Covered and Invasive Species Management: Crestridge Ecological Reserve and South Crest Properties

TASKS 1-4: Appendices

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CONSERVATION BIOLOGY INSTITUTE

APPENDIX A

GIS LOCATIONS

INVASIVE PLANT SPECIES

Appendix A - Invasive Species Locations
Crestridge Ecological Reserve and South Crest Properties

Species	Site	Occurrence No.	Observor	Date	GPS Unit	Datum	GPS Error	Point/Polygon	GPS location (center)
Arundo donax	CER	ARDO_01	Patricia Gordon-Reedy/Curtis Battle	3/14/2011	Garmin 60CSX	NAD83	12	point	-116.874263424, 32.8432675925
Arundo donax	CER	ARDO_02	Patricia Gordon-Reedy/Curtis Battle	3/14/2011	Garmin 60CSX	NAD83	12	point	-116.873696544, 32.8428914106
Brachypodium distachyon	CER	BRDI_01	Patricia Gordon-Reedy/Curtis Battle	3/14/2011	Garmin 60CSX	NAD83	12	polygon	-116.866404524, 32.8410164788
Brachypodium distachyon	CER	BDRI_02	Patricia Gordon-Reedy/Curtis Battle	4/20/2011	Garmin 60CSX	NAD83	N/A	polygon	-116.870138852, 32.8431811525
Brachypodium distachyon	CER	BDRI_03	Patricia Gordon-Reedy/Curtis Battle	4/20/2011	Garmin 60CSX	NAD83	15	polygon	-116.863230489, 32.8409731658
Brachypodium distachyon	CER	BDRI_04	Patricia Gordon-Reedy/Curtis Battle	6/2/2011	Garmin 60CSX	NAD83	N/A	polygon	-116.866061069, 32.8393748522
Brachypodium distachyon	CER	BDRI_05	Patricia Gordon-Reedy/Curtis Battle	6/10/2011	Garmin 60CSX	NAD83	12	polygon	-116.87022412, 32.8424535633
Brachypodium distachyon	SC	BDRI_01	Patricia Gordon-Reedy/Curtis Battle	4/6/2011	Garmin 60CSX	NAD83	13	polygon	-116.869185926, 32.788513128
Brassica tournefortii	SC	BRTO_01	Jessie Vinje/Curtis Battle	5/23/2012	Garmin 60CSX	NAD83	N/A	point	-116.866070471, 32.7861710435
Brassica tournefortii	SC	BRTO_02	Jessie Vinje/Curtis Battle	5/23/2012	Garmin 60CSX	NAD83	N/A	point	-116.86629414, 32.7875130595
Carduus pycnocephalus	CER	CAPY_01	Patricia Gordon-Reedy/Curtis Battle	3/28/2011	Garmin 60CSX	NAD83	10	polygon	-116.853209023, 32.8344263984
Carduus pycnocephalus	CER	CAPY_02	Patricia Gordon-Reedy/Curtis Battle	3/28/2011	Garmin 60CSX	NAD83	12	polygon	-116.859113406, 32.8334270441
Carduus pycnocephalus	CER	CAPY_03	Patricia Gordon-Reedy/Curtis Battle	3/28/2011	Garmin 60CSX	NAD83	17	polygon	-116.851689429, 32.8351797779
Carduus pycnocephalus	CER	CAPY_04	Patricia Gordon-Reedy/Curtis Battle	3/30/2011	Garmin 60CSX	NAD83	13	polygon	-116.886712724, 32.8177753981
Carduus pycnocephalus	CER	CAPY_05	Patricia Gordon-Reedy/Curtis Battle	3/30/2011	Garmin 60CSX	NAD83	13	polygon	-116.883719988, 32.822471666
Carduus pycnocephalus	CER	CAPY_06	Patricia Gordon-Reedy/Curtis Battle	3/30/2011	Garmin 60CSX	NAD83	13	polygon	-116.882455181, 32.8218153953
Carduus pycnocephalus	CER	CAPY_07	Patricia Gordon-Reedy/Curtis Battle	3/30/2011	Garmin 60CSX	NAD83	13	polygon	-116.882169587, 32.8215862719
Carduus pycnocephalus	CER	CAPY_08	Patricia Gordon-Reedy/Curtis Battle	4/20/2011	Garmin 60CSX	NAD83	15	point	-116.872129544, 32.8438952312
Carduus pycnocephalus	CER	CAPY_09	Patricia Gordon-Reedy/Curtis Battle	4/20/2011	Garmin 60CSX	NAD83	15	point	-116.870844061, 32.844149434
Carduus pycnocephalus	CER	CAPY_10	Patricia Gordon-Reedy/Curtis Battle	4/20/2011	Garmin 60CSX	NAD83	15	polygon	-116.865672743, 32.8429222716
Carduus pycnocephalus	CER	CAPY_11	Patricia Gordon-Reedy/Curtis Battle	6/14/2012	Garmin 60CSX	NAD83	15	polygon	-116.834726777, 32.8462336533
Carduus pycnocephalus	CER	CAPY_12	Patricia Gordon-Reedy/Curtis Battle	6/14/2012	Garmin 60CSX	NAD83	15	polygon	-116.835179308, 32.8462007344
Carduus pycnocephalus	CER	CAPY_13	Patricia Gordon-Reedy/Curtis Battle	6/14/2012	Garmin 60CSX	NAD83	15	polygon	-116.835645086, 32.8465962261
Carduus pycnocephalus	CER	CAPY_14	Patricia Gordon-Reedy/Curtis Battle	7/5/2011	Garmin 60CSX	NAD83	12	polygon	-116.825420004, 32.8536211357
Carduus pycnocephalus	CER	CAPY_15	Patricia Gordon-Reedy/Curtis Battle	7/26/2011	Garmin 60CSX	NAD83	12	polygon	-116.837561413, 32.8467543471
Carduus pycnocephalus	CER	CAPY_16	Patricia Gordon-Reedy/Curtis Battle	8/26/2011	Garmin 60CSX	NAD83	12	polygon	-116.836674577, 32.8463015989
Carduus pycnocephalus	CER	CAPY_17	Patricia Gordon-Reedy/Curtis Battle	5/29/2012	Garmin 60CSX	NAD83	14	polygon	-116.847846122, 32.8347142524
Carduus pycnocephalus	SC	CAPY_01	Patricia Gordon-Reedy/Curtis Battle	4/5/2011	Garmin 60CSX	NAD83	13	polygon	-116.8779965, 32.7973628373

Carpobrotus sp. (aff. edulis?)	CER	CASP_01	Patricia Gordon-Reedy/Curtis Battle	3/28/2011	Garmin 60CSX	NAD83	12	polygon	-116.873942981, 32.8424764766
Cortarderia selloana	CER	COSE_01	Patricia Gordon-Reedy/Curtis Battle	3/28/2011	Garmin 60CSX	NAD83	15	polygon	-116.874072883, 32.8425568109
Cortarderia selloana	CER	COSE_02	Patricia Gordon-Reedy/Curtis Battle	3/28/2011	Garmin 60CSX	NAD83	15	polygon	-116.874043633, 32.8425233612
Cynara cardunculus	SC	CYCA_01	Patricia Gordon-Reedy/Curtis Battle	4/14/2011	Garmin 60CSX	NAD83	12	polygon	-116.868430728, 32.785555638
Cyperus involucratus	CER	CYIN_01	Patricia Gordon-Reedy/Curtis Battle	9/21/2011	Garmin 60CSX	NAD83	12	point	-116.858383, 32.828864
Cyperus involucratus	CER	CYIN_02	Patricia Gordon-Reedy/Curtis Battle	9/21/2011	Garmin 60CSX	NAD83	12	point	-116.858544, 32.828925
Dittrichia graveolens	CER	DIGR_01	Patricia Gordon-Reedy/Curtis Battle	8/26/2011	Garmin 60CSX	NAD83	14	polygon	-116.83092, 32.844245
Dittrichia graveolens	CER	DIGR_02	Patricia Gordon-Reedy/Curtis Battle	8/26/2011	Garmin 60CSX	NAD83	14	point	-116.830488, 32.844276
Dittrichia graveolens	CER	DIGR_03	Patricia Gordon-Reedy/Curtis Battle	8/26/2011	Garmin 60CSX	NAD83	14	point	-116.830381, 32.84421
Dittrichia graveolens	CER	DIGR_04	Patricia Gordon-Reedy/Curtis Battle	8/26/2011	Garmin 60CSX	NAD83	11	polygon	-116.830706, 32.84408
Dittrichia graveolens	CER	DIGR_05	Patricia Gordon-Reedy/Curtis Battle	8/26/2011	Garmin 60CSX	NAD83	11	point	-116.830981, 32.844043
Dittrichia graveolens	CER	DIGR_06	Patricia Gordon-Reedy/Curtis Battle	8/26/2011	Garmin 60CSX	NAD83	11	polygon	-116.831992, 32.843233
Dittrichia graveolens	CER	DIGR_07	Patricia Gordon-Reedy/Curtis Battle	8/26/2011	Garmin 60CSX	NAD83	11	polygon	-116.833095, 32.84328
Dittrichia graveolens	CER	DIGR_08	Patricia Gordon-Reedy/Curtis Battle	8/26/2011	Garmin 60CSX	NAD83	11	polygon	-116.833856, 32.841779
Dittrichia graveolens	CER	DIGR_09	Patricia Gordon-Reedy/Curtis Battle	8/26/2011	Garmin 60CSX	NAD83	11	polygon	-116.833248, 32.842415
Dittrichia graveolens	CER	DIGR_10	Patricia Gordon-Reedy/Curtis Battle	8/26/2011	Garmin 60CSX	NAD83	11	point	-116.833572, 32.841123
Dittrichia graveolens	CER	DIGR_11	Patricia Gordon-Reedy/Curtis Battle	8/26/2011	Garmin 60CSX	NAD83	11	polygon	-116.83308, 32.842415
Dittrichia graveolens	CER	DIGR_12	Patricia Gordon-Reedy/Curtis Battle	8/26/2011	Garmin 60CSX	NAD83	11	polygon	-116.83254, 32.842311
Dittrichia graveolens	CER	DIGR_13	Patricia Gordon-Reedy/Curtis Battle	8/26/2011	Garmin 60CSX	NAD83	11	polygon	-116.832552, 32.842042
Dittrichia graveolens	CER	DIGR_14	Patricia Gordon-Reedy/Curtis Battle	8/26/2011	Garmin 60CSX	NAD83	12	polygon	-116.832854, -116.832854
Dittrichia graveolens	CER	DIGR_15	Patricia Gordon-Reedy/Curtis Battle	8/26/2011	Garmin 60CSX	NAD83	12	point	-116.832854, 32.842035
Dittrichia graveolens	CER	DIGR_16	Patricia Gordon-Reedy/Curtis Battle	8/26/2011	Garmin 60CSX	NAD83	12	polygon	-116.834622, 32.842464
Dittrichia graveolens	CER	DIGR_17	Patricia Gordon-Reedy/Curtis Battle	8/26/2011	Garmin 60CSX	NAD83	12	point	-116.835191, 32.842103
Dittrichia graveolens	CER	DIGR_18	Patricia Gordon-Reedy/Curtis Battle	8/26/2011	Garmin 60CSX	NAD83	12	point	-116.835296, 32.842055
Dittrichia graveolens	CER	DIGR_19	Patricia Gordon-Reedy/Curtis Battle	8/26/2011	Garmin 60CSX	NAD83	12	point	-116.83592, 32.841738
Dittrichia graveolens	CER	DIGR_20	Patricia Gordon-Reedy/Curtis Battle	8/26/2011	Garmin 60CSX	NAD83	12	point	-116.834349, 32.841753
Dittrichia graveolens	CER	DIGR_21	Patricia Gordon-Reedy/Curtis Battle	8/26/2011	Garmin 60CSX	NAD83	12	point	-116.834131, 32.841851
Dittrichia graveolens	CER	DIGR_22	Patricia Gordon-Reedy/Curtis Battle	8/26/2011	Garmin 60CSX	NAD83	12	point	-116.834079, 32.841949
Ehrharta longiflora	CER	EHLO_01	Patricia Gordon-Reedy/Curtis Battle	3/28/2011	Garmin 60CSX	NAD83	12	point	-116.874103, 32.843091

Ehrharta longiflora	CER	EHLO_02	Patricia Gordon-Reedy/Curtis Battle	3/28/2011	Garmin 60CSX	NAD83	17	polygon	-116.855164, 32.834079
Ehrharta longiflora	CER	EHLO_03	Patricia Gordon-Reedy/Curtis Battle	3/28/2011	Garmin 60CSX	NAD83	12	polygon	-116.85702, 32.833606
Ehrharta longiflora	CER	EHLO_04	Patricia Gordon-Reedy/Curtis Battle	3/28/2011	Garmin 60CSX	NAD83	12	polygon	-116.859013, 32.834083
Ehrharta longiflora	CER	EHLO_05	Patricia Gordon-Reedy/Curtis Battle	3/28/2011	Garmin 60CSX	NAD83	11	polygon	-116.886632, 32.817768
Ehrharta longiflora	CER	EHLO_06	Patricia Gordon-Reedy/Curtis Battle	7/5/2011	Garmin 60CSX	NAD83	12	polygon	-116.825558, 32.853888
Ehrharta longiflora	CER	EHLO_07	Patricia Gordon-Reedy/Curtis Battle	7/5/2011	Garmin 60CSX	NAD83	12	polygon	-116.825711, 32.854266
Ehrharta longiflora	CER	EHLO_08	Patricia Gordon-Reedy/Curtis Battle	7/5/2011	Garmin 60CSX	NAD83	12	polygon	-116.825409, 32.854157
Ehrharta longiflora	CER	EHLO_09	Patricia Gordon-Reedy/Curtis Battle	7/26/2011	Garmin 60CSX	NAD83	12	polygon	-116.833908, 32.846155
Ehrharta longiflora	CER	EHLO_10	Patricia Gordon-Reedy/Curtis Battle	9/21/2011	Garmin 60CSX	NAD83	12	polygon	-116.860458, 32.829588
Ehrharta longiflora	CER	EHLO_11	Patricia Gordon-Reedy/Curtis Battle	5/29/2012	Garmin 60CSX	NAD83	13	polygon	-116.857754, 32.833105
Ehrharta longiflora	CER	EHLO_12	Patricia Gordon-Reedy/Curtis Battle	5/29/2012	Garmin 60CSX	NAD83	17	polygon	-116.859836, 32.829205
Ehrharta longiflora	SC	EHLO_01	Patricia Gordon-Reedy/Curtis Battle	4/6/2011	Garmin 60CSX	NAD83	12	polygon	-116.865591, 32.788087
Eucalyptus sp.	CER	EUSP_01	Patricia Gordon-Reedy/Curtis Battle	9/21/2011	Garmin 60CSX	NAD83	12	point	-116.858582, 32.828344
Eucalyptus sp.	SC	EUSP_01	Patricia Gordon-Reedy/Curtis Battle	4/5/2011	Garmin 60CSX	NAD83	12	polygon	-116.879035, 32.791062
Foeniculum vulgare	CER	FOVU_01	Patricia Gordon-Reedy/Curtis Battle	5/26/2011	Garmin 60CSX	NAD83	11	polygon	-116.870977, 32.789062
Foeniculum vulgare	SC	FOVU_02	Jessie Vinje/Curtis Battle	5/29/2012	Garmin 60CSX	NAD83	15	point	-116.84771, 32.834708
Foeniculum vulgare	SC	FOVU_03	Jessie Vinje/Curtis Battle	5/29/2012	Garmin 60CSX	NAD83	15	point	-116.848518, 32.834587
Chrysanthemum coronarium	SC	GLCO_01	Patricia Gordon-Reedy/Curtis Battle	4/5/2011	Garmin 60CSX	NAD83	14	polygon	-116.880414, 32.799433
Chrysanthemum coronarium	SC	GLCO_02	Patricia Gordon-Reedy/Curtis Battle	4/5/2011	Garmin 60CSX	NAD83	17	polygon	-116.884011, 32.800463
Chrysanthemum coronarium	SC	GLCO_03	Patricia Gordon-Reedy/Curtis Battle	4/5/2011	Garmin 60CSX	NAD83	17	polygon	-116.880882, 32.796142
Chrysanthemum coronarium	SC	GLCO_04	Patricia Gordon-Reedy/Curtis Battle	4/5/2011	Garmin 60CSX	NAD83	14	polygon	-116.880259, 32.795184
Chrysanthemum coronarium	SC	GLCO_05	Patricia Gordon-Reedy/Curtis Battle	4/5/2011	Garmin 60CSX	NAD83	14	polygon	-116.877956, 32.797208
Chrysanthemum coronarium	SC	GLCO_06	Patricia Gordon-Reedy/Curtis Battle	4/5/2011	Garmin 60CSX	NAD83	13	polygon	-116.876963, 32.795247
Chrysanthemum coronarium	SC	GLCO_07	Patricia Gordon-Reedy/Curtis Battle	4/5/2011	Garmin 60CSX	NAD83	14	polygon	-116.877783, 32.799863
Marrubium vulgare	CER	MAVU_01	Patricia Gordon-Reedy/Curtis Battle	3/28/2011	Garmin 60CSX	NAD83	12	polygon	-116.851432, 32.835308
Marrubium vulgare	CER	MAVU_02	Patricia Gordon-Reedy/Curtis Battle	3/30/2011	Garmin 60CSX	NAD83	12	polygon	-116.884096, 32.822775
Marrubium vulgare	CER	MAVU_03	Patricia Gordon-Reedy/Curtis Battle	9/21/2011	Garmin 60CSX	NAD83	12	polygon	-116.858548, 32.829432
Marrubium vulgare	SC	MAVU_01	Patricia Gordon-Reedy/Curtis Battle	4/5/2011	Garmin 60CSX	NAD83	12	point	-116.880424, 32.799945
Marrubium vulgare	SC	MAVU_02	Patricia Gordon-Reedy/Curtis Battle	4/5/2011	Garmin 60CSX	NAD83	12	point	-116.880371, 32.799905

Melenis repens	SC	MERE_01	Patricia Gordon-Reedy/Curtis Battle	4/14/2011	Garmin 60CSX	NAD83	11	polygon	-116.862096, 32.785241
Melenis repens	SC	MERE_02	Patricia Gordon-Reedy/Curtis Battle	4/14/2011	Garmin 60CSX	NAD83	11	polygon	-116.862141, 32.785252
Melenis repens	SC	MERE_03	Patricia Gordon-Reedy/Curtis Battle	4/14/2011	Garmin 60CSX	NAD83	11	polygon	-116.862127, 32.785295
Melenis repens	SC	MERE_04	Patricia Gordon-Reedy/Curtis Battle	4/14/2011	Garmin 60CSX	NAD83	11	point	-116.861802, 32.785846
Olea europaea	CER	OLEU_01	Patricia Gordon-Reedy/Curtis Battle	4/20/2011	Garmin 60CSX	NAD83	15	point	-116.869216, 32.8437
Oxalis pes-carpe	SC	OXPE_01	Patricia Gordon-Reedy/Curtis Battle	4/5/2011	Garmin 60CSX	NAD83	13	polygon	-116.879961, 32.799656
Pennisetum setaceum	CER	PESE_01	Patricia Gordon-Reedy/Curtis Battle	3/14/2011	Garmin 60CSX	NAD83	12	polygon	-116.868162, 32.838675
Pennisetum setaceum	CER	PESE_02	Patricia Gordon-Reedy/Curtis Battle	3/14/2011	Garmin 60CSX	NAD83	12	polygon	-116.868282, 32.838733
Pennisetum setaceum	CER	PESE_03	Patricia Gordon-Reedy/Curtis Battle	3/14/2011	Garmin 60CSX	NAD83	12	polygon	-116.869051, 32.84008
Pennisetum setaceum	CER	PESE_04	Patricia Gordon-Reedy/Curtis Battle	3/28/2011	Garmin 60CSX	NAD83	12	polygon	-116.860503, 32.834211
Pennisetum setaceum	CER	PESE_05	Patricia Gordon-Reedy/Curtis Battle	3/28/2011	Garmin 60CSX	NAD83	12	polygon	-116.860589, 32.834186
Pennisetum setaceum	CER	PESE_06	Patricia Gordon-Reedy/Curtis Battle	3/28/2011	Garmin 60CSX	NAD83	12	polygon	-116.860854, 32.834177
Pennisetum setaceum	CER	PESE_07	Patricia Gordon-Reedy/Curtis Battle	3/28/2011	Garmin 60CSX	NAD83	12	point	-116.860903, 32.834185
Pennisetum setaceum	CER	PESE_08	Patricia Gordon-Reedy/Curtis Battle	3/28/2011	Garmin 60CSX	NAD83	12	point	-116.860865, 32.834182
Pennisetum setaceum	CER	PESE_09	Patricia Gordon-Reedy/Curtis Battle	3/30/2011	Garmin 60CSX	NAD83	14	polygon	-116.850053, 32.834568
Pennisetum setaceum	CER	PESE_10	Patricia Gordon-Reedy/Curtis Battle	3/30/2011	Garmin 60CSX	NAD83	14	polygon	-116.850084, 32.834472
Pennisetum setaceum	CER	PESE_11	Patricia Gordon-Reedy/Curtis Battle	3/30/2011	Garmin 60CSX	NAD83	N/A	point	-116.889769, 32.822242
Pennisetum setaceum	CER	PESE_12	Patricia Gordon-Reedy/Curtis Battle	3/30/2011	Garmin 60CSX	NAD83	N/A	point	-116.889918, 32.822415
Pennisetum setaceum	CER	PESE_13	Patricia Gordon-Reedy/Curtis Battle	3/30/2011	Garmin 60CSX	NAD83	N/A	point	-116.889793, 32.822554
Pennisetum setaceum	CER	PESE_14	Patricia Gordon-Reedy/Curtis Battle	4/20/2011	Garmin 60CSX	NAD83	11	point	-116.868717, 32.843576
Pennisetum setaceum	CER	PESE_15	Patricia Gordon-Reedy/Curtis Battle	4/20/2011	Garmin 60CSX	NAD83	15	polygon	-116.863189, 32.841238
Pennisetum setaceum	CER	PESE_16	Patricia Gordon-Reedy/Curtis Battle	4/20/2011	Garmin 60CSX	NAD83	15	polygon	-116.866894, 32.840241
Pennisetum setaceum	CER	PESE_17	Patricia Gordon-Reedy/Curtis Battle	5/3/2011	Garmin 60CSX	NAD83	16	polygon	-116.846796, 32.837905
Pennisetum setaceum	CER	PESE_18	Patricia Gordon-Reedy/Curtis Battle	5/3/2011	Garmin 60CSX	NAD83	16	polygon	-116.846327, 32.838328
Pennisetum setaceum	CER	PESE_19	Patricia Gordon-Reedy/Curtis Battle	5/3/2011	Garmin 60CSX	NAD83	16	polygon	-116.846458, 32.838541
Pennisetum setaceum	CER	PESE_20	Patricia Gordon-Reedy/Curtis Battle	5/3/2011	Garmin 60CSX	NAD83	16	polygon	-116.847253, 32.838179
Pennisetum setaceum	CER	PESE_21	Patricia Gordon-Reedy/Curtis Battle	5/3/2011	Garmin 60CSX	NAD83	16	polygon	-116.847619, 32.83881
Pennisetum setaceum	CER	PESE_22	Patricia Gordon-Reedy/Curtis Battle	5/3/2011	Garmin 60CSX	NAD83	16	polygon	-116.847881, 32.838975
Pennisetum setaceum	CER	PESE_23	Patricia Gordon-Reedy/Curtis Battle	5/3/2011	Garmin 60CSX	NAD83	16	polygon	-116.848155, 32.839154

Pennisetum setaceum	CER	PESE_24	Patricia Gordon-Reedy/Curtis Battle	6/14/2011	Garmin 60CSX	NAD83	12	point	-116.842348, 32.843619
Pennisetum setaceum	CER	PESE_25	Patricia Gordon-Reedy/Curtis Battle	6/14/2011	Garmin 60CSX	NAD83	12	point	-116.843186, 32.843602
Pennisetum setaceum	CER	PESE_26	Patricia Gordon-Reedy/Curtis Battle	7/26/2011	Garmin 60CSX	NAD83	13	point	-116.840276, 32.845399
Pennisetum setaceum	CER	PESE_27	Jessie Vinje/Curtis Battle	5/29/2012	Garmin 60CSX	NAD83	15	point	-116.850048, 32.833299
Pennisetum setaceum	CER	PESE_28	Jessie Vinje/Curtis Battle	5/29/2012	Garmin 60CSX	NAD83	15	point	-116.850553, 32.833542
Pennisetum setaceum	SC	PESE_01	Patricia Gordon-Reedy/Curtis Battle	4/6/2011	Garmin 60CSX	NAD83	12	polygon	-116.883108, 32.800586
Pennisetum setaceum	SC	PESE_02	Patricia Gordon-Reedy/Curtis Battle	4/6/2011	Garmin 60CSX	NAD83	12	point	-116.883072, 32.80064
Pennisetum setaceum	SC	PESE_03	Patricia Gordon-Reedy/Curtis Battle	4/6/2011	Garmin 60CSX	NAD83	12	point	-116.883084, 32.800705
Pennisetum setaceum	SC	PESE_04	Patricia Gordon-Reedy/Curtis Battle	4/6/2011	Garmin 60CSX	NAD83	12	point	-116.869883, 32.790601
Pennisetum setaceum	SC	PESE_05	Patricia Gordon-Reedy/Curtis Battle	4/6/2011	Garmin 60CSX	NAD83	12	point	-116.869656, 32.787731
Pennisetum setaceum	SC	PESE_06	Patricia Gordon-Reedy/Curtis Battle	4/6/2011	Garmin 60CSX	NAD83	12	point	-116.865236, 32.788605
Pennisetum setaceum	SC	PESE_07	Patricia Gordon-Reedy/Curtis Battle	4/6/2011	Garmin 60CSX	NAD83	12	point	-116.865256, 32.788607
Pennisetum setaceum	SC	PESE_08	Patricia Gordon-Reedy/Curtis Battle	4/6/2011	Garmin 60CSX	NAD83	12	point	-116.865283, 32.78857
Pennisetum setaceum	SC	PESE_09	Patricia Gordon-Reedy/Curtis Battle	4/6/2011	Garmin 60CSX	NAD83	12	point	-116.865278, 32.788547
Pennisetum setaceum	SC	PESE_10	Patricia Gordon-Reedy/Curtis Battle	4/6/2011	Garmin 60CSX	NAD83	12	point	-116.864991, 32.788547
Pennisetum setaceum	SC	PESE_11	Patricia Gordon-Reedy/Curtis Battle	4/13/2011	Garmin 60CSX	NAD83	12	point	-116.86429, 32.789359
Pennisetum setaceum	SC	PESE_12	Patricia Gordon-Reedy/Curtis Battle	4/13/2011	Garmin 60CSX	NAD83	11	point	-116.864199, 32.789376
Pennisetum setaceum	SC	PESE_13	Patricia Gordon-Reedy/Curtis Battle	4/14/2011	Garmin 60CSX	NAD83	11	point	-116.862571, 32.783574
Pennisetum setaceum	SC	PESE_14	Patricia Gordon-Reedy/Curtis Battle	4/14/2011	Garmin 60CSX	NAD83	11	point	-116.862025 , 32.784406
Pennisetum setaceum	SC	PESE_15	Patricia Gordon-Reedy/Curtis Battle	4/14/2011	Garmin 60CSX	NAD83	11	polygon	-116.861949, 32.784944
Pennisetum setaceum	SC	PESE_16	Patricia Gordon-Reedy/Curtis Battle	4/14/2011	Garmin 60CSX	NAD83	11	point	-116.862259, 32.785521
Pennisetum setaceum	SC	PESE_17	Patricia Gordon-Reedy/Curtis Battle	4/14/2011	Garmin 60CSX	NAD83	11	polygon	-116.862178, 32.78633
Pennisetum setaceum	SC	PESE_18	Patricia Gordon-Reedy/Curtis Battle	4/14/2011	Garmin 60CSX	NAD83	11	polygon	-116.861397, 32.78496
Pennisetum setaceum	SC	PESE_19	Patricia Gordon-Reedy/Curtis Battle	4/14/2011	Garmin 60CSX	NAD83	11	polygon	-116.861605, 32.78464
Pennisetum setaceum	SC	PESE_20	Patricia Gordon-Reedy/Curtis Battle	4/14/2011	Garmin 60CSX	NAD83	11	point	-116.861767, 32.784265
Pennisetum setaceum	SC	PESE_21	Patricia Gordon-Reedy/Curtis Battle	4/14/2011	Garmin 60CSX	NAD83	11	polygon	-116.860606, 32.78417
Pennisetum setaceum	SC	PESE_22	Patricia Gordon-Reedy/Curtis Battle	5/24/2011	Garmin 60CSX	NAD83	11	point	-116.872189, 32.78928
Pennisetum setaceum	SC	PESE_23	Patricia Gordon-Reedy/Curtis Battle	5/24/2011	Garmin 60CSX	NAD83	12	point	-116.870032, 32.787499
Pennisetum setaceum	SC	PESE_24	Patricia Gordon-Reedy/Curtis Battle	6/30/2011	Garmin 60CSX	NAD83	11	point	-116.86604, 32.788585

Pennisetum setaceum	SC	PESE_25	Patricia Gordon-Reedy/Curtis Battle	6/30/2011	Garmin 60CSX	NAD83	11	point	-116.866682, 32.788585
Pennisetum setaceum	SC	PESE_26	Patricia Gordon-Reedy/Curtis Battle	6/30/2011	Garmin 60CSX	NAD83	11	polygon	-116.866908, 32.786035
Ricinis Communis	CER	RICO_01	Patricia Gordon-Reedy/Curtis Battle	3/14/2011	Garmin 60CSX	NAD83	12	point	-116.874149, 32.843335
Schinus molle	SC	SCMO_01	Patricia Gordon-Reedy/Curtis Battle	4/5/2011	Garmin 60CSX	NAD83	14	point	-116.878072, 32.797534
Silybum Marianum	CER	SIMA_01	Patricia Gordon-Reedy/Curtis Battle	3/14/2011	Garmin 60CSX	NAD83	12	polygon	-116.873821, 32.842989
Silybum Marianum	CER	SIMA_02	Patricia Gordon-Reedy/Curtis Battle	4/26/2011	Garmin 60CSX	NAD83	12	polygon	-116.893466, 32.81733
Silybum Marianum	SC	SIMA_01	Patricia Gordon-Reedy/Curtis Battle	4/5/2011	Garmin 60CSX	NAD83	11	polygon	-116.880206, 32.800424
Silybum Marianum	SC	SIMA_02	Patricia Gordon-Reedy/Curtis Battle	4/5/2011	Garmin 60CSX	NAD83	12	point	-116.879945, 32.80011
Tamarix sp.	CER	TASP_01	Patricia Gordon-Reedy/Curtis Battle	5/29/2011	Garmin 60CSX	NAD83	12	point	-116.859224, 32.833739
Tamarix sp.	SC	TASP_01	Patricia Gordon-Reedy/Curtis Battle	4/5/2011	Garmin 60CSX	NAD83	N/A	point	-116.877612, 32.795895
Vinca major	CER	VIMA_01	Jessie Vinje/Curtis Battle	5/29/2011	Garmin 60CSX	NAD83	12	point	-116.858444, 32.827976
Vinca major	CER	VIMA_02	Jessie Vinje/Curtis Battle	5/29/2011	Garmin 60CSX	NAD83	12	point	-116.858423, 32.82811
Washingtonia spp	SC	WASP_01	Patricia Gordon-Reedy/Curtis Battle	4/5/2011	Garmin 60CSX	NAD83	N/A	point	-116.877357, 32.798131
Washingtonia spp	SC	WASP-02	Patricia Gordon-Reedy/Curtis Battle	4/5/2011	Garmin 60CSX	NAD83	N/A	point	-116.878396, 32.796575

Metadata
Species: Scientific Name
Site: CER = Crestridge Ecological Reserve; SC = South Crest (San Diego County, CA)
Occurrence Number: 4-letter code plus site-specific occurrence number
Observor(s): PGR = Patricia Gordon-Reedy; CB = Curtis Battle; JV = Jessie Vinje
Date: Date of field work/data collection
GPS Unit: Make and model
Datum: NAD83
GPS Error: Recorded in feet
Point/Polygon: Indicates whether spatial data were collected as a point or polygon
GPS Location: Coordinates are reported in decimal degres; UTM Zone 11N

Appendix B
Invasive Plant Data Forms

B.1: Crestridge Ecological Reserve

B.2: South Crest Properties

Appendix B.1

Invasive Plant Data Forms:

