

Appendix A. Blank data sheet.

UNIT (T-R-S-code) _____ DATE _____
 PHOTO POINT: COORDINATES N _____ W _____ WHOSE CAMERA: _____
 PHOTO FACING _____ OBSERVERS _____
 % COVER: SHRUB (live + dead) _____ + _____; HERB (native + exotic) _____ + _____; LITTER _____; BARE _____
 (SUM of all % COVER categories = 100). AV. SHRUB HEIGHT (circle) < 0.5 m; 0.5-1 m; 1-2 m; > 2m

SHRUBS	% Cover ¹	Distribution ²	Notes
<i>Atriplex lentiformis</i> (quailbush)		C P S 1	
<i>Atriplex polycarpa</i> (valley saltbush)		C P S 1	
<i>Atriplex spinifera</i> (spiny saltbush)		C P S 1	
<i>Frankenia salina</i> (alkali heath)		C P S 1	
<i>Isocoma acradenia</i> (alkali goldenbush)		C P S 1	
<i>Isomeris arborea</i> (bladderpod)		C P S 1	
<i>Suaeda</i> (bush seepweed)		C P S 1	
		C P S 1	
HERBS	% Cover ¹	Distribution ²	Notes
<i>Amsinckia</i> sp. (fiddleneck)		C P S 1	
<i>Bromus rubens</i> (red brome)		C P S 1	
<i>Erodium cicutarium</i> (filaree)		C P S 1	
<i>Hordeum murinum</i> (foxtail barley)		C P S 1	
<i>Lasthenia</i> sp. (goldfields)		C P S 1	
<i>Layia pentachaeta</i> ssp. <i>albida</i> (layia)		C P S 1	
<i>Phacelia ciliata</i> (valley phacelia)		C P S 1	
<i>Sisymbrium irio</i> (London rocket)		C P S 1	
		C P S 1	
		C P S 1	
		C P S 1	
		C P S 1	
		C P S 1	
		C P S 1	
CRUST	Check if present	Distribution ²	Notes
moss		C P S 1	
lichen		C P S 1	
ANIMAL SIGN	Use ³		Notes (write in species if known)
	On berm	On flats	
rodent	L M H	L M H	
gopher	L M H	L M H	
rabbit or pellets	C P S 1	C P S 1	
carnivore scat/tracks	C P S 1	C P S 1	
lizard	C P S 1	C P S 1	
bird	F H N R	F H N R	
NOTES (include management needs if appropriate):			
			more on back

¹ Cover classes: 0-1%; 1-5%; 5-25%; 25-50%; 50-75%; 75-95%; 95-100%
² Circle appropriate distribution category: **C** = continuous; **P** = patchy; **S** = scattered; **1** = in only one spot
³ Circle usage level. **Rodent/Gopher**: from any given point, can see on average **L** = 0-2 burrows/mounds; **M** = 3-5; **H** = 6+
Bird: **F** = flying over; **H** = hunting (raptor); **N** = nesting; **R** = resting/roosting

Appendix B. Plant list with species codes

Appendix B. Plants observed at the Atwell Island Restoration Project area in spring 2017 or seeded into selected restoration plots 2001-2015.

