acreage	Wetland Type (acres)								
WETLAND - MOUNTAIN	US Fish and Wildlife Service 2001	121.3	Lacustrine Limnetic (80.8), Palustrine Aquatic Bed (10.0), Palustrine Emergent (2.5), Palustrine Forested (0.8), Palustrine Scrub-Shrub (25.7), Palustrine Unconsolidated Shore (1.5).								
	P. West 1984	na	Palustrine scrub-shrub dominant.								
WETLAND - VALLEY	US Fish and Wildlife Service 2001	7.3	Palustrine Aquatic Bed (7.3).								

Table MC1. Habitat features documented in the Mill Creek watershed.

Habitat Type	Reference ID	Elevation (ft.)	Dominant Substrate	Channel Entrenchment	Slope (%)	Rosgen type	Bank Stability	Pool:Riffle ratio	Macro species	Habitat Quality Index (lb/acre)	Fish Species
AQUATIC - MOUNTAIN	SL Co Water Quality and Water Pollution Control 1978	Not elevation specific.	na	na	Moderate.	na	Poor-Excellent	na	Abundant; ephemeroptera and trichoptera common.	na	Rainbow trout, cutthroat trout.
	Cowley 2005	6,000-7,600	na	na	na	na	na	na	na	na	Rainbow trout (0-8), cutthroat trout (0-11), rainbow-cutthroat trout crosses (0-1), brown trout (0-6).
	C. Thompson et al. 2003	4,892-6,685	na	na	na	na	na	na	na	34	Rainbow trout, brown trout, cutthroat trout.
	Coon et al. 1982	Not elevation specific.	na	na	Moderate	na	Poor-Excellent	na	na	na	Rainbow trout, cutthroat trout.
AQUATIC - VALLEY	SL Co Water Quality and Water Pollution Control 1978	Not elevation specific.	Excessively silted	na	Moderate	na	na	na	Abundant; ephemeroptera and trichoptera common.	na	Rainbow trout, cutthroat trout.
	Salt Lake County 2005	4,221-4,983	Gravel-Sand	na	0.2-10	A-F4	na	na	na	na	Rainbow trout (0-8), cutthroat trout (0-11), rainbow-cutthroat trout crosses (0-1), brown trout (0-6).
	C. Thompson et al. 2003	4,243-6,685	na	na	na	na	na	na	na	34	Rainbow trout, brown trout, cutthroat trout.
	Coon et al. 1982	Not elevation specific.	na	na	Gradual	na	na	na	na	na	Rainbow trout, cutthroat trout.
<b>Habitat Type</b>	<b>Reference ID</b>	<b>Elevation (ft.)</b>	<b>Area</b>	<b>Vegetation Community</b>							<b>Canopy Cover (%)</b>



RIPARIAN - MOUNTAIN	SL Co Water Quality and Water Pollution Control 1978	General Canyon Area	na	Boxelder, birch, dogwood, maple, willow, grasses, white and Douglas fir, and cow parsnip.	Poor-Excellent
	Coon et al. 1982	General Canyon Area	na	White and Douglas fir, dogwood, cow parsnip, grasses, box elder, birch, dogwood, maple, and willow.	na
	Lowry 2005	Not elevation specific.	na	Rocky Mountain Lower Montane Riparian Woodland and Shrubland (0.7 mi., 6.9 %).	na
RIPARIAN - VALLEY	SL Co Water Quality and Water Pollution Control 1978	Not elevation specific.	na	Box elder, birch, dogwood, maple, willow, grasses, and exotic plants.	Very Poor-Adequate
	Coon et al. 1982	Not elevation specific.	na	na	na
	Lowry 2005	Not elevation specific.	na	Great Basin Foothill and Lower Montane Riparian Woodland and Shrubland (0.1 mi., 0.7 %), Rocky Mountain Lower Montane Riparian Woodland and Shrubland (0.7 mi., 8.1 %).	na
<b>Habitat Type</b>	<b>Reference ID</b>	<b>Total Acreage</b>	<b>Wetland Type (acres)</b>		
WETLAND - MOUNTAIN	US Fish and Wildlife Service 2001	9.3	Palustrine Aquatic Bed (1.6), Palustrine Emergent (7.7).		
	P. West 1984	na	Palustrine Scrub-Shrub dominant.		
WETLAND - VALLEY	US Fish and Wildlife Service 2001	51.3	Palustrine Aquatic Bed (11.3), Palustrine Emergent (24.7), Palustrine Forested (2.0), Palustrine Scrub-Shrub (2.0), Palustrine Unconsolidated (11.3).		

Table PC1. Habitat features documented in the Parley Creek watershed.