Crestridge Ecological Reserve

Invasive Species Data Form

Species	*Arundo donax*
Occurrence Number	CER_ARDO_01
Date	3/14/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	Crestridge Ecological Reserve
Specific (onsite) Location	Slopes east of Rios Canyon and north of 'Thornmint Hill'; north of Rios Elementary School, east of fenceline adjacent to trailer park.
GPS Unit **Datum**	Garmin 60CSX NAD83 UTM Zone 11N
GPS Location	-116.874263, 32.843268
GPS Error	12 ft
Aspect	Bottom of slope (disturbed swale)
Infested Area	N/A
Canopy Closure (canopy area covered by invasive plant)	Low
Abundance	1 large clump
Vegetation Community	*Bromus diandrus* Semi-Natural Stand
Overall Site Quality	____ Very Good-Excellent ____ Fair-Good ____Poor __X__ Very Poor
Comments	East of fuelbreak along nw edge of CER; may be outside (and just north) of reserve.
Voucher Specimen	Yes/No; Herbarium:
Definitions: *Occurrence Number* *Infested Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Arundo donax*
Occurrence Number	CER_ARDO_02
Date	3/14/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	Crestridge Ecological Reserve
Specific (onsite) Location	Slopes east of Rios Canyon and north of 'Thornmint Hill'; north of Rios Elementary School, east of fenceline adjacent to trailer park.
GPS Unit **Datum**	Garmin 60CSX NAD83 UTM Zone 11N
GPS Location	-116.873697, 32.842891
GPS Error	12 ft
Aspect	N; adjacent to disturbed, cleared area.
Infested Area	N/A
Canopy Closure (canopy area covered by invasive plant)	Low
Abundance	2 plants (note: it appears that a number of plants have been removed and dumpe
Vegetation Community	*Bromus diandrus* Semi-Natural Stand
Overall Site Quality	____ Very Good-Excellent ____ Fair-Good ____Poor __X__ Very Poor
Comments	This location is just north of northern reserve boundary.
Voucher Specimen	Yes/No; Herbarium:
Definitions: *Occurrence Number* *Infested Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Brachypodium distachyon*
Occurrence Number	CER_BRDI_01
Date	3/14/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	Crestridge Ecological Reserve
Specific (onsite) Location	Slopes east of Rios Canyon ('Thornmint Hill')
GPS Unit **Datum**	Garmin 60CSX NAD83 UTM Zone 11N
GPS Location	-116.866405, 32.841016
GPS Error	12 ft
Aspect	W, SW
Infested Area	13.95 acres
Canopy Closure (canopy area covered by invasive plant)	Moderate to High
Abundance	Dense monoculture to scattered, dense patches
Vegetation Community	Varies: *Avena barbata* (*fatua*) Semi-Natural Stands; Nassella pulchra Association;
Overall Site Quality	____ Very Good-Excellent __X__ Fair-Good __X__Poor ____ Very Poor
Comments	Slopes burned in 2003 Cedar fire; shrubs, native grasses, native bulbs recovering. Associated species: *Malosma laurina* , *Salvia apiana* , *Nassella pulchra* , *Chlorogalum parviflorum* , *Allium haematochiton* , *Dichelostemma capitatum* , *Calochortus splendens* , *Avena barbata* , *Centaurea melitensis* . BRDI - just beginning to flower in a few locations; mostly 2-4" high with no florets.
Voucher Specimen	Yes/No; Herbarium:
Definitions: *Occurrence Number* *Infested Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Brachypodium distachyon*
Occurrence Number	CER_BRDI_02
Date	3/20/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	Crestridge Ecological Reserve
Specific (onsite) Location	Slopes east of Rios Canyon and north of 'Thornmint Hill'
GPS Unit **Datum**	Garmin 60CSX NAD83 UTM Zone 11N
GPS Location	-116.870139, 32.843181
GPS Error	N/A
Aspect	N, NW, NE, flat (top)
Infested Area	45.61 acres
Canopy Closure (canopy area covered by invasive plant)	Moderate
Abundance	Dense monoculture to scattered, dense patches
Vegetation Community	Varies: *Avena barbata* (*fatua*) Semi-Natural Stand; *Nassella pulchra* Association; *Malosma laurina-Lotus scoparius* Association; *Brachypodium distachyon* Semi-
Overall Site Quality	____ Very Good-Excellent __X__ Fair-Good __X__ Poor ____ Very Poor
Comments	Slopes burned in 2003 Cedar fire; shrubs, native grasses, native bulbs recovering. Associated species: *Malosma laurina* , *Rhamnus crocea, Sambucus nigra, Adenostoma fasciculatum, Salvia apiana, Heteromeles arbutifolia, Eriophyllum confertiflorum, Eriogonum fasciculatum* , *Nassella pulchra* , *Chlorogalum parviflorum* , *Sidalcea malvaeflora, Epilobium sp.*
Voucher Specimen	Yes/No; Herbarium:
Definitions: *Occurrence Number* *Infested Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Brachypodium distachyon*
Occurrence Number	CER_BRDI_03
Date	4/20/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	Crestridge Ecological Reserve
Specific (onsite) Location	Slopes east of 'Thornmint Hill'
GPS Unit **Datum**	Garmin 60CSX NAD83 UTM Zone 11N
GPS Location	-116.86323, 32.840973
GPS Error	15 ft
Aspect	SW
Infested Area	0.13 acre
Canopy Closure (canopy area covered by invasive plant)	Moderate (25%)
Abundance	Dense monoculture to scattered, dense patches
Vegetation Community	Varies: *Avena* (*barbata*) *fatua*) Semi-Natural Stand; *Brachypodium distachyon* Semi-Natural Stand; *Malosma laurina-Lotus scoparius* Association
Overall Site Quality	____ Very Good-Excellent __X__ Fair-Good ____Poor ____ Very Poor
Comments	Slopes burned in 2003 Cedar fire; Associated species: *Malosma laurina (5%)* , Adenostoma fasciculatum (<1%)*, Salvia apiana (3%), Avena barbata (30%).*
Voucher Specimen	Yes/No; Herbarium:
Definitions: *Occurrence Number* *Infested Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Brachypodium distachyon*
Occurrence Number	CER_BRDI_05
Date	6/10/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	Crestridge Ecological Reserve
Specific (onsite) Location	Slope directly east of Rios Canyon Elementary School
GPS Unit **Datum**	Garmin 60CSX NAD83 UTM Zone 11N
GPS Location	-116.870224, 32.842454
GPS Error	12 ft
Aspect	NW-facing slope
Infested Area	0.18 acre
Canopy Closure (canopy area covered by invasive plant)	High (80%)
Abundance	Dense monoculture
Vegetation Community	*Brachypodium distachyon* Semi-Natural Stand Type
Overall Site Quality	____ Very Good-Excellent __X__ Fair-Good __X__ Poor ____ Very Poor
Comments	Slopes burned in 2003 Cedar fire; recovering CSS + nonnative grasses (primarily *Avena barbata* , *Bromus hordeaceus* , *Vulpia myuros*); only stand of *Brachypodium distachyon* on this slope and possibly, a relatively new occurrence. Associated species: *Malosma laurina (5%)* , *Salvia apiana (1%), Rhamnus crocea (1%), Calystegia macrostegia (1%), Eriogonum fasciculatum (<1%), Lotus scoparius (<1%),Centaurea melitensis (1%), Avena barbata (<1%).*
Voucher Specimen	Yes/No; Herbarium: No
Definitions: *Occurrence Number* *Infested Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Carduus pycnocephalus*
Occurrence Number	CER_CAPY_01
Date	3/28/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	Crestridge Ecological Reserve
Specific (onsite) Location	Rios Canyon; Rios Canyon Road, west of junction with Montana Serena; edge of road; both sides of road
GPS Unit **Datum**	Garmin 60CSX NAD83 UTM Zone 11N
GPS Location (waypoint)	-116.853209, 32.834426
GPS Error	10 ft
Aspect	Flat
Infested Area	0.14 acre
Gross Area	
Canopy Closure (canopy area covered by invasive plant)	High (60%)
Abundance	Scattered to dense
Vegetation Community	*Ceanothus tomentosus* Association
Overall Site Quality	Very Good-Excellent X Fair-Good Poor Very Poor
Comments	Shrub stratum: *Ceanothus tomentosus* ; Herb stratum: *Bromus diandrus* (10%); *Carduus pycnocephalus* (60%); *Vulpia myuros* (5%). Intact shrub stratum with disturbed understory.
Voucher Specimen	Yes/No; Herbarium:
Definitions: *Occurrence Number* *Infested Area/Gross Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Carduus pycnocephalus*
Occurrence Number	CER_CAPY_02
Date	3/28/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	Crestridge Ecological Reserve
Specific (onsite) Location	Rios Canyon; Rios Canyon Road, west of junction with Montana Serena; bottom of drainage; low-lying area at base of culvert.
GPS Unit **Datum**	Garmin 60CSX NAD83 UTM Zone 11N
GPS Location (waypoint)	-116.859113, 32.833427
GPS Error	12 ft
Aspect	Northeast: bottom of drainage
Infested Area	0.05 acre
Gross Area	
Canopy Closure (canopy area covered by invasive plant)	Moderate (15%)
Abundance	Scattered to dense
Vegetation Community	*Artemisia californica-Eriogonum fasciculatum-Malosma laurina* Association
Overall Site Quality	Very Good-Excellent Fair-Good X Poor Very Poor
Comments	*Eriogonum fasciculatum* (20%), *Lotus scoparius* (5%), *Artemisia californica* (20%), *Carduus pycnocephalus* (15%), *Centaurea melitensis* (20%).
Voucher Specimen	Yes/No; Herbarium:
Definitions: *Occurrence Number* *Infested Area/Gross Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Carduus pycnocephalus*
Occurrence Number	CER_CAPY_03
Date	3/28/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	Crestridge Ecological Reserve
Specific (onsite) Location	Rios Canyon; Rios Canyon Road, west of junction with Montana Serena; directly south of CAPY_02.
GPS Unit **Datum**	Garmin 60CSX NAD83 UTM Zone 11N
GPS Location (waypoint)	-116.851689, 32.83518
GPS Error	17 ft
Aspect	North-facing slope
Infested Area	0.02 acre
Gross Area	
Canopy Closure (canopy area covered by invasive plant)	Moderate (20%)
Abundance	Scattered to dense
Vegetation Community	*Artemisia californica* Association
Overall Site Quality	Very Good-Excellent Fair-Good X Poor Very Poor
Comments	*Eriophyllum confertiflorum (5%), Isocoma menziesii (2%), Carduus pycnocephalus (20%), Artemisia californica (10%), Erodium cicutarium (10%), Bromus diandrus (7%), Medicago polymorpha (3%).*
Voucher Specimen	Yes/No; Herbarium:
Definitions: *Occurrence Number* *Infested Area/Gross Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Carduus pycnocephalus*
Occurrence Number	CER_CAPY_04
Date	3/30/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	Crestridge Ecological Reserve
Specific (onsite) Location	Reserve entrance at west end of La Cresta Heights Road; along east-trending trail through smaller oak grove; west of oak grove.
GPS Unit **Datum**	Garmin 60CSX NAD 83 UTM Zone 11N
GPS Location (waypoint)	-116.886713, 32.817775
GPS Error	13 ft
Aspect	Flat to south-facing slope
Infested Area	0.10 acre
Gross Area	
Canopy Closure (canopy area covered by invasive plant)	Moderate (20%)
Abundance	Scattered dense patches to dense monoculture
Vegetation Community	Quercus agrifolia/Toxicodendron/Grass Association
Overall Site Quality	Very Good-Excellent Fair-Good X Poor Very Poor
Comments	Both sides of trail, in wet soil. Opening adjacent to oaks. Dominant understory species*: Carduus pycnocephalus (25%), Centaurea melitensis (5%), Ehrharta longiflora (localized - 10%), Bromus diandrus (3%), Vulpia myuros (1%), Bromus hordeaceus, Bromus rubens, Lythrum hyssopifolium (all <1%). Adjacent tree/shrub strata include Quercus agrifolia, Ceanothus leucodermis, Baccharis pilularis.* ***Note: Artemisia palmeri by abandoned truck (not included in GPS mapping - will be ARPA_12).***
Voucher Specimen	Yes/No; Herbarium:
Definitions: *Occurrence Number* *Infested Area/Gross Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Carduus pycnocephalus*
Occurrence Number	CER_CAPY_05
Date	3/30/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	Crestridge Ecological Reserve
Specific (onsite) Location	Reserve entrance at west end of La Cresta Heights Road; along east-trending trail through smaller oak grove; west edge of oak grove.
GPS Unit **Datum**	Garmin 60CSX NAD 83 UTM Zone 11N
GPS Location (waypoint)	-116.886632, 32.817768
GPS Error	13 ft
Aspect	Flat to slightly north-facing slope
Infested Area	0.08 acre
Gross Area	
Canopy Closure (canopy area covered by invasive plant)	High (30%)
Abundance	Scattered dense patches
Vegetation Community	*Quercus agrifolia/Toxicodendron* /Grass Association
Overall Site Quality	Very Good-Excellent Fair-Good X Poor Very Poor
Comments	Both sides of trail, opening under oak canopy. Associated species: *Toxicodendron diversilobum* (20%), *Bromus diandrus* (30%). *Quercus agrifolia* adjacent to opening.
Voucher Specimen	Yes/No; Herbarium:
Definitions: *Occurrence Number* *Infested Area/Gross Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Carduus pycnocephalus*
Occurrence Number	CER_CAPY_06
Date	3/30/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	Crestridge Ecological Reserve
Specific (onsite) Location	Reserve entrance at west end of La Cresta Heights Road; along east-trending trail through smaller oak grove; just west of oak grove and CAPY_05.
GPS Unit **Datum**	Garmin 60CSX NAD 83 UTM Zone 11N
GPS Location (waypoint)	-116.882455, 32.821815
GPS Error	13 ft
Aspect	Flat
Infested Area	0.03 acre
Gross Area	
Canopy Closure (canopy area covered by invasive plant)	Moderate (25%)
Abundance	Scattered dense patches
Vegetation Community	*Quercus agrifolia/Toxicodendron* /Grass Association
Overall Site Quality	Very Good-Excellent Fair-Good X Poor Very Poor
Comments	North side of trail, along trail edge. Road edge: *Carduus pycnocephalus* (25%), *Bromus diandrus* (15%). Adjacent species: *Sambucus mexicana, Toxicodendron diversilobum, Quercus agrifolia.*
Voucher Specimen	Yes/No; Herbarium:
Definitions: *Occurrence Number* *Infested Area/Gross Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Carduus pycnocephalus*
Occurrence Number	CER_CAPY_07
Date	3/30/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	Crestridge Ecological Reserve
Specific (onsite) Location	Reserve entrance at west end of La Cresta Heights Road; along east-trending trail through smaller oak grove; just west of oak grove and CAPY_05.
GPS Unit **Datum**	Garmin 60CSX NAD 83 UTM Zone 11N
GPS Location (waypoint)	-116.88217, 32.821586
GPS Error	13 ft
Aspect	Flat
Infested Area	0.04 acre
Gross Area	
Canopy Closure (canopy area covered by invasive plant)	High (50%)
Abundance	Scattered dense patches to dense monocultures
Vegetation Community	*Quercus agrifolia/Toxicodendron* /Grass Association
Overall Site Quality	Very Good-Excellent Fair-Good X Poor Very Poor
Comments	Both sides of trail *Quercus agrifolia* (30%), *Toxicodendron diversilobum* (15%), *Carduus pycnocephalus* (40%), *Bromus diandrus* (15%)
Voucher Specimen	Yes/No; Herbarium:
Definitions: *Occurrence Number* *Infested Area/Gross Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Carduus pycnocephalus*
Occurrence Number	CER_CAPY_08
Date	4/20/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	Crestridge Ecological Reserve
Specific (onsite) Location	North-facing slopes east of Rios Canyon and directly south of northern property boundary
GPS Unit **Datum**	Garmin 60CSX NAD 83 UTM Zone 11N
GPS Location (waypoint)	-116.87213, 32.843895
GPS Error	15 ft
Aspect	N
Infested Area	N/A
Gross Area	
Canopy Closure (canopy area covered by invasive plant)	Low
Abundance	Scattered plants to scattered dense patches
Vegetation Community	*Malosma laurina-Lotus scoparius* Association
Overall Site Quality	X Very Good-Excellent Fair-Good Poor Very Poor
Comments	In understory of shrubs; associated species: *Malosma laurina* (40%), *Rhamnus crocea* (2%), *Sambucus nigra* (2%), *Salvia apiana* (2%), *Heteromeles arbutifolia* (4%), *Eriophyllum confertiflorum* (3%), *Bromus diandrus* (5%), *Brachypodium distachyon* (10%), *Galium aparine* (1%), *Bromus hordeaceus* (<1%), *Sonchus oleraceus* (<1%), Clarkia *epilobiodes* (<1%), *Sidalcea malvaeflora* (<1%), *Dichelostemma capitatum* (<1%).
Voucher Specimen	Yes/No; Herbarium:
Definitions: *Occurrence Number* *Infested Area/Gross Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Carduus pycnocephalus*
Occurrence Number	CER_CAPY_09
Date	4/20/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	Crestridge Ecological Reserve
Specific (onsite) Location	North-facing slopes east of Rios Canyon and directly south of northern property boundary
GPS Unit **Datum**	Garmin 60CSX NAD 83 UTM Zone 11N
GPS Location (waypoint)	-116.870844, 32.844149
GPS Error	15 ft
Aspect	N
Infested Area	N/A
Gross Area	
Canopy Closure (canopy area covered by invasive plant)	Low
Abundance	Scattered plants
Vegetation Community	*Malosma laurina-Lotus scoparius* Association
Overall Site Quality	X Very Good-Excellent Fair-Good Poor Very Poor
Comments	5-10 plants in and near drainage along illegal fenceline; associated species: *Malosma laurina (40%), Rhamnus crocea (2%), Sambucus nigra (2%), Salvia apiana (2%), Heteromeles arbutifolia (4%), Eriophyllum confertiflorum (3%), Bromus diandrus (5%), Brachypodium distachyon (10%), Galium aparine (1%), Bromus hordeaceus (<1%), Sonchus oleraceus (<1%), Clarkia epilobiodes (<1%), Sidalcea malvaeflora (<1%), Dichelostemma capitatum (<1%).*
Voucher Specimen	Yes/No; Herbarium:
Definitions: *Occurrence Number* *Infested Area/Gross Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Carduus pycnocephalus*
Occurrence Number	CER_CAPY_10
Date	4/20/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	Crestridge Ecological Reserve
Specific (onsite) Location	North-facing slopes east of Rios Canyon and directly south of northern property boundary
GPS Unit **Datum**	Garmin 60CSX NAD 83 UTM Zone 11
GPS Location (waypoint)	-116.865673, 32.842922
GPS Error	15 ft
Aspect	N
Infested Area	2.66 acres
Gross Area	
Canopy Closure (canopy area covered by invasive plant)	Moderate
Abundance	Scattered plants to scattered dense patches
Vegetation Community	*Malosma laurina-Lotus scoparius* Association
Overall Site Quality	X Very Good-Excellent Fair-Good Poor Very Poor
Comments	Scattered to dense throughout slope; associated species: *Malosma laurina* (15%), *Rhamnus crocea* (5%), *Heteromeles arbutifolia* (10%), *Artemisia californica (5%), Eriogonum fasciculatum (5%)*
Voucher Specimen	Yes/No; Herbarium:
Definitions: *Occurrence Number* *Infested Area/Gross Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Carduus pycnocephalus*
Occurrence Number	CER_CAPY_11
Date	6/14/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	Crestridge Ecological Reserve
Specific (onsite) Location	East-central portion of reserve (accessed through Gibson cattle gate), along dirt trail heading west from cattle gate
GPS Unit **Datum**	Garmin 60CSX NAD83 UTM Zone 11N
GPS Location (waypoint)	-116.834727, 32.846234
GPS Error	11 ft
Aspect	Slight s-facing slope
Infested Area	36.96 square feet
Gross Area	
Canopy Closure (canopy area covered by invasive plant)	Low - Moderate
Abundance	Scattered plants (ca. 25 plants)
Vegetation Community	*Adenostoma fasciculatum-Ceanothus tomentosus* Association
Overall Site Quality	Very Good-Excellent X Fair-Good Poor Very Poor
Comments	Disturbed opening in chaparral. Associated species: *Ceanothus tomentosus, Adenostoma fasciculatum, Cercocarpus betuloides, Centaurea melitensis, Bromus madritensis.*
Voucher Specimen	Yes/No; Herbarium:
Definitions: *Occurrence Number* *Infested Area/Gross Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Carduus pycnocephalus*
Occurrence Number	CER_CAPY_12
Date	6/14/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	Crestridge Ecological Reserve
Specific (onsite) Location	East-central portion of reserve (accessed through Gibson cattle gate), along dirt trail heading west from cattle gate
GPS Unit **Datum**	Garmin 60CSX NAD83 UTM Zone 11N
GPS Location (waypoint)	-116.835179, 32.846201
GPS Error	15 ft
Aspect	N-facing slope
Infested Area	186.85 square feet
Gross Area	
Canopy Closure (canopy area covered by invasive plant)	Moderate
Abundance	Scattered dense patches (50-100 individuals)
Vegetation Community	*Adenostoma fasciculatum-Ceanothus tomentosus* Association
Overall Site Quality	Very Good-Excellent X Fair-Good Poor Very Poor
Comments	South side of trail, adjacent to chaparral. Associated species: *Ceanothus tomentosus, Adenostoma fasciculatum, Cercocarpus betuloides, Centaurea melitensis.*
Voucher Specimen	Yes/No; Herbarium:
Definitions: *Occurrence Number* *Infested Area/Gross Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Carduus pycnocephalus*
Occurrence Number	CER_CAPY_13
Date	6/14/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	Crestridge Ecological Reserve
Specific (onsite) Location	East-central portion of reserve (accessed through Gibson cattle gate), along dirt trail heading west from cattle gate
GPS Unit **Datum**	Garmin 60CSX NAD83 UTM Zone 11N
GPS Location (waypoint)	-116.835645, 32.846596
GPS Error	15 ft
Aspect	N-facing slope
Infested Area	138.99 square feet
Gross Area	
Canopy Closure (canopy area covered by invasive plant)	Moderate
Abundance	Scattered dense patches (50-100 individuals)
Vegetation Community	*Ceanothus tomentosus* Association
Overall Site Quality	Very Good-Excellent X Fair-Good Poor Very Poor
Comments	South edge of trail, in chaparral. Associated species: *Ceanothus tomentosus, Quercus berberidifolia, Cercocarpus betuloides.*
Voucher Specimen	Yes/No; Herbarium:
Definitions: *Occurrence Number* *Infested Area/Gross Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Carduus pycnocephalus*
Occurrence Number	CER_CAPY_14
Date	7/5/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	Crestridge Ecological Reserve
Specific (onsite) Location	Northeast corner of reserve, west of dirt road off of Dunbar Lane.
GPS Unit **Datum**	Garmin 60CSX NAD83 UTM Zone 11N
GPS Location (waypoint)	-116.82542, 32.853621
GPS Error	12 ft
Aspect	NE
Infested Area	0.11 acre
Gross Area	
Canopy Closure (canopy area covered by invasive plant)	High
Abundance	Scattered plants (edge of polygon) to dense monoculture
Vegetation Community	Mediterranean California Naturalized Annual and Perennial Grassland Semi-Natural Stand
Overall Site Quality	Very Good-Excellent Fair-Good X Poor Very Poor
Comments	Disturbed, open area, burned chaparral. Associated species: *Bromus hordeaceus* (10%), *Hirschfeldia incana* (20%), *Centaurea melitensis* (10%), *Vulpia myuros* (2%) *Juncus arcticus* var. *mexicanus* (tr), *Erodium cicutarium* (tr). Note: polygon includes dense patch of *Hirschfeldia incana* .
Voucher Specimen	Yes/No; Herbarium:
Definitions: *Occurrence Number* *Infested Area/Gross Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Carduus pycnocephalus*
Occurrence Number	CER_CAPY_15
Date	7/26/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	Crestridge Ecological Reserve
Specific (onsite) Location	East-central portion of reserve, just north of e-w oriented trail that heads east from Gibson cattle gate.
GPS Unit **Datum**	Garmin 60CSX NAD83 UTM Zone 11N
GPS Location (waypoint)	-116.837561, 32.846754
GPS Error	12 ft
Aspect	SE
Infested Area	0.02 acre
Gross Area	
Canopy Closure (canopy area covered by invasive plant)	High (within mapped polygon)
Abundance	Scattered plants (edge of polygon) to dense monoculture
Vegetation Community	*Ceanothus tomentosus* Association
Overall Site Quality	Very Good-Excellent X Fair-Good Poor Very Poor
Comments	Dense patch (looks like soil has been dumped?), surrounded by intact habitat. Within polygon: *Carduus pycnocephalus* (70%), *Bromus diandrus* (5%), *Vulpia myuros* (2%), *Bromus hordeaceus* (1%). Adjacent habitat: *Ceanothus tomentosus* (70%), *Sambucus nigra* (5%), *Adenostoma fasciculatum* (5%), *Ceanothus cyaneus* (2%), *Malosma laurina* (1%).
Voucher Specimen	Yes/No; Herbarium:
Definitions: *Occurrence Number* *Infested Area/Gross Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Carduus pycnocephalus*
Occurrence Number	CER_CAPY_16
Date	8/26/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	Crestridge Ecological Reserve
Specific (onsite) Location	East-central portion of reserve, south of e-w oriented trail that heads east from Gibson cattle gate.
GPS Unit **Datum**	Garmin 60CSX NAD83 UTM Zone 11N
GPS Location (waypoint)	-116.836674576923, 32.846302
GPS Error	12 ft
Aspect	West-facing
Infested Area	0.12 acre
Gross Area	
Canopy Closure (canopy area covered by invasive plant)	High (30%)
Abundance	Scattered plants (edge of polygon) to dense monoculture
Vegetation Community	Mediterranean California Naturalized Annual and Perennial Grassland Semi-Natural Stand
Overall Site Quality	Very Good-Excellent X Fair-Good Poor Very Poor
Comments	Flat, meadow-like opening in chaparral. Associated species: *Bromus madritensis* (40%), *Vulpia myuros* (5%), *Nasella pulchra* (tr), *Erodium cicutarium* (5%), *Navarretia hamata* (tr), *Selaginella cinerascens* (tr).
Voucher Specimen	Yes/No; Herbarium:
Definitions: *Occurrence Number* *Infested Area/Gross Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Carduus pycnocephalus*
Occurrence Number	CER_CAPY_17
Date	5/29/2012
Observor(s)	Jessie Vinje
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	Crestridge Ecological Reserve
Specific (onsite) Location	In the trail and along either side of the trail.
GPS Unit **Datum**	Garmin 60CSX NAD83
GPS Location (waypoint)	-116.847846, 32.834714
GPS Error	14 ft
Aspect	Flat
Infested Area	Several square feet.
Gross Area	0.03 acre
Canopy Closure (canopy area covered by invasive plant)	Open
Abundance	Scattered individuals; trace.
Vegetation Community	Ruderal habitat along either side of the road.
Overall Site Quality	[ ] Very Good-Excellent [ ] Fair-Good [ ] Poor [x] Very Poor
Comments	All plants in flower and some in fruit.
Voucher Specimen	Yes/No; Herbarium:
Definitions:	
Occurrence Number	*Site (CER or SC)_4-letter species code (e.g., PESE)_Number*
Infested Area/Gross Area	*Acres; hectares; square feet; square meters*
Canopy Closure	*Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)*
Abundance	*Single plant; scattered plants; dense monoculture; scattered dense patches*
Overall Site Quality	*See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Carpobrotus* sp. (aff. *edulis*)
Occurrence Number	CER_CAED_01
Date	3/14/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	Crestridge Ecological Reserve
Specific (onsite) Location	Slopes northeast of Rios Canyon and north of 'Thornmint Hill'; north of Rios Elementary School, along fenceline adjacent to trailer park.
GPS Unit **Datum**	Garmin 60CSX NAD83 UTM Zone 11N
GPS Location	-116.873943, 32.842476
GPS Error	12 ft
Aspect	Top of slope (adjacent to fence).
Infested Area	0.02 acre
Canopy Closure (canopy area covered by invasive plant)	100%
Abundance	Several small patches
Vegetation Community	*Bromus diandrus* Semi-Natural Stand.
Overall Site Quality	____ Very Good-Excellent ____ Fair-Good ____Poor __X__ Very Poor
Comments	Fuelbreak along nw edge of CER; may be outside reserve.
Voucher Specimen	Yes/No; Herbarium:
Definitions: *Occurrence Number* *Infested Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Cortaderia selloana*
Occurrence Number	CER_COSE_01
Date	3/14/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	Crestridge Ecological Reserve
Specific (onsite) Location	Slopes northeast of Rios Canyon and north of 'Thornmint Hill'; north of Rios Elementary School, along fenceline adjacent to trailer park.
GPS Unit **Datum**	Garmin 60CSX NAD83 UTM Zone 11N
GPS Location	-116.874073, 32.842557
GPS Error	15 ft
Aspect	Top of slope (adjacent to fence).
Infested Area	N/A
Canopy Closure (canopy area covered by invasive plant)	Low
Abundance	2 plants
Vegetation Community	*Bromus diandrus* Semi-Natural Stand
Overall Site Quality	____ Very Good-Excellent ____ Fair-Good ____Poor __x__ Very Poor
Comments	Fuelbreak along nw edge of CER; may be outside reserve; plant along fenceline appears to have been treated with herbicide - mostly dead with a few green leaves.
Voucher Specimen	Yes/No; Herbarium:
Definitions: *Occurrence Number* *Infested Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Cyperus involucratus*
Occurrence Number	CER_CYIN_01
Date	9/21/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	Crestridge Ecological Reserve
Specific (onsite) Location	North-south oriented drainage through oak grove at the Horsemill Road entrance to CER.
GPS Unit **Datum**	Garmin 60CSX NAD83
GPS Location	-116.858383, 32.828864
GPS Error	12 ft
Aspect	Drainage bottom
Infested Area	N/A
Canopy Closure (canopy area covered by invasive plant)	Trace
Abundance	Scattered plants
Vegetation Community	*Quercus agrifolia* /*Toxicodendron diversilobum* /Grass Association
Overall Site Quality	____ Very Good-Excellent ___X__ Fair-Good ____Poor ___ Very Poor
Comments	Two point locations - one with 2 large plants; the other with 1 small plant. Under oak canopy but within/adjacent to stream channel. Associated species: *Quercus agrifolia* , *Vitis girdiana* , *Rumex crispus* , *Toxicodendron diversilobum* , *Nasturtium officianale* (formerly *Rorippa nasturtium-aquaticum*).
Voucher Specimen	Yes/No; Herbarium: No
Definitions: *Occurrence Number* *Infested Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Dittrichia graveolens*
Occurrence Number	CER_DIGR_01
Date	8/25/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	Adjacent to Crestridge Ecological Reserve
Specific (onsite) Location	North side of Bullard Lane, adjacent to Gibson cattle gate.
GPS Unit **Datum**	Garmin 60CSX NAD83
GPS Location	-116.830920265444, 32.8442446251109
GPS Error	14 ft
Aspect	South-facing
Infested Area	0.22 acre
Canopy Closure (canopy area covered by invasive plant)	Low (1-5%)
Abundance	Scattered plants to scattered dense patches
Vegetation Community	Disturbed roadside and bare (graded) pullout (Mediterranean California Naturalized Annual and Perennial Grassland Semi-Natural Stand)
Overall Site Quality	____ Very Good-Excellent ____ Fair-Good ____Poor __X__ Very Poor
Comments	DIGR most abundant at edge of paved road and on spoils pile; just starting to invade upslope into chaparral habitat. Plants 2" to 2' tall; single-stemmed to branched; not flowering. Associated species: *Baccharis sarothroides* (tr), *Hirshfeldia incana* (1-5%), *Heliotropium curassavicum* (tr), *Deinandra fasciculata* (tr), *Centaurea melitensis* (1-5%), *Salvia apiana* (tr), *Hazardia squarrosa* (tr).
Voucher Specimen	Yes/No; Herbarium: No
Definitions: *Occurrence Number* *Infested Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Dittrichia graveolens*
Occurrence Number	CER_DIGR_02
Date	8/25/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Private
General Location	Adjacent to Crestridge Ecological Reserve
Specific (onsite) Location	South side of Bullard Lane, edge of private driveway.
GPS Unit **Datum**	Garmin 60CSX NAD83
GPS Location	-116.830488, 32.844276
GPS Error	14 ft
Aspect	West-facing
Infested Area	N/A
Canopy Closure (canopy area covered by invasive plant)	Trace
Abundance	Single plant
Vegetation Community	Edge of driveway (disturbed - no other vegetation).
Overall Site Quality	____ Very Good-Excellent ____ Fair-Good ____Poor __X__ Very Poor
Comments	One plant at edge of private driveway.
Voucher Specimen	Yes/No; Herbarium: No
Definitions: *Occurrence Number* *Infested Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Dittrichia graveolens*
Occurrence Number	CER_DIGR_03
Date	8/25/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Private
General Location	Adjacent to Crestridge Ecological Reserve
Specific (onsite) Location	South side of Bullard Lane, adjacent to private driveway and residence.
GPS Unit **Datum**	Garmin 60CSX NAD83
GPS Location	-116.830381, 32.84421
GPS Error	14 ft
Aspect	West-facing
Infested Area	N/A
Canopy Closure (canopy area covered by invasive plant)	Trace
Abundance	Single plant
Vegetation Community	Chaparral (*Adenostoma fasciculatum-Xylococcus bicolor* Association)
Overall Site Quality	____ Very Good-Excellent ____ Fair-Good ____Poor __X__ Very Poor
Comments	One plant in chaparral/rocks adjacent to driveway and house.
Voucher Specimen	Yes/No; Herbarium: No
Definitions: *Occurrence Number* *Infested Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Dittrichia graveolens*
Occurrence Number	CER_DIGR_04
Date	8/25/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Private
General Location	Adjacent to Crestridge Ecological Reserve
Specific (onsite) Location	South side of Bullard Lane, adjacent to road and on manicured slope.
GPS Unit **Datum**	Garmin 60CSX NAD83
GPS Location	-116.830705806376, 32.8440801848329
GPS Error	11 ft
Aspect	South-facing, flat
Infested Area	0.06 acre
Canopy Closure (canopy area covered by invasive plant)	Scattered plants
Abundance	Low (1-5%)
Vegetation Community	Disturbed (Mediterranean California Naturalized Annual and Perennial Grassland Semi-Natural Stands)
Overall Site Quality	____ Very Good-Excellent ____ Fair-Good __X__Poor ___ Very Poor
Comments	Scattered plants along edge of paved road and down manicured slope. Associated species: *Hirschfeldia incana* , *Bromus madritensis* . Planted trees on slope: *Quercus agrifolia* , *Platanus racemosa* , *Juniperus* sp.
Voucher Specimen	Yes/No; Herbarium: No
Definitions: *Occurrence Number* *Infested Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Dittrichia graveolens*
Occurrence Number	CER_DIGR_05
Date	8/25/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Private
General Location	Adjacent to Crestridge Ecological Reserve
Specific (onsite) Location	South side of Bullard Lane, adjacent to road.
GPS Unit **Datum**	Garmin 60CSX NAD83
GPS Location	-116.830981, 32.844043
GPS Error	11 ft
Aspect	Flat
Infested Area	N/A
Canopy Closure (canopy area covered by invasive plant)	Trace
Abundance	Single plant
Vegetation Community	Disturbed (bare - no other vegetation)
Overall Site Quality	____ Very Good-Excellent ____ Fair-Good __Poor X Very Poor
Comments	One plant at edge of paved road.
Voucher Specimen	Yes/No; Herbarium: No
Definitions: *Occurrence Number* *Infested Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Dittrichia graveolens*
Occurrence Number	CER_DIGR_06
Date	8/25/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Private
General Location	Adjacent to Crestridge Ecological Reserve
Specific (onsite) Location	South side of Bullard Lane.
GPS Unit **Datum**	Garmin 60CSX NAD83
GPS Location	-116.831991669853, 32.8432330733387
GPS Error	11 ft
Aspect	South- and west-facing; flat
Infested Area	1.35 acres
Canopy Closure (canopy area covered by invasive plant)	Low to Moderate (varies throughout polygon)
Abundance	Scattered plants to dense monoculture (varies throughout polygon)
Vegetation Community	Disturbed (bare - no other vegetation); Mediterranean California Naturalized Annual and Perennial Grassland Semi-Natural Stands; *Salix lasiolepis* Association.
Overall Site Quality	____ Very Good-Excellent __X___ Fair-Good ___X__Poor __X_ Very Poor
Comments	Polygon includes road edge, disturbed (graded) pad, and drainage area. Associated species on pad: *Baccharis sarothroides* (1%), *Hirschfeldia incana* (1%), *Helianthus gracilentus* (2%), *Heliotropium curassavicum* (tr), *Erodium cicutarium* (1%), *Croton setigerus* (tr), *Eriogonum fasciculatum* (1%), *Lotus scoparius* (tr), *Juncus arcticus* var. *mexicanus* (1%), *Polypogon monspeliensis* (1%). Additional associated species in drainage: *Salix lasiolepis* , *Bromus hordeaceus* , *Cercocarpus* sp., *Malacothamnus fasciculatus* , *Ambrosia psilostachya* , *Salvia apiana* .
Voucher Specimen	Yes/No; Herbarium: No
Definitions: *Occurrence Number* *Infested Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Dittrichia graveolens*
Occurrence Number	CER_DIGR_07
Date	8/25/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Private
General Location	Adjacent to Crestridge Ecological Reserve
Specific (onsite) Location	North side of Bullard Lane, along road edge and up into drainages.
GPS Unit **Datum**	Garmin 60CSX NAD83
GPS Location	-116.833095120663, 32.8432795161354
GPS Error	11 ft
Aspect	Southwest, northeast, south, and east-facing, and flat
Infested Area	0.63 acre
Canopy Closure (canopy area covered by invasive plant)	Low to High (varies throughout polygon)
Abundance	Scattered dense patches to dense monoculture (varies throughout polygon)
Vegetation Community	Disturbed (bare - no other vegetation); Mediterranean California Naturalized Annual and Perennial Grassland Semi-Natural Stands; *Salix lasiolepis* Association; *Ceanothus tomentosus* Association.
Overall Site Quality	____ Very Good-Excellent __X___ Fair-Good ___Poor _ Very Poor
Comments	Some surface disturbance (cattle, horses?), particularly nearer to road. Plants are primarily in dry drainage, with little incursion into adjacent chaparral on slopes. Associated species in lower drainage reach: *Anagallis arvensis* , *Salix* sp., *Polypogon monspeliensis* . Associated species in upper drainage dominated by chaparral: *Heteromeles arbutifolia* , *Eriodictyon crassifolium* , *Toxicodendron diversilobum* , *Malosma laurina* , *Ceanothus tomentosus* .
Voucher Specimen	Yes/No; Herbarium: No
Definitions: *Occurrence Number* *Infested Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Dittrichia graveolens*
Occurrence Number	CER_DIGR_08
Date	8/25/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Private
General Location	Adjacent to Crestridge Ecological Reserve
Specific (onsite) Location	North side of Bullard Lane, along road edge and up around pond.
GPS Unit **Datum**	Garmin 60CSX NAD83
GPS Location	-116.833855681299, 32.8417794192766
GPS Error	11 ft
Aspect	South-facing
Infested Area	0.10 acre
Canopy Closure (canopy area covered by invasive plant)	Moderate
Abundance	Scattered plants to scattered dense patches
Vegetation Community	Disturbed (bare - no other vegetation); Mediterranean California Naturalized Annual and Perennial Grassland Semi-Natural Stands.
Overall Site Quality	____ Very Good-Excellent ____ Fair-Good __X__Poor _ Very Poor
Comments	Polygon includes plants in bare opening (pullout along road), up slope to dam, and around pond edge. Associated species: *Hazardia squarrosa* , *Baccharis sarothroides* , *Bromus hordeaceus* , *Hirshfeldia incana* , *Chamaesyce* sp., *Centaurea melitensis* , *Helianthus gracilentus* , *Croton setigerus* , *Ambrosia psilostachya* , *Lotus* sp. Also: *Typha* sp., *Salix* sp. around pond.
Voucher Specimen	Yes/No; Herbarium: No
Definitions: *Occurrence Number* *Infested Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Dittrichia graveolens*
Occurrence Number	CER_DIGR_09
Date	8/25/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Private
General Location	Adjacent to Crestridge Ecological Reserve
Specific (onsite) Location	North side of Bullard Lane, along road edge, east of DIGR_08.
GPS Unit **Datum**	Garmin 60CSX NAD83
GPS Location	-116.833248096593, 32.8424149874582
GPS Error	11 ft
Aspect	South-facing
Infested Area	0.04 acre
Canopy Closure (canopy area covered by invasive plant)	Low
Abundance	Scattered plants
Vegetation Community	Disturbed (bare - no other vegetation).
Overall Site Quality	____ Very Good-Excellent ____ Fair-Good X __Poor _ Very Poor
Comments	Polygon includes plants along road edge.
Voucher Specimen	Yes/No; Herbarium: No
Definitions: *Occurrence Number* *Infested Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Dittrichia graveolens*
Occurrence Number	CER_DIGR_10
Date	8/25/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Private
General Location	Adjacent to Crestridge Ecological Reserve
Specific (onsite) Location	North side of Bullard Lane, along road edge, west of DIGR_08.
GPS Unit **Datum**	Garmin 60CSX NAD83
GPS Location	-116.833571534023, 32.8411229891109
GPS Error	11 ft
Aspect	East-facing
Infested Area	N/A
Canopy Closure (canopy area covered by invasive plant)	Trace
Abundance	Single plant
Vegetation Community	Disturbed (bare - no other vegetation).
Overall Site Quality	____ Very Good-Excellent ____ Fair-Good X __Poor _ Very Poor
Comments	One plant at edge of pullout. Associated species: *Hirschfeldia incana* .
Voucher Specimen	Yes/No; Herbarium: No
Definitions: *Occurrence Number* *Infested Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Dittrichia graveolens*
Occurrence Number	CER_DIGR_11
Date	8/25/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Private
General Location	Adjacent to Crestridge Ecological Reserve
Specific (onsite) Location	South side of Bullard Lane, along road edge.
GPS Unit **Datum**	Garmin 60CSX NAD83
GPS Location	-116.833079789643, 32.8424150099
GPS Error	11 ft
Aspect	North-facing
Infested Area	0.19 acre
Canopy Closure (canopy area covered by invasive plant)	Low
Abundance	Scattered plants
Vegetation Community	Disturbed (bare - no other vegetation); Mediterranean California Naturalized Annual and Perennial Grassland Semi-Natural Stand.
Overall Site Quality	____ Very Good-Excellent ____ Fair-Good X __Poor _ Very Poor
Comments	Scattered plants along edge of paved road. Associated species: *Lotus scoparius* , *Deinandra fasciculata* , *Hirshfeldia incana* , *Bromus madritensis* , *Centaurea melitensis* , *Helianthus gracilentus* , and *Marrubium vulgare* .
Voucher Specimen	Yes/No; Herbarium: No
Definitions: *Occurrence Number* *Infested Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Dittrichia graveolens*
Occurrence Number	CER_DIGR_12
Date	8/25/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Private
General Location	Adjacent to Crestridge Ecological Reserve
Specific (onsite) Location	South side of Bullard Lane; small, nw-se oriented drainage.
GPS Unit **Datum**	Garmin 60CSX NAD83
GPS Location	-116.832539606173, 32.8423106096641
GPS Error	11 ft
Aspect	South-east facing
Infested Area	0.06 acre
Canopy Closure (canopy area covered by invasive plant)	Moderate
Abundance	Scattered dense patches to dense monoculture
Vegetation Community	*Quercus* (*berberidifolia*) x *acutidens*) Association; *Malosma laurina -Lotus scoparius* Association
Overall Site Quality	____ Very Good-Excellent __X__ Fair-Good __Poor _ Very Poor
Comments	DIGR occurs primarily in drainage and not into adjacent chaparral on slopes; plants extend further down drainage (to se), beyond mapped polygon; some evidence of soil disturbance. Associated species: *Malosma laurina* , *Quercus berberidifolia* , *Salix lasiolepis* , *Guiterrezia sarothroides* , *Prunus ilicifolia* , *Arctostaphylos glauca* , *Eriodictyon crassifolium* , *Rumex crispus* , *Conyza canadensis* , *Vulpia myuros* .
Voucher Specimen	Yes/No; Herbarium: No
Definitions: *Occurrence Number* *Infested Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Dittrichia graveolens*
Occurrence Number	CER_DIGR_13
Date	8/25/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Private
General Location	Adjacent to Crestridge Ecological Reserve
Specific (onsite) Location	South side of Bullard Lane; disturbed area of chaparral with bark 'mulch'
GPS Unit **Datum**	Garmin 60CSX NAD83
GPS Location	-116.832552369373, 32.8420424542551
GPS Error	11 ft
Aspect	East-facing (80°E)
Infested Area	0.14 acre
Canopy Closure (canopy area covered by invasive plant)	Moderate to High
Abundance	Scattered plants to dense monoculture
Vegetation Community	*Adenostoma fasciculatum-Lotus scoparius* Association
Overall Site Quality	____ Very Good-Excellent __X__ Fair-Good __Poor _ Very Poor
Comments	Largest DIGR plants observed in the area and some of the densest patches; because of plant density and position at top of slope, this area should be a priority for treatment. Associated species: *Hazardia squarrosa* , *Lonicera subspicata* var. *denudata* , *Mimulus aurantiacus* , *Eriodictyon crassifolium* , *Adenostoma fasciculatum* , *Malosma laurina* , *Arctostaphylos glauca* , *Lotus scoparius* , *Helianthus gracilentus* .
Voucher Specimen	Yes/No; Herbarium: No
Definitions: *Occurrence Number* *Infested Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Dittrichia graveolens*
Occurrence Number	CER_DIGR_14
Date	8/25/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Private
General Location	Adjacent to Crestridge Ecological Reserve
Specific (onsite) Location	South side of Bullard Lane; trail from paved road edge to DIGR_13.
GPS Unit **Datum**	Garmin 60CSX NAD83
GPS Location	-116.832853550706, 32.8418018583304
GPS Error	12 ft
Aspect	East- and south-facing
Infested Area	0.01 acre
Canopy Closure (canopy area covered by invasive plant)	Low
Abundance	Single plants to scattered plants
Vegetation Community	Mediterranean California Naturalized Annual and Perennial Grassland Semi-Natural Stand
Overall Site Quality	____ Very Good-Excellent __X__ Fair-Good X__Poor _ Very Poor
Comments	Plants scattered along (and in middle of) trail. Associated species: *Helianthemum scoparium* , *Helianthus gracilentus* , *Gutierrezia sarothrae* , *Eriodicyton crassifolium* , *Centaurea melitensis* , *Bromus madritensis* , *Navarretia hamata* .
Voucher Specimen	Yes/No; Herbarium: No
Definitions: *Occurrence Number* *Infested Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Dittrichia graveolens*
Occurrence Number	CER_DIGR_15
Date	8/26/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Private
General Location	Gibson property; adjacent to Crestridge Ecological Reserve
Specific (onsite) Location	North side of Bullard Lane; north of pond, along fenceline.
GPS Unit **Datum**	Garmin 60CSX NAD83
GPS Location	-116.834543, 32.8420348493292
GPS Error	12 ft
Aspect	East-facing
Infested Area	N/A
Canopy Closure (canopy area covered by invasive plant)	Trace
Abundance	Scattered plants
Vegetation Community	Mediterranean California Naturalized Annual and Perennial Grassland Semi-Natural Stand
Overall Site Quality	____ Very Good-Excellent ____ Fair-Good X__Poor _ Very Poor
Comments	Two plants along fenceline
Voucher Specimen	Yes/No; Herbarium: No
Definitions: *Occurrence Number* *Infested Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Dittrichia graveolens*
Occurrence Number	CER_DIGR_16
Date	8/26/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Private
General Location	Gibson property; adjacent to Crestridge Ecological Reserve
Specific (onsite) Location	North side of Bullard Lane; inside paddock, heading northwest
GPS Unit **Datum**	Garmin 60CSX NAD83
GPS Location	-116.834622, 32.842464
GPS Error	12 ft
Aspect	East- and west-facing
Infested Area	0.01 acre
Canopy Closure (canopy area covered by invasive plant)	Low
Abundance	Scattered plants
Vegetation Community	Mediterranean California Naturalized Annual and Perennial Grassland Semi-Natural Stand; *Malosma laurina -Lotus scoparius* Association; *Salix gooddingii* Association.
Overall Site Quality	____ Very Good-Excellent __X__ Fair-Good X__Poor _ Very Poor
Comments	Scattered plants along drainage; DIGR appears to have been grazed near paddock. Associated species: *Salix gooddingii* , *Malosma laurina* , *Eriodictyon crassifolium* .
Voucher Specimen	Yes/No; Herbarium: No
Definitions: *Occurrence Number* *Infested Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Dittrichia graveolens*
Occurrence Number	CER_DIGR_17
Date	8/26/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Private
General Location	Gibson property; adjacent to Crestridge Ecological Reserve
Specific (onsite) Location	North side of Bullard Lane; dry drainage north of paddock.
GPS Unit **Datum**	Garmin 60CSX NAD83
GPS Location	-116.835191, 32.842103
GPS Error	17 ft
Aspect	East-facing
Infested Area	N/A
Canopy Closure (canopy area covered by invasive plant)	Trace
Abundance	Single plant
Vegetation Community	Mediterranean California Naturalized Annual and Perennial Grassland Semi-Natural Stand; *Malosma laurina -Lotus scoparius* Association.
Overall Site Quality	____ Very Good-Excellent __X__ Fair-Good X__Poor _ Very Poor
Comments	One plant along drainage; Associated species: *Malosma laurina* , *Eriodictyon crassifolium, Gutierrezia sarothrae* .
Voucher Specimen	Yes/No; Herbarium: No
Definitions: *Occurrence Number* *Infested Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Dittrichia graveolens*
Occurrence Number	CER_DIGR_18
Date	8/26/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Private
General Location	Gibson property; adjacent to Crestridge Ecological Reserve
Specific (onsite) Location	North side of Bullard Lane; dry drainage north of paddock.
GPS Unit **Datum**	Garmin 60CSX NAD83
GPS Location	-116.835296, 32.842055
GPS Error	12 ft
Aspect	East-facing
Infested Area	N/A
Canopy Closure (canopy area covered by invasive plant)	Trace
Abundance	Scattered plants
Vegetation Community	Disturbed (no vegetation); Mediterranean California Naturalized Annual and Perennial Grassland Semi-Natural Stand.
Overall Site Quality	____ Very Good-Excellent ____ Fair-Good X__Poor _ Very Poor
Comments	Five plants along drainage.
Voucher Specimen	Yes/No; Herbarium: No
Definitions: *Occurrence Number* *Infested Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Dittrichia graveolens*
Occurrence Number	CER_DIGR_19
Date	8/26/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Private
General Location	Gibson property; adjacent to Crestridge Ecological Reserve
Specific (onsite) Location	North side of Bullard Lane; trail north of paddock.
GPS Unit **Datum**	Garmin 60CSX NAD83
GPS Location	-116.83592, 32.841738
GPS Error	12 ft
Aspect	East-facing
Infested Area	N/A
Canopy Closure (canopy area covered by invasive plant)	Low
Abundance	Scattered plants
Vegetation Community	Disturbed (no vegetation); Mediterranean California Naturalized Annual and Perennial Grassland Semi-Natural Stand.
Overall Site Quality	____ Very Good-Excellent ____ Fair-Good X__Poor _ Very Poor
Comments	Twenty-one (21) small plants along trail. Vegetation appears to have been grazed and is composed of nonnative herbaceous species.
Voucher Specimen	Yes/No; Herbarium: No
Definitions: *Occurrence Number* *Infested Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Dittrichia graveolens*
Occurrence Number	CER_DIGR_20
Date	8/26/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Private
General Location	Gibson property; adjacent to Crestridge Ecological Reserve
Specific (onsite) Location	North side of Bullard Lane; trail around pond.
GPS Unit **Datum**	Garmin 60CSX NAD83
GPS Location	-116.834349, 32.841753
GPS Error	12 ft
Aspect	South-facing
Infested Area	N/A
Canopy Closure (canopy area covered by invasive plant)	Trace
Abundance	Single plant
Vegetation Community	Disturbed (no vegetation).
Overall Site Quality	____ Very Good-Excellent ____ Fair-Good X__Poor _ Very Poor
Comments	One plant on trail around pond.
Voucher Specimen	Yes/No; Herbarium: No
Definitions: *Occurrence Number* *Infested Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Dittrichia graveolens*
Occurrence Number	CER_DIGR_21
Date	8/26/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Private
General Location	Gibson property; adjacent to Crestridge Ecological Reserve
Specific (onsite) Location	North side of Bullard Lane; trail around pond.
GPS Unit **Datum**	Garmin 60CSX NAD83
GPS Location	-116.834131, 32.841851
GPS Error	12 ft
Aspect	West-facing
Infested Area	N/A
Canopy Closure (canopy area covered by invasive plant)	Trace
Abundance	Single plant
Vegetation Community	Disturbed (no vegetation).
Overall Site Quality	____ Very Good-Excellent ____ Fair-Good X__Poor _ Very Poor
Comments	One plant below trail around pond, near water.
Voucher Specimen	Yes/No; Herbarium: No
Definitions: *Occurrence Number* *Infested Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Dittrichia graveolens*
Occurrence Number	CER_DIGR_22
Date	8/26/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Private
General Location	Gibson property; adjacent to Crestridge Ecological Reserve
Specific (onsite) Location	North side of Bullard Lane; trail around pond.
GPS Unit **Datum**	Garmin 60CSX NAD83
GPS Location	-116.834078554124, 32.8419489395056
GPS Error	12 ft
Aspect	Southwest-facing
Infested Area	N/A
Canopy Closure (canopy area covered by invasive plant)	Trace
Abundance	Single plant
Vegetation Community	Disturbed (no vegetation).
Overall Site Quality	____ Very Good-Excellent ____ Fair-Good X__Poor __ Very Poor
Comments	One plant adjacent to trail around pond.
Voucher Specimen	Yes/No; Herbarium: No
Definitions: *Occurrence Number* *Infested Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Ehrharta longiflora*
Occurrence Number	CER_ERLO_01
Date	3/14/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	Crestridge Ecological Reserve
Specific (onsite) Location	Slopes east of Rios Canyon and north of 'Thornmint Hill'; north of Rios Elementary School, east of fenceline adjacent to trailer park.
GPS Unit **Datum**	Garmin 60CSX NAD83 UTM Zone 11N
GPS Location	-116.874115, 32.843098
GPS Error	12 ft
Aspect	NE
Infested Area	N/A
Canopy Closure (canopy area covered by invasive plant)	Trace
Abundance	1 flowering individual (pulled up); a few additional non-flowering plants.
Vegetation Community	*Nassella pulchra* association
Overall Site Quality	____ Very Good-Excellent ____ Fair-Good __X__Poor ___ Very Poor
Comments	East of fuelbreak along nw edge of CER; may be outside (and just north) of reserve; just north of CER_ARDO_01.
Voucher Specimen	Yes/No; Herbarium:
Definitions: *Occurrence Number* *Infested Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Ehrharta longiflora*
Occurrence Number	CER_EHLO_09
Date	7/26/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	Crestridge Ecological Reserve
Specific (onsite) Location	East-central portion of reserve, just north of e-w oriented trail that heads east from Gibson cattle gate.
GPS Unit **Datum**	Garmin 60CSX NAD83 UTM Zone 11N
GPS Location (waypoint)	-116.833908, 32.846155
GPS Error	12
Aspect	E-facing
Infested Area	183.77 square feet
Gross Area	
Canopy Closure (canopy area covered by invasive plant)	Moderate
Abundance	Scattered dense patch
Vegetation Community	*Adenostoma fasciculatum-Lotus scoparius* Association
Overall Site Quality	Very Good-Excellent X Fair-Good Poor Very Poor
Comments	Disturbed opening just north of trail with *Carduus pycnocephalus* , *Bromus hordeaceus* . Adjacent to intact chaparral dominated by *Adenostoma fasciculatum* (5%), *Ceanothus tomentosus* (5%), *Helianthemum scoparium* (10%), and *Hesperoyucca whipplei* (tr). Exposed bedrock prominent.
Voucher Specimen	Yes/No; Herbarium:
Definitions: *Occurrence Number* *Infested Area/Gross Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Ehrharta longiflora*
Occurrence Number	CER_ERLO_03
Date	3/28/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	Crestridge Ecological Reserve
Specific (onsite) Location	Rios Canyon; Rios Canyon Road, west of junction with Montana Serena; edge of road.
GPS Unit **Datum**	Garmin 60CSX NAD83 UTM Zone 11N
GPS Location (waypoint)	-116.85702, 32.833606
GPS Error	12 ft
Aspect	West-facing slope
Infested Area	0.02 acre
Gross Area	
Canopy Closure (canopy area covered by invasive plant)	High (50%)
Abundance	Dense
Vegetation Community	Mediterranean California Naturalized Annual and Perennial Grassland Semi-Natural Stand
Overall Site Quality	Very Good-Excellent Fair-Good X Poor X Very Poor
Comments	North side of trail; opening in coastal sage scrub. Associated species: *Mirabilis laevis* var. *laevis* (10%), *Bromus madritensis* ssp. *rubens* (<1%), *Gnaphalium* sp. (<1%), *Centaurea melitensis* (5%), *Bromus diandrus* (10%); boulders (25%).
Voucher Specimen	Yes/No; Herbarium:
Definitions: *Occurrence Number* *Infested Area/Gross Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Ehrharta longiflora*
Occurrence Number	CER_ERLO_04
Date	3/28/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	Crestridge Ecological Reserve
Specific (onsite) Location	Rios Canyon; Rios Canyon Road, west of junction with Montana Serena; edge of road; both sides of road.
GPS Unit **Datum**	Garmin 60CSX NAD83 UTM Zone 11N
GPS Location (waypoint)	-116.859013, 32.834083
GPS Error	12 ft
Aspect	Northwest-facing slope
Infested Area	0.02 acre
Gross Area	
Canopy Closure (canopy area covered by invasive plant)	High (50-60%)
Abundance	Dense
Vegetation Community	*Artemisia californica-Mimulus aurantiacus* Association
Overall Site Quality	Very Good-Excellent X Fair-Good Poor Very Poor
Comments	South side of road: continues upslope 15-20 ft into stand of *Toxicodendron diversilobum* . Asociated species: *Eriophyllum confertiflorum (5%), Artemisia californica (20%), Mimulus auranticus (5%), Eriogonum fasciculatum (5%), Toxicodendron diversilobum (10%), Bromus diandrus (5%).*
Voucher Specimen	Yes/No; Herbarium:
Definitions: *Occurrence Number* *Infested Area/Gross Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Ehrharta longiflora*
Occurrence Number	CER_EHLO_05
Date	3/30/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	Crestridge Ecological Reserve
Specific (onsite) Location	Reserve entrance at west end of La Cresta Heights Road; along east-trending trail through smaller oak grove; west of oak grove.
GPS Unit **Datum**	Garmin 60CSX NAD83 UTM Zone 11N
GPS Location (waypoint)	-116.886632, 32.817768
GPS Error	11 ft
Aspect	Flat
Infested Area	0.01 acre
Gross Area	
Canopy Closure (canopy area covered by invasive plant)	High (50%)
Abundance	Dense monoculture
Vegetation Community	*Quercus agrifolia/Toxicodendron* /Grass Association
Overall Site Quality	Very Good-Excellent Fair-Good X Poor Very Poor
Comments	Both sides of trail, in wet soil. Opening adjacent to oaks. Dense patch within larger CER_CAPY_04 polygon. Within patch: *Ehrharta longiflora* (50%), *Carduus pycnocephalus* (5%), *Bromus diandrus* (5%). Adjacent habitat: *Quercus agrifolia* (30%), *Toxicodendron diversilobum* (5%).
Voucher Specimen	Yes/No; Herbarium:
Definitions: *Occurrence Number* *Infested Area/Gross Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Ehrharta longiflora*
Occurrence Number	CER_EHLO_06
Date	7/5/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	Crestridge Ecological Reserve
Specific (onsite) Location	Northeast corner of reserve, west of dirt road off of Dunbar Lane.
GPS Unit **Datum**	Garmin 60CSX NAD83 UTM Zone 11N
GPS Location (waypoint)	-116.825558, 32.853888
GPS Error	12 ft
Aspect	NE
Infested Area	0.13 acre
Gross Area	
Canopy Closure (canopy area covered by invasive plant)	High (60%)
Abundance	Dense monoculture
Vegetation Community	*Malosma laurina-Lotus scoparius* Association
Overall Site Quality	Very Good-Excellent X Fair-Good Poor Very Poor
Comments	Open areas, burned chaparral. Associated species: *Malosma laurina* (30%), *Artemisia californica* (5%), *Quercus engelmannii* (2%), *Salvia apiana* (2%), *Quercus berberidifolia* (2%), *Prunus ilicifolia* (1%), *Hazardia squarrosa* (1%), *Rhamnus crocea* (tr).
Voucher Specimen	Yes/No; Herbarium:
Definitions: *Occurrence Number* *Infested Area/Gross Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Ehrharta longiflora*
Occurrence Number	CER_EHLO_07
Date	7/5/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	Crestridge Ecological Reserve
Specific (onsite) Location	Northeast corner of reserve, west of dirt road off of Dunbar Lane.
GPS Unit **Datum**	Garmin 60CSX NAD83 UTM Zone 11N
GPS Location (waypoint)	-116.825711, 32.854266
GPS Error	12 ft
Aspect	NE
Infested Area	0.09 acre
Gross Area	
Canopy Closure (canopy area covered by invasive plant)	High (90%)
Abundance	Dense monoculture
Vegetation Community	Mediterranean California Naturalized Annual and Perennial Grassland Semi-Natural Stand
Overall Site Quality	Very Good-Excellent X Fair-Good Poor Very Poor
Comments	Open areas, burned chaparral. Associated species: *Malosma laurina* (2%), *Adenostoma fasciculatum* (3%), *Ceanothus tomentosus* (3%), *Heteromeles arbutifolia* (1%), *Bromus hordeaceus (2%), Hirschfeldia incana (tr), Centaurea melitensis (1%)* .
Voucher Specimen	Yes/No; Herbarium:
Definitions: *Occurrence Number* *Infested Area/Gross Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Ehrharta longiflora*
Occurrence Number	CER_EHLO_08
Date	7/5/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	Crestridge Ecological Reserve
Specific (onsite) Location	Northeast corner of reserve, west of dirt road off of Dunbar Lane.
GPS Unit **Datum**	Garmin 60CSX NAD83 UTM Zone 11N
GPS Location (waypoint)	-116.825409, 32.854157
GPS Error	12 ft
Aspect	NE
Infested Area	0.13 acre
Gross Area	
Canopy Closure (canopy area covered by invasive plant)	High (65%)
Abundance	Dense monoculture
Vegetation Community	Mediterranean California Naturalized Annual and Perennial Grassland Semi-Natural Stand
Overall Site Quality	Very Good-Excellent Fair-Good X Poor Very Poor
Comments	Open areas, burned chaparral. Associated species: *Juncus articus* var. *mexicanus* (20%), *Vulpia myuros* (5%), *Bromus hordeaceus* (3%), *Juncus bufonius* (1%), *Bromus diandrus* (1%), *Croton setigerus* (1%), *Centaurea melitensis* (tr), *Erodium cicutarium* (tr), *Avena barbata* (tr), *Sisyrinchium bellum* (tr)
Voucher Specimen	Yes/No; Herbarium:
Definitions: *Occurrence Number* *Infested Area/Gross Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Ehrharta longiflora*
Occurrence Number	CER_EHLO_09
Date	7/26/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	Crestridge Ecological Reserve
Specific (onsite) Location	East-central portion of reserve, just north of e-w oriented trail that heads east from Gibson cattle gate.
GPS Unit **Datum**	Garmin 60CSX NAD83 UTM Zone 11N
GPS Location (waypoint)	-116.833908, 32.846155
GPS Error	12 ft
Aspect	E-facing
Infested Area	183.77 square feet
Gross Area	
Canopy Closure (canopy area covered by invasive plant)	Moderate
Abundance	Scattered dense patch
Vegetation Community	*Adenostoma fasciculatum-Lotus scoparius* Association
Overall Site Quality	Very Good-Excellent X Fair-Good Poor Very Poor
Comments	Disturbed opening just north of trail with *Carduus pycnocephalus* , *Bromus hordeaceus* . Adjacent to intact chaparral dominated by *Adenostoma fasciculatum* (5%), *Ceanothus tomentosus* (5%), *Helianthemum scoparium* (10%), and *Hesperoyucca whipplei* (tr). Exposed bedrock prominent.
Voucher Specimen	Yes/No; Herbarium:
Definitions: *Occurrence Number* *Infested Area/Gross Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Ehrharta longiflora*
Occurrence Number	CER_EHLO_10
Date	9/21/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	Crestridge Ecological Reserve
Specific (onsite) Location	Adjacent to and east of north-south oriented drainage through oak grove at Horsemill Road entrance to CER.
GPS Unit **Datum**	Garmin 60CSX NAD83
GPS Location	-116.860458458282, 32.829588
GPS Error	12 ft
Aspect	West-facing
Infested Area	0.15 acre
Canopy Closure (canopy area covered by invasive plant)	High; nearly continuous cover in herb stratum.
Abundance	Dense monoculture to scattered dense patches.
Vegetation Community	*Quercus agrifolia* /*Toxicodendron diversilobum* /Grass Association
Overall Site Quality	____ Very Good-Excellent __X__ Fair-Good __X__Poor ___ Very Poor
Comments	Associated species: *Quercus agrifolia* , *Toxicodendron diversilobum* , *Carduus pycnocephalus* . EHLO is completely dried; inflorescences have dehisced.
Voucher Specimen	Yes/No; Herbarium: No
Definitions: *Occurrence Number* *Infested Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Ehrharta longiflora*
Occurrence Number	CER_ERLO_11
Date	5/29/2012
Observor(s)	Jessie Vinje
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	Crestridge Ecological Reserve
Specific (onsite) Location	North facing slope above dirt access road/trail.
GPS Unit **Datum**	Garmin 60CSX NAD83
GPS Location (waypoint)	-116.857754, 32.833105
GPS Error	13 ft
Aspect	North
Infested Area	0.01 acre
Gross Area	Unknown, could be scattered throughout entire hillside.
Canopy Closure (canopy area covered by invasive plant)	Low to moderate.
Abundance	Scattered, dense patches. Thousands of plants.
Vegetation Community	Coastal sage scrub.
Overall Site Quality	[ ] Very Good-Excellent [x] Fair-Good [ ] Poor [ ] Very Poor
Comments	Thousands of plants located adjacent to a game trail and in other scattered areas throughout the hillside. All plants had set seed already.
Voucher Specimen	Yes/No; Herbarium:
Definitions: *Occurrence Number* *Infested Area/Gross Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Ehrharta longiflora*
Occurrence Number	CER_ERLO_12
Date	5/29/2012
Observor(s)	Jessie Vinje
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	Crestridge Ecological Reserve
Specific (onsite) Location	Near grinding stones, under oak trees, along game trail and adjacent to creek.
GPS Unit **Datum**	Garmin 60CSX NAD83
GPS Location (waypoint)	-116.859836, 32.829205
GPS Error	17 ft
Aspect	North and west.
Infested Area	0.11 acre
Gross Area	Unknown, likely scattered throughout vegetation and along entire creek to edge of property.
Canopy Closure (canopy area covered by invasive plant)	Moderate
Abundance	Scattered, dense patches. Very abundant.
Vegetation Community	Oak woodland.
Overall Site Quality	☐ Very Good-Excellent ☒ Fair-Good ☐ Poor ☐ Very Poor
Comments	Many plants in understory of oak woodland. All plants had set seed. Plants are growing with Clarkia delicata.
Voucher Specimen	Yes/No; Herbarium:
Definitions: *Occurrence Number* *Infested Area/Gross Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Eucalyptus* sp.
Occurrence Number	CER_EUSP_01
Date	9/21/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	Crestridge Ecological Reserve
Specific (onsite) Location	Within oak grove at Horsemill Road entrance to CER.
GPS Unit **Datum**	Garmin 60CSX NAD83
GPS Location	-116.858582, 32.828344
GPS Error	12 ft
Aspect	Flat
Infested Area	N/A
Canopy Closure (canopy area covered by invasive plant)	Trace
Abundance	Single tree
Vegetation Community	*Quercus engelmannii-Quercus agrifolia* /*Toxicodendron diversilobum* /Grass Associ
Overall Site Quality	____ Very Good-Excellent __X__ Fair-Good ___Poor __ Very Poor
Comments	One tree; ca. 50-60 feet tall; no understory. Associated species: *Quercus agrifolia, Quercus engelmannii, Toxicodendron diversilobum* .
Voucher Specimen	Yes/No; Herbarium: No
Definitions: *Occurrence Number* *Infested Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Foeniculum vulgare*
Occurrence Number	CER_FOVU_01
Date	5/29/2012
Observor(s)	Jessie Vinje
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	Crestridge Ecological Reserve
Specific (onsite) Location	In the dirt road.
GPS Unit **Datum**	Garmin 60CSX NAD83
GPS Location (waypoint)	-116.84771, 32.834708
GPS Error	14 ft
Aspect	Flat
Infested Area	1 plant
Gross Area	
Canopy Closure (canopy area covered by invasive plant)	Open
Abundance	Trace.
Vegetation Community	Disturbed habitat - dirt access road.
Overall Site Quality	[ ] Very Good-Excellent [ ] air-Good [ ] Poor [x] Very Poor
Comments	Small plant.
Voucher Specimen	Yes/No; Herbarium:
Definitions: *Occurrence Number* *Infested Area/Gross Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Foeniculum vulgare*
Occurrence Number	CER_FOVU_02
Date	5/29/2012
Observor(s)	Jessie Vinje
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	Crestridge Ecological Reserve
Specific (onsite) Location	Along the side of the trail (southern and northern sides).
GPS Unit **Datum**	Garmin 60 CSX
GPS Location (waypoint)	
GPS Error	
Aspect	Flat
Infested Area	2 plants
Gross Area	
Canopy Closure (canopy area covered by invasive plant)	Open
Abundance	Trace.
Vegetation Community	Disturbed habitat - on either side of the dirt access road.
Overall Site Quality	[ ] Very Good-Excellent [ ] air-Good [ ] Poor [x] Very Poor
Comments	Moderate sized plants.
Voucher Specimen	Yes/No; Herbarium:
Definitions: *Occurrence Number* *Infested Area/Gross Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Heteropogon contortus*
Occurrence Number	CER_HECO_01-12, 15
Date	1/31/2012
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	Crestridge Ecological Reserve
Specific (onsite) Location	Slopes east of Rios Canyon, on 'Thornmint Hill'.
GPS Unit **Datum**	Garmin 60CSX NAD83 UTM Zone 11N
GPS Location	-116.86689, 32.840367; -116.866926, 32.840284; -116.866907, 32.840237; -116.866915, 32.840218; -116.866847, 32.840198; -116.866868, 32.840176; -116.86693, 32.840094; -116.866779, 32.840188; -116.866754, 32.840268; -116.866644, 32.840143; -116.866289, 32.84023; -116.866233, 32.840067; -116.865799, 32.840258.
GPS Error	12 ft
Aspect	South and south-west facing slopes
Infested Area	N/A
Canopy Closure (canopy area covered by invasive plant)	Low
Abundance	64 plants, spread over a wide area (see point/polygon information)
Vegetation Community	*Salvia apiana-Artemisia californica* Association
Overall Site Quality	____ Very Good-Excellent ___X__ Fair-Good ____Poor ___ Very Poor
Comments	Area burned in 2003 Cedar fire; understory invaded by *Brachypodium distachyon* . Associated species: *Salvia apiana, Bahiopsis laciniata, Artemisia californica, Hesperoyucca whipplei, Eriogonum fasciculatum, Malosma laurina, Porophyllum gracile, Brachypodium distachyon, Pennisetum setaceum, Aristida adscencionis, Allium* sp. Note: hillside formerly occupied by *Acanthomintha ilicifolia* .
Voucher Specimen	Yes/No; Herbarium: San Diego Natural History Museum
Definitions: *Occurrence Number* *Infested Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Invasive Species Data Form

Species	*Heteropogon contortus*
Occurrence Number	CER_HECO_13-14
Date	1/31/2012
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	Crestridge Ecological Reserve
Specific (onsite) Location	Slopes east of Rios Canyon, on 'Thornmint Hill'.
GPS Unit **Datum**	Garmin 60CSX NAD83 UTM Zone 11N
GPS Location	-116.865656, 32.840142; -116.865787, 32.840193
GPS Error	12 ft
Aspect	South and south-west facing slopes
Infested Area	N/A
Canopy Closure (canopy area covered by invasive plant)	Low
Abundance	15 plants (14 = 1 polygon; 1 = 1 point) (see point/polygon information)
Vegetation Community	*Bahiopsis laciniata-Artemisia californica-Eriogonum fasciculatum* Association
Overall Site Quality	____ Very Good-Excellent ___X__ Fair-Good ____Poor ___ Very Poor
Comments	Area burned in 2003 Cedar fire; understory invaded by *Brachypodium distachyon* . At edge of steep, rocky slope, overlooking drainage. Associated species: *Bahiopsis laciniata, Eriogonum fasciculatum, Cneoridium dumosum, Calystegia macrostegia, Malosma laurina, Nassella pulchra, Bothriochloa barbinodis* .
Voucher Specimen	Yes/No; Herbarium:
Definitions: *Occurrence Number* *Infested Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Marrubium vulgare*
Occurrence Number	CER_MAVU_01
Date	3/28/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	Crestridge Ecological Reserve
Specific (onsite) Location	Rios Canyon; Rios Canyon Road, west of junction with Montana Serena; low-lying area east of road.
GPS Unit **Datum**	Garmin 60CSX NAD83 UTM Zone 11N
GPS Location (waypoint)	-116.851432, 32.835308
GPS Error	12 ft
Aspect	Flat
Infested Area	53.30 square feet
Gross Area	
Canopy Closure (canopy area covered by invasive plant)	Trace (<1%)
Abundance	Scattered (8 plants)
Vegetation Community	*Baccharis pilularis* /Herbaceous Association (note: adjacent to *Quercus agrifolia* Alliance)
Overall Site Quality	Very Good-Excellent Fair-Good X Poor Very Poor
Comments	Drainage (old road?) - flat area at bottom of slope between oak woodland and chaparral. Dominant species in adjacent habitat*: Quercus agrifolia, Sambucus mexicana, Ceanothus tomentosus, Baccharis pilularis, Centaurea melitensis.*
Voucher Specimen	Yes/No; Herbarium:
Definitions: *Occurrence Number* *Infested Area/Gross Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Marrubium vulgare*
Occurrence Number	CER_MAVU_02
Date	9/21/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	Crestridge Ecological Reserve
Specific (onsite) Location	Adjacent to and east of north-south oriented drainage through oak grove at Horsemill Road entrance to CER.
GPS Unit **Datum**	Garmin 60CSX NAD83
GPS Location	-116.858548450516, 32.829432
GPS Error	12 ft
Aspect	West-facing
Infested Area	137.60 square feet
Canopy Closure (canopy area covered by invasive plant)	Trace
Abundance	Scattered plants (ca. 30 seedlings or young plants; some with flowers)
Vegetation Community	Disturbed; at trail juncture.
Overall Site Quality	____ Very Good-Excellent ____ Fair-Good __X__Poor __ Very Poor
Comments	Associated species: *Croton setigerus.*
Voucher Specimen	Yes/No; Herbarium: No
Definitions: *Occurrence Number* *Infested Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Olea europaea*
Occurrence Number	CER_OLEU_01
Date	4/20/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	Crestridge Ecological Reserve
Specific (onsite) Location	North-facing slopes east of Rios Canyon and directly south of northern property boundary
GPS Unit **Datum**	Garmin 60CSX NAD83 UTM Zone 11N
GPS Location (waypoint)	-116.869216, 32.8437
GPS Error	15 ft
Aspect	N
Infested Area	N/A
Gross Area	
Canopy Closure (canopy area covered by invasive plant)	Low
Abundance	1 tree
Vegetation Community	*Adenostoma fasciculatum* -(*Eriogonum fasciculatum*) Association
Overall Site Quality	X Very Good-Excellent Fair-Good Poor Very Poor
Comments	1 tree on north-facing slope; associated species: *Adenostoma fasciculatum* (15%), *Eriogonum fasciculatum* (10%), *Rhamnus crocea* (5%), *Heteromeles arbutifolia* (10%), *Malosma laurina* (5%), *Eriophyllum confertiflorum* (1%).
Voucher Specimen	Yes/No; Herbarium:
Definitions: *Occurrence Number* *Infested Area/Gross Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Pennisetum setaceum*
Occurrence Number	CER_PESE_01
Date	3/14/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	Crestridge Ecological Reserve
Specific (onsite) Location	Slopes east of Rios Canyon ('Thornmint Hill')
GPS Unit **Datum**	Garmin 60CSX NAD83 UTM Zone 11N
GPS Location	-116.860458458282, 32.829588
GPS Error	12 ft
Aspect	S
Infested Area	0.02 acre
Canopy Closure (canopy area covered by invasive plant)	Moderate to High
Abundance	Small, dense stand (ca. 60 plants)
Vegetation Community	*Pennisetum setaceum* Semi-Natural Stand within *Bahiopsis laciniata-Artemisia californica-Eriogonum fasciculatum* Association
Overall Site Quality	____ Very Good-Excellent _____ Fair-Good __X___Poor _____ Very Poor
Comments	Slopes burned in 2003 Cedar fire; localized, dense stand of *Pennisetum setaceum* surrounded by Good to Very Good quality native habitat.
Voucher Specimen	Yes/No; Herbarium:
Definitions: *Occurrence Number* *Infested Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Pennisetum setaceum*
Occurrence Number	CER_PESE_02
Date	3/14/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	Crestridge Ecological Reserve
Specific (onsite) Location	Slopes east of Rios Canyon ('Thornmint Hill')
GPS Unit **Datum**	Garmin 60CSX NAD83 UTM Zone 11N
GPS Location	-116.868174, 32.83868
GPS Error	12 ft
Aspect	S
Infested Area	413.67 square feet
Canopy Closure (canopy area covered by invasive plant)	Low
Abundance	Scattered plants (ca. 11)
Vegetation Community	*Salvia apiana-Artemisia californica* Association
Overall Site Quality	____ Very Good-Excellent __X___ Fair-Good ____Poor _____ Very Poor
Comments	Slopes burned in 2003 Cedar fire; scattered *Pennisetum setaceum* plants.
Voucher Specimen	Yes/No; Herbarium:
Definitions: *Occurrence Number* *Infested Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Pennisetum setaceum*
Occurrence Number	CER_PESE_03
Date	4/20/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	Crestridge Ecological Reserve
Specific (onsite) Location	Slopes east of Rios Canyon and north of 'Thornmint Hill' along northern property boundary
GPS Unit **Datum**	Garmin 60CSX NAD83 UTM Zone 11N
GPS Location (waypoint)	-116.869051, 32.84008
GPS Error	12 ft
Aspect	W
Infested Area	N/A
Gross Area	
Canopy Closure (canopy area covered by invasive plant)	Low
Abundance	Scattered plants (5-10 plants)
Vegetation Community	*Adenostoma fasciculatum* -(*Eriogonum fasciculatum*) *Artemisia californica*) *Saliva mellifera*) Association
Overall Site Quality	Very Good-Excellent X Fair-Good Poor Very Poor
Comments	*Mapped from the other side (just west of) drainage. Associated species: *Artemesia californica* (30%), *Malosma laurina* (10%), *Eriogonum fasciculatum* (10%), *Adenostoma fasciculatum* (10%), *Lotus scoparius* (10%).
Voucher Specimen	Yes/No; Herbarium:
Definitions: *Occurrence Number* *Infested Area/Gross Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Pennisetum setaceum*
Occurrence Number	CER_PESE_04-08
Date	3/28/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	Crestridge Ecological Reserve
Specific (onsite) Location	Lower slopes east of Rios Canyon Road and south of 'Thornmint Hill,' at head of Rios Canyon (end of paved road)
GPS Unit **Datum**	Garmin 60CSX NAD83 UTM Zone 11N
GPS Location (waypoint)	(4)-116.860503, 32.834211 (5) -116.860589, 32.834186; (6) -116.860854, 32.834177; (7) -116.860892, 32.834181; (8) -116.862472, 32.834259
GPS Error	12 ft
Aspect	W
Infested Area	N/A
Gross Area	
Canopy Closure (canopy area covered by invasive plant)	Low
Abundance	Scattered plants
Vegetation Community	*Malosma laurina-Lotus scoparius* Association
Overall Site Quality	Very Good-Excellent Fair-Good x Poor Very Poor
Comments	Five discrete patches, burned coastal sage scrub. Associated species: *Artemisia californica* , *Malosma laurina* , *Eriogonum fasciculatum* , *Centaurea melitensis* .
Voucher Specimen	Yes/No; Herbarium:
Definitions: *Occurrence Number* *Infested Area/Gross Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Pennisetum setaceum*
Occurrence Number	CER_PESE_09-10
Date	3/30/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	Crestridge Ecological Reserve
Specific (onsite) Location	Dirt trail heading east from west end of La Cresta Heights Road
GPS Unit **Datum**	Garmin 60CSX NAD83 UTM Zone 11N
GPS Location (waypoint)	(9) -116.850053, 32.834568; (10) -116.850084, 32.834472
GPS Error	14 ft
Aspect	South
Infested Area	N/A
Gross Area	
Canopy Closure (canopy area covered by invasive plant)	Low
Abundance	Scattered plants
Vegetation Community	*Adenostoma fasciculatum-Lotus scoparius* Association
Overall Site Quality	Very Good-Excellent X Fair-Good Poor Very Poor
Comments	Two discrete patches, burned chaparral; plants are along edge of trail.
Voucher Specimen	Yes/No; Herbarium:
Definitions: *Occurrence Number* *Infested Area/Gross Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Pennisetum setaceum*
Occurrence Number	CER_PESE_11-13
Date	3/30/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	Crestridge Ecological Reserve
Specific (onsite) Location	Dirt trail heading east of the north end of Vista de Montemar Road and southwest of the water tank.
GPS Unit **Datum**	Garmin 60CSX NAD83 UTM Zone 11N
GPS Location (waypoint)	(11) -116.889769, 32.822242; (12) -116.889918, 32.822415; (13) -116.889793, 32.822554
GPS Error	N/A
Aspect	NW-facing slope
Infested Area	N/A
Gross Area	N/A
Canopy Closure (canopy area covered by invasive plant)	Low
Abundance	Scattered plants
Vegetation Community	
Overall Site Quality	Very Good-Excellent X Fair-Good Poor Very Poor
Comments	Three discrete patches (2 are mapped as points, single plants only, and the third is a polygon with about 10 plants). The polygon is on a slope about 30 feet from the road and was mapped from a GPS point along the road.
Voucher Specimen	Yes/No; Herbarium:
Definitions: *Occurrence Number* *Infested Area/Gross Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Pennisetum setaceum*
Occurrence Number	CER_PESE_14
Date	4/20/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	Crestridge Ecological Reserve
Specific (onsite) Location	Slopes east or Rios Canyon and 'Thornmint Hill'
GPS Unit **Datum**	Garmin 60CSX NAD83 UTM Zone 11N
GPS Location (waypoint)	-116.868717, 32.843576
GPS Error	N/A
Aspect	SW
Infested Area	N/A
Gross Area	
Canopy Closure (canopy area covered by invasive plant)	Low
Abundance	Scattered plants (6 plants)
Vegetation Community	*Salvia apiana-Artemisia californica* Association
Overall Site Quality	Very Good-Excellent X Fair-Good Poor Very Poor
Comments	6 plants in burned (recovering) habitat; Associated species: *Malosma laurina* (15%), *Artemisia californica* (10%), *Cneoridium dumosum* (5%), *Salvia apiana* (1%), *Hesperoyucca whipplei* (<1%); *Avena barbata* (30%).
Voucher Specimen	Yes/No; Herbarium:
Definitions: *Occurrence Number* *Infested Area/Gross Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Pennisetuem setaceum*
Occurrence Number	CER_PESE_15
Date	4/20/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	Crestridge Ecological Reserve
Specific (onsite) Location	Slopes east or Rios Canyon and 'Thornmint Hill'
GPS Unit **Datum**	Garmin 60CSX NAD83 UTM Zone 11N
GPS Location (waypoint)	-116.863189, 32.841238
GPS Error	N/A
Aspect	SW
Infested Area	43.92 square feet
Gross Area	
Canopy Closure (canopy area covered by invasive plant)	Low
Abundance	Scattered plants
Vegetation Community	*Bahiopsis laciniata-Artemisia californica-Eriogonum fasciculatum* Association
Overall Site Quality	Very Good-Excellent X Fair-Good Poor Very Poor
Comments	10 plants in burned (recovering) habitat; Associated species: *Malosma laurina* (10%), *Artemisia californica* (8%), *Bahiopsis laciniata* (3%), *Salvia apiana* (25%), *Hesperoyucca whipplei* (<1%), *Nassella pulchra* (2%), *Brachypodium distachyon* (30%).
Voucher Specimen	Yes/No; Herbarium:
Definitions: *Occurrence Number* *Infested Area/Gross Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Pennisetum setaceum*
Occurrence Number	CER_PESE_16
Date	4/20/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	Crestridge Ecological Reserve
Specific (onsite) Location	Slopes east of Rios Canyon and 'Thornmint Hill'
GPS Unit **Datum**	Garmin 60CSX NAD83 UTM Zone 11N
GPS Location (waypoint)	-116.860589, 32.834186
GPS Error	N/A
Aspect	SW
Infested Area	288.55 square feet
Gross Area	
Canopy Closure (canopy area covered by invasive plant)	Low
Abundance	Single plant
Vegetation Community	*Bahiopsis laciniata-Artemisia californica-Eriogonum fasciculatum* Association
Overall Site Quality	Very Good-Excellent X Fair-Good Poor Very Poor
Comments	1 plant in burned (recovering) habitat; Associated species: *Malosma laurina* (10%), *Artemisia californica* (8%), *Bahiopsis laciniata* (3%), *Salvia apiana* (25%), *Hesperoyucca whipplei* (<1%), *Nassella pulchra* (2%), *Brachypodium distachyon* (30%).
Voucher Specimen	Yes/No; Herbarium:
Definitions: *Occurrence Number* *Infested Area/Gross Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Pennisetum setaceum*
Occurrence Number	CER_PESE_17-23
Date	5/3/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	Crestridge Ecological Reserve
Specific (onsite) Location	Slopes above 'racetrack'
GPS Unit **Datum**	Garmin 60CSX NAD83 UTM Zone 11N
GPS Location (waypoint)	(17)-116.846796, 32.837905; (18)-116.846327, 32.838328; (19)-116.846458, 32.838541; (20)-116.847253, 32.838179; (21)-116.847619, 32.83881; (22)-116.847881, 32.838975; (23)-116.848155, 32.839154
GPS Error	16 ft
Aspect	S to SW
Infested Area	(17) 0.06 acre; (18) 0.06 acre; (19) 0.03 acres; (20) 0.02 acre; (21) 0.02 acre; (22) 0.03 acre; (23) 0.10 acre
Gross Area	
Canopy Closure (canopy area covered by invasive plant)	Low - Moderate
Abundance	Scattered dense patches
Vegetation Community	*Adenostoma fasciculatum-Lotus scoparius* Association/*Ceanothus cyaneus* Special Stands
Overall Site Quality	Very Good-Excellent X Fair-Good Poor Very Poor
Comments	7 discrete patches mapped; Associated species: *Adenostoma fasciculatum* (15%), *Ceanothus cyaneus* (25%), *Malosma laurina* (15%), *Artemisia californica* (1%)
Voucher Specimen	Yes/No; Herbarium:
Definitions: *Occurrence Number* *Infested Area/Gross Area* *Canopy Closure*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)*

Invasive Species Data Form

Abundance	*Single plant; scattered plants; dense monoculture; scattered dense patches*
Overall Site Quality	*See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Pennisetum setaceum*
Occurrence Number	CER_PESE_24
Date	6/14/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	Crestridge Ecological Reserve
Specific (onsite) Location	West end of trail from Gibson cattle gate, east of west-facing slopes bordering 'racetrack'
GPS Unit **Datum**	Garmin 60CSX NAD83 UTM Zone 11N
GPS Location (waypoint)	-116.842348, 32.843619
GPS Error	12 ft
Aspect	S-facing
Infested Area	N/A
Gross Area	
Canopy Closure (canopy area covered by invasive plant)	Trace
Abundance	Scattered plants (1 mature plant and 2 seedlings)
Vegetation Community	*Adenostoma fasciculatum-Lotus scoparius* Association
Overall Site Quality	Very Good-Excellent X Fair-Good Poor Very Poor
Comments	Plants are in the middle of the trail. Associated species in adjacent habitat: *Adenostoma fasciculatum , Ceanothus tomentosus, Malosma laurina, Artemisia californica, Eriodictyon crassifolium.*
Voucher Specimen	Yes/No; Herbarium:
Definitions: *Occurrence Number* *Infested Area/Gross Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Pennisetum setaceum*
Occurrence Number	CER_PESE_25
Date	6/14/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	Crestridge Ecological Reserve
Specific (onsite) Location	West end of trail from Gibson cattle gate, east of west-facing slopes bordering 'racetrack'
GPS Unit **Datum**	Garmin 60CSX NAD83 UTM Zone 11N
GPS Location (waypoint)	-116.843186, 32.843602
GPS Error	12 ft
Aspect	SE-facing
Infested Area	N/A
Gross Area	
Canopy Closure (canopy area covered by invasive plant)	Trace
Abundance	Scattered plants (2 plants)
Vegetation Community	*Adenostoma fasciculatum-Lotus scoparius* Association
Overall Site Quality	Very Good-Excellent X Fair-Good Poor Very Poor
Comments	Plants are north of the trail. Associated species in adjacent habitat: *Adenostoma fasciculatum* , *Ceanothus tomentosus, Malosma laurina, Artemisia californica, Eriodictyon crassifolium.*
Voucher Specimen	Yes/No; Herbarium:
Definitions: *Occurrence Number* *Infested Area/Gross Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Pennisetum setaceum*
Occurrence Number	CER_PESE_26
Date	7/26/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	Crestridge Ecological Reserve
Specific (onsite) Location	East-central portion of reserve, just north of e-w oriented trail that heads east from Gibson cattle gate.
GPS Unit **Datum**	Garmin 60CSX NAD83 UTM Zone 11N
GPS Location (waypoint)	-116.840276, 32.845399
GPS Error	13 ft
Aspect	SW
Infested Area	N/A
Gross Area	N/A
Canopy Closure (canopy area covered by invasive plant)	Trace
Abundance	Single plant
Vegetation Community	*Adenostoma fasciculatum-Xylococcus bicolor-Ceanothus crassifolius* Association
Overall Site Quality	X Very Good-Excellent Fair-Good Poor Very Poor
Comments	Plant is north of the trail, in a bare area near rock outcrops. Associated species in adjacent habitat: *Adenostoma fasciculatum* (10%), *Ceanothus tomentosus* (20%), *Ceanothus cyaneus* (5%), *Xylococcus bicolor* (5%), *Malosma laurina* (3%), *Ceanothus crassifolius* (2%), *Cercocarpus betuloides* (1%).
Voucher Specimen	Yes/No; Herbarium:
Definitions: *Occurrence Number* *Infested Area/Gross Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Pennisetum setaceum*
Occurrence Number	CER_PESE_27
Date	5/29/2012
Observor(s)	Jessie Vinje
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	Crestridge Ecological Reserve
Specific (onsite) Location	Along the east side of the trail on a slope.
GPS Unit **Datum**	Garmin 60 CSX NAD83
GPS Location (waypoint)	-116.850048, 32.833299
GPS Error	14 ft
Aspect	West
Infested Area	3 plants.
Gross Area	N/A
Canopy Closure (canopy area covered by invasive plant)	Open
Abundance	Trace.
Vegetation Community	Slope adjacent to southern mixed chaparral.
Overall Site Quality	☐ Very Good-Excellent ☐ Fair-Good ☐ Poor ☐ Very Poor
Comments	Pulled all flowering inflorescences.
Voucher Specimen	Yes/No; Herbarium:
Definitions: *Occurrence Number* *Infested Area/Gross Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Pennisetum setaceum*
Occurrence Number	CER_PESE_28
Date	5/29/2012
Observor(s)	Jessie Vinje
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	Crestridge Ecological Reserve
Specific (onsite) Location	Along edge of trail on slope and in small gully adjacent to the trail.
GPS Unit **Datum**	Garmin 60 CSX NAD83
GPS Location (waypoint)	-116.850553, 32.833542
GPS Error	N/A
Aspect	South
Infested Area	3 square feet
Gross Area	10 square feet
Canopy Closure (canopy area covered by invasive plant)	Open
Abundance	13 plants.
Vegetation Community	Plants located adjacent to the trail. Southern mixed chaparral adjacent to the trai
Overall Site Quality	[ ] Very Good-Excellent [ ] Fair-Good [X] Poor [ ] Very Poor
Comments	All plants in flower. Pulled all flowering inflorescences.
Voucher Specimen	Yes/No; Herbarium:
Definitions: *Occurrence Number* *Infested Area/Gross Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Ricinus communis*
Occurrence Number	CER_RICO_01
Date	3/14/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	Crestridge Ecological Reserve
Specific (onsite) Location	Slopes east of Rios Canyon and north of 'Thornmint Hill'; north of Rios Elementary School, east of fenceline adjacent to trailer park.
GPS Unit **Datum**	Garmin 60CSX NAD83 UTM Zone 11N
GPS Location	-116.874149, 32.843335
GPS Error	12 ft
Aspect	N; adjacent to disturbed, cleared area.
Infested Area	0
Canopy Closure (canopy area covered by invasive plant)	Low
Abundance	1 plant
Vegetation Community	*Bromus diandrus* Semi-Natural Stand
Overall Site Quality	____ Very Good-Excellent ____ Fair-Good ____Poor __X__ Very Poor
Comments	This location is just north of northern reserve boundary and adjacent to CER-ARDO_02.
Voucher Specimen	Yes/No; Herbarium:
Definitions: *Occurrence Number* *Infested Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Silybum marianum*
Occurrence Number	CER_SIMA_01
Date	3/14/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	Crestridge Ecological Reserve
Specific (onsite) Location	Slopes east of Rios Canyon and north of 'Thornmint Hill'; north of Rios Elementary School, east of fenceline adjacent to trailer park.
GPS Unit **Datum**	Garmin 60CSX NAD83 UTM Zone 11N
GPS Location	-116.873821, 32.842989
GPS Error	12 ft
Aspect	Bottom of slope (disturbed swale).
Infested Area	0.02 acre
Canopy Closure (canopy area covered by invasive plant)	Low to moderate
Abundance	Scattered dense patches
Vegetation Community	*Bromus diandrus* Semi-Natural Stand
Overall Site Quality	____ Very Good-Excellent ____ Fair-Good ____Poor __X_ Very Poor
Comments	East of fuelbreak along nw edge of CER; may be outside (and just north) of reserve; just north of CER_ARDO_01.
Voucher Specimen	Yes/No; Herbarium:
Definitions: *Occurrence Number* *Infested Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Silybum marianum*
Occurrence Number	CER_SIMA_02
Date	4/26/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	Crestridge Ecological Reserve
Specific (onsite) Location	Access reserve through Vista de Monte Mar Road; N. side of dirt road on north facing slope
GPS Unit **Datum**	Garmin 60CSX NAD83 UTM Zone 11N
GPS Location	-116.893466, 32.81733
GPS Error	12 ft
Aspect	N-facing slope
Infested Area	0.02 acre
Canopy Closure (canopy area covered by invasive plant)	Low-Moderate
Abundance	Scattered dense patches
Vegetation Community	*Artemisia californica* Association
Overall Site Quality	____ Very Good-Excellent __X__ Fair-Good __X__ Poor ___ Very Poor
Comments	50-60 plants along disturbed road edge and then downslope into intact coastal sage scrub. Associated species: *Artemisia californica* (40%), *Malosma laurina* (5%), *Lotus scoparius* (<1%), *Baccharis sarothroides* (1%), *Eriophyllum confertiflorum* (5%), *Silybum marianum* (1%), *Bromus diandrus* (5%), *Centaurea melitensis* (2%), *Claytonia perfoliata* (<1%), *Hirschfeldia incana* (1%).
Voucher Specimen	Yes/No; Herbarium:
Definitions: *Occurrence Number* *Infested Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Tamarix* sp.
Occurrence Number	CER_TASP_01
Date	5/29/2012
Observor(s)	Jessie Vinje/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	Crestridge Ecological Reserve
Specific (onsite) Location	Rios Canyon; Rios Canyon Road, south-facing slope south of the road and west of the large switchback.
GPS Unit **Datum**	Garmin 60CSX NAD83 UTM Zone 11N
GPS Location (waypoint)	-116.859224, 32.833739
GPS Error	12 ft
Aspect	Flat
Infested Area	N/A
Gross Area	
Canopy Closure (canopy area covered by invasive plant)	Trace (<1%)
Abundance	1 plant
Vegetation Community	Coastal sage scrub on slope above drainage - vegetation in drainage is dominated by coast live oak (*Quercus agrifolia*)
Overall Site Quality	Very Good-Excellent X Fair-Good Poor Very Poor
Comments	Mapped from aerials
Voucher Specimen	Yes/No; Herbarium:
Definitions: *Occurrence Number* *Infested Area/Gross Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Vinca* aff. *major*
Occurrence Number	CER_VIMA_01
Date	5/29/2012
Observor(s)	Jessie Vinje
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	Crestridge Ecological Reserve
Specific (onsite) Location	Under the oaks in the Horsemill Road oak grove.
GPS Unit **Datum**	Garmin 60 CSX NAD83
GPS Location (waypoint)	-116.858444, 32.827976
GPS Error	14 ft
Aspect	Flat
Infested Area	2 square feet
Gross Area	N/A
Canopy Closure (canopy area covered by invasive plant)	Trace
Abundance	One patch located at this point.
Vegetation Community	Oak woodland.
Overall Site Quality	☐ Very Good-Excellent ☒ Fair-Good ☐ Poor ☐ Very Poor
Comments	Blue herbicide marking dye observed on this patch so the plant may die over the next couple of weeks.
Voucher Specimen	Yes/No; Herbarium:
Definitions: *Occurrence Number* *Infested Area/Gross Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Vinca* aff. *major*
Occurrence Number	CER_VIMA_02
Date	5/29/2012
Observor(s)	Jessie Vinje
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	Crestridge Ecological Reserve
Specific (onsite) Location	Under the oaks in the Horsemill Road oak grove.
GPS Unit **Datum**	Garmin 60 CSX NAD83
GPS Location (waypoint)	-116.858423, 32.82811
GPS Error	14 ft
Aspect	Flat
Infested Area	2 square feet
Gross Area	N/A
Canopy Closure (canopy area covered by invasive plant)	Trace
Abundance	One patch located at this point.
Vegetation Community	Oak woodland.
Overall Site Quality	[ ] Very Good-Excellent [x] Fair-Good [ ] Poor [ ] Very Poor
Comments	Blue herbicide marking dye observed on this patch so the plant may die over the next couple of weeks.
Voucher Specimen	Yes/No; Herbarium:
Definitions: *Occurrence Number* *Infested Area/Gross Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Appendix B.2

