

Table 3-25. Marsh and Riparian Areal Cover at Middle Waterway (Simpson/Trustees) by Polygon

Vegetation Polygon	Percent Cover	Dominant Species
MA	30	<i>Atriplex patula</i> , <i>Salicornia virginica</i>
MB	85	<i>Deschampsia cespitosa</i> , <i>Salicornia virginica</i>
MC	80	<i>Spergularia canadensis</i>
MD	35	<i>Scirpus americanus</i> , <i>Salicornia virginica</i> , <i>Distichlis spicata</i> , <i>Deschampsia cespitosa</i>
ME	80	<i>Distichlis spicata</i> , <i>Spergularia canadensis</i>
MF	95	<i>Spergularia canadensis</i>
MG	80	<i>Atriplex patula</i> , <i>Spergularia canadensis</i>
MH	25	<i>Gnaphlium palustre</i>
MI	20	<i>Deschampsia cespitosa</i>
MJ	60	<i>Distichlis spicata</i>
MK	30	<i>Deschampsia cespitosa</i>
ML	25	<i>Scirpus americanus</i>
MM	50	<i>Deschampsia cespitosa</i> , <i>Distichlis spicata</i>
MN	60	<i>Triglochin maritimus</i>
MO	85	<i>Atriplex patula</i>
MP	35	<i>Deschampsia cespitosa</i>
MQ	85	<i>Atriplex patula</i>
MR	35	<i>Plantago maritima</i>
MS	30	<i>Deschampsia cespitosa</i>
MT	100	<i>Salicornia virginica</i>
MU	25	<i>Distichlis spicata</i> , <i>Deschampsia cespitosa</i>
MV	90	<i>Atriplex patula</i> , <i>Salicornia virginica</i> , <i>Spergularia canadensis</i>
MW	90	<i>Deschampsia caespitosa</i>
MX	80	<i>Spergularia canadensis</i> , <i>Plantago maritima</i> , <i>Salicornia virginica</i> , <i>Gnaphlium palustre</i>
MY	25	<i>Salicornia virginica</i> , <i>Spergularia canadensis</i>
MZ	50	<i>Triglochin maritimus</i>
MAA	60	<i>Distichlis spicata</i>
MBB	95	<i>Deschampsia cespitosa</i>
MCC	95	<i>Deschampsia cespitosa</i> , <i>Distichlis spicata</i>
MDD	95	<i>Distichlis spicata</i>
MEE	85	<i>Distichlis spicata</i>
MFF	40	<i>Eleocharis sp.</i>
MGG	30	<i>Eleocharis sp.</i>
RA	75	<i>Populus balsamifera</i> , <i>Pseudotsuga menziesii</i> , <i>Thuja plicata</i> , <i>Rosa spp.</i> , <i>Lupinus sp.</i> , <i>Arctostaphylos uva-ursi</i> , <i>Hypochaeris radicata</i> , <i>Hypericum perforatum</i> , grass spp.

Note: In Vegetation Polygon column, M=Marsh polygon; R=Riparian polygon

Table 3-26. Quadrat Locations Along Marsh and Riparian Transects at Middle Waterway (Simpson/Trustees)

Marsh Transect 1		Riparian Transect 2	
Quadrat	Distance Along Transect (ft)	Quadrat	Distance Along Transect (ft)
1	115	1	115
2	117	2	122
3	177	3	177
4	271	4	271
5	273	5	342
6	327	6	370
7	342	7	378
8	370	8	378
9	378	9	447
10	428	10	473
11	444	11	637
12	447	12	690
13	453	13	744
14	473	14	748
15	600	15	986
16	603		
17	637		
18	690		
19	702		
20	715		
21	744		
22	748		
23	986		

Table 3-28. Marsh Development at Middle Waterway (Simpson/Trustees) - Cover (Daubenmire Method)