Habitat Type	Reference ID	Elevation (ft.)	Dominant Substrate	Channel Entrenchment	Slope (%)	Rosgen type	Bank Stability	Pool:Riffle ratio	Macro species	Habitat Quality Index (lb/acre)	Fish Species
AQUATIC - MOUNTAIN	SL Co Water Quality and Water Pollution Control 1978	Not elevation specific.	Suitable for aquatic organisms.	na	na	na	Excellent above reservoir.	na	Present	na	Trout.
	C. Thompson et al. 2003	4,411-6,052	na	na	na	na	na	na	na	110	Bonneville cutthroat trout.
	Coon et al. 1982	4,700-9,400	na	na	na	na	na	na	na	na	Trout.
AQUATIC - VALLEY	SL Co Water Quality and Water Pollution Control 1978	Not elevation specific.	Good for insects.	na	na	na	Fair	Excellent	Present	na	na
	C. Thompson et al. 2003	4,411-5,420	na	na	na	na	na	na	na	na	Bonneville cutthroat trout.
	Salt Lake County 2005	4,300-4,677	Rock-sediment	Moderate	1.6-2.5	B4	Fair	na	na	na	na
Habitat Type	Reference ID	Elevation (ft.)	Area	Vegetation Community							Canopy Cover (%)
RIPARIAN - MOUNTAIN	SL Co Water Quality and Water Pollution Control 1978	Not elevation specific.	na	Birch, willow, hawthorne, and grasses.							Excellent
	Coon et al. 1982	4,700-9,400	na	Conifer, aspen, scrub oak, birch, willow, grasses, hawthorne.							na
	Lowry 2005	Not elevation specific.	na	Rocky Mountain Lower Montane Riparian Woodland and Shrubland (1.0 mi., 9.7 %).							na
RIPARIAN - VALLEY	SL Co Water Quality and Water Pollution Control 1978	Not elevation specific.	na	Cottonwood, hawthorne, russian olive, and grasses.							Adequate
	Salt Lake County 2005	4,375-4,677	na	Cottonwood, willow, box elder, trees, shrubs.							na
	Coon et al. 1982	Not elevation specific.	na	Birch, willow, hawthorne, and grasses.							na
	Lowry 2005	Not elevation specific.	na	Rocky Mountain Lower Montane Riparian Woodland and Shrubland (0.6 mi., 15.7 %).							na
	Salt Lake County 2007	Not elevation specific.	36	na							na
Habitat Type	Reference ID	Total Acreage	Wetland Type (acres)								
WETLAND - MOUNTAIN	US Fish and Wildlife Service 2001	121.3	Lacustrine Limnetic (80.8), Palustrine Aquatic Bed (10.0), Palustrine Emergent (2.5), Palustrine Forested (0.8), Palustrine Scrub-Shrub (25.7), Palustrine Unconsolidated Shore (1.5).								
	P. West 1984	na	Palustrine scrub-shrub dominant.								
WETLAND - VALLEY	US Fish and Wildlife Service 2001	7.3	Palustrine Aquatic Bed (7.3).								

Table RB1. Habitat features documented in the Red Butte Creek watershed.

Habitat Type	Reference ID	Elevation (ft.)	Dominant Substrate	Channel Entrenchment	Slope (%)	Rosgen type	Bank Stability	Pool:Riffle ratio	Macro species	Habitat Quality Index (lb/acre)	Fish Species
AQUATIC - MOUNTAIN	SL Co Water Quality and Water Pollution Control 1978	Not elevation specific.	Silt	na	Moderate.	na	Well stabilized	na	Common; dominated by ephemeroptera.	na	Cutthroat trout and brook trout.
	Wasache Cache NF 2006	6,270-8,200	Boulder-silt	Moderately high.	2.5-12.5	A5a+ - G4	10-80%	na	na	na	na
	C. Thompson et al. 2003	5,171-6,852	na	na	na	na	na	na	na	75	Bonneville cutthroat trout.
	Coon et al. 1982	5,000-8,200	Heavily silted in some areas.	na	na	na	Well stabilized	na	na	na	Brook trout, cutthroat trout.
AQUATIC - VALLEY	SL Co Water Quality and Water Pollution Control 1978	Not elevation specific.	na	na	na	na	Poor	na	Ephemeroptera common.	na	na
	C. Thompson et al. 2003	4,517-5,385	na	na	na	na	na	na	na	na	na
	Salt Lake County 2005	4,300-4,885	Cobble-sand	Moderately high.	3.5-6.6	B4-G3	Poor-Excellent	na	na	na	na
Habitat Type	Reference ID	Elevation (ft.)	Area	Vegetation Community							Canopy Cover (%)
RIPARIAN - MOUNTAIN	SL Co Water Quality and Water Pollution Control 1978	Not elevation specific.	na	Birch, dogwood, elm, horsetail, wheatgrass, and thistle.							Well shaded
	Wasache Cache NF 2006	5,030-6,520	na	Birch, box elder, dogwood, grasses, horsetail, willow, thistle.							na
	Coon et al. 1982	5,000-8,200	na	Scrub oak, birch, dogwood, and grasses.							Well shaded
	Lowry 2005	Not elevation specific.	na	Rocky Mountain Lower Montane Riparian Woodland and Shrubland (2.3 mi., 56.8%).							na
RIPARIAN - VALLEY	SL Co Water Quality and Water Pollution Control 1978	Not elevation specific.	na	Elm, scrub oak, wheatgrass, rose, and june grass.							Poor
	Lowry 2005	Not elevation specific.	na	Rocky Mountain Lower Montane Riparian Woodland and Shrubland (0.5 mi., 17.2%).							na
	Salt Lake County 2007	Not elevation specific.	58	na							na
Habitat Type	Reference ID	Total Acreage	Wetland Type (acres)								
WETLAND - MOUNTAIN	US Fish and Wildlife Service 2001	26.9	Lacustrine Limnetic (13.4), Palustrine Aquatic Bed (5.7), Palustrine Emergent (0.7), Palustrine Forested (0.7), Palustrine Scrub-Shrub (6.4).								