Invasive Plant Data Forms:

South Crest Properties

Invasive Species Data Form

Species	*Brachypodium distachyon*
Occurrence Number	SC_BRDIS_01
Date	4/6/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	Endangered Habitats Conservancy
Land Manager	Endangered Habitats Conservancy
General Location	South Crest Properties
Specific (onsite) Location	Skeleton Flats and surrounding slopes
GPS Unit **Datum**	Garmin 60CSX NAD83
GPS Location	-116.869186, 32.788513
GPS Error	N/A
Aspect	Flat, S, W-facing
Infested Area	58.4 acres (38.14 acres onsite; 20.26 acres offsite)
Canopy Closure (canopy area covered by invasive plant)	High
Abundance	Dense monoculture
Vegetation Community	Varies - *Brachypodium distachyon* Semi-Natural Stand, coastal sage scrub, chaparr
Overall Site Quality	____ Very Good-Excellent __X___ Fair-Good __X___Poor ___ Very Poor
Comments	Occurs with covered species, including *Nolina interrata, Tetracoccus dioicus, Acanthomintha ilicifolia, Dudleya variegata* , and *Harpagonella palmeri*
Voucher Specimen	Yes/No; Herbarium: No
Definitions: *Occurrence Number* *Infested Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Brassica tournefortii*
Occurrence Number	SC_BRTO_01
Date	5/23/2012
Observor(s)	Jessie Vinje
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	South Crest
Specific (onsite) Location	In southern portion of preserve near a *Nolina* patch.
GPS Unit **Datum**	Garmin 60CSX NAD83
GPS Location (waypoint)	-116.86607, 32.786171
GPS Error	N/A
Aspect	Flat to slightly southwest-facing.
Infested Area	1 square foot
Gross Area	N/A
Canopy Closure (canopy area covered by invasive plant)	Open
Abundance	One individual.
Vegetation Community	Disturbed area within southern mixed chaparral.
Overall Site Quality	☐ Very Good-Excellent ☐ Fair-Good ☒ Poor ☐ Very Poor
Comments	The plant was dry, but still standing. Growth from 2012 and all seeds had droppe
Voucher Specimen	Yes/No; Herbarium:
Definitions: *Occurrence Number* *Infested Area/Gross Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Brassica tournefortii*
Occurrence Number	SC_BRTO_02
Date	5/23/2012
Observor(s)	Jessie Vinje
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	South Crest
Specific (onsite) Location	Southeastern portion of Skeleton Flats, near the end of a dirt road.
GPS Unit **Datum**	Garmin 60CSX NAD83
GPS Location (waypoint)	-116.866294, 32.787513
GPS Error	N/A
Aspect	Southwest facing.
Infested Area	1 square foot.
Gross Area	N/A
Canopy Closure (canopy area covered by invasive plant)	Open
Abundance	Two individuals.
Vegetation Community	Disturbed area within chaparral.
Overall Site Quality	☐ Very Good-Excellent ☐ Fair-Good ☒ Poor ☐ Very Poor
Comments	Both plants were dry, but still standing. Growth from 2012 and all seeds had dro
Voucher Specimen	Yes/No; Herbarium:
Definitions: *Occurrence Number* *Infested Area/Gross Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Carduus pycnocephalus*
Occurrence Number	SC_CAPY_01
Date	4/5/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	South Crest
Specific (onsite) Location	East of Suncrest Boulevard and south of Orchard Avenue in north-south oriented drainage.
GPS Unit **Datum**	Garmin 60CSX NAD83 UTM Zone 11N
GPS Location (waypoint)	-116.877997, 32.797363
GPS Error	13 ft
Aspect	All
Infested Area	0.02 acre
Gross Area	
Canopy Closure (canopy area covered by invasive plant)	Low
Abundance	Scattered dense patches
Vegetation Community	*Quercus agrifolia* Alliance; *Quercus agrifolia/Toxicodendron* diversilobum/Grass Association
Overall Site Quality	Very Good-Excellent X Fair-Good Poor Very Poor
Comments	Understory of oaks. Associated species: *Quercus agrifolia* (50%), *Toxicodendron diversilobum* (20%), *Artemisia californica* (10%), *Chrysanthemum coronarium* (15%), *Raphanus sativus* (1%).
Voucher Specimen	Yes/No; Herbarium:
Definitions: *Occurrence Number* *Infested Area/Gross Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Cynara cardunculus*
Occurrence Number	SC_CYCA_01
Date	4/13/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	South Crest
Specific (onsite) Location	Offsite; south of southern property boundary, in large grassland area
GPS Unit **Datum**	Garmin 60CSX NAD83 UTM Zone 11N
GPS Location (waypoint)	-116.868431, 32.785556
GPS Error	12 ft
Aspect	Flat
Infested Area	0.05 acre
Gross Area	
Canopy Closure (canopy area covered by invasive plant)	Low
Abundance	14 plants
Vegetation Community	*Brachypodium distachyon* Semi-Natural Stand Type
Overall Site Quality	Very Good-Excellent X Fair-Good Poor Very Poor
Comments	14 plants in large grassland area; adjacent to *Malosma laurina* , but in area heavily dominated by non-native grasses. Several plants contain last year's inflorescences with seed.
Voucher Specimen	Yes/No; Herbarium:
Definitions: *Occurrence Number* *Infested Area/Gross Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Ehrharta longiflora*
Occurrence Number	SC_EHLO_01
Date	4/6/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	South Crest
Specific (onsite) Location	South of east-west oriented trail through burned chaparral, within **NOIN_17**
GPS Unit **Datum**	Garmin 60CSX NAD83 UTM Zone 11N
GPS Location (waypoint)	-116.865591, 32.788087
GPS Error	11 ft
Aspect	South-facing slope
Infested Area	0.02 acre
Gross Area	
Canopy Closure (canopy area covered by invasive plant)	Moderate
Abundance	Scattered dense patches
Vegetation Community	*Bahiopsis laciniata-Artemisia californica-Eriogonum fasciculatum* Association
Overall Site Quality	Very Good-Excellent Fair-Good X Poor Very Poor
Comments	South of trail, in rock outcrops and associated with *Nolina interrata* stand. Associated species: *Nolina interrata (60%), Bahiopsis laciniata (10%), Salvia apiana (5%), Lotus scoparius (5%), Centaurea melitensis (2%), Guiterrezia sp. (2%).*
Voucher Specimen	Yes/No; Herbarium:
Definitions: *Occurrence Number* *Infested Area/Gross Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Eucalyptus sp.*
Occurrence Number	SC_EUSP_01
Date	4/5/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	South Crest
Specific (onsite) Location	Northwest corner of main property; at top of hill
GPS Unit **Datum**	Garmin 60CSX NAD83 UTM Zone 11N
GPS Location (waypoint)	-116.879035, 32.791062
GPS Error	13 ft
Aspect	All
Infested Area	N/A
Gross Area	
Canopy Closure (canopy area covered by invasive plant)	Low
Abundance	5 trees
Vegetation Community	*Artemisia californica* Association
Overall Site Quality	Very Good-Excellent Fair-Good X Poor Very Poor
Comments	Top of hill; burned coastal sage scrub. Associated species: *Malosma laurina* (10%), *Artemisia californica* (10%), *Bromus diandrus* (30%), *Avena barbata* (10%).
Voucher Specimen	Yes/No; Herbarium:
Definitions: *Occurrence Number* *Infested Area/Gross Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Foeniculum vulgare*
Occurrence Number	SC_FOVU_01
Date	5/26/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	South Crest
Specific (onsite) Location	Skeleton Flats, west of the north-south oriented main trail
GPS Unit **Datum**	Garmin 60CSX NAD83 UTM Zone 11N
GPS Location (waypoint)	-116.870977, 32.789062
GPS Error	11 ft
Aspect	Flat to gentle, sw-facing slope
Infested Area	0.18 acre
Gross Area	
Canopy Closure (canopy area covered by invasive plant)	Moderate
Abundance	Scattered plants (ca. 50 plants - mature and seedling)
Vegetation Community	*Nassella pulchra* Association
Overall Site Quality	Very Good-Excellent X Fair-Good X Poor Very Poor
Comments	In relatively flat 'meadow;' slight drainage; with native grass (*Nassella pulchra*); near *Nolina interrata* . Associated species: *Nassella pulchra* , *Grindelia camporum* , *Avena barbata* , *Brachypodium distachyon* .
Voucher Specimen	Yes/No; Herbarium:
Definitions: *Occurrence Number* *Infested Area/Gross Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Glebionis (= Chrysanthemum) coronaria*
Occurrence Number	SC_CHCO_01
Date	4/5/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	South Crest
Specific (onsite) Location	Northwest corner of main property; along Orchard Avenue (dirt road) and spreading into adjacent scrub habitat.
GPS Unit **Datum**	Garmin 60CSX NAD83 UTM Zone 11N
GPS Location (waypoint)	-116.880414, 32.799433
GPS Error	14 ft
Aspect	All
Infested Area	3.7 acres
Gross Area	
Canopy Closure (canopy area covered by invasive plant)	Low to Moderate
Abundance	Scattered plants to dense monoculture
Vegetation Community	*Bahiopsis laciniata-Artemisia californica-Eriogonum fasciculatum* Association
Overall Site Quality	Very Good-Excellent X Fair-Good Poor Very Poor
Comments	Spreading along road and downslope. Associated species: *Eriogonum fasciculatum* (10%), *Artemisia californica* (30%), *Bahiopsis laciniata* (5%), *Lotus scoparius* (5%), *Malosma laurina* (3%), *Rhamnus crocea* (2%), *Erodium cicutarium* (<1%), *Centaurea melitensis* (<1%), *Avena barbata* (1%), *Filago gallica* (<1%), *Vulpia myuros* (<1%), *Bromus rubens* (<1%).
Voucher Specimen	Yes/No; Herbarium:
Definitions: *Occurrence Number* *Infested Area/Gross Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Glebionis (= Chrysanthemum) coronaria*
Occurrence Number	SC_CHCO_02
Date	4/5/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	South Crest
Specific (onsite) Location	Northwest corner of main property; along Orchard Avenue (dirt road).
GPS Unit **Datum**	Garmin 60CSX NAD83 UTM Zone 11N
GPS Location (waypoint)	-116.880882, 32.796142
GPS Error	17 ft
Aspect	Flat
Infested Area	0.01 acre
Gross Area	
Canopy Closure (canopy area covered by invasive plant)	Moderate
Abundance	Scattered dense patches
Vegetation Community	Disturbed (road edge), south side of road; Adjacent habitat = *Bahiopsis laciniata-Artemisia californica-Eriogonum fasciculatum* Association
Overall Site Quality	Very Good-Excellent Fair-Good Poor X Very Poor
Comments	Road edge; disturbed habitat.
Voucher Specimen	Yes/No; Herbarium:
Definitions: *Occurrence Number* *Infested Area/Gross Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Glebionis (= Chrysanthemum) coronaria*
Occurrence Number	SC_CHCO_03
Date	4/5/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	South Crest
Specific (onsite) Location	Northern portion of property, along trail south of Orchard Avenue and west of Suncrest Boulevard.
GPS Unit **Datum**	Garmin 60CSX NAD83 UTM Zone 11N
GPS Location (waypoint)	-116.880882, 32.796142
GPS Error	17 ft
Aspect	Northeast-facing slope
Infested Area	0.13 acre
Gross Area	
Canopy Closure (canopy area covered by invasive plant)	Moderate to High
Abundance	Scattered dense patches
Vegetation Community	*Bahiopsis laciniata-Artemisia californica-Eriogonum fasciculatum* Association
Overall Site Quality	Very Good-Excellent X Fair-Good Poor Very Poor
Comments	Along trail and spreading into intact habitat.
Voucher Specimen	Yes/No; Herbarium:
Definitions: *Occurrence Number* *Infested Area/Gross Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Glebionis (= Chrysanthemum) coronaria*
Occurrence Number	SC_CHCO_04
Date	4/5/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	South Crest
Specific (onsite) Location	Northern portion of property, along trail south of Orchard Avenue and west of Suncrest Boulevard.
GPS Unit **Datum**	Garmin 60CSX NAD83 UTM Zone 11N
GPS Location (waypoint)	-116.880259, 32.795184
GPS Error	14 ft
Aspect	Northeast-facing slope
Infested Area	0.01 acre
Gross Area	
Canopy Closure (canopy area covered by invasive plant)	Low
Abundance	Scattered plants
Vegetation Community	*Bahiopsis laciniata-Artemisia californica-Eriogonum fasciculatum* Association
Overall Site Quality	Very Good-Excellent Fair-Good X Poor Very Poor
Comments	Along trail, adjacent to intact habitat.
Voucher Specimen	Yes/No; Herbarium:
Definitions: *Occurrence Number* *Infested Area/Gross Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Glebionis (= Chrysanthemum) coronaria*
Occurrence Number	SC_CHCO_05
Date	4/5/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	South Crest
Specific (onsite) Location	East of Suncrest Boulevard and south of Orchard Avenue in north-south oriented drainage.
GPS Unit **Datum**	Garmin 60CSX NAD83 UTM Zone 11N
GPS Location (waypoint)	-116.877956, 32.797208
GPS Error	14 ft
Aspect	Flat
Infested Area	0.01 acre
Gross Area	
Canopy Closure (canopy area covered by invasive plant)	Moderate
Abundance	Scattered dense patches
Vegetation Community	*Quercus agrifolia* Alliance; *Quercus agrifolia/Toxicodendron diversilobum* /Grass Association
Overall Site Quality	Very Good-Excellent X Fair-Good Poor Very Poor
Comments	Understory of oaks. Associated species: *Quercus agrifolia* (50%), *Toxicodendron diversilobum* (20%), *Artemisia californica* (10%), *Carduus pycnocephalus* (5%), *Raphanus sativus* (1%).
Voucher Specimen	Yes/No; Herbarium:
Definitions: *Occurrence Number* *Infested Area/Gross Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Glebionis (= Chrysanthemum) coronaria*
Occurrence Number	SC_CHCO_06
Date	4/5/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	South Crest
Specific (onsite) Location	Northwest corner of main property; along Suncrest Boulevard, south of intersection with Orchard Avenue (dirt road).
GPS Unit **Datum**	Garmin 60CSX NAD83 UTM Zone 11N
GPS Location (waypoint)	-116.876963, 32.795247
GPS Error	13 ft
Aspect	Flat (road edge) to west-facing slopes
Infested Area	0.18 acre
Gross Area	
Canopy Closure (canopy area covered by invasive plant)	Moderate
Abundance	Scattered dense patches
Vegetation Community	*Artemisia californica* Association
Overall Site Quality	Very Good-Excellent Fair-Good Poor X Very Poor
Comments	Dense patches along edge of Suncrest Boulevard, adjacent to intact habitat.
Voucher Specimen	Yes/No; Herbarium:
Definitions: *Occurrence Number* *Infested Area/Gross Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Glebionis (= Chrysanthemum) coronaria*
Occurrence Number	SC_CHCO_07
Date	4/5/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	South Crest
Specific (onsite) Location	Northwest corner of main property; along Suncrest Boulevard, just east of intersection with Orchard Avenue (dirt road).
GPS Unit **Datum**	Garmin 60CSX NAD83 UTM Zone 11N
GPS Location (waypoint)	-116.877783, 32.799863
GPS Error	14 ft
Aspect	Flat (road edge) to south-facing slopes
Infested Area	0.63 acre
Gross Area	
Canopy Closure (canopy area covered by invasive plant)	High
Abundance	Dense monoculture
Vegetation Community	Disturbed (roadside); adjacent habitat = *Bahiopsis laciniata-Artemisia californica-Eriogonum fasciculatum* Association
Overall Site Quality	Very Good-Excellent Fair-Good Poor X Very Poor
Comments	Dense patches along southern shoulder of Suncrest Boulevard, spreading downslope into intact habitat.
Voucher Specimen	Yes/<u>No</u>; Herbarium:
Definitions: *Occurrence Number* *Infested Area/Gross Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Marrubium vulgare*
Occurrence Number	SC_MAVU_01
Date	4/5/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	South Crest
Specific (onsite) Location	Northwest corner of main property; along Orchard Avenue (dirt road).
GPS Unit **Datum**	Garmin 60CSX NAD83 UTM Zone 11N
GPS Location (waypoint)	-116.880424, 32.799945
GPS Error	12 ft
Aspect	Flat
Infested Area	N/A
Gross Area	
Canopy Closure (canopy area covered by invasive plant)	Trace
Abundance	1 plant
Vegetation Community	Disturbed (road edge); Adjacent habitat = *Bahiopsis laciniata-Artemisia californica-Eriogonum fasciculatum* Association
Overall Site Quality	Very Good-Excellent Fair-Good Poor X Very Poor
Comments	Road edge; disturbed habitat.
Voucher Specimen	Yes/No; Herbarium:
Definitions: *Occurrence Number* *Infested Area/Gross Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Marrubium vulgare*
Occurrence Number	SC_MAVU_02
Date	4/5/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	South Crest
Specific (onsite) Location	Northwest corner of main property; along Orchard Avenue (dirt road).
GPS Unit **Datum**	Garmin 60CSX NAD83 UTM Zone 11N
GPS Location (waypoint)	-116.880371, 32.799905
GPS Error	12 Ft
Aspect	Flat
Infested Area	N/A
Gross Area	
Canopy Closure (canopy area covered by invasive plant)	Trace
Abundance	1 plant
Vegetation Community	Disturbed (road edge); Adjacent habitat = *Bahiopsis laciniata-Artemisia californica-Eriogonum fasciculatum* Association
Overall Site Quality	Very Good-Excellent Fair-Good Poor X Very Poor
Comments	Road edge; disturbed habitat.
Voucher Specimen	Yes/No; Herbarium:
Definitions: *Occurrence Number* *Infested Area/Gross Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Melinis repens*
Occurrence Number	SC_MERE_01
Date	4/14/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	South Crest
Specific (onsite) Location	Slopes north of Dehesa Road; same location as TEDI_68.
GPS Unit **Datum**	Garmin 60CSX NAD83 UTM Zone 11N
GPS Location (waypoint)	-116.862096, 32.785241
GPS Error	11 ft
Aspect	South-facing slope
Infested Area	N/A
Gross Area	
Canopy Closure (canopy area covered by invasive plant)	Trace
Abundance	Single plant
Vegetation Community	*Bahiopsis laciniata-Artemisia californica-Eriogonum fasciculatum* Association
Overall Site Quality	Very Good-Excellent X Fair-Good Poor Very Poor
Comments	1 plant in coastal sage scrub. Associated species: *Bahiopsis laciniata (25%), Malosma laurina (3%), Artemisia californica (5%), Tetracoccus dioicus (1%), Rhamnus crocea (<1%), Calystegia macrostegia (2%).*
Voucher Specimen	Yes/No; Herbarium:
Definitions: *Occurrence Number* *Infested Area/Gross Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Melinis repens*
Occurrence Number	SC_MERE_02
Date	4/14/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	South Crest
Specific (onsite) Location	Slopes north of Dehesa Road; same location as TEDI_68.
GPS Unit **Datum**	Garmin 60CSX NAD83 UTM Zone 11N
GPS Location (waypoint)	-116.862141, 32.785252
GPS Error	11 ft
Aspect	South-facing slope
Infested Area	N/A
Gross Area	
Canopy Closure (canopy area covered by invasive plant)	Trace
Abundance	Scattered plants
Vegetation Community	*Bahiopsis laciniata-Artemisia californica-Eriogonum fasciculatum* Association
Overall Site Quality	Very Good-Excellent X Fair-Good Poor Very Poor
Comments	3 plants in coastal sage scrub. Associated species: *Bahiopsis laciniata (25%), Malosma laurina (3%), Artemisia californica (5%), Tetracoccus dioicus (1%), Rhamnus crocea (<1%), Calystegia macrostegia (2%).*
Voucher Specimen	Yes/No; Herbarium:
Definitions: *Occurrence Number* *Infested Area/Gross Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Melinis repens*
Occurrence Number	SC_MERE_03
Date	4/14/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	South Crest
Specific (onsite) Location	Slopes north of Dehesa Road; same location as TEDI_68.
GPS Unit **Datum**	Garmin 60CSX NAD83 UTM Zone 11N
GPS Location (waypoint)	-116.862127,32.785295
GPS Error	11 ft
Aspect	South-facing slope
Infested Area	N/A
Gross Area	
Canopy Closure (canopy area covered by invasive plant)	Trace
Abundance	Scattered plants
Vegetation Community	*Bahiopsis laciniata-Artemisia californica-Eriogonum fasciculatum* Association
Overall Site Quality	Very Good-Excellent X Fair-Good Poor Very Poor
Comments	3 plants in coastal sage scrub. Associated species: *Bahiopsis laciniata (25%), Malosma laurina (3%), Artemisia californica (5%), Tetracoccus dioicus (1%), Rhamnus crocea (<1%), Calystegia macrostegia (2%).*
Voucher Specimen	Yes/No; Herbarium:
Definitions: *Occurrence Number* *Infested Area/Gross Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Melinis repens*
Occurrence Number	SC_MERE_04
Date	4/14/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	South Crest
Specific (onsite) Location	Slopes north of Dehesa Road; vicinity of TEDI_70.
GPS Unit **Datum**	Garmin 60CSX NAD83 UTM Zone 11N
GPS Location (waypoint)	-116.861802, 32.785846
GPS Error	11 ft
Aspect	South-facing slope
Infested Area	0.09 acre
Gross Area	
Canopy Closure (canopy area covered by invasive plant)	Low
Abundance	Scattered plants
Vegetation Community	*Bahiopsis laciniata-Artemisia californica-Eriogonum fasciculatum* Association
Overall Site Quality	Very Good-Excellent X Fair-Good Poor Very Poor
Comments	Associated species: *Bahiopsis laciniata (25%), Malosma laurina (25%), Artemisia californica (<1%), Tetracoccus dioicus (2%), Rhamnus crocea (2%), Calystegia macrostegia (2%), Salvia apiana (<1%).*
Voucher Specimen	Yes/No; Herbarium:
Definitions: *Occurrence Number* *Infested Area/Gross Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Oxalis pes-caprae*
Occurrence Number	SC_OXPE_01
Date	4/5/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	South Crest
Specific (onsite) Location	Northwest corner of main property; south of Orchard Avenue (dirt road).
GPS Unit **Datum**	Garmin 60CSX NAD83 UTM Zone 11N
GPS Location (waypoint)	-116.879961, 32.799656
GPS Error	13 ft
Aspect	East-facing slope
Infested Area	69.86 square feet
Gross Area	
Canopy Closure (canopy area covered by invasive plant)	Low
Abundance	Scattered dense patches
Vegetation Community	*Salvia apiana-Artemisia californica* Association
Overall Site Quality	Very Good-Excellent Fair-Good Poor X Very Poor
Comments	South of Orchard Avenue (dirt road), east-facing slope adjacent to trail. Associated species: *Artemisia californica* (15%), *Salvia apiana* (15%), *Helianthus gracilentus* (5%), *Erodium cicutarium* (<1%), *Centaurea melitensis* (<1%), *Vulpia myuros* (<1%).
Voucher Specimen	Yes/No; Herbarium:
Definitions: *Occurrence Number* *Infested Area/Gross Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Pennisetum setaceum*
Occurrence Number	SC_PESE_01
Date	4/5/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	South Crest
Specific (onsite) Location	Northwest corner of main property; along Orchard Avenue (dirt road).
GPS Unit **Datum**	Garmin 60CSX NAD83 UTM Zone 11N
GPS Location (waypoint)	-116.883108, 32.800586
GPS Error	12 ft
Aspect	South-facing slope
Infested Area	N/A
Gross Area	
Canopy Closure (canopy area covered by invasive plant)	Low
Abundance	Scattered plants
Vegetation Community	*Artemisia californica* Association
Overall Site Quality	X Very Good-Excellent Fair-Good Poor Very Poor
Comments	2 plants along north side of Orchard Avenue (dirt road), in intact scrub habitat. Associated species: *Artemisia californica* (50%), *Lotus scoparius* (10%), *Malosma laurina* (5%), *Helianthus gracilentus* (1%), *Baccharis sarothroides* (1%), *Bahiopsis laciniata* (1%).
Voucher Specimen	Yes/No; Herbarium:
Definitions: *Occurrence Number* *Infested Area/Gross Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Pennisetum setaceum*
Occurrence Number	SC_PESE_02
Date	4/5/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	South Crest
Specific (onsite) Location	Northwest corner of main property; along Orchard Avenue (dirt road).
GPS Unit **Datum**	Garmin 60CSX NAD83 UTM Zone 11N
GPS Location (waypoint)	-116.883072, 32.80064
GPS Error	12 ft
Aspect	South-facing slope
Infested Area	N/A
Gross Area	
Canopy Closure (canopy area covered by invasive plant)	Low
Abundance	Single plant
Vegetation Community	*Artemisia californica* Association
Overall Site Quality	X Very Good-Excellent Fair-Good Poor Very Poor
Comments	1 plant along north side of Orchard Avenue (dirt road), in intact scrub habitat. Associated species: *Artemisia californica* (50%), *Lotus scoparius* (10%), *Malosma laurina* (5%), *Helianthus gracilentus* (1%), *Baccharis sarothroides* (1%), *Bahiopsis laciniata* (1%).
Voucher Specimen	Yes/No; Herbarium:
Definitions: *Occurrence Number* *Infested Area/Gross Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Pennisetum setaceum*
Occurrence Number	SC_PESE_03
Date	4/5/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	South Crest
Specific (onsite) Location	Northwest corner of main property; along Orchard Avenue (dirt road).
GPS Unit **Datum**	Garmin 60CSX NAD83 UTM Zone 11N
GPS Location (waypoint)	-116.883084, 32.800705
GPS Error	12 ft
Aspect	South-facing slope
Infested Area	N/A
Gross Area	
Canopy Closure (canopy area covered by invasive plant)	Low
Abundance	Single plant
Vegetation Community	*Artemisia californica* Association
Overall Site Quality	X Very Good-Excellent Fair-Good Poor Very Poor
Comments	1 plant along north side of Orchard Avenue (dirt road), in intact scrub habitat. Associated species: *Artemisia californica* (50%), *Lotus scoparius* (10%), *Malosma laurina* (5%), *Helianthus gracilentus* (1%), *Baccharis sarothroides* (1%), *Bahiopsis laciniata* (1%).
Voucher Specimen	Yes/No; Herbarium:
Definitions: *Occurrence Number* *Infested Area/Gross Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Pennisetum setaceum*
Occurrence Number	SC_PESE_04
Date	4/5/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	South Crest
Specific (onsite) Location	Northwest corner of main property; along Orchard Avenue (dirt road).
GPS Unit **Datum**	Garmin 60CSX NAD83 UTM Zone 11N
GPS Location (waypoint)	-116.869883, 32.790601
GPS Error	12 ft
Aspect	South-facing slope
Infested Area	N/A
Gross Area	
Canopy Closure (canopy area covered by invasive plant)	Low
Abundance	Scattered plants
Vegetation Community	*Artemisia californica* Association
Overall Site Quality	X Very Good-Excellent Fair-Good Poor Very Poor
Comments	1 plant along north side of Orchard Avenue (dirt road), in intact scrub habitat. Associated species: *Artemisia californica* (50%), *Lotus scoparius* (10%), *Malosma laurina* (5%), *Helianthus gracilentus* (1%), *Baccharis sarothroides* (1%), *Bahiopsis laciniata* (1%).
Voucher Specimen	Yes/No; Herbarium:
Definitions: *Occurrence Number* *Infested Area/Gross Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Pennisetum setaceum*
Occurrence Number	SC_PESE_05
Date	4/6/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	South Crest
Specific (onsite) Location	Along trail through open grassland near center of site.
GPS Unit **Datum**	Garmin 60CSX NAD83 UTM Zone 11N
GPS Location (waypoint)	-116.869656, 32.787731
GPS Error	12 ft
Aspect	Flat
Infested Area	N/A
Gross Area	
Canopy Closure (canopy area covered by invasive plant)	Low
Abundance	Single plant
Vegetation Community	*Brachypodium distachyon* Semi-Natural Stand Type
Overall Site Quality	Very Good-Excellent Fair-Good X Poor Very Poor
Comments	1 plant along trail through grassland. Associated species: *Brachypodium distachyon* (50%), *Avena barbata* (15%), *Grindelia* sp. (<1%).
Voucher Specimen	Yes/No; Herbarium:
Definitions: *Occurrence Number* *Infested Area/Gross Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Pennisetum setaceum*
Occurrence Number	SC_PESE_06
Date	4/6/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	South Crest
Specific (onsite) Location	Along east-west oriented trail through burned chaparral.
GPS Unit **Datum**	Garmin 60CSX NAD83 UTM Zone 11N
GPS Location (waypoint)	-116.865236, 32.788605
GPS Error	12 ft
Aspect	Southwest-facing slope
Infested Area	N/A
Gross Area	
Canopy Closure (canopy area covered by invasive plant)	Low
Abundance	Single plant
Vegetation Community	*Adenostoma fasciculatum-Lotus scoparius* Association
Overall Site Quality	Very Good-Excellent Fair-Good X Poor Very Poor
Comments	1 plant along trail through chaparral. Associated species: *Adenostoma fasciculatum (25%), Tetracoccus dioicus (1%), Ceanothus tomentosus (7%), Malosma laurina (5%).*
Voucher Specimen	Yes/No; Herbarium:
Definitions: *Occurrence Number* *Infested Area/Gross Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Pennisetum setaceum*
Occurrence Number	SC_PESE_07
Date	4/6/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	South Crest
Specific (onsite) Location	Along east-west oriented trail through burned chaparral.
GPS Unit **Datum**	Garmin 60CSX NAD83 UTM Zone 11N
GPS Location (waypoint)	-116.865256, 32.788607
GPS Error	12 ft
Aspect	Southwest-facing slope
Infested Area	N/A
Gross Area	
Canopy Closure (canopy area covered by invasive plant)	Low
Abundance	Single plant
Vegetation Community	*Adenostoma fasciculatum-Lotus scoparius* Association
Overall Site Quality	Very Good-Excellent Fair-Good X Poor Very Poor
Comments	1 plant along trail through chaparral. Associated species: *Adenostoma fasciculatum (25%), Tetracoccus dioicus (1%), Ceanothus tomentosus (7%), Malosma laurina (5%).*
Voucher Specimen	Yes/No; Herbarium:
Definitions: *Occurrence Number* *Infested Area/Gross Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Pennisetum setaceum*
Occurrence Number	SC_PESE_08
Date	4/6/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	South Crest
Specific (onsite) Location	Along east-west oriented trail through burned chaparral.
GPS Unit **Datum**	Garmin 60CSX NAD83 UTM Zone 11N
GPS Location (waypoint)	-116.865256, 32.788607
GPS Error	12 ft
Aspect	Southwest-facing slope
Infested Area	N/A
Gross Area	
Canopy Closure (canopy area covered by invasive plant)	Low
Abundance	Single plant
Vegetation Community	*Adenostoma fasciculatum-Lotus scoparius* Association
Overall Site Quality	Very Good-Excellent Fair-Good X Poor Very Poor
Comments	1 plant along trail through chaparral. Associated species: *Adenostoma fasciculatum (25%), Tetracoccus dioicus (1%), Ceanothus tomentosus (7%), Malosma laurina (5%).*
Voucher Specimen	Yes/No; Herbarium:
Definitions: *Occurrence Number* *Infested Area/Gross Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Pennisetum setaceum*
Occurrence Number	SC_PESE_09
Date	4/6/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	South Crest
Specific (onsite) Location	Along east-west oriented trail through burned chaparral.
GPS Unit **Datum**	Garmin 60CSX NAD83 UTM Zone 11N
GPS Location (waypoint)	-116.865283, 32.788547
GPS Error	12 ft
Aspect	Southwest-facing slope
Infested Area	N/A
Gross Area	
Canopy Closure (canopy area covered by invasive plant)	Low
Abundance	Single plant
Vegetation Community	*Adenostoma fasciculatum-Lotus scoparius* Association
Overall Site Quality	Very Good-Excellent Fair-Good X Poor Very Poor
Comments	1 plant along trail through chaparral. Associated species: *Adenostoma fasciculatum (25%), Tetracoccus dioicus (1%), Ceanothus tomentosus (7%), Malosma laurina (5%).*
Voucher Specimen	Yes/No; Herbarium:
Definitions: *Occurrence Number* *Infested Area/Gross Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Pennisetum setaceum*
Occurrence Number	SC_PESE_10
Date	4/6/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	South Crest
Specific (onsite) Location	Along east-west oriented trail through burned chaparral.
GPS Unit **Datum**	Garmin 60CSX NAD83 UTM Zone 11N
GPS Location (waypoint)	-116.865278, 32.788547
GPS Error	12 ft
Aspect	Southwest-facing slope
Infested Area	N/A
Gross Area	
Canopy Closure (canopy area covered by invasive plant)	Low
Abundance	Single plant
Vegetation Community	*Adenostoma fasciculatum-Lotus scoparius* Association
Overall Site Quality	Very Good-Excellent Fair-Good X Poor Very Poor
Comments	1 plant along trail through chaparral. Associated species: *Adenostoma fasciculatum (25%), Tetracoccus dioicus (1%), Ceanothus tomentosus (7%), Malosma laurina (5%).*
Voucher Specimen	Yes/No; Herbarium:
Definitions: *Occurrence Number* *Infested Area/Gross Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Pennisetum setaceum*
Occurrence Number	SC_PESE_11
Date	4/13/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	South Crest
Specific (onsite) Location	West-facing slope, east of large, central grassland area
GPS Unit **Datum**	Garmin 60CSX NAD83 UTM Zone 11N
GPS Location (waypoint)	-116.86429, 32.789359
GPS Error	12 ft
Aspect	West-facing slope
Infested Area	N/A
Gross Area	
Canopy Closure (canopy area covered by invasive plant)	Trace
Abundance	Single plant
Vegetation Community	*Bahiopsis laciniata-Artemisia californica-Eriogonum fasciculatum* Association
Overall Site Quality	Very Good-Excellent X Fair-Good Poor Very Poor
Comments	1 plant in burned chaparral. Associated species: *Bahiopsis laciniata (20%), Malosma laurina (5%), Artemisia californica (5%), Lotus scoparius (3%), Salvia apiana (2%), Tetracoccus dioicus (2%), Eriogonum fasciculatum (1%), Rhamnus crocea (<1%), Guiterrezia* californica *(1%), Calystegia macrostegia (<1%).*
Voucher Specimen	Yes/No; Herbarium:
Definitions: *Occurrence Number* *Infested Area/Gross Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Pennisetum setaceum*
Occurrence Number	SC_PESE_12
Date	4/13/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	South Crest
Specific (onsite) Location	West-facing slope, east of large, central grassland area
GPS Unit **Datum**	Garmin 60CSX NAD83 UTM Zone 11N
GPS Location (waypoint)	-116.864199, 32.789376
GPS Error	12 ft
Aspect	West-facing slope
Infested Area	N/A
Gross Area	
Canopy Closure (canopy area covered by invasive plant)	Trace
Abundance	Single plant
Vegetation Community	*Bahiopsis laciniata-Artemisia californica-Eriogonum fasciculatum* Association
Overall Site Quality	Very Good-Excellent X Fair-Good Poor Very Poor
Comments	1 plant in burned chaparral. Associated species: *Bahiopsis laciniata (20%), Malosma laurina (5%), Artemisia californica (5%), Lotus scoparius (3%), Salvia apiana (2%), Tetracoccus dioicus (2%), Eriogonum fasciculatum (1%), Rhamnus crocea (<1%), Guiterrezia* californica *(1%), Calystegia macrostegia (<1%).*
Voucher Specimen	Yes/No; Herbarium:
Definitions: *Occurrence Number* *Infested Area/Gross Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Pennisetum setaceum*
Occurrence Number	SC_PESE_13
Date	4/14/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	South Crest; slopes north of Dehesa Road
Specific (onsite) Location	East-facing slope at top of drainage
GPS Unit **Datum**	Garmin 60CSX NAD83 UTM Zone 11N
GPS Location (waypoint)	-116.862571, 32.783574
GPS Error	11 ft
Aspect	East-facing slope
Infested Area	N/A
Gross Area	
Canopy Closure (canopy area covered by invasive plant)	Trace
Abundance	Scattered plants (3)
Vegetation Community	*Bahiopsis laciniata-Artemisia californica-Eriogonum fasciculatum* Association
Overall Site Quality	Very Good-Excellent X Fair-Good Poor Very Poor
Comments	3 plants in coastal sage scrub. Associated species: *Bahiopsis laciniata (40%), Malosma laurina (5%), Cneoridium dumosum (<1%), Rhamnus crocea.*
Voucher Specimen	Yes/No; Herbarium:
Definitions: *Occurrence Number* *Infested Area/Gross Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Pennisetum setaceum*
Occurrence Number	SC_PESE_14
Date	4/14/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	South Crest; slopes north of Dehesa Road
Specific (onsite) Location	South-facing slopes; same locatios as TEDI_67.
GPS Unit **Datum**	Garmin 60CSX NAD83 UTM Zone 11N
GPS Location (waypoint)	-116.862025, 32.784406
GPS Error	11 ft
Aspect	South-facing slope
Infested Area	N/A
Gross Area	
Canopy Closure (canopy area covered by invasive plant)	Trace
Abundance	Scattered plants.
Vegetation Community	*Bahiopsis laciniata-Artemisia californica-Eriogonum fasciculatum* Association
Overall Site Quality	Very Good-Excellent X Fair-Good Poor Very Poor
Comments	3 plants in coastal sage scrub. Associated species: *Artemisia californica* (15%), *Malosma laurina* (10%), *Bahiopsis laciniata* (10%), *Tetracoccus dioicus* (1%), *Rhamnus crocea* (<1%), *Centaurea melitensis* (2%), *Calystegia macrostegia* (1%).
Voucher Specimen	Yes/No; Herbarium:
Definitions: *Occurrence Number* *Infested Area/Gross Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Pennisetum setaceum*
Occurrence Number	SC_PESE_15
Date	4/14/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	South Crest; slopes north of Dehesa Road
Specific (onsite) Location	South-facing slopes; same general area as TEDI_67.
GPS Unit **Datum**	Garmin 60CSX NAD83 UTM Zone 11N
GPS Location (waypoint)	-116.861949, 32.784944
GPS Error	11 ft
Aspect	South-facing slope
Infested Area	0.26 acre
Gross Area	
Canopy Closure (canopy area covered by invasive plant)	Moderate
Abundance	Scattered dense patches (ca. 80 plants)
Vegetation Community	*Bahiopsis laciniata-Artemisia californica-Eriogonum fasciculatum* Association
Overall Site Quality	Very Good-Excellent X Fair-Good Poor Very Poor
Comments	Ca. 80 plants in coastal sage scrub. Associated species: *Artemisia californica (15%), Malosma laurina (10%), Bahiopsis laciniata (10%), Tetracoccus dioicus (1%), Rhamnus crocea (<1%), Centaurea melitensis (2%), Calystegia macrostegia (1%).*
Voucher Specimen	Yes/No; Herbarium:
Definitions: *Occurrence Number* *Infested Area/Gross Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Pennisetum setaceum*
Occurrence Number	SC_PESE_16
Date	4/14/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	South Crest; slopes north of Dehesa Road
Specific (onsite) Location	South-facing slopes.
GPS Unit **Datum**	Garmin 60CSX NAD83 UTM Zone 11N
GPS Location (waypoint)	-116.862259, 32.785521
GPS Error	11 ft
Aspect	South-facing slope
Infested Area	N/A
Gross Area	
Canopy Closure (canopy area covered by invasive plant)	Trace
Abundance	Single plant; scattered plants; dense monoculture; scattered dense patches
Vegetation Community	*Bahiopsis laciniata-Artemisia californica-Eriogonum fasciculatum* Association
Overall Site Quality	Very Good-Excellent X Fair-Good Poor Very Poor
Comments	1 plant in coastal sage scrub. Associated species: *Artemisia californica (15%), Malosma laurina (10%), Bahiopsis laciniata (10%), Tetracoccus dioicus (1%), Rhamnus crocea (<1%), Centaurea melitensis (2%), Calystegia macrostegia (1%).*
Voucher Specimen	Yes/No; Herbarium:
Definitions: *Occurrence Number* *Infested Area/Gross Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Pennisetum setaceum*
Occurrence Number	SC_PESE_17
Date	4/14/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	South Crest; slopes north of Dehesa Road
Specific (onsite) Location	South-facing slopes
GPS Unit **Datum**	Garmin 60CSX NAD83 UTM Zone 11N
GPS Location (waypoint)	-116.862178, 32.78633
GPS Error	11 ft
Aspect	South-facing slope
Infested Area	212.35 square feet
Gross Area	
Canopy Closure (canopy area covered by invasive plant)	Low
Abundance	Scattered plants
Vegetation Community	*Bahiopsis laciniata-Artemisia californica-Eriogonum fasciculatum* Association
Overall Site Quality	Very Good-Excellent X Fair-Good Poor Very Poor
Comments	16 plants in coastal sage scrub. Associated species: *Artemisia californica (15%), Malosma laurina (10%), Bahiopsis laciniata (10%), Tetracoccus dioicus (1%), Rhamnus crocea (<1%), Centaurea melitensis (2%), Calystegia macrostegia (1%).*
Voucher Specimen	Yes/No; Herbarium:
Definitions: *Occurrence Number* *Infested Area/Gross Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Pennisetum setaceum*
Occurrence Number	SC_PESE_17a
Date	4/14/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	South Crest; slopes north of Dehesa Road
Specific (onsite) Location	South-facing slope; due east of PESE_17 on nose and west-facing slope.
GPS Unit **Datum**	Garmin 60CSX NAD83 UTM Zone 11N
GPS Location (waypoint)	-116.860935, 32.786723
GPS Error	N/A
Aspect	South-facing slope
Infested Area	0.37 acre
Gross Area	
Canopy Closure (canopy area covered by invasive plant)	Moderate
Abundance	Scattered dense patches
Vegetation Community	*Bahiopsis laciniata-Artemisia californica-Eriogonum fasciculatum* Association
Overall Site Quality	Very Good-Excellent X Fair-Good Poor Very Poor
Comments	Note: not mapped in field.
Voucher Specimen	Yes/No; Herbarium:
Definitions: *Occurrence Number* *Infested Area/Gross Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Pennisetum setaceum*
Occurrence Number	SC_PESE_18
Date	4/14/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	South Crest; slopes north of Dehesa Road
Specific (onsite) Location	South-facing slopes.
GPS Unit **Datum**	Garmin 60CSX NAD83 UTM Zone 11N
GPS Location (waypoint)	-116.861397, 32.78496
GPS Error	11 ft
Aspect	South-facing slope
Infested Area	0.06 acre
Gross Area	
Canopy Closure (canopy area covered by invasive plant)	Low
Abundance	Scattered plants
Vegetation Community	*Bahiopsis laciniata-Artemisia californica-Eriogonum fasciculatum* Association
Overall Site Quality	Very Good-Excellent X Fair-Good Poor Very Poor
Comments	6 plants in coastal sage scrub. Associated species: *Malosma laurina (5%), Bahiopsis laciniata (10%), Aristida adscensionis (1%), Lotus scoparius (1%).*
Voucher Specimen	Yes/No; Herbarium:
Definitions: *Occurrence Number* *Infested Area/Gross Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Pennisetum setaceum*
Occurrence Number	SC_PESE_19
Date	4/14/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	South Crest; slopes north of Dehesa Road
Specific (onsite) Location	South-facing slopes.
GPS Unit **Datum**	Garmin 60CSX NAD83 UTM Zone 11N
GPS Location (waypoint)	-116.861605, 32.78464
GPS Error	11 ft
Aspect	South-facing slope
Infested Area	0.03 acre
Gross Area	
Canopy Closure (canopy area covered by invasive plant)	Low
Abundance	Scattered plants
Vegetation Community	*Bahiopsis laciniata-Artemisia californica-Eriogonum fasciculatum* Association
Overall Site Quality	Very Good-Excellent X Fair-Good Poor Very Poor
Comments	12 plants in coastal sage scrub. Associated species: *Bahiopsis laciniata (50%), Encelia farinosa (<1%), Chaenactis artemisiaefolia (<1%).*
Voucher Specimen	Yes/No; Herbarium:
Definitions: *Occurrence Number* *Infested Area/Gross Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Pennisetum setaceum*
Occurrence Number	SC_PESE_20
Date	4/14/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	South Crest; slopes north of Dehesa Road
Specific (onsite) Location	South-facing slopes.
GPS Unit **Datum**	Garmin 60CSX NAD83 UTM Zone 11N
GPS Location (waypoint)	-116.861767, 32.784265
GPS Error	11 ft
Aspect	South-facing slope
Infested Area	N/A
Gross Area	
Canopy Closure (canopy area covered by invasive plant)	Trace
Abundance	Single plant
Vegetation Community	*Bahiopsis laciniata-Artemisia californica-Eriogonum fasciculatum* Association
Overall Site Quality	Very Good-Excellent X Fair-Good Poor Very Poor
Comments	1 plant in coastal sage scrub. Associated species: *Bahiopsis laciniata (50%), Encelia farinosa (<1%), Chaenactis artemisiaefolia (<1%).*
Voucher Specimen	Yes/No; Herbarium:
Definitions: *Occurrence Number* *Infested Area/Gross Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Pennisetum setaceum*
Occurrence Number	SC_PESE_21
Date	4/14/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	South Crest; slopes north of Dehesa Road
Specific (onsite) Location	South-facing slopes.
GPS Unit **Datum**	Garmin 60CSX NAD83 UTM Zone 11N
GPS Location (waypoint)	-116.861767, 32.784265
GPS Error	11 ft
Aspect	South-facing slope
Infested Area	0.01 acre
Gross Area	
Canopy Closure (canopy area covered by invasive plant)	Moderate
Abundance	Scattered dense patches
Vegetation Community	*Bahiopsis laciniata-Artemisia californica-Eriogonum fasciculatum* Association
Overall Site Quality	Very Good-Excellent X Fair-Good Poor Very Poor
Comments	18-20 plants in coastal sage scrub. Associated species: *Bahiopsis laciniata (50%), Encelia farinosa (<1%), Chaenactis artemisiaefolia (<1%).*
Voucher Specimen	Yes/No; Herbarium:
Definitions: *Occurrence Number* *Infested Area/Gross Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Pennisetum setaceum*
Occurrence Number	SC_PESE_22
Date	5/24/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	South Crest
Specific (onsite) Location	Vicinity of Skeleton Flats; burned coastal sage scrub
GPS Unit **Datum**	Garmin 60CSX NAD83 UTM Zone 11N
GPS Location (waypoint)	-116.872189, 32.78928
GPS Error	11 ft
Aspect	Southeast-facing slope
Infested Area	N/A
Gross Area	
Canopy Closure (canopy area covered by invasive plant)	Trace (1 plant)
Abundance	Single plant
Vegetation Community	*Avena* (*barbata*) *fatua*) Semi-Natural Stand; *Brachypodium distachyon* Semi-Natural Stand
Overall Site Quality	Very Good-Excellent Fair-Good X Poor Very Poor
Comments	Associated species: *Avena barbata* (50%), *Brachypodium distachyon* (45%), *Salvia apiana* (2%), *Rhamnus crocea* (1%), *Grindelia hirsutula* (1%).
Voucher Specimen	Yes/No; Herbarium:
Definitions: *Occurrence Number* *Infested Area/Gross Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Pennisetum setaceum*
Occurrence Number	SC_PESE_23
Date	5/26/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	South Crest
Specific (onsite) Location	Vicinity of Skeleton Flats; burned coastal sage scrub
GPS Unit **Datum**	Garmin 60CSX NAD83 UTM Zone 11N
GPS Location (waypoint)	-116,870032, 32.787499
GPS Error	12 ft
Aspect	Southwest-facing slope
Infested Area	N/A
Gross Area	
Canopy Closure (canopy area covered by invasive plant)	Trace (1 plant)
Abundance	Single plant
Vegetation Community	*Artemisia californica* Association
Overall Site Quality	Very Good-Excellent X Fair-Good Poor Very Poor
Comments	Associated species: *Nolina interrata, Tetracoccus dioicus, Calystegia macrostegia, Artemisia californica, Eriophyllum confertiflorum.*
Voucher Specimen	Yes/No; Herbarium:
Definitions: *Occurrence Number* *Infested Area/Gross Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Pennisetum setaceum*
Occurrence Number	SC_PESE_24
Date	6/30/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	South Crest
Specific (onsite) Location	Vicinity of Skeleton Flats; burned chaparral
GPS Unit **Datum**	Garmin 60CSX NAD83 UTM Zone 11N
GPS Location (waypoint)	-116.86604, 32.788585
GPS Error	11 ft
Aspect	Southwest-facing slope
Infested Area	N/A
Gross Area	
Canopy Closure (canopy area covered by invasive plant)	Trace (2 plants)
Abundance	Scattered plants
Vegetation Community	*Adenostoma fasciculatum-Ceanothus tomentosus* Association
Overall Site Quality	Very Good-Excellent X Fair-Good Poor Very Poor
Comments	Associated species: *Adenostoma fasciculatum* (60%), *Ceanothus tomentosus* (10%), *Helianthus gracilentus* (1%), *Calystegia macrostegia* (1%), *Cneoridium dumosum* (tr), *Nolina interrata* (tr).
Voucher Specimen	Yes/No; Herbarium:
Definitions: *Occurrence Number* *Infested Area/Gross Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Pennisetum setaceum*
Occurrence Number	SC_PESE_25
Date	6/30/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	South Crest
Specific (onsite) Location	South of Skeleton Flats, upper slopes above Dehesa Road; burned coastal sage scrub
GPS Unit **Datum**	Garmin 60CSX NAD83 UTM Zone 11N
GPS Location (waypoint)	-116.866682, 32.786233
GPS Error	11 ft
Aspect	South-facing slope
Infested Area	N/A
Gross Area	
Canopy Closure (canopy area covered by invasive plant)	Trace (2-3 plants)
Abundance	Scattered plants
Vegetation Community	*Bahiopsis laciniata-Artemisia californica-Eriogonum fasciculatum* Association
Overall Site Quality	Very Good-Excellent X Fair-Good Poor Very Poor
Comments	Plants scattered in boulders, s-facing slope. Associated species: *Bahiopsis laciniata* (15%), *Malosma laurina* (10%), *Artemisia californica* (5), *Eriogonum fasciculatum* (5%), *Nolina interrata* (2%), *Hesperoyucca whipplei* (tr).
Voucher Specimen	Yes/No; Herbarium:
Definitions: *Occurrence Number* *Infested Area/Gross Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Pennisetum setaceum*
Occurrence Number	SC_PESE_26
Date	6/30/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	South Crest
Specific (onsite) Location	South of Skeleton Flats, upper slopes above Dehesa Road; burned coastal sage scrub
GPS Unit **Datum**	Garmin 60CSX NAD83 UTM Zone 11N
GPS Location (waypoint)	-116.866908, 32.786035
GPS Error	11 ft
Aspect	South-facing slope
Infested Area	0.04 acre
Gross Area	
Canopy Closure (canopy area covered by invasive plant)	High
Abundance	Scattered dense patches
Vegetation Community	*Bahiopsis laciniata-Artemisia californica-Eriogonum fasciculatum* Association
Overall Site Quality	Very Good-Excellent X Fair-Good Poor Very Poor
Comments	Plants scattered in boulders, s-facing slope. Associated species: *Bahiopsis laciniata* (15%), *Malosma laurina* (10%), *Artemisia californica* (5), *Eriogonum fasciculatum* (5%), *Nolina interrata* (2%), *Hesperoyucca whipplei* (tr).
Voucher Specimen	Yes/No; Herbarium:
Definitions: *Occurrence Number* *Infested Area/Gross Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Schinus molle*
Occurrence Number	SC_SCMO_01
Date	4/5/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	South Crest
Specific (onsite) Location	East of Suncrest Boulevard and south of Orchard Avenue in north-south oriented drainage
GPS Unit **Datum**	Garmin 60CSX NAD83 UTM Zone 11N
GPS Location (waypoint)	-116.878072, 32.797534
GPS Error	14 ft
Aspect	All
Infested Area	N/A
Gross Area	
Canopy Closure (canopy area covered by invasive plant)	Low
Abundance	1 tree
Vegetation Community	*Quercus agrifolia* Alliance; *Quercus agrifolia/Toxicodendron diversilobum* /Grass Association
Overall Site Quality	Very Good-Excellent Fair-Good X Poor Very Poor
Comments	1 tree, burned, at edge of oak-riparian woodland. Associated species: *Quercus agrifolia* , *Toxicodendron diversilobum* , *Eriogonum fasciculatum* , *Malosma laurina* .
Voucher Specimen	Yes/No; Herbarium:
Definitions: *Occurrence Number* *Infested Area/Gross Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Silybum marianum*
Occurrence Number	SC_SIMA_01
Date	4/5/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	South Crest
Specific (onsite) Location	Northwest corner of main property; along Orchard Avenue (dirt road).
GPS Unit **Datum**	Garmin 60CSX NAD83 UTM Zone 11N
GPS Location (waypoint)	-116.880206, 32.800424
GPS Error	11 ft
Aspect	Flat
Infested Area	0.01 acre
Gross Area	
Canopy Closure (canopy area covered by invasive plant)	Low
Abundance	Scattered plants to scattered dense patches
Vegetation Community	Mediterranean California Naturalized Annual and Perennial Grassland Semi-Natural Stands
Overall Site Quality	Very Good-Excellent Fair-Good Poor X Very Poor
Comments	Disturbed edge of Orchard Avenue (dirt road), just west of 'Y'; south side of road. One large dense stand and several small scattered clumps Associated species = *Chrysanthemum coronarium* (50%), *Vulpia myuros* , *Bromus madritensis* ssp. *rubens* .
Voucher Specimen	Yes/No; Herbarium:
Definitions: *Occurrence Number* *Infested Area/Gross Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Silybum marianum*
Occurrence Number	SC_SIMA_02
Date	4/5/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	South Crest
Specific (onsite) Location	Northwest corner of main property; along Orchard Avenue (dirt road).
GPS Unit **Datum**	Garmin 60CSX NAD83 UTM Zone 11N
GPS Location (waypoint)	-116.879945, 32.80011
GPS Error	12 ft
Aspect	East-facing slope
Infested Area	N/A
Gross Area	
Canopy Closure (canopy area covered by invasive plant)	Low
Abundance	Scattered plants
Vegetation Community	Mediterranean California Naturalized Annual and Perennial Grassland Semi-Natural Stands
Overall Site Quality	Very Good-Excellent Fair-Good Poor X Very Poor
Comments	South of Orchard Avenue (dirt road). One small patch in understory of *Malosma laurina* (60%), with *Chrysanthemum coronarium* (10%), *Eriophyllum confertiflorum* , *Bromus madritensis* ssp *rubens* .
Voucher Specimen	Yes/No; Herbarium:
Definitions: *Occurrence Number* *Infested Area/Gross Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Tamarix* sp.
Occurrence Number	SC_TASP_01
Date	9/21/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	Endangered Habitats Conservancy
Land Manager	Endangered Habitats Conservancy
General Location	South Crest Properties
Specific (onsite) Location	South of the intersection of Orchard Avenue and Suncrest Boulevard; west-facing slope just west of Suncrest Boulevard.
GPS Unit **Datum**	Garmin 60CSX NAD83
GPS Location	-116.877612, 32.795895
GPS Error	12 ft
Aspect	West-facing
Infested Area	N/A
Canopy Closure (canopy area covered by invasive plant)	Trace
Abundance	Single plant
Vegetation Community	*Artemisia californica-Eriogonum fasciculatum-Malosma laurina* Association
Overall Site Quality	____ Very Good-Excellent __X__ Fair-Good ____Poor ___ Very Poor
Comments	1 tree (ca. 15 ft tall); east and well upslope of drainage, downslope of dirt road. Associated species: *Malosma laurina, Artemisia californica, Eriogonum fasciculatum* .
Voucher Specimen	Yes/No; Herbarium: No
Definitions: *Occurrence Number* *Infested Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Washingtonia sp.*
Occurrence Number	SC_WASP_01
Date	4/5/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	South Crest
Specific (onsite) Location	Drainage south of Suncrest Boulevard and east of junction with Orchard Avenue; northeast corner of property.
GPS Unit **Datum**	Garmin 60CSX NAD83 UTM Zone 11N
GPS Location (waypoint)	-116.877357, 32.798131
GPS Error	N/A
Aspect	Drainage bottom
Infested Area	N/A
Gross Area	
Canopy Closure (canopy area covered by invasive plant)	Low
Abundance	Single plant
Vegetation Community	
Overall Site Quality	Very Good-Excellent Fair-Good X Poor Very Poor
Comments	1 tree,in bottom of drainage, just south of *Quercus agrifolia* Alliance.
Voucher Specimen	Yes/No; Herbarium:
Definitions: *Occurrence Number* *Infested Area/Gross Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Invasive Species Data Form

Species	*Washingtonia sp.*
Occurrence Number	SC_WASP_02
Date	4/5/2011
Observor(s)	Patricia Gordon-Reedy/Curtis Battle
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	South Crest
Specific (onsite) Location	Drainage; east of Suncrest Boulevard and south of junction with Orchard Avenue.
GPS Unit **Datum**	Garmin 60CSX NAD83 UTM Zone 11N
GPS Location (waypoint)	-116.878396, 32.796575
GPS Error	N/A
Aspect	Drainage bottom
Infested Area	N/A
Gross Area	
Canopy Closure (canopy area covered by invasive plant)	High
Abundance	Scattered plants
Vegetation Community	*Quercus agrifolia* Alliance
Overall Site Quality	Very Good-Excellent X Fair-Good Poor Very Poor
Comments	2-3 palm trees inriparian oak woodland.
Voucher Specimen	Yes/No; Herbarium:
Definitions: *Occurrence Number* *Infested Area/Gross Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

APPENDIX C

INVASIVE SPECIES DESCRIPTIONS

A discussion of each invasive species detected on CER and South Crest (or in proximity) during the 2011-2012 invasive species mapping effort is included below. The use of scientific names follows the Jepson Manual, 2nd edition (Baldwin et al. 2012), unless otherwise noted. Where appropriate or to lessen confusion, synonymy is included in the text.