Common Name	Scientific Name	Total Canopy	Canopy Cover (%)	Frequency (%)	Species Composition
American bulrush	<i>Scirpus americanus</i>	2.5	0.11	4.35	0.02%
American glasswort, pickleweed	<i>Salicornia virginica</i>	17.5	0.76	8.7	0.17%
<u>Canadian sand-spurry</u>	<i>Spergularia canadensis</i>	150	6.52	43.5	1.43%
orache, fat-hen saltbush	<i>Atriplex patula</i>	95	4.13	43.5	0.91%
seashore saltgrass	<i>Distichlis spicata</i>	190	8.26	21.7	1.82%
TOTAL		455	19.78		

Notes:

Bold indicates planted native species, underline indicates volunteer native species

Total canopy: Obtained by counting the number of quadrats in each of six cover class (by species), multiplying this value times the midpoint of the appropriate cover class, and totalling the products for all cover classes by species.

Canopy cover: Obtained by dividing the total canopy by the total number of quadrats sampled on the transect.

Frequency: Obtained by dividing the number of occurrences of a plant species (the number of quadrats in which a plant species was observed) by the total number of quadrats sampled along the transect.

Species composition: Obtained by dividing the percent canopy cover of each plant species by the total canopy cover of all plant species.

See Appendix B for a complete description of the Daubenmire method.

Table 3-30. Marsh Development at Middle Waterway (Simpson/Trustees) - Shoot Density

Common Name	Scientific Name	Average Shoot Density	Quadrat																						
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
American bulrush	<i>Scirpus americanus</i>	5.0															5								
American glasswort, pickleweed	<i>Salicornia virginica</i>	45.5											3		88										
Canadian sand-spurry	<u><i>Spergularia canadensis</i></u>	31.6				85	70	73				2	4	8	10	1									
orache, fat-hen saltbush	<i>Atriplex patula</i>	7.8	25			12	8	7	12			2		2	2		6					2			
seashore saltgrass	<i>Distichlis spicata</i>	229.6											185	270	327	308			58						

Notes:

Shoot density in shoots per quadrat. Quadrats are 0.25 m² in area.

Blank indicates no vegetation was observed in the quadrat

Bold indicates native planted species, underline indicates volunteer native species.

Table 3-31. Riparian Coverage at Middle Waterway (Simpson/Trustees) - Percent Cover

Common Name	Scientific Name	No. of Quadrats Found	Percent Cover (range)	Percent Cover (mean)
Herbs, Forbes and Grasses				
brome	<i>Bromus sp.</i>	11	15 to 45%	28.6
colonial bentgrass	<i>Agrostis tenuis</i>	7	1 to 75%	30.0
common St. John's-wort	<i>Hypericum perforatum</i>	7	1 to 30%	8.9
common velvet-grass	<i>Holcus lanatus</i>	3	Trace to 3%	1.7
hairy catsear	<i>Hypochaeris radicata</i>	6	Trace to 3%	1.5
lupine	<i>Lupinus sp.</i>	5	Trace to 15%	4.2
orchard grass	<i>Dactylis glomerata</i>	2	1 to 5%	3.0
pea	<i>Lathyrus sp.</i>	3	Trace to 10%	3.4
red clover	<i>Trifolium pratense</i>	1	3%	3.0
English plantain	<i>Plantago lanceolata</i>	4	2 to 10%	4.3
sheep sorrel	<i>Rumex acetosella</i>	2	Trace to 7%	3.5
silver hairgrass	<i>Aira caryophyllea</i>	3	5 to 15%	8.3
strawberry	<u><i>Fragaria chiloensis</i></u>	11	2 to 35%	15.5
unclassified-herb	unclassified-herb	3	Trace to 1%	0.4
Shrubs				
common snowberry	<i>Symphoricarpos albus</i>	3	5 to 30%	14.0
Himalayan blackberry	<i>Rubus discolor</i>	4	3 to 45%	18.3
kinnikinnick	<i>Arctostaphylos uva-ursi</i>	4	20 to 70%	51.3
nootka rose	<i>Rosa nutkana</i>	1	20%	20.0
oceanspray	<i>Holodiscus discolor</i>	1	10%	10.0
butterfly bush	<i>Buddleja davidii</i>	1	5 to 5%	5.0
rose	<i>Rosa sp.</i>	6	2 to 65%	23.5
trailing blackberry	<i>Rubus ursinus</i>	1	3%	3.0
vine maple	<i>Acer circinatum</i>	1	5%	5.0
Trees				
bigleaf maple	<i>Acer macrophyllum</i>	1	5%	5.0
black cottonwood	<i>Populus balsamifera</i>	6	5 to 45%	25.0
Douglas-fir	<i>Pseudotsuga menziesii</i>	1	15%	15.0
madrone	<i>Arbutus menziesii</i>	3	1 to 5%	2.3
Scouler's willow	<i>Salix scouleriana</i>	1	75%	75.0
Shore pine	<i>Pinus contorta</i>	1	5%	5.0
western redcedar	<u><i>Thuja plicata</i></u>⁽¹⁾	3	5 to 35%	18.3
Unknown				
unknown	unknown	2	2 to 3%	2.5

