

Appendix A. Sandpiper Habitat Field Forms

Form 1. LDW spotted sandpiper habitat survey form

Date: 6-3-04	Observer's name: BOYLE
Area number: 1	Time: 08:56
Data recorder's name: P.D.	Weather: SUNNY
GPS location: start	GPS location: end
Easting (X): 122,20,739	Easting (X): 122,20,755
Northing (Y): 47,34,233	Northing (Y): 47,34,156
Intertidal habitat description	
Substrate type (i.e., gravel, sand, mud, riprap):	Riprap (see @ W 0.0)
Bank slope (i.e., steep, medium, flat)	Medium
Other observations: high fucus/barnacle	
Upland habitat description	
Vegetation type:	herb fringe / (Rhus, hard fescue, 1/2 Salt)
Structures present:	Building W-3
Potential nesting habitat:	low area potential / grasses are present / shrubs are present
Other observations:	
Photo # and description: #1 segment / downstream	

Date: 6-3	Observer's name: BOYLE
Area number: 2	Time: 9:01
Data recorder's name:	Weather: SUNNY
GPS location: start	GPS location: end
Easting (X): 122,20,755	Easting (X): 122,20,757
Northing (Y): 47,34,156	Northing (Y): 47,34,078
Intertidal habitat description	
Substrate type (i.e., gravel, sand, mud, riprap):	Rock beneath pier
Bank slope (i.e., steep, medium, flat):	Rock medium / pier vertical
Other observations: barn swallows beneath pier	
Upland habitat description	
Vegetation type:	NONE
Structures present:	PIER STRUCTURE, grade walkway
Potential nesting habitat:	NONE
Other observations:	"SEA SPAN 240" MOORED
Photo # and description: #2 - pier facing upstream	

Form 1. LDW spotted sandpiper habitat survey form

Date: 6-3	Observer's name: BOYLE
Area number: 3	Time: 09
Data recorder's name: BOYLE	Weather: SUN
GPS location: start	GPS location: end
Easting (X): 122,20,75.7mb (change was 0)	Easting (X): 122 20 806
Northing (Y): 47 34078	Northing (Y): 47 33 804
Intertidal habitat description	
Substrate type (i.e., gravel, sand, mud, riprap):	riprap, gravel (shrimping)
Bank slope (i.e., steep, medium, flat)	medium (low focus)
Other observations:	
Upland habitat description	
Vegetation type:	herb/shrub (small alder) w 20' wide woody block above
Structures present:	concrete plant, pile supported berth w pier fence
Potential nesting habitat:	poor upstream, low downstream - high activity
Other observations:	concrete plant & container yard in this segment
Photo # and description:	3 downstream, 4 osprey nest @ terminal 105

Date: 6-3	Observer's name: BOYLE
Area number: 4	Time: 9:16
Data recorder's name: BOYLE	Weather: SUNNY
GPS location: start	GPS location: end
Easting (X): 122 20 806	Easting (X): 122 20 719
Northing (Y): 47 33 804	Northing (Y): 47 33 702
Intertidal habitat description	
Substrate type (i.e., gravel, sand, mud, riprap):	gravel + scattered rip rap (30% cover)
Bank slope (i.e., steep, medium, flat):	medium
Other observations:	
"downish-diagonal + overgrown lot, then container yard w/cow scat pier	
Upland habitat description	
Vegetation type:	shrub-shoreline
Structures present:	fence, lot (bordered ALRU)
Potential nesting habitat:	poor due to dense shoreline scats burnt hick, blackberry
Other observations:	"dusting" spot on diagonal.
Photo # and description:	5 Downish diagonal 6 Segment poststream 7 habitat downish diagonal

Form 1. LDW spotted sandpiper habitat survey form

Date: 6-3	Observer's name: BOYLE
Area number: 5	Time: 9:30
Data recorder's name: BOYLE	Weather: SUN
GPS location: start	GPS location: end
Easting (X): 122 20 719	Easting (X): 122 20 700
Northing (Y): 47 33 702	Northing (Y): 47 33 614
Intertidal habitat description	
Substrate type (i.e., gravel, sand, mud, riprap):	sand stone bench beneath riprap
Bank slope (i.e., steep, medium, flat):	flat bench medium riprap
Other observations:	
Upland habitat description	
Vegetation type:	blackberry N 15' wide, paved yard
Structures present:	containers, public access
Potential nesting habitat:	grass area is public access/boat launch/low
Other observations:	
Photo # and description:	
8 - bench $\frac{1}{2}$ outfall	

Date: 6-3	Observer's name: BOYLE
Area number: 6 CORPS OF ENGINEERS	Time: 9:38
Data recorder's name: BOYLE	Weather: SUN
GPS location: start	GPS location: end
Easting (X): 122 20 700	Easting (X): 122 20 606
Northing (Y): 47 33 614	Northing (Y): 47 33 467
Intertidal habitat description	
Substrate type (i.e., gravel, sand, mud, riprap):	rip rap
Bank slope (i.e., steep, medium, flat):	medium
Other observations:	
high focus, small potential near mitigation site	
Upland habitat description	
Vegetation type:	salix, cottonwood fringe, high fence/parking lot
Structures present:	building N 150' set back
Potential nesting habitat:	low/high shrub density, then parking lot
Other observations: mitigation site (intertidal) on upstream 200'	
Photo # and description:	
9 - geese 10 - upstream area 6	

~~2019 map~~

Form 1. LDW spotted sandpiper habitat survey form

Date: 6-3	Observer's name: BOYLE
Area number: 7	Time: 9:47
Data recorder's name: BOYLE	Weather: SUN
GPS location: start	GPS location: end
Easting (X): 122 20 700 ^{ML} 611	Easting (X): 122 20 492
Northing (Y): 47 33 467	Northing (Y): 47 33 286
Intertidal habitat description	
Substrate type (i.e., gravel, sand, mud, riprap):	Wharf
Bank slope (i.e., steep, medium, flat)	—
Other observations: WINDSDN SITE SLIP 1	
Upland habitat description	
Vegetation type:	NONE in trees, butterfly bush, knotweed
Structures present:	PIER, rubble, parking
Potential nesting habitat:	NONE / Craying mound
Other observations:	
Photo # and description: 11, 12 manson site	

Date: 6-3	Observer's name: BOYLE
Area number: 8	Time: 10:17 (-218)
Data recorder's name: BOYLE	Weather: SUN
GPS location: start	GPS location: end
Easting (X): 122 20 492	Easting (X): 122 20 348
Northing (Y): 47 33 286	Northing (Y): 47 33 93
Intertidal habitat description	
Substrate type (i.e., gravel, sand, mud, riprap):	RIPRAP, rubble, steep mud (photo 13)
Bank slope (i.e., steep, medium, flat):	STEEP (2:1)
Other observations: long umbrae, sycamore plant, glacier one mud beach below old foraging	
Upland habitat description	
Vegetation type:	beach pea
Structures present:	STILTS, SPORTING YARD
Potential nesting habitat:	NONE / Craying Yes
Other observations: LOW/NO FUCUS	
Photo # and description: 13 dam stream, segment 9) # 14 segment 8	

