



2015 ANNUAL PLAN
FORMER FORT ORD SITE 39 HABITAT RESTORATION

W91238-14-D-0010 | APRIL 2016



Burleson Consulting Inc.
Woman-Owned Small Business
Environmental Services

**FINAL | 2015 ANNUAL REPORT
FORMER FORT ORD SITE 39 HABITAT RESTORATION
CONTRACT NO. W91238-14-D-0010-0001**

FORMER FORT ORD



Prepared for:

US Army Corps of Engineers
Sacramento District
1325 J Street
Sacramento, CA 95814-2922

Prepared by:

Burleson Consulting Inc.
950 Glenn Drive, Suite 245
Folsom, CA 95630

April 2016



Burleson Consulting Inc.

Woman-Owned Small Business
Environmental Services

This page intentionally left blank

TABLE OF CONTENTS

Section	Page
1.0 INTRODUCTION	1
1.1 Purpose.....	1
1.2 General Site Conditions	1
1.3 Site 39 Restoration Progress.....	2
2.0 RESTORATION PROTOCOLS AND SITE SPECIFIC RESTORATION PLANS	4
2.1 Burleson Carmel Valley Native Plant Nursery	4
3.0 SEED COLLECTION.....	6
3.1 Seed Production/Purchase	6
4.0 PLANT PROPAGATION	7
5.0 RESTORATION ACTIVITIES.....	8
5.1 Passive Restoration.....	8
5.2 Active Restoration	9
6.0 MONITORING, RESULTS AND DISCUSSION	11
6.1 Photo Points and Photo Documentation	11
6.2 HMP Forbs Density Surveys and Results.....	11
6.3 Random Quadrat Sampling.....	27
6.4 Plant Survivorship Monitoring	27
7.0 EROSION CONTROL.....	32
8.0 COMMUNITY INVOLVEMENT WORKSHOP / OPEN HOUSE BUS TOUR.....	33
9.0 FIFTH ANNUAL SITE 39 HABITAT RESTORATION MEETING	34
10.0 REFERENCES	35

Images

Image 1. Restoration Progress Map.	3
---	---

Tables

Table 1. 2015 Summary of Passive Restoration Activities per Historic Area.....	8
Table 2. 2015 Summary of Active Restoration Activities per Historic Area	10
Table 3. 2015 Summary of Monitoring Activities per Historic Area	11

Appendices

- A. Seed & Plant Tables
- B. Monitoring Results
- C. Photograph Log of Activities
- D. Figures
- E. Photo Points

Graphs

Graph 1. HA 19 Sand Gilia Density Classes	13
Graph 2. HA 39/40 Sand Gilia Density Classes	14
Graph 3. HA 43 Sand Gilia Density Classes	15
Graph 4. HA 18 Monterey Spineflower Density Classes	16
Graph 5. HA 22 Monterey Spineflower Density Classes	17
Graph 6. HA 23 Monterey Spineflower Density Classes	18
Graph 7. HA 28 Monterey Spineflower Density Classes	19
Graph 8. HA 33 Monterey Spineflower Density Classes	20
Graph 9. HA 37 Monterey Spineflower Density Classes	21
Graph 10. HA 38 Monterey Spineflower Density Classes	22
Graph 11. HA 39/40 Monterey Spineflower Density Classes	23
Graph 12. HA 43 Monterey Spineflower Density Classes	24
Graph 13. HA 39/40 Seaside Bird's Beak Density Classes	25
Graph 14. HA 43 Seaside Bird's Beak Density Classes.....	26
Graph 15. Overall Plant Survivorship Results	31

Acronyms and Abbreviations

Burleson	Burleson Consulting Inc.
BMP	Best Management Practice
CDFA	California Department of Food and Agriculture
CDFW	California Department of Fish and Wildlife
CSUMB	California State University Monterey Bay
ft ²	square feet
HA	Historic Area
HMP	Habitat Management Plan
HRP	Habitat Restoration Plan
km	kilometer
lb	pound
MCAC	Monterey County Agricultural Commission
SSRP	Site Specific Restoration Plan
USACE	US Army Corps of Engineers
USFWS	US Fish and Wildlife Service

1.0 INTRODUCTION

Burleson Consulting Inc. (Burleson) was issued ID/IQ Contract Number W91238-14-D-0010 by the US Army Corps of Engineers (USACE) to continue habitat restoration at Site 39 Remedial Action Areas at former Fort Ord, Monterey, California. This annual report summarizes all restoration activities completed during the 2015 calendar year.