Notes: There were a total of 23 quadrats

Bold are planted native species, underline indicates volunteer native species. (All other entries are non-native or invasive.)

Mean percent cover is calculated for the number of quadrats where the plant was observed.

⁽¹⁾ Thuja plicata was planted and there are volunteers.

Table 3-32. Riparian Coverage at Middle Waterway (Simpson/Trustees) - Cover (Daubenmire Method)

Common Name	Scientific Name	Total Canopy	Canopy Cover (%)	Frequency (%)	Species Composition
Herbs, Forbs and Grasses					
brome	<i>Bromus sp.</i>	300	20.00	73.3%	1.41%
colonial bentgrass	<i>Agrostis tenuis</i>	197.5	13.17	46.7%	0.93%
common St. John's-wort	<i>Hypericum perforatum</i>	65	4.33	46.7%	0.30%
common velvet-grass	<i>Holcus lanatus</i>	7.5	0.50	20.0%	0.04%
hairy catsear	<i>Hypochaeris radicata</i>	15	1.00	40.0%	0.07%
lupine	<i>Lupinus sp.</i>	25	1.67	33.3%	0.12%
orchard grass	<i>Dactylis glomerata</i>	5	0.33	13.3%	0.02%
pea	<i>Lathyrus sp.</i>	20	1.33	20.0%	0.09%
red clover	<i>Trifolium pratense</i>	2.5	0.17	6.7%	0.01%
English plantain	<i>Plantago lanceolata</i>	22.5	1.50	26.7%	0.11%
sheep sorrel	<i>Rumex acetosella</i>	17.5	1.17	13.3%	0.08%
silver hairgrass	<i>Aira caryophylla</i>	20	1.33	20.0%	0.09%
strawberry	<i>Fragaria sp.</i>	160	10.67	73.3%	0.75%
unclassified-herb	unclassified-herb	7.5	0.50	20.0%	0.04%
	<i>Subtotal:</i>	<i>565</i>	<i>37.67</i>		<i>2.65%</i>
Shrubs					
common snowberry	<i>Symphoricarpos albus</i>	55	3.67	20.0%	0.26%
Himalayan blackberry	<i>Rubus discolor</i>	70	4.67	26.7%	0.33%
kinnikinnick	<i>Arctostaphylos uva-ursi</i>	202.5	13.50	26.7%	0.95%
nootka rose	<i>Rosa nutkana</i>	15	1.00	6.7%	0.07%
occanspray	<i>Holodiscus discolor</i>	15	1.00	6.7%	0.07%
orange eye	<i>Buddleja davidii</i>	2.5	0.17	6.7%	0.01%
rose	<i>Rosa sp.</i>	135	9.00	40.0%	0.63%
trailing blackberry	<i>Rubus ursinus</i>	2.5	0.17	6.7%	0.01%
vine maple	<i>Acer circinatum</i>	2.5	0.17	6.7%	0.01%
	<i>Subtotal:</i>	<i>500</i>	<i>33.33</i>		<i>2.34%</i>
Trees					
bigleaf maple	<i>Acer macrophyllum</i>	2.5	0.17	6.7%	0.01%
black cottonwood	<i>Populus balsamifera</i>	207.5	13.83	40.0%	0.97%
Douglas-fir	<i>Pseudotsuga menziesii</i>	15	1.00	6.7%	0.07%
madrone	<i>Arbutus menziesii</i>	7.5	0.50	20.0%	0.04%
Scouler's willow	<i>Salix scouleriana</i>	62.5	4.17	6.7%	0.29%
lodgepole	<i>Pinus contorta</i>	2.5	0.17	6.7%	0.01%
western redcedar	<i>Thuja plicata</i>	55	3.67	20.0%	0.26%
	<i>Subtotal:</i>	<i>352.5</i>	<i>23.50</i>		<i>1.65%</i>
Unknown					
unknown	unknown	5	0.33	13.3%	0.02%
	<i>Subtotal:</i>	<i>5</i>	<i>0.33</i>		<i>0.02%</i>
	TOTAL:	1422.5	94.83		