California Invasive Plant Council (Cal-IPC) ratings are provided for each species; rating definitions for described in Table C-1 (Cal-IPC 2006). It should be noted that the Cal-IPC ratings are based on a statewide assessment and individual species may have greater impacts or pose greater threats to resources at the preserve-level or in specific habitat types. A regional assessment of invasive species is currently in progress (CBI in prep.); preliminary information from that assessment has been incorporated into this document, as appropriate.

Arundo donax
Giant reed
Cal-IPC Rating: High
Site: CER

Biology and Life History. Giant reed is a perennial grass to 9 meters (m) (30 feet [ft]) tall that grows in many-stemmed, cane-like clumps from underground rootstocks. It can be distinguished in the field by alternate, two-ranked, pale green to blue-green leaves up to 0.6 m (2 ft) long, and by its tall, terminal, plume-like inflorescence of cream-colored flowers (Dudley 2000; DiTomaso and Healy 2007). The species flowers primarily from March-November, but does not produce viable seed in North America (Dudley 2000; Hickman 1993). Populations spread through vegetative reproduction, either by rhizomes (underground runners) or rhizome and stem fragments which are dispersed by water, mud, or human activities (Dudley 2000; DiTomaso and Healy 2007). Growth of giant reed is rapid, and the species can survive and grow under a wide variety of environmental conditions (Dudley 2000), which contributes to its invasive success.

Habitat. Giant reed is typically found in moist sites, such as riparian areas, floodplains, drainage ditches, or residential areas with a source of supplemental irrigation. The species occurs on many soil types, including coarse sands, gravelly soils, heavy clays, and river sediments; however, it does best in well-drained soil with moisture (Dudley 2000).

Threats. Giant reed poses a threat to wildland areas because it can form massive stands that displace native vegetation and wildlife, outcompete native plants for water, alter hydrological regimes, reduce groundwater availability, alter channel morphology, contribute to fuel load and increased fire intensity, and contribute to flooding and bank erosion (Dudley 2000; DiTomaso and Healy 2007). On CER, impacts to native habitat and species, and an increase in fire hazard, are currently the greatest threats from this species.

Table C-1. Cal-IPC Inventory Rating Categories.[1]

Rating Category	Description
High	Species have severe ecological impacts on physical processes, plant and animal communities, and vegetation structure. Reproductive biology and other attributes are conducive to moderate to high rates of dispersal and establishment. Most are widely distributed ecologically.
Moderate	Species have substantial and apparent—but generally not severe—ecological impacts on physical processes, plant and animal communities, and vegetation structure. Reproductive biology and other attributes are conducive to moderate to high rates of dispersal, though establishment is generally dependent upon ecological disturbance. Ecological amplitude and distribution may range from limited to widespread.
Limited	Species are invasive but their ecological impacts are minor on a statewide level or there was not enough information to justify a higher score. Reproductive biology and other attributes result in low to moderate rates of invasiveness. Ecological amplitude and distribution are generally limited, but these species may be locally persistent and problematic.
Evaluated but Not Listed	Species for which there is not sufficient information to assign a rating or the available information indicates that species does not have significant impact at the present time.

1 See Cal-IPC 2006.

Location and Extent Onsite. Giant reed was mapped in two locations on CER, both in the vicinity of 'Thornmint Hill.' These locations are east of the trailer park and north of Rios Elementary School, just inside the reserve boundary (Figure C-1). ARDO_01 consists of 1 large clump; ARDO_02 consists of 2 plants. Both occurrences are in disturbed habitat mapped as *Bromus diandrus* Semi-Natural Stand (Sproul et al. 2011) and were likely introduced from ornamental plantings in the adjacent trailer park. Both stands have been treated with herbicide (Task 3, Appendix I).

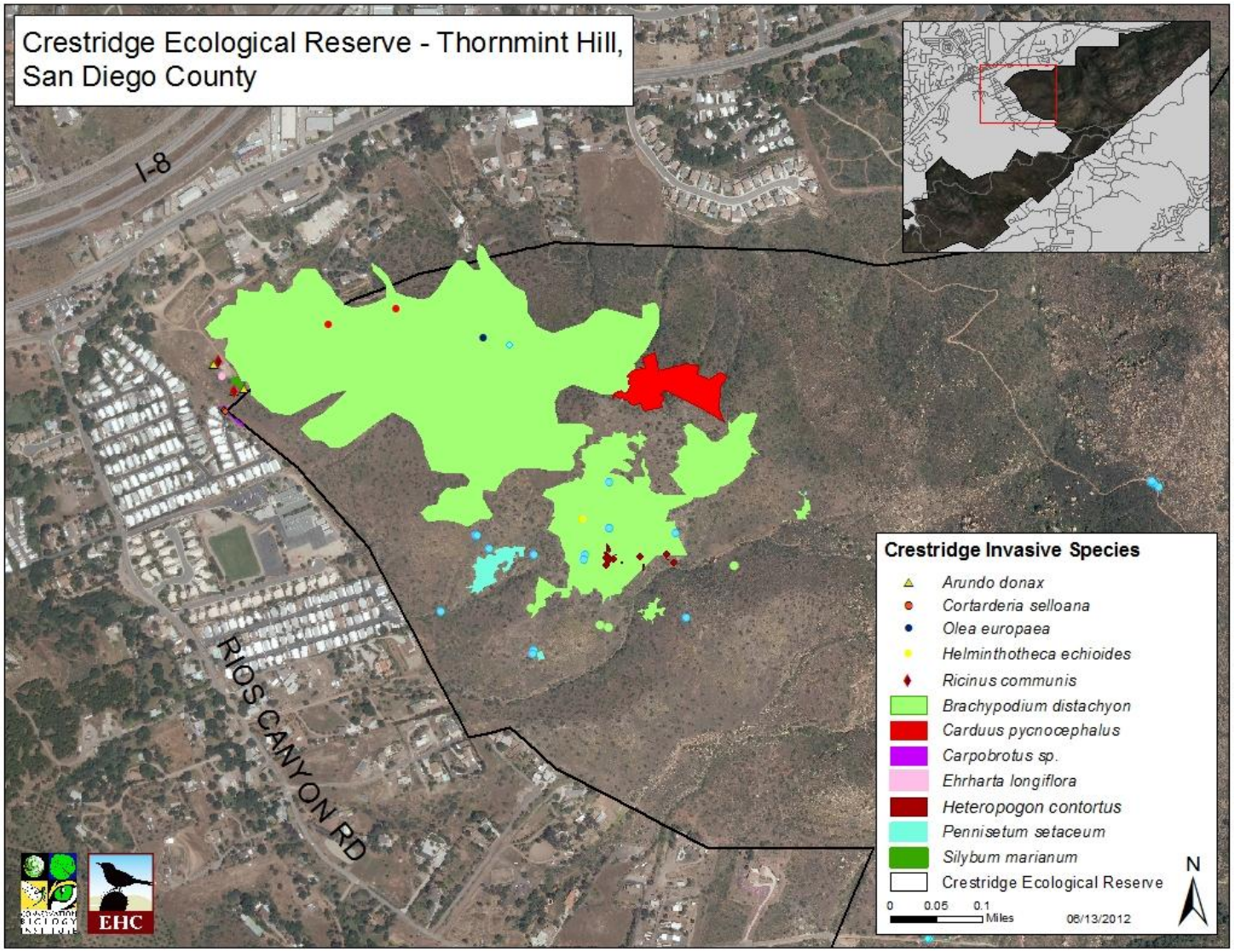

Figure C-1. Invasive Plant Species, Thornmint Hill, Crestridge Ecological Reserve.

Brachypodium distachyon
Purple false brome
Cal-IPC Rating: Moderate
Site: CER, South Crest

Biology and Life History. *Brachypodium distachyon* (*Brachypodium*) is an erect, loosely tufted winter annual to 0.5 m (1.6 ft) tall with purplish-tinged, spike-like to raceme-like inflorescences of sessile spikelets that contain 6-20 florets each. Lemmas are awned from the tip (Hickman 1993; DiTomaso and Healy 2007; Benson and McDougall 2005), and leaves are flat with an open sheath (Hickman 1993). In spring, dense stands can be distinguished by the bright green leaf color that fades to yellow-orange in late spring and summer.

***Genome*: The full complement of genetic information of an organism, contained in the chromosomes.**

***Polyploid*: containing more than two paired sets of chromosomes.**

***Tetraploid*: a type of polyploidy in which there are 4 sets of chromosomes.**

***Vernalization*: a period of low temperatures necessary for some plants to initiate or accelerate the flowering process.**

This small, fast-growing grass is characterized by a short life cycle and small genome (Schwartz et al. 2010; Bakker et al. 2009; Opanowicz et al. 2008; Draper et al. 2001). Because of these traits, *Brachypodium* has been identified as a model grass for crop genetics (Mur 2011; Vogel and Bragg 2009; Watt et al. 2009; Garvin et al. 2008; Olsen et al. 2006; Hasterok et al. 2004). The same traits that make it an ideal model species are also attributes of a successful invader (Bakker et al. 2009). For example, a short life cycle combined with rapid growth provides a competitive advantage by allowing for multiple life cycles during a growing season (Basu et al. 2004). A species' genetics can also contribute to invasion success (Bakker et al. 2009). Some of the most successful weed species are polyploids (Bakker et al. 2009; Soltis and Soltis 1999; Soltis and Soltis 2000; Lee 2002), which have the potential to increase their genetic diversity through recombination of multiple chromosome sets (Bakker et al. 2009). California populations of *Brachypodium* appear to be tetraploids, whereas the species exhibits diploid and tetraploid races in its native range in Eurasia (Bakker et al. 2009).

As an annual species, *Brachypodium* reproduces primarily by seed. It is self-fertile (Schwartz et al. 2010; Bakker et al. 2009; Opanowicz et al. 2008; Draper et al. 2001), with a typical life cycle of less than 4 months (Opanowicz 2008; Draper et al. 2001). Throughout its natural and introduced range, flowering time has been reported as between 3-4 weeks without a vernalization requirement, to more than 8 weeks following 6 weeks or more of vernalization. Tetraploids generally lack vernalization requirements (Opanowicz et al. 2008), and the southern California population may additionally represent an early flowering phenotype (Bakker et al. 2009). In studies on diploid accessions of *Brachypodium* from the Middle East, germination of fresh seed was strongly inhibited by blue light (found at the soil surface), while red light (found in the soil layer immediately below the surface) strongly promoted germination. This controlling effect of light on dormancy eventually faded in after-ripened seed (Barrero et al. 2011).

Florets are primarily gravity-dispersed, falling near the parental plant, but can be dispersed greater distances by animals, vehicle tires, mountain bikes, and other human activities (Bakker et al. 2009; DiTomaso and Healy 2007; Carr et al. 1992; Gordon-Reedy pers. obs.). Some researchers consider vertebrates to be the main dispersal agent of *Brachypodium* seed (Crossman et al. 2011). Seed bank persistence is presumed to be short (e.g., less than one year), although stored seed shows little loss of viability over 2 years (Gordon-Reedy pers. obs.). Individual plants are killed by fire (Brown and Bettink 2010); however, the species appears to be able to recolonize quickly and spread in extent post-fire.

Habitat. *Brachypodium* is found on dry slopes and fields, roadsides, grasslands, scrub habitats, and oak woodlands. It tolerates thin, rocky soil, shady areas (e.g., understory of oak woodland) (DiTomaso and Healy 2007), and is found in both dry and moist areas (Brown and Bettink 2010). In San Diego County, dense stands of *Brachypodium* occur on clay and gabbro soils, although the species is found on other soil types, as well.

Threats. *Brachypodium* can become dominant in grasslands and the understory of shrubs and oak woodland, forming monospecific stands that limit establishment of native species and outcompete and exclude native herbs and grasses (Brown and Bettink 2010; Gordon-Reedy pers. obs.). The species forms a thick litter layer and thus, has the potential to alter fire regimes (Brown and Bettink 2010; D'Antonio and Vitousek 1992), as well as nutrient cycles. In studies on the Sweetwater National Wildlife Refuge in southern San Diego County, Wolkovich et al. (2010) found that invasive grasses (including *Brachypodium distachyon*, a dominant species in their study area) greatly increased C and N storage pools in the soil, acting as sinks for these elements, while the added litter increased above-ground native and non-native biomass due to greater inputs (invasive grasses), slower decomposition rates of grass versus shrub litter, and shading effects of grass litter which reduced decomposition rates of both non-native and native litter. Changes in C and N storage were linked to increases in the soil fungi:bacteria ratio, increased plant inputs, and decreased litter loss. Wolkovich et al. (2009) demonstrated that litter addition facilitated non-native grass growth, suggesting a positive feedback mechanism for invasion success. This study also demonstrated that invasive grass litter may benefit native shrubs by altering soil moisture, but did not examine the effects of shrub regeneration (e.g., seedling germination and growth) under conditions of high grass litter.

Location and Extent Onsite. *Brachypodium* was mapped on both CER and South Crest. On CER, this species dominates grassland and scrub habitat on Thornmint Hill and other slopes east of Rios Canyon Road (Figure C-1). Five discrete stands were mapped in this area, totaling 68 acres. The species has increased greatly in areal extent since it was first noted in 2000 (CBI and EHC 2009); the direction of spread appears to be primarily downslope, and along recreational and game trails and roads. In 2011, this species was also detected just east of the easternmost reserve boundary (not mapped, on private property), and has a high potential for invasion onto the reserve from this point.

On South Crest, *Brachypodium* is the dominant nonnative grass in the Skeleton Flats area (Figure C-2), where it occurs primarily on clay and gabbro soils, and to a lesser extent, on granitic soils (Figure C-3). The large stand mapped in this area is approximately 58 acres in size. Of this total ca. 38 acres occur

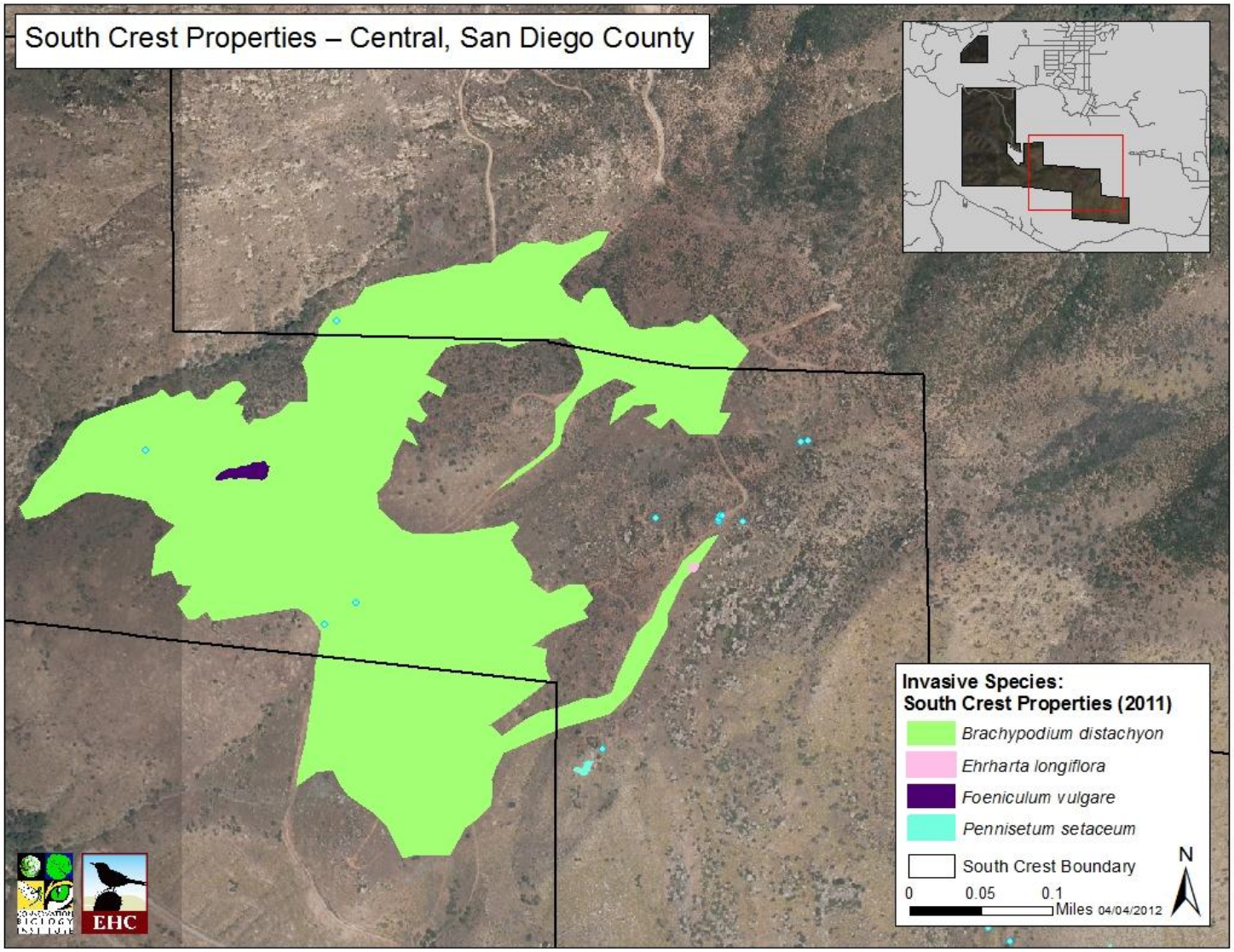

Figure C-2. Invasive Plant Species, Skeleton Flats and vicinity, South Crest Properties.

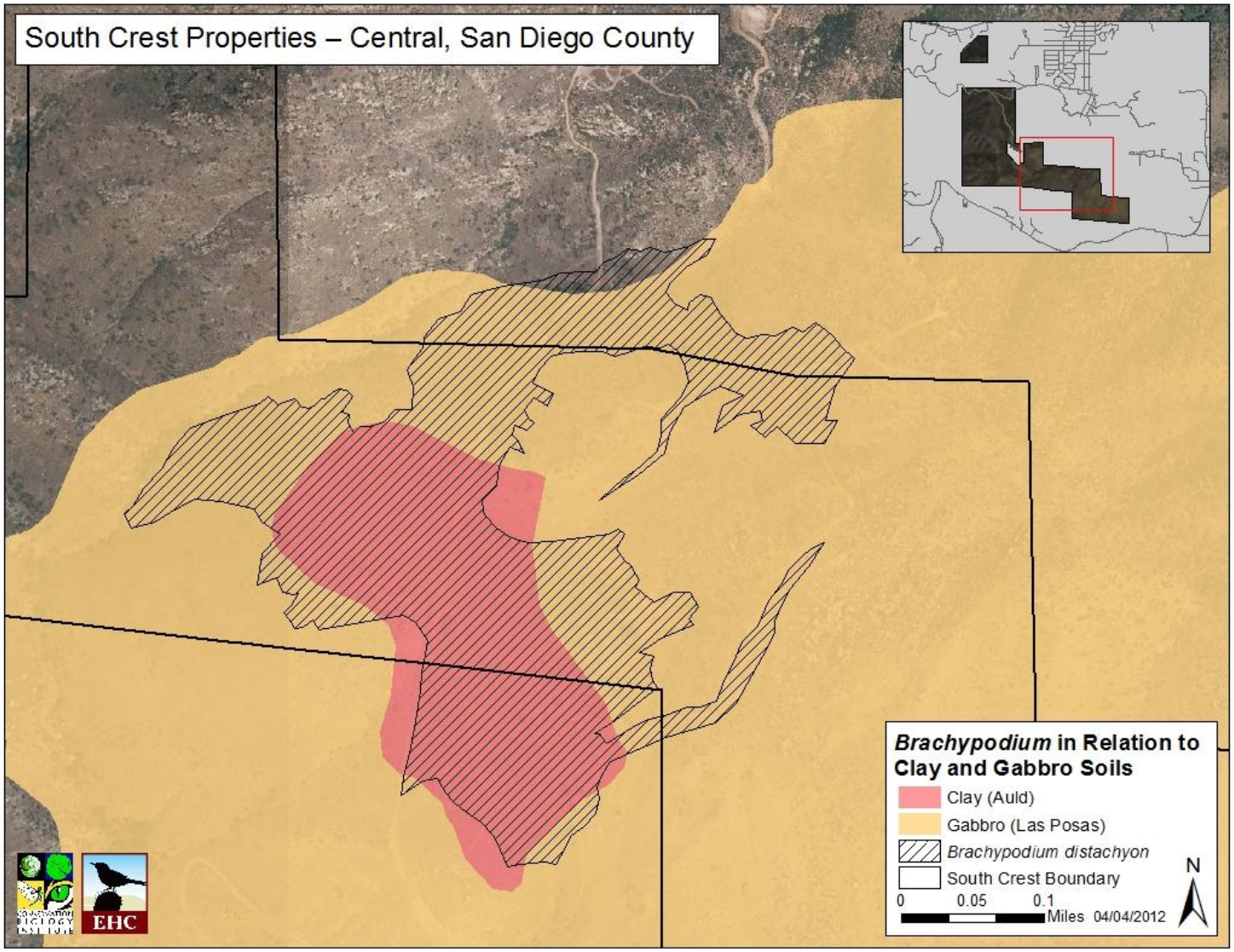

Figure C-3. Distribution of *Brachypodium* on Clay and Gabbro Soils, Skeleton Flats and Vicinity, South Crest Properties.

onsite and the remaining 20 acres occur just offsite. *Brachypodium* co-occurs with four MSCP covered species in this area: Dehesa beargrass, Parry's tetracoccus, San Diego thornmint, and variegated dudleya (Figure C-4). The sensitive plant, Palmer's grapplinghook, also occurs on clay and gabbro soils near the edges of *Brachypodium*-dominated habitat.

Brassica tournefortii
Saharan mustard
Cal-IPC Rating: High
Site: South Crest

Biology and Life History. Saharan mustard is an annual herb to 10 dm (~3.3 ft) tall with small, pale yellow flowers (Baldwin et al. 2012; Bossard et al. 2000). Plants emerge and flower earlier than other *Brassica* species. The species can germinate and set seed as early as December and January; timing of flowering is likely triggered by the onset of the rainy season (Bossard et al. 2000). During warm or dry periods, plants remain small, but can still flower and set seed (Bossard et al. 2000). This species is a copious seed producer and there is almost 100 percent fruit set on a single plant (Bossard et al. 2000).

Saharan mustard originated in semi-arid to arid deserts of North Africa and the Middle East (Bossard et al. 2000), so is well adapted to the dry conditions in southern California. A sticky gel forms on the seed case during wet periods, and likely promotes adhesion of seeds to animals, vehicle tires, and other dispersal agents (Bossard et al. 2000). This species is common in areas with wind-blown sediments (e.g., deserts) (Bossard et al. 2000).

Habitat. Saharan mustard can be found growing in a variety of habitats in southern California, including deserts, dunes, coastal sage scrub, grasslands, chaparral, and disturbed areas (i.e., along roadsides, in old orchards, groves, and agricultural areas) (DiTomaso and Healy 2007; Vinje pers. obs.).

Threats. Saharan mustard increases the fire frequency in desert and coastal sage scrub habitats and can also establish from a soil seedbank after a fire (Bossard et al. 2000). Increased fire frequency can result in habitat type conversions in desert ecosystems (DiTomaso and Healy 2007). Since this species germinates earlier than most native, annual forb species, it monopolizes soil nutrients, moisture, and sunlight, thereby inhibiting native annual forb germination (Bossard et al. 2000).

Location and Extent Onsite. Several Saharan mustard plants were detected on South Crest, in chaparral habitat adjacent to and east of Skeleton Flats (not mapped).

Carduus pycnocephalus
Italian thistle
Cal-IPC Rating: Moderate
Site: CER, South Crest

Biology and Life History. Italian thistle is a winter annual or occasionally biennial to 2 m (6.6 ft) tall with slightly winged stems, spiny leaves that are mostly covered with woolly hairs, and small inflorescences covered with densely matted, cobwebby hairs. Inflorescences are clustered in groups of 2-5; disk

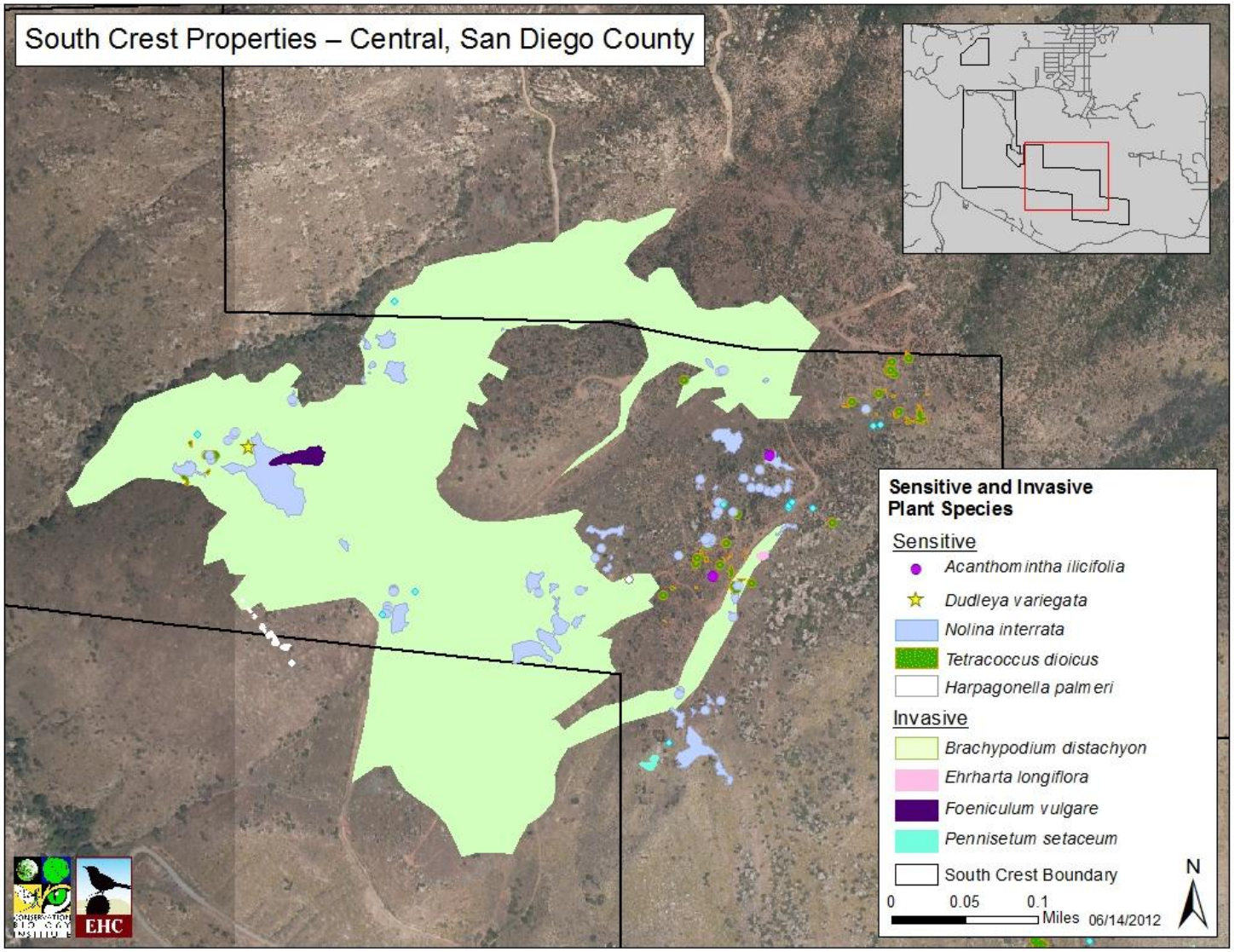

Figure C-4. Distribution of Sensitive and Invasive Plant Species on Skeleton Flats, South Crest Properties.

flowers are pink to purple. Fruits (achenes) are glabrous; disk achenes have a pappus of numerous flat, minutely barbed, bristles (DiTomaso and Healy 2007; Bossard and Lichti 2000; Hickman 1993).

Italian thistle is both self-compatible and outcrossing; insects are the primary pollination vector. Plants typically flower from May-July and produce copious amounts of seed. A single plant may produce up to 20,000 seeds per season (Bossard and Lichti 2000). Ray and disk flowers produce different types of seed. Seed from disk flowers remains attached to the inflorescence and falls with that structure to the ground at the end of the season. Seed from ray flowers is wind- or gravity-dispersed, appears to lack an after-ripening period, and can remain dormant in the soil seedbank for long periods of time (e.g., 7-10 years) (Bossard and Lichti 2000; DiTomaso and Healy 2007). Germination commences with autumn rains and can extend through spring, with plants existing as basal rosettes until late spring when flowering stalks bolt. Flowering is then continuous until soil moisture is depleted. Dead plants persist as standing litter (DiTomaso and Healy 2007).

Habitat. Italian thistle occurs in chaparral, oak woodlands, meadows, roadsides, and disturbed wildland areas, typically on high fertility soils or soils with a relatively high pH (Bossard and Lichti 2000). Bare soils and high light conditions favor establishment. Dispersal is via seed, which is spread naturally by wind, water, birds, and small mammals (DiTomaso and Healy 2007; Bossard and Lichti 2000). Ants may also aid in dispersal. Human-assisted dispersal occurs by vehicles or through movement of contaminated hay and soil (Bossard and Lichti 2000).

Threats. Italian thistle can dominate sites, displacing and/or excluding native species. Dense crops of overwintering rosettes can inhibit germination of other plants. In oak woodlands, persistent dead litter acts like a fuel ladder, carrying fire into tree canopies (DiTomaso and Healy 2007; Bossard and Lichti 2000).

Location and Extent Onsite. Italian thistle is relatively common on CER and relatively uncommon on South Crest. This species was mapped where it occurred in larger stands and/or in association with sensitive habitats. On CER, this species was mapped in 17 locations; these occurrences ranged from scattered plants to patches up to 3 acres in size (C-1, C-5, C-6, C-7). The majority of occurrences (69%) are <0.1 acre. Associated habitats included disturbed grassland, scrub, chaparral, and oak woodland (Appendix A). On South Crest, this species was mapped in one location, where it occurred in an oak woodland understory and covered about 0.3 acre in extent (C-8).

Carpobrotus sp.
Iceplant, Hottentot-fig
Cal-IPC Rating: High
Site: CER, South Crest

Biology and Life History. Iceplant is a mat-forming or trailing succulent perennial species with elongate, succulent leaves and showy yellow or pink flowers. Stems have a prostrate, creeping habit and root at the nodes. Flowering typically occurs from February through fall, but may occur year-round in some locations. The species spreads by both seed and vegetative reproduction (i.e., root fragments). Fruits are fleshy and indehiscent, and remain on plants for several months. Seeds are consumed and

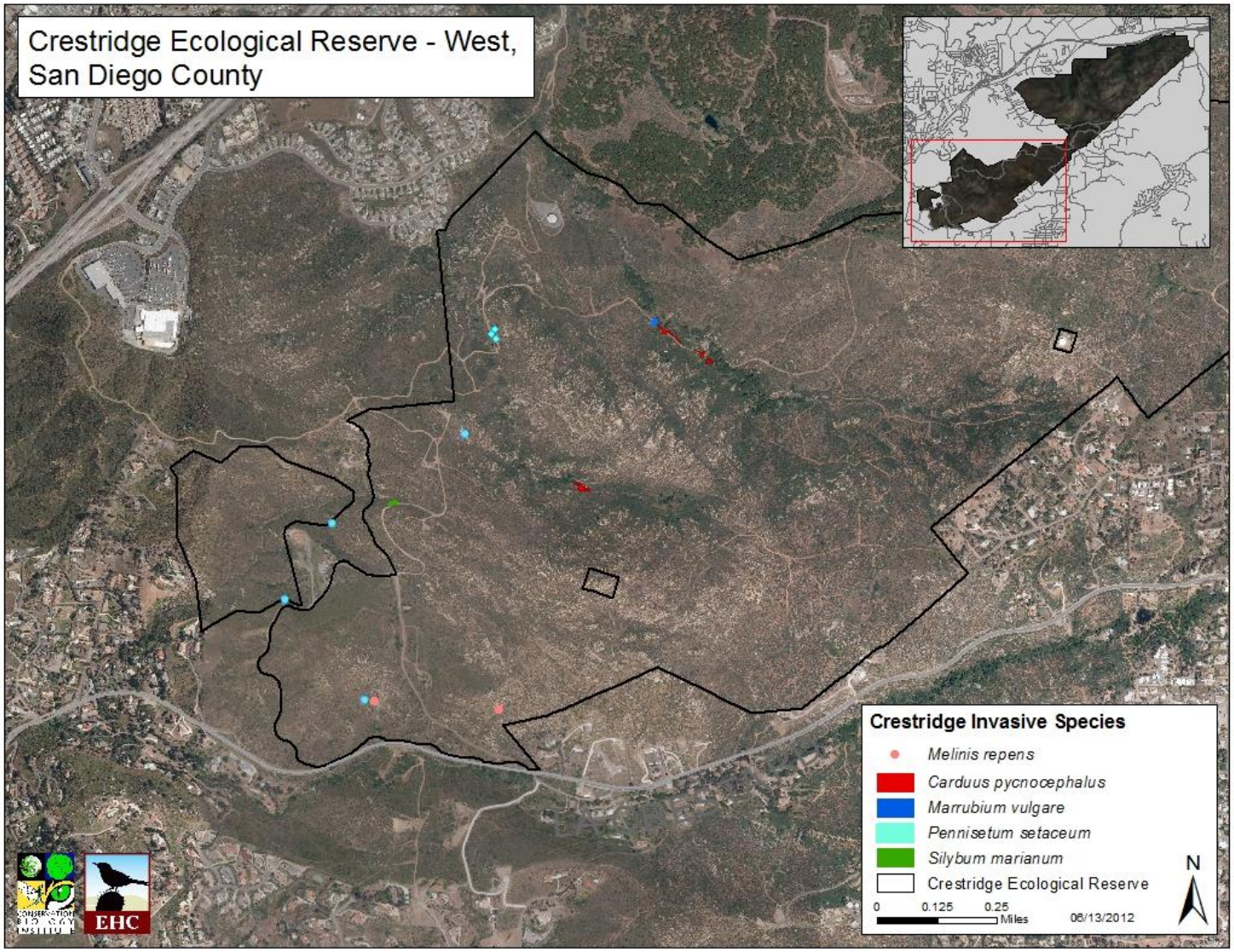

Figure C-5. Invasive Plant Species, Crestridge Ecological Reserve – West.

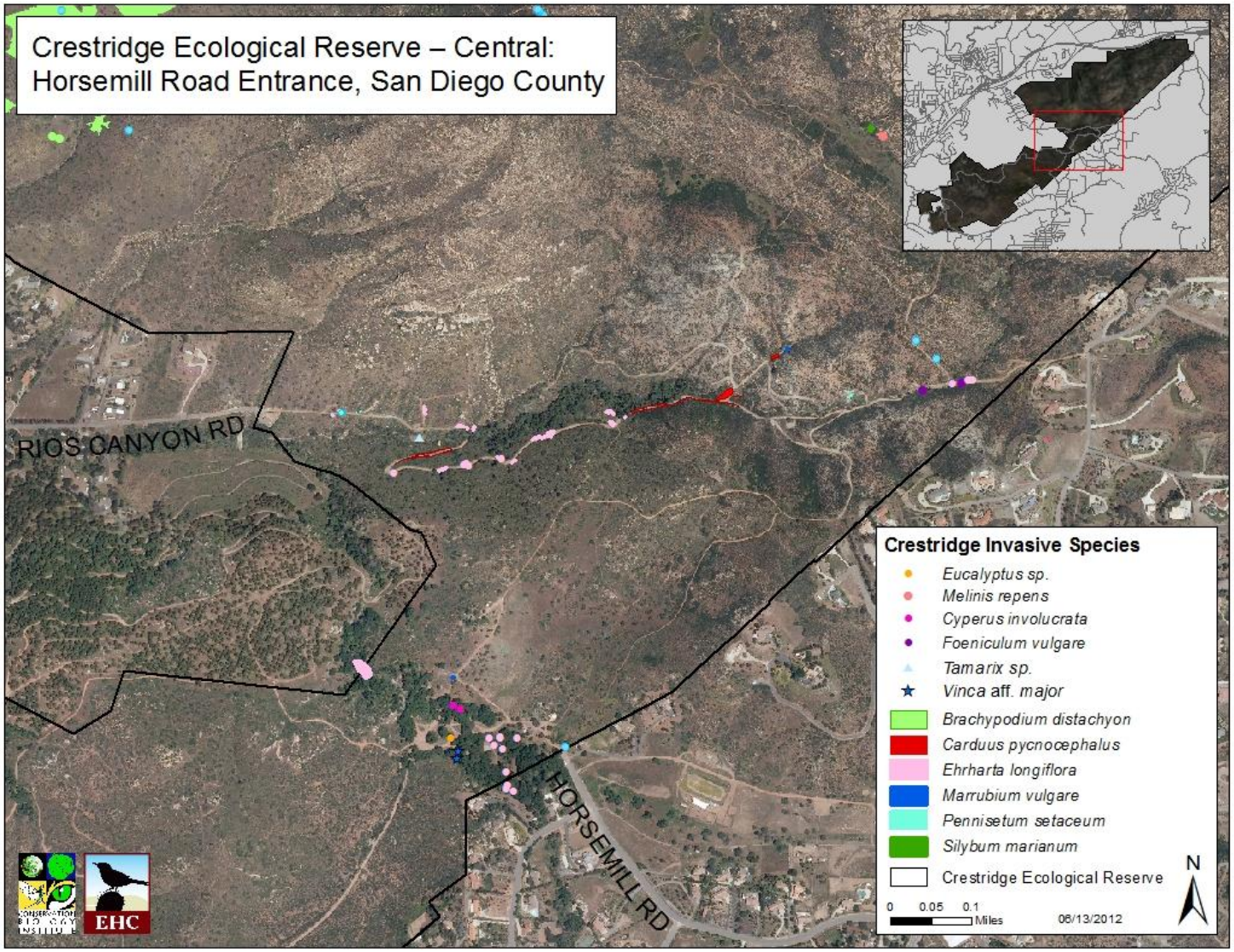

Figure C-6. Invasive Plant Species, Crestridge Ecological Reserve – Central.

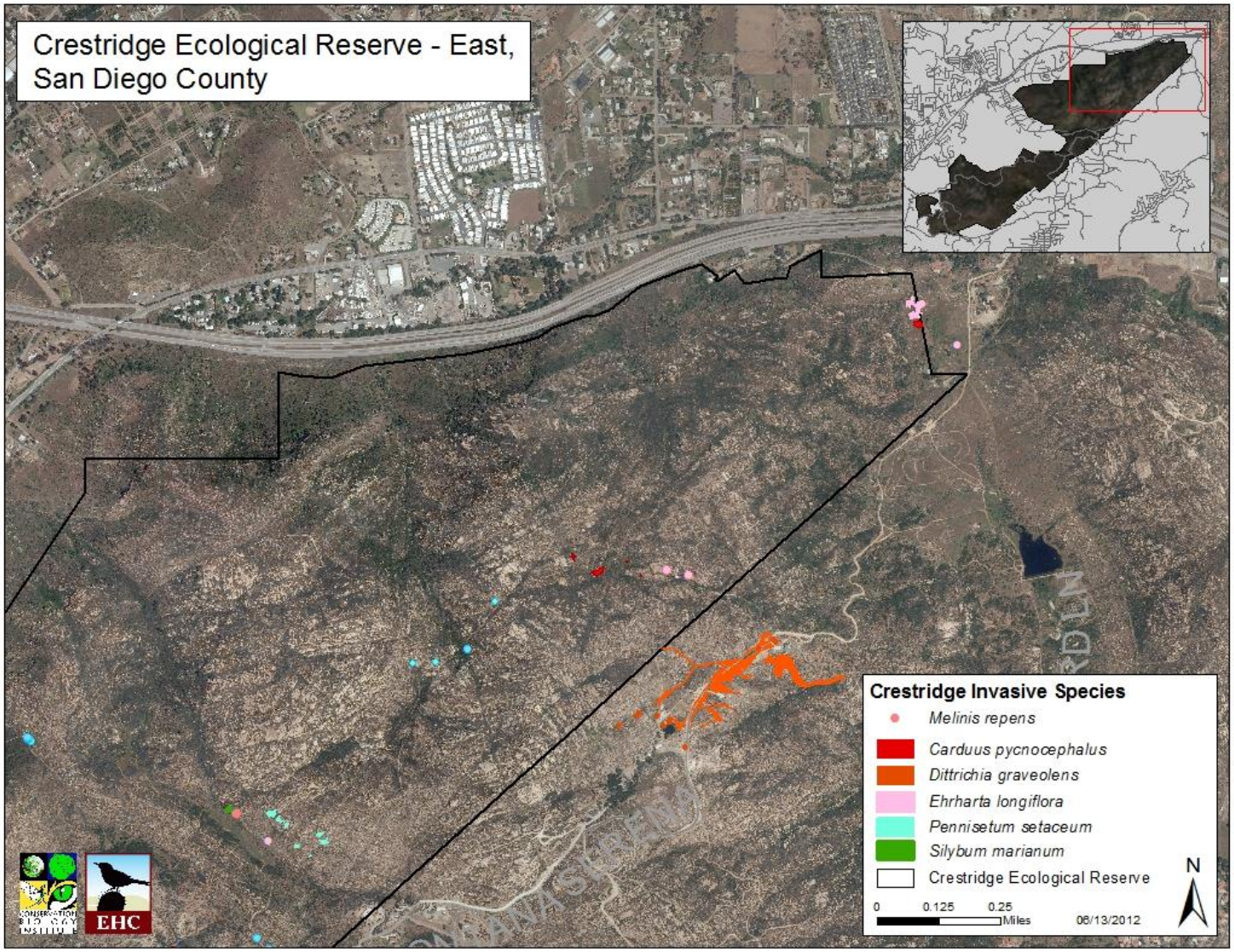

Figure C-7. Invasive Plant Species, Crestridge Ecological Reserve – East.

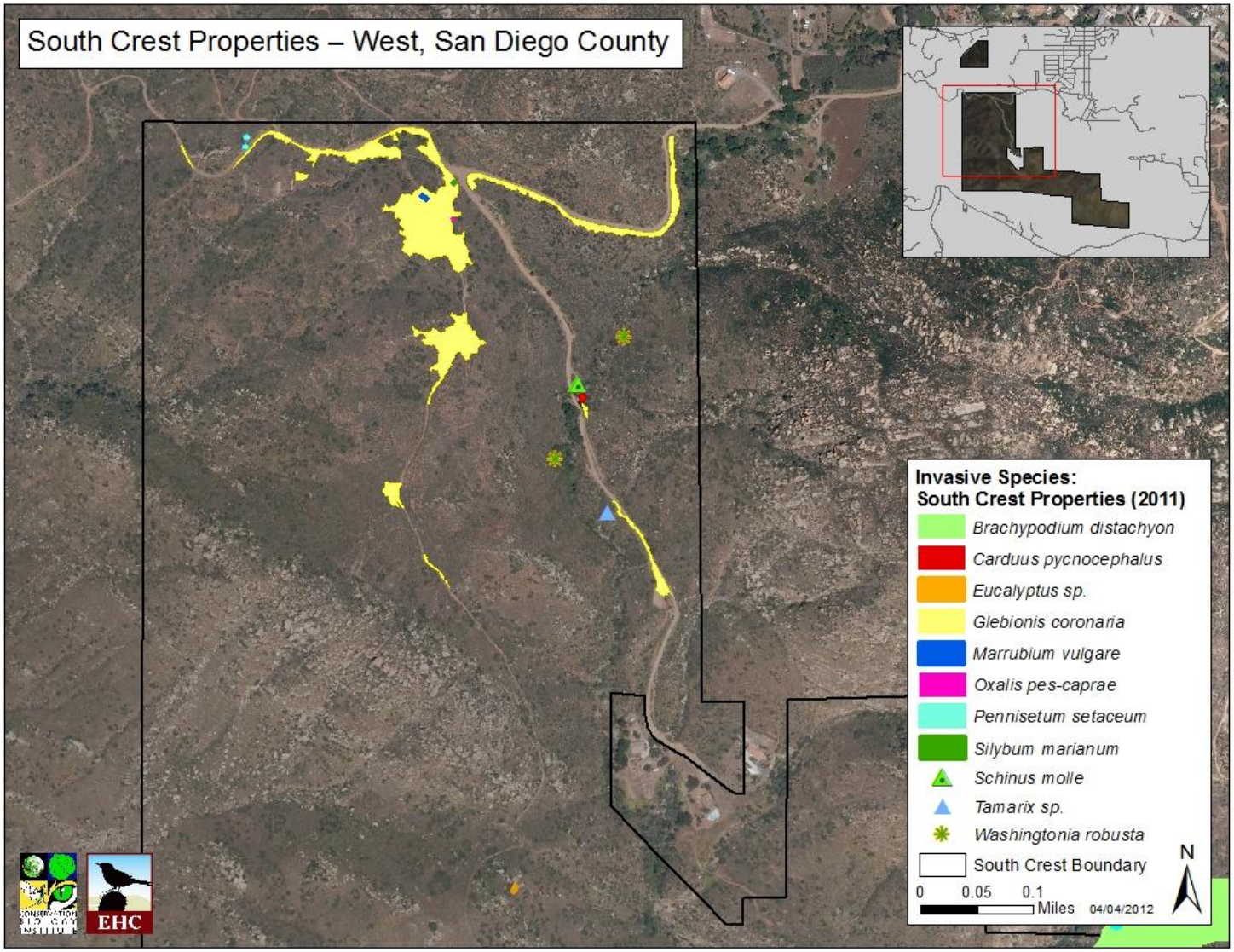

Figure C-8. Invasive Plant Species, South Crest Properties – West.

dispersed by animals, including rabbits, rodents, and deer (DiTomaso and Healy 2007; Albert 2000; D'Antonio 1993; Hickman 1993).

Habitat. Iceplant is a common ornamental species in California and has been widely planted along highways for landscaping and soil stabilization. Infestations into wildlands are generally escapes from cultivation or highway plantings. The species has the ability to spread rapidly into suitable habitat, invading dunes, coastal scrub, chaparral, and grassland. Disturbance enhances establishment; colonization often occurs along roads, trails, gopher mounds, and in recently burned areas (DiTomaso and Healy 2007; Albert 2000).

Threats. Because of its tendency to form deep mats and large, monospecific stands, iceplant often competes directly with native plants for nutrients, water, light, and space. Dense mats suppress native seedlings and mature shrubs, while biomass and litter increases soil organic matter, ultimately promoting invasion by other nonnative species. This species can also alter soil pH and change the root system morphology of some native shrub species (D'Antonio 1990; D'Antonio and Mahall 1991). This species has the ability to spread rapidly into suitable areas.

Location and Extent Onsite. Iceplant was detected in one location on CER (Figure C-1). Several small stands, totaling 0.02 acre, occur just northeast of Rios Elementary School and east of the fence that separates the reserve from the adjacent trailer park (Figure 4). Vegetation in this area is disturbed and characterized as *Bromus diandrus* Semi-Natural Stand. These occurrences were treated with herbicide in 2011 and have been eradicated (Task 3, Appendix I).

Cortaderia selloana
Pampas grass
Cal-IPC Rating: High
Site: CER

Biology and Life History. Pampas grass is a large, densely tufted, long-lived perennial grass to 4 m (13 ft) tall with long basal leaves and tall, showy, plume-like inflorescences. Inflorescences are light violet to silver-white, and flowering is typically late August through September (DiTomaso and Healy 2007; DiTomaso 2000). Pampas grass is functionally dioecious, with male and female flowers on separate plants (Hickman 1993). Historically, plants sold ornamentally were primarily female; however, due to recent nursery practices, both sexes are now widely planted, which increases the potential for cross-pollination, production of viable seed, and effective sexual reproduction. Seed production is copious, with a single inflorescence capable of producing up to 100,000 seeds. The lightweight seed can disperse up to 20 miles (32 km) by wind. Effective long-distance seed dispersal also occurs through human activities and possibly, by animals (DiTomaso and Healy 2007; Harradine 1991). Bare, sandy soils, moisture, and light are requirements for seed germination; seedling establishment is typically in spring and young plants usually begin flowering at 2-3 years old. Vegetative reproduction may occur when fragments from parental plants receive adequate moisture and develop adventitious roots (DiTomaso 2000).

Habitat. Pampas grass is a common ornamental plant in California, and was also used for erosion control (DiTomaso and Healy 2007; DiTomaso 2000). It has escaped cultivation and spread into wildland areas, particularly along the coast, and is now found from the San Francisco Bay area southward (DiTomaso and Healy 2007; DiTomaso 2000; Hickman 1993). In coastal southern California, it occurs below 1000 ft (330 m) elevation, and is found in disturbed areas, dunes, bluffs, roadsides, road-cuts, undisturbed coastal shrublands and marshes, inland riparian areas, and other inland sites with adequate moisture (DiTomaso and Healy 2007; Hickman 1993).

Threats. Pampas grass outcompetes native vegetation, reduces the aesthetic and recreational value of wildland areas, and increases fire potential through the excessive build-up of dry leaves, leaf bases, and old flowering stalks (DiTomaso 2000). In addition, pampas grass may alter soil or hydrological conditions (e.g., Domènech and Vilà 2006; Lambrinos 2000), thus favoring its own persistence. The species also colonizes burned areas and resprouts rapidly following a burn (DiTomaso and Healy 2007; DiTomaso 2000). Pampasgrass biomass is extremely flammable (Gadgil et al. 1984; Gadgil et al. 1990a,b; Harradine 1991). Because of its height, pampas grass may add a structural element in many native habitats and influence fuel continuity in grassland and chaparral habitats (Lambert et al. 2010).

Location and Extent Onsite. Pampas grass was mapped in one location on CER: just inside the reserve property boundary, in the fuelbreak just north of Rios Elementary School and the adjacent trailer park (Figure C-1). Two plants occur in disturbed habitat in this location: both occurrences were treated with herbicide and killed in 2011 (Task 3, Appendix I).

Cynara cardunculus
Artichoke thistle
Cal-IPC Rating: Moderate
Site: None

Biology and Life History. Artichoke thistle is an erect, leafy, perennial herb with grayish-green, spine-tipped leaves. Flowers can emerge as early as April (southern California) and can bloom into July (Kelly 2000). It can reach 2.5 m (8 ft) in height. The inflorescences are erect and support one to several flowers per stalk. Flowers range in color from blue to purple (Baldwin et al. 2012), but white-flowered individuals have been reported (Kelly 2000). Artichoke thistle reproduces via seed that is primarily wind-driven; however, there is some evidence that it may also spread via water, gravity, wildlife, and vehicles (Kelly 2000). In some cases, it has been known to resprout from root fragments (Cal-IPC no date).

Habitat. Artichoke thistle primarily invades disturbed habitats and non-native, annual grasslands in coastal areas, but has been found growing inland in disturbed areas and other habitats, including riparian and scrub (Kelly 2000). This species prefers clay-based soils. In the early 1930s, artichoke thistle was considered one of the worst rangeland weeds (Kelly 2000).

Threats. Artichoke thistle reduces forage production and limits livestock and wildlife movement in rangeland areas (Kelly 2000). This species competes with native and non-native vegetation for resources such as water, light, and nutrients. Additionally, there is evidence that the soil seedbank can persist for up to five years, making annual control of this species essential until all individuals have been

eradicated. If left uncontrolled, it can form large, impenetrable monocultures (Kelly 2000). In San Diego County, this species grows in threatened and endangered plant species habitats (Kelly 2000; Vinje pers. obs.).

Location and Extent Onsite. This species was not detected on either site, but occurs just beyond the South Crest property boundary, adjacent to and just south of Skeleton Flats. An estimated 14 mature plants (0.05 acre) were observed in nonnative grassland (*Brachypodium distachyon* Semi-Natural Stand) in 2011 (Appendix B), and there is a concern that the windblown seed could easily establish in disturbed areas onsite.

Cyperus involucrata
Umbrella sedge
Cal-IPC Rating: Not rated
Site: CER

Biology and Life History. Umbrella sedge is a perennial, rhizomatous herb that can reach 2 m (6 ft) tall and support 1-20 three-angled stems (Baldwin et al. 2012). Flowering occurs throughout the year and individual flowers are green (Baldwin et al. 2012). A single spikelet can produce thousands of small, brown seeds from early summer through fall (Ball et al. 2003; Prigge and Gibson 2012). This species spreads by rhizomes and seed.

Habitat. Umbrella sedge is commonly used as a horticultural plant in aquatic settings and can be found in the wild in wet habitats. It is considered an obligate wetland species in California (USFWS 1993), but has been reported to thrive in drier sites, as well (Ball et al. 2003; Scheper 2004).

Threats. Although this species is acknowledged as a nonnative species that occurs primarily in wetland and riparian habitats, little information exists on impacts to native species, habitats, and ecosystems. It is probable that this species competes with native plants for light, water, and nutrients. It is also likely that it can form dense monocultures in areas where it is uncontrolled and left to grow.

Location and Extent Onsite. Umbrella sedge was detected in one location on CER, where 3 plants were observed growing in the drainage through the oak grove near the Horsemill Road entrance (Figure C-6).

Dittrichia graveolens
Stinkwort
Cal-IPC Rating: Moderate
Site: CER

Biology and Life History. Stinkwort is a yellow-flowered, fall-blooming annual plant to about 1 m (3 ft) tall that is characterized by sticky glandular-hairy foliage and a strong camphor-like odor (DiTomaso and Healy 2007; Marriott no date). This species has a unique life history, characterized by rapid growth in late summer and flowering and fruiting in fall (Brownsley et al. 2011; Marriott no date). It is a prolific seed producer (Santa Clara WMA 2009; Csurhes and Zhou 2008; Parsons and Cuthbertson 1992; Marriott no date), with plants producing tens of thousands of small seeds (Brownsley et al. 2011). Seed

is primarily windborne, with reported dispersal distances over 200 m (656 ft) (Parsons and Cuthbertson 1992); however, seed is also effectively dispersed by water, animals, vehicles (Parsons and Cuthbertson 1992), and humans (Mariott no date). Seed viability is high and seeds do not exhibit any innate dormancy (Brownsley et al. 2011). This lack of dormancy, in conjunction with small seed size, suggest that seed longevity is fairly low and the seed bank is fairly short-lived (1-2[-3] years); however, there have not yet been any specific seed bank studies (Brownsley et al. 2011; Brown and Bettink 2011a; Parsons and Cuthbertson 1992).

Stinkwort seed germinates quickly and at a range of temperatures; germination commences with the first rainfall of the season and continues throughout the rainy season. Germination is dependent on precipitation rather than light or temperature; thus, soil moisture appears to be a limiting factor for this species. Subsequent to germination, plants require high light levels for growth and are dramatically suppressed by shade (Brownsley et al. 2011). Flowering response is based on photoperiod (Brownsley et al. 2011), with simultaneous flowering often observed in a region.

Habitat. Stinkwort often forms monocultures in disturbed areas or areas with low total vegetative cover, such as roadsides, pastures, fields, riparian woodlands, washes, and the edges of tidal marshes (Brownsley et al. 2011; DiTomaso and Healy 2007; Parsons and Cuthbertson 1992; Herbiguide no date). In Santa Clara County, where this species was first detected in the state, it was restricted to roadsides and disturbed areas for the first decade after invasion, but then spread into wildland areas, displacing native plant species. It has also invaded serpentine soils and other low fertility soils that are usually relatively resistant to weed invasion (Santa Clara County WMA 2009). Stinkwort appears to be expanding its range rapidly in California (DiTomaso and Healy 2007).

Threats. In addition to displacing native species, stinkwort alters physical processes, and provides poor forage for both wildlife and domesticated livestock. This species can be poisonous to livestock, and causes dermatitis, skin irritation, and headaches in some people (Brown and Bettink 2011a; Burry and Kloot 1982; Marriott no date).

Location and Extent Onsite. The presence of stinkwort in proximity to CER was brought to the attention of the reserve manager by adjacent homeowners, who noticed an increasing infestation of this plant along an access road and in disturbed areas and drainages adjacent to the reserve. Subsequent mapping indicated that while the majority of the infestation is adjacent to the reserve, but stinkwort is beginning to encroach onto CER in one location (Figure C-7). Twenty-two stands of stinkwort were mapped; of this total, 0.22 acre occurs on the reserve.

Ehrharta longiflora
Long-flowered veldt grass
Cal-IPC Rating: Moderate
Site: CER, South Crest

Biology and Life History. Long-flowered veldt grass is an erect, leafy, tufted annual grass to about 0.6 m (2 ft) tall. It is characterized by slightly drooping panicles, and purplish-tinged leaves and flowers, and long-awned sterile lemmas (DiTomaso and Healy 2007; Pickart 2000). Long-flowered veldt grass

reproduces by seed, which germinates following winter rains (Pickart 2000). Flowering occurs in April and May (Smith 2011). Seed is primarily wind-dispersed (Pickart 2000), although water and mammals may also function as dispersal vectors (Brown and Bettink 2011b).

Habitat. Long-flowered veldt grass is a relatively recent invasive species in California, and was not included in the first edition of the Jepson Manual (Hickman 1993). Its distribution within the state is currently limited to the South Coast and Peninsular Ranges, where it occurs on disturbed sites, often on sandy or loamy soils below 900 m (2953 ft) elevation (Smith 2011). It has been reported from roadsides, in rock outcrops and on roadcuts, in the understory and at the edges of oak woodland and riparian habitats, and in coastal sage scrub and chaparral (Gordon-Reedy pers. obs.; Chester 2005; Brey 1996).

Threats. Impacts of this species are not well-known, but it appears to spread rapidly in wildland areas (Pickart 2000; Brey 1996). Dense stands may smother shrub and understory layers, resulting in habitat degradation due to loss species diversity and cover or foraging opportunities for wildlife species. Dense stands also result in litter build-up which may alter nutrient cycling and contribute to increased fuel loads. In general, fire increases the invasiveness of *Ehrharta* species (Milberg and Lamont 1995).

Location and Extent Onsite. On CER, 10 stands of long-flowered veldt grass were mapped in four general locations (Figures C-1, C-6, C-7). The largest stand occurs in the understory of the Horsemill oak grove, although portions of this infestation have been treated with herbicide. The species also occurs on roadcuts adjacent to Rios Canyon, on dry slopes and rock outcrops in association with Lakeside ceanothus (*Ceanothus cyaneus*), and in *Juncus*-dominated meadows in the eastern portion of the reserve, where it occurs near a population of San Diego goldenstar (*Bloomeria clevelandii*). On South Crest, this species was noted in only one location in 2011, along a trail east of Skeleton Flats (Figure C-2).

***Eucalyptus* spp.**
Eucalyptus, gum tree
Cal-IPC Rating: Moderate
Site: CER, South Crest

Biology and Life History. The genus *Eucalyptus* includes shrubs and trees that have been reported to reach heights of greater than 100 m (300 ft) (Baldwin et al. 2012). The two most commonly encountered species in the wild in southern California are red gum (*E. camaldulensis*) and blue gum (*E. globulus*) (Baldwin et al. 2012). Red gum is generally smaller in stature (<25 m [82 ft]) compared to blue gum (<60 m [200 ft]) (Baldwin et al. 2012). The two species exhibit different flowering periods, with red gum flowering in spring and summer (April to July) and blue gum flowering from fall through early winter (October to January) (Baldwin et al. 2012). Fruit (capsules) are thick-walled and tough, and the small seeds are wind dispersed (Baldwin et al. 2012). Eucalyptus species reproduce via seed and stump- and trunk-sprouting, but seedling success is dependent on soil moisture, light availability, litter, and duff (Boyd 2000). Blue gum trees have lignotubers, which allows for sprouting some distance away from the original parent plant (Boyd 2000). Red gum does not have a lignotuber which reduces the probability for post-fire survival (CSIRO 2004).

Habitat. Eucalyptus can invade any habitat type in the coastal areas of southern California (as long as local site conditions are favorable) and vast plantings of eucalyptus trees in the mid-1800s and early 1900s for ornamental and commercial purposes produced large monotypic stands (Boyd 2000).

Threats. Native plants and animals are displaced from eucalyptus groves (Boyd 2000) and even from underneath large individual trees (Vinje pers. obs.). The allelopathic nature of eucalyptus trees inhibit native plant community establishment and the large accumulation of leaf, branch, and bark litter is extremely flammable. Eucalyptus forests are among the worst in the world for spreading spot fires because of the burning and drifting debris (i.e., bark) (Boyd 2000).

Location and Extent Onsite. On CER, a single tree was mapped in the Horsemill Road oak grove, in association with oak woodland (*Quercus engelmannii-Quercus agrifolia/Toxicodendron*/Grass Association) (Figure C-6). On South Crest, 5 trees were mapped at the top of a hill in the western portion of the site, in burned coastal sage scrub (*Artemisia californica* Association) (Figure C-8).

Foeniculum vulgare
Sweet fennel
Cal-IPC Rating: High
Site: South Crest

Biology and Life History. Sweet fennel is an erect perennial herb to 3.5 m (3.3-12 ft) tall with erect, glaucous-green stems, finely dissected, feathery leaves and a strong anise or licorice scent. Yellow flowers are arranged in compound umbels, and flowering typically occurs from April through July (Klinger 2000). Fennel reproduces both by seed and vegetatively from the root crown. Flowering begins when plants are 1.5-2 years old (Klinger 2000). Seed production is prolific (Erskine Ogden 2004; Klinger 2000), seed viability is high, and the seedbank is long-lived. Germination can occur throughout the year, while vegetative growth typically begins in mid-winter and continues throughout the summer. Seeds are dispersed by water, animals (e.g., birds, rodents), humans, and vehicles (Klinger 2000; Parsons 1973).

Habitat. In California, fennel occurs in mesic, disturbed sites to 610 m (2000 ft) elevation, and may be found adjacent to fresh or brackish water, pastures, abandoned lots, and roadsides, or in open grassland, coastal scrub, and riparian habitats (Klinger 2000). Abandoned agricultural areas are particularly susceptible to monospecific stands of fennel (Beatty 1991). The species prefers well-drained sandy soils, but can thrive on sites with high clay content (Klinger 2000).

Threats. Fennel may exclude or prevent the reestablishment of native species in disturbed areas. This species outcompetes native plants for light, nutrients, and water, and may exert allelopathic effects. Fennel can alter the composition and structure of native plant communities by adding a vertical component (DiTomaso and Healy 2007; Erskine Ogden and Rejmanek 2005; Brenton and Klinger 2002; Klinger 2000). In addition, fennel recovers quickly from fire by resprouting from the base and has high volatility (Brown and Bettink 2011c; Sawyer et al. 2009); thus, it can increase fire frequency and intensity.

Location and Extent Onsite. Three plants were detected on CER in 2012; these individuals occur adjacent to Rios Canyon Road (Figure C-6). One stand of fennel was detected on South Crest, in clay soils in the Skeleton Flats area (Figure C-2). Approximately 50 plants (mature plants and seedlings) (0.18 acre) were mapped in native grassland (*Nassella pulchra* Association) with a high nonnative grass component (e.g. *Brachypodium distachyon*, *Avena barbata*). This stand occurs in a slight drainage.