1.1 Purpose

Former military ranges are currently undergoing soil remediation and subsequent habitat restoration in areas that range in size from 0.05 to 14 acres and are scattered around the perimeter of the Site 39 Inland Ranges area (Site 39) of former Fort Ord. Approximately 60 acres of soil remediation areas need restoration at Historic Areas (HA) 18, 19, 22, 23, 26, 27, 27A, 28, 29, 33, 34, 36, 37, 38, 39/40, 43, 44, 48, and Austin Road Stockpile. Burleson's objective is to provide seed/plant material collection, propagation, planting, and minor erosion control repairs necessary to restore the area to the requirements of the Site 39 Habitat Restoration Plan (HRP) (Shaw 2009). The restoration area contains primarily rare central maritime chaparral habitat with smaller inclusions of coastal sage scrub, oak woodland, grassland, and vernal pool habitats.

Previously, Burleson developed Site Specific Restoration Plans (SSRP) for HAs 18, 19, 22, 23, 26, 27, 27A, 28, 29, 33, 34, 36, 37, 38, 39/40, 43, 44, 48, and Austin Road Stockpile (Burleson 2013) which provide detailed information (site conditions, baseline vegetation, targets, and collection/propagation requirements) for each HA. In 2010, Burleson prepared the Plant Material, Collection, Storage, and Propagation Protocols for Site Restoration at Site 39 (Burleson 2010). These documents provide the necessary information and guidance to conduct restoration activities at Site 39 Inland Ranges. This annual report provides the details involved with the execution of habitat restoration on Site 39 for the year 2015.

Work performed during 2015 consisted of:

- Storage of previously collected plant material
- Propagation of the collected material
- Restoration activities at HAs 19, 28, 34, 37, and 38
- Stormwater related repairs at HAs 28 and 37
- Monitoring of restoration sites to evaluate vegetative establishment

1.2 General Site Conditions

Site 39 is dominated by maritime chaparral; a regionally rare, fire-dependent plant community found within the coastal fog zone on sandy to rocky soils. Chaparral habitats are dominated by drought-deciduous or evergreen sclerophyllous shrubs. This unique species-rich plant community changes in species composition from the western edges of the Site 39 Inland Ranges, which are frequently foggy and cool, to the eastern edges which are less foggy, warmer, and drier.

1.3 Site 39 Restoration Progress

SSRPs have been developed for 18 HAs and one stockpile area requiring habitat restoration for 61.71 acres. The 19 SSRPs have prescribed passive restoration (seeding) to 31.87 acres and active restoration (seeding and planting) to 29.84 acres. Active restoration requires installation of approximately 52,000 plants. Image 1 presents the current status of restoration sites within Site 39 Inland Ranges.

Both active and passive restoration activities began in 2011 and are ongoing. By the end of the 2015 calendar year, approximately 42 acres had been seeded (passive restoration) and about 22,000 plants had been installed (active restoration). Twelve of the 19 restoration sites have received their full SSRP restoration prescription and are currently in a monitoring phase. Five of the sites have received some level of restoration and two sites have not received any restoration to date.