Notes:

Bold are planted native species, underline indicates volunteer native species. All other entries are non-native or invasive.

Total canopy: Obtained by counting the number of quadrats in each of six cover class (by species), multiplying this value times the midpoint of the appropriate cover class, and totalling the products for all cover classes by species.

Canopy cover: Obtained by dividing the total canopy by the total number of quadrats sampled on the transect.

Frequency: Obtained by dividing the number of occurrences of a plant species (the number of quadrats in which a plant species was observed) by the total number of quadrats sampled along the transect.

Species composition: Obtained by dividing the percent canopy cover of each plant species by the total canopy cover of all plant species.

See Appendix B for a description of the Daubenmire method.

Table 3-33. Fish Species Richness at Middle Waterway (Simpson/Trustees)

Common Name	Scientific Name	Number Caught
Chinook salmon	<i>Oncorhynchus tshawytscha</i>	32
Coho salmon	<i>Oncorhynchus kisutch</i>	2
Chum salmon	<i>Oncorhynchus keta</i>	281
Pink	<i>Oncorhynchus gorbuscha</i>	21
Starry flounder	<i>Platichthys stellatus</i>	15
Staghorn sculpin	<i>Leptocottus armatus</i>	193
Sculpin	unknown species	5
Surf smelt	<i>Hypomesus pretiosus</i>	651
Shiner perch	<i>Cymatogaster aggregata</i>	6,003
Pile perch	<i>Damalichthys vacca</i>	4
Threespine stickleback	<i>Gasterosteus aculeatus</i>	1
Snake prickleback	<i>Lumpenus sagitta</i>	27
Pacific herring	<i>Clupea pallasii</i>	1

Table 3-34. Invertebrates in Fallout Traps at Middle Waterway (Simpson/Trustees)

Order	Family	July 24	August 8	Total
<i>Amphipoda</i>	Unknown	6		6
<i>Araneae</i>	Unknown	2		2
<i>Coleoptera</i>	<i>Cicindelidae</i>	1		1
<i>Coleoptera</i>	<i>Curculionidae</i>	2		2
<i>Coleoptera</i>	<i>Staphylinidae</i>	2		2
<i>Coleoptera</i>	Unknown		1	1
<i>Diptera</i>	<i>Agromyzidae</i>	67	98	165
<i>Diptera</i>	<i>Chironomidae</i>	39	2	41
<i>Diptera</i>	<i>Culicidae</i>	1		1
<i>Diptera</i>	<i>Dolichopodidae</i>	30	65	95
<i>Diptera</i>	<i>Sciomyzidae</i>		4	4
<i>Diptera</i>	<i>Tabanidae</i>		3	3
<i>Diptera</i>	<i>Tipulidae</i>	1	1	2
<i>Diptera</i>	Unknown	4	1	5
<i>Hemiptera</i>	<i>Saldidae</i>	6	2	8
<i>Hymenoptera</i>	<i>Formicidae</i>	2		2
<i>Hymenoptera</i>	<i>Ichneumonidae</i>	4		4
<i>Hymenoptera</i>	Unknown	1		1
<i>Orthoptera</i>	Unknown	1		1
<i>Trichoptera</i>	Unknown	2	1	3
Unknown	Unknown	3		3
TOTAL:		174	178	352