Species Code ¹	Genus	Species	Common name	Family	Seeded ²	Observed 2017	Notes
	<i>Acroptilon</i>	<i>repens</i>	Russian knapweed	Asteraceae		X	non-native
	<i>Acmispon (Lotus)</i>	<i>wrangelianus</i>	calf lotus	Fabaceae		X	
ALOC	<i>Allenrolfea</i>	<i>occidentalis</i>	iodine bush	Chenopodiaceae	X		
AMME	<i>Amsinckia</i>	<i>menziesii</i>	small-flowered fiddleneck	Boraginaceae	X	X	
	<i>Astragalus</i>	<i>didymocarpus</i>	two-seeded milkvetch	Fabaceae		X	
ASOX	<i>Astragalus</i>	<i>oxyphysus</i>	Diablo locoweed	Fabaceae	X		
ATAR	<i>Atriplex</i>	<i>argentea</i> var. <i>expansa</i>	silverscale, fogweed	Chenopodiaceae		X	Seedlings identified via dead parent
ATLE	<i>Atriplex</i>	<i>lentiformis</i>	quailbush	Chenopodiaceae	X	X	
ATPO	<i>Atriplex</i>	<i>polycarpa</i>	valley saltbush	Chenopodiaceae	X	X	
ATSP	<i>Atriplex</i>	<i>spinifera</i>	spiny saltbush	Chenopodiaceae	X	X	
	<i>Avena</i>	<i>fatua</i>	wild oats	Poaceae		X	non-native
BAHY	<i>Bassia</i>	<i>hyssopifolia</i>	five-hook bassia	Chenopodiaceae		X	non-native
	<i>Beta</i>	<i>vulgaris</i>	beet	Chenopodiaceae		X	non-native
	<i>Bromus</i>	<i>arizonicus</i>	Arizona brome	Poaceae		X	
	<i>Bromus</i>	<i>berteroanus</i>	Chilean chess	Poaceae		X	non-native
BRCA	<i>Bromus</i>	<i>carinatus</i>	California brome	Poaceae	X		
	<i>Bromus</i>	<i>diandrus</i>	ripgut brome	Poaceae		X	non-native
	<i>Bromus</i>	<i>hordeaceus</i>	soft chess	Poaceae		X	non-native
BRRU	<i>Bromus</i>	<i>madritensis</i> ssp. <i>rubens</i>	red brome	Poaceae		X	non-native
	<i>Bromus</i>	<i>tectorum</i>	cheatgrass	Poaceae		X	non-native
CABR	<i>Castilleja</i>	<i>brevistyla</i>	short-style owl's-clover	Orobanchaceae		X	
	<i>Capsella</i>	<i>bursa-pastoris</i>	shepherd's purse	Brassicaceae		X	non-native
CAEX	<i>Castilleja</i>	<i>exserta</i>	purple owl's-clover	Orobanchaceae		X	
CAPU	???		unknown code	?	X		not seen, not in 2010 report
	<i>Beta</i>	<i>vulgaris</i>	beet	Chenopodiaceae		X	non-native
	<i>Chenopodium</i>	<i>album</i>	lambs quarters	Chenopodiaceae		X	non-native
COCA	<i>Erigeron (Conyza)</i>	<i>canadensis</i>	horseweed	Asteraceae	X	X	
COCO	<i>Laennecia (Conyza)</i>	<i>coulteri</i>	Coulter's horseweed	Asteraceae	X	X	
	<i>Crassula</i>	<i>connata</i>	pygmy-weed	Crassulaceae		X	
CRTR	<i>Cressa</i>	<i>truxillensis</i>	alkali weed	Convolvulaceae	X	X	
DAWR	<i>Datura</i>	<i>wrightii</i>	jimson weed	Solanaceae	X		
	<i>Descurainia</i>	<i>sophia</i>	tansy mustard	Brassicaceae		X	non-native

Species Code	Genus	Species	Common name	Family	Seeded	Observed 2017	Notes
DICA	<i>Dichelostemma</i>	<i>capitatum</i>	blue dicks	Themidaceae	X		
DISP	<i>Distichlis</i>	<i>spicata</i>	salt grass	Poaceae		X	
ERPA	<i>Eremalche</i>	<i>parryi</i> ssp. <i>kernensis</i>	Kern mallow	Malvaceae	X	X	Federally endangered, 1B.2 ³
ERSE	<i>Croton (Eremocarpus)</i>	<i>setiger (setigerus)</i>	turkey-mullein		X		
ERCI	<i>Erodium</i>	<i>cicutarium</i>	redstem filaree	Geraniaceae		X	non-native
ESCA	<i>Eschscholzia</i>	<i>californica</i>	California poppy	Papaveraceae	X		
FRSA	<i>Frankenia</i>	<i>salina</i>	alkali heath	Frankeniaceae	X	X	
GITR	<i>Gilia</i>	<i>tricolor</i>	bird's-eye gilia	Polemoniaceae	X	X	
GRCA	<i>Grindelia</i>	<i>camporum</i>	gumplant	Asteraceae	X		
GULA	<i>Caulanthus (Guillenia)</i>	<i>lasiophyllus (lasiophylla)</i>	California mustard	Brassicaceae		X	
HEAN	<i>Helianthus</i>	<i>annuus</i>	annual sunflower	Asteraceae	X	X	
HECU	<i>Heliotropium</i>	<i>curassavicum</i>	alkali heliotrope	Boraginaceae	X		
HEPA	<i>Deinandra (Hemizonia)</i>	<i>pallida</i>	San Joaquin tarweed	Asteraceae	X		
HEPU	<i>Centromadia (Hemizonia)</i>	<i>pungens</i> ssp. <i>pungens</i>	spikeweed	Asteraceae	X	X	
HODE	<i>Hordeum</i>	<i>depressum</i>	low barley	Poaceae	X	X	
HOMU	<i>Hordeum</i>	<i>murinum</i> ssp. <i>glaucum</i>	wall (foxtail) barley	Poaceae		X	non-native
	<i>Hornungia (Hutchinsia)</i>	<i>procumbens</i>	prostrate Hutchinsia	Brassicaceae		X	non-native
ISAC	<i>Isocoma</i>	<i>acradenia</i>	alkali goldenbush	Asteraceae	X	X	
ISAR	<i>Peritoma (Isomeris)</i>	<i>arborea</i>	bladderpod	Cleomaceae	X	X	
LAFE	<i>Lasthenia</i>	<i>ferrisiae</i>	Ferris' goldfields	Asteraceae	X	X	Rare Plant Rank 4.2 ⁴
LACA	<i>Lasthenia</i>	<i>gracilis (californica)</i>	common goldfields	Asteraceae	X		Counted as present if LAMI or LASP observed
LAMI	<i>Lasthenia</i>	<i>minor</i>	coastal goldfields	Asteraceae		X	
LAGL	<i>Layia</i>	<i>glandulosa</i>	white layia	Asteraceae	X		Counted as present if LAPE observed
LAPE	<i>Layia</i>	<i>pentachaeta</i> ssp. <i>albida</i>	white Sierran tidy-tips	Asteraceae		X	
LASE	<i>Lactuca</i>	<i>serriola</i>	prickly lettuce	Asteraceae		X	non-native
LASP	<i>Lasthenia</i>	<i>species</i>	goldfields	Asteraceae		X	
LEAC	<i>Lepidium</i>	<i>acutidens (dictyotum</i> var. <i>acutidens)</i>	alkali peppergrass	Brassicaceae		X	
LEDI	<i>Lepidium</i>	<i>dictyotum</i>	peppergrass	Brassicaceae	X	X	Counted as present if LESP observed
LENI	<i>Lepidium</i>	<i>nitidum</i>	common peppergrass	Brassicaceae	X	X	Counted as present if LESP observed
LESP	<i>Lepidium</i>	<i>species</i>	peppergrass	Brassicaceae		X	
LETR	<i>Elymus (Leymus)</i>	<i>triticoideis</i>	beardless wild rye	Poaceae	X		