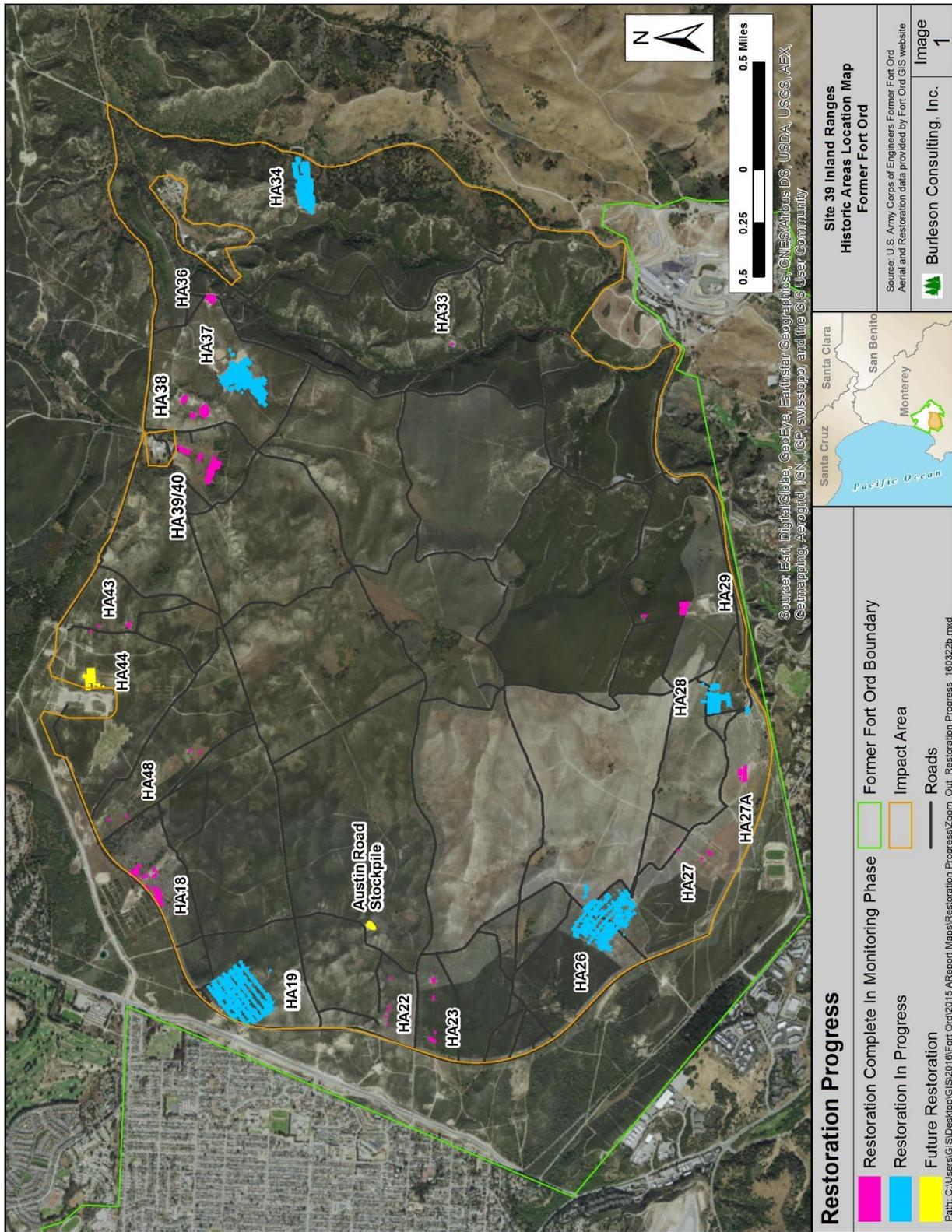


Image 1. Restoration Progress Map.

2.0 RESTORATION PROTOCOLS AND SITE SPECIFIC RESTORATION PLANS

Burleson developed the Site 39 Plant Material Collection, Storage, and Propagation Protocols (Burleson 2010) and SSRPs for each HA that detail quantities and types of plant material to be collected for former Fort Ord (Burleson 2013). The protocols contain detailed information on specific salvage and propagation techniques to be followed by field crews. Burleson teamed with Rana Creek and California State University Monterey Bay (CSUMB) Watershed Institute to complete these habitat restoration activities. Additionally, Hedgerow Farms/S&S Seed supported Burleson with seed production as discussed in Section 3.1.

In accordance with the protocol (Burleson 2010), field crews collected Habitat Management Plan (HMP) species within a 1-kilometer (km) radius centered on each HA. Common species were collected within a 10-mile radius of each HA. Collected seeds were processed manually to remove residual hull, stems, leaves, and chaff, as much as possible. Seed weight totals were entered into the plant inventory database after seed processing was completed.