Notes:

Blank indicates no specimen was caught in the sampling for the month

Table 3-35. Seasonal Bird Counts at Middle Waterway (Simpson/Trustees)

Common Name	Scientific Name	Total Count	Spring	Summer	Fall
Cormorants					
double-crested cormorant	<i>Phalacrocorax auritus</i>	5			5
Bitterns and Herons					
great blue heron	<i>Ardea herodias</i>	2		1	1
Waterfowl					
American wigeon	<i>Anas americana</i>	6	6		
Canada goose	<i>Branta canadensis</i>	9	4		5
mallard	<i>Anas platyrhynchos</i>	6		6	
Plovers					
American golden plover	<i>Pluvialis dominica</i>	1			1
killdeer	<i>Charadrius vociferus</i>	11	2	7	2
Sandpipers					
semipalmated sandpiper	<i>Calidris pusilla</i>	8		8	
spotted sandpiper	<i>Actitis macularia</i>	2		2	
western sandpiper	<i>Calidris mauri</i>	5			5
Gulls and Terns					
Caspian tern	<i>Sterna caspia</i>	4	3	1	
glaucous-winged gull	<i>Larus glaucescens</i>	73	14	30	29
Heermann's gull	<i>Larus heermanni</i>	1			1
Doves					
rock dove	<i>Columba livia</i>	6		4	2
Kingfishers					
kingfisher	<i>Ceryle sp.</i>	1			1
Woodpeckers					
red-shafted flicker	<i>Colaptes auratus cafer</i>	1			1
Swallows					
barn swallow	<i>Hirundo rustica</i>	3		3	
cliff swallow	<i>Petrochelidon pyrrhonota</i>	1		1	
swallow		2	2		
violet-green swallow	<i>Tachycineta thalassina</i>	6		6	
Crows					
American crow	<i>Corvus brachyrhynchos</i>	19	3	3	13
Northwestern crow	<i>Corvus caurinus</i>	15	4	6	5
Bushtits					
bushtit	<i>Psaltriparus minimus</i>	2		2	
Thrushes					
American robin	<i>Turdus migratorius</i>	3	1	2	
Starlings					
European starling	<i>Sturnus vulgaris</i>	24	5	18	1
Finches and Sparrows					
American goldfinch	<i>Carduelis tristis</i>	1	1		
house finch	<i>Carpodacus mexicanus</i>	23	5	10	8
song sparrow	<i>Melospiza melodia</i>	11		4	7
white-crowned sparrow	<i>Zonotrichia leucophrys</i>	7	2	5	
Blackbirds and Orioles					
cowbird	<i>Molothrus sp.</i>	2		2	
Total Number of Species:		30	13	20	16
Total Number of Birds:		260	52	121	87

Notes:

Blank indicates no bird was observed.

Spring = March to May

Summer = June to August

Fall = September to November

Table 3-36. Bird Use at Middle Waterway (Simpson/Trustees)