Glebionis (=Chrysanthemum) coronaria
Garland chrysanthemum
Cal-IPC Rating: Moderate
Site: South Crest

Biology and Life History. Garland chrysanthemum is a yellow-flowered annual plant in the Composite family. This common ornamental reaches 0.9-1.5 m (3-5 ft) in height (Hickman 1993; Schneider 2005). Flowering occurs from April-July (Strother 2006); dead plant material can persist for years (Schneider 2005). Plants produce many viable seeds that germinate readily (LASGRWC no date), with dense infestations producing more than 1000 viable seeds per square meter (m^2) (Cal-IPC 2005a) and possibly in excess of 5000 seeds per m^2 (Giessow pers. comm.). Seed is likely gravity-dispersed, falling near the parental plant. However, wind, birds, or storm water may be dispersal agents, as well. Fuel load reduction along roads is suspected as an anthropogenic dispersal mechanism (Giessow pers. comm.).

Habitat. Garland chrysanthemum is typically found below 200 m (656 ft) elevation in disturbed areas in coastal regions, often in vacant lots, waste areas, and along roadsides (DiTomaso and Healy 2007; Hickman 1993). In addition, the species invades areas that receive natural disturbance, such as riparian habitat and dunes, and has been reported invading coastal sage scrub in Orange County (Harmsworth Associates 2007).

Threats. Garland chrysanthemum appears to be expanding its distribution in San Diego County (Kelly 2005), moving aggressively into disturbed areas (Giessow pers. comm.). The species may add a structural element in disturbed habitats and displace native shrub species in scrub habitats. The persistent dead material may contribute to ignition probability, particularly along roadsides.

Location and Extent Onsite. Seven stands of garland chrysanthemum were mapped on South Crest, totaling 5.3 acres (Figure C-8). The points of introduction and conduit for spread of this species are the road edges along Suncrest Boulevard and Orchard Avenue and adjacent trails. From these points, plants have spread downslope into adjacent coastal sage scrub habitat (*Bahiopsis laciniata-Artemisia californica-Eriogonum fasciculatum* Association). Treatment of this species was initiated in 2011; the success rate appears high (90% control of above-ground material), but seed continues to germinate from the soil seed bank and additional treatments will be necessary.

Helminthotheca (=Picris) echioides
Bristly ox-tongue
Cal-IPC Rating: Limited
Site: CER

Biology and Life History. Bristly ox-tongue is an annual herb that can reach heights up to 20 decimeters (dm) (~6.5 ft) (Baldwin et al. 2012). The pinnately lobed leaves and stem are dark green covered with rigid hairs (Baldwin et al. 2012). The stem is coarse, stout, branched, and leafy (Baldwin et al. 2012). Flowers are liguliflorous, terminal and axillary, and bright yellow (Baldwin et al. 2012). Many flowers can occur on a single plant and can be solitary or arranged in a few-headed cyme-like cluster (Baldwin et al. 2012). This species flowers from May through October and the fruit (achene) likely spreads via wind, animals, water, soil movement, and human activities (DiTomaso and Healy 2007).

Habitat. This species can be found growing in a variety of locations and habitats, including landscaped areas, roadsides, waste places, orchards, with agricultural crops, coastal sage scrub, riparian areas, native, and non-native grasslands. It is known to thrive in clay soils, especially when the calcium content is high (DiTomaso and Healy 2007; Vinje pers. obs.).

Threats. Where conditions are suitable, bristly ox-tongue can form dense monocultures that outcompete other native and non-native plants (Vinje pers. obs.). In several areas of southern California, this species grows in the habitat of threatened and endangered plant habitat, competing with these sensitive species for soil nutrients, moisture, and sunlight (Vinje pers. obs.).

Location and Extent Onsite. Bristly ox-tongue was mapped previously in one location on CER: on Thornmint Hill where it occurs in proximity to sensitive plant habitat (Figure C-1). This species occurs elsewhere onsite in small stands, but was not mapped in those locations.

Heteropogon contortus
Tanglehead
Cal-IPC Rating: Not rated
CDFA List: A (noxious species)
Site: CER

Biology and Life History. Tanglehead is a densely tufted tropical or subtropical perennial grass to 0.2-1.0 m (0.6-3.2 ft) tall (Baldwin et al. 2012; DiTomaso and Healy 2007). The California Department of Food and Agriculture (CDFA) consider this species a noxious introduction everywhere in California, except for the Sonoran Desert (CDFA 2012). Unique characteristics of this species include foliage that turns orange-pink after frost and long awns that are often tangled at the apex (DiTomaso and Healy 2007). Tanglehead has long, unbranched, raceme-like inflorescences to 4-8 cm (1.6-3 in) in length that are composed of pairs of sessile and stalked spikelets and fertile and sterile florets. Fertile florets in upper spikelet pairs have long, reddish-brown, bent or wavy, often tangled awns to 6-10 cm (2.4-3.9 in) (Baldwin et al. 2012; DiTomaso and Healy 2007). Flowering typically occurs from March-November (Baldwin et al. 2012); however, plants on CER were flowering in January 2012 (Gordon-Reedy pers. obs.).

Reproduction is by apomictic seed (Goergen and Daehler 2001). Fresh seed has a low germination rate; germination is typically uneven, and most seed remains dormant for about 1 year after maturation (Goergen and Daehler 2001). Burning increases seedling recruitment. The species is tolerant of low resources, and does well in nutrient-poor soils (Goergen and Daehler 2001).

Habitat: Tanglehead is a species of open sites, rocky slopes, and washes. Plants require some summer moisture, so it often occurs in depressions or sites where excess water is available (Baldwin et al. 2007; DiTomaso and Healy 2007). In California, this species occurs below 800 m (2625 ft) elevation, and has been reported only from San Diego County, where it is considered a noxious introduction, and from the Sonoran Desert, where it is considered native. Tanglehead was first reported from San Diego County in 1938 by Frank Gander, who collected the species on a hillside ¾ mile west of the Dehesa School. This location is in proximity to the southern end of the South Crest properties, and about 4.5 km (2.8 mi) due south of its current location on CER. Only two additional collections have been reported from San Diego County. In 1971, the species was collected in the vicinity of San Diego State University, in an urban canyon south of Montezuma Road and east of Fairmount Avenue. It was also collected from Anza Borrego State Park in 2005 (CCH 2012).

Threats. Tanglehead is considered a noxious weed because its sharp awns can injure sheep and other animals. In addition, the awns can get tangled in the wool of sheep; thus, lowering the value of the wool (DiTomaso and Healy 2007). There is little available information on impacts to native species and habitats in California. However, large infestations can displace native plant species and potentially impact sensitive species. Because this species is a large grass, it has the potential to increase biomass in certain habitats, alter nutrient cycling and vegetation structure, and contribute to increased fire frequency or intensity.

In its native habitat in the Hawaiian Islands, tanglehead is being outcompeted and displaced in many areas by fountain grass (*Pennisetum setaceum*), except under drought conditions; tanglehead seedlings tolerate drought better than fountain grass seedlings. Tanglehead recruitment also increases in disturbed areas (Goergen and Daehler 2002). Interestingly, both tanglehead and fountaingrass occur in proximity to one another on CER. While the tanglehead population is relatively contained at the current time, the propensity of this species to thrive after fire, and under drought and disturbance regimes, suggest that control efforts may be warranted to contain and potentially eliminate this species from the site.

Location and Extent Onsite. Tanglehead was mapped in one location on CER: on a south-facing slope near Thornmint Hill (Figure C-1). Approximately 124 mature plants were observed in coastal sage scrub (*Salvia apiana-Artemisia californica* Association; *Bahiopsis laciniata-Artemisia californica-Eriogonum fasciculatum* Association). Additional plants were observed at a later date on a west-facing slope near a large stand of fountain grass, but have not yet been mapped. Because this species is relatively inconspicuous when not in flower or fruit, there is also the potential that it occurs on South Crest, on slopes north of Dehesa Road (in proximity to the original 1938 collection in San Diego County). Because tanglehead is inconspicuous and native to the desert regions of California, it might be worth further investigation of its distribution in San Diego County prior to treatment, if it is not spreading rapidly.

Marrubium vulgare
Horehound
Cal-IPC Rating: Limited
Site: CER, South Crest

Biology and Life History. Horehound is a perennial with densely white woolly stems to 0.6 m (2 ft) tall, greyish-green, ovate to round leaves, and headlike whorls of small white flowers (Baldwin et al. 2012; DiTomaso and Healy 2007). Flowering occurs from spring through summer. Dead stems with persistent fruits can persist through winter (DiTomaso and Healy 2007).

Horehound is a prolific seeder and can produce a persistent seedbank (DiTomaso and Healy 2007). Seedling establishment is dependent upon rainfall and water availability (Cal-IPC 2003a). Seed viability tests have revealed that 85% of the seed is viable and that there is a high germination rate (Cal-IPC 2003a). Although seed can be transported via animal fur, human clothing/boots, vehicles, water, and soil movement, most seed is gravity-dispersed, falling to the ground beneath the parent plant (Cal-IPC 2003a).

Habitat. Horehound is a species of disturbed areas, such as overgraze pastures, fields, roadsides, rangelands, roadsides, waste places, and ditches (DiTomaso and Healy 2007; Hickman 1993; Whitson et al. 1996). It is a facultative wetland species, but grows in both wet and dry locations from the coast to higher elevations within California (DiTomaso and Healy 2007; Cal-IPC 2003a).

Threats. Horehound appears to be stable in mainland California, and is not rapidly increasing in presence or coverage. The species thrives best in areas where there is little competition with other vegetation (Cal-IPC 2003a) and its impact on native species appears to be minor. During drought, horehound may outcompete native vegetation for resources, such as water (Anonymous 1988).

Location and Extent Onsite. On CER, 2 stands of horehound were mapped (Figure C-6). The stand in Rios Canyon, west of the junction with Montana Serena, includes 8 individuals in a low-lying area east of the road. The stand adjacent to and east of the drainage through the Horsemill Road oak grove includes approximately 30 plants occurs in disturbed. On South Crest, 2 individuals were mapped in the northwest corner of the main (larger) property, in disturbed habitat at the edge of Orchard Avenue (Figure C-8).

Melinis (=Rhychyletrum) repens
Natal grass
Cal-IPC Rating: Not rated
Site: CER, South Crest

Biology and Life History. Natal grass is an annual or short-lived perennial grass with decumbent to erect stems (Baldwin et al. 2012). This grass ranges in height from 3-10 dm (3 ft) and can be identified by densely hairy glumes that are reddish to purplish in color (fading to pink or white with age) (Baldwin et al. 2012; Hickman 1993). Natal grass flowers year-round (Baldwin et al. 2012), possibly allowing for continuous seed production. It is a prolific seed producer, and seed germination is not dependent on

light availability (Stokes et al. 2011). A recent study demonstrated no loss in seed viability for buried seed over a 15 month period (Stokes et al. 2011); thus, the soil seedbank likely persists for at least 1-2 years. In contrast, seedling establishment from seed on the soil surface was greatly reduced after one month and no germination occurred at all after four months (Stokes et al. 2011). Spread likely occurs via rhizomes (Baldwin et al. 2012) and wind dispersal of seed.

Habitat. Natal grass is often used for soil stabilization purposes, but can be found growing in coastal sage scrub, southern maritime chaparral, and disturbed habitats, such as fields, slopes and along roadsides in southern California (DiTomaso and Healy 2007; Hickman 1993; Vinje pers. obs.).

Threats. Natal grass can spread in both disturbed and undisturbed habitat and can outcompete native plant species (Vinje pers. obs.; Gordon-Reedy pers. obs.).

Location and Extent Onsite. Natal grass was previously mapped in the western portion of CER, where it occurs on south-facing slopes north of La Cresta Road (Figure C-5). In this location, plants occur in rocky outcrops in coastal sage scrub. On South Crest, four small stands were mapped on steep, south-facing slopes north of Dehesa Road (Figure C-9), where this species occurs scattered in coastal sage scrub (*Bahiopsis laciniata-Artemisia californica-Eriogonum fasciculatum* Association). One covered plant species, Parry's tetracoccus, also occurs on these slopes, but does not appear to be currently impacted by this infestation.

Olea europaea
Olive
Cal-IPC Rating: Limited
Site: CER

Biology and Life History. Olive is a white-flowered shrub or tree to 10 m (32 ft) tall with grey, furrowed bark and leathery leaves that are dark green above and densely silver scaly below (Hickman 1993; Baldwin et al. 2012). Fruit is produced on a 2-3 year cycle and seeds have been reported to remain dormant within the soil for 20 months making the seed very susceptible to animal herbivory (Cal-IPC 2003b). Additionally, trees in garden settings do not produce fruit until the seventh or eight year and it is assumed that seed production in the wild occurs even later; however, one-year old seedlings exposed to light have produced fruit (Cal-IPC 2003b). Because of the lag in fruit production and high level of animal herbivory, seedling survival is very critical to the success of this species in the wild (Cal-IPC 2003b). In California, seed is likely spread by birds (DiTomaso and Healy 2007).

Habitat. Olive trees are usually found in the wild near old settlements and ranches, and in abandoned orchards. Occasionally, waifs are found in open space areas in southern California, especially when soil moisture is adequate (Vinje pers. obs.).

Threats. Although olives appear to be more common in northern versus southern California, the species is not spreading rapidly anywhere in California, nor does it appear to be significantly impacting native species or habitats (Cal-IPC 2003b).

Location and Extent Onsite. One tree was observed on CER, on a north-facing slope east of Rios Canyon and directly south of the northern property boundary (Figure C-1). This individual occurs within chaparral (*Adenostoma fasciculatum* – (*Eriogonum fasciculatum*) Association).

Oxalis pes-caprae
Bermuda buttercup
Cal-IPC Rating: Moderate
Site: South Crest

Biology and Life History. Bermuda buttercup is a low-growing, perennial species that produces many shamrock-like leaves in a loose, basal rosette (DiTomaso and Healy 2007; Hickman 1993). The main portion of the stem is below ground (DiTomaso and Healy 2007; Hickman 1993). Leaf petioles are relatively short (<12 cm [5 in]) and the green leaves are often brown to purple-spotted (Baldwin et al. 2012; Hickman 1993). The species produces bright yellow flowers on long stems (Hickman 1993). Flowering occurs from November to May, but California plants have a pentaploid chromosome set and rarely produce capsules (DiTomaso and Healy 2007). Plants spread vegetatively from bulbs (Baldwin et al. 2012; DiTomaso and Healy 2007; Cal-IPC 2003c). Each plant produces approximately one dozen small bulbs per year, and can also form a lateral stem (runner) that produces a new, aboveground plant (LeStrange et al. 2012).

Habitat. Spread of bulbs occurs most commonly in urban areas, but this species can be found in undisturbed habitats such as forests, coastal bluffs, dunes, and along the shores and banks of riparian areas (Cal-IPC 2003c; Vinje pers. obs.). Pigs also reportedly disperse bulbs (Cal-IPC 2003c).

Threats. Bermuda buttercup causes soil enrichment and has been known to stabilize semi-stable areas, leading to an alteration in nutrient cycling (Cal-IPC 2003c). It outcompetes native vegetation for light and space, and is toxic to livestock (Cal-IPC 2003c). It appears that this species has not been well-studied, nor is it being aggressively controlled. It is likely spreading in California, but the rate of spread is probably slow (Cal-IPC 2003c). Once established, this species may be almost impossible to eradicate. Therefore, preventing initial establishment is imperative to long-term control (LeStrange et al. 2012).

Location and Extent. Bermuda buttercup was mapped in one location on South Crest, where it occurs in scattered, dense patches adjacent to a trail south of Orchard Avenue (Figure C-8). In this location, it occurs within coastal sage scrub (*Salvia apiana-Artemsia californica* Association) and occupies a total of ca. 70 ft^2.

Pennisetum setaceum
Fountain grass
Cal-IPC Rating: Moderate
Site: CER, South Crest

Biology and Life History. Fountain grass is a tufted perennial bunchgrass to 1.5 m (5 ft) tall with showy, panicle-like inflorescences that are pinkish to red or purple (Baldwin et al. 2012; DiTomaso and Healy 2007; Hickman 1993). Flowering occurs from January through October and fountain grass is able to

reproduce by both fertilized and unfertilized seed (DiTomaso and Healy 2007; Lovich 2000). The seed can remain viable in the soil for at least seven years; however, research has also shown that seed viability from seed stored in a lab decreased from 80% to 44% within a period of 18 months (Lovich 2000). Individual plants may live 20 years or more (DiTomaso and Healy 2007).

Habitat. Fountain grass is an aggressive and adaptable invasive species that can establish and reproduce in many habitats, including disturbed sites, roadsides, urban areas, undisturbed coastal dunes, and coastal sage scrub (Lovich 2000; DiTomaso and Healy 2007). Cold temperatures appear to be a limiting factor (DiTomaso and Healy 2007).

Threats. Fountain grass is a fire-adapted species that can increase fuel loads, thereby increasing fire intensity and spread. Because it is fire-adapted, it can increase in density after a fire (Lovich 2000; DiTomaso and Healy 2007). By forming dense monocultures in disturbed and undisturbed habitats, fountain grass outcompetes and displaces native species. It is difficult to kill and can take many years to eradicate from infested areas (Lovich 2000; Vinje pers. obs.).

Location and Extent Onsite. Fountain grass is widespread on both CER and South Crest, with 26 stands mapped on each site, respectively (Figures C-1 C-2, C-5, C-6, C-7, C-8, C-9). Stands range in size from individual plants to dense monocultures.

Ricinus communis
Castor bean
Cal-IPC Rating: Limited
Site: CER

Biology and Life History. Castor bean is a shrub and occasional tree to 3 m (6 ft) in height (Hickman 1993). The large green leaves are shield-shaped, alternate, and lobed with toothed margins (Baldwin et al. 2012). Castor bean is deciduous (Baldwin et al. 2012), which makes detection of this species difficult at certain times of the year (Vinje pers. obs.). Castor bean is also monoecious (separate male and female flowers on the same plant) (Baldwin et al. 2012; Hickman 1993). The female flowers are red and the resulting fruit is greenish-grey (sometimes red or purple) with soft spines (Baldwin et al. 2012; DiTomaso and Healy 2007). The black seeds are highly toxic to humans and animals if ingested (Baldwin et al. 2012; Burrascano 2000). Castor bean can flower year-round. It reproduces by seed, and is capable of resprouting from a cut stump (Baldwin et al. 2012; Burrascano 2000). Castor bean is a prolific seed producer and it has been suggested that the seeds are long-lived (Burrascano 2000). The seeds are transported by water, soil movement/transportation, and road maintenance machinery (Burrascano 2000). Castor bean germinates rapidly in full sunlight, but seedlings can also be found in the understory of native riparian plan communities where sunlight is scarce (Burrascano 2000; Vinje pers. obs.).

Habitat. Castor bean is naturalized in California, occurring below 300 m (984 ft) elevation from northern California to the South Coast region. It is typically found along roadsides, abandoned fields, drainages, ditches, and other disturbed and undisturbed habitats (DiTomaso and Healy 2007; Burrascano 2000). Castor bean thrives in wet areas, but tolerates drought conditions. It is frost-sensitive and grows as an annual in cold-winter areas (DiTomaso and Healy 2007).

Threats. Castor bean displaces native plants, especially in riparian communities, and is tolerant of a wide range of soil types and environmental conditions (Burrascano 2000). The species grows rapidly, quickly shading out native plants. If left uncontrolled, castor bean can form large, monotypic stands (Burrascano 2000) that displace native habitat and species.

Location and Extent Onsite. One plant was mapped adjacent to CER in disturbed habitat (*Bromus diandrus* Semi-Natural Stand) north of Rios Elementary School and east of the trailer park in the vicinity of Thornmint Hill (Figure C-1).

Schinus molle
Peruvian peppertree
Cal-IPC Rating: Limited
Site: South Crest

Biology and Life History. Peruvian peppertree is a fast-growing, dioecious tree to 18 m (60 ft) tall (Baldwin et al. 2012; DiTomaso and Healy 2007). The aromatic, compound leaves are composed of many entire, sessile leaflets and fruits are reddish to pink drupes (Baldwin et al. 2012). Flowering typically occurs from June through August (longer in some climates), and fruits mature in the fall (DiTomaso and Healy 2007). Although this species is largely insect-pollinated, low levels of self-pollination and apomixis have been reported (Iponga et al. 2009, 2010). Reproduction is primarily by seed; however, individuals can also sprout from the rootstock if damaged. Birds feed on seeds, and seeds are dispersed by birds, mammals, and water (DiTomaso and Healy 2007; Nilsen and Muller 1980a,b; Howard and Minnich 1989). Seeds do not appear to remain viable in the soil seedbank for more than 3 years (Iponga et al. 2009).

Habitat. Peruvian peppertree was once widely planted in California as an ornamental species (Brenzel 2001). It now occurs in a variety of habitats, including grasslands, coastal sage scrub, riparian areas, and disturbed and ruderal places (e.g., roadsides, near old homestead sites) (DiTomaso and Healy 2007; Vinje pers. obs.).

Threats. This species is reported to be only mildly invasive in California and is not spreading quickly (Cal-IPC 2003d). In Riverside County, Peruvian peppertree can form dense stands on slopes (Knapp pers. comm.; Sigg and Case pers. comm.). Mature trees may create a fire hazard by increasing fuel load and structure in some habitats. In addition, the leaves contain volatile oils. Trees are resistant to fire, and can resprout from the base after burning. Mature trees provide cover for transient camps, which are often ignition sources. Trees also reduce biodiversity by suppressing the understory flora (Weber 2003).

Location and Extent Onsite. A single Peruvian peppertree was mapped on South Crest (Figure C-8), at the edge of the north-south oriented oak-riparian woodland east of Suncrest Boulevard and south of Orchard Avenue. This individual burned in the 2003 Cedar fire, but has since recovered. A number of peppertrees also occur around the Horsemill Road entrance to CER, but were not mapped.

Silybum marianum
Blessed milk thistle
Cal-IPC Rating: Limited
Site: CER, South Crest

Biology and Life History: Blessed milk thistle is a tap rooted annual or biennial herb to 3 m (10 ft) tall. Basal and cauline leaves are spine-tipped and variegated (Baldwin et al. 2012; DiTomaso and Healy 2007). The large, discoid flower heads are on long peduncles and involucral phyllaries are spiny. Flowers are pinkish to purple and there are usually many flower heads per plant (Baldwin et al. 2012). Flowering occurs from April to July. Seeds are primarily wind-dispersed, but can also be spread by human activities, animals, soil and water movement, and as a crop seed or feed contaminant (DiTomaso and Healy 2007). Seeds can germinate in the fall and winter and even into early spring and can survive in the soil seed bank for at least nine years (DiTomaso and Healy 2007).

Habitat. Blessed milk thistle is widely naturalized in California (especially in the coastal areas) and can be found in many other states (Cal-IPC 2003e). The species grows in a wide variety of habitats, including coastal sage scrub, grasslands, and riparian areas, but there is almost always a degree of current or historical disturbance associated with infestations (DiTomaso and Healy 2007). This species is a prolific seed producer, but requires animal and human disturbance to establish and spread. Dead plants can remain in place for a year, allowing for continued seed dispersal (Cal-IPC 2003e).

Threats. Blessed milk thistle often grows in dense stands that displace native species (Cal-IPC 2003e). It outcompetes native plants for light, water, and nutrients, and thrives in areas with fertile soil (Cal-IPC 2003e; DiTomaso and Healy 2007). At least 47 insect species have been found feeding or reproducing on blessed milk thistle; however, at least 26 of these species are economically damaging crop pests. Blessed milk thistle can be toxic to sheep and cattle, especially under site-specific environmental conditions (Cal-IPC 2003e). Finally, this species may carry human-ignited fires into neighboring grasslands or shrubs (Cal-IPC 2003e).

Location and Extent Onsite. Blessed milk thistle occurs in three locations on CER and two locations on South Crest. On CER, one stand (0.02 acre) occurs north of Rios Elementary School and east of the trailer park and fuel break, where plants are scattered to abundant in a disturbed swale (Figure C-1). Another stand occurs in the western portion of the reserve, on a north-facing slope just east of Vista de Montemar Road, where approximately 50-60 plants (0.02 acre) occur at the edge of a dirt road and spread downslope into adjacent coastal sage scrub (*Artemisia californica* Association) habitat (Figure C-5). A third stand was previously mapped in the 'racetrack' area of the reserve (Figure C-6). The South Crest occurrences are both in disturbed habitat along Orchard Avenue (Figure C-8), and range from scattered to scattered but dense patches.

Tamarix sp.
Tamarisk
Cal-IPC Rating: High
Site: South Crest

Biology and Life History. Tamarisk is a shrub or tree that can reach heights up to 25 m (82 ft) (depending on the species) (Baldwin et al. 2012). The small, green, sessile leaves are awl- or scale-like and encrusted with excreted salt (Baldwin et al. 2012). The inflorescence is a raceme or compound raceme of pink, white, or red flowers. Flowering months vary by species but usually begin in either early or late spring to mid-summer (DiTomaso and Healy 2007). Tamarisk produces copious amounts of small seed annually; it has been estimated that an individual plant can produce 500,000 seeds per year. However, seed usually survives for no longer than five weeks (Lovich 2000; DiTomaso and Healy 2007). Tamarisk can also reproduce vegetatively (root and stem fragments) and the roots can sprout adventitiously (Lovich 2000). Seedling mortality is high since the roots develop slowly, and these seedlings cannot tolerate dry conditions for even a day (DiTomaso and Healy 2007).

Habitat. Tamarisk was originally planted as an ornamental, for erosion control, as a wind-break, and for shade, but it escaped and quickly colonized large areas throughout the western United States (Lovich 2000). Five species can be found growing in California (Baldwin et al. 2012), but smallflower tamarisk (*T. parviflora*) and saltcedar (*T. ramosissima*) are the most common and most invasive (DiTomaso and Healy 2007). Tamarisk grows in ditches, canals, desert washes, springs, along the shores of lakes, ponds, rivers and streams, and in riparian communities. It can also grow in a variety of soil types, including alkaline, saline and acidic soils (Lovich 2000; DiTomaso and Healy 2007).

Threats. The negative impacts associated with tamarisk establishment (large populations) have been widely studied and include drastic changes in geomorphology, lowering the water table, altering soil chemistry, increasing fire frequency, decreasing plant community composition, and lowering habitat value for wildlife (Lovich 2000). Once established and left to grow, tamarisk can form large, dense monocultures that outcompete all other native plants (Lovich 2000). Additionally, the increases in soil salinity in tamarisk-infested areas preclude the growth of native plants that are not able to tolerate the high levels of soil salinity (Lovich 2000).

Location and Extent Onsite. Tamarisk was mapped in only one location on CER and South Crest, respectively. On CER, one tree was observed on a south-facing slope above the drainage in Rios Canyon (Figure C-6). On South Crest, an individual tree was growing on a west-facing slope above the north-south oriented drainage along Orchard Avenue, in coastal sage scrub habitat (*Artemisia californica-Eriogonum fasciculatum-Malosma laurina* Association) (Figure C-8). This occurrence was treated with herbicide and killed in November 2011 (Task 3, Appendix I).

Vinca* aff. *major
Periwinkle
Cal-IPC Rating: Moderate
Site: CER

Biology and Life History. Periwinkle is a perennial vine with a sprawling habit (Baldwin et al. 2012; Bossard et al. 2000). The species is characterized by dark green, glabrous, mostly opposite leaves (Baldwin et al. 2012) and purple to lavender (-white) flowers (Baldwin et al. 2012). The non-flowering stems are prostrate and root at the nodes, while the flowering stems grow erect to 9 m (ca. 3 ft) tall (Bossard et al. 2000). Flowers develop in March and continue to bloom through July (Baldwin et al. 2012). Fruits are rarely formed, but when they do, they are curved and hairy and there are 1-5 seeds per pod (Baldwin et al. 2012; Bossard et al. 2000; DiTomaso and Healy 2007).

Habitat. In California, this species reproduces vegetatively and is found growing in moist, cool, and shady places, including riparian areas, oak woodlands, landscaped areas, and old homesteads (Bossard et al. 2000; DiTomaso and Healy 2007; Vinje pers. obs.). Stem fragments break off and are carried by water to other locations that are favorable for establishment. Plants and stems can also be transported to other locations via human activities (e.g., landscape planting, disposal of landscape waste) (DiTomaso and Healy 2007). When conditions are favorable, stem fragments can root in place (DiTomaso and Healy 2007).

Threats. Periwinkle can form dense monocultures, especially in riparian areas (Bossard et al. 2012; Vinje pers. obs.) where it outcompetes native plants and lowers species diversity (Bossard et al. 2012). Vegetative reproduction is accelerated during wet periods and the species will die back in a frost, but resprout when conditions are favorable (Bossard et al. 2012).

Location and Extent Onsite. Two small patches of periwinkle were mapped in the southwestern portion of the Horsemill Road oak grove in 2012 (Figure C-6).

Washingtonia robusta
Washington fan palm
Cal-IPC Rating: Moderate
Site: South Crest

Biology and Life History. Washington fan palm is a tree that can reach 30 m (98 ft) in height (Baldwin et al. 2012). The palmately divided green leaves are 1-2 m (3-6 ft) wide, and hang down and form a skirt around the trunk as they dry and senesce (Baldwin et al. 2012). The bisexual, white flowers grow on long inflorescences located within the crown (Baldwin et al 2012). Fruits are black drupes which are consumed by birds and dispersed in their droppings (DiTomaso and Healy 2007). Seeds are also dispersed by mammals and water (DiTomaso and Healy 2007; Cornett 1986; Starr et al. 2003; Zona 2001), and are effectively transported with landscape mulch (Vinje pers. obs.). Washington fan palms can resprout from cut stumps and are resistant to fire damage (Cal-IPC 2003f).

In San Diego, Washington fan palms may not reach reproductive maturity until about 20 years, or until they are about 3 m (9.8 ft) tall (Martus 2008). Dense populations reportedly produce <1,000 viable seeds per square meter (Cal-IPC 2005b), and the horticultural industry reports 99% seed viability (Giessow pers. comm.). These palms are self-compatible and do not require special pollinators (Anonymous no date).

Habitat. These palm trees can be found growing in landscaped areas, urban places, in riparian habitats, lagoons, and orchards (Cal-IPC 2003f, DiTomaso and Healy 2007). This fan palm is often found in dense concentrations in riparian areas that are close to urban areas or downstream from the invasion source (DiTomaso and Healy 2007).

Threats. Dense stands of palms are impossible to penetrate and little native vegetation can grow in these 'forests' (Vinje pers. obs.). Additionally, these dense monocultures displace native animal species, including (potentially) riparian obligate sensitive species, and the dead palm leaves (fronds) can create a fire hazard (Tu and Randall 2002; Cal-IPC 2003f; Gilman and Watson 1994). Palm stands can harbor encampments, and the associated open fires and smoking are ignition sources (Giessow pers. comm.). Palms can also form dense thickets in riparian communities (Tu and Randall 2002; Daehler no date), which may contribute to flooding and subsequent erosion along stream channels. An increase in rodent populations in palms may result in increased bird predation (Young and Young 1992).

Location and Extent Onsite. Washington fan palm was mapped in two locations on South Crest, both in the north-south oriented drainage south of Suncrest Boulevard and east of the junction with Orchard Avenue (Figure C-8). The northernmost location consists of one tree in the bottom of the drainage, just south of a stand of oak woodland (*Quercus agrifolia* Alliance). The southernmost occurrence includes a number of scattered trees in this drainage, also in association with oak woodland (*Quercus agrifolia* Association). One of the palms was treated with herbicide and killed in November 2011 (Task 3, Appendix I).

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Appendix D
Sensitive Plant Species
Attribute Data
(South Crest Properties)

Appendix D
Sensitive Plant Attribute Data - South Crest 2011-2012

Species	Site	Occurrence No.	Observor	Date	GPS Unit	Datum	GPS Error	Point/Polygon	GPS location (center)	Population Size	Phenology	Vegetation Association	Notes
Acanthomintha ilicifolia	SC	ACIL_01	Jessie Vinje/Curtis Battle	5/15/2012	Garmin 60CSX	NAD83	12	Point	-116.865513, 32.78908	950	90% flowering/10% fruiting	Southern mixed chaparral	Gabbro soils; sw-facing slope
Acanthomintha ilicifolia	SC	ACIL_02	Jessie Vinje/Curtis Battle	5/8/2012	Garmin 60CSX	NAD83	12	Point	-116.866174, 32.78788	185	90% flowering/10% fruiting	Southern mixed chaparral	Gabbro soils; sw-facing slope
Dudleya variegata	SC	DUVA_01	Jessie Vinje/Curtis Battle	5/2/2012	Garmin 60CSX	NAD83	13	Point	-116.870121, 32.786242	N/A	100% flowering	Nonnative Grassland	Offsite
Dudleya variegata	SC	DUVA_02	Jessie Vinje/Curtis Battle	5/2/2012	Garmin 60CSX	NAD83	13	Point	-116.869658, 32.78606	N/A	100% flowering	Nonnative Grassland	Offsite
Dudleya variegata	SC	DUVA_03	Jessie Vinje/Curtis Battle	5/2/2012	Garmin 60CSX	NAD83	13	Point	-116.869615, 32.786036	N/A	100% flowering	Nonnative Grassland	Offsite
Dudleya variegata	SC	DUVA_04	Jessie Vinje/Curtis Battle	5/2/2012	Garmin 60CSX	NAD83	13	Point	-116.869382, 32.785852	N/A	100% flowering	Nonnative Grassland	Offsite
Dudleya variegata	SC	DUVA_05	Jessie Vinje/Curtis Battle	5/2/2012	Garmin 60CSX	NAD83	13	Point	-116.869586, 32.785834	N/A	100% flowering	Nonnative Grassland	Offsite
Dudleya variegata	SC	DUVA_06	Jessie Vinje/Curtis Battle	5/2/2012	Garmin 60CSX	NAD83	13	Point	-116.869626, 32.785733	N/A	100% flowering	Nonnative Grassland	Offsite
	SC	DUVA_06	Jessie Vinje/Curtis Battle	5/2/2012	Garmin 60CSX	NAD83	13	Point	-116.871596, 32.78916	11	100% flowering	Nonnative Grassland	Little to no bare ground for this species; area dominated by nonnative grasses
Harpagonella palmeri	SC	HAPA_01	Patricia Gordon-Reedy/Curtis Battle	4/6/2011	Garmin 60CSX	NAD83	12	polygon	-116.871173, 32.787191	300	10% flowering/90% fruiting	Deinandra fasciculata	S-facing slope; opening in disturbed grassland
Harpagonella palmeri	SC	HAPA_02	Patricia Gordon-Reedy/Curtis Battle	4/6/2011	Garmin 60CSX	NAD83	12	point	-116.871091, 32.787029	1	10% flowering/90% fruiting	Deinandra fasciculata	S-facing slope; opening in disturbed grassland
Harpagonella palmeri	SC	HAPA_03	Patricia Gordon-Reedy/Curtis Battle	4/6/2011	Garmin 60CSX	NAD83	12	polygon	-116.871369, 32.787323	Scattered to dense patches	10% flowering/90% fruiting	Deinandra fasciculata	S-facing slope; opening in disturbed grassland
Harpagonella palmeri	SC	HAPA_04	Patricia Gordon-Reedy/Curtis Battle	4/6/2011	Garmin 60CSX	NAD83	12	point	-116.867155, 32.787846	1	10% flowering/90% fruiting	Quercus (berberidifolia) x acutidens)-Adenostoma fasciculatum	Plants scattered up e-w oriented trail and into adjacent habitat
Nolina interrata	SC	NOIN_01	Patricia Gordon-Reedy/Curtis Battle	4/6/2011	Garmin 60CSX	NAD83	16	point	-116.866561, 32.788089	1 clump*	100% vegetative	Quercus (berberidifolia) x acutidens)-Adenostoma fasciculatum	Clump = several individuals from base; W-facing slope, burned chaparral
Nolina interrata	SC	NOIN_02	Patricia Gordon-Reedy/Curtis Battle	4/6/2011	Garmin 60CSX	NAD83	13	point	-116.866229, 32.7882	2	100% vegetative	Adenostoma fasciculatum-Lotus scoparius	W-facing slope; burned chaparral
Nolina interrata	SC	NOIN_03	Patricia Gordon-Reedy/Curtis Battle	4/6/2011	Garmin 60CSX	NAD83	13	point	-116.866186, 32.788233	2	100% vegetative	Adenostoma fasciculatum-Lotus scoparius	W-facing slope; burned chaparral
Nolina interrata	SC	NOIN_04	Patricia Gordon-Reedy/Curtis Battle	4/6/2011	Garmin 60CSX	NAD83	13	point	-116.866183, 32.788246	4	100% vegetative	Adenostoma fasciculatum-Lotus scoparius	W-facing slope; burned chaparral
Nolina interrata	SC	NOIN_05	Patricia Gordon-Reedy/Curtis Battle	4/6/2011	Garmin 60CSX	NAD83	16	point	-116.866229, 32.788265	4	100% vegetative	Adenostoma fasciculatum-Lotus scoparius	W-facing slope; burned chaparral
Nolina interrata	SC	NOIN_06	Patricia Gordon-Reedy/Curtis Battle	4/6/2011	Garmin 60CSX	NAD83	16	point	-116.866263, 32.788241	3	100% vegetative	Adenostoma fasciculatum-Lotus scoparius	W-facing slope; burned chaparral
Nolina interrata	SC	NOIN_07	Patricia Gordon-Reedy/Curtis Battle	4/6/2011	Garmin 60CSX	NAD83	16	point	-116.866128, 32.788491	2	100% vegetative	Adenostoma fasciculatum-Lotus scoparius	W-facing slope; burned chaparral
Nolina interrata	SC	NOIN_08	Patricia Gordon-Reedy/Curtis Battle	4/6/2011	Garmin 60CSX	NAD83	11	point	-116.866104, 32.788524	2	100% vegetative	Adenostoma fasciculatum-Lotus scoparius	W-facing slope; burned chaparral
Nolina interrata	SC	NOIN_09	Patricia Gordon-Reedy/Curtis Battle	4/6/2011	Garmin 60CSX	NAD83	11	point	-116.865938, 32.788517	4	100% vegetative	Adenostoma fasciculatum-Lotus scoparius	W-facing slope; burned chaparral
Nolina interrata	SC	NOIN_10	Patricia Gordon-Reedy/Curtis Battle	4/6/2011	Garmin 60CSX	NAD83	11	point	-116.866057, 32.788603	3	100% vegetative	Adenostoma fasciculatum-Xylococcus bicolor	W-facing slope; burned chaparral

Appendix D
Sensitive Plant Attribute Data - South Crest 2011-2012

Species	Site	Occurrence No.	Observor	Date	GPS Unit	Datum	GPS Error	Point/Polygon	GPS location (center)	Population Size	Phenology	Vegetation Association	Notes
Nolina interrata	SC	NOIN_11	Patricia Gordon-Reedy/Curtis Battle	4/6/2011	Garmin 60CSX	NAD83	11	point	-116.866104, 32.788604	4	100% vegetative	Adenostoma fasciculatum-Xylococcus bicolor	W-facing slope; burned chaparral
Nolina interrata	SC	NOIN_12	Patricia Gordon-Reedy/Curtis Battle	4/6/2011	Garmin 60CSX	NAD83	11	polygon	-116.866138, 32.788758	15	100% vegetative	Adenostoma fasciculatum-Xylococcus bicolor	W-facing slope; burned chaparral
Nolina interrata	SC	NOIN_13	Patricia Gordon-Reedy/Curtis Battle	4/6/2011	Garmin 60CSX	NAD83	15	polygon	-116.866339, 32.788768	15	100% vegetative	Adenostoma fasciculatum-Xylococcus bicolor	W-facing slope; burned chaparral
Nolina interrata	SC	NOIN_14	Patricia Gordon-Reedy/Curtis Battle	4/6/2011	Garmin 60CSX	NAD83	15	point	-116.866309, 32.78884	5	100% vegetative	Adenostoma fasciculatum-Xylococcus bicolor	W-facing slope; burned chaparral
Nolina interrata	SC	NOIN_15	Patricia Gordon-Reedy/Curtis Battle	4/6/2011	Garmin 60CSX	NAD83	15	polygon	-116.865991, 32.789238	150	100% vegetative	Malosma laurina-Lotus scoparius	SW-facing slope; burned chaparral
Nolina interrata	SC	NOIN_16	Patricia Gordon-Reedy/Curtis Battle	4/6/2011	Garmin 60CSX	NAD83	15	point	-116.865881, 32.78778	4	100% vegetative	Artemisia californica-Eriogonum fasciculatum-Malosma laurina	SW-facing slope; burned chaparral
Nolina interrata	SC	NOIN_17	Patricia Gordon-Reedy/Curtis Battle	4/6/2011	Garmin 60CSX	NAD83	15	polygon	-116.865914, 32.787668	25	100% vegetative	Artemisia californica-Eriogonum fasciculatum-Malosma laurina	S-facing slope; disturbed understory
Nolina interrata	SC	NOIN_18	Patricia Gordon-Reedy/Curtis Battle	4/6/2011	Garmin 60CSX	NAD83	15	polygon	-116.865976, 32.787523	3	Flowering	Artemisia californica-Eriogonum fasciculatum-Malosma laurina	S-facing slope; disturbed understory
Nolina interrata	SC	NOIN_19	Patricia Gordon-Reedy/Curtis Battle	4/6/2011	Garmin 60CSX	NAD83	15	point	-116.865934, 32.787479	1	100% vegetative	Artemisia californica-Eriogonum fasciculatum-Malosma laurina	S-facing slope; disturbed understory
Nolina interrata	SC	NOIN_20	Patricia Gordon-Reedy/Curtis Battle	4/6/2011	Garmin 60CSX	NAD83	15	polygon	-116.865563, 32.788095	45	100% vegetative	Bahiopsis laciniata-Artemisia californica-Eriogonum fasciculatum	S-facing slope; burned; disturbed understory; Ehrharta longiflora
Nolina interrata	SC	NOIN_21	Patricia Gordon-Reedy/Curtis Battle	4/6/2011	Garmin 60CSX	NAD83	15	polygon	-116.865311, 32.788358	30	100% vegetative	Malosma laurina-Lotus scoparius	SW-facing slope; burned; disturbed understory; Brachypodium distachyon
Nolina interrata	SC	NOIN_22	Patricia Gordon-Reedy/Curtis Battle	4/13/2011	Garmin 60CSX	NAD83	12	polygon	-116.866212, 32.789986	27	100% vegetative	Salvia apiana-Artemisia californica	SW-facing slope; burned chaparral
Nolina interrata	SC	NOIN_23	Patricia Gordon-Reedy/Curtis Battle	4/13/2011	Garmin 60CSX	NAD83	13	polygon	-116.866064, 32.789896	5	100% vegetative	Salvia apiana-Artemisia californica	SW-facing slope; burned chaparral + Brachypodium distachyon
Nolina interrata	SC	NOIN_24	Patricia Gordon-Reedy/Curtis Battle	4/13/2011	Garmin 60CSX	NAD83	13	point	-116.866079, 32.789905	3	100% vegetative	Salvia apiana-Artemisia californica	SW-facing slope; burned chaparral + Brachypodium distachyon
Nolina interrata	SC	NOIN_25	Patricia Gordon-Reedy/Curtis Battle	4/13/2011	Garmin 60CSX	NAD83	16	point	-116.866051, 32.789917	2	100% vegetative	Salvia apiana-Artemisia californica	SW-facing slope; burned chaparral + Brachypodium distachyon
Nolina interrata	SC	NOIN_26	Patricia Gordon-Reedy/Curtis Battle	4/13/2011	Garmin 60CSX	NAD83	14	point	-116.866046, 32.789908	1	100% vegetative	Salvia apiana-Artemisia californica	SW-facing slope; burned chaparral + Brachypodium distachyon
Nolina interrata	SC	NOIN_27	Patricia Gordon-Reedy/Curtis Battle	4/13/2011	Garmin 60CSX	NAD83	12	polygon	-116.865556, 32.789818	11	100% vegetative	Malosma laurina-Lotus scoparius	W-facing slope; burned chaparral
Nolina interrata	SC	NOIN_28	Patricia Gordon-Reedy/Curtis Battle	4/13/2011	Garmin 60CSX	NAD83	10	point	-116.86438, 32.789525	1	100% vegetative	Bahiopsis laciniata-Artemisia californica-Eriogonum fasciculatum	W-facing slope
Nolina interrata	SC	NOIN_29	Patricia Gordon-Reedy/Curtis Battle	4/13/2011	Garmin 60CSX	NAD83	10	polygon	-116.864361, 32.789499	3	100% vegetative	Bahiopsis laciniata-Artemisia californica-Eriogonum fasciculatum	W-facing slope
Nolina interrata	SC	NOIN_30	Patricia Gordon-Reedy/Curtis Battle	4/14/2011	Garmin 60CSX	NAD83	15	polygon	-116.862801, 32.782517	2	100% vegetative	Avena (barbata) fatua) Semi-Natural Stand	S-facing slope
Nolina interrata	SC	NOIN_31	Patricia Gordon-Reedy/Curtis Battle	4/14/2011	Garmin 60CSX	NAD83	10	polygon	-116.862791, 32.78294	2	100% vegetative	Bahiopsis laciniata-Artemisia californica-Eriogonum fasciculatum	SW-facing slope
Nolina interrata	SC	NOIN_32	Patricia Gordon-Reedy/Curtis Battle	4/14/2011	Garmin 60CSX	NAD83	10	polygon	-116.862825, 32.783155	5	100% vegetative	Bahiopsis laciniata-Artemisia californica-Eriogonum fasciculatum	SW-facing slope
Nolina interrata	**SC**	NOIN_33	Patricia Gordon-Reedy/Curtis Battle	5/24/2011	Garmin 60CSX	NAD83	**13**	point	-116.869977, 32.787592	1	100% vegetative	Avena (barbata) fatua) Semi-Natural Stand	Road cut; e-facing cut; seedling
Nolina interrata	SC	NOIN_34	Patricia Gordon-Reedy/Curtis Battle	5/24/2011	Garmin 60CSX	NAD83	13	point	-116.869968, 32.787546	1	100% vegetative	Avena (barbata) fatua) Semi-Natural Stand	Road cut; e-facing cut; seedling

Appendix D
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Species	Site	Occurrence No.	Observor	Date	GPS Unit	Datum	GPS Error	Point/Polygon	GPS location (center)	Population Size	Phenology	Vegetation Association	Notes
Nolina interrata	SC	NOIN_35	Patricia Gordon-Reedy/Curtis Battle	5/24/2011	Garmin 60CSX	NAD83	11	point	-116.869987, 32.787518	1	100% vegetative	Avena (barbata) fatua) Semi-Natural Stand	Road cut; e-facing cut; seedling
Nolina interrata	SC	NOIN_36	Patricia Gordon-Reedy/Curtis Battle	5/24/2011	Garmin 60CSX	NAD83	15	point	-116.870004, 32.78751	1	100% vegetative	Avena (barbata) fatua) Semi-Natural Stand	Road cut; e-facing cut; seedling
Nolina interrata	SC	NOIN_37	Patricia Gordon-Reedy/Curtis Battle	5/26/2011	Garmin 60CSX	NAD83	13	point	-116.869904, 32.787754	1	100% vegetative	Avena (barbata) fatua) Semi-Natural Stand	Road cut
Nolina interrata	SC	NOIN_38	Patricia Gordon-Reedy/Curtis Battle	5/26/2011	Garmin 60CSX	NAD83	13	point	-116.869907, 32.78774	1	100% vegetative	Avena (barbata) fatua) Semi-Natural Stand	Road cut
Nolina interrata	SC	NOIN_39	Patricia Gordon-Reedy/Curtis Battle	5/26/2011	Garmin 60CSX	NAD83	12	point	-116.869904, 32.787728	1	100% vegetative	Avena (barbata) fatua) Semi-Natural Stand	Road cut
Nolina interrata	SC	NOIN_40	Patricia Gordon-Reedy/Curtis Battle	5/26/2011	Garmin 60CSX	NAD83	13	polygon	-116.869845, 32.787477	80	100% vegetative	Malosma laurina-Lotus scoparius	SW-facing slope
Nolina interrata	SC	NOIN_41	Patricia Gordon-Reedy/Curtis Battle	5/26/2011	Garmin 60CSX	NAD83	13	polygon	-116.868325, 32.787147	75-100	100% vegetative	Brachypodium distachyon Semi-Natural Stand Type	SW-facing slope
Nolina interrata	SC	NOIN_42	Patricia Gordon-Reedy/Curtis Battle	5/26/2011	Garmin 60CSX	NAD83	12	polygon	-116.868091, 32.78725	20	100% vegetative	Salvia apiana-Artemisia californica; Brachypodium distachyon Semi-Natural Stand Type	SW-facing slope
Nolina interrata	SC	NOIN_43	Patricia Gordon-Reedy/Curtis Battle	5/26/2011	Garmin 60CSX	NAD83	11	polygon	-116.867969, 32.787404	40-50	100% vegetative	Salvia apiana-Artemisia californica	SW-facing slope
Nolina interrata	SC	NOIN_44	Patricia Gordon-Reedy/Curtis Battle	5/26/2011	Garmin 60CSX	NAD83	13	polygon	-116.867764, 32.78744	35	100% vegetative	Brachypodium distachyon Semi-Natural Stand Type	SW-facing slope
Nolina interrata	SC	NOIN_45	Patricia Gordon-Reedy/Curtis Battle	5/26/2011	Garmin 60CSX	NAD83	14	polygon	-116.868003, 32.787614	15	100% vegetative	Salvia apiana-Artemisia californica	SW-facing slope
Nolina interrata	SC	NOIN_46	Patricia Gordon-Reedy/Curtis Battle	5/26/2011	Garmin 60CSX	NAD83	11	polygon	-116.867405, 32.787962	15	100% vegetative	Salvia apiana-Artemisia californica	SW-facing slope
Nolina interrata	SC	NOIN_47	Patricia Gordon-Reedy/Curtis Battle	5/26/2011	Garmin 60CSX	NAD83	11	polygon	-116.867362, 32.788071	3	100% vegetative	Malosma laurina-Lotus scoparius	SW-facing slope
Nolina interrata	SC	NOIN_48	Patricia Gordon-Reedy/Curtis Battle	5/26/2011	Garmin 60CSX	NAD83	11	point	-116.867543, 32.788064	2	100% vegetative	Salvia apiana-Artemisia californica	SW-facing slope
Nolina interrata	SC	NOIN_49	Patricia Gordon-Reedy/Curtis Battle	5/26/2011	Garmin 60CSX	NAD83	12	polygon	-116.867421, 32.788328	31	100% vegetative	Salvia apiana-Artemisia californica	SW-facing slope
Nolina interrata	SC	NOIN_50	Patricia Gordon-Reedy/Curtis Battle	5/26/2011	Garmin 60CSX	NAD83	14	point	-116.867472, 32.788158	1	100% vegetative	Salvia apiana-Artemisia californica	SW-facing slope
Nolina interrata	SC	NOIN_51	Patricia Gordon-Reedy/Curtis Battle	5/26/2011	Garmin 60CSX	NAD83	10	polygon	-116.86766, 32.787764	10	100% vegetative	Salvia apiana-Artemisia californica	SW-facing slope
Nolina interrata	SC	NOIN_52	Patricia Gordon-Reedy/Curtis Battle	5/26/2011	Garmin 60CSX	NAD83	11	point	-116.867727, 32.787736	5	100% vegetative	Salvia apiana-Artemisia californica	SW-facing slope
Nolina interrata	SC	NOIN_53	Patricia Gordon-Reedy/Curtis Battle	5/26/2011	Garmin 60CSX	NAD83	12	polygon	-116.868041, 32.78778	10	100% vegetative	Salvia apiana-Artemisia californica	SW-facing slope
Nolina interrata	SC	NOIN_54	Patricia Gordon-Reedy/Curtis Battle	5/26/2011	Garmin 60CSX	NAD83	12	point	-116.868214, 32.787714	1	100% vegetative	Salvia apiana-Artemisia californica	SW-facing slope
Nolina interrata	SC	NOIN_55	Patricia Gordon-Reedy/Curtis Battle	5/26/2011	Garmin 60CSX	NAD83	13	polygon	-116.868267, 32.787839	80	100% vegetative	Salvia apiana-Artemisia californica	SW-facing slope
Nolina interrata	SC	NOIN_56	Patricia Gordon-Reedy/Curtis Battle	5/26/2011	Garmin 60CSX	NAD83	14	polygon	-116.870483, 32.788201	40	100% vegetative	Artemisia californica	SW-facing slope
Nolina interrata	SC	NOIN_57	Patricia Gordon-Reedy/Curtis Battle	5/26/2011	Garmin 60CSX	NAD83	12	polygon	-116.87132, 32.788856	150	100% vegetative	Brachypodium distachyon Semi-Natural Stand Type	SW-facing slope
Nolina interrata	SC	NOIN_58	Patricia Gordon-Reedy/Curtis Battle	5/26/2011	Garmin 60CSX	NAD83	12	polygon	-116.872326, 32.788944	25	100% vegetative	Bahiopsis laciniata-Artemisia californica-Eriogonum fasciculatum	SW-facing slope
Nolina interrata	SC	NOIN_59	Patricia Gordon-Reedy/Curtis Battle	5/26/2011	Garmin 60CSX	NAD83	12	point	-116.872042, 32.78903	2	100% vegetative	Artemisia californica	SW-facing slope
Nolina interrata	SC	NOIN_60	Patricia Gordon-Reedy/Curtis Battle	5/26/2011	Garmin 60CSX	NAD83	12	point	-116.872049, 32.789082	1	100% vegetative	Artemisia californica	SW-facing slope
Nolina interrata	SC	NOIN_61	Patricia Gordon-Reedy/Curtis Battle	5/26/2011	Garmin 60CSX	NAD83	9	point	-116.871838, 32.78922	2	100% vegetative	Artemisia californica	SW-facing slope
Nolina interrata	SC	NOIN_62	Patricia Gordon-Reedy/Curtis Battle	5/26/2011	Garmin 60CSX	NAD83	12	point	-116.871765, 32.789283	3	100% vegetative	Artemisia californica	SW-facing slope
Nolina interrata	SC	NOIN_63	Patricia Gordon-Reedy/Curtis Battle	5/26/2011	Garmin 60CSX	NAD83	13	point	-116.871759, 32.789307	1	100% vegetative	Artemisia californica	SW-facing slope

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Species	Site	Occurrence No.	Observor	Date	GPS Unit	Datum	GPS Error	Point/Polygon	GPS location (center)	Population Size	Phenology	Vegetation Association	Notes
Nolina interrata	SC	NOIN_64	Patricia Gordon-Reedy/Curtis Battle	5/26/2011	Garmin 60CSX	NAD83	13	point	-116.871075, 32.78961	1	100% vegetative	Artemisia californica	SW-facing slope
Nolina interrata	SC	NOIN_65	Patricia Gordon-Reedy/Curtis Battle	5/26/2011	Garmin 60CSX	NAD83	13	point	-116.871087, 32.789628	1	100% vegetative	Artemisia californica	SW-facing slope
Nolina interrata	SC	NOIN_66	Patricia Gordon-Reedy/Curtis Battle	5/26/2011	Garmin 60CSX	NAD83	13	polygon	-116.87107, 32.789702	5	100% vegetative	Artemisia californica	SW-facing slope
Nolina interrata	SC	NOIN_67	Patricia Gordon-Reedy/Curtis Battle	5/26/2011	Garmin 60CSX	NAD83	13	polygon	-116.870259, 32.789823	9	100% vegetative	Rhamnus crocea Provsional Association	SW-facing slope
Nolina interrata	SC	NOIN_68	Patricia Gordon-Reedy/Curtis Battle	5/26/2011	Garmin 60CSX	NAD83	14	polygon	-116.870188, 32.789898	3	100% vegetative	Adenostoma fasciculatum-Lotus scoparius	SW-facing slope
Nolina interrata	SC	NOIN_69	Patricia Gordon-Reedy/Curtis Battle	5/26/2011	Garmin 60CSX	NAD83	9	polygon	-116.870155, 32.789973	25	100% vegetative	Salvia apiana-Artemisia californica; Brachypodium distachyon Semi-Natural Stand Type	SW-facing slope
Nolina interrata	SC	NOIN_70	Patricia Gordon-Reedy/Curtis Battle	5/26/2011	Garmin 60CSX	NAD83	9	polygon	-116.869877, 32.789907	70	100% vegetative	Brachypodium distachyon Semi-Natural Stand Type	SW-facing slope
Nolina interrata	SC	NOIN_71	Patricia Gordon-Reedy/Curtis Battle	5/26/2011	Garmin 60CSX	NAD83	9	polygon	-116.869986, 32.790218	110	100% vegetative	Salvia apiana-Artemisia californica	SW-facing slope
Nolina interrata	SC	NOIN_72	Patricia Gordon-Reedy/Curtis Battle	5/26/2011	Garmin 60CSX	NAD83	9	polygon	-116.870221, 32.790179	8	100% vegetative	Nassella pulchra	SW-facing slope
Nolina interrata	SC	NOIN_73	Patricia Gordon-Reedy/Curtis Battle	6/30/2011	Garmin 60CSX	NAD83	13	polygon	-116.868626, 32.790326	3	Vegetative	Malosma laurina-Lotus scoparius	W-facing slope
Nolina interrata	SC	NOIN_74	Patricia Gordon-Reedy/Curtis Battle	6/30/2011	Garmin 60CSX	NAD83	11	polygon	-116.865858, 32.788841	6	Vegetative	Adenostoma fasciculatum-Lotus scoparius	SW-facing slope
Nolina interrata	SC	NOIN_75	Patricia Gordon-Reedy/Curtis Battle	6/30/2011	Garmin 60CSX	NAD83	10	point	-116.865807, 32.788853	1	Vegetative	Adenostoma fasciculatum-Lotus scoparius	SW-facing slope
Nolina interrata	SC	NOIN_76	Patricia Gordon-Reedy/Curtis Battle	6/30/2011	Garmin 60CSX	NAD83	10	point	-116.865712, 32.788757	5	Vegetative	Adenostoma fasciculatum-Lotus scoparius	SW-facing slope
Nolina interrata	SC	NOIN_77	Patricia Gordon-Reedy/Curtis Battle	6/30/2011	Garmin 60CSX	NAD83	11	point	-116.865615, 32.78875	1	Vegetative	Ceanothus tomentosus	SW-facing slope
Nolina interrata	SC	NOIN_78	Patricia Gordon-Reedy/Curtis Battle	6/30/2011	Garmin 60CSX	NAD83	9	polygon	-116.865703, 32.788843	5	Vegetative	Adenostoma fasciculatum-Lotus scoparius	SW-facing slope
Nolina interrata	SC	NOIN_79	Patricia Gordon-Reedy/Curtis Battle	6/30/2011	Garmin 60CSX	NAD83	9	point	-116.865621, 32.788931	3	Vegetative	Adenostoma fasciculatum-Ceanothus tomentosus	SW-facing slope
Nolina interrata	SC	NOIN_80	Patricia Gordon-Reedy/Curtis Battle	6/30/2011	Garmin 60CSX	NAD83	12	polygon	-116.865582, 32.78891	10	Vegetative	Adenostoma fasciculatum-Ceanothus tomentosus	SW-facing slope
Nolina interrata	SC	NOIN_81	Patricia Gordon-Reedy/Curtis Battle	6/30/2011	Garmin 60CSX	NAD83	13	polygon	-116.865559, 32.788843	10	Vegetative	Adenostoma fasciculatum-Ceanothus tomentosus	SW-facing slope
Nolina interrata	SC	NOIN_82	Patricia Gordon-Reedy/Curtis Battle	6/30/2011	Garmin 60CSX	NAD83	12	polygon	-116.865561, 32.78877	3	Vegetative	Ceanothus tomentosus	SW-facing slope
Nolina interrata	SC	NOIN_83	Patricia Gordon-Reedy/Curtis Battle	6/30/2011	Garmin 60CSX	NAD83	12	point	-116.865518, 32.788718	1	Vegetative	Ceanothus tomentosus	SW-facing slope
Nolina interrata	SC	NOIN_84	Patricia Gordon-Reedy/Curtis Battle	6/30/2011	Garmin 60CSX	NAD83	15	polygon	-116.865488, 32.788734	5	Vegetative	Ceanothus tomentosus	SW-facing slope
Nolina interrata	SC	NOIN_85	Patricia Gordon-Reedy/Curtis Battle	6/30/2011	Garmin 60CSX	NAD83	13	point	-116.865455, 32.788709	1	Vegetative	Ceanothus tomentosus	SW-facing slope
Nolina interrata	SC	NOIN_86	Patricia Gordon-Reedy/Curtis Battle	6/30/2011	Garmin 60CSX	NAD83	12	point	-116.865404, 32.788746	1	Vegetative	Ceanothus tomentosus	SW-facing slope
Nolina interrata	SC	NOIN_87	Patricia Gordon-Reedy/Curtis Battle	6/30/2011	Garmin 60CSX	NAD83	13	polygon	-116.865298, 32.788773	35-50	Vegetative	Adenostoma fasciculatum-Xylococcus biocolor	SW-facing slope
Nolina interrata	SC	NOIN_88	Patricia Gordon-Reedy/Curtis Battle	6/30/2011	Garmin 60CSX	NAD83	11	polygon	-116.865424, 32.789012	35-40	Vegetative	Adenostoma fasciculatum-Xylococcus biocolor-Ceanothus tomentosus	SW-facing slope