The plant material collected was stored at the CSUMB Watershed Institute and Burleson's native plant nursery in Carmel Valley. The plant material was stored in cool, dry locations until ready to be processed. Labeling and tracking of all plant material followed the storage protocol (Burleson 2010). A spreadsheet database was developed, maintained, and is regularly updated by Burleson biologists so that plant and seed inventories are readily available. The database contains the following information:

- Scientific name and common name
- Container size (if applicable)
- Quantity (in nursery)
- Quantity (delivered)
- Seed/cutting origin
- Client
- Batch name and date sown
- Experimental treatments used during propagation (when applicable)

Burleson staff entered GPS data, collection quantities, and species of plants salvaged into the plant inventory database to track each species collected.

2.1 Burleson Carmel Valley Native Plant Nursery

Beginning in March 2015, Burleson started building and transitioning to a new native plant nursery in Carmel Valley, California. The new nursery was specifically designed for the propagation of hard to grow former Fort Ord species and began full operation in June 2015. The new facility features a greenhouse, uncovered sun area, covered shade areas, transitional hoop houses, as well as seed storage, ground tarping, fenced enclosure around all areas, heating mats, temperature regulated cooling systems, and timed irrigation systems.

Working closely with the California Department of Food and Agriculture (CDFA) and Monterey County Agricultural Commission (MCAC), Burleson continues to improve and implement

recommended Best Management Practices (BMP) for plant pathogens. The BMPs that have been implemented include foot baths at critical access points, limited access points, mandatory use of new plant containers, sanitation of tools and off-site cuttings, designated areas for soil storage, raised plant platforms, cautionary distance of plants to one another, as well as quarantine and treatment of questionable plants.

3.0 SEED COLLECTION

In 2015, 9.27 acres worth of seed was collected. An acres worth of seed is defined as the amount of seed, as prescribed by each SSRP, to restore 1 acre at a specific restoration site. Seed was collected to restore 5.6 acres for HA 26, 3.4 acres for HA 34, and 0.27 acre for HA 37. All common and HMP species were collected in accordance with the protocol with the exception of Monterey ceanothus (*Ceanothus cuneatus* var. *rigidus*) at HA 26. The seed target amount for this species was unachievable within a 1-km radius, due to recent prescribed burns and mastication around HA 26 that caused seed to be scarce. The US Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW) approved extending the seed collection zone to a 2.5-km radius for Monterey ceanothus, specifically at HA 26. For common, non-HMP species, crews collected material within a 10-mile radius of each HA. All HMP and common species collection target goals were met for 2015, with the exception of purple needlegrass (*Stipa pulchra*). The target for purple needlegrass was 7.34 pounds (lb) and the amount collected was 6.34 lb. This shortfall was due to an overestimation of how much clean seed would be processed from collected seed material and unfortunately, this was realized after the window of time to collect purple needlegrass had passed. An additional pound of purple needlegrass seed will be collected in 2016 to make up for this missed target. Common and HMP seed inventories are presented in Tables A-1 and A-2 in Appendix A.

3.1 Seed Production/Purchase

In addition to on-site collection, Burleson has former Fort Ord-specific seed production contracts with Hedgerow Farms/S&S Seed for a number of species. One such species grown for seed harvesting is blue wildrye (*Elymus glaucus*). The blue wildrye seed production plot is located on a 0.5-acre plot at the Hedgerow Farms/S&S Seed facility in Winters, California. Hedgerow Farms/S&S Seed delivered a total of 200 lb of blue wildrye seed in October 2015. The blue wildrye seed is being stored at the Burleson native plant nursery in Carmel Valley, California. An additional 400 lb of surplus blue wildrye seed is available for purchase at \$25 per lb from Hedgerow Farms/S&S Seed. Burleson/USACE have first priority to purchase the surplus seed.

In addition to blue wildrye, four new 0.5-acre seed production plots were contracted with Hedgerow Farms/S&S Seed at their facility in Los Alamos, California. The four new plots were established to grow the following species: purple needlegrass; deerweed (*Acmispon glaber*); rush-rose (*Helianthemum scoparium*), and common yarrow (*Achillea millefolium*). The purple needlegrass and deerweed plots did not produce any seed in 2015, but are expected to produce seed in the fall of 2016. The common yarrow plot produced 80.3 lb of seed that is stored at Burleson's native plant nursery. The rush-rose plot was unsuccessful. Recent photos of the successful plots are presented in Appendix C, Photos C-11 to C-16. Seed analysis test results conducted by Hedgerow Farms/S&S Seed for the blue wildrye and common yarrow seed are presented in Figures 1 and 2 in Appendix D.