Species Code	Genus	Species	Common name	Family	Seeded	Observed 2017	Notes
LOPU	<i>Acmispon (Lotus)</i>	americanus (purshianus)	Spanish clover	Fabaceae	X		
LUNA	<i>Lupinus</i>	nanus	sky lupine	Fabaceae	X		
MACO	<i>Malacothrix</i>	coulteri	snake's-head	Asteraceae	X	X	
	<i>Malva</i>	parviflora	cheeseweed, little mallow	Malvaceae		X	non-native
MALE	<i>Malvella</i>	leprosa	alkali mallow	Malvaceae	X		
MEIN	<i>Melilotus</i>	indicus	sourclover	Fabaceae		X	non-native
MONU	<i>Monolepis</i>	nuttalliana	poverty weed	Chenopodiaceae		X	
NEME	<i>Nemophila</i>	menziesii	baby blue-eyes	Boraginaceae	X		
	<i>Pectocarya</i>	penicillata	northern combseed	Boraginaceae		X	
PHCI	<i>Phacelia</i>	ciliata	valley phacelia	Boraginaceae	X	X	
PHTA	<i>Phacelia</i>	tanacetifolia	tansy-leaved phacelia	Boraginaceae	X		
	<i>Phalaris</i>	minor	lesser canary grass	Poaceae		X	non-native
PLCA	<i>Plagiobothrys</i>	canescens	Valley popcorn flower	Boraginaceae		X	
PLLE	<i>Plagiobothrys</i>	leptocladus	vernal pool popcorn flower	Boraginaceae		X	
	<i>Poa</i>	annua	annual bluegrass	Poaceae		X	non-native
	<i>Polygonum</i>	arenastrum	common knotweed	Polygonaceae		X	non-native
	<i>Raphanus</i>	raphinastrum	wild radish	Brassicaceae		X	non-native
SCAR	<i>Schismus</i>	arabicus	Arabian grass	Poaceae		X	non-native
SEVE	<i>Sesuvium</i>	verrucosum	western sea-purslane	Aizoaceae	X		
SEVU	<i>Senecio</i>	vulgaris	common groundsel	Asteraceae		X	non-native
	<i>Sinapis</i>	arvensis	wild mustard	Brassicaceae		X	non-native
SIIR	<i>Sisymbrium</i>	irio	London rocket	Brassicaceae		X	non-native
	<i>Sonchus</i>	asper	prickly sow-thistle	Asteraceae		X	non-native
	<i>Sonchus</i>	oleraceus	sow-thistle	Asteraceae		X	non-native
SPAI	<i>Sporobolus</i>	airoides	alkali dropseed	Poaceae	X	X	
SPMA	<i>Spergularia</i>	marina	salt-marsh sand-spurrey	Caryophyllaceae		X	
	<i>Stellaria</i>	media	common chickweed	Caryophyllaceae		X	non-native
SUMO	<i>Suaeda</i>	nigra (moquinii)	bush seepweed	Chenopodiaceae	X	X	
TRER	<i>Triphysaria</i>	eriantha	Johnny-tuck, butter-and-eggs	Orobanchaceae	X		
TRLA	<i>Trichostema</i>	lanceolatum	vinegar weed	Lamiaceae	X		
TROV	Trichostema	ovatum	San Joaquin bluecurls	Lamiaceae	X		Rare Plant Rank 4.2 ⁴
VUMI	<i>Festuca (Vulpia)</i>	microstachys	Pacific fescue	Poaceae	X	X	
VUMY	<i>Festuca (Vulpia)</i>	myuros	rat-tail fescue	Poaceae		X	non-native
	<i>Festuca (Vulpia)</i>	octoflora	six weeks fescue	Poaceae		X	
	<i>Veronica</i>	peregrina ssp. xalapensis	purslane speedwell	Plantaginaceae		X	