Form 1. LDW spotted sandpiper habitat survey form

Date: 6-3	Observer's name: BOYLE
Area number: 9	Time: 10:42 (-3.0)
Data recorder's name: BOYLE	Weather: SUN
GPS location: start	GPS location: end
Easting (X): 122 20 348	Easting (X): 122 20 337
Northing (Y): 47 32 98 ^{incomplete entry}	Northing (Y): 47 32 940
Intertidal habitat description	
Substrate type (i.e., gravel, sand, mud, riprap):	rip rap @ w + 1.0, mud below
Bank slope (i.e., steep, medium, flat)	RR steep, mud medium
Other observations: Several seeps	
Upland habitat description	
Vegetation type: narrow butterfly bush, black berry, fancy w/ 10' cottonwood	
Structures present: parking lot, building > 100' setback	
Potential nesting habitat: none / foraging habitat below 1.0 ft	
Other observations: dense fens in high intertidal	
Photo # and description: 13 downstream	

Date: 6-3	Observer's name: BOYLE
Area number: 10 Glacier sort yard	Time:
Data recorder's name: BOYLE	Weather: SUN
GPS location: start	GPS location: end
Easting (X): 122 20 337	Easting (X): 122 20 204
Northing (Y): 47 32 940	Northing (Y): 47 32 768
Intertidal habitat description	
Substrate type (i.e., gravel, sand, mud, riprap):	mud -3.0 to -2.0, rip rap to +4.0
Bank slope (i.e., steep, medium, flat)	Steep below constructed bench @ w+4.0
Other observations: flat bench,	
Upland habitat description	
Vegetation type: sumac above bench, invasives otherwise	
Structures present: cement plant	
Potential nesting habitat: none / no foraging	
Other observations: substrate is waste concrete (intertidal + upland) near	
Photo # and description: slip 2 ##15	

Form 1. LDW spotted sandpiper habitat survey form

Date: 6-3	Observer's name: BOYLE
Area number: 11	Time: 11:00
Data recorder's name: BOYLE	Weather: SUN
GPS location: start	GPS location: end
Easting (X): 122 20 224	Easting (X): 122 20 139
Northing (Y): 47 32 768	Northing (Y): 47
Intertidal habitat description	
Substrate type (i.e., gravel, sand, mud, riprap):	rip rap in slip 2 w cement @ head of slip
Bank slope (i.e., steep, medium, flat):	
Other observations:	
Upland habitat description	
Vegetation type: blackberry, plantings / landscape	
Structures present: barge already, warehouses	
Potential nesting habitat: none / none	
Other observations:	
Photo # and description: #16	

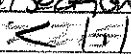
Date: 6-3	Observer's name: BOYLE
Area number: 12	Time: 11:06 (-3:06)
Data recorder's name: BOYLE	Weather: SUN
GPS location: start	GPS location: end
Easting (X): 122 20 139	Easting (X): 122 20 202
Northing (Y): 47 32 786 <small>ML (additional missing data)</small>	Northing (Y): 47 32 678
Intertidal habitat description	
Substrate type (i.e., gravel, sand, mud, riprap):	coars sand to wt 3.0, riprap to parking lot
Bank slope (i.e., steep, medium, flat):	medium sand, steep RR
Other observations:	
Upland habitat description	
Vegetation type: almost none - 1-2 landscape trees	
Structures present: warehouse, barge facility	
Potential nesting habitat: none / foraging potential (coarse substrate)	
Other observations: vegetation has been sprayed	
Photo # and description: #17	

Form 1. LDW spotted sandpiper habitat survey form

Date: 6-3	Observer's name: BOYLE
Area number: 13	Time: - 3.0
Data recorder's name: BOYLE	Weather: SUN
GPS location: start	GPS location: end
Easting (X): 122 20 202	Easting (X): 122 20 108
Northing (Y): 47 32 675	Northing (Y): 47 32 590
Intertidal habitat description	
Substrate type (i.e., gravel, sand, mud, riprap):	rip rap + rubble
Bank slope (i.e., steep, medium, flat):	medium
Other observations:	
Upland habitat description	
Vegetation type: None/black berries	
Structures present: boat yard/boat sheds	
Potential nesting habitat: None / no foraging	
Other observations: boatwashes (6)	
Photo # and description:	

Date: 6-3	Observer's name: BOYLE
Area number: 14 (Bridge)	Time: 11:28
Data recorder's name: BOYLE	Weather: SUN
GPS location: start	GPS location: end
Easting (X): 122 20 108	Easting (X): 122 20 038
Northing (Y): 47 32 590	Northing (Y): 47 32 555
Intertidal habitat description	
Substrate type (i.e., gravel, sand, mud, riprap):	
Bank slope (i.e., steep, medium, flat):	Steep banks
Other observations: beneath 1st N.E.S. bridge	
Upland habitat description	
Vegetation type: little none	
Structures present: bridge	
Potential nesting habitat: none / none	
Other observations:	
Photo # and description: #18	

Form 1. LDW spotted sandpiper habitat survey form

Date: 6-3	Observer's name: BOYLE
Area number: 15	Time: 11:28
Data recorder's name: BOYLE	Weather: SUN
GPS location: start	GPS location: end
Easting (X): 122 20 038	Easting (X): 122 19 895
Northing (Y): 47 32 555	Northing (Y): 47 32 441
Intertidal habitat description	
Substrate type (i.e., gravel, sand, mud, riprap)	Riprap, pier, small sections of sheet pile
Bank slope (i.e., steep, medium, flat)	either vertical or 
Other observations:	
Upland habitat description	
Vegetation type: none except blackberries at head of slip	
Structures present: - warehouse, barges	
Potential nesting habitat: none / no foraging	
Other observations:	
Photo # and description: none within slip 3	

Date: 6-3	Observer's name: BOYLE
Area number: 16 auto recycling	Time: 11:38
Data recorder's name: BOYLE	Weather: SUN
GPS location: start	GPS location: end
Easting (X): 122 19 895	Easting (X): 122 19 569
Northing (Y): 47 32 441	Northing (Y): 47 32 220
Intertidal habitat description	
Substrate type (i.e., gravel, sand, mud, riprap)	
Bank slope (i.e., steep, medium, flat):	1'
Other observations: low algae	
Upland habitat description	
Vegetation type: landscape trees, but weedy some grasses (brome)	
Structures present: gas plants, warehouses	
Potential nesting habitat: none - no foraging opportunities	
Other observations: no grasses are over hill	
Photo # and description: #19	