In 2016, S&S Seeds will continue to maintain the blue wildrye, common yarrow, deerweed, and purple needlegrass seed production plots. The unsuccessful rush-rose plot will be abandoned.

4.0 PLANT PROPAGATION

Plant propagation began at the CSUMB Watershed Institute in early 2015 and fully transitioned to Burleson's native plant nursery in Carmel Valley by June 2015. All propagation activities were conducted in accordance with the Plant Material, Collection, Storage, and Propagation Protocols for Site Restoration at Site 39 (Burleson 2010) for eighteen different common and HMP species used in active restoration. Approximately 5,200 plants were propagated and grown in 2015 for HAs 34 and 37. Burleson met the overall 2015 plant quantity targets for both HAs but missed targets for some species and had surplus plants for other species. For certain species, drought conditions may have impacted the viability of seed and the success of cuttings compared to past years, resulting in fewer plants. However, other species did very well and a surplus was obtained. Where suitable and approved by the USACE, surplus plants were used to replace the missed targets. See Tables A-3 and A-4 in Appendix A, for final plant inventories for HAs 34 and 37.

5.0 RESTORATION ACTIVITIES

The objective of restoration activities is to return the impacted area to a natural landscape that conforms to the adjacent habitat communities in accordance with each SSRP. Restoration activities completed in 2015 included passive restoration (seed broadcast) at HAs 19, 28, 34, 37, and 38 and active restoration (live plant installation) at HAs 28, 34, 37, and 38.

5.1 Passive Restoration

Table 1 summarizes 2015 passive restoration activities. Generally, passive restoration activities occur annually between October and February, overlapping calendar years. This report focuses on the 2015 calendar year and only reports restoration activities in that timeframe. Passive restoration activities for 2015 occurred in January, February, and November. In early 2015, Burleson performed passive restoration at HAs 19, 34, 37, and 38 to complete 2014/2015 passive restoration activities. In late 2015, Burleson initiated passive restoration activities for the 2015/2016 season at HAs 28 and 37. Tables A-5 through A-9 in Appendix A provide detailed seed quantities and species applied at each restoration site in 2015. The following sections provide a detailed description of passive restoration activities at each HA.

Table 1. 2015 Summary of Passive Restoration Activities per Historic Area

HA	2015 Passive Restoration Activities
19	0.2 lb (90 grams) sand gilia seed broadcast
28	0.36 acres worth* of native seed broadcast
34	1.7 acres worth* of native seed broadcast
37	0.36 lb (163 grams) Monterey spineflower and 0.27 acres worth* of native seed broadcast
38	0.01 lb (5 grams) Monterey spineflower broadcast

*Acres worth of seed = amount of seed prescribed to restore 1 acre of area in accordance with the SSRP

5.1.1 HA 19 Passive Restoration

Burleson performed passive restoration for the HMP forb sand gilia (*Gilia tenuiflora* ssp. *arenaria*) at HA 19 to fulfill SSRP seed targets. Prior to 2015, five sand gilia test plots were established and seeded with approximately four total grams of seed. For more details on the sand gilia test plots, see 2013 and 2014 Habitat Restoration Annual Reports (Burleson, 2013; Burleson, 2014). In January 2015, the required 0.2 lb (90 grams) of sand gilia seed was broadcast at nine plots according to the SSRP seed target. Each plot received 10 grams of seed. The plots were chosen based on having suitable sand gilia habitat (sandy bare ground) and adjacent extant sand gilia populations. The total area of the nine broadcast plots was 13,276 ft². See Table A-5 in Appendix A for seed broadcast amounts and Figure 3 in Appendix D for sand gilia plot locations.