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Species	Site	Occurrence No.	Observor	Date	GPS Unit	Datum	GPS Error	Point/Polygon	GPS location (center)	Population Size	Phenology	Vegetation Association	Notes
Nolina interrata	SC	NOIN_89	Patricia Gordon-Reedy/Curtis Battle	6/30/2011	Garmin 60CSX	NAD83	9	polygon	-116.866213, 32.786658	25	Vegetative	Malosma laurina-Lotus scoparius	S, SE-facing slope
Nolina interrata	SC	NOIN_90	Patricia Gordon-Reedy/Curtis Battle	6/30/2011	Garmin 60CSX	NAD83	10	point	-116.866068, 32.786652	1	Vegetative	Malosma laurina-Lotus scoparius	S, SE-facing slope
Nolina interrata	SC	NOIN_91	Patricia Gordon-Reedy/Curtis Battle	6/30/2011	Garmin 60CSX	NAD83	10	polygon	-116.866133, 32.786559	5	Vegetative	Malosma laurina-Lotus scoparius	S, SE-facing slope
Nolina interrata	SC	NOIN_92	Patricia Gordon-Reedy/Curtis Battle	6/30/2011	Garmin 60CSX	NAD83	10	point	-116.866265, 32.78656	1	Vegetative	Artemisia californica-Eriogonum fasciculatum-Malosma laurina	S, SE-facing slope
Nolina interrata	SC	NOIN_93	Patricia Gordon-Reedy/Curtis Battle	6/30/2011	Garmin 60CSX	NAD83	11	polygon	-116.866405, 32.786544	15	Vegetative	Malosma laurina-Lotus scoparius	S, SE-facing slope
Nolina interrata	SC	NOIN_94	Patricia Gordon-Reedy/Curtis Battle	6/30/2011	Garmin 60CSX	NAD83	11	polygon	-116.866571, 32.786486	50	Vegetative	Salvia apiana-Artemisia californica	SW-facing slope
Nolina interrata	SC	NOIN_95	Patricia Gordon-Reedy/Curtis Battle	6/30/2011	Garmin 60CSX	NAD83	10	polygon	-116.866338, 32.786132	95	Vegetative	Bahiopsis laciniata-Artemisia californica-Eriogonum fasciculatum	S-facing slope
Nolina interrata	SC	NOIN_96	Patricia Gordon-Reedy/Curtis Battle	6/30/2011	Garmin 60CSX	NAD83	12	point	-116.866576, 32.786714	1	Vegetative	Bahiopsis laciniata-Artemisia californica-Eriogonum fasciculatum	S-facing slope
Nolina interrata	SC	NOIN_97	Patricia Gordon-Reedy/Curtis Battle	6/30/2011	Garmin 60CSX	NAD83	10	polygon	-116.866549, 32.786769	20	Vegetative	Bahiopsis laciniata-Artemisia californica-Eriogonum fasciculatum	S-facing slope
Nolina interrata	SC	NOIN_A	Patricia Gordon-Reedy/Curtis Battle	4/14/2011	Garmin 60CSX	NAD83	11	point	-116.859388, 32.781436	75	100% vegetative	Artemisia californa	Flat; offsite - adjacent to Dehesa Road
Tetracoccus dioicus	SC	TEDI_01	Patricia Gordon-Reedy/Curtis Battle	4/6/2011	Garmin 60CSX	NAD83	11	polygon	-116.866648, 32.787769	14	100% flowering	Adenostoma fasciculatum-Lotus scoparius	W-facing slope; burned chp; clay soil
Tetracoccus dioicus	SC	TEDI_02	Patricia Gordon-Reedy/Curtis Battle	4/6/2011	Garmin 60CSX	NAD83	11	point	-116.866734, 32.78769	1	100% flowering	Adenostoma fasciculatum-Lotus scoparius	W-facing slope; burned chp; clay soil
Tetracoccus dioicus	SC	TEDI_03	Patricia Gordon-Reedy/Curtis Battle	4/6/2011	Garmin 60CSX	NAD83	11	Polygon	-116.866749, 32.787448	5	100% flowering	Adenostoma fasciculatum-Lotus scoparius	W-facing slope; burned chp; clay soil
Tetracoccus dioicus	SC	TEDI_04	Patricia Gordon-Reedy/Curtis Battle	4/6/2011	Garmin 60CSX	NAD83	11	Polygon	-116.86637, 32.787773	7	100% flowering	Adenostoma fasciculatum-Lotus scoparius	W-facing slope; burned chp; clay soil
Tetracoccus dioicus	SC	TEDI_05	Patricia Gordon-Reedy/Curtis Battle	4/6/2011	Garmin 60CSX	NAD83	11	point	-116.86635, 32.787996	1	100% flowering	Ceanothus tomentosus	W-facing slope; road edge; clay soil
Tetracoccus dioicus	SC	TEDI_06	Patricia Gordon-Reedy/Curtis Battle	4/6/2011	Garmin 60CSX	NAD83	11	point	-116.86634, 32.788062	1	100% flowering	Ceanothus tomentosus	W-facing slope; burned chp; clay soil
Tetracoccus dioicus	SC	TEDI_07	Patricia Gordon-Reedy/Curtis Battle	4/6/2011	Garmin 60CSX	NAD83	11	Polygon	-116.866313, 32.788121	3	100% flowering	Ceanothus tomentosus	W-facing slope; burned chp; clay soil
Tetracoccus dioicus	SC	TEDI_08	Patricia Gordon-Reedy/Curtis Battle	4/6/2011	Garmin 60CSX	NAD83	11	polygon	-116.866248, 32.788048	15	100% flowering	Ceanothus tomentosus	W-facing slope; burned chp; clay soil
Tetracoccus dioicus	SC	TEDI_09	Patricia Gordon-Reedy/Curtis Battle	4/6/2011	Garmin 60CSX	NAD83	11	point	-116.866229, 32.788491	1	100% flowering	Quercus (berberidifolia) x acutidens)-Adenostoma fasciculatum	W-facing slope; burned chp; clay soil
Tetracoccus dioicus	SC	TEDI_10	Patricia Gordon-Reedy/Curtis Battle	4/6/2011	Garmin 60CSX	NAD83	11	point	-116.865869, 32.788491	1	100% flowering	Adenostoma fasciculatum-Lotus scoparius	W-facing slope; burned chp; clay soil
Tetracoccus dioicus	SC	TEDI_11	Patricia Gordon-Reedy/Curtis Battle	4/6/2011	Garmin 60CSX	NAD83	11	point	-116.86476, 32.7884	1	100% flowering	Bahiopsis laciniata-Artemisia californica-Eriogonum fasciculatum	SW-facing slope; coastal sage scrub
Tetracoccus dioicus	SC	TEDI_12	Patricia Gordon-Reedy/Curtis Battle	4/6/2011	Garmin 60CSX	NAD83	15	polygon	-116.865794, 32.788122	2	100% flowering	Bahiopsis laciniata-Artemisia californica-Eriogonum fasciculatum	SW-facing slope; trail edge
Tetracoccus dioicus	SC	TEDI_13	Patricia Gordon-Reedy/Curtis Battle	4/6/2011	Garmin 60CSX	NAD83	15	polygon	-116.865798, 32.788053	4	100% flowering	Bahiopsis laciniata-Artemisia californica-Eriogonum fasciculatum	SW-facing slope; trail edge
Tetracoccus dioicus	SC	TEDI_14	Patricia Gordon-Reedy/Curtis Battle	4/6/2011	Garmin 60CSX	NAD83	15	point	-116.866, 32.788204	1	100% flowering	Bahiopsis laciniata-Artemisia californica-Eriogonum fasciculatum	SW-facing slope; trail edge
Tetracoccus dioicus	SC	TEDI_15	Patricia Gordon-Reedy/Curtis Battle	4/6/2011	Garmin 60CSX	NAD83	15	polygon	-116.865977, 32.788078	9	100% flowering	Bahiopsis laciniata-Artemisia californica-Eriogonum fasciculatum	SW-facing slope; trail edge

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Species	Site	Occurrence No.	Observor	Date	GPS Unit	Datum	GPS Error	Point/Polygon	GPS location (center)	Population Size	Phenology	Vegetation Association	Notes
Tetracoccus dioicus	SC	TEDI_16	Patricia Gordon-Reedy/Curtis Battle	4/6/2011	Garmin 60CSX	NAD83	15	polygon	-116.866047, 32.788055	3	100% flowering	Quercus (berberidifolia) x acutidens)-Adenostoma fasciculatum	W-facing slope; burned chp; clay soil
Tetracoccus dioicus	SC	TEDI_17	Patricia Gordon-Reedy/Curtis Battle	4/6/2011	Garmin 60CSX	NAD83	15	point	-116.866078, 32.787983	1	100% flowering	Bahiopsis laciniata-Artemisia californica-Eriogonum fasciculatum	SW-facing slope; trail edge
Tetracoccus dioicus	SC	TEDI_18	Patricia Gordon-Reedy/Curtis Battle	4/6/2011	Garmin 60CSX	NAD83	15	polygon	-116.865962, 32.787929	5	100% flowering	Bahiopsis laciniata-Artemisia californica-Eriogonum fasciculatum	SW-facing slope; trail edge
Tetracoccus dioicus	SC	TEDI_19	Patricia Gordon-Reedy/Curtis Battle	4/6/2011	Garmin 60CSX	NAD83	15	polygon	-116.865843, 32.787849	5	100% flowering	Bahiopsis laciniata-Artemisia californica-Eriogonum fasciculatum	SW-facing slope; coastal sage scrub
Tetracoccus dioicus	SC	TEDI_20	Patricia Gordon-Reedy/Curtis Battle	4/6/2011	Garmin 60CSX	NAD83	15	point	-116.865913, 32.787781	1	100% flowering	Bahiopsis laciniata-Artemisia californica-Eriogonum fasciculatum	SW-facing slope; coastal sage scrub
Tetracoccus dioicus	SC	TEDI_21	Patricia Gordon-Reedy/Curtis Battle	4/6/2011	Garmin 60CSX	NAD83	15	point	-116.865892, 32.787744	1	100% flowering	Bahiopsis laciniata-Artemisia californica-Eriogonum fasciculatum	SW-facing slope; coastal sage scrub
Tetracoccus dioicus	SC	TEDI_22	Patricia Gordon-Reedy/Curtis Battle	4/6/2011	Garmin 60CSX	NAD83	15	point	-116.8657, 32.787808	1	100% flowering	Bahiopsis laciniata-Artemisia californica-Eriogonum fasciculatum	SW-facing slope; coastal sage scrub
Tetracoccus dioicus	SC	TEDI_23	Patricia Gordon-Reedy/Curtis Battle	4/13/2011	Garmin 60CSX	NAD83	12	point	-116.866501, 32.789819	1	100% flowering	Adenostoma fasciculatum-Lotus scoparius	W-facing slope; edge of burned chaparral
Tetracoccus dioicus	SC	TEDI_24	Patricia Gordon-Reedy/Curtis Battle	4/13/2011	Garmin 60CSX	NAD83	10	polygon	-116.864622, 32.789561	14	100% flowering	Adenostoma fasciculatum-Xylococcus bicolor-Quercus (berberidifolia) x acutidens)	W-facing slope; burned chaparral
Tetracoccus dioicus	SC	TEDI_25	Patricia Gordon-Reedy/Curtis Battle	4/13/2011	Garmin 60CSX	NAD83	10	point	-116.864532, 32.789602	1	100% flowering	Adenostoma fasciculatum-Xylococcus bicolor-Quercus (berberidifolia) x acutidens)	W-facing slope; burned chaparral
Tetracoccus dioicus	SC	TEDI_26	Patricia Gordon-Reedy/Curtis Battle	4/13/2011	Garmin 60CSX	NAD83	12	polygon	-116.864386, 32.789511,	9	100% flowering	Bahiopsis laciniata-Artemisia californica-Eriogonum fasciculatum	W-facing slope
Tetracoccus dioicus	SC	TEDI_27	Patricia Gordon-Reedy/Curtis Battle	4/13/2011	Garmin 60CSX	NAD83	12	polygon	-116.864257, 32.789479	3	100% flowering	Bahiopsis laciniata-Artemisia californica-Eriogonum fasciculatum	W-facing slope
Tetracoccus dioicus	SC	TEDI_28	Patricia Gordon-Reedy/Curtis Battle	4/13/2011	Garmin 60CSX	NAD83	12	point	-116.864223, 32.789687	3	100% flowering	Bahiopsis laciniata-Artemisia californica-Eriogonum fasciculatum	W-facing slope
Tetracoccus dioicus	SC	TEDI_29	Patricia Gordon-Reedy/Curtis Battle	4/13/2011	Garmin 60CSX	NAD83	12	polygon	-116.864166, 32.78971	4	100% flowering	Bahiopsis laciniata-Artemisia californica-Eriogonum fasciculatum	W-facing slope
Tetracoccus dioicus	SC	TEDI_30	Patricia Gordon-Reedy/Curtis Battle	4/13/2011	Garmin 60CSX	NAD83	12	polygon	-116.864059, 32.789662	10	100% flowering	Bahiopsis laciniata-Artemisia californica-Eriogonum fasciculatum	W-facing slope
Tetracoccus dioicus	SC	TEDI_31	Patricia Gordon-Reedy/Curtis Battle	4/13/2011	Garmin 60CSX	NAD83	12	point	-116.864039, 32.789871	1	100% flowering	Bahiopsis laciniata-Artemisia californica-Eriogonum fasciculatum	W-facing slope
Tetracoccus dioicus	SC	TEDI_32	Patricia Gordon-Reedy/Curtis Battle	4/13/2011	Garmin 60CSX	NAD83	12	point	-116.864079, 32.78991	1	100% flowering	Bahiopsis laciniata-Artemisia californica-Eriogonum fasciculatum	W-facing slope
Tetracoccus dioicus	SC	TEDI_33	Patricia Gordon-Reedy/Curtis Battle	4/13/2011	Garmin 60CSX	NAD83	12	point	-116.864105, 32.789904	2	100% flowering	Bahiopsis laciniata-Artemisia californica-Eriogonum fasciculatum	W-facing slope
Tetracoccus dioicus	SC	TEDI_34	Patricia Gordon-Reedy/Curtis Battle	4/13/2011	Garmin 60CSX	NAD83	12	point	-116.864062, 32.789996	1	100% flowering	Adenostoma fasciculatum-Xylococcus bicolor-Ceanothus tomentosus	W-facing slope; burned chaparral
Tetracoccus dioicus	SC	TEDI_35	Patricia Gordon-Reedy/Curtis Battle	4/13/2011	Garmin 60CSX	NAD83	12	point	-116.863861, 32.790032	1	100% flowering	Adenostoma fasciculatum-Xylococcus bicolor-Ceanothus tomentosus	W-facing slope; burned chaparral

Appendix D
Sensitive Plant Attribute Data - South Crest 2011-2012

Species	Site	Occurrence No.	Observor	Date	GPS Unit	Datum	GPS Error	Point/Polygon	GPS location (center)	Population Size	Phenology	Vegetation Association	Notes
Tetracoccus dioicus	SC	TEDI_36	Patricia Gordon-Reedy/Curtis Battle	4/13/2011	Garmin 60CSX	NAD83	12	polygon	-116.863899, 32.790084	5	100% flowering	Adenostoma fasciculatum-Xylococcus bicolor-Ceanothus tomentosus	W-facing slope; burned chaparral
Tetracoccus dioicus	SC	TEDI_37	Patricia Gordon-Reedy/Curtis Battle	4/13/2011	Garmin 60CSX	NAD83	12	polygon	-116.863666, 32.789679	7	100% flowering	Bahiopsis laciniata-Artemisia californica-Eriogonum fasciculatum	W-facing slope
Tetracoccus dioicus	SC	TEDI_38	Patricia Gordon-Reedy/Curtis Battle	4/13/2011	Garmin 60CSX	NAD83	12	polygon	-116.86377, 32.789451	35	100% flowering	Bahiopsis laciniata-Artemisia californica-Eriogonum fasciculatum	W-facing slope
Tetracoccus dioicus	SC	TEDI_39	Patricia Gordon-Reedy/Curtis Battle	4/13/2011	Garmin 60CSX	NAD83	12	point	-116.863972, 32.789508	1	100% flowering	Bahiopsis laciniata-Artemisia californica-Eriogonum fasciculatum	W-facing slope
Tetracoccus dioicus	SC	TEDI_40	Patricia Gordon-Reedy/Curtis Battle	4/13/2011	Garmin 60CSX	NAD83	12	polygon	-116.864033, 32.789469	10	100% flowering	Bahiopsis laciniata-Artemisia californica-Eriogonum fasciculatum	W-facing slope
Tetracoccus dioicus	SC	TEDI_41	Patricia Gordon-Reedy/Curtis Battle	4/14/2011	Garmin 60CSX	NAD83	15	point	-116.862791, 32.782883	1	100% flowering	Bahiopsis laciniata-Artemisia californica-Eriogonum fasciculatum	SW-facing slope
Tetracoccus dioicus	SC	TEDI_42	Patricia Gordon-Reedy/Curtis Battle	4/14/2011	Garmin 60CSX	NAD83	15	point	-116.862859, 32.782937	1	100% flowering	Bahiopsis laciniata-Artemisia californica-Eriogonum fasciculatum	SW-facing slope
Tetracoccus dioicus	SC	TEDI_43	Patricia Gordon-Reedy/Curtis Battle	4/14/2011	Garmin 60CSX	NAD83	15	point	-116.862775, 32.782936	1	100% flowering	Bahiopsis laciniata-Artemisia californica-Eriogonum fasciculatum	SW-facing slope
Tetracoccus dioicus	SC	TEDI_44	Patricia Gordon-Reedy/Curtis Battle	4/14/2011	Garmin 60CSX	NAD83	15	point	-116.862805, 32.782976	1	100% flowering	Bahiopsis laciniata-Artemisia californica-Eriogonum fasciculatum	SW-facing slope
Tetracoccus dioicus	SC	TEDI_45	Patricia Gordon-Reedy/Curtis Battle	4/14/2011	Garmin 60CSX	NAD83	15	point	-116.862803, 32.783001	1	100% flowering	Bahiopsis laciniata-Artemisia californica-Eriogonum fasciculatum	SW-facing slope
Tetracoccus dioicus	SC	TEDI_46	Patricia Gordon-Reedy/Curtis Battle	4/14/2011	Garmin 60CSX	NAD83	15	polygon	-116.862858, 32.7831	5	100% flowering	Bahiopsis laciniata-Artemisia californica-Eriogonum fasciculatum	SW-facing slope
Tetracoccus dioicus	SC	TEDI_47	Patricia Gordon-Reedy/Curtis Battle	4/14/2011	Garmin 60CSX	NAD83	11	point	-116.862804, 32.783136	1	100% flowering	Bahiopsis laciniata-Artemisia californica-Eriogonum fasciculatum	SW-facing slope
Tetracoccus dioicus	SC	TEDI_48	Patricia Gordon-Reedy/Curtis Battle	4/14/2011	Garmin 60CSX	NAD83	11	point	-116.862821, 32.783159	1	100% flowering	Bahiopsis laciniata-Artemisia californica-Eriogonum fasciculatum	SW-facing slope
Tetracoccus dioicus	SC	TEDI_49	Patricia Gordon-Reedy/Curtis Battle	4/14/2011	Garmin 60CSX	NAD83	11	point	-116.862741, 32.783063	1	100% flowering	Avena (barbata) fatua) Semi-Natural Stand	S-facing slope
Tetracoccus dioicus	SC	TEDI_50	Patricia Gordon-Reedy/Curtis Battle	4/14/2011	Garmin 60CSX	NAD83	11	point	116.862764, 32.783102	1	100% flowering	Bahiopsis laciniata-Artemisia californica-Eriogonum fasciculatum	SW-facing slope
Tetracoccus dioicus	SC	TEDI_51	Patricia Gordon-Reedy/Curtis Battle	4/14/2011	Garmin 60CSX	NAD83	11	point	-116.862756, 32.783113	1	100% flowering	Bahiopsis laciniata-Artemisia californica-Eriogonum fasciculatum	SW-facing slope
Tetracoccus dioicus	SC	TEDI_52	Patricia Gordon-Reedy/Curtis Battle	4/14/2011	Garmin 60CSX	NAD83	11	point	-116.862631, 32.78314	1	100% flowering	Bahiopsis laciniata-Artemisia californica-Eriogonum fasciculatum	SW-facing slope
Tetracoccus dioicus	SC	TEDI_53	Patricia Gordon-Reedy/Curtis Battle	4/14/2011	Garmin 60CSX	NAD83	11	point	-116.862692, 32.783233	1	100% flowering	Bahiopsis laciniata-Artemisia californica-Eriogonum fasciculatum	SW-facing slope
Tetracoccus dioicus	SC	TEDI_54	Patricia Gordon-Reedy/Curtis Battle	4/14/2011	Garmin 60CSX	NAD83	11	point	-116.86264, 32.783296	1	100% flowering	Bahiopsis laciniata-Artemisia californica-Eriogonum fasciculatum	SW-facing slope
Tetracoccus dioicus	SC	TEDI_55	Patricia Gordon-Reedy/Curtis Battle	4/14/2011	Garmin 60CSX	NAD83	11	polygon	-116.862548, 32.783362	13	100% flowering	Bahiopsis laciniata-Artemisia californica-Eriogonum fasciculatum	SW-facing slope
Tetracoccus dioicus	SC	TEDI_56	Patricia Gordon-Reedy/Curtis Battle	4/14/2011	Garmin 60CSX	NAD83	11	polygon	-116.862493, 32.783544	5	100% flowering	Malosma laurina-Lotus scoparius	SW-facing slope
Tetracoccus dioicus	SC	TEDI_57	Patricia Gordon-Reedy/Curtis Battle	4/14/2011	Garmin 60CSX	NAD83	11	polygon	-116.862314, 32.783581	12	100% flowering	Bahiopsis laciniata-Artemisia californica-Eriogonum fasciculatum	S-facing slope

Appendix D
Sensitive Plant Attribute Data - South Crest 2011-2012

Species	Site	Occurrence No.	Observor	Date	GPS Unit	Datum	GPS Error	Point/Polygon	GPS location (center)	Population Size	Phenology	Vegetation Association	Notes
Tetracoccus dioicus	SC	TEDI_58	Patricia Gordon-Reedy/Curtis Battle	4/14/2011	Garmin 60CSX	NAD83	11	point	-116.862365, 32.783665	1	100% flowering	Bahiopsis laciniata-Artemisia californica-Eriogonum fasciculatum	S-facing slope
Tetracoccus dioicus	SC	TEDI_59	Patricia Gordon-Reedy/Curtis Battle	4/14/2011	Garmin 60CSX	NAD83	11	polygon	-116.862095, 32.783636	5	100% flowering	Bahiopsis laciniata-Artemisia californica-Eriogonum fasciculatum	S-facing slope
Tetracoccus dioicus	SC	TEDI_60	Patricia Gordon-Reedy/Curtis Battle	4/14/2011	Garmin 60CSX	NAD83	11	polygon	-116.861994, 32.783564	3	100% flowering	Bahiopsis laciniata-Artemisia californica-Eriogonum fasciculatum	S-facing slope
Tetracoccus dioicus	SC	TEDI_61	Patricia Gordon-Reedy/Curtis Battle	4/14/2011	Garmin 60CSX	NAD83	11	polygon	-116.861913, 32.783689	6	100% flowering	Bahiopsis laciniata-Artemisia californica-Eriogonum fasciculatum	S-facing slope
Tetracoccus dioicus	SC	TEDI_62	Patricia Gordon-Reedy/Curtis Battle	4/14/2011	Garmin 60CSX	NAD83	11	polygon	-116.862107, 32.78378	2	100% flowering	Bahiopsis laciniata-Artemisia californica-Eriogonum fasciculatum	S-facing slope
Tetracoccus dioicus	SC	TEDI_63	Patricia Gordon-Reedy/Curtis Battle	4/14/2011	Garmin 60CSX	NAD83	11	polygon	-116.862224, 32.783883	2	100% flowering	Bahiopsis laciniata-Artemisia californica-Eriogonum fasciculatum	S-facing slope
Tetracoccus dioicus	SC	TEDI_64	Patricia Gordon-Reedy/Curtis Battle	4/14/2011	Garmin 60CSX	NAD83	11	point	-116.862192, 32.783934	1	100% flowering	Bahiopsis laciniata-Artemisia californica-Eriogonum fasciculatum	S-facing slope
Tetracoccus dioicus	SC	TEDI_65	Patricia Gordon-Reedy/Curtis Battle	4/14/2011	Garmin 60CSX	NAD83	11	polygon	-116.86228, 32.784032	10	100% flowering	Bahiopsis laciniata-Artemisia californica-Eriogonum fasciculatum	S-facing slope
Tetracoccus dioicus	SC	TEDI_66	Patricia Gordon-Reedy/Curtis Battle	4/14/2011	Garmin 60CSX	NAD83	11	polygon	-116.862376, 32.784291	36	100% flowering	Bahiopsis laciniata-Artemisia californica-Eriogonum fasciculatum	S-facing slope
Tetracoccus dioicus	SC	TEDI_67	Patricia Gordon-Reedy/Curtis Battle	4/14/2011	Garmin 60CSX	NAD83	11	polygon	-116.862322, 32.784622	32	100% flowering	Bahiopsis laciniata-Artemisia californica-Eriogonum fasciculatum	S-facing slope
Tetracoccus dioicus	SC	TEDI_68	Patricia Gordon-Reedy/Curtis Battle	4/14/2011	Garmin 60CSX	NAD83	11	polygon	-116.861957, 32.785096	12	100% flowering	Bahiopsis laciniata-Artemisia californica-Eriogonum fasciculatum	S-facing slope
Tetracoccus dioicus	SC	TEDI_69	Patricia Gordon-Reedy/Curtis Battle	4/14/2011	Garmin 60CSX	NAD83	11	polygon	-116.862131, 32.785264	11	100% flowering	Bahiopsis laciniata-Artemisia californica-Eriogonum fasciculatum	S-facing slope
Tetracoccus dioicus	SC	TEDI_70	Patricia Gordon-Reedy/Curtis Battle	4/14/2011	Garmin 60CSX	NAD83	11	polygon	-116.861815, 32.78596	12	100% flowering	Bahiopsis laciniata-Artemisia californica-Eriogonum fasciculatum	S-facing
Tetracoccus dioicus	SC	TEDI_71	Patricia Gordon-Reedy/Curtis Battle	4/14/2011	Garmin 60CSX	NAD83	11	point	-116.859809, 32.781882	1	100% flowering	Malosma laurina-Lotus scoparius	S-facing
Tetracoccus dioicus	SC	TEDI_72	Patricia Gordon-Reedy/Curtis Battle	5/26/2011	Garmin 60CSX	NAD83	12	polygon	-116.87234, 32.78887	5	Fruiting	Bahiopsis laciniata-Artemisia californica-Eriogonum fasciculatum	SW-facing slope
Tetracoccus dioicus	SC	TEDI_73	Patricia Gordon-Reedy/Curtis Battle	5/26/2011	Garmin 60CSX	NAD83	11	polygon	-116.872079, 32.788919	3	Fruiting	Bahiopsis laciniata-Artemisia californica-Eriogonum fasciculatum	SW-facing slope
Tetracoccus dioicus	SC	TEDI_74	Patricia Gordon-Reedy/Curtis Battle	5/26/2011	Garmin 60CSX	NAD83	12	point	-116.872013, 32.78904	1	Fruiting	Bahiopsis laciniata-Artemisia californica-Eriogonum fasciculatum	SW-facing slope
Tetracoccus dioicus	SC	TEDI_75	Patricia Gordon-Reedy/Curtis Battle	5/26/2011	Garmin 60CSX	NAD83	12	point	-116.871984, 32.789082	1	Fruiting	Bahiopsis laciniata-Artemisia californica-Eriogonum fasciculatum	SW-facing slope
Tetracoccus dioicus	SC	TEDI_76	Patricia Gordon-Reedy/Curtis Battle	5/26/2011	Garmin 60CSX	NAD83	12	point	-116.872081, 32.789083	1	Fruiting	Bahiopsis laciniata-Artemisia californica-Eriogonum fasciculatum	SW-facing slope
Tetracoccus dioicus	SC	TEDI_77	Patricia Gordon-Reedy/Curtis Battle	5/26/2011	Garmin 60CSX	NAD83	12	polygon	-116.872282, 32.789197	3	Fruiting	Bahiopsis laciniata-Artemisia californica-Eriogonum fasciculatum	SW-facing slope

Metadata
Species: Scientific Name
Site: SC = South Crest (San Diego County, CA)
Occurrence Number: 4-letter code plus site-specific occurrence number
Observor(s): PGR = Patricia Gordon-Reedy; CB = Curtis Battle
Date: Date of field work/data collection
GPS Unit: Make and model
Datum: NAD83
GPS Error: Recorded in feet
Point/Polygon: Indicates whether spatial data were collected as a point or polygon
GPS Location: Coordinates are reported in decimal degres; UTM Zone 11N
Population Size Estimate: Estimate of the number of NOIN basal clusters (ramets) per point or polygon
Phenology: Estimated percent (%) of population that is in a vegetative, flowering, or fruiting stage (dominant stage listed)
Vegetation Association: Associations follow the Vegetation Classification Manual for western San Diego County (Sproul et al. 2011) or the revised Holland classification (Oberbauer 1996).
Notes: Additional notes on occurrence

Appendix E
California Natural Diversity Data Forms

Mail to:
California Natural Diversity Database
Department of Fish and Game
1807 13th Street, Suite 202
Sacramento, CA 95811
Fax: (916) 324-0475 email: CNDDB@dfg.ca.gov

Date of Field Work (mm/dd/yyyy): 05/08/2012

For Office Use Only
Source Code _____ Quad Code _____
Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

Reset

California Native Species Field Survey Form

Send Form

Scientific Name: *Acanthomintha ilicifolia*

Common Name: San Diego thornmint

Species Found? ☑ Yes ☐ No _____ If not, why?

Total No. Individuals ~950 Subsequent Visit? ☐ yes ☑ no

Is this an existing NDDB occurrence? _____ Yes, Occ. # ☑ no ☐ unk.

Collection? If yes: _____ Number _____ Museum / Herbarium

Reporter: Jessie Vinje

Address: 1807 Esquire Glen, Escondido, CA 92029

E-mail Address: jvinje74@gmail.com

Phone: (760) 445-3684

Plant Information

Phenology: _____% vegetative 90 % flowering 10 % fruiting

Animal Information

_____ # adults _____ # juveniles _____ # larvae _____ # egg masses _____ # unknown

☐ wintering ☐ breeding ☐ nesting ☐ rookery ☐ burrow site ☐ other

Location Description (please attach map AND/OR fill out your choice of coordinates, below)

County: San Diego Landowner / Mgr.: Endangered Habitats Conservancy

Quad Name: _____ Elevation: 1,466 ft.

T____ R____ Sec ____, ____ ¼ of ____ ¼, Meridian: H☐ M☐ S☐ Source of Coordinates (GPS, topo. map & type): GPS

T____ R____ Sec ____, ____ ¼ of ____ ¼, Meridian: H☐ M☐ S☐ GPS Make & Model Garmin GPS Map 60CSX

DATUM: NAD27 ☐ NAD83 ☐ WGS84 ☐ Horizontal Accuracy 11 feet meters/feet

Coordinate System: UTM Zone 10 ☐ UTM Zone 11 ☐ *OR* Geographic (Latitude & Longitude) ☑

Coordinates: N 32 degrees, 47'20.7. W 116 degrees, 51'55.9.

Habitat Description (plants & animals) *plant communities, dominants, associates, substrates/soils, aspects/slope:*
Animal Behavior *(Describe observed behavior, such as territoriality, foraging, singing, calling, copulating, perching, roosting, etc., especially for avifauna):*

Open area in southern mixed chaparral. Occupied area is composed of 50-75% bare ground and rock. Soils are mapped as gabbro. Occurrence is on a steep slope with a southwest facing aspect. Dominant species: Centaurea melitensis. Associates: Sonchus asper, Hirschfeldia incana, Gutierrezia spp., Erodium cicutarium, Acmispon glaber, Sonchus oleraceus, Deinandra fasciculata, Bromus madritensis, Eriophyllum confertifolium, Apiastrum angustifolium, Gastridium ventricosium, Harpagonella palmeri, Nolina interatta, Hedypnois cretica, Brachypodium distachyon, and Festuca myuros. Species in southern mixed chaparral: Dominant: Adenostoma fasciculata. Associates: Rhamnus crocea, Hesperoyucca whipplei, Malosma laurina, Xylococcus bicolor, and Ceanothus tomentosus.

Please fill out separate form for other rare taxa seen at this site.

Site Information Overall site/occurrence quality/viability (site + population): ☐ Excellent ☑ Good ☐ Fair ☐ Poor

Immediate AND surrounding land use: Open space with a dirt road approximately 30 meters to the east of the occurrence.

Visible disturbances:

Threats: Non-native grasses and forbs. Possible threat is browsing by deer.

Comments: Hand weeded the Brachypodium distachyon out of the occurrence.

Determination: *(check one or more, and fill in blanks)*
- ☐ Keyed (cite reference): _____
- ☐ Compared with specimen housed at: _____
- ☐ Compared with photo / drawing in: _____
- ☐ By another person (name): _____
- ☐ Other: Familiar with the species.

Photographs: *(check one or more)*

	Slide	Print	Digital
Plant / animal	☐	☐	☑
Habitat	☐	☐	☐
Diagnostic feature	☐	☐	☐

May we obtain duplicates at our expense? yes ☑ no ☐

Mail to:
California Natural Diversity Database
Department of Fish and Game
1807 13th Street, Suite 202
Sacramento, CA 95811
Fax: (916) 324-0475 email: CNDDB@dfg.ca.gov

For Office Use Only
Source Code _____ Quad Code _____
Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

Date of Field Work (mm/dd/yyyy): 05/08/2012

Reset

California Native Species Field Survey Form

Send Form

Scientific Name: *Acanthomintha ilicifolia*

Common Name: San Diego thornmint

Species Found? ☑ Yes ☐ No _____ If not, why?

Total No. Individuals 185 Subsequent Visit? ☐ yes ☑ no

Is this an existing NDDB occurrence? _____ Yes, Occ. # ☑ no ☐ unk.

Collection? If yes: _____ Number _____ Museum / Herbarium

Reporter: Jessie Vinje

Address: 1807 Esquire Glen, Escondido, CA 92029

E-mail Address: jvinje74@gmail.com

Phone: (760) 445-3684

Plant Information

Phenology: _____% vegetative 50 % flowering 50 % fruiting

Animal Information

_____ # adults _____ # juveniles _____ # larvae _____ # egg masses _____ # unknown

☐ wintering ☐ breeding ☐ nesting ☐ rookery ☐ burrow site ☐ other

Location Description (please attach map AND/OR fill out your choice of coordinates, below)

County: San Diego Landowner / Mgr.: Endangered Habitats Conservancy

Quad Name: _____ Elevation: 1,420 ft.

T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐ Source of Coordinates (GPS, topo. map & type): GPS

T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐ GPS Make & Model Garmin GPS Map 60CSX

DATUM: NAD27 ☐ NAD83 ☐ WGS84 ☐ Horizontal Accuracy 9 feet meters/feet

Coordinate System: UTM Zone 10 ☐ UTM Zone 11 ☐ *OR* Geographic (Latitude & Longitude) ☑

Coordinates: N 32 degrees, 47' 273. W 116 degrees, 51' 972.

Habitat Description (plants & animals) *plant communities, dominants, associates, substrates/soils, aspects/slope:*

Animal Behavior *(Describe observed behavior, such as territoriality, foraging, singing, calling, copulating, perching, roosting, etc., especially for avifauna):*

Open area, forbland and/or coastal sage scrub with high native grass cover. Open area is located in southern mixed chaparral. Slighly slopeing with a northwest facing aspect. Dominant species: Acmispon glaber. Associates: Hirschfeldia incana, Gutierrezia spp., Deinandra fasciculata, Bromus madritensis, Centaurea melitenis, Sisyrinchium bellum, Stipa lepida, Hesperoyucca whipplei, Calochortus splendens, Plantago erecta, and Plantago spp.. Species in southern mixed chaparral: Dominant: Adenostoma fasciculata, Hesperoyucca whipplei, Rhamnus crocea, Stipa lepida, and Centaurea melitensis.

Please fill out separate form for other rare taxa seen at this site.

Site Information Overall site/occurrence quality/viability (site + population): ☐ Excellent ☑ Good ☐ Fair ☐ Poor

Immediate AND surrounding land use: Open space with a dirt road approximately 20 meters to the south of the occurrence.

Visible disturbances:

Threats: Non-native grasses and forbs. Possible threat is browsing by deer.

Comments:

Determination: *(check one or more, and fill in blanks)*

- ☐ Keyed (cite reference): _____
- ☐ Compared with specimen housed at: _____
- ☐ Compared with photo / drawing in: _____
- ☐ By another person (name): _____
- ☐ Other: Familiar with the species.

Photographs: *(check one or more)*

	Slide	Print	Digital
Plant / animal	☐	☐	☑
Habitat	☐	☐	☐
Diagnostic feature	☐	☐	☐

May we obtain duplicates at our expense? yes ☑ no ☐

DFG/BDB/1747 Rev. 6/16/09

Department of Fish and Game
1807 13th Street, Suite 202
Sacramento, CA 95811
Fax: (916) 324-0475 email: CNDDB@dfg.ca.gov

Source Code _____ Quad Code _____
Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

Date of Field Work (mm/dd/yyyy): 5/23/12

Reset

California Native Species Field Survey Form

Send Form

Scientific Name: *Dudleya variegata*

Common Name: Variegated dudleya

Species Found? ☑ Yes ☐ No _____ If not, why?

Total No. Individuals 11 Subsequent Visit? ☐ yes ☑ no

Is this an existing NDDB occurrence? _____ Yes, Occ. # ☑ no ☐ unk.

Collection? If yes: _____ Number _____ Museum / Herbarium

Reporter: Jessie Vinje
Address: 1807 Esquire Glen
Escondido, CA 92029
E-mail Address: jvinje74@gmail.com
Phone: 760-445-3684

Plant Information

Phenology: _____% vegetative 100% flowering _____% fruiting

Animal Information

_____ # adults _____ # juveniles _____ # larvae _____ # egg masses _____ # unknown

☐ wintering ☐ breeding ☐ nesting ☐ rookery ☐ burrow site ☐ other

Location Description (please attach map AND/OR fill out your choice of coordinates, below)

County: San Diego Landowner / Mgr.: Endangered Habitats Conservancy

Quad Name: _____ Elevation: 1,128 feet

T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐

T____ R____ Sec ____, ____ ¼ of _____¼, Meridian: H☐ M☐ S☐

Source of Coordinates (GPS, topo. map & type): GPS

GPS Make & Model Garmin GPS Map 60CSX

DATUM: NAD27 ☐ NAD83 ☐ WGS84 ☐

Horizontal Accuracy 11 feet meters/feet

Coordinate System: UTM Zone 10 ☐ UTM Zone 11 ☐ *OR* Geographic (Latitude & Longitude) ☑

Coordinates: N 32 degrees, 47'344. W 116 degrees 52'280.

Habitat Description (plants & animals) *plant communities, dominants, associates, substrates/soils, aspects/slope:*

Animal Behavior *(Describe observed behavior, such as territoriality, foraging, singing, calling, copulating, perching, roosting, etc., especially for avifauna):*

Non-native grassland. Plants are growoing in relatively open areas in the grassland. Some plants are growing adjacent to a rock. The area is flat to slightly sloping. Western aspect. Dominant species: Brachypodium distachyon. Associate species: Stipa pulchra, Sisyrinchium bellum, Avena spp., Sonchus oleraceus, Calochortus splendens, Acmispon glaber, Artemisia californica, Hedypnois cretica, Chlorogalum parviflorum, and Lessingia filaginifolia.

Please fill out separate form for other rare taxa seen at this site.

Site Information Overall site/occurrence quality/viability (site + population): ☐ Excellent ☐ Good ☐ Fair ☑ Poor

Immediate AND surrounding land use: Open space with several dirt roads in the vicinity.

Visible disturbances:

Threats: Non-native grasses and forbs.

Comments: Little to no bare ground for this species. All areas almost completely covered with non-native grasses.

Determination: *(check one or more, and fill in blanks)*

- ☐ Keyed (cite reference): _____
- ☐ Compared with specimen housed at: _____
- ☐ Compared with photo / drawing in: _____
- ☐ By another person (name): _____
- ☐ Other: _____

Photographs: *(check one or more)*

	Slide	Print	Digital
Plant / animal	☐	☐	☑
Habitat	☐	☐	☐
Diagnostic feature	☐	☐	☐

May we obtain duplicates at our expense? yes ☐ no ☐

Appendix F

Nolina interrata

Attribute Data

Appendix F
***Nolina interrata* Attribute Data - South Crest 2011**

Species	Site	Occurrence Number	Observor(s)	Date	GPS Unit	Datum	GPS Error	Point/Polygon	GPS Location	Population Size Estimate	Phenology	Vegetation Association	Fire History (date, last fire)	Fire History (name, last fire)	Soil Type	Notes	BRDIS	Photo
Nolina interrata	SC	NOIN_01	PGR/CB	4/6/2011	Garmin 60CSX	NAD83	16	point	-116.866561, 32.788089	1 cluster*	100% vegetative	Quercus (berberidifolia) x acutidens)-Adenostoma fasciculatum	2003	Cedar	Las Posas	Clump = several individuals from base; W-facing slope, burned chaparral	Yes	Yes
Nolina interrata	SC	NOIN_02	PGR/CB	4/6/2011	Garmin 60CSX	NAD83	13	point	-116.866229, 32.7882	2	100% vegetative	Adenostoma fasciculatum-Lotus scoparius	2003	Cedar	Las Posas	W-facing slope; burned chaparral	Yes	Yes
Nolina interrata	SC	NOIN_03	PGR/CB	4/6/2011	Garmin 60CSX	NAD83	13	point	-116.866186, 32.788233	2	100% vegetative	Adenostoma fasciculatum-Lotus scoparius	2003	Cedar	Las Posas	W-facing slope; burned chaparral	Yes	Yes
Nolina interrata	SC	NOIN_04	PGR/CB	4/6/2011	Garmin 60CSX	NAD83	13	point	-116.866183, 32.788246	4	100% vegetative	Adenostoma fasciculatum-Lotus scoparius	2003	Cedar	Las Posas	W-facing slope; burned chaparral	Yes	Yes
Nolina interrata	SC	NOIN_05	PGR/CB	4/6/2011	Garmin 60CSX	NAD83	16	point	-116.866229, 32.788265	4	100% vegetative	Adenostoma fasciculatum-Lotus scoparius	2003	Cedar	Las Posas	W-facing slope; burned chaparral	Yes	Yes
Nolina interrata	SC	NOIN_06	PGR/CB	4/6/2011	Garmin 60CSX	NAD83	16	point	-116.866263, 32.788241	3	100% vegetative	Adenostoma fasciculatum-Lotus scoparius	2003	Cedar	Las Posas	W-facing slope; burned chaparral	Yes	Yes
Nolina interrata	SC	NOIN_07	PGR/CB	4/6/2011	Garmin 60CSX	NAD83	16	point	-116.866128, 32.788491	2	100% vegetative	Adenostoma fasciculatum-Lotus scoparius	2003	Cedar	Las Posas	W-facing slope; burned chaparral	Yes	Yes
Nolina interrata	SC	NOIN_08	PGR/CB	4/6/2011	Garmin 60CSX	NAD83	11	point	-116.866104, 32.788524	2	100% vegetative	Adenostoma fasciculatum-Lotus scoparius	2003	Cedar	Las Posas	W-facing slope; burned chaparral	Yes	Yes
Nolina interrata	SC	NOIN_09	PGR/CB	4/6/2011	Garmin 60CSX	NAD83	11	point	-116.865938, 32.788517	4	100% vegetative	Adenostoma fasciculatum-Lotus scoparius	2003	Cedar	Las Posas	W-facing slope; burned chaparral	No	No
Nolina interrata	SC	NOIN_10	PGR/CB	4/6/2011	Garmin 60CSX	NAD83	11	point	-116.866057, 32.788603	3	100% vegetative	Adenostoma fasciculatum-Xylococcus bicolor	2003	Cedar	Las Posas	W-facing slope; burned chaparral	No	Yes
Nolina interrata	SC	NOIN_11	PGR/CB	4/6/2011	Garmin 60CSX	NAD83	11	point	-116.866104, 32.788604	4	100% vegetative	Adenostoma fasciculatum-Xylococcus bicolor	2003	Cedar	Las Posas	W-facing slope; burned chaparral	Yes	Yes
Nolina interrata	SC	NOIN_12	PGR/CB	4/6/2011	Garmin 60CSX	NAD83	11	polygon	-116.866138, 32.788758	15	100% vegetative	Adenostoma fasciculatum-Xylococcus bicolor	2003	Cedar	Las Posas	W-facing slope; burned chaparral	No	No
Nolina interrata	SC	NOIN_13	PGR/CB	4/6/2011	Garmin 60CSX	NAD83	15	polygon	-116.866339, 32.788768	15	100% vegetative	Adenostoma fasciculatum-Xylococcus bicolor	2003	Cedar	Las Posas	W-facing slope; burned chaparral	Yes	Yes
Nolina interrata	SC	NOIN_14	PGR/CB	4/6/2011	Garmin 60CSX	NAD83	15	point	-116.866309, 32.78884	5	100% vegetative	Adenostoma fasciculatum-Xylococcus bicolor	2003	Cedar	Las Posas	W-facing slope; burned chaparral	Yes	Yes
Nolina interrata	SC	NOIN_15	PGR/CB	4/6/2011	Garmin 60CSX	NAD83	15	polygon	-116.865991, 32.789238	150	100% vegetative	Malosma laurina-Lotus scoparius	2003	Cedar	Las Posas	SW-facing slope; burned chaparral	Yes	Yes
Nolina interrata	SC	NOIN_16	PGR/CB	4/6/2011	Garmin 60CSX	NAD83	15	point	-116.865881, 32.78778	4	100% vegetative	Artemisia californica-Eriogonum fasciculatum-Malosma laurina	2003	Cedar	Las Posas	SW-facing slope; burned chaparral	Yes	Yes
Nolina interrata	SC	NOIN_17	PGR/CB	4/6/2011	Garmin 60CSX	NAD83	15	polygon	-116.865914, 32.787668	25	100% vegetative	Artemisia californica-Eriogonum fasciculatum-Malosma laurina	2003	Cedar	Las Posas	S-facing slope; disturbed understory	Yes	Yes
Nolina interrata	SC	NOIN_18	PGR/CB	4/6/2011	Garmin 60CSX	NAD83	15	polygon	-116.865976, 32.787523	3	Flowering	Artemisia californica-Eriogonum fasciculatum-Malosma laurina	2003	Cedar	Las Posas	S-facing slope; disturbed understory	Yes	Yes
Nolina interrata	SC	NOIN_19	PGR/CB	4/6/2011	Garmin 60CSX	NAD83	15	point	-116.865934, 32.787479	1	100% vegetative	Artemisia californica-Eriogonum fasciculatum-Malosma laurina	2003	Cedar	Las Posas	S-facing slope; disturbed understory	Yes	Yes
Nolina interrata	SC	NOIN_20	PGR/CB	4/6/2011	Garmin 60CSX	NAD83	15	polygon	-116.865563, 32.788095	45	100% vegetative	Bahiopsis laciniata-Artemisia californica-Eriogonum fasciculatum	2003	Cedar	Las Posas	S-facing slope; burned; disturbed understory; Ehrharta longiflora	Yes	Yes
Nolina interrata	SC	NOIN_21	PGR/CB	4/6/2011	Garmin 60CSX	NAD83	15	polygon	-116.865311, 32.788358	30	100% vegetative	Malosma laurina-Lotus scoparius	2003	Cedar	Las Posas	SW-facing slope; burned; disturbed understory; Brachypodium distachyon	No	No
Nolina interrata	SC	NOIN_22	PGR/CB	4/13/2011	Garmin 60CSX	NAD83	12	polygon	-116.866212, 32.789986	27	100% vegetative	Salvia apiana-Artemisia californica	2003	Cedar	Las Posas	SW-facing slope; burned chaparral	No	No
Nolina interrata	SC	NOIN_23	PGR/CB	4/13/2011	Garmin 60CSX	NAD83	13	polygon	-116.866064, 32.789896	5	100% vegetative	Salvia apiana-Artemisia californica	2003	Cedar	Las Posas	SW-facing slope; burned chaparral + Brachypodium distachyon	No	No
Nolina interrata	SC	NOIN_24	PGR/CB	4/13/2011	Garmin 60CSX	NAD83	13	point	-116.866079, 32.789905	3	100% vegetative	Salvia apiana-Artemisia californica	2003	Cedar	Las Posas	SW-facing slope; burned chaparral + Brachypodium distachyon	Yes	Yes
Nolina interrata	SC	NOIN_25	PGR/CB	4/13/2011	Garmin 60CSX	NAD83	16	point	-116.866051, 32.789917	2	100% vegetative	Salvia apiana-Artemisia californica	2003	Cedar	Las Posas	SW-facing slope; burned chaparral + Brachypodium distachyon	Yes	Yes
Nolina interrata	SC	NOIN_26	PGR/CB	4/13/2011	Garmin 60CSX	NAD83	14	point	-116.866046, 32.789908	1	100% vegetative	Salvia apiana-Artemisia californica	2003	Cedar	Las Posas	SW-facing slope; burned chaparral + Brachypodium distachyon	No	No

Appendix F
***Nolina interrata* Attribute Data - South Crest 2011**

Species	Site	Occurrence Number	Observor(s)	Date	GPS Unit	Datum	GPS Error	Point/Polygon	GPS Location	Population Size Estimate	Phenology	Vegetation Association	Fire History (date, last fire)	Fire History (name, last fire)	Soil Type	Notes	BRDIS	Photo
Nolina interrata	SC	NOIN_27	PGR/CB	4/13/2011	Garmin 60CSX	NAD83	12	polygon	-116.865556, 32.789818	11	100% vegetative	Malosma laurina-Lotus scoparius	2003	Cedar	Las Posas	W-facing slope; burned chaparral	No	No
Nolina interrata	SC	NOIN_28	PGR/CB	4/13/2011	Garmin 60CSX	NAD83	10	point	-116.86438, 32.789525	1	100% vegetative	Bahiopsis laciniata-Artemisia californica-Eriogonum fasciculatum	2003	Cedar	Las Posas	W-facing slope	Yes	Yes
Nolina interrata	SC	NOIN_29	PGR/CB	4/13/2011	Garmin 60CSX	NAD83	10	polygon	-116.864361, 32.789499	3	100% vegetative	Bahiopsis laciniata-Artemisia californica-Eriogonum fasciculatum	2003	Cedar	Las Posas	W-facing slope	No	No
Nolina interrata	SC	NOIN_30	PGR/CB	4/14/2011	Garmin 60CSX	NAD83	15	polygon	-116.862801, 32.782517	2	100% vegetative	Avena (barbata) fatua) Semi-Natural Stand	2003	Dehesa	Las Posas	S-facing slope	No	No
Nolina interrata	SC	NOIN_31	PGR/CB	4/14/2011	Garmin 60CSX	NAD83	10	polygon	-116.862791, 32.78294	2	100% vegetative	Bahiopsis laciniata-Artemisia californica-Eriogonum fasciculatum	2003	Dehesa	Las Posas	SW-facing slope	No	No
Nolina interrata	SC	NOIN_32	PGR/CB	4/14/2011	Garmin 60CSX	NAD83	10	polygon	-116.862825, 32.783155	5	100% vegetative	Bahiopsis laciniata-Artemisia californica-Eriogonum fasciculatum	2003	Dehesa	Las Posas	SW-facing slope	No	No
Nolina interrata	SC	NOIN_33	PGR/CB	5/24/2011	Garmin 60CSX	NAD83	**13**	point	-116.869977, 32.787592	1	100% vegetative	Avena (barbata) fatua) Semi-Natural Stand	2003	Cedar	Auld	Road cut; e-facing cut; seedling	No	No
Nolina interrata	SC	NOIN_34	PGR/CB	5/24/2011	Garmin 60CSX	NAD83	13	point	-116.869968, 32.787546	1	100% vegetative	Avena (barbata) fatua) Semi-Natural Stand	2003	Cedar	Auld	Road cut; e-facing cut; seedling	No	No
Nolina interrata	SC	NOIN_35	PGR/CB	5/24/2011	Garmin 60CSX	NAD83	11	point	-116.869987, 32.787518	1	100% vegetative	Avena (barbata) fatua) Semi-Natural Stand	2003	Cedar	Auld	Road cut; e-facing cut; seedling	No	No
Nolina interrata	SC	NOIN_36	PGR/CB	5/24/2011	Garmin 60CSX	NAD83	15	point	-116.870004, 32.78751	1	100% vegetative	Avena (barbata) fatua) Semi-Natural Stand	2003	Cedar	Auld	Road cut; e-facing cut; seedling	No	No
Nolina interrata	SC	NOIN_37	PGR/CB	5/26/2011	Garmin 60CSX	NAD83	13	point	-116.869904, 32.787754	1	100% vegetative	Avena (barbata) fatua) Semi-Natural Stand	2003	Cedar	Auld	Road cut	No	No
Nolina interrata	SC	NOIN_38	PGR/CB	5/26/2011	Garmin 60CSX	NAD83	13	point	-116.869907, 32.78774	1	100% vegetative	Avena (barbata) fatua) Semi-Natural Stand	2003	Cedar	Auld	Road cut	No	No
Nolina interrata	SC	NOIN_39	PGR/CB	5/26/2011	Garmin 60CSX	NAD83	12	point	-116.869904, 32.787728	1	100% vegetative	Avena (barbata) fatua) Semi-Natural Stand	2003	Cedar	Auld	Road cut	No	No
Nolina interrata	SC	NOIN_40	PGR/CB	5/26/2011	Garmin 60CSX	NAD83	13	polygon	-116.869845, 32.787477	80	100% vegetative	Malosma laurina-Lotus scoparius	2003	Cedar	Auld	SW-facing slope	Yes	Yes
Nolina interrata	SC	NOIN_41	PGR/CB	5/26/2011	Garmin 60CSX	NAD83	13	polygon	-116.868325, 32.787147	75-100	100% vegetative	Brachypodium distachyon Semi-Natural Stand Type	2003	Cedar	Auld/Las Posas	SW-facing slope	Yes	Yes
Nolina interrata	SC	NOIN_42	PGR/CB	5/26/2011	Garmin 60CSX	NAD83	12	polygon	-116.868091, 32.78725	20	100% vegetative	Salvia apiana-Artemisia californica; Brachypodium distachyon Semi-Natural Stand Type	2003	Cedar	Las Posas	SW-facing slope	Yes	Yes
Nolina interrata	SC	NOIN_43	PGR/CB	5/26/2011	Garmin 60CSX	NAD83	11	polygon	-116.867969, 32.787404	40-50	100% vegetative	Salvia apiana-Artemisia californica	2003	Cedar	Las Posas	SW-facing slope	Yes	Yes
Nolina interrata	SC	NOIN_44	PGR/CB	5/26/2011	Garmin 60CSX	NAD83	13	polygon	-116.867764, 32.78744	35	100% vegetative	Brachypodium distachyon Semi-Natural Stand Type	2003	Cedar	Las Posas	SW-facing slope	Yes	Yes
Nolina interrata	SC	NOIN_45	PGR/CB	5/26/2011	Garmin 60CSX	NAD83	14	polygon	-116.868003, 32.787614	15	100% vegetative	Salvia apiana-Artemisia californica	2003	Cedar	Las Posas	SW-facing slope	Yes	Yes
Nolina interrata	SC	NOIN_46	PGR/CB	5/26/2011	Garmin 60CSX	NAD83	11	polygon	-116.867405, 32.787962	15	100% vegetative	Salvia apiana-Artemisia californica	2003	Cedar	Las Posas	SW-facing slope	Yes	Yes
Nolina interrata	SC	NOIN_47	PGR/CB	5/26/2011	Garmin 60CSX	NAD83	11	polygon	-116.867362, 32.788071	3	100% vegetative	Malosma laurina-Lotus scoparius	2003	Cedar	Las Posas	SW-facing slope	Yes	Yes
Nolina interrata	SC	NOIN_48	PGR/CB	5/26/2011	Garmin 60CSX	NAD83	11	point	-116.867543, 32.788064	2	100% vegetative	Salvia apiana-Artemisia californica	2003	Cedar	Las Posas	SW-facing slope	Yes	Yes
Nolina interrata	SC	NOIN_49	PGR/CB	5/26/2011	Garmin 60CSX	NAD83	12	polygon	-116.867421, 32.788328	31	100% vegetative	Salvia apiana-Artemisia californica	2003	Cedar	Las Posas	SW-facing slope	Yes	Yes
Nolina interrata	SC	NOIN_50	PGR/CB	5/26/2011	Garmin 60CSX	NAD83	14	point	-116.867472, 32.788158	1	100% vegetative	Salvia apiana-Artemisia californica	2003	Cedar	Las Posas	SW-facing slope	Yes	Yes
Nolina interrata	SC	NOIN_51	PGR/CB	5/26/2011	Garmin 60CSX	NAD83	10	polygon	-116.86766, 32.787764	10	100% vegetative	Salvia apiana-Artemisia californica	2003	Cedar	Las Posas	SW-facing slope	Yes	Yes
Nolina interrata	SC	NOIN_52	PGR/CB	5/26/2011	Garmin 60CSX	NAD83	11	point	-116.867727, 32.787736	5	100% vegetative	Salvia apiana-Artemisia californica	2003	Cedar	Las Posas	SW-facing slope	Yes	Yes
Nolina interrata	SC	NOIN_53	PGR/CB	5/26/2011	Garmin 60CSX	NAD83	12	polygon	-116.868041, 32.78778	10	100% vegetative	Salvia apiana-Artemisia californica	2003	Cedar	Las Posas	SW-facing slope	Yes	Yes
Nolina interrata	SC	NOIN_54	PGR/CB	5/26/2011	Garmin 60CSX	NAD83	12	point	-116.868214, 32.787714	1	100% vegetative	Salvia apiana-Artemisia californica	2003	Cedar	Las Posas	SW-facing slope	No	No
Nolina interrata	SC	NOIN_55	PGR/CB	5/26/2011	Garmin 60CSX	NAD83	13	polygon	-116.868267, 32.787839	80	100% vegetative	Salvia apiana-Artemisia californica	2003	Cedar	Las Posas	SW-facing slope	Yes	Yes
Nolina interrata	SC	NOIN_56	PGR/CB	5/26/2011	Garmin 60CSX	NAD83	14	polygon	-116.870483, 32.788201	40	100% vegetative	Artemisia californica	2003	Cedar	Auld	SW-facing slope	Yes	Yes
Nolina interrata	SC	NOIN_57	PGR/CB	5/26/2011	Garmin 60CSX	NAD83	12	polygon	-116.87132, 32.788856	150	100% vegetative	Brachypodium distachyon Semi-Natural Stand Type	2003	Cedar	Auld/Las Posas	SW-facing slope	Yes	Yes
Nolina interrata	SC	NOIN_58	PGR/CB	5/26/2011	Garmin 60CSX	NAD83	12	polygon	-116.872326, 32.788944	25	100% vegetative	Bahiopsis laciniata-Artemisia californica-Eriogonum fasciculatum	2003	Cedar	Las Posas	SW-facing slope	Yes	Yes
Nolina interrata	SC	NOIN_59	PGR/CB	5/26/2011	Garmin 60CSX	NAD83	12	point	-116.872042, 32.78903	2	100% vegetative	Artemisia californica	2003	Cedar	Las Posas	SW-facing slope	No	No

Appendix F
***Nolina interrata* Attribute Data - South Crest 2011**

Species	Site	Occurrence Number	Observor(s)	Date	GPS Unit	Datum	GPS Error	Point/Polygon	GPS Location	Population Size Estimate	Phenology	Vegetation Association	Fire History (date, last fire)	Fire History (name, last fire)	Soil Type	Notes	BRDIS	Photo
Nolina interrata	SC	NOIN_60	PGR/CB	5/26/2011	Garmin 60CSX	NAD83	12	point	-116.872049, 32.789082	1	100% vegetative	Artemisia californica	2003	Cedar	Las Posas	SW-facing slope	No	No
Nolina interrata	SC	NOIN_61	PGR/CB	5/26/2011	Garmin 60CSX	NAD83	9	point	-116.871838, 32.78922	2	100% vegetative	Artemisia californica	2003	Cedar	Las Posas	SW-facing slope	No	No
Nolina interrata	SC	NOIN_62	PGR/CB	5/26/2011	Garmin 60CSX	NAD83	12	point	-116.871765, 32.789283	3	100% vegetative	Artemisia californica	2003	Cedar	Las Posas	SW-facing slope	No	No
Nolina interrata	SC	NOIN_63	PGR/CB	5/26/2011	Garmin 60CSX	NAD83	13	point	-116.871759, 32.789307	1	100% vegetative	Artemisia californica	2003	Cedar	Las Posas	SW-facing slope	No	No
Nolina interrata	SC	NOIN_64	PGR/CB	5/26/2011	Garmin 60CSX	NAD83	13	point	-116.871075, 32.78961	1	100% vegetative	Artemisia californica	2003	Cedar	Las Posas	SW-facing slope	No	No
Nolina interrata	SC	NOIN_65	PGR/CB	5/26/2011	Garmin 60CSX	NAD83	13	point	-116.871087, 32.789628	1	100% vegetative	Artemisia californica	2003	Cedar	Las Posas	SW-facing slope	No	No
Nolina interrata	SC	NOIN_66	PGR/CB	5/26/2011	Garmin 60CSX	NAD83	13	polygon	-116.87107, 32.789702	5	100% vegetative	Artemisia californica	2003	Cedar	Las Posas	SW-facing slope	Yes	No
Nolina interrata	SC	NOIN_67	PGR/CB	5/26/2011	Garmin 60CSX	NAD83	13	polygon	-116.870259, 32.789823	9	100% vegetative	Rhamnus crocea Provsional Association	2003	Cedar	Las Posas	SW-facing slope	Yes	Yes
Nolina interrata	SC	NOIN_68	PGR/CB	5/26/2011	Garmin 60CSX	NAD83	14	polygon	-116.870188, 32.789898	3	100% vegetative	Adenostoma fasciculatum-Lotus scoparius	2003	Cedar	Las Posas	SW-facing slope	No	No
Nolina interrata	SC	NOIN_69	PGR/CB	5/26/2011	Garmin 60CSX	NAD83	9	polygon	-116.870155, 32.789973	25	100% vegetative	Salvia apiana-Artemisia californica; Brachypodium distachyon Semi-Natural Stand Type	2003	Cedar	Las Posas	SW-facing slope	Yes	Yes
Nolina interrata	SC	NOIN_70	PGR/CB	5/26/2011	Garmin 60CSX	NAD83	9	polygon	-116.869877, 32.789907	70	100% vegetative	Brachypodium distachyon Semi-Natural Stand Type	2003	Cedar	Las Posas	SW-facing slope	Yes	Yes
Nolina interrata	SC	NOIN_71	PGR/CB	5/26/2011	Garmin 60CSX	NAD83	9	polygon	-116.869986, 32.790218	110	100% vegetative	Salvia apiana-Artemisia californica	2003	Cedar	Las Posas	SW-facing slope	Yes	Yes
Nolina interrata	SC	NOIN_72	PGR/CB	5/26/2011	Garmin 60CSX	NAD83	9	polygon	-116.870221, 32.790179	8	100% vegetative	Nassella pulchra	2003	Cedar	Las Posas	SW-facing slope	Yes	Yes
Nolina interrata	SC	NOIN_73	PGR/CB	6/30/2011	Garmin 60CSX	NAD83	13	polygon	-116.868626, 32.790326	3	Vegetative	Malosma laurina-Lotus scoparius	2003	Cedar	Las Posas	W-facing slope	Yes	Yes
Nolina interrata	SC	NOIN_74	PGR/CB	6/30/2011	Garmin 60CSX	NAD83	11	polygon	-116.865858, 32.788841	6	Vegetative	Adenostoma fasciculatum-Lotus scoparius	2003	Cedar	Las Posas	SW-facing slope	Yes	Yes
Nolina interrata	SC	NOIN_75	PGR/CB	6/30/2011	Garmin 60CSX	NAD83	10	point	-116.865807, 32.788853	1	Vegetative	Adenostoma fasciculatum-Lotus scoparius	2003	Cedar	Las Posas	SW-facing slope	Yes	Yes
Nolina interrata	SC	NOIN_76	PGR/CB	6/30/2011	Garmin 60CSX	NAD83	10	point	-116.865712, 32.788757	5	Vegetative	Adenostoma fasciculatum-Lotus scoparius	2003	Cedar	Las Posas	SW-facing slope	Yes	Yes
Nolina interrata	SC	NOIN_77	PGR/CB	6/30/2011	Garmin 60CSX	NAD83	11	point	-116.865615, 32.78875	1	Vegetative	Ceanothus tomentosus	2003	Cedar	Las Posas	SW-facing slope	Yes	Yes
Nolina interrata	SC	NOIN_78	PGR/CB	6/30/2011	Garmin 60CSX	NAD83	9	polygon	-116.865703, 32.788843	5	Vegetative	Adenostoma fasciculatum-Lotus scoparius	2003	Cedar	Las Posas	SW-facing slope	Yes	Yes
Nolina interrata	SC	NOIN_79	PGR/CB	6/30/2011	Garmin 60CSX	NAD83	9	point	-116.865621, 32.788931	3	Vegetative	Adenostoma fasciculatum-Ceanothus tomentosus	2003	Cedar	Las Posas	SW-facing slope	Yes	Yes
Nolina interrata	SC	NOIN_80	PGR/CB	6/30/2011	Garmin 60CSX	NAD83	12	polygon	-116.865582, 32.78891	10	Vegetative	Adenostoma fasciculatum-Ceanothus tomentosus	2003	Cedar	Las Posas	SW-facing slope	Yes	Yes
Nolina interrata	SC	NOIN_81	PGR/CB	6/30/2011	Garmin 60CSX	NAD83	13	polygon	-116.865559, 32.788843	10	Vegetative	Adenostoma fasciculatum-Ceanothus tomentosus	2003	Cedar	Las Posas	SW-facing slope	Yes	Yes
Nolina interrata	SC	NOIN_82	PGR/CB	6/30/2011	Garmin 60CSX	NAD83	12	polygon	-116.865561, 32.78877	3	Vegetative	Ceanothus tomentosus	2003	Cedar	Las Posas	SW-facing slope	Yes	Yes
Nolina interrata	SC	NOIN_83	PGR/CB	6/30/2011	Garmin 60CSX	NAD83	12	point	-116.865518, 32.788718	1	Vegetative	Ceanothus tomentosus	2003	Cedar	Las Posas	SW-facing slope	Yes	Yes
Nolina interrata	SC	NOIN_84	PGR/CB	6/30/2011	Garmin 60CSX	NAD83	15	polygon	-116.865488, 32.788734	5	Vegetative	Ceanothus tomentosus	2003	Cedar	Las Posas	SW-facing slope	Yes	Yes
Nolina interrata	SC	NOIN_85	PGR/CB	6/30/2011	Garmin 60CSX	NAD83	13	point	-116.865455, 32.788709	1	Vegetative	Ceanothus tomentosus	2003	Cedar	Las Posas	SW-facing slope	Yes	Yes
Nolina interrata	SC	NOIN_86	PGR/CB	6/30/2011	Garmin 60CSX	NAD83	12	point	-116.865404, 32.788746	1	Vegetative	Ceanothus tomentosus	2003	Cedar	Las Posas	SW-facing slope	Yes	Yes
Nolina interrata	SC	NOIN_87	PGR/CB	6/30/2011	Garmin 60CSX	NAD83	13	polygon	-116.865298, 32.788773	35-50	Vegetative	Adenostoma fasciculatum-Xylococcus biocolor	2003	Cedar	Las Posas	SW-facing slope	Yes	Yes
Nolina interrata	SC	NOIN_88	PGR/CB	6/30/2011	Garmin 60CSX	NAD83	11	polygon	-116.865424, 32.789012	35-40	Vegetative	Adenostoma fasciculatum-Xylococcus biocolor-Ceanothus tomentosus	2003	Cedar	Las Posas	SW-facing slope	Yes	Yes
Nolina interrata	SC	NOIN_89	PGR/CB	6/30/2011	Garmin 60CSX	NAD83	9	polygon	-116.866213, 32.786658	25	Vegetative	Malosma laurina-Lotus scoparius	2003	Cedar	Las Posas	S, SE-facing slope	Yes	Yes
Nolina interrata	SC	NOIN_90	PGR/CB	6/30/2011	Garmin 60CSX	NAD83	10	point	-116.866068, 32.786652	1	Vegetative	Malosma laurina-Lotus scoparius	2003	Cedar	Las Posas	S, SE-facing slope	Yes	Yes
Nolina interrata	SC	NOIN_91	PGR/CB	6/30/2011	Garmin 60CSX	NAD83	10	polygon	-116.866133, 32.786559	5	Vegetative	Malosma laurina-Lotus scoparius	2003	Cedar	Las Posas	S, SE-facing slope	Yes	Yes
Nolina interrata	SC	NOIN_92	PGR/CB	6/30/2011	Garmin 60CSX	NAD83	10	point	-116.866265, 32.78656	1	Vegetative	Artemisia californica-Eriogonum fasciculatum-Malosma laurina	2003	Cedar	Las Posas	S, SE-facing slope	Yes	Yes
Nolina interrata	SC	NOIN_93	PGR/CB	6/30/2011	Garmin 60CSX	NAD83	11	polygon	-116.866405, 32.786544	15	Vegetative	Malosma laurina-Lotus scoparius	2003	Cedar	Las Posas	S, SE-facing slope	Yes	Yes
Nolina interrata	SC	NOIN_94	PGR/CB	6/30/2011	Garmin 60CSX	NAD83	11	polygon	-116.866571, 32.786486	50	Vegetative	Salvia apiana-Artemisia californica	2003	Cedar	Las Posas	SW-facing slope	Yes	Yes

Appendix F
***Nolina interrata* Attribute Data - South Crest 2011**

Species	Site	Occurrence Number	Observor(s)	Date	GPS Unit	Datum	GPS Error	Point/Polygon	GPS Location	Population Size Estimate	Phenology	Vegetation Association	Fire History (date, last fire)	Fire History (name, last fire)	Soil Type	Notes	BRDIS	Photo
Nolina interrata	SC	NOIN_95	PGR/CB	6/30/2011	Garmin 60CSX	NAD83	10	polygon	-116.866338, 32.786132	95	Vegetative	Bahiopsis laciniata-Artemisia californica-Eriogonum fasciculatum	2003; 1970	Cedar; Laguna	Las Posas	S-facing slope; small portion burned I 2003 Cedar fire; majority of stand has not burned since 1970 Laguna fire	Yes	Yes
Nolina interrata	SC	NOIN_96	PGR/CB	6/30/2011	Garmin 60CSX	NAD83	12	point	-116.866576, 32.786714	1	Vegetative	Bahiopsis laciniata-Artemisia californica-Eriogonum fasciculatum	2003	Cedar	Las Posas	S-facing slope	Yes	Yes
Nolina interrata	SC	NOIN_97	PGR/CB	6/30/2011	Garmin 60CSX	NAD83	10	polygon	-116.866549, 32.786769	20	Vegetative	Bahiopsis laciniata-Artemisia californica-Eriogonum fasciculatum	2003	Cedar	Las Posas	S-facing slope	Yes	Yes
Nolina interrata	SC	NOIN_A	PGR/CB	4/14/2011	Garmin 60CSX	NAD83	11	point	-116.866549, 32.786769	75	100% vegetative	Artemisia california	2003	Dehesa	Tujunga Sand	Flat; offsite - adjacent to Dehesa Road	Yes	Yes

Metadata
Species: Scientific Name
Site: SC = South Crest (San Diego County, CA)
Occurrence Number: 4-letter code plus site-specific occurrence number
Observor(s): PGR = Patricia Gordon-Reedy; CB = Curtis Battle
Date: Date of field work/data collection
GPS Unit: Make and model
Datum: NAD83
GPS Error: Recorded in feet
Point/Polygon: Indicates whether spatial data were collected as a point or polygon
GPS Location: Coordinates are reported in decimal degres; UTM Zone 11N
Population Size Estimate: Estimate of the number of NOIN basal clusters (ramets) per point or polygon
Phenology: Estimated percent (%) of population that is in a vegetative, flowering, or fruiting stage (dominant stage listed)
Vegetation Association: Associations follow the Vegetation Classification Manual for western San Diego County (Sproul et al. 2011)
Fire History (last fire): year of last recorded fire on site.
Fire History (name, last fire): Official (e.g., California Department of Fire) fire name.
Soil Type: Soil series, based on USDA SCS
Notes: Additional notes on occurrence
BRDIS: Yes = *Brachypodium distachyon* present at point or within polygon; No = *Brachypodium distachyon* not present.
Photo: Yes = photograph available; No = photograph not available.