Form 1. LDW spotted sandpiper habitat survey form

Date: 6-3	Observer's name: BOYLE
Area number: 17	Time: 11:49 -3.0 -2.5
Data recorder's name: BOYLE	Weather: SUN
GPS location: start	GPS location: end
Easting (X): 122 19 569	Easting (X): 122 19 351
Northing (Y): 47 32 222	Northing (Y): 47 32 083
Intertidal habitat description	
Substrate type (i.e., gravel, sand, mud, riprap):	rip rap over coarse sand
Bank slope (i.e., steep, medium, flat):	steep riprap over medium sand (+3-4.0 ft)
Other observations: rip rap is covered by rocks, debris	
Upland habitat description	
Vegetation type: Scott's broom, grasses, knotweed	
Structures present:	
Potential nesting habitat: low / yes below +3 - +4.0 (foraging)	
Other observations:	
Photo # and description: 20	

Date: 6-3	Observer's name: BOYLE
Area number: 18 (Slip 4)	Time: -2.5
Data recorder's name: BOYLE	Weather: SUN
GPS location: start	GPS location: end
Easting (X): 122 19 351	Easting (X): 122 19 155
Northing (Y): 47 32 083	Northing (Y): 47 32 192
Intertidal habitat description	
Substrate type (i.e., gravel, sand, mud, riprap):	Pier on North side
Bank slope (i.e., steep, medium, flat):	
Other observations: Small riprap beneath pier - no barnacles & fuus	
Upland habitat description	
Vegetation type: NONE	
Structures present: PIER	
Potential nesting habitat: NONE / FORAGING NONE	
Other observations:	
Photo # and description: #21	

Form 1. LDW spotted sandpiper habitat survey form

Date: 6-3	Observer's name: BOYLE
Area number: 1A (SLIP 4 SOUTH SIDE)	Time: 12:08
Data recorder's name: BOYLE	Weather:
GPS location: start	GPS location: end
Easting (X): 122 19 155	Easting (X): 122 19 170
Northing (Y): 47 32 192	Northing (Y): 47 32 127
Intertidal habitat description	
Substrate type (i.e., gravel, sand, mud, riprap):	mud below wood bulkhead and riprap
Bank slope (i.e., steep, medium, flat):	vertical bulkhead down to NO-20
Other observations:	
Upland habitat description	
Vegetation type: little herb blackberry	
Structures present: BOILING BUILDING N/50' back to panel between	
Potential nesting habitat: NONE - FORAGING BELOW O.O	
Other observations:	
Photo # and description: #22	

Date: 6-3	Observer's name: BOYLE
Area number: 20 (SLIP 4 SOUTH)	Time:
Data recorder's name: BOYLE	Weather: SUN
GPS location: start	GPS location: end
Easting (X): 122 19 170	Easting (X): 122 19 284
Northing (Y): 47 32 127	Northing (Y): 47 32 050
Intertidal habitat description	
Substrate type (i.e., gravel, sand, mud, riprap):	mixed sizes up into upland veg
Bank slope (i.e., steep, medium, flat):	
Other observations:	
Upland habitat description	
Vegetation type: willows/alders, herbs, blackberry	
Structures present: willows/alders walkway, fence, lot	
Potential nesting habitat: none / no foraging	
Other observations:	
Photo # and description: #22	

Form 1. LDW spotted sandpiper habitat survey form

Date: 6-3	Observer's name: BOYLE
Area number: 21	Time: -2.5
Data recorder's name: BOYLE	Weather: SUN
GPS location: start	GPS location: end
Easting (X): 122 19 284	Easting (X): 122 18 843
Northing (Y): 47 32 051 <small>M (change prev 127)</small>	Northing (Y): 47 31 763
Intertidal habitat description <i>was same as prev. segment</i>	
Substrate type (i.e., gravel, sand, mud, riprap):	rip rap over sand
Bank slope (i.e., steep, medium , flat):	steep RR over medium sand
Other observations: sand becomes flat along pile-supported building	
Upland habitat description	
Vegetation type: blackberries below fence - landscape beyond	
Structures present: BOILING	
Potential nesting habitat: NONE / foraging below 0.0 ft	
Other observations:	
Photo # and description: 23	

Date: 6-3	Observer's name: BOYLE
Area number: 22	Time: 12:36 - 1:54
Data recorder's name: BOYLE	Weather:
GPS location: start	GPS location: end
Easting (X): 122 18 843	Easting (X): 122 18 655
Northing (Y): 47 31 763	Northing (Y): 47 31 660
Intertidal habitat description	
Substrate type (i.e., gravel, sand, mud, riprap):	mud sandy/mud
Bank slope (i.e., steep, medium, flat):	flat beyond pile-supported building
Other observations:	
Upland habitat description	
Vegetation type: none - pile supported building	
Structures present: building	
Potential nesting habitat: none / forage below 0.00	
Other observations: off filamentous green algae on mud	
Photo # and description: 24 - pile-supported building	

Form 1. LDW spotted sandpiper habitat survey form

Date: 6-3	Observer's name: BOYLE
Area number: 23	Time: 1317 0.4A
Data recorder's name: BOYLE	Weather: SUN
GPS location: start	GPS location: end
Easting (X): 122 18 655	Easting (X): 122 18 483
Northing (Y): 47 31 666	Northing (Y): 47 31 465
Intertidal habitat description	
Substrate type (i.e., gravel, sand, mud, riprap):	Riprap + Sheet pile
Bank slope (i.e., steep, medium, flat):	
Other observations: Steep RR/RUBBLE	
Upland habitat description	
Vegetation type:	blackberry below fence - developed above
Structures present:	BOYLE facility
Potential nesting habitat:	None / low = some mud patches (< 1 m ²) @ 0.4'
Other observations:	
Photo # and description:	

Date: 6-3	Observer's name: BOYLE
Area number: 24	Time: 1320
Data recorder's name: BOYLE	Weather: SUN
GPS location: start	GPS location: end
Easting (X): 122 18 483	Easting (X): 122 18 412 18 340
Northing (Y): 47 31 465	Northing (Y): 47 31 136
Intertidal habitat description	
Substrate type (i.e., gravel, sand, mud, riprap):	Sandy mud below wooden bulkhead
Bank slope (i.e., steep, medium, flat):	mud 10:1 bulkhead vertical
Other observations: Bulkhead is sheet pile / soldier pile - no flat areas	
Upland habitat description	
Vegetation type:	blackberry on top of sheet pile
Structures present:	building and parking behind fence
Potential nesting habitat:	None - foraging below 4.0 ft
Other observations:	
Photo # and description:	