Date	Common Name	Scientific Name	Gender	Count	Tide	Seen	Heard	Tracks	Flyover	Pier Pilings	Riparian	Marsh	Intertidal	Mud Flats	Open Water	Comments
5/31/02	American crow	<i>Corvus brachyrhynchos</i>		3	L	X										on wires just outside site
5/31/02	American goldfinch	<i>Carduelis tristis</i>		1	L		X									2 flyovers
5/31/02	American robin	<i>Turdus migratorius</i>	M	1	L		X				X					
5/31/02	American wigeon	<i>Anas americana</i>		6	L											X
5/31/02	Canada goose	<i>Branta canadensis</i>		4	L											X
5/31/02	Caspian tern	<i>Sterna caspia</i>		3	L	X	X		X						X	X
5/31/02	European starling	<i>Sturnus vulgaris</i>		5	L	X	X		X							diving, foraging.
5/31/02	glaucous-winged gull	<i>Larus glaucescens</i>		14	L										X	
5/31/02	house finch	<i>Carpodacus mexicanus</i>		5	L	X	X		X		X		X			singing in riparian; foraging in intertidal inside exclusions
5/31/02	killdeer	<i>Charadrius vociferus</i>		2	L	X	X						X	X		pair
5/31/02	Northwestern crow	<i>Corvus caurinus</i>		4	L	X				X		X	X			foraging in intertidal
5/31/02	swallow			2	L											too far away to tell species
5/31/02	white-crowned sparrow	<i>Zonotrichia leucophrys</i>	M	2	L	X	X				X					2 singing males, 2 pairs?
6/21/02	American robin	<i>Turdus migratorius</i>	M	1	L	X			X		X					
6/21/02	American robin	<i>Turdus migratorius</i>	F	1	L	X			X		X					
6/21/02	barn swallow	<i>Hirundo rustica</i>	F	1	L	X			X				X	X	X	
6/21/02	barn swallow	<i>Hirundo rustica</i>	M	1	L	X			X				X			flyovers; one collecting nesting material.
6/21/02	bush-tit	<i>Psaltriparus minimus</i>	M	2	L	X	X				X					number recorded as 2+
6/21/02	cliff swallow	<i>Petrochelidon pyrrhonota</i>	M	1	L	X	X		X					X		
6/21/02	cowbird	<i>Molothrus sp.</i>	F	1	L	X					X					
6/21/02	cowbird	<i>Molothrus sp.</i>	M	1	L	X					X					
6/21/02	European starling	<i>Sturnus vulgaris</i>	M	3	L	X			X							both male and female.
6/21/02	glaucous-winged gull	<i>Larus glaucescens</i>		13	L	X									X	
6/21/02	house finch	<i>Carpodacus mexicanus</i>		1	L	X	X				X					
6/21/02	killdeer	<i>Charadrius vociferus</i>		5	L	X							X	X		both male and female; 4 together, family?; 1 alone.
6/21/02	Northwestern crow	<i>Corvus caurinus</i>		3	L	X								X		
6/21/02	song sparrow	<i>Melospiza melodia</i>		2	L	X					X					
6/21/02	spotted sandpiper	<i>Actitis macularia</i>		2	L	X	X									both male and female.
6/21/02	violet-green swallow	<i>Tachycineta thalassina</i>		3	L	X			X							chasing cliff swallow.
6/21/02	white-crowned sparrow	<i>Zonotrichia leucophrys</i>	M	3	L	X	X				X					3 singing males.
6/21/02	white-crowned sparrow	<i>Zonotrichia leucophrys</i>	F	1	L	X					X					
6/25/02	barn swallow	<i>Hirundo rustica</i>	F	1	H	X			X							number recorded as 1-2; foraging.
6/25/02	Caspian tern	<i>Sterna caspia</i>	F	1	H	X	X		X							
6/25/02	European starling	<i>Sturnus vulgaris</i>		5	H	X					X					
6/25/02	glaucous-winged gull	<i>Larus glaucescens</i>		5	H	X				X					X	sitting on pilings; 1 foraging in open water.
6/25/02	house finch	<i>Carpodacus mexicanus</i>	M	1	H	X	X				X		X			foraging in intertidal.
6/25/02	house finch	<i>Carpodacus mexicanus</i>	F	2	H	X	X				X		X			foraging in intertidal.
6/25/02	killdeer	<i>Charadrius vociferus</i>		2	H	X	X						X			pair; nesting behavior; nest - riparian.