WETLAND - VALLEY	US Fish and Wildlife Service 2001	6.3	Palustrine Aquatic Bed (6.3).
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Table RC1. Habitat features documented in the Rose Creek watershed.

Habitat Type	Reference ID	Elevation (ft.)	Dominant Substrate	Channel Entrenchment	Slope (%)	Rosgen type	Bank Stability	Pool:Riffle ratio	Macro species	Habitat Quality Index (lb/acre)	Fish Species
AQUATIC - MOUNTAIN	Coon et al. 1982	Not elevation specific.	na	na	Gentle	na	na	na	na	na	na
AQUATIC - VALLEY	Coon et al. 1982	Not elevation specific.	na	na	Gentle	na	na	na	na	na	na
Habitat Type	Reference ID	Elevation (ft.)	Area	Vegetation Community							Canopy Cover (%)
RIPARIAN - MOUNTAIN	Coon et al. 1982	Not elevation specific.	na	Grasses and shrubs including: bitterbrush, big sage brush.							na
	Lowry 2005	Not elevation specific.	na	Great Basin Foothill and Lower Montane Riparian Woodland and Shrubland (1.3 mi., 11.3%).							na
RIPARIAN - VALLEY	Coon et al. 1982	Not elevation specific.	na	Natural vegetation displaced. Now alfalfa and small dryland grains.							na
	Salt Lake County 2007	Not elevation specific.	73	na							na
Habitat Type	Reference ID	Total Acreage	Wetland Type (acres)								
WETLAND	US Fish and Wildlife Service 2001	43.2	Palustrine Aquatic Bed (11.3), Palustrine Emergent (10.5), Palustrine Scrub-Shrub (1.0), Palustrine Unconsolidated Shore (1.7), Riverine Intermittent (18.7).								

Table WC1. Habitat features documented in the Willow Creek watershed.

Habitat Type	Reference ID	Elevation (ft.)	Dominant Substrate	Channel Entrenchment	Slope (%)	Rosgen type	Bank Stability	Pool:Riffle ratio	Macro species	Habitat Quality Index (lb/acre)	Fish Species
AQUATIC - MOUNTAIN	C. Thompson et al. 2003	6,031-8,228	na	na	na	na	na	na	na	103-146	Bonneville cutthroat trout.
	Coon et al. 1982	Not elevation specific.	na	na	Gradual-very steep (Big Willow Creek Canyon); moderate to steep (Little Willow Creek Canyon).	na	na	na	na	na	na
Habitat Type	Reference ID	Elevation (ft.)	Area	Vegetation Community							Canopy Cover (%)
RIPARIAN - MOUNTAIN	Coon et al. 1982	Not elevation specific.	na	Low elevations: shrubs and grasses, mid elevations: scrub oak, high elevations: conifer and aspen (Big Willow Creek Canyon); Low elevations: shrubs and grasses, high elevations: conifer and aspen (Little Willow Creek Canyon).							na
	Lowry 2005	Not elevation specific.	na	na							na
RIPARIAN - VALLEY	Lowry 2005	Not elevation specific.	na	Big Willow Creek - Rocky Mountain Lower Montane Riparian Woodland and Shrubland (0.8 mi., 24.8 %). Little Willow Creek - Rocky Mountain Lower Montane Riparian Woodland and Shrubland (0.3 mi., 17.4 %).							na
	Salt Lake County 2007	Not elevation specific.	51	na							na
Habitat Type	Reference ID	Total Acreage	Wetland Type (acres)								
WETLAND - MOUNTAIN	US Fish and Wildlife Service 2001	0	na								
WETLAND - VALLEY	US Fish and Wildlife Service 2001	56.1	Palustrine Aquatic Bed (16.2), Palustrine Emergent (39.0), Riverine Unconsolidated Shore (0.5), Upland (0.4).								