Form 1. LDW spotted sandpiper habitat survey form

Date: 6-3	Observer's name: BOYLE
Area number: 25	Time:
Data recorder's name: BOYLE	Weather: SUN
GPS location: start	GPS location: end
Easting (X): 122 18 340	Easting (X): 122 18 302
Northing (Y): 47 31 136	Northing (Y): 47 31 087
Intertidal habitat description	
Substrate type (i.e., gravel, sand, mud, riprap):	RR STEEP 7/
Bank slope (i.e., steep, medium, flat):	S side per N side RR
Other observations: no clean filamentous green algae	
Upland habitat description	
Vegetation type: blackberries, knotweed, grass willow behind	
Structures present: building 2 15-75' parking lot	
Potential nesting habitat: none / no foraging habitat	
Other observations:	
Photo # and description: 26	

Date: 6-3	Observer's name: BOYLE
Area number: 26	Time:
Data recorder's name: BOYLE	Weather: SUN
GPS location: start	GPS location: end
Easting (X): 122 18 302	Easting (X): 122 18 294
Northing (Y): 47 31 087	Northing (Y): 47 30 955
Intertidal habitat description	
Substrate type (i.e., gravel, sand, mud, riprap):	"
Bank slope (i.e., steep, medium, flat):	STEEP RIP RAP TO H ₂ O
Other observations:	
Upland habitat description	
Vegetation type: willows, blackberry	
Structures present: building, manicured lawn, walkway	
Potential nesting habitat: none / none	
Other observations:	
Photo # and description:	

Form 1. LDW spotted sandpiper habitat survey form

Date: 6-3	Observer's name: BOYLE
Area number: 27	Time: 1346 + 1.9A
Data recorder's name: BOYLE	Weather: SUN
GPS location: start	GPS location: end
Easting (X): 122 18 294	Easting (X): 122 18 074
Northing (Y): 47 30 955	Northing (Y): 47 30 759
Intertidal habitat description	
Substrate type (i.e., gravel, sand, mud, riprap):	Out mud (10:1-5:1) w RR
Bank slope (i.e., steep, medium, flat):	RR STEEP MUD - LONG RUNS
Other observations:	
Upland habitat description	
Vegetation type: Blackberry, ground below fence land surge + lot above	
Structures present: buildings, pile-supported lot, lot	
Potential nesting habitat: none - large opportunities	
Other observations:	
Photo # and description:	

Date: 6-3	Observer's name: BOYLE
Area number: 28	Time: + 1.9A
Data recorder's name: BOYLE	Weather: SUN
GPS location: start	GPS location: end
Easting (X): 122 18 074	Easting (X): 122 17 956
Northing (Y): 47 30 759	Northing (Y): 47 30 742
Intertidal habitat description	
Substrate type (i.e., gravel, sand, mud, riprap):	RR
Bank slope (i.e., steep, medium, flat):	RR 2:1
Other observations:	
Upland habitat description	
Vegetation type: blackberries/fence	
Structures present: buildings	
Potential nesting habitat: none - no large opportunity	
Other observations:	
Photo # and description:	

Form 1. LDW spotted sandpiper habitat survey form

Date: 6-3	Observer's name: BOYLE
Area number: 29 WAGON	Time: 1404 + 214
Data recorder's name: BOYLE	Weather: SUN
GPS location: start	GPS location: end
Easting (X): 122 812 956	Easting (X): 122 17 798
Northing (Y): 47 30 742	Northing (Y): 47 30 663
Intertidal habitat description	
Substrate type (i.e. gravel, sand, mud, riprap):	RIP RAP over sand to edge of lot
Bank slope (i.e. steep, medium, flat):	steep mud slope
Other observations: outfall 1/2 up area, barge below bridge	
Upland habitat description	
Vegetation type:	blackberry + landscape
Structures present:	building, walkway, paved storage
Potential nesting habitat:	none - foraging potential + 2 - +6(?)
Other observations:	
Photo # and description: 327	

Date: 6-3	Observer's name: BOYLE
Area number: 30 (west bank)	Time: 1404
Data recorder's name: BOYLE	Weather: SUN
GPS location: start	GPS location: end
Easting (X): 122 17 956 ^m 798	Easting (X): 122 17 858
Northing (Y): 47 30 742 ^m 663	Northing (Y): 47 36 95
Intertidal habitat description	
Substrate type (i.e., gravel, sand, mud, riprap):	Steep RR w/ underexposed soil areas
Bank slope (i.e., steep, medium, flat):	
Other observations:	
Upland habitat description	
Vegetation type:	landscape / black berries, weeping willow
Structures present:	paved storage lot
Potential nesting habitat:	low - some potential on high edge of RR / low forage
Other observations: more mud lot upstream of pedestrian bridge	
Photo # and description: #29	

Form 1. LDW spotted sandpiper habitat survey form

Date: 6-3	Observer's name: BOYLE
Area number: 31 TURNING BASIN	Time: 1456 - end
Data recorder's name: BOYLE	Weather: SUN
GPS location: start	GPS location: end
Easting (X): 122 17 898	Easting (X): 12218587
Northing (Y): 47 36 695	Northing (Y): 47 30 8746
Intertidal habitat description	
Substrate type (i.e., gravel, sand, mud, riprap):	broad mud / marsh bottom
Bank slope (i.e., steep, medium, flat):	flat, w marsh, some channels
Other observations:	
Upland habitat description	
Vegetation type: marsh vegetation below / willow / dogwood (planted)	
Structures present: bounded by w. marginal way, storage yard	
Potential nesting habitat: potential nesting at top of slope in small areas	
Other observations: mouse.	
Photo # and description: L1 photo #17	

around intertidal stream

Date:	Observer's name:
Area number:	Time:
Data recorder's name:	Weather:
GPS location: start	GPS location: end
Easting (X):	Easting (X):
Northing (Y):	Northing (Y):
Intertidal habitat description	
Substrate type (i.e., gravel, sand, mud, riprap):	
Bank slope (i.e., steep, medium, flat):	
Other observations:	
Upland habitat description	
Vegetation type:	
Structures present:	
Potential nesting habitat:	
Other observations:	
Photo # and description:	

Form 1. LDW spotted sandpiper habitat survey form

Date: 6-4	Observer's name: BOYLE
Area number: 32 (Start @ RR Bridge)	Time: 0929 ~ 1.0
Data recorder's name: BOYLE	Weather: SUN
GPS location: start	GPS location: end
Easting (X): 122 21 134	Easting (X): 122 21 087
Northing (Y): 47 34 200	Northing (Y): 47 34 089
Intertidal habitat description	
Substrate type (i.e., gravel, sand, mud, riprap)	pik + pier over RR
Bank slope (i.e., steep, medium, flat)	pik + pier vertical RR medium
Other observations: General construction area, barges always present, cement plant	
Upland habitat description	
Vegetation type: none	
Structures present: pier, barges	
Potential nesting habitat: none / no foraging opportunities	
Other observations:	
Photo # and description: #)	