Appendix G

Nolina interrata

Quantitative Data

Patch I.D	Patch Size	Center Location (GPS)	Patch Width (m)	Patch Breadth (m)	Patch Height (m)	Patch Area (m^2)	Patch Volume (m^2)	Fire History (date, last fire)	Fire History (name, last fire)	Soil Type	Field Biologists	BRDIS
SC_NOIN_01	< 1 m	-116.866561, 32.788089	2.05	1.75	1.30	2.82	5.29	2003	Cedar	**Clay**	PGR/CB	**Yes**
SC_NOIN_02	< 1 m	-116.866229, 32.7882	1.60	1.60	0.90	2.01	2.70	2003	Cedar	**Clay**	PGR/CB	**Yes**
SC_NOIN_03	< 1 m	-116.866186, 32.788233	1.90	1.05	0.95	1.57	1.64	2003	Cedar	**Clay**	PGR/CB	**Yes**
SC_NOIN_04	< 1 m	-116.866183, 32.788246	1.90	2.90	1.40	4.33	12.49	2003	Cedar	**Clay**	PGR/CB	**Yes**
SC_NOIN_05	< 1 m	-116.866229, 32.788265	2.10	3.05	1.30	5.03	16.87	2003	Cedar	**Clay**	PGR/CB	**Yes**
SC_NOIN_06	< 1 m	-116.866263, 32.788241	2.60	2.90	1.30	5.92	23.38	2003	Cedar	**Clay**	PGR/CB	**Yes**
SC_NOIN_07	< 1 m	-116.866128, 32.788491	1.70	1.90	2.05	2.54	4.29	2003	Cedar	Gabbro	PGR/CB	**Yes**
SC_NOIN_08	< 1 m	-116.866104, 32.788524	2.00	2.00	1.30	3.14	6.58	2003	Cedar	Gabbro	PGR/CB	**Yes**
SC_NOIN_10	< 1 m	-116.866057, 32.788603	2.40	2.90	1.10	5.47	19.92	2003	Cedar	Gabbro	PGR/CB	**Yes**
SC_NOIN_11	< 1 m	-116.866104, 32.788604	1.90	2.90	1.20	4.33	12.49	2003	Cedar	Gabbro	PGR/CB	**Yes**
SC_NOIN_14	< 1 m	-116.866309, 32.78884	2.20	2.60	1.10	4.49	13.45	2003	Cedar	Gabbro	PGR/CB	**Yes**
SC_NOIN_16	< 1 m	-116.865881, 32.78778	2.40	4.10	1.10	7.73	39.82	2003	Cedar	Gabbro	PGR/CB	**Yes**
SC_NOIN_19	< 1 m	-116.865934, 32.787479	1.70	2.30	1.30	3.07	6.29	2003	Cedar	Gabbro	PGR/CB	**Yes**
SC_NOIN_24	< 1 m	-116.866079, 32.789905	1.70	1.80	0.90	2.40	3.85	2003	Cedar	Gabbro	PGR/CB	**Yes**
SC_NOIN_25	< 1 m	-116.866051, 32.789917	1.50	1.80	0.90	2.12	3.00	2003	Cedar	Gabbro	PGR/CB	**Yes**
SC_NOIN_26	< 1 m	-116.866046, 32.789908	0.60	0.90	0.80	0.42	0.12	2003	Cedar	Gabbro	PGR/CB	**Yes**
SC_NOIN_28	< 1 m	-116.86438, 32.789525	1.40	1.60	1.40	1.76	2.06	2003	Cedar	Gabbro	PGR/CB	**Yes**
SC_NOIN_33	< 1 m	-116.869977, 32.787592	0.90	0.80	0.70	0.57	0.21	2003	Cedar	Gabbro	PGR/CB	**Yes**
SC_NOIN_34	< 1 m	-116.869968, 32.787546	0.40	0.35	0.40	0.11	0.01	2003	Cedar	Gabbro	PGR/CB	**Yes**
SC_NOIN_35	< 1 m	-116.869987, 32.787518	0.50	0.35	0.50	0.14	0.01	2003	Cedar	Gabbro	PGR/CB	**Yes**
SC_NOIN_36	< 1 m	-116.870004, 32.78751	0.20	0.10	0.30	0.02	0.00	2003	Cedar	Gabbro	PGR/CB	**Yes**
SC_NOIN_37	< 1 m	-116.869904, 32.787754	0.35	0.30	0.30	0.08	0.00	2003	Cedar	Gabbro	PGR/CB	**Yes**
SC_NOIN_38	< 1 m	-116.869907, 32.78774	0.40	0.20	0.20	0.06	0.00	2003	Cedar	Gabbro	PGR/CB	**Yes**
SC_NOIN_39	< 1 m	-116.869904, 32.787728	0.30	0.40	0.20	0.09	0.01	2003	Cedar	Gabbro	PGR/CB	**No**
SC_NOIN_48	< 1 m	-116.867543, 32.788064	2.20	2.10	1.15	3.63	8.78	2003	Cedar	Gabbro	PGR/CB	**No**
SC_NOIN_50	< 1 m	-116.867472, 32.788158	1.80	1.60	1.20	2.26	3.41	2003	Cedar	Gabbro	PGR/CB	**No**
SC_NOIN_52	< 1 m	-116.867727, 32.787736	1.20	1.10	0.80	1.04	0.72	2003	Cedar	Gabbro	PGR/CB	**No**
SC_NOIN_54	< 1 m	-116.868214, 32.787714	2.40	2.50	1.30	4.71	14.80	2003	Cedar	Gabbro	PGR/CB	**No**
SC_NOIN_59	< 1 m	-116.872042, 32.78903	2.70	1.70	1.30	3.60	8.66	2003	Cedar	Gabbro	PGR/CB	**No**
SC_NOIN_60	< 1 m	-116.872049, 32.789082	2.50	2.10	1.30	4.12	11.33	2003	Cedar	Gabbro	PGR/CB	**No**
SC_NOIN_61	< 1 m	-116.871838, 32.78922	1.90	1.80	1.60	2.69	4.81	2003	Cedar	Gabbro	PGR/CB	**No**
SC_NOIN_62	< 1 m	-116.871765, 32.789283	2.50	2.00	1.30	3.93	10.28	2003	Cedar	Gabbro	PGR/CB	**No**
SC_NOIN_63	< 1 m	-116.871759, 32.789307	1.60	1.60	0.90	2.01	2.70	2003	Cedar	Gabbro	PGR/CB	**No**
SC_NOIN_64	< 1 m	-116.871075, 32.78961	2.10	2.00	1.30	3.30	7.25	2003	Cedar	Gabbro	PGR/CB	**No**
SC_NOIN_65	< 1 m	-116.871087, 32.789628	1.70	1.70	1.20	2.27	3.43	2003	Cedar	Gabbro	PGR/CB	**No**
SC_NOIN_75	< 1 m	-116.865807, 32.788853	2.10	1.50	1.00	2.47	4.08	2003	Cedar	Gabbro	PGR/CB	**No**
SC_NOIN_76	< 1 m	-116.865712, 32.788757	2.35	2.20	1.10	4.06	10.99	2003	Cedar	Gabbro	PGR/CB	**No**
SC_NOIN_77	< 1 m	-116.865615, 32.78875	1.80	1.40	1.15	1.98	2.61	2003	Cedar	Gabbro	PGR/CB	**No**
SC_NOIN_79	< 1 m	-116.865621, 32.788931	2.40	1.70	1.30	3.20	6.85	2003	Cedar	Gabbro	PGR/CB	**No**
SC_NOIN_83	< 1 m	-116.865518, 32.788718	2.10	1.40	1.25	2.31	3.55	2003	Cedar	Gabbro	PGR/CB	**No**
SC_NOIN_85	< 1 m	-116.865455, 32.788709	1.60	1.50	1.30	1.88	2.37	2003	Cedar	Gabbro	PGR/CB	**No**
SC_NOIN_86	< 1 m	-116.865404, 32.788746	1.90	1.70	1.20	2.54	4.29	2003	Cedar	Gabbro	PGR/CB	**No**
SC_NOIN_90	< 1 m	-116.866068, 32.786652	2.20	2.20	1.20	3.80	9.63	2003	Cedar	Gabbro	PGR/CB	**No**
SC_NOIN_92	< 1 m	-116.866265, 32.78656	2.50	1.80	1.20	3.53	8.33	2003	Cedar	Gabbro	PGR/CB	**No**
SC_NOIN_96	< 1 m	-116.866576, 32.786714	2.10	1.70	0.80	2.80	5.24	2003	Cedar	Gabbro	PGR/CB	**No**

Patch I.D	Patch Size	Center Location (GPS)	Patch Width (m)	Patch Breadth (m)	Patch Height (m)	Patch Area (m^2)	Patch Volume (m^2)	Fire History (date, last fire)	Fire History (name, last fire)	Soil Type	Field Biologists	BRDIS
Total			78.35	77.85	47.75	122.36	308.60					
Average			1.74	1.73	1.06	2.72	6.86					
Minimum			0.20	0.10	0.20	0.02	0.00					
Maximum			2.70	4.10	2.05	7.73	39.82					
StdDev			0.69	0.84	0.38	1.72	7.52					

Patch I.D.	≥ 1 m	Center Location (GPS)	Patch Radius (m)	Proportion Coverage (%)	Height (H)1	H2	H3	H4	H5	Average Height (m)	Patch Area (m2)	Patch Volume (m2)	Fire History (last fire)	Fire History (name, last fire)	Soil Type	Field Biologists	BRDIS
SC_NOIN_09	≥ 1 m	-116.865938, 32.788517	2.60	0.40	1.10	1.15	1.30	1.40	1.10	1.21	8.49	10.28	2003	Cedar	**Clay**	PGR/CB	**Yes**
SC_NOIN_12	≥ 1 m	-116.866138, 32.788758	3.50	0.10	1.10	0.80	0.80	0.90	0.80	0.88	3.85	3.39	2003	Cedar	**Clay**	PGR/CB	**Yes**
SC_NOIN_13	≥ 1 m	-116.866339, 32.788768	4.10	0.10	0.90	0.60	0.90	0.80	1.00	0.84	5.28	4.44	2003	Cedar	**Clay**	PGR/CB	**Yes**
SC_NOIN_15	≥ 1 m	-116.865991, 32.789238	19.40	0.13	1.00	1.20	1.10	1.20	1.10	1.12	147.80	165.53	2003	Cedar	**Gabbro**	PGR/CB	**Yes**
SC_NOIN_17	≥ 1 m	-116.865914, 32.787668	6.60	0.30	1.40	1.30	1.10	1.30	1.30	1.28	41.05	52.55	2003	Cedar	**Gabbro**	PGR/CB	**Yes**
SC_NOIN_18	≥ 1 m	-116.865976, 32.787523	2.40	0.60	1.40	1.30	1.10	1.10	1.40	1.26	10.86	13.68	2003	Cedar	**Gabbro**	PGR/CB	**Yes**
SC_NOIN_20	≥ 1 m	-116.865563, 32.788095	7.00	0.70	1.10	1.00	1.10	1.00	1.20	1.08	107.76	116.38	2003	Cedar	**Gabbro**	PGR/CB	**Yes**
SC_NOIN_21	≥ 1 m	-116.865311, 32.788358	12.00	0.10	1.00	0.70	1.10	1.10	1.00	0.98	45.24	44.33	2003	Cedar	**Gabbro**	PGR/CB	**Yes**
SC_NOIN_22	≥ 1 m	-116.866212, 32.789986	7.50	0.35	1.50	1.40	1.20	1.10	0.90	1.22	61.85	75.46	2003	Cedar	**Gabbro**	PGR/CB	**Yes**
SC_NOIN_23	≥ 1 m	-116.866064, 32.789896	1.40	0.60	0.80	0.85	1.00	1.00	1.00	0.93	3.69	3.44	2003	Cedar	**Gabbro**	PGR/CB	**Yes**
SC_NOIN_27	≥ 1 m	-116.865556, 32.789818	3.10	0.40	1.30	1.20	1.50	1.30	1.40	1.34	12.08	16.18	2003	Cedar	**Gabbro**	PGR/CB	**Yes**
SC_NOIN_29	≥ 1 m	-116.864361, 32.789499	1.40	0.70	1.15	0.90	1.10	1.10	1.00	1.05	4.31	4.53	2003	Cedar	**Gabbro**	PGR/CB	**Yes**
SC_NOIN_30	≥ 1 m	-116.862801, 32.782517	1.90	0.60	0.90	0.85	0.80	0.85	0.60	0.80	6.80	5.44	2003	Cedar	**Gabbro**	PGR/CB	**Yes**
SC_NOIN_31	≥ 1 m	-116.862791, 32.78294	1.10	0.80	1.15	1.05	0.95	1.30	1.40	1.17	3.04	3.56	2003	Cedar	**Gabbro**	PGR/CB	**Yes**
SC_NOIN_32	≥ 1 m	-116.862825, 32.783155	1.50	0.95	1.20	1.40	1.40	1.50	1.10	1.32	6.72	8.86	2003	Cedar	**Gabbro**	PGR/CB	**Yes**
SC_NOIN_40	≥ 1 m	-116.869845, 32.787477	22.60	0.20	1.10	0.90	1.20	1.20	1.15	1.11	320.92	356.22	2003	Cedar	**Gabbro**	PGR/CB	**Yes**
SC_NOIN_41	≥ 1 m	-116.868325, 32.787147	22.00	0.10	0.90	1.00	1.20	1.10	1.00	1.04	152.05	158.14	2003	Cedar	**Gabbro**	PGR/CB	**Yes**
SC_NOIN_42	≥ 1 m	-116.868091, 32.78725	14.90	0.05	1.40	1.00	1.00	1.40	0.90	1.14	34.87	39.76	2003	Cedar	**Gabbro**	PGR/CB	**Yes**
SC_NOIN_43	≥ 1 m	-116.867969, 32.787404	12.00	0.15	1.30	1.40	1.25	1.30	1.40	1.33	67.86	90.25	2003	Cedar	**Gabbro**	PGR/CB	**Yes**
SC_NOIN_44	≥ 1 m	-116.867764, 32.78744	9.30	0.15	1.10	1.20	1.10	0.90	1.15	1.09	40.76	44.43	2003	Cedar	**Gabbro**	PGR/CB	**Yes**
SC_NOIN_45	≥ 1 m	-116.868003, 32.787614	11.00	0.05	1.10	1.20	1.20	1.20	0.75	1.09	19.01	20.72	2003	Cedar	**Gabbro**	PGR/CB	**Yes**
SC_NOIN_46	≥ 1 m	-116.867405, 32.787962	6.00	0.40	1.50	1.20	0.90	1.20	0.90	1.14	45.24	51.57	2003	Cedar	**Gabbro**	PGR/CB	**Yes**
SC_NOIN_47	≥ 1 m	-116.867362, 32.788071	1.70	0.85	0.90	0.90	0.50	0.85	1.10	0.85	7.72	6.56	2003	Cedar	**Gabbro**	PGR/CB	**Yes**
SC_NOIN_49	≥ 1 m	-116.867421, 32.788328	24.20	1.10	1.15	1.40	1.20	0.80	1.10	1.13	2023.82	2286.92	2003	Cedar	**Gabbro**	PGR/CB	**Yes**
SC_NOIN_51	≥ 1 m	-116.86766, 32.787764	2.70	0.60	0.70	0.70	0.80	0.80	0.90	0.78	13.74	10.72	2003	Cedar	**Gabbro**	PGR/CB	**Yes**
SC_NOIN_53	≥ 1 m	-116.868041, 32.78778	5.20	0.10	1.50	1.30	1.20	1.10	1.20	1.26	8.49	10.70	2003	Cedar	**Gabbro**	PGR/CB	**Yes**
SC_NOIN_55	≥ 1 m	-116.868267, 32.787839	7.50	0.05	1.40	0.90	1.20	1.10	0.90	1.10	8.84	9.72	2003	Cedar	**Gabbro**	PGR/CB	**Yes**
SC_NOIN_56	≥ 1 m	-116.870483, 32.788201	7.30	0.15	0.70	1.10	1.10	0.90	1.10	0.98	25.11	24.61	2003	Cedar	**Gabbro**	PGR/CB	**Yes**
SC_NOIN_57	≥ 1 m	-116.87132, 32.788856	56.00	0.40	0.90	1.00	1.10	1.00	1.00	1.00	3940.81	3940.81	2003	Cedar	**Gabbro**	PGR/CB	**Yes**
SC_NOIN_58	≥ 1 m	-116.872326, 32.788944	14.00	0.05	1.00	0.80	1.10	1.50	1.10	1.10	30.79	33.87	2003	Cedar	**Gabbro**	PGR/CB	**No**
SC_NOIN_66	≥ 1 m	-116.87107, 32.789702	1.90	0.30	1.30	1.40	1.50	1.40	1.50	1.42	3.40	4.83	2003	Cedar	**Gabbro**	PGR/CB	**No**
SC_NOIN_67	≥ 1 m	-116.870259, 32.789823	3.60	0.20	1.00	1.10	1.25	1.00	1.10	1.09	8.14	8.88	2003	Cedar	**Gabbro**	PGR/CB	**No**
SC_NOIN_68	≥ 1 m	-116.870188, 32.789898	1.25	0.60	0.85	1.00	0.80	0.80	0.90	0.87	2.95	2.56	2003	Cedar	**Gabbro**	PGR/CB	**No**
SC_NOIN_69	≥ 1 m	-116.870155, 32.789973	4.40	0.60	0.80	1.00	0.80	0.90	1.00	0.90	36.49	32.84	2003	Cedar	**Gabbro**	PGR/CB	**No**
SC_NOIN_70	≥ 1 m	-116.869877, 32.789907	13.00	0.20	1.00	1.05	1.90	1.00	0.80	1.15	106.19	122.11	2003	Cedar	**Gabbro**	PGR/CB	**No**
SC_NOIN_71	≥ 1 m	-116.869986, 32.790218	13.20	0.10	1.10	0.90	0.70	0.90	1.00	0.92	54.74	50.36	2003	Cedar	**Gabbro**	PGR/CB	**No**
SC_NOIN_72	≥ 1 m	-116.870221, 32.790179	8.50	0.01	0.90	0.90	0.75	1.00	1.00	0.91	2.27	2.07	2003	Cedar	**Gabbro**	PGR/CB	**No**
SC_NOIN_73	≥ 1 m	-116.868626, 32.790326	1.25	0.75	1.50	1.40	1.60	1.40	1.50	1.48	3.68	5.45	2003	Cedar	**Gabbro**	PGR/CB	**No**
SC_NOIN_74	≥ 1 m	-116.865858, 32.788841	1.60	0.90	1.20	1.30	1.40	1.50	1.50	1.38	7.24	9.99	2003	Cedar	**Gabbro**	PGR/CB	**No**
SC_NOIN_78	≥ 1 m	-116.865703, 32.788843	1.90	0.75	1.00	1.00	1.00	1.05	1.10	1.03	8.51	8.76	2003	Cedar	**Gabbro**	PGR/CB	**No**
SC_NOIN_80	≥ 1 m	-116.865582, 32.78891	1.30	0.90	0.80	0.70	0.70	0.60	0.40	0.64	4.78	3.06	2003	Cedar	**Gabbro**	PGR/CB	**No**
SC_NOIN_81	≥ 1 m	-116.865559, 32.788843	1.00	0.80	0.40	0.50	0.75	0.65	0.90	0.64	2.51	1.61	2003	Cedar	**Gabbro**	PGR/CB	**No**
SC_NOIN_82	≥ 1 m	-116.865561, 32.78877	1.60	0.75	1.00	1.30	1.00	1.30	0.90	1.10	6.03	6.64	2003	Cedar	**Gabbro**	PGR/CB	**No**
SC_NOIN_84	≥ 1 m	-116.865488, 32.788734	1.20	0.75	1.90	1.90	0.90	0.90	0.80	1.28	3.39	4.34	2003	Cedar	**Gabbro**	PGR/CB	**No**
SC_NOIN_87	≥ 1 m	-116.865298, 32.788773	9.00	0.05	1.10	0.80	0.70	1.10	1.30	1.00	12.72	12.72	2003	Cedar	**Gabbro**	PGR/CB	**No**

Patch I.D.	≥ 1 m	Center Location (GPS)	Patch Radius (m)	Proportion Coverage (%)	Height (H)1	H2	H3	H4	H5	Average Height (m)	Patch Area (m2)	Patch Volume (m2)	Fire History (last fire)	Fire History (name, last fire)	Soil Type	Field Biologists	BRDIS
SC_NOIN_88	≥ 1 m	-116.865424, 32.789012	15.50	0.03	1.00	0.90	0.80	1.30	1.00	1.00	22.64	22.64	2003	Cedar	**Gabbro**	PGR/CB	**No**
SC_NOIN_89	≥ 1 m	-116.866213, 32.786658	6.50	0.05	1.00	0.90	1.10	1.00	1.20	1.04	6.64	6.90	2003	Cedar	**Gabbro**	PGR/CB	**No**
SC_NOIN_91	≥ 1 m	-116.866133, 32.786559	1.50	0.50	1.00	0.90	1.05	1.10	0.90	0.99	3.53	3.50	2003	Cedar	**Gabbro**	PGR/CB	**No**
SC_NOIN_93	≥ 1 m	-116.866405, 32.786544	5.20	0.05	0.65	0.70	1.40	1.10	1.00	0.97	4.25	4.12	2003	Cedar	**Gabbro**	PGR/CB	**No**
SC_NOIN_94	≥ 1 m	-116.866571, 32.786486	11.00	0.20	1.10	1.40	1.30	1.40	1.10	1.26	76.03	95.79	2003	Cedar	**Gabbro**	PGR/CB	**No**
SC_NOIN_95	≥ 1 m	-116.866338, 32.786132	39.20	0.03	1.00	0.80	0.95	1.15	1.10	1.00	144.82	144.82	2003	Cedar	**Gabbro**	PGR/CB	**No**
SC_NOIN_97	≥ 1 m	-116.866549, 32.786769	6.00	0.50	1.00	0.90	1.00	1.50	1.40	1.16	56.55	65.60	2003	Cedar	**Gabbro**	PGR/CB	**No**
Total			395.90							48.18	7461.27	7866.39					
Average			8.80							1.07	165.81	174.81					
Minimum			1.00							0.64	2.27	1.61					
Maximum			56.00							1.48	3940.81	3940.81					
StdDev			10.10							0.18	605.30	622.01					

Metadata
species code (*Nolina interrata*); last 2 digits = unique patch identication number.
Patch Size: Estimated size of patch (i.e., ≤ or ≥ 1 meter (m) (note: initial assignment of patch size was made in the
Center Location (GPS): GPS coordinates at the center of the patch for patches ≤ 1 m or near the center of, but not within, the patch, for patches ≥ 1 m. Coordinates reorted in decimal degrees; Datum = NAD83; UTM Zone = 11N.
Patch Width: Length of the major axis for patches ≤ 1 m.
Patch Breadth: Length of teminor axis for patches ≤ 1 m;
Patch Height: Height of highest live leaf for patches ≤ 1 m;
Patch Area: $(\pi/4) \times$ (patch width) × (patch breadth) for patches ≤ 1 m; $\pi \times$ (patch radius)^2 × (proportion coverage)
Patch Volume: $(\pi/6) \times$ (patch width) × (patch breadth) × (patch height) for patches ≤ 1 m; A × (average patch
Patch Radius: Distance from the center location to a locationon the edge of the patch most distant from the
Proportion Coverage: A visual estimate of the proportion of area covered by Dehesa beargrass within the polygon
Average Patch Height: Average of five randomly selected leaf heights within the patch for patches ≥ 1 m.
Patch Area: $(\pi/4) \times$ (patch width) × (patch breadth) for patches ≤ 1 m.
Patch Volume: $(\pi/6) \times$ (patch width) × (patch breadth) × (patch height) for patches ≤ 1 m.
Fire History (last fire): year of last recorded fire on site.
Fire History (name, last fire): Official (e.g., California Department of Fire) fire name.
Soil Type: Soil series, based on USDA SCS.
Field Biologists: PGR = Patricia Gordon-Reedy; CB = Curtis Battle.
BRDIS: Yes = *Brachypodium distachyon* present at point or within polygon; No = *Brachypodium distachyon* not

Appendix H

Nolina interrata

Photodocumentation

Nolina interrata (Dehesa Beargrass)

NOIN_01

NOIN_02

NOIN_03

NOIN_04

Nolina interrata (Dehesa Beargrass)

NOIN_05

NOIN_06

NOIN_07

NOIN_08

Nolina interrata (Dehesa Beargrass)

NOIN_10

NOIN_11

NOIN_013

NOIN_14

Nolina interrata (Dehesa Beargrass)

NOIN_15

NOIN_16

NOIN_17

NOIN_18

Nolina interrata (Dehesa Beargrass)

NOIN_19

NOIN_20

NOIN_24

NOIN_25

Nolina interrata (Dehesa Beargrass)

NOIN_28

NOIN_40

NOIN_41

NOIN_42

Nolina interrata (Dehesa Beargrass)

NOIN_43

NOIN_44

NOIN_45

NOIN_46

Nolina interrata (Dehesa Beargrass)

NOIN_47

NOIN_48

NOIN_49

NOIN_50

Nolina interrata (Dehesa Beargrass)

NOIN_51

NOIN_52

NOIN_53

NOIN_55

Nolina interrata (Dehesa Beargrass)

NOIN_56

NOIN_57

NOIN_58

NOIN_66

Nolina interrata (Dehesa Beargrass)

NOIN_67

NOIN_69

NOIN_70

NOIN_71

Nolina interrata (Dehesa Beargrass)

NOIN_72

NOIN_73

NOIN_74

NOIN_75

Nolina interrata (Dehesa Beargrass)

NOIN_76

NOIN_77

NOIN_78

NOIN_79

Nolina interrata (Dehesa Beargrass)

NOIN_80

NOIN_81

NOIN_82

NOIN_83

Nolina interrata (Dehesa Beargrass)

NOIN_84

NOIN_85

NOIN_86a

NOIN_86b

Nolina interrata (Dehesa Beargrass)

NOIN_87

NOIN_88

NOIN_89

NOIN_90

Nolina interrata (Dehesa Beargrass)

NOIN_91

NOIN_92

NOIN_93

NOIN_94

Nolina interrata (Dehesa Beargrass)

NOIN_95

NOIN_96

NOIN_97

Appendix I
Invasive Control Treatments

Appendix I
Herbicide Application Record - Crestridge Ecological Reserve - 2010

Date	Product	Product Amount (oz)	Application Rate	Mixed Amount (gal)	Treatment Area (acres)	Treatment Location	Site Description	Target Invasive Species	Name of Applicator(s)	Applicator's San Diego County License #	EPA Regulation Number
12/3/2010	Glyphosate Pro 4	41.0	1.00%	32	0.55	Grassland restoration area near Horsemill Road entrance, areas adjacent to residence	Area of historic livestock grazing, now in 4th year of non-native control efforts. Three years of planting have introduced *Nassella pulchra* in the central, flatter meadow area and a palette of CSS shrubs on the surrounding slopes	Long-beak filaree (*Erodium botrys*), red brome (*Bromus rubens*), rattail fescue (*Vulpia myuros* var. *hirsuta*), black mustard (*Brassica nigra*), tocolote (*Centaurea melitensis*), and additional non-native grasses	Anthony Santare; assisted by Cathy Chadwick, Michael Beck	QAL 123998	72112-4
12/3/2010	Glyphosate Pro 4	2.6	0.50%	4	0.05	Grassland restoration area	Area of historic livestock grazing, now in 4th year of non-native control efforts. Three years of planting have introduced *Nassella pulchra* in the central, flatter meadow area and a palette of CSS shrubs on the surrounding slopes	Long-beak filaree (*Erodium botrys*), red brome (*Bromus rubens*), rattail fescue (*Vulpia myuros* var. *hirsuta*), black mustard (*Brassica nigra*), tocolote (*Centaurea melitensis*), and additional non-native grasses	Anthony Santare	QAL 123998	72112-4
12/8/2010	Glyphosate Pro 4	19.2	1.00%	15	0.25	Grassland restoration area	Area of historic livestock grazing, now in 4th year of non-native control efforts. Three years of planting have introduced *Nassella pulchra* in the central, flatter meadow area and a palette of CSS shrubs on the surrounding slopes	Long-beak filaree (*Erodium botrys*), red brome (*Bromus rubens*), rattail fescue (*Vulpia myuros* var. *hirsuta*), black mustard (*Brassica nigra*), tocolote (*Centaurea melitensis*), and additional non-native grasses	Anthony Santare	QAL 123998	72112-4

Appendix I
Herbicide Application Record - Crestridge Ecological Reserve - 2010

Date	Product	Product Amount (oz)	Application Rate	Mixed Amount (gal)	Treatment Area (acres)	Treatment Location	Site Description	Target Invasive Species	Name of Applicator(s)	Applicator's San Diego County License #	EPA Regulation Number
12/11/2010	Glyphosate Pro 4	35.8	1.00%	28	0.50	Grassland restoration area	Area of historic livestock grazing, now in 4th year of non-native control efforts. Three years of planting have introduced *Nassella pulchra* in the central, flatter meadow area and a palette of CSS shrubs on the surrounding slopes	Long-beak filaree (*Erodium botrys*), red brome (*Bromus rubens*), rattail fescue (*Vulpia myuros* var. *hirsuta*), black mustard (*Brassica nigra*), tocolote (*Centaurea melitensis*), and additional non-native grasses	Anthony Santare	QAL 123998	72112-4
12/12/2010	Glyphosate Pro 4	25.6	1.00%	20	0.40	Grassland restoration area	Area of historic livestock grazing, now in 4th year of non-native control efforts. Three years of planting have introduced *Nassella pulchra* in the central, flatter meadow area and a palette of CSS shrubs on the surrounding slopes	Long-beak filaree (*Erodium botrys*), red brome (*Bromus rubens*), rattail fescue (*Vulpia myuros* var. *hirsuta*), black mustard (*Brassica nigra*), tocolote (*Centaurea melitensis*), and additional non-native grasses	Anthony Santare	QAL 123998	72112-4
12/29/2010	Glyphosate Pro 4	30.7	2.00%	12	0.25	Grassland restoration area	Area of historic livestock grazing, now in 4th year of non-native control efforts. Three years of planting have introduced *Nassella pulchra* in the central, flatter meadow area and a palette of CSS shrubs on the surrounding slopes	Long-beak filaree (*Erodium botrys*), red brome (*Bromus rubens*), rattail fescue (*Vulpia myuros* var. *hirsuta*), black mustard (*Brassica nigra*), tocolote (*Centaurea melitensis*), and additional non-native grasses	Anthony Santare	QAL 123998	72112-4
December Glyphosate Pro 4 total		**154.9**		**111**	**2.00**						

Appendix I

Herbicide Application Record - Crestridge Ecological Reserve and South Crest Properties - 2011

Date	Product	Product Amount (oz)	Application Rate	Mixed Amount (gal)	Treatment Area (acres)	Treatment Location	Site Description	Target Invasive Species	% Cover, Non-native Species[1] at beginning of season (visual estimate)	Name of Applicator(s)	Applicator's San Diego County License #	EPA Regulation Number
1/4/2011	Glyphosate Pro 4	30.72	2.00%	12.00	0.25	Crestridge; grassland restoration area near Horsemill Road entrance	Area of historic livestock grazing, now in 4th year of non-native control efforts. Three years of planting have introduced *Nassella pulchra* in the central, flatter meadow area and a palette of CSS shrubs on the surrounding slopes	Long-beak filaree (*Erodium botrys*), red brome (*Bromus rubens*), rattail fescue (*Vulpia myuros* var. *hirsuta*), black mustard (*Brassica nigra*), tocolote (*Centaurea melitensis*), and additional non-native grasses.		Anthony Santare	QAL 123998	72112-4
1/5/2011	Glyphosate Pro 4	30.72	2.00%	12.00	0.25	Crestridge; grassland restoration area near Horsemill Road entrance	"	"		"	"	72112-4
1/9/2011	Glyphosate Pro 4	56.32	2.00%	22.00	0.50	Crestridge; grassland restoration area near Horsemill Road entrance	"	"		"	"	72112-4
1/15/2011	Glyphosate Pro 4	20.48	2.00%	8.00	0.25	Crestridge; grassland restoration area near Horsemill Road entrance	"	"		"	"	72112-4
1/17/2011	Glyphosate Pro 4	51.20	2.00%	20.00	0.50	Crestridge; grassland restoration area near Horsemill Road entrance	"	"		"	"	72112-4
1/22/2011	Glyphosate Pro 4	30.72	2.00%	12.00	0.25	Crestridge; grassland restoration area near Horsemill Road entrance	"	"		"	"	72112-4
1/29/2011	Glyphosate Pro 4	51.20	2.00%	20.00	0.50	Crestridge; grassland restoration area near Horsemill Road entrance	"	"		"	"	72112-4
January Glyphosate Pro 4 total		**271.36**		**106.00**	**2.50**							
2/5/2011	Glyphosate Pro 4	64.00	2.00%	25.00	0.50	Crestridge; grassland restoration area near Horsemill Road entrance	Area of historic livestock grazing, now in 4th year of non-native control efforts. Three years of planting have introduced *Nassella pulchra* in the central, flatter meadow area and a palette of CSS shrubs on the surrounding slopes	Long-beak filaree (*Erodium botrys*), red brome (*Bromus rubens*), rattail fescue (*Vulpia myuros* var. *hirsuta*), black mustard (*Brassica nigra*), tocolote (*Centaurea melitensis*), and additional non-native grasses.	65%	Anthony Santare	QAL 123998	72112-4

Appendix I

Herbicide Application Record - Crestridge Ecological Reserve and South Crest Properties - 2011

Date	Product	Product Amount (oz)	Application Rate	Mixed Amount (gal)	Treatment Area (acres)	Treatment Location	Site Description	Target Invasive Species	% Cover, Non-native Species[1] at beginning of season (visual estimate)	Name of Applicator(s)	Applicator's San Diego County License #	EPA Regulation Number
2/8/2011	Glyphosate Pro 4	81.92	2.00%	32.00	0.75	Crestridge, Rios Canyon; CER edge behind Rios Canyon Mobile Manor and Rios Elementary School	Area along CER boundary where structures are closer than 100' to property line, so vegetation management is required for fire safety. Vegetation is comprised primarily of coastal sage scrub shrubs, including some spiny redberry (*Rhamnus crocea*). There area also patches of native bulbs and annuals. This is an area where San Diego thornmint (*Acanthomintha ilicifolia*) was mapped in 2000, although it has not been seen in the same location in subsequent surveys. CBI biologist indicated this date of application should be well in advance of any possible emergence of this plant.	Long-beak filaree (*Erodium botrys*), red brome (*Bromus rubens*), rattail fescue (*Vulpia myuros* var. *hirsuta*), black mustard (*Brassica nigra*), tocolote (*Centaurea melitensis*), and additional non-native grasses.	30-75%	Anthony Santare, Cathy Chadwick	QAL 123998	72112-4
2/8/2011	Glyphosate Pro 4	51.20	2.00%	20.00	0.50	Crestridge, Rios Canyon; CER edge behind Rios Elementary School	Area along CER boundary where structures are closer than 100' to property line, so vegetation management is required for fire safety. Vegetation is comprised primarily of coastal sage scrub shrubs, including some spiny redberry (*Rhamnus crocea*). There area also patches of native bulbs and annuals.	Long-beak filaree (*Erodium botrys*), red brome (*Bromus rubens*), rattail fescue (*Vulpia myuros* var. *hirsuta*), black mustard (*Brassica nigra*), tocolote (*Centaurea melitensis*), and additional non-native grasses.	75%	Anthony Santare	QAL 123998	72112-4
February Glyphosate Pro 4 total		**197.12**		**77.00**	**1.75**							
3/12/2011	Glyphosate Pro 4	51.20	2.00%	20.00	1.50	Crestridge, Rios Canyon; CER edge behind Pecan Community trailer park	Area along CER boundary where structures are closer than 100' to property line, so vegetation management is required for fire safety. Vegetation is comprised primarily of coastal sage scrub shrubs, including some spiny redberry (*Rhamnus crocea*). There area also patches of native bulbs and annuals.	Long-beak filaree (*Erodium botrys*), red brome (*Bromus rubens*), rattail fescue (*Vulpia myuros* var. *hirsuta*), black mustard (*Brassica nigra*), tocolote (*Centaurea melitensis*), and additional non-native grasses.	85%	Anthony Santare	QAL 123998	72112-4

Appendix I
Herbicide Application Record - Crestridge Ecological Reserve and South Crest Properties - 2011

Date	Product	Product Amount (oz)	Application Rate	Mixed Amount (gal)	Treatment Area (acres)	Treatment Location	Site Description	Target Invasive Species	% Cover, Non-native Species[1] at beginning of season (visual estimate)	Name of Applicator(s)	Applicator's San Diego County License #	EPA Regulation Number
3/13/2011	Glyphosate Pro 4	20.48	2.00%	8.00	0.50	Crestridge, Rios Canyon; CER edge behind Pecan Community trailer park	"	Long-beak filaree (*Erodium botrys*), red brome (*Bromus rubens*), rattail fescue (*Vulpia myuros* var. *hirsuta*), black mustard (*Brassica nigra*), tocolote (*Centaurea melitensis*), additional non-native grasses, and non-native ornanmentals encroaching from trailer park landscaping (e.g., iceplant [*Carpobrotus* sp.]).	85%	Anthony Santare	QAL 123998	72112-4
March Glyphosate Pro 4 total		71.68		28.00	2.00							
3/12/2011	Fusilade II	2.23	0.58%	3.00	0.25	Crestridge: Thornmint Hill (experimental plots).	Disturbed (burned) native grassland and coastal sage scrub dominated by dense purple falsebrome (*Brachypodium distachyon*).	Purple falsebrome (*Brachypodium distachyon*), wild oats (*Avena barbata*).	100%	Anthony Santare	QAL 123998	10182-393
3/13/2011	Fusilade II	5.94	0.58%	8.00	1.00	Crestridge; oak grove near Horsemill entrance.	Area is closed canopy of coast live oak (*Quercus agrifolia*) and Engelmann oak (*Quercus engelmannii*) woodland. The northeast edge of the grove is bordered by a naturally seasonal creek that now has water most of the year due to upstream runoff. Native shrubs in the grove include toyon (*Heteromeles arbutifolia*), poison oak (*Toxicodendron diversilobum*), California fuschia (*Epilobium canum*), and honeysuckle (*Lonicera subspicata* var. *denudata*). Native annuals in the grove include miner's lettuce (*Claytonia perfoliata*) and delicate clarkia (*Clarkia delicata*).	Non-native grasses, especially long-flowered veldt grass (*Ehrharta longiflora*).	60%	Anthony Santare	QAL 123998	10182-393
3/31/2011	Fusilade II	14.85	0.58%	20.00	3.50	Crestridge; oak grove near Horsemill entrance.	"	Non-native grasses, especially long-flowered veldt grass (*Ehrharta longiflora*).		Anthony Santare	QAL 123999	10182-393

Appendix I

Herbicide Application Record - Crestridge Ecological Reserve and South Crest Properties - 2011

Date	Product	Product Amount (oz)	Application Rate	Mixed Amount (gal)	Treatment Area (acres)	Treatment Location	Site Description	Target Invasive Species	% Cover, Non-native Species[1] at beginning of season (visual estimate)	Name of Applicator(s)	Applicator's San Diego County License #	EPA Regulation Number
March Fusilade II total		**23.01**		**28.00**	**4.50**							
4/2/2011	Glyphosate Pro 4	20.48	2.00%	8.00	1.00	Crestridge; oak grove near Horsemill entrance.	"	Italian thistle (*Carduus pycnocephalus*).	60%	Anthony Santare	QAL 123998	72112-4
4/10/2011	Glyphosate Pro 4	20.48	2.00%	8.00	0.50	Crestridge; grassland restoration area near Horsemill Road entrance	Area of historic livestock grazing, now in 4th year of non-native control efforts. Three years of planting have introduced *Nassella pulchra* in the central, flatter meadow area and a palette of CSS shrubs on the surrounding slopes	Long-beak filaree (*Erodium botrys*), red brome (*Bromus rubens*), rattail fescue (*Vulpia myuros* var. *hirsuta*), black mustard (*Brassica nigra*), tocolote (*Centaurea melitensis*), additional non-native grasses, thistles (*Carduus* spp., *Cirsium* spp.), and vetch (*Vicia* spp.).	65%	Anthony Santare	QAL 123999	72112-4
4/23/2011	Glyphosate Pro 4	30.72	2.00%	12.00	1.00	Crestridge; grassland restoration area near Horsemill Road entrance	"	"	65%	Anthony Santare	QAL 123999	72112-4
4/24/2011	Glyphosate Pro 4	40.96	2.00%	16.00	2.00	Crestridge; grassland restoration area near Horsemill Road entrance	"	"	65%	Anthony Santare	QAL 124000	72112-4
4/27/2011	Glyphosate Pro 4	25.60	2.00%	10.00	2.00	Crestridge, Rios Canyon; CER edge behind Pecan Community trailer park	Area along CER boundary where structures are closer than 100' to property line, so vegetation management is required for fire safety. Vegetation is comprised primarily of coastal sage scrub shrubs, including some spiny redberry (*Rhamnus crocea*). There area also patches of native bulbs and annuals.	"	85%	Anthony Santare	QAL 123998	72112-4

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Herbicide Application Record - Crestridge Ecological Reserve and South Crest Properties - 2011

Date	Product	Product Amount (oz)	Application Rate	Mixed Amount (gal)	Treatment Area (acres)	Treatment Location	Site Description	Target Invasive Species	% Cover, Non-native Species[1] at beginning of season (visual estimate)	Name of Applicator(s)	Applicator's San Diego County License #	EPA Regulation Number
4/30/2011	Glyphosate Pro 4	20.48	2.00%	8.00	1.00	Crestridge; oak grove near Horsemill entrance.	Area is closed canopy of coast live oak (*Quercus agrifolia*) and Engelmann oak (*Quercus engelmannii*) woodland. The northeast edge of the grove is bordered by a naturally seasonal creek that now has water most of the year due to upstream runoff. Native shrubs in the grove include toyon (*Heteromeles arbutifolia*), poison oak (*Toxicodendron diversilobum*), California fuschia (*Epilobium canum*), and honeysuckle (*Lonicera subspicata* var. *denudata*). Native annuals in the grove include miner's lettuce (*Claytonia perfoliata*) and delicate clarkia (*Clarkia delicata*)	Italian thistle (*Carduus pycnocephalus*), long-flowered veldt grass (*Ehrharta longiflora*).	60%	Anthony Santare	QAL 123998	72112-4
April Glyphosate Pro 4 total		**158.72**		**62.00**	**8.50**							
4/16/2011	Fusilade II	4.08	0.58%	5.50	0.10	Crestridge, Rios Canyon Road and Montana Serena entrance road.	Access road within reserve used by management staff and SDGE for utility pole access. Traverses areas of coastal sage scrub, chaparral, and oak riparian habitats.	Long-flowered veldt grass (*Ehrharta longiflora*).	Minimal, but new infestation in of very invasive species.	Anthony Santare	QAL 124000	10182-393
Fusilade II Total		**4.08**		**5.50**	**0.10**							

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Date	Product	Product Amount (oz)	Application Rate	Mixed Amount (gal)	Treatment Area (acres)	Treatment Location	Site Description	Target Invasive Species	% Cover, Non-native Species[1] at beginning of season (visual estimate)	Name of Applicator(s)	Applicator's San Diego County License #	EPA Regulation Number
5/7/2011	Fusilade II	10.39	0.58%	14.00	1.50	Crestridge; oak grove near Horsemill entrance.	Area is closed canopy of coast live oak (*Quercus agrifolia*) and Engelmann oak (*Quercus engelmannii*) woodland. The northeast edge of the grove is bordered by a naturally seasonal creek that now has water most of the year due to upstream runoff. Native shrubs in the grove include toyon (*Heteromeles arbutifolia*), poison oak (*Toxicodendron diversilobum*), California fuschia (*Epilobium canum*), and honeysuckle (*Lonicera subspicata* var. *denudata*). Native annuals in the grove include miner's lettuce (*Claytonia perfoliata*) and delicate clarkia (*Clarkia delicata*).	Long-flowered veldt grass (*Ehrharta longiflora*).	40%	Anthony Santare	QAL 123998	10182-393
5/23/2011	Fusilade II	0.74	0.58%	1.00	0.25	Crestridge; oak grove near Horsemill entrance.	"	Long-flowered veldt grass (*Ehrharta longiflora*).	40%	Anthony Santare	QAL 123998	10182-393
May Fusilade total		**11.14**		**15.00**	**1.75**							
5/8/2011	Glyphosate Pro 4	23.04	2.00%	9.00	1.00	Crestridge; oak grove and coastal sage scrub restoration areas near Horsemill entrance.	"	Long-beak filaree (*Erodium botrys*), red brome (*Bromus rubens*), rattail fescue (*Vulpia myuros* var. *hirsuta*), black mustard (*Brassica nigra*), tocolote (*Centaurea melitensis*), and additional non-native grasses.	20%	Anthony Santare	QAL 123998	72112-4

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Date	Product	Product Amount (oz)	Application Rate	Mixed Amount (gal)	Treatment Area (acres)	Treatment Location	Site Description	Target Invasive Species	% Cover, Non-native Species[1] at beginning of season (visual estimate)	Name of Applicator(s)	Applicator's San Diego County License #	EPA Regulation Number
5/14/2011	Glyphosate Pro 4	40.96	2.00%	16.00	2.00	Crestridge, Rios Canyon; CER edge behind Pecan Community trailer park	Area along CER boundary where structures are closer than 100' to property line, so vegetation management is required for fire safety. Vegetation is comprised primarily of coastal sage scrub shrubs, including some spiny redberry (*Rhamnus crocea*). There area also patches of native bulbs and annuals.	Black mustard (*Brassica nigra*) and tocolote (*Centaurea melitensis*).	85%	Anthony Santare	QAL 123998	72112-4
5/21/2011	Glyphosate Pro 4	40.96	2.00%	16.00	2.00	Crestridge; oak grove and coastal sage scrub restoration areas near Horsemill entrance.	Area is closed canopy of coast live oak (*Quercus agrifolia*) and Engelmann oak (*Quercus engelmannii*) woodland. The northeast edge of the grove is bordered by a naturally seasonal creek that now has water most of the year due to upstream runoff. Native shrubs in the grove include toyon (*Heteromeles arbutifolia*), poison oak (*Toxicodendron diversilobum*), California fuschia (*Epilobium canum*), and honeysuckle (*Lonicera subspicata* var. *denudata*). Native annuals in the grove include miner's lettuce (*Claytonia perfoliata*) and delicate clarkia (*Clarkia delicata*). Coastal sage restoration is taking place adjacent to the oak woodland in an area previously disturbed by grazing and fire; active restoration has been in process for 5+ years.	Italian thistle (*Carduus pycnocephalus*) and long-flowered veldt grass (*Ehrharta longiflora*).	20%	Anthony Santare	QAL 123998	72112-4
5/23/2011	Glyphosate Pro 4	40.96	2.00%	16.00	2.00	Crestridge; grassland restoration area near Horsemill Road entrance	Area of historic livestock grazing, now in 4th year of non-native control efforts. Three years of planting have introduced *Nassella pulchra* in the central, flatter meadow area and a palette of CSS shrubs on the surrounding slopes.	Black mustard (*Brassica nigra*).	20%	Anthony Santare	QAL 123998	72112-4

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Herbicide Application Record - Crestridge Ecological Reserve and South Crest Properties - 2011

Date	Product	Product Amount (oz)	Application Rate	Mixed Amount (gal)	Treatment Area (acres)	Treatment Location	Site Description	Target Invasive Species	% Cover, Non-native Species[1] at beginning of season (visual estimate)	Name of Applicator(s)	Applicator's San Diego County License #	EPA Regulation Number
5/28/2011	Glyphosate Pro 4	30.72	2.00%	12.00	1.50	Crestridge; grassland restoration area near Horsemill Road entrance	"	Black mustard (*Brassica nigra*) and tocolote (*Centaurea melitensis*).	20%	Anthony Santare	QAL 123998	72112-4
May Glyphosate Pro 4 total		**176.64**		**69.00**	**8.50**							
5/28/2011	Aquamaster	2.56	2.00%	1.00	0.25	Crestridge; Horsemill stream corridor	Naturally seasonal stream that now has water year-round due to upstream runoff. Associated species include toyon (*Heteromeles arbutifolia*), coast live oak (*Quercus agrifolia*), Engelmann oak (*Quercus engelmanii*), poison oak (*Toxicodendron diversilobum*), willow (*Salix* spp.), and sedges (*Carex* spp.).	Long-leaved ehrharta (*Erharta longifolia*) and curly dock (*Rumex crispus*).	5%	Anthony Santare	QAL 123998	524-343
May Aquamaster total		**2.56**		**1.00**	**0.25**							
7/2/2011	Glyphosate Pro 4 Pro 4	30.72	4.00%	6.00	0.20	Crestridge, west end; Vista del Monte Mar roadside.	Nonnative grasses along edge of paved access road.	Natal grass (*Melinis repens*) and fountain grass (*Pennisetum setaceum*).		Anthony Santare	QAL 123998	72112-4
7/17/2011	Glyphosate Pro 4 Pro 4	7.68	2.00%	3.00	0.10	Crestridge; around house near Horsemill Road entrance.	Disturbed.	Tree tobacco (*Nicotiana glauca*) and black mustard (*Brassica nigra*).		Anthony Santare	QAL 123998	72112-4
7/17/2011	Glyphosate Pro 4 Pro 4	7.68	2.00%	3.00	5.00	Crestridge; grassland restoration area near Horsemill Road entrance	Area of historic livestock grazing, now in 4th year of non-native control efforts. Three years of planting have introduced *Nassella pulchra* in the central, flatter meadow area and a palette of CSS shrubs on the surrounding slopes.	Spot treatments, black mustard (*Brassica nigra*).		Anthony Santare	QAL 123998	72112-4
July Glyphosate Pro 4 total		**46.08**		**12.00**	**5.30**							

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Date	Product	Product Amount (oz)	Application Rate	Mixed Amount (gal)	Treatment Area (acres)	Treatment Location	Site Description	Target Invasive Species	% Cover, Non-native Species[1] at beginning of season (visual estimate)	Name of Applicator(s)	Applicator's San Diego County License #	EPA Regulation Number
9/3/2011	Glyphosate Pro 4 Pro 4	3.84	4.00%	0.75	0.10	Crestridge; east-central portion of reserve, adjacent to and just north of Gibson property.		Stinkwort (*Dittrichia graveolens*).		Anthony Santare	QAL 123998	72112-4
9/3/2011	Glyphosate Pro 4 Pro 4	6.40	4.00%	1.25	2.00	Crestridge; grassland restoration area near Horsemill Road entrance	Area of historic livestock grazing, now in 4th year of non-native control efforts. Three years of planting have introduced *Nassella pulchra* in the central, flatter meadow area and a palette of CSS shrubs on the surrounding slopes.	Spot treatments, black mustard (*Brassica nigra*).		Anthony Santare	QAL 123998	72112-4
September Glyphosate Pro 4 total		10.24		**2.00**	**2.10**							
9/10/2011	Pathfinder II	15.00	100.00%	N/A		Crestridge; Horsemill Road entrance.		Pepper trees (*Schinus molle*).		Anthony Santare	QAL 123998	62719-176
9/24/2011	Pathfinder II	1.00	100.00%	N/A		Crestridge; Horsemill Road entrance.		Tree tobacco (*Nicotiana glauca*).		Anthony Santare	QAL 123998	62719-176
September Pathfinder II total		**16.00**										
10/22/2012	Glyphosate Pro 4	19.00	100.00%	N/A	0.00	South Crest: Treated palm by spring (by entrance gate) and castor bean just downstream.		Palm (*Washingtonia* spp.), castor bean (*Ricinus communis*).		Anthony Santare	QAL 123998	72112-4
October Glyphosate Pro 4 total		**19.00**										
11/13/2012	Pathfinder II	9.00	100.00%	N/A	0.01	Crestridge; Horsemill Road entrance.		Pepper trees (*Schinus molle*); trees were cut down and stump-treated.		Anthony Santare	QAL 123998	62719-176
11/13/2011	Pathfinder II	8.00	100.00%	N/A	0.01	South Crest; edge of riparian habitat adjacent to and east of Suncrest Boulevard.	Disturbed habitat at edge of riparian-oak woodland; coastal sage scrub.	One pepper trees (*Schinus molle*) and one tamarisk tree; trees were cut down and stump-treated.		Anthony Santare	QAL 123998	62719-176

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Date	Product	Product Amount (oz)	Application Rate	Mixed Amount (gal)	Treatment Area (acres)	Treatment Location	Site Description	Target Invasive Species	% Cover, Non-native Species[1] at beginning of season (visual estimate)	Name of Applicator(s)	Applicator's San Diego County License #	EPA Regulation Number
November Pathfinder II total		**17.00**										
11/5/2011	Glyphosate Pro 4 Pro 4	14.00	100.00%	N/A		Crestridge; western portion, behind Pecan Park Trailer Park (*Arundo donax*) and near creek by Lakeview gate (*Foeniculum vulgare*).		Fennel (*Foeniculum vulgare*) - 4 plants; giant reed (*Arundo donax*) - cut stump treatment.		Anthony Santare	QAL 123998	72112-4
11/16/2011	Glyphosate Pro 4 Pro 4	15.36	1.00%	12.00	1.00	Crestridge.; Horsemill Road entrance area.		Black mustard (*Brassica nigra*), nonnative grasses, and horehound (*Marrubium vulgare*).		Anthony Santare	QAL 123998	72112-4
11/26/2011	Glyphosate Pro 4 Pro 4	25.60	1.00%	20.00	1.50	Crestridge; vicinity of Horsemill Road entrance, oak grove and surrounding areas.		Italian thistle (*Carduus pycnocephalus*), black mustard (*Brassica nigra*), tocalote (*Centaurea melitensis*), and long-flowered veldt grass (*Ehrharta longiflora*).		Anthony Santare	QAL 123998	72112-4
11/29/2011	Glyphosate Pro 4 Pro 4	110.08	1.00%	86.00	3.00	Crestridge; grassland restoration area near Horsemill Road entrance		Tocalote (*Centaurea melitensis*), black mustard (*Brassica nigra*), and non-native grasses.		Anthony Santare	QAL 123998	72112-4
11/30/2011	Glyphosate Pro 4 Pro 4	46.08	1.00%	36.00	2.00	Crestridge; grassland restoration area near Horsemill Road entrance		Tocalote (*Centaurea melitensis*), black mustard (*Brassica nigra*), and non-native grasses.		Anthony Santare	QAL 123998	72112-4
November Glyphosate Pro 4 total		**211.12**		**154.00**	**7.50**							
12/9/2011	Glyphosate Pro 4 Pro 4	40.96	2.00%	16.00	0.01	Crestridge; Vista de Monte Mar roadsides.		Black mustard (*Brassica nigra*) and tocalote (*Centaurea melitensis*).		Anthony Santare	QAL 123998	72112-4
12/10/2011	Glyphosate Pro 4 Pro 4	20.48	2.00%	8.00	0.01	Crestridge; La Cresta Heights; Rios stepovers.		Black mustard (*Brassica nigra*) and iceplant (*Carpobrotus* sp.).		Anthony Santare	QAL 123998	72112-4
12/17/2011	Glyphosate Pro 4 Pro 4	30.72	2.00%	12.00	0.01	Crestridge; around Horsemill Road entrance.		Black mustard (*Brassica nigra*), filaree (*Erodium* spp.), vetch (*Vicia* spp.).		Anthony Santare	QAL 123998	72112-4