6/25/02	Northwestern crow	<i>Corvus caurinus</i>		3	H	X	X		X		X					
6/25/02	rock dove	<i>Columba livia</i>		1	H											
6/25/02	spotted sandpiper	<i>Actitis macularia</i>		3	H		X						X			likely on south side of waterway.
6/25/02	violet-green swallow	<i>Tachycineta thalassina</i>		3	H	X			X							
6/25/02	white-crowned sparrow	<i>Zonotrichia leucophrys</i>	M	1	H	X					X					
8/22/02	American crow	<i>Corvus brachyrhynchos</i>		3	M								X			foraging
8/22/02	European starling	<i>Sturnus vulgaris</i>		10	M	X										number recorded as +/- 10; flock; foraging.
8/22/02	glaucous-winged gull	<i>Larus glaucescens</i>		12	M	X			X				X			3 flyover, 5 intertidal, 2 open water. Two juveniles "begging" for food
8/22/02	great blue heron	<i>Ardea herodias</i>		1	M				X			X				took off from marsh.
8/22/02	house finch	<i>Carpodacus mexicanus</i>		6	M		X				X					foraging
8/22/02	mullard	<i>Anas platyrhynchos</i>		6	M								X	X		1 intertidal, 5 open water, 4 females; 2 males
8/22/02	rock dove	<i>Columba livia</i>		3	M	X			X							1 intertidal; 2 flyover.
8/22/02	semipalmated sandpiper	<i>Calidris pusilla</i>		8	M	X							X	X		males and females; mixed, worn plumage.
8/22/02	song sparrow	<i>Melospiza melodia</i>		2	M		X									number recorded as 2?; no clearly seen.
9/27/02	American crow	<i>Corvus brachyrhynchos</i>		2	H											on wires
9/27/02	American Golden-Plover	<i>Pluvialis dominica</i>		1	H							X				non-breeding plumage; resting at edge of water.
9/27/02	double-crested cormorant	<i>Phalacrocorax auritus</i>		1	H				X						X	
9/27/02	glaucous-winged gull	<i>Larus glaucescens</i>		3	H				X							
9/27/02	great blue heron	<i>Ardea herodias</i>		5	H					X						
9/27/02	house finch	<i>Carpodacus mexicanus</i>		2	H		X				X					
9/27/02	killdeer	<i>Charadrius vociferus</i>		2	H	X			X	X						
9/27/02	red-shafted flicker	<i>Colaptes auratus cafer</i>		1	H		X			X						
9/27/02	song sparrow	<i>Melospiza melodia</i>		2	H	X	X									
9/30/02	Canada goose	<i>Branta canadensis</i>		5	L				X							one bird seen, one bird heard.
9/30/02	double-crested cormorant	<i>Phalacrocorax auritus</i>		3	L											
9/30/02	European starling	<i>Sturnus vulgaris</i>		1	L		X						X			
9/30/02	glaucous-winged gull	<i>Larus glaucescens</i>		6	L									X	X	
9/30/02	great blue heron	<i>Ardea herodias</i>	M	1	L										X	
9/30/02	Heermann's gull	<i>Larus heermanni</i>		1	L				X							
9/30/02	house finch	<i>Carpodacus mexicanus</i>		4	L	X	X									number recorded as 4+
9/30/02	kingfisher	<i>Ceryle sp.</i>		1	L					X					X	
9/30/02	Northwestern crow	<i>Corvus caurinus</i>		5	L	X			X	X			X	X		crow eating roship.
9/30/02	rock dove	<i>Columba livia</i>		2	L	X							X	X		
11/5/02	American crow	<i>Corvus brachyrhynchos</i>		11	L	X			X				X			
11/5/02	double-crested cormorant	<i>Phalacrocorax auritus</i>		1	L											X
11/5/02	glaucous-winged gull	<i>Larus glaucescens</i>		20	L	X									X	X
11/5/02	great blue heron	<i>Ardea herodias</i>		1	L				X							
11/5/02	house finch	<i>Carpodacus mexicanus</i>		2	L		X				X					
11/5/02	song sparrow	<i>Melospiza melodia</i>		5	L						X	X				
11/5/02	western sandpiper	<i>Calidris mauri</i>		5	L								X	X		

Notes:
Gender: "F" = female, "M" = male, "U" = unknown
Tide: "L" = low, "M" = medium, "H" = high