Date: 6-4	Observer's name: BOYLE
Area number: 33 (Terminal 105)	Time:
Data recorder's name: BOYLE	Weather: SUN
GPS location: start	GPS location: end
Easting (X): 122 21 007	Easting (X): 122 21 013
Northing (Y): 47 34 089	Northing (Y): 47 34 024
Intertidal habitat description	
Substrate type (i.e., gravel, sand, mud, riprap)	
Bank slope (i.e., steep, medium, flat):	
Other observations: high feces density	
Upland habitat description	
Vegetation type: park + restored habitat	
Structures present: walkways, shelter	
Potential nesting habitat: yes, potential low potential @ park / low forage	
Other observations:	
Photo # and description:	

Form 1. LDW spotted sandpiper habitat survey form

Date: 6-4	Observer's name: BOYLE
Area number: 34	Time: 1-1.0
Data recorder's name: BOYLE	Weather:
GPS location: start	GPS location: end
Easting (X): 122 21 013	Easting (X): 122 21 220
Northing (Y): 47 34 004	Northing (Y): 47 34 81
Intertidal habitat description	
Substrate type (i.e., gravel, sand, mud, riprap):	stone constructed channel T 105
Bank slope (i.e., steep, medium, flat):	
Other observations: Channel is draining @ -1.0 Thalweg @ 3.4'	
Upland habitat description	
Vegetation type: mixed native community	
Structures present: gravel walkway - fence setback w/ 40' on L bank	
Potential nesting habitat:	yes potential nest - esp L bank, forage potential at low tide
Other observations: Killdeer	
Photo # and description:	

Date: 6-4	Observer's name: BOYLE
Area number: 35	Time:
Data recorder's name: BOYLE	Weather: SUN
GPS location: start	GPS location: end
Easting (X): 122 21 013 ^{122 20 942}	Easting (X): 122 20 942
Northing (Y): 47 34 004 ^{47 33 923}	Northing (Y): 47 33 923
Intertidal habitat description	
Substrate type (i.e., gravel, sand, mud, riprap):	mud + sand w/ remnant pile
Bank slope (i.e., steep, medium, flat):	
Other observations:	
Upland habitat description	
Vegetation type: shrubby invasives, fencing	
Structures present: building w/ 60' back, boat lift	
Potential nesting habitat: no low/yes foraging	
Other observations: many Marting gulls + boxes in vicinity, sand appears coarse, maybe part of T 105 105 activities?	
Photo # and description: 374	

Form 1. LDW spotted sandpiper habitat survey form

Date: 6-4	Observer's name: BOYLE
Area number: 36	Time:
Data recorder's name: BOYLE	Weather: SUN
GPS location: start	GPS location: end
Easting (X): 122 20942	Easting (X): 122 20 931
Northing (Y): 47 33 923	Northing (Y): 47 33 722
Intertidal habitat description	
Substrate type (i.e., gravel, sand, mud, riprap):	concrete pile pier
Bank slope (i.e., steep, medium, flat):	vertical pile w steep flat sheet pile
Other observations:	
Upland habitat description	
Vegetation type:	NONE
Structures present:	PIER
Potential nesting habitat:	NO / NO FORAGE
Other observations:	
Photo # and description:	

Date: 6-4	Observer's name: BOYLE
Area number: 37	Time: 1013 N-2.25
Data recorder's name: BOYLE	Weather: SUN
GPS location: start	GPS location: end
Easting (X): 122 20 931	Easting (X): 122 20 931 *
Northing (Y): 47 33 722	Northing (Y): 47 33 722
Intertidal habitat description	
Substrate type (i.e., gravel, sand, mud, riprap):	channel @ terminal 107
Bank slope (i.e., steep, medium, flat):	mud is flat
Other observations: sand pipes, killdeer, sora,	
Upland habitat description	
Vegetation type:	restoration site
Structures present:	none
Potential nesting habitat:	yes / yes forage
Other observations:	≥ 3 spots observed
Photo # and description:	

* START/END LOCATIONS ARE SAME (SIDE CHANNEL)

Form 1. LDW spotted sandpiper habitat survey form

Date: 6-4	Observer's name: BOYLE
Area number: 38	Time: 10:50 N - 4.0 N
Data recorder's name: BOYLE	Weather: SUN
GPS location: start	GPS location: end
Easting (X): 122 20 93 62 MW	Easting (X): 122 20 990 21 018
Northing (Y): 47 33 722 31 MW	Northing (Y): 47 33 603
Intertidal habitat description	
Substrate type (i.e., gravel, sand, mud, riprap):	Short RR section, broad mud flat
Bank slope (i.e., steep, medium, flat):	mud below +1.0, native veg sparse
Other observations: Restoration area above mud flat	
Upland habitat description	
Vegetation type: MARSH/UPLAND vegetation	
Structures present: walkway	
Potential nesting habitat: YES/Storage YES	
Other observations:	
Photo # and description:	

Date: 6-4	Observer's name: BOYLE
Area number: 39	Time: 11:01
Data recorder's name: BOYLE	Weather: SUN
GPS location: start	GPS location: end
Easting (X): 122 20 990 21 018	Easting (X): 122 21 029
Northing (Y): 47 33 603	Northing (Y): 47 33 494
Intertidal habitat description	
Substrate type (i.e., gravel, sand, mud, riprap):	W bank of Kelley Island channel
Bank slope (i.e., steep, medium, flat):	
Other observations:	
Upland habitat description	
Vegetation type: Shrubs on clay bank - ROSA, SPIRAEA, some RUBUS	
Structures present: not near shore, walkway (x 60' long)	
Potential nesting habitat: nesting potential in spots/high coverage opportunities	
Other observations:	
Photo # and description:	

992 0177

Form 1. LDW spotted sandpiper habitat survey form

Date: 6-4	Observer's name: BOYLE
Area number: 40 (Kellog Channel)	Time: 11:25 - 4.0
Data recorder's name: BOYLE	Weather: SUN
GPS location: start	GPS location: end
Easting (X): 122 21 029	Easting (X):
Northing (Y): 47 33 494	Northing (Y):
Intertidal habitat description	
Substrate type (i.e., gravel, sand, mud, riprap):	mud behind clay bank
Bank slope (i.e., steep, medium, flat):	flat @ channel bottom
Other observations: Bank swallow cavities in bank	
Upland habitat description	
Vegetation type:	uplands are mixed native / introduced shrubs/tree canopy
Structures present:	- bank's clay bluff, parks, parking (set back)
Potential nesting habitat:	yes; some wetlands near bank edge, particularly
Other observations:	\$ end of segment
Photo # and description:	

average potential high

of dunes made one cottonwood

Date: 6-4	Observer's name: BOYLE
Area number: 41 (Kellog)	Time: 12:00 - 4.0
Data recorder's name: BOYLE	Weather:
GPS location: start	GPS location: end
Easting (X): 122 20 786 <small>doesn't area 201's</small>	Easting (X): 122 20 854
Northing (Y): 47 33 421	Northing (Y): 47 33 406
Intertidal habitat description	
Substrate type (i.e., gravel, sand, mud, riprap):	gravel + sand slope on S side of Kellog
Bank slope (i.e., steep, medium, flat):	
Other observations:	
Upland habitat description	
Vegetation type:	blackberry shrub under alder (steep)
Structures present:	no
Potential nesting habitat:	low nesting / good forage
Other observations:	
Photo # and description: 1 (Barge in lot)	