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Date	Product	Product Amount (oz)	Application Rate	Mixed Amount (gal)	Treatment Area (acres)	Treatment Location	Site Description	Target Invasive Species	% Cover, Non-native Species[1] at beginning of season (visual estimate)	Name of Applicator(s)	Applicator's San Diego County License #	EPA Regulation Number
12/24/2011	Glyphosate Pro 4 Pro 4	10.24	2.00%	4.00	0.01	Crestridge; around Horsemill Road entrance.		Black mustard (*Brassica nigra*), long-flowered veldt grass (*Ehrharta longiflora*), and Italian thistle (*Carduus pycnocephalus*).		Anthony Santare	QAL 123998	72112-4
12/26/2011	Glyphosate Pro 4 Pro 4	5.12	2.00%	2.00	0.01	Crestridge; around Horsemill Road entrance.		Black mustard (*Brassica nigra*) and filaree (*Erodium* spp.).		Anthony Santare	QAL 123998	72112-4
12/26/2011	Glyphosate Pro 4 Pro 4	20.48	2.00%	8.00	0.02	Crestridge; around Horsemill Road entrance.		Black mustard (*Brassica nigra*) and nettle (*Urtica urens*).		Anthony Santare	QAL 123998	72112-4
12/28/2011	Glyphosate Pro 4 Pro 4	20.48	2.00%	8.00	0.01	Crestridge; Horsemill oak grove.		Long-flowered veldt grass (*Ehrharta longiflora*) and Italian thistle (*Carduus pycnocephalus*).		Anthony Santare	QAL 123998	72112-4
12/31/2011	Glyphosate Pro 4 Pro 4	20.48	2.00%	8.00	1.01	Crestridge; Horsemill oak grove.		Long-flowered veldt grass (*Ehrharta longiflora*) and Italian thistle (*Carduus pycnocephalus*).		Anthony Santare	QAL 123998	72112-4
December Glyphosate Pro 4 total		**168.96**			**1.09**							

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Date	Product	Product Amount (oz)	Application Rate	Mixed Amount (gal)	Treatment Area (acres)	Treatment Location	Target Invasive Species	Name of Applicator(s)	Applicator's San Diego County License #	EPA Regulation Number
1/6/2012	Glyphosate Pro 4 Pro 4	46.08	2.00%	18.00	2.00	Crestridge; west end.	Filaree (*Erodium* spp.), black mustard (*Brassica nigra*), and tocalote (*Centaurea melitensis*).	Anthony Santare	QAL 123998	72112-4
1/7/2012	Glyphosate Pro 4 Pro 4	51.20	2.00%	20.00	3.00	Crestridge; west end.	Filaree (*Erodium* spp.), black mustard (*Brassica nigra*), and tocalote (*Centaurea melitensis*).	Anthony Santare	QAL 123998	72112-4
1/14/2012	Glyphosate Pro 4 Pro 4	7.68	2.00%	3.00	0.50	Crestridge; around Horsemill Road entrance.	Fennel (*Foeniculum vulgare*), black mustard (*Brassica nigra*), and tocalote (*Centaurea melitensis*).	Anthony Santare	QAL 123998	72112-4
1/20/2012	Glyphosate Pro 4 Pro 4	14.00	100.00%	N/A	0.01	Crestridge; around Horsemill Road entrance.	Palm tree (*Washingtonia* sp.).	Anthony Santare	QAL 123998	72112-4
1/27/2012	Glyphosate Pro 4 Pro 4	30.72	2.00%	12.00	2.00	Crestridge; grassland restoration area near Horsemill Road entrance	Filaree (*Erodium* spp.), black mustard (*Brassica nigra*), and tocalote (*Centaurea melitensis*).	Anthony Santare	QAL 123998	72112-4
1/28/2012	Glyphosate Pro 4 Pro 4	40.96	2.00%	16.00	2.00	Crestridge; grassland restoration area near Horsemill Road entrance	Filaree (*Erodium* spp.), black mustard (*Brassica nigra*), and tocalote (*Centaurea melitensis*).	Anthony Santare	QAL 123998	72112-4
1/29/2012	Glyphosate Pro 4 Pro 4	30.72	2.00%	12.00	2.00	Crestridge; grassland restoration area near Horsemill Road entrance	Filaree (*Erodium* spp.), black mustard (*Brassica nigra*), and tocalote (*Centaurea melitensis*).	Anthony Santare	QAL 123998	72112-4
January Glyphosate Pro 4 total		**221.36**		**81.00**	**11.56**					
2/1/2012	Fusilade II	4.83	0.58%	6.50	0.25	Crestridge, 'Thornmint Hill;' experimental plots.	Purple false brome (*Brachypodium distachyon*).	Anthony Santare	QAL 123998	10182-393
2/15/2012	Fusilade II	0.74	0.58%	1.00	0.10	Crestridge, 'Thornmint Hill.'	Tanglehead (*Heteropogon contortus*).	Anthony Santare	QAL 123998	10182-393
2/17/2012	Fusilade II	1.48	0.58%	2.00	1.25	Crestridge; Horsemill oak grove	Long-flowered veldt grass (*Ehrharta longiflora*).	Anthony Santare	QAL 123998	10182-393
February Fusillade II total		**7.05**		**9.50**	**1.60**					

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2/18/2012	Round up Quick Pro Dry	12		8	1.00	Crestridge; around Horsemill Road entrance.	Black mustard (*Brassica nigra*), nettle (*Urtica* sp.).	Anthony Santare	QAL 123998	524-535
1/25/2012	Round up Quick Pro Dry	24		20	1.50	Crestridge; around Horsemill Road entrance.	Black mustard (*Brassica nigra*), nettle (*Urtica* sp.).	Anthony Santare	QAL 123998	524-535
February Round up Quick Dry Pro total		**36.00**		**28.00**	**2.50**					
2/24/2012	Glyphosate Pro 4 Pro 4	10.24	2.00%	4.00	0.50	Crestridge; La Cresta Heights trail entrance.	Black mustard (*Brassica nigra*), nettle (*Urtica* sp.).	Anthony Santare	QAL 123998	72112-4
2/24/2012	Glyphosate Pro 4	10.24	2.00%	4.00	0.50	Crestridge; Horsemill Road entrance.	Black mustard (*Brassica nigra*), horehound (*Marrubium vulgare*).	Anthony Santare	QAL 123998	72112-4
2/29/2012	Glyphosate Pro 4	120.32	2.00%	47.00	2.75	South Crest; along Orchard Avenue.	Black mustard (*Brassica nigra*) and garland chrysanthemum (*Glebionis coronaria*).	Anthony Santare	QAL 123998	72112-4
February Glyphosate Pro 4 Pro 4 total		**140.80**		**8.00**	**1.00**					
3/2/2012	Glyphosate Pro 4 Pro 4	71.68	2.00%	28.00	2.00	Crestridge, west end; Vista de Monte Mar roadsides.	Black mustard (Brassica nigra), tocalote (Centaurea melitensis).	Anthony Santare	QAL 123998	72112-4
3/3/2012	Glyphosate Pro 4 Pro 4	51.20	2.00%	20.00	1.50	Crestridge, west end; Vista de Monte Mar roadsides.	Black mustard (Brassica nigra), tocalote (Centaurea melitensis).	Anthony Santare	QAL 123998	72112-4
3/7/2012	Glyphosate Pro 4	133.12	2.00%	52.00	3.00	South Crest; along Orchard Avenue.	Black mustard (*Brassica nigra*) and garland chrysanthemum (*Glebionis coronaria*).	Anthony Santare	QAL 123998	72112-4
3/9/2012	Glyphosate Pro 4 Pro 4	10.24	2.00%	4.00	0.50	Crestview, west end; Lakeview gate entrance area.	Black mustard (*Brassica nigra*), fennel (*Foeniculum vulgare*).	Anthony Santare	QAL 123998	72112-4
3/9/2012	Glyphosate Pro 4 Pro 4	7.00	100.00%	N/A	0.01	Crestridge; Horsemill Road entrance, demonstration garden.	Laurel sumac (*Malosma laurina*).	Anthony Santare	QAL 123998	72112-4
3/15/2012	Glyphosate Pro 4 Pro 4	51.20	2.00%	20.00	1.50	Crestridge; vicinity of Thornmint Hill (SERG).	Fountain grass (*Pennisetum setaceum*).	Anthony Santare	QAL 123998	72112-4

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Date	Product	Product Amount (oz)	Application Rate	Mixed Amount (gal)	Treatment Area (acres)	Treatment Location	Target Invasive Species	Name of Applicator(s)	Applicator's San Diego County License #	EPA Regulation Number
3/30/2012	Glyphosate Pro 4 Pro 4	51.20	2.00%	20.00	1.50	Crestridge; Horsemill grassland restoration area.	Black mustard (*Brassica nigra*), tocalote (*Centaurea melitensis*), and filaree (*Erodium* spp.).	Anthony Santare	QAL 123998	72112-4
March Glyphosate Pro 4 Pro 4 total		**375.64**		**88.00**	**6.51**					
3/15/2012	Stalker	38.40	3.00%	10.00	1.00	Crestridge; vicinity of Thornmint Hill (SERG).	Fountain grass (*Pennisetum setaceum*) - low volume application.	Anthony Santare	QAL 123998	241-398
March Stalker total		**38.40**		**10.00**	**1.00**					
3/15/2012	No Foam A adjuvant	5.12	0.40%	10.00	1.00	Crestridge; vicinity of Thornmint Hill (SERG).	Fountain grass (*Pennisetum setaceum*).	Anthony Santare	QAL 123998	CA Reg 1050775-50015
March No Foam A adjuvant total		**5.12**		**10.00**	**1.00**					
3/16/2012	Round up Quick Pro Dry	5.25		7.00	0.75	Crestridge; Horsemill Road entrance.	Black mustard (*Brassica nigra*), non-native grasses.	Anthony Santare	QAL 123998	524-535
3/23/2012	Round up Quick Pro Dry	24.00		16.00	1.00	Crestridge; Horsemill Road grassland restoration area.	Black mustard (*Brassica nigra*), tocalote (*Centaurea melitensis*), and filaree (*Erodium* spp.).	Anthony Santare	QAL 123998	524-535
3/31/2012	Round up Quick Pro Dry	12.00		8.00	0.50	Crestridge; Horsemill Road grassland restoration area.	Black mustard (*Brassica nigra*), tocalote (*Centaurea melitensis*), and filaree (*Erodium* spp.).	Anthony Santare	QAL 123998	524-535
March Round up Quick Pro Dry		**41.25**		**31.00**	**2.25**					
4/6/2012	Glyphosate Pro 4 Pro 4	32.77	1.60%	16.00	1.50	Crestridge; Horsemill Road grassland restoration area.	Black mustard (*Brassica nigra*), tocalote (*Centaurea melitensis*), vetch (*Vicia* spp.).	Anthony Santare	QAL 123998	72112-4
	Element 4 (Garlon 4)	10.80	0.50%	(cocktail)						62719-40

Appendix I
Herbicide Application Record - Crestridge Ecological Reserve and South Crest Properties - 2012

Date	Product	Product Amount (oz)	Application Rate	Mixed Amount (gal)	Treatment Area (acres)	Treatment Location	Target Invasive Species	Name of Applicator(s)	Applicator's San Diego County License #	EPA Regulation Number
	No Foam A	4.00	0.20%							CA Reg 1050775-50015
4/7/2012	Glyphosate Pro 4 Pro 4	24.58	1.60%	12.00	1.20	Crestridge; Horsemill Road grassland restoration area.	Black mustard (*Brassica nigra*), tocalote (*Centaurea melitensis*), vetch (*Vicia* spp.).	Anthony Santare	QAL 123998	72112-4
	Element 4 (Garlon 4)	8.10	0.50%	(cocktail)						62719-40
	No Foam A	3.00	0.20%							CA Reg 1050775-50015
4/20/2012	Glyphosate Pro 4 Pro 4	24.58	1.60%	12.00	1.20	Crestridge; Horsemill Road grassland restoration area.	Black mustard (*Brassica nigra*), tocalote (*Centaurea melitensis*), vetch (*Vicia* spp.).	Anthony Santare	QAL 123998	72112-4
	Element 4 (Garlon 4)	8.10	0.50%	(cocktail)						62719-40
	No Foam A	3.00	0.20%							CA Reg 1050775-50015
4/21/2012	Glyphosate Pro 4 Pro 4	28.67	1.60%	14.00	2.00	Crestridge; Horsemill Road entrance and vicinity of house.	Black mustard (*Brassica nigra*), tocalote (*Centaurea melitensis*), and nettle (*Urtica* spp.).	Anthony Santare	QAL 123998	72112-4
	Element 4 (Garlon 4)	9.50	0.50%	(cocktail)						62719-40
	No Foam A	3.50	0.20%							CA Reg 1050775-50015
4/27/2012	Glyphosate Pro 4 Pro 4	40.96	1.60%	20.00	2.50	Crestridge; trails around the Horsemill Road entrance.	Black mustard (*Brassica nigra*), tocalote (*Centaurea melitensis*).	Anthony Santare	QAL 123998	72112-4
	Element 4 (Garlon 4)	13.50	0.50%	(cocktail)						62719-40
	No Foam A	5.00	0.20%							CA Reg 1050775-50015

Appendix I

Herbicide Application Record - Crestridge Ecological Reserve and South Crest Properties - 2012

Date	Product	Product Amount (oz)	Application Rate	Mixed Amount (gal)	Treatment Area (acres)	Treatment Location	Target Invasive Species	Name of Applicator(s)	Applicator's San Diego County License #	EPA Regulation Number
4/28/2012	Glyphosate Pro 4 Pro 4	32.77	1.60%	16.00	1.50	Crestridge; Horsemill Road grassland restoration area.	Black mustard (*Brassica nigra*), tocalote (*Centaurea melitensis*), vetch (*Vicia* spp.).	Anthony Santare	QAL 123998	72112-4
	Element 4 (Garlon 4)	10.80	0.50%	(cocktail)						62719-40
	No Foam A	4.00	0.20%							CA Reg 1050775-50015
April Glyphosate Pro 4 Pro 4-Element 4 (Garlon 4)-No Foam A Cocktail	Glyphosate Pro 4 Pro 4	**184.32**		**90.00**	**9.90**					
	Element 4 (Garlon 4)	**60.80**		**(cocktail)**						
	No Foam A	**22.50**								
4/7/2012	Fusilade II	2.23	0.58%	3.00	0.75	Crestridge; Horsemill Road oak grove.	Long-flowered veldt grass (*Ehrharta longiflora*).	Anthony Santare	QAL 123998	10182-393
April Fusillade II total		**2.23**		**3.00**	**0.75**					
4/12/2012	Round up Quick Pro Dry	18.00		12.00	1.25	Crestridge; Horsemill Road grassland restoration area.	Black mustard (*Brassica nigra*), tocalote (*Centaurea melitensis*), vetch (*Vicia* spp.).	Anthony Santare	QAL 123998	524-535
April Round up Quick Pro Dry total		**18.00**		**12.00**						
5/4/2012	Glyphosate Pro 4	32.00	1.60%	16.00	1.50	Crestridge; Horsemill Road grassland restoration area.	Black mustard (*Brassica nigra*), tocalote (*Centaurea melitensis*), vetch (*Vicia* spp.).	Anthony Santare	QAL 123998	72112-4
	Element 4 (Garlon 4)	10.80	0.50%	(cocktail)						62719-40
	No Foam A	4.00	0.20%							CA Reg 1050775-50015

Appendix I

Herbicide Application Record - Crestridge Ecological Reserve and South Crest Properties - 2012

Date	Product	Product Amount (oz)	Application Rate	Mixed Amount (gal)	Treatment Area (acres)	Treatment Location	Target Invasive Species	Name of Applicator(s)	Applicator's San Diego County License #	EPA Regulation Number
5/5/2012	Glyphosate Pro 4	24.00	1.60%	12.00	1.20	Crestridge; Horsemill Road grassland restoration area.	Black mustard (*Brassica nigra*), tocalote (*Centaurea melitensis*), vetch (*Vicia* spp.).	Anthony Santare	QAL 123998	72112-4
	Element 4 (Garlon 4)	8.10	0.50%	(cocktail)						62719-40
	No Foam A	3.00	0.20%							CA Reg 1050775-50015
5/6/2012	Glyphosate Pro 4	24.00	1.60%	12.00	2.50	Crestridge; Horsemill trailheads, Horsemill Road oak grove	Black mustard (*Brassica nigra*), tocalote (*Centaurea melitensis*), long-flowered veldt grass (*Ehrharta longiflora*).	Anthony Santare	QAL 123998	72112-4
	Element 4 (Garlon 4)	8.10	0.50%	(cocktail)						62719-40
	No Foam A	3.00	0.20%							CA Reg 1050775-50015
5/11/2012	Glyphosate Pro 4	14.00	1.60%	7.00	1.30	Crestridge; La Cresta Heights and Rios Canyon	Black mustard (*Brassica nigra*), tocalote (*Centaurea melitensis*).	Anthony Santare	QAL 123998	72112-4
	Element 4 (Garlon 4)	4.70	0.50%	(cocktail)						62719-40
	No Foam A	1.60	0.20%							CA Reg 1050775-50015
5/12/2012	Glyphosate Pro 4	32.00	1.60%	16.00	2.75	Crestridge; Behind Pecan Park Trailer Park and Rios Elementary School	Black mustard (*Brassica nigra*), tocalote (*Centaurea melitensis*).	Anthony Santare	QAL 123998	72112-4
	Element 4 (Garlon 4)	10.80	0.50%	(cocktail)						62719-40
	No Foam A	4.00	0.20%							CA Reg 1050775-50015
5/18/2012	Glyphosate Pro 4	24.00	1.60%	12.00	1.75	Crestridge; Vista de Monte Mar roadsides	Black mustard (*Brassica nigra*), tocalote (*Centaurea melitensis*).	Anthony Santare	QAL 123998	72112-4
	Element 4 (Garlon 4)	8.10	0.50%	(cocktail)						62719-40
	No Foam A	3.00	0.20%							CA Reg 1050775-50015
5/18/2012	Glyphosate Pro 4	16.00	1.60%	8.00	1.50	Crestridge; behind Rios Manor Trailer Park	Black mustard (*Brassica nigra*), tocalote (*Centaurea melitensis*).	Anthony Santare	QAL 123998	72112-4
	Element 4 (Garlon 4)	5.40	0.50%	(cocktail)						62719-40
	No Foam A	2.50	0.20%							CA Reg 1050775-50015

Appendix I

Herbicide Application Record - Crestridge Ecological Reserve and South Crest Properties - 2012

Date	Product	Product Amount (oz)	Application Rate	Mixed Amount (gal)	Treatment Area (acres)	Treatment Location	Target Invasive Species	Name of Applicator(s)	Applicator's San Diego County License #	EPA Regulation Number
5/19/2012	Glyphosate Pro 4	27.00	1.60%	13.50	2.00	Crestridge; Vista de Monte Mar roadsides	Black mustard (*Brassica nigra*), tocalote (*Centaurea melitensis*).	Anthony Santare	QAL 123998	72112-4
	Element 4 (Garlon 4)	9.10	0.50%	(cocktail)						62719-40
	No Foam A	3.40	0.20%							CA Reg 1050775-50015
5/19/2012	Glyphosate Pro 4	16.00	1.60%	8.00	0.75	Crestridge; Horsemill Road Entrance	Black mustard (*Brassica nigra*), tocalote (*Centaurea melitensis*).	Anthony Santare	QAL 123998	72112-4
	Element 4 (Garlon 4)	5.40	0.50%	(cocktail)						62719-40
	No Foam A	2.00	0.20%							CA Reg 1050775-50015
May Glyphosate Pro 4 Pro 4-Element 4 (Garlon 4)-No	**Glyphosate Pro 4**	**209.00**		**104.50**						
	Element 4 (Garlon 4)	**70.50**								
	No Foam A	**26.50**								
5/28/2012	Glyphosate Pro 4	31.2	2.00%	12	0.75	Crestridge; Horsemill Road oak grove and shed areas	Black mustard (*Brassica nigra*), long-flowered veldt grass (*Ehrharta longiflora*).	Anthony Santare	QAL 123998	72112-4
May Glyphosate Pro 4 total		**31.2**		**12**						

Appendix J
Invasive Species Detection Package

J.1: Invasive Plant Fact Sheets

J.2: Volunteer Invasive Plant Form

Appendix J.1

Invasive Plant Fact Sheets

Arundo donax

Giant Reed

How is it identified?

Perennial grass nine to 9 meters (30 feet) tall; grows in many-stemmed, cane-like clumps with pale green to blue-green leaves up to two feet long; cream-colored, plume-like flowers.

When does it flower?

Early summer to early fall.

Where is it found?

Riparian areas, floodplains, drainage ditches, residential areas.

Photo by James H. Miller, USDA Forest Service, www.forestryimages.org

How does it spread?

It spreads either by rhizomes (underground runners) or fragments. Fragments disperse by water, mud, and human activities

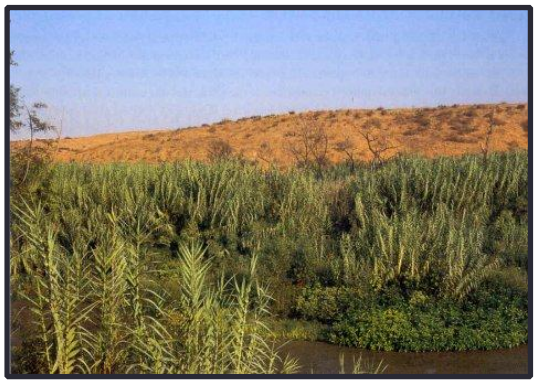


Photo by Cal-IPC

Why is it a problem?

Forms massive stands that displace native vegetation and wildlife, including aquatic species; outcompetes native plants for water; alters hydrological regimes, reduces groundwater availability, alters channel morphology, contributes to fuel load and increased fire intensity, contributes to flooding and bank erosion.

References:

California Invasive Plant Council (Cal-IPC). 2003. Plant assessment form: Arundo donax.
http://www.cal-ipc.org/ip/inventory/PAF/Arundo%20donax.pdf
DiTomaso, J.M. and E.A. Healy. 2007. Pages 1034-1039 in Weeds of California and other western states. Vol. 2: Geraniaceae-Zygophyllaceae. University of California Agriculture and Natural Resources publication 3488, Oakland, CA. 1805 pp.
Dudley, T.L. 2000. Pages 53-58 in Bossard, C.C., J.M. Randall, and M.C. Hoshovsky, eds. Invasive plants of California's wildlands. University of California Press, Berkeley, CA. 360 pp.

Brachypodium distachyon

Purple False-brome

How is it identified?

Annual grass to 15 inches (0.4 m) tall; bright (lime) green in spring, drying orange-yellow; flowering stalks spike-like, spikes often tinged purple; flowers with stiff awns.

When does it flower?

April - June

Where is it found?

Dry slopes and fields, roadsides, coastal sage scrub, grassland; often abundant on clay soils and in post-burn conditions.

How does it spread?

Spreads by seed; dense stands may produce >36,000 seeds m^2; seed falls near parent plant but is dispersed greater distances by animals, vehicles (including mountain bikes), and humans (e.g., socks, boots).

Why is it a problem?

Forms dense stands, particularly on clay soils, outcompeting native and other nonnative plants, including threatened and endangered species; forms dense litter layers that provide fuel for fire and alter fire regimes (grass-fire cycle); likely lowers wildlife habitat value and alters nutrient cycling.

References:

California Invasive Plant Council (Cal-IPC). 2007. Plant assessment form: Brachypodium distachyon..
http://www.cal-ipc.org/ip/inventory/PAF/Brachypodium%20distachyon.pdf
DiTomaso, J.M. and E.A. Healy. 2007. Pages 1046-1052 in Weeds of California and other western states. Vol. 2: Geraniaceae-Zygophyllaceae. University of California Agriculture and Natural Resources publication 3488, Oakland, CA. 1805 pp.

Brassica tournefortii

Saharan Mustard

How is it identified?

Annual herb; 0.1-1 meter (0.3-3 feet) tall with stiff and dense hairs on the leaves and stems. Leaves are deeply lobed; pale yellow flowers have 4 petals. Fruit is a long silique that is spreading to ascending. The fruit almost appears "beaded."

When does it flower?

December through June.

Where is it found?

Along roadsides, disturbed areas, orchards, annual grasslands, washes, desert habitats, and coastal scrub.

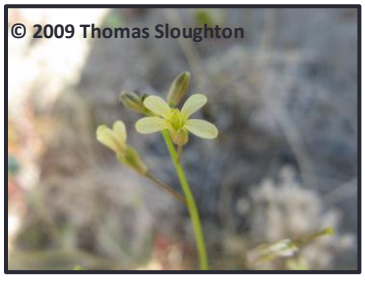
Saharan mustard in foreground (in fruit) growing with other non-native plant species.

How does it spread?

Copious seed producer. Seeds can remain viable in soil for three or more years, and are spread by animals, agricultural commodities (e.g., hay), vehicle tires, and via wind when dried and dead plants break off and are blown.

Why is it a problem?

Competes with native plants for light, water, and nutrients. May increase fire frequency and intensity in desert habitats, where fire was previously uncommon. Can form very dense monocultures.



References:

Minnich, R.A. and A.C. Sanders. 2000. Brassica tournefortii. Pages 68-72 in Bossard, C.C., J.M. Randall, and M.C. Hoshovsky, eds. Invasive plants of California's wildlands. University of California Press, Berkeley, CA. 360 pp.

California Invasive Plant Council (Cal-IPC). 2005. Plant assessment form: Brassica tournefortii.
http://www.cal-ipc.org/ip/inventory/PAF/Brassica%20tournefortii.pdf

DiTomaso, J.M. and E.A. Healy. 2007. Pages 460-470 in Weeds of California and other western states. Vol. 1: Aizoaceae-Fabaceae. University of California Agriculture and Natural Resources publication 3488, Oakland, CA. 1805 pp.

Carduus pycnocephalus ssp. *pycnocephalus*

Italian thistle

How is it identified?

Italian thistle is an annual plant that can grow to 2 meters (6.5 feet) tall. Leaves and stem are wooly and very spiny. Flowers are pink to purple and a few to many of these flowers can occur on a plant depending on its size. The seeds are either light brown or silver and tufted with whitish-tannish hairs.

When does it flower?

September through July.

Where is it found?

In pastures, along roadsides, disturbed habitats, riparian areas, coastal scrub, grasslands, chaparral, oak woodlands and oak grasslands, and meadows.

How does it spread?

It is a copious seed producer and spreads by seed. Germination is highest in areas of bare soil, but germination and spread can occur in most habitats if conditions are suitable.


© 2009 Thomas Stoughton

Why is it a problem?

Outcompetes other plants for light, water, and nutrients. Forms dense monocultures that displace other plants. May prevent wildlife from using areas that existed prior to the invasion. Can carry grass fires to tree canopies.

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References:

Baldwin, Bruce G., Douglas H. Goldman, David J. Keil, Robert Patterson, Thomas J. Rosatti, and Dieter H. Wilken, eds. The Jepson manual vascular plants of California, second edition. University of California Press. CA. 1,568 pp.

Bossard, Carla and Rich Lichti. 2000. Carduus pycnocephalus. Pages 86-90 in Bossard, C.C., J.M. Randall, and M.C. Hoshovsky, eds. Invasive plants of California's wildlands. University of California Press, Berkeley, CA. 360 pp.

Carpobrotus spp.

Iceplant, Hottentot-fig

How is it identified?

Mat-forming or trailing perennial; elongate, succulent leaves; showy yellow or pink flowers.

When does it flower?

February – Fall; may flower year-round in some locations.

Where is it found?

Escape from cultivation; planted along highways; coastal scrub, grasslands.

Carpobrotus edulis (Hottentot-fig)
© 2009 Neal Kramer

How does it spread?

Spreads by seed and vegetatively by root fragments. Seeds are consumed and dispersed by animals (e.g., rabbits, rodents, deer).

Carpobrotus edulis (Hottentot-fig)
© 2009 Neal Kramer

Why is it a problem?

Competes directly with native plants for nutrients, water, light, and space; suppresses native seedlings and mature shrubs; increases soil organic matter which ultimately encourages invasion by other nonnative species; spreads rapidly into suitable areas.

References:

Albert, M. 2000. Carpobrotus edulis. Pages 90-94 in Bossard, C.C., J.M. Randall, and M.C. Hoshovsky, eds. Invasive plants of California's wildlands. University of California Press, Berkeley, CA. 360 pp.

California Invasive Plant Council (Cal-IPC). 2005. Plant assessment form: Carpobrotus edulis.
http://www.cal-ipc.org/ip/inventory/PAF/Carpobrotus%20edulis.pdf

D'Antonio, C.M. 1993. Mechanisms controlling invasion of coastal plant communities by the alien succulent Carpobrotus edulis. Ecology 74(1):83-95.

D'Antonio, C.M. and B.E. Mahall. 1991. Root profiles and competition between the invasive, exotic perennial Carpobrotus edulis, and two native shrub species in California coastal scrub. American Journal of Botany 78:885-894.

DiTomaso, J.M. and E.A. Healy. 2007. Pages 58-70 in Weeds of California and other western states. Vol. 2: Aizoaceae-Fabaceae. University of California Agriculture and Natural Resources publication 3488, Oakland, CA. 1805 pp.

Cortaderia selloana

Pampasgrass

How is it identified?

Large, densely tufted perennial grass with long basal leaves and tall, showy, plume-like inflorescences.

When does it flower?

Late August through September; occasionally in winter.

Where is it found?

Disturbed areas, roadsides, road-cuts, wetlands (including riparian areas), grasslands, coastal scrub habitats.

Cortaderia selloana **(Pampasgrass)**
© 2008 Neal Kramer

How does it spread?

Seed dispersal by wind (up to 30 km or >18 miles) and human activities. Each seed-bearing plume can produce up to 100,000 seeds. Also spreads vegetatively from root fragments. Increases rapidly after initial colonization.

Cortaderia selloana **(Pampasgrass)**
© 2001 CDFA

Why is it a problem?

Dense stands crowd out native plants and degrade wildlife habitat; harbors vermin (e.g., rats); build-up of dry leaves, leaf bases, and flowering stalks create a fire hazard.

References:

California Invasive Plant Council (Cal-IPC). 2004. Plant assessment form: Cortaderia selloana . http://www.cal-ipc.org/ip/inventory/PAF

DiTomaso, J. 2000. Pages 124-132 in Bossard, C.C., J.M. Randall, and M.C. Hoshovsky, eds. Invasive plants of California's wildlands. University of California Press, Berkeley, CA. 360 pp.

DiTomaso, J.M. and E.A. Healy. 2007. Pages 1090-1097 in Weeds of California and other western states. Vol. 2: Geraniaceae-Zygophyllaceae. University of California Agriculture and Natural Resources publication 3488, Oakland, CA. 1805 pp.

Global Invasive Species Database. 2006. Cortaderia jubata (grass).
http://www.issg.org/database/species/impact_info.asp?si=375&fr=1&sts=&lang=EN

Cynara cardunculus

Artichoke Thistle, Cardoon

How is it identified?

Large perennial herb to 2.5 meters (7.5 feet) tall; gray-green leaves; bright purple flower heads 5-8 centimeters (2-3 inches) in diameter; stout spines on leaves, stems, and flowering bracts.

When does it flower?

April – July.

Where is it found?

Disturbed areas, fallow or abandoned fields, grasslands, riparian woodlands, openings in coastal sage scrub and chaparral; does well in heavy clay soils.

How does it spread?

Spreads by seed; dispersal is by gravity, wind, water, attachment to animals, vehicle tires.

Why is it a problem?

Outcompetes native vegetation for light, water, and nutrients; dense stands displace native vegetation and wildlife, impede wildlife movement.

References:

DiTomaso, J.M. and E.A. Healy. 2007. Pages 302-305 in Weeds of California and other western states. Vol. 1 – Aizoaceae-Fabaceae. University of California Agriculture and Natural Resources, Oakland, CA.

Kelly, M. Pages 139-145 in Bossard, C.C., J.M. Randall, and M.C. Hoshovsky, eds. Invasive plants of California's wildlands. University of California Press, Berkeley, CA. 360 pp.

Dittrichia graveolens

Stinkwort

How is it identified?

Erect annual plant to about 0.7 meters (2.3 feet) tall; sticky glandular-hairy foliage, yellow flowers; very aromatic (like camphor or Vicks VapoRub).

When does it flower?

Late summer into fall.

Where is it found?

Disturbed areas (roadsides, graded pads), but can then spread into native habitat, including drainages.

How does it spread?

Each plant produces abundant seed that can be spread by wind, water, animals (including horses), vehicles, construction equipment, contaminated soil, shoes, and clothing.

Why is it a problem?

Displaces native plants; provides poor forage for wildlife; poisonous to livestock; causes dermatitis and skin irritation in some people.

References:

Marriott, M. No date. The spread and control of Dittrichia graveolens. http://www.cal-ipc.org/ip/management/pdf/Dittrichia_poster.jpg

Parsons, W.T. and E.G. Cuthbertson. 1992. Noxious weeds of Australia. Inkata Press, Melbourne and Sydney.

DiTomaso, J.M. and E.A. Healy. 2007. Pages 350-352 in Weeds of California and other western states. Vol. 1 – Aizoaceae-Fabaceae. University of California Agriculture and Natural Resources, Oakland, CA.

Burry, J.N. and P.M. Kloot. 1982. The spread of Composite (Compositae) weeds in Australia. Contact Dermatitis 8:410-413.

Santa Clara County Weed Management Area (WMA). 2007. Weed alert: Dittrichia graveolens. www.bpaonline.org/habitat/dittrichia_weed_alert_flyer.pdf.

Santa Clara County WMA. 2009. Dittrichia graveolens – a new threat to Santa Clara County. www.cal-ipc.org/WMAs/Dittrichia%20Brochure%202009%20General.doc

Ehrharta longiflora

Long-flowered Veldt Grass

How is it identified?

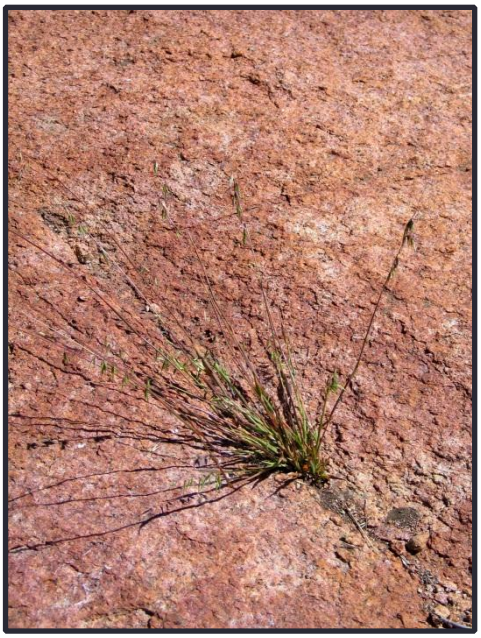
Annual grass to about 0.6 meters (2 feet) tall; sprawling habit with erect stems growing from the crown; purplish-tinged leaves and flowers.

When does it flower?

Spring – Summer.

Where is it found?

Roadsides, rock outcrops, understory and edge of oak woodland and riparian habitats, coastal sage scrub, chaparral.



How does it spread?

Spreads primarily by wind-borne seed.

Why is it a problem?

Impacts are not well-known, but it appears to spread rapidly in wildland areas. Dense stands can result in litter build-up which may alter nutrient cycling and contribute to fuel load. Relatively new invasive species in San Diego County.

References:

California Invasive Plant Council (Cal-IPC). 2003. Plant assessment form: Ehrharta longiflora.
http://www.cal-ipc.org/ip/inventory/PAF/Ehrharta%20longiflora.pdf
DiTomaso, J.M. and E.A. Healy. 2007. Pages 1133-1135 in Weeds of California and other western states. Vol. 2: Geraniaceae-Zygophyllaceae. University of California Agriculture and Natural Resources publication 3488, Oakland, CA. 1805 pp.
Pickart, A.J.. 2000. Pages 5164-170 in Bossard, C.C., J.M. Randall, and M.C. Hoshovsky, eds. Invasive plants of California's wildlands. University of California Press, Berkeley, CA. 360 pp.

Elymus caput-medusae

Medusa Head

How is it identified?

Winter annual grass to 0.6 meters (2 feet) tall. Bright green while growing; as plant matures, it turns brownish-tan and the spikes bend into almost a horizontal position. A late season grass that can be identified by its bright green appearance as the season progresses.

When does it flower?

Germination can begin in the fall after the first rains, but some seeds don't germinate until winter or spring. Flowering occurs in May.

Where is it found?

Grows in disturbed sites, rangeland, grasslands, oak woodlands, sagebrush, and chaparral openings. Does best in areas that receive 8 inches of rain a year.

Photo: Blecker et al. no date.

How does it spread?

Spreads by seed; seed production can be prolific. Seeds are able to sprout in dense, dry thatch even without touching the soil. Seed spread can occur by clinging to animal fur and human clothing, wind, water, soil movement, on vehicles tires, and on the bottom of shoes.

Photo: Blecker et al. no date.

Why is it a problem?

This rangeland weed can displace native plants and wildlife. The awns and florets can injure the eyes, mouths, and nostrils of grazing animals due to high silica levels. Large amounts of dry grass thatch are left in place after this species senesces which can change soil temperature and soil moisture dynamics. Large dry stands create fuel for wildfires.

References:

Baldwin, B.G., D.H. Goldman, D.J. Keil, R. Patterson, T.J. Rosatti, and D.H. Wilken, eds. The Jepson manual vascular plants of California, second edition. University of California Press. CA. 1568 pp.

Kan, T. and O. Pollack. 2000. Taeniatherum caput-medusae. Pages 309-312. in Bossard, C.C., J.M. Randall, and M.C. Hoshovsky, eds. Invasive plants of California's wildlands. University of California Press, Berkeley, CA. 360 pp.

DiTomaso, J.M. and E.A. Healy. 2007. Pages 1310-1313 in Weeds of California and other western states. Vol. 2: Geraniaceae – Zygophyllaceae. University of California Agriculture and Natural Resources publication 3488, Oakland, CA. 1805 pp.

Emex spinosa

Devil's Thorn

How is it identified?

Erect to sprawling annual plant to 3-6(8) decimeters (1-2[2.6] feet) tall, base often red. Three-angled fruit with spines is a key identifying characteristic.

When does it flower?

May – December.

Where is it found?

Sandy areas or disturbed places; < 500 meters elevation. On Crestridge Ecological Reserve, Devil's thorn has been found along Rios Canyon.

How does it spread?

Spiny seed pods stick to humans, vehicles, machinery, and animals; may be transported through soil movement. Spreads along trails. Also, wind- and water-dispersed.

Why is it a problem?

Considered a noxious weed by the federal and state governments. Carpets areas if left unchecked, crowding out other species.

References:

Burrascano, C. 2005. Personal communication in California Invasive Plant Council (Cal-IPC). 2005. Plant assessment form: Emex spinosa. http://www.cal-ipc.org/ip/inventory/PAF/Emex%20spinosa.pdf

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DiTomaso, J.M. and E.A. Healy. 2007. Page 1649 in Weeds of California and other western states. Vol. 2: Geraniaceae-Zygophyllaceae. University of California Agriculture and Natural Resources publication 3488, Oakland, CA. 1805 pp.

Sadeh, A., H. Guterman, M. Gersani, and O. Ovadia. 2009. Plastic bet-hedging in an amphicarpic annual: an integrated strategy under variable conditions. Evolutionary Ecology 23:373-388.

Foeniculum vulgare

Fennel

How is it identified?

Perennial with a thick taproot, 0.9-2 meters (3-6.5 feet) tall; licorice smell when crushed. Leaves, green and thread-like (feathery). Small, yellow flowers are arranged in an umbel. Seeds small and tannish in color; look similar to fennel seeds sold for food flavoring.

When does it flower?

April through July.

Where is it found?

Disturbed and undisturbed areas, including pastures, abandoned lots, roadsides, sites adjacent to brackish water, grasslands, coastal scrub, savannahs, and the banks of creeks, estuaries and bays.

How does it spread?

By seed and resprouts from root crown. Copious seed producer; seeds can remain dormant in the soil for several years. Seeds are dispersed by animals, humans, water, clinging to clothing, and mud on vehicle tires.

Why is it a problem?

Can form dense monocultures that alter native vegetation composition by outcompeting native plants for light, nutrients, and water. May exude substances that inhibit the growth of other plants. Can form a long-lived soil seed bank that makes control and eradication difficult.

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References:

Baldwin, B.G., D.H. Goldman, D.J. Keil, R. Patterson, T.J. Rosatti, and D.H. Wilken, eds. The Jepson manual vascular plants of California, second edition. University of California Press. CA. 1568 pp.

Klinger, R. 2000. Pages 198-202 in Bossard, C.C., J.M. Randall, and M.C. Hoshovsky, eds. Invasive plants of California's wildlands. University of California Press, Berkeley, CA. 360 pp.

Glebionis coronaria

Garland Chrysanthemum

How is it identified?

Annual that can grow to 1 meter (3 feet) tall. Leaves toothed, pinnately lobed or dissected. Bright yellow flowers composed of ray (petals) and disk flowers. Flower petals can also be white or a combination of yellow and white.

When does it flower?

March through July.

Where is it found?

Along roadsides, disturbed habitats, riparian areas, coastal scrub, grasslands, coastal bluffs, and sand dunes.

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How does it spread?

Spreads by seed and most of the seed falls to the ground below the parent plant allowing for large monocultures to form. Possibly spread by wind, water, and birds.

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Why is it a problem?

Competes with native plants for light, water, and nutrients. Can form very dense monocultures; dry plants persist for several years. Possibly prevents wildlife from using the open areas that existed prior to the invasion.

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References:

California Invasive Plant Council (Cal-IPC). 2005. Plant assessment form: Chrysanthemum coronarium.
http://www.cal-ipc.org/ip/inventory/PAF/Chrysanthemum%20coronarium.pdf

DiTomaso, J.M. and E.A. Healy. 2007. Page 1607 in Weeds of California and other western states. Vol. 2: Geraniaceae-Zygophyllaceae. University of California Agriculture and Natural Resources publication 3488, Oakland, CA. 1805 pp.

Heteropogon contortus

Tanglehead

How is it identified?

Densely tufted perennial grass, 0.2-1 meters (0.7-3.3 feet) tall; leaves turn orange-pink after frost. Inflorescence of terminal spikes, 4-8 cm long, with long, bent or wavy, dark reddish-brown awns that are often tangled or twisted together.

When does it flower?

March – November (but found flowering in late January on Crestridge Ecological Reserve)

Where is it found?

Rocky slopes, washes, open areas, particularly depressions or sites with excess water available; < 800 meters elevation.

How does it spread?

Reproduces by seed; most seed remains dormant for ~ 1 year after maturation. Burning appears to increase seedling recruitment. May be spread by animals, humans.

Why is it a problem?

Considered a noxious plant by the California Department of Agriculture. Spikelets become tangled in wool of sheep and florets can injure livestock. Fast-growing; may displace native species. Extent of ecological impacts is unknown.

References:

Baldwin, B.G., D.H. Goldman, D.J. Keil, R. Patterson, T.J. Rosatti, and D.H. Wilken, eds. 2012. The Jepson manual, vascular plants of California. Second edition. Berkeley, CA: University of California Press. 1568 pp.

DiTomaso, J.M. and E.A. Healy. 2007. Pages 1176-1178 in Weeds of California and other western states. Vol. 2: Geranaceae-Zygophyllaceae. University of California Agriculture and Natural Resources publication 3488, Oakland, CA. 1805 pp.

Global Invasive Species Database. 2008. Heteropogon contortus. http://www.issg.org/database/species/ecology.asp?si=1334&r=1&sts=&lang=EN

Lepidium latifolium

Perennial Pepperweed

How is it identified?

Perennial herb to 2 meters (6.6 feet) tall; stems, leaves gray-green and waxy, may have reddish spots; small white flowers; extensive, creeping root system.

When does it flower?

May – September.

Where is it found?

Wetlands (including riparian areas, meadows), roadsides, irrigation ditches, and fields with slightly alkaline or saline soils.

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How does it spread?

Spreads by seed and underground stems. Prolific seed producer (produces up to 6 million seeds/acre); seeds are dispersed by wind, water, soil movement, birds, tires, shoes.

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Why is it a problem?

Forms dense stands that displaces native vegetation and degrades wildlife habitat. Alters soil salinity; dense litter increases soil organic matter and alters carbon/nitrogen ratios.

References:

California Invasive Plant Council (Cal-IPC). 2003. Plant assessment form: Lepidium latifolium.
http://www.cal-ipc.org/ip/inventory/PAF/Lepidium%20latifolium.pdf

DiTomaso, J.M. and E.A. Healy. 2007. Pages 511-515 in Weeds of California and other western states. Vol. 1 – Aizoaceae-Fabaceae. University of California Agriculture and Natural Resources, Oakland, CA.

Howald, A. Pages 222-227in Bossard, C.C., J.M. Randall, and M.C. Hoshovsky, eds. Invasive plants of California's wildlands. University of California Press, Berkeley, CA. 360 pp.

Marrubium vulgare
White Horehound

How is it identified?

Herbaceous perennial to 0.6 meters (2 feet) tall; stems densely white-woolly; leaves opposite and ridged; inflorescence of head-like whorls of small white flowers. Mint family; aromatic.

When does it flower?

March – November.

Where is it found?

Disturbed areas such as overgrazed pastures, waste places, ditches, and roadsides. Generally grows in dry areas, but can be found near wetland or riparian habitats.

How does it spread?

Reproduces by seed; forms large, persistent seedbank. Most seeds fall directly below parent plant; however, seeds can also be dispersed by water, soil movement, mud, animals, human activities, and vehicle tires. Seeds can survive ingestion by horses.

Why is it a problem?

Horehound is a common weed in disturbed areas, especially where there is little competition from other species. May outcompete native species for water resources due to its deep taproot.

References:
Baldwin, B.G., D.H. Goldman, D.J. Keil, R. Patterson, T.J. Rosatti, and D.H. Wilken, eds. 2012. The Jepson manual, vascular plants of California. Second edition. Berkeley, CA: University of California Press. 1568 pp.
California Invasive Plant Council (Cal-IPC). 2004. Plant assessment form: Marrubium vulgare.
http://www.cal-ipc.org/ip/inventory/PAF/Marrubium%20vulgare.pdf
DiTomaso, J.M. and E.A. Healy. 2007. Pages 873-875 in Weeds of California and other western states. Vol. 2: Geranaceae-Zygophyllaceae University of California Agriculture and Natural Resources publication 3488, Oakland, CA. 1805 pp.

Melinis repens ssp. *repens*

Natal Grass

How is it identified?

Annual or short-lived perennial grass that can grow to 1.5 meters (~5 feet) tall. Leaves are bright green and flowers are densely silky. The rose to purple flowers fade to pink or white as they age. The flowers make identification of this species easy.

When does it flower?

Year-round.

Where is it found?

Along roadsides, disturbed habitats, slopes, southern maritime chaparral, and coastal scrub. This grass is used for slope stabilization.

How does it spread?

This grass is a copious seed producer and spread likely occurs via wind, water, human activities, and animals. Spread of this plant can occur in both disturbed and undisturbed habitats. The seed can remain viable for at least one year.

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Why is it a problem?

Natal grass competes with native plants for light, water, and nutrients. This species can also form dense patches in native scrub habitats possibly leading to an increase in the fire frequency.

References:
Baldwin, Bruce G., Douglas H. Goldman, David J. Keil, Robert Patterson, Thomas J. Rosatti, and Dieter H. Wilken, eds. The Jepson manual vascular plants of California, second edition. University of California Press. CA. 1,568 pp.
Vinje, J. Personal communication. June 6, 2012.

Nicotiana glauca

Tree Tobacco

How is it identified?

Evergreen shrub or small tree to 7 meters (23 feet) tall; stems laxly branched; grayish-green leaves; yellow tubular flowers; foliage has an unpleasant scent.

When does it flower?

March – November.

Where is it found?

Roadsides, fields, disturbed areas and waste places, riparian habitat; often on sandy or gravelly soils.

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How does it spread?

Prolific seed producer; seeds are dispersed by wind, water, soil movement, animals, and humans. Often moves down streams.

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Why is it a problem?

Rapid growth; young plants can grow > 1 meter (3 feet)/year. All plant parts are toxic to animals and humans; hummingbirds pollinate this species rather than native plants, resulting in a decline in habitat for native wildlife species, including cactus wren.

References:

California Invasive Plant Council (Cal-IPC). 2005 Plant assessment form: Nicotiana glauca.
http://www.cal-ipc.org/ip/inventory/PAF/Nicotiana%20glauca.pdf
DiTomaso, J.M. and E.A. Healy. 2007. Pages 1513-1517 in Weeds of California and other western states. Vol. 2 – Geraniaceae-Zygophyllaceae. University of California Agriculture and Natural Resources, Oakland, CA. 1805 pp.
Global Invasive Species Database. 2010. Nicotiana glauca.
http://www.issg.org/database/species/ecology.asp?si=1453&fr=1&sts=&lang=EN

Oxalis pes-caprae

Buttercup oxalis, Bermuda buttercup, sourgrass

How is it identified?

Low-growing perennial herb; shamrock-like leaves; bright yellow flowers.

When does it flower?

November-April.

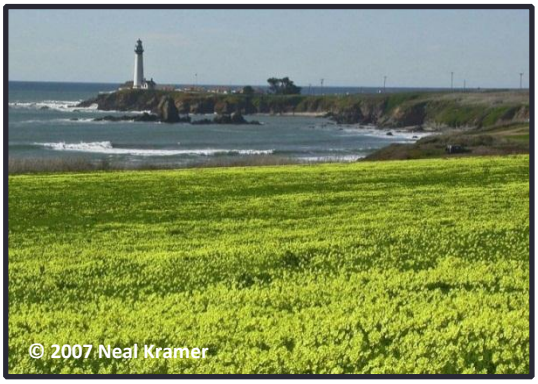
Where is it found?

Garden ornamental that has escaped locally; roadsides, disturbed areas, fields, orchards, grassland, disturbed coastal scrub. ***Note: has not been observed on Crestridge; however, it does occur on South Crest.***

Oxalis pes-caprae **(Bermuda buttercup)**

How does it spread?

Garden escape that spreads at urban-wildland interface. Reproduces by bulbs rather than seeds; bulbs can be spread by garden waste, soil movement, equipment, intentional planting, cultivation; bulblets can also be dispersed by birds.



Oxalis pes-caprae **(Bermuda buttercup)**

Why is it a problem?

Outcompetes native plants for light and space; contributes to soil organic matter and alters nutrient cycling; may be toxic to wildlife.

References:

California Invasive Plant Council (Cal-IPC). 2003. Plant assessment form. Oxalis pes-caprae.
http://www.cal-ipc.org/ip/inventory/PAF/Oxalis%20pes%20caprae.pdf
DiTomaso, J.M. and E.A. Healy. 2007. Pages 981-988 in Weeds of California and other western states. Vol. 2: Geraniaceae-Zygophyllaceae. University of California Agriculture and Natural Resources publication 3488, Oakland, CA. 1805 pp.

Pennisetum setaceum

Fountain Grass

How is it identified?

Perennial, clumping grass to 1.5 meters (5 feet) tall; flowering stalks showy, nodding, feathery; light pink to purple flowers.

When does it flower?

January – November.

Where is it found?

Disturbed areas, roadsides, road-cuts, rock crevices, coastal sage scrub, chaparral.

How does it spread?

Popular ornamental plant; produces large amounts of seed that is dispersed by wind, water, birds, vehicles, and humans.

Why is it a problem?

Dense stands crowd out native plants and degrade wildlife habitat; produces large amounts of biomass which contribute to increased fire frequency and intensity, and result in type conversion of shrubland to grassland.

References:

California Invasive Plant Council (Cal-IPC). 2004. Plant assessment form: Pennisetum setaceum.
http://www.cal-ipc.org/ip/inventory/PAF/Pennisetum%20setaceum.pdf

DiTomaso, J.M. and E.A. Healy. 2007. Pages 1219-1229 in Weeds of California and other western states. Vol. 2: Geraniaceae-Zygophyllaceae. University of California Agriculture and Natural Resources publication 3488, Oakland, CA. 1805 pp.

Lovich, J.E. 2000. Pages 258-262 in Bossard, C.C., J.M. Randall, and M.C. Hoshovsky, eds. Invasive plants of California's wildlands. University of California Press, Berkeley, CA. 360 pp.

Ricinus communis

Castor Bean

How is it identified?

Perennial shrub, 1-5 meters (3-15 feet) tall; large, palmately lobed leaves, often with a reddish cast. Flowers small and greenish, with separate male and female flowers on same plant; fruit round, gray-green (or red-tinged), soft-spiny capsule. Crushed foliage has a disagreeable odor.

When does it flower?

Throughout much of the year.

Where is it found?

Often found in riparian areas; may occur in abandoned fields, drainages, ditches, and roadsides or trails.


Source: Alvesgaspar

How does it spread?

Cultivated as an oil crop and ornamental; seeds sold as a gopher deterrent; occasionally found in nurseries. Seeds spread by moving water, soil transport, road maintenance machinery, and mammals. Can resprout from rootcrown when cut.


Source: Geographer @en.wikipedia

Why is it a problem?

Displaces native plants in riparian areas and drainages. Early colonizer in disturbed areas (including burns), outcompeting natives and producing monocultures. Seeds, leaves contain the highly toxic protein, ricin. Ingestion can be lethal to humans and causes animal moralities. Oil from leaves, seeds causes contact dermatitis in some people.


2005 George W. Hartwell

References:

California Invasive Plant Council (Cal-IPC). 2004. Plant assessment form: Ricinus communis.
http://www.cal-ipc.org/ip/inventory/PAF/Ricinus communis.pdf
DiTomaso, J.M. and E.A. Healy. 2007. Pages 728-730 in Weeds of California and other western states. Vol. 1: Aizoaceae-Fabaceae. University of California Agriculture and Natural Resources publication 3488, Oakland, CA. 1805 pp.
Burrascano, C. 2000. Pages 269-2673in Bossard, C.C., J.M. Randall, and M.C. Hoshovsky, eds. Invasive plants of California's wildlands. University of California Press, Berkeley, CA. 360 pp.

Silybum marianum

Blessed Milk-thistle

How is it identified?

Erect annual or biennial to 2 meters (6 feet) tall; leaves prickly and white-variegated. Flowers heads of numerous pink-purple flowers with spine-tipped phyllaries. Dead stems and flower heads can persist into winter.

When does it flower?

April – July.

Where is it found?

Disturbed sites, roadsides, pastures, fields, agricultural areas, trail margins in chaparral and woodlands; prefers fertile soils.

How does it spread?

Reproduces by seed; seeds are wind-dispersed over short distances and dispersed longer distances through human-activities, water, soil movement, animals, and in crop seed or as a feed contaminant. Seeds can survive up to 9 years under field conditions. Requires disturbance to spread.

Why is it a problem?

Forms dense stands that outcompete and displace native vegetation, i.e., large rosettes block light and suppress germination and growth. Dead skeletons can carry fire into grassland and scrub habitats. Foliage can be toxic to livestock and possibly, deer.

References:

California Invasive Plant Council (Cal-IPC). 2004. Plant assessment form: Silybum marianum.
http://www.cal-ipc.org/ip/inventory/PAF/Silybum%20marianum.pdf
DiTomaso, J.M. and E.A. Healy. 2007. Pages 391-394 in Weeds of California and other western states. Vol. 1: Aizoaceae-Fabaceae. University of California Agriculture and Natural Resources publication 3488, Oakland, CA. 1805 pp.

Tamarix spp.

Tamarisk; Saltcedar

How is it identified?

Tamarisk is a shrub or tree that can reach heights up to 25 meters (82 feet) (depending on the species). The small, green, sessile leaves are awl-like or scale-like and encrusted with excreted salt. The flowers are pink, white, or red.

When does it flower?

Flowering months vary by species but usually begin in either early or late spring and end by mid-summer.

Where is it found?

Tamarisk grows in ditches, canals, desert washes, springs, along the shores of lakes, ponds, rivers and streams, and in riparian communities, and can grow in a variety of soil types including alkaline, saline, and acidic soils.

Saltcedar (Tamarix ramosissima)

How does it spread?

Tamarisk can spread vegetatively and seedlings and shoots can grow rapidly. Roots can also sprout adventitiously. Mature trees produce copious amounts of seed.

Saltcedar (Tamarix ramosissima)

Why is it a problem?

Impacts include drastic changes in geomorphology, lowering the water table, altering soil chemistry, increasing fire frequency, decreasing plant community composition, and lowering habitat value for wildlife.

References:

Baldwin, B.G., D.H. Goldman, D.J. Keil, R. Patterson, T.J. Rosatti, and D.H. Wilken, eds. The Jepson manual vascular plants of California, second edition. University of California Press. CA. 1568 pp.

Lovich, J. 2000. Tamarix ramosissima, T. chinensis, T. gallica, and T. parviflora. Pages 312-317 in Bossard, C.C., J.M. Randall, and M.C. Hoshovsky, eds. Invasive plants of California's wildlands. University of California Press, Berkeley, CA. 360 pp.

DiTomaso, J.M. and E.A. Healy. 2007. Pages 1554-1561 in Weeds of California and other western states. Vol. 2: Geraniaceae – Zygophyllaceae. University of California Agriculture and Natural Resources publication 3488, Oakland, CA. 1805 pp.

Vinca major
Periwinkle

How is it identified?

Periwinkle is a perennial, sprawling plant with shiny, dark green leaves. The leaves are usually opposite each other on the stem. The flowers are purplish-blue with a white center and there are five petals.

When does it flower?

March through July.

Where is it found?

Periwinkle grows in moist, shaded sites in riparian areas, oak woodlands, along roadsides, near old homesteads, and on coastal bluffs.

How does it spread?

Periwinkle spreads vegetatively by rooting at the stem nodes as they come in contact with the soil. It does not reproduce by seed in California. It spreads rapidly in wet conditions, but dies back with frost. Periwinkle can resprout after dieback and does poorly in dry soil and direct sunlight.

Why is it a problem?

Periwinkle can form a dense ground cover that prohibits the growth of other plants. It lowers plant diversity and disrupts natural plant communities and ecosystem functioning including local hydrology.

References:

Baldwin, Bruce G., Douglas H. Goldman, David J. Keil, Robert Patterson, Thomas J. Rosatti, and Dieter H. Wilken, eds. The Jepson manual vascular plants of California, second edition. University of California Press. CA. 1,568 pp.

Drewitz, Jennifer. 2000. Pages 326-329 in Bossard, C.C., J.M. Randall, and M.C. Hoshovsky, eds. Invasive plants of California's wildlands. University of California Press, Berkeley, CA. 360 pp.

Appendix J.2

Reserve Ranger Invasive Plant Data Form

Reserve Ranger_Invasive Species Form

Scientific Name					
Common Name					
Observor(s) Name					
Date					
Property Name					
General Location					
Specific Location					
Did you record a GPS waypoint?	Yes _____ No ____				
GPS Coordinates					
If occurrence is a discrete patch, estimate size (length x width)	Patch Size: _____ length x _____ width (____ feet **or** ____ meters)				
Estimate number of individuals	1-25_____	25-50_____	50-100_____	100-500____	>500_____
Is species flowering or fruiting?	Flowering_____ Fruiting_____				
Habitat Description	Disturbed (e.g., roadside, trail)_____ Natural habitat_____				
Photograph(s)	Yes_____ No_____				
Comments					
Definitions:					
Scientific Name	*Provide scientific name, if known*				
Common Name	*Provide common name, if known*				
Observor(s) Name	*Provide name of person completing the field form*				
Date	*Provide date that invasive species was observed*				
Property Name	*Provide name of reserve or adjacent property (e.g., Crestridge Ecological Reserve, South Crest, private [or private property owner, if known])*				
General Location	*General location of observance (e.g., Horsemill Road Entrance, Skeleton Flats)*				
Specific Location	*Provide additional information to help locate occurrence (e.g., nw corner of Skeleton Flats)*				
GPS Waypoint	*Indicate whether a GPS waypoint was taken. If available, provide make, model of GPS unit.*				
GPS Coordinates	*Provide GPS coordinates, if taken*				
Patch Size	*Estimate patch size; indicate whether units are in feet or meters*				
Number of Individuals	*Estimate number of individuals present*				
Flowering or Fruiting	*Indicate whether species is flowering or has fruits*				
Habitat Description	*Provide information on where species is growing (e.g., bare soil along a trail, in the middle of a stand of native vegetation)*				
Photograph(s)	*Indicate whether or not you took a photograph of the species or habitat*				
Comments	*Add any comments you feel would help identify this plant or re-locate this occurrence*				

Appendix K
Invasive Plant Data Form

Invasive Species Data Form

Species	
Occurrence Number	
Date	
Observor(s)	
Organization	Conservation Biology Institute
State	California
County	San Diego
Ownership	California Department of Fish and Game
Land Manager	Endangered Habitats Conservancy
General Location	Crestridge Ecological Reserve
Specific (onsite) Location	
GPS Unit **Datum**	
GPS Location (waypoint)	
GPS Error	
Aspect	
Infested Area	
Gross Area	
Canopy Closure (canopy area covered by invasive plant)	
Abundance	
Vegetation Community	
Overall Site Quality	☐ Very Good-Excellent ☐ Fair-Good ☐ Poor ☐ Very Poor
Comments	
Voucher Specimen	Yes/No; Herbarium:
Definitions: *Occurrence Number* *Infested Area/Gross Area* *Canopy Closure* *Abundance* *Overall Site Quality*	 *Site (CER or SC)_4-letter species code (e.g., PESE)_Number* *Acres; hectares; square feet; square meters* *Trace (less than 1%); low (1-5%); Moderate (5.1-25%); High (25.1-100%)* *Single plant; scattered plants; dense monoculture; scattered dense patches* *See Modified Trudgen & Keighery Vegetation Condition Scale*

Overall Site Quality: Modified Trudgen & Keighery Vegetation Condition Scale	
Very Good to Excellent	80-100% Native Flora Composition
	Vegetation structure intact or nearly so
	Cover/abundance of weeds < 5%
	No or minimal signs of disturbance
Fair to Good	50-80% Native Flora Composition
	Vegetation structure modified or somewhat modified
	Cover/abundance of weeds 5-20% any number of individuals
	Possible minor signs of disturbance
Poor	20-50% Native Flora Composition
	Vegetation structure modified or somewhat modified
	Cover/abundance of weeds 20-60% any number of individuals
	Disturbance incidence high
Very Poor	0-20% Native Flora Composition
	Vegetation structure disappeared
	Cover/abundance of weeds 60-80% any number of individuals
	Disturbance incidence high