¹ Codes may not match current name due to recent taxonomic changes. Codes are included only for species referenced in tables.

² Includes species from the S&S Seed mixture.

³ Rare or endangered in California and elsewhere (California Native Plant Society 2017).

⁴ Limited distribution in CA (California Native Plant Society 2017).

Appendix C. Animal list with species codes.

Appendix C.

Vertebrate animals observed at the Atwell Island Restoration Project area in spring 2017.

Species Code ¹	Genus & species	Common name	Notes
REPTILES			
coachwhip ²	<i>Masticophis flagellum ruddocki</i>	San Joaquin Coachwhip	unconfirmed sighting
horned lizard	<i>Phrynosoma blainvillii</i>	coast horned lizard	
Uta	<i>Uta stansburiana</i>	side-blotched lizard	
BIRDS			
avocet	<i>Recurvirostra americana</i>	American avocet	resting/roosting in flooded plot
blkneck stilt	<i>Himantopus mexicanus</i>	black-necked stilt	resting/roosting in flooded plot
BUOW	<i>Athene cunicularia</i>	burrowing owl ²	nesting
cliff swallow, swallow	<i>Petrochelidon pyrrhonota</i>	cliff swallow	flying over plot
dove	<i>Zenaida macroura</i>	mourning dove	
duck			flying over plot; probably mallard
great egret	<i>Ardea alba</i>	great egret ³	hunting
harrier	<i>Circus cyaneus</i>	northern harrier ³	flying over plot
ibis	<i>Plegadis chihi</i>	white-faced ibis ³	resting or roosting in flooded plot, flying over
mallard	<i>Anas platyrhynchos</i>	mallard	nesting in flooded plot
mockingbird	<i>Mimus polyglottos</i>	northern mockingbird	resting/roosting
pheasant	<i>Phasianus colchicus</i>	ring-necked pheasant	nesting?
raven	<i>Corvus corax</i>	common raven	flying over plot
red-tailed hawk	<i>Buteo jamaicensis</i>	red-tailed hawk	flying over plot, nesting
roadrunner	<i>Geococcyx californianus</i>	greater roadrunner	running on plot
RRBB, RWBB, blackbird	<i>Agelaius phoeniceus</i>	red-winged blackbird	individuals and flock observed; resting/roosting, flying over plot
SASP	<i>Artemisiospiza nevadensis/belli</i>	sagebrush sparrow	resting/roosting
savannah sp?	<i>Passerculus sandwichensis</i>	savannah sparrow	resting/roosting
WCS	<i>Zonotrichia leucophrys</i>	white-crowned sparrow	resting/roosting in flooded plot
WEME, meadowlark	<i>Sturnella neglecta</i>	western meadowlark	resting/roosting
white-tailed kite, kite	<i>Elanus leucurus</i>	white-tailed kite ³	flying over plot
w. kingbird	<i>Tyrannus verticalis</i>	western kingbird	

MAMMALS			
CAGR, grdsq	<i>Spermophilus beecheyi</i>	California ground squirrel	observation and burrows
cottontail	<i>Sylvilagus audubonii</i>	desert cottontail	observation and pellets
coyote	<i>Canis latrans</i>	coyote	dens, tracks, and scats observed
gopher	<i>Thomomys bottae</i>	Botta's pocket gopher	burrows
hare, jackrabbit, JR	<i>Lepus californicus</i>	black-tailed jackrabbit	observation and pellets
kit fox	<i>Vulpes macrotis mutica</i>	San Joaquin kit fox ²	possible scat at artificial den
k-rat	<i>Dipodomys heermanni</i>	Heermann's kangaroo rat	burrows
mice	unknown	mice	burrows
rabbit			includes both cottontail and jackrabbit

¹ Codes from data sheets.

² Species of Special Concern (California Department of Fish and Wildlife 2017).

³ A Species of Special Concern only if nesting (California Department of Fish and Wildlife 2017).