Form 1. LDW spotted sandpiper habitat survey form

Date: 6-4	Observer's name: BOYLE
Area number: 42	Time: 12
Data recorder's name: BOYLE	Weather: SUN
GPS location: start	GPS location: end
Easting (X): 122 20 854	Easting (X): 122 90 944
Northing (Y): 47 33 406	Northing (Y): 47 33 485
Intertidal habitat description	
Substrate type (i.e., gravel, sand, mud, riprap):	mud below clay bank
Bank slope (i.e., steep, medium, flat):	flat mud sloping to Kellogg Is.
Other observations:	
Upland habitat description	
Vegetation type: mixed native + invasives, mature trees along top of Bank	
Structures present: none	
Potential nesting habitat: spots beneath large trees / high fringe	
Other observations:	
Photo # and description:	
#2 looking North	

Date: 6-4	Observer's name: BOYLE
Area number: 43 (Kellogg Isl.)	Time: 12 24
Data recorder's name: BOYLE	Weather: SUN
GPS location: start	GPS location: end
Easting (X): 122 20 ^{NE} 944	Easting (X): 122 20 901
Northing (Y): 47 33 485	Northing (Y): 47 35 538
Intertidal habitat description	
Substrate type (i.e., gravel, sand, mud, riprap):	broad mud bench @ NO-tlo
Bank slope (i.e., steep, medium, flat):	
Other observations:	
spot in channel large mud area on NE end of Kellogg Island	
Upland habitat description	
Vegetation type: shrubs/IV/Blackberry on flat upland, phragmites in low area	
Structures present: none	
Potential nesting habitat: Yes, nesting + foraging	
Other observations:	
Photo # and description:	
3-0 panorama of bench 4 spot	

Form 1. LDW spotted sandpiper habitat survey form

Date: 6-4	Observer's name: BOYLE
Area number: 44 Kellogg North	Time: 12 46
Data recorder's name: BOYLE	Weather: SUN
GPS location: start	GPS location: end
Easting (X): 122 20 940 01 ^m	Easting (X): 122 20 857
Northing (Y): 47 35 518	Northing (Y): 47 33 541
Intertidal habitat description	
Substrate type (i.e., gravel, sand, mud riprap):	mud + marsh
Bank slope (i.e., steep, medium, flat):	flat
Other observations: Phragmites	
Upland habitat description	
Vegetation type: Salt marsh + phragmites	
Structures present: none	
Potential nesting habitat: yes foraging yes	
Other observations: SPOTS present	
Photo # and description: 3-8	

Date: 6-4	Observer's name: BOYLE
Area number: 45 Kellogg east	Time: 12 51
Data recorder's name: BOYLE	Weather: SUN
GPS location: start	GPS location: end
Easting (X): 122 20 857	Easting (X): 122 20 670
Northing (Y): 47 33 541	Northing (Y): 47 33 429
Intertidal habitat description	
Substrate type (i.e., gravel, sand, mud riprap):	broad mud with shrubs above
Bank slope (i.e., steep, medium, flat):	low slope N80°
Other observations: 3 spots on beach	
Upland habitat description	
Vegetation type: blackberry overhanging / alder / madrone	
Structures present: NO	
Potential nesting habitat: yes / foraging yes	
Other observations:	
Photo # and description: 3-9	

Form 1. LDW spotted sandpiper habitat survey form

Date: 6-4	Observer's name: BOYLE
Area number: 46	Time: 1308 - 3.8
Data recorder's name: BOYLE	Weather: SUN
GPS location: start	GPS location: end
Easting (X): 122 20 670	Easting (X): 122 20 740 738
Northing (Y): 47 33 429	Northing (Y): 47 33 401 350
Intertidal habitat description	
Substrate type (i.e., gravel, sand, mud, riprap):	mud below rip rap w/ gravel in places
Bank slope (i.e., steep, medium, flat):	medium slope under bluff
Other observations:	
Upland habitat description	
Vegetation type: shrubs on steep ground under trees	
Structures present: none	
Potential nesting habitat: low nesting / mud forage	
Other observations: LDW on beach	
Photo # and description: 9	

Date: 6-4	Observer's name: BOYLE
Area number: 47	Time: 1332
Data recorder's name: BOYLE	Weather: SUN
GPS location: start	GPS location: end
Easting (X): 122 20 615	Easting (X): 122 20 431
Northing (Y): 47 33 320	Northing (Y): 47 33 031
Intertidal habitat description	
Substrate type (i.e., gravel, sand, mud, riprap):	Sheet pile / pier
Bank slope (i.e., steep, medium, flat):	vertical
Other observations:	
Upland habitat description	
Vegetation type: none	
Structures present: Cement plant + shipyard	
Potential nesting habitat: none - no foraging	
Other observations:	
Photo # and description: 10-18	

Form 1. LDW spotted sandpiper habitat survey form

Date: 6-4	Observer's name: BOYLE
Area number: 48	Time:
Data recorder's name: BOYLE	Weather: SUN
GPS location: start	GPS location: end
Easting (X): 122 20 439	Easting (X): 122 20 434
Northing (Y): 47 33 031	Northing (Y): 47 32 904
Intertidal habitat description	
Substrate type (i.e., gravel, sand, mud, riprap):	riprap or mud below riprap
Bank slope (i.e., steep, medium, flat)	
Other observations: area inside barge berth, barge moored	
Upland habitat description	
Vegetation type:	blackberry w/ landscape trees on S side
Structures present:	yes - conveyors / pier, container yard
Potential nesting habitat:	low on S side, none elsewhere - foraging yes below
Other observations:	
Photo # and description: 19+20	

Date: 6-4	Observer's name: BOYLE
Area number: 49	Time: 1345
Data recorder's name: BOYLE	Weather: SUN
GPS location: start	GPS location: end
Easting (X): 122 20 434	Easting (X): 122 20 281
Northing (Y): 47 32 904	Northing (Y): 47 32 708
Intertidal habitat description	
Substrate type (i.e., gravel, sand, mud, riprap):	PIER
Bank slope (i.e., steep, medium, flat):	PIER / RR beneath
Other observations: barges moored	
Upland habitat description	
Vegetation type:	none
Structures present:	pier + container yard
Potential nesting habitat:	no forage no
Other observations: Barges moored	
Photo # and description: 21	

Form 1. LDW spotted sandpiper habitat survey form

Date: 6-4	Observer's name: BOYLE
Area number: 50	Time: 1355
Data recorder's name: BOYLE	Weather:
GPS location: start	GPS location: end
Easting (X): 122 20 281	Easting (X): 122 20 127
Northing (Y): 47 32 708	Northing (Y): 47 32 543
Intertidal habitat description	
Substrate type (i.e., gravel, sand, mud, riprap):	WIND PIER S
Bank slope (i.e., steep, medium, flat):	
Other observations:	
Upland habitat description	
Vegetation type:	invasive fringe @ top of rip rap, sparse
Structures present:	containers yard / barge dock
Potential nesting habitat:	NO / forage NO
Other observations:	
Photo # and description:	
22	

Date: 6-4	Observer's name: BOYLE
Area number: 51	Time: 1358
Data recorder's name: BOYLE	Weather: SUN
GPS location: start	GPS location: end
Easting (X): 122 20 127	Easting (X): 122 20 068
Northing (Y): 47 32 543	Northing (Y): 47 32 484
Intertidal habitat description	
Substrate type (i.e., gravel, sand, mud, riprap):	
Bank slope (i.e., steep, medium, flat):	
Other observations:	
Upland habitat description	
Vegetation type:	fringe of shrub
Structures present:	bridge
Potential nesting habitat:	no foraging yes
Other observations:	
Photo # and description:	

Form 1. LDW spotted sandpiper habitat survey form

Date: 6-4	Observer's name: BOYLE
Area number: 52	Time: 1200 1400
Data recorder's name: BOYLE	Weather: SUN
GPS location: start	GPS location: end
Easting (X): 122 20 068	Easting (X): 122 20 068
Northing (Y): 47 32 484	Northing (Y): 47 32 484
Intertidal habitat description	
Substrate type (i.e., gravel, sand, <u>mud</u> , <u>riprap</u>):	Channel between rock gabions
Bank slope (i.e., <u>steep</u> , medium, flat):	
Other observations: Spot bathing in stream	
Upland habitat description	
Vegetation type:	mixed deciduous + shrub layer
Structures present:	Gabion, bridge pile
Potential nesting habitat:	yes swaying yes
Other observations:	
Photo # and description:	

Date: 6-4	Observer's name: BOYLE
Area number: 53	Time: 1428
Data recorder's name: BOYLE	Weather: SUN
GPS location: start	GPS location: end
Easting (X): 122 20 068	Easting (X): 122-20 19 912
Northing (Y): 47 32 484	Northing (Y): 47 32 365
Intertidal habitat description	
Substrate type (i.e., gravel, sand, <u>mud</u> , <u>riprap</u>):	R.R. mud @ barge mooring
Bank slope (i.e., <u>steep</u> , medium, flat):	
Other observations: barge moored	
Upland habitat description	
Vegetation type:	invasive fringe
Structures present:	Parking / container lot
Potential nesting habitat:	no - no forage
Other observations:	
Photo # and description: 23	

Form 1. LDW spotted sandpiper habitat survey form

Date: 6-4	Observer's name: BOYLE
Area number: 54	Time:
Data recorder's name: BOYLE	Weather: SUN
GPS location: start	GPS location: end
Easting (X): 122 19 912	Easting (X): 122 19 912
Northing (Y): 47 32 365	Northing (Y): 47 32 365
Intertidal habitat description	
Substrate type (i.e., gravel, sand, mud, riprap): mud, riprap	Channel with flow
Bank slope (i.e., steep, medium, flat): medium, flat	
Other observations: wiers? in channel	
Upland habitat description	
Vegetation type: blackberry	
Structures present: houses, birkhead	
Potential nesting habitat: poor / grazing yes	
Other observations: survey to 'cultivate'	
Photo # and description: Kevin Li photo	

Date: 6-4	Observer's name: BOYLE
Area number: 55	Time: 1442
Data recorder's name: BOYLE	Weather: SUN
GPS location: start	GPS location: end
Easting (X): 122 19 912	Easting (X): 122 19 778
Northing (Y): 47 32 365	Northing (Y): 47 32 295
Intertidal habitat description	
Substrate type (i.e., gravel, sand, mud, riprap): mud, riprap	and below riprap
Bank slope (i.e., steep, medium, flat): medium, flat	
Other observations: 24	
Upland habitat description	
Vegetation type: Knotweed/black bay fringe fringe	
Structures present: boat floats, boat yard	
Potential nesting habitat: no-norage	
Other observations:	
Photo # and description: 24	

Form 1. LDW spotted sandpiper habitat survey form

Date: 6-4	Observer's name: BOYLE
Area number: 56	Time:
Data recorder's name: BOYLE	Weather: SUN
GPS location: start	GPS location: end
Easting (X): 122 19 778	Easting (X): 122 19 399
Northing (Y): 47 32 295	Northing (Y): 47 32 076
Intertidal habitat description	
Substrate type (i.e., gravel, sand, mud, riprap):	rip rap + rubble small mud patches
Bank slope (i.e., steep, medium, flat):	with piers, sunken barges
Other observations: Sunken boats, vehicles, construction materials	
Upland habitat description	
Vegetation type: none - short lawn at residence w/ shrubs	
Structures present: pier, cranes	
Potential nesting habitat: no - no forage, except short mud patch at residence	
Other observations:	
Photo # and description:	

Date: 6-4	Observer's name: BOYLE
Area number: 57	Time: 1453
Data recorder's name: BOYLE	Weather: SUN
GPS location: start	GPS location: end
Easting (X): 122 19 399	Easting (X): 122 19 181
Northing (Y): 47 32 076	Northing (Y): 47 31 925
Intertidal habitat description	
Substrate type (i.e., gravel, sand, mud, riprap):	RR and piers, mud no mud with rubble
Bank slope (i.e., steep, medium, flat):	vertical pier steep bank
Other observations: moored barges, sunken hulls	
Upland habitat description	
Vegetation type: blackberry fringe	
Structures present: building, residence, no bulkheads	
Potential nesting habitat: no - poor forage	
Other observations: only forage @ south park beach	
Photo # and description: south park beach	

Form 1. LDW spotted sandpiper habitat survey form

Date: 6-4	Observer's name: BOYLE
Area number: 58	Time: 1458
Data recorder's name: BOYLE	Weather: SUN
GPS location: start	GPS location: end
Easting (X): 122 19 181	Easting (X): 122 18 860
Northing (Y): 47 31 925	Northing (Y): 47 31 754
Intertidal habitat description	
Substrate type (i.e., gravel, sand, mud, riprap):	riprap + rubble
Bank slope (i.e., steep, medium, flat):	steep
Other observations: residential area (South Park)	
Upland habitat description	
Vegetation type: manicured landscape on steep bank - no riparian	
Structures present: some high elevation bulk heads, houses set back	
Potential nesting habitat: none - no forage	
Other observations:	
Photo # and description:	

in some locations

Date: 6-4	Observer's name: BOYLE
Area number: 59 (marina)	Time: 1501
Data recorder's name: BOYLE	Weather: SUN
GPS location: start	GPS location: end
Easting (X): 122 18 860	Easting (X): 122 18 845
Northing (Y): 47 31 754	Northing (Y): 47 31 624
Intertidal habitat description	
Substrate type (i.e., gravel, sand, mud, riprap):	riprap + epoxy block bulkhead
Bank slope (i.e., steep, medium, flat):	vertical / steep
Other observations: marina	
Upland habitat description	
Vegetation type: sparse weeds	
Structures present: bulkhead, fences - lots	
Potential nesting habitat: no, no foraging potential	
Other observations:	
Photo # and description:	

Form 1. LDW spotted sandpiper habitat survey form

Date: 6-4	Observer's name: BOYLE
Area number: 60	Time: 15:05 +2:0
Data recorder's name: BOYLE	Weather: SUN/CLOUDS
GPS location: start	GPS location: end
Easting (X): 122 18 645	Easting (X): 122-18-486
Northing (Y): 47 31 624	Northing (Y): 47 31 333
Intertidal habitat description	
Substrate type (i.e., gravel, sand, <u>mud</u> , <u>riprap</u>):	mud below riprap mud to N+4.0
Bank slope (i.e., <u>steep</u> , <u>medium</u> , flat):	medium mud/steep riprap
Other observations: up stream end is	
Upland habitat description	
Vegetation type:	blackberry below fence / landscaped behind
Structures present:	walkway, lots
Potential nesting habitat:	no - low forage potential
Other observations: Some Shoreline trees appear spreading down	
Photo # and description: Kevin Li photo #28 53	

Date: 6-4	Observer's name: BOYLE
Area number: 61	Time: 1
Data recorder's name: BOYLE	Weather:
GPS location: start	GPS location: end
Easting (X): 122 18 486	Easting (X): 122 18 468
Northing (Y): 47 31 333	Northing (Y): 47 31 235
Intertidal habitat description	
Substrate type (i.e., gravel, sand, <u>mud</u> , <u>riprap</u>):	riprap + mud with pier
Bank slope (i.e., steep, <u>medium</u> , flat):	
Other observations: Barges moored	
Upland habitat description	
Vegetation type:	sparse weedy
Structures present:	pier
Potential nesting habitat:	no - no forage
Other observations:	
Photo # and description:	

Form 1. LDW spotted sandpiper habitat survey form

Date: 6-4 DULWICH YACHT CLUB	Observer's name: BOYLE
Area number: 62 (MARINA)	Time:
Data recorder's name: BOYLE	Weather: CLOUDS
GPS location: start	GPS location: end
Easting (X): 122 18 468	Easting (X): 122 18 405
Northing (Y): 47 31 235	Northing (Y): 47 31 128
Intertidal habitat description	
Substrate type (i.e., gravel, sand, mud, <u>riprap</u>)	
Bank slope (i.e. <u>steep</u> , medium, flat)	
Other observations:	
Upland habitat description	
Vegetation type: IVY ON RIPRAP	
Structures present: boat lift, floats, boat house 3	
Potential nesting habitat: NO - NO COVERAGE	
Other observations:	
Photo # and description: 54 - Kenna Li	

Date: 6-4 DELTA MARINE	Observer's name: BOYLE
Area number: 63	Time: 15 16
Data recorder's name: BOYLE	Weather:
GPS location: start	GPS location: end
Easting (X): 122 18 405	Easting (X): 122 18 372
Northing (Y): 47 31 128	Northing (Y): 47 31 044
Intertidal habitat description	
Substrate type (i.e., gravel, sand, mud, riprap):	brickhead
Bank slope (i.e., steep, medium, flat):	vertical
Other observations: Delta Marine Yard	
Upland habitat description	
Vegetation type: NONE	
Structures present: SHIP YARD	
Potential nesting habitat: NO - NO COVERAGE	
Other observations:	
Photo # and description:	

Form 1. LDW spotted sandpiper habitat survey form

Date: 6-4	Observer's name: BOYLE
Area number: 64 HAMM CREEK	Time:
Data recorder's name: BOYLE	Weather: SUN
GPS location: start	GPS location: end
Easting (X): 122 18 372	Easting (X): 122 18 371
Northing (Y): 47 31 044	Northing (Y): 47 30 943
Intertidal habitat description	
Substrate type (i.e., gravel, sand, mud, riprap):	mud + marsh
Bank slope (i.e., steep, medium, flat):	medium slope mud
Other observations: remnant pile in mud - stream restoration	
Upland habitat description	
Vegetation type:	restored marsh
Structures present:	pile
Potential nesting habitat:	Yes - forage yes
Other observations: public access from road	
Photo # and description:	

Date: 6-4	Observer's name: BOYLE
Area number: 65	Time: 1540 N+3.0
Data recorder's name: BOYLE	Weather:
GPS location: start	GPS location: end
Easting (X): 122 18 371	Easting (X): 122 18 330
Northing (Y): 47 30 943	Northing (Y): 47 30 807
Intertidal habitat description	
Substrate type (i.e., gravel, sand, mud, riprap):	steep riprap w/ path along top
Bank slope (i.e., steep, medium, flat):	steep, topped by wood bulkhead + backfill
Other observations: power substation	
Upland habitat description	
Vegetation type:	weedy fringe w/ path
Structures present:	bulkhead - very high elevation +15-16.0
Potential nesting habitat:	poor - no forage
Other observations:	
Photo # and description:	

Form 1. LDW spotted sandpiper habitat survey form

Date: 6-4	Observer's name: BOYLE
Area number: 666	Time: 1546 W+3.0
Data recorder's name: BOYLE	Weather: CLOUDS
GPS location: start	GPS location: end
Easting (X): 122 18 33	Easting (X): 122 18 287
Northing (Y): 47 30 807	Northing (Y): 47 30 769
Intertidal habitat description	
Substrate type (i.e., gravel, sand, mud, riprap):	mud beneath steep rubble
Bank slope (i.e., steep, medium, flat):	medium mud steep rubble
Other observations: outfall beach downstream of small pier	
Upland habitat description	
Vegetation type:	blackberries, locust
Structures present:	Quonset hut upstream
Potential nesting habitat:	low - foraging yes
Other observations:	
Photo # and description: Kevin Li #600	

Date:	Observer's name:
Area number:	Time:
Data recorder's name:	Weather:
GPS location: start	GPS location: end
Easting (X):	Easting (X):
Northing (Y):	Northing (Y):
Intertidal habitat description	
Substrate type (i.e., gravel, sand, mud, riprap):	
Bank slope (i.e., steep, medium, flat):	
Other observations:	
Upland habitat description	
Vegetation type:	
Structures present:	
Potential nesting habitat:	
Other observations:	
Photo # and description:	