5.1.2 HA 28 Passive Restoration

Burleson completed passive restoration activities in November 2015 at HA 28 to support erosion control repairs for Kemron, another USACE contractor. Burleson's senior biologists worked with USACE staff to develop a seed mix to sufficiently cover 0.36 acre. A small portion of common seed (non-HMP seed) collected for HA 26 was combined with production plot seed to develop the seed mix for HA 28. Burleson broadcast the mix over 0.36 acre on November 5, 2015. To create good seed-soil contact, Kemron mechanically drove the seed into the soil by track-walking over it with a dozer. In the days following, a heavy rainfall event washed a significant portion of the seed off site. Burleson broadcast additional seed on November 11, 2015. Kemron mechanically punched the seed into the soil and completed erosion control repairs. HA 28 seed mix species and quantities are presented in Table A-6 in Appendix A. See Figure 4 in Appendix D for specific seed broadcast locations at HA 28.

5.1.3 HA 34 Passive Restoration

Burleson selectively applied 1.7 acres worth of seed over the top third of HA 34 in January 2015. HA 34 only received seed in areas that were void of vegetation and showed no signs of erosion. These areas were cleared of old straw and hydromulch, broadcast with seed, raked for good seed-soil contact, and covered with fresh straw. The seed mix was supplemented with available blue wildrye seed to assist with erosion control. Figure 5 in Appendix D shows the location of the seed broadcast and Table A-7 in Appendix A shows the species and broadcast amounts at HA 34.

5.1.4 HA 37 Passive Restoration

In January 2015, 0.32 lb of HMP forb Monterey spineflower (*Chorizanthe pungens* var. *pungens*) was broadcast in three plots totaling 8,150 ft². In November 2015, 0.27 acre worth of native seed mix was broadcast onsite. Additionally, 0.04 lb of Monterey spineflower was broadcast in one plot totaling 1,030 ft². Table A-8 in Appendix A shows species and broadcast amounts and Figure 6 in Appendix D shows seed broadcast locations at HA 37.

5.1.5 HA 38 Passive Restoration

In January 2015, 0.01 lb of the HMP forb Monterey spineflower was broadcast over 521 ft² at HA 38. Table A-9 in Appendix A illustrates species and amounts. See Figure 7 in Appendix D for seed broadcast locations.

5.2 Active Restoration

Table 2 summarizes 2015 active restoration activities at each site. Burleson installed a total of 9,367 plants at four HAs. Plants were installed at HAs 28, 37, and 38 in early 2015 and at HA 34 in late 2015. Tables A-10 through A-12 in Appendix A, provide detailed information on species and quantities planted at HAs 28, 37, and 38.

Table 2. 2015 Summary of Active Restoration Activities per Historic Area

HA	2015 Active Restoration Activities
28	Installed 3,435 plants (2.9 acres of active restoration)
34	Installed 777 plants (1 partial acre of active restoration)
37	Installed 4,664 plants (2 acres of active restoration)
38	Installed 491 plants (to complete 0.8 acres of active restoration)

5.2.1 HA 28 Active Restoration

Burleson performed active restoration at HA 28 in January 2015. Figure 4 in Appendix D shows the installation location of the 3,435 plants. Plant targets were achieved with the exception of three species: Eastwood's golden fleece (*Ericameria fasciculata*); golden yarrow (*Eriophyllum confertiflorum*), and sandmat manzanita (*Arctostaphylos pumila*). Due to poor germination, Eastwood's golden fleece and golden yarrow missed their targets by 76 and 62 plants, respectively. The missed shrub targets were substituted with 138 Monterey ceanothus suitable for HA 28. A total of 947 sandmat manzanita plants were culled by MCAC due to pathogen concerns. Because sandmat manzanita is a dominant species in the plant community at HA 28, the target will have to be achieved in future restoration efforts. To meet the contractual 2015 plant quantity targets, Burleson installed 947 plants of other species at HA 37 (to make up for the 947 culled sandmat manzanita plants). Table A-10 in Appendix A shows planting species and quantities at HA 28.

5.2.2 HA 34 Active Restoration

In December 2015, Burleson initiated planting at HA 34. Approximately 777 plants were installed. Planting efforts continued into the beginning of 2016. A full detailed planting inventory will be provided in the 2016 annual report.

5.2.3 HA 37 Active Restoration

In early 2015, Burleson installed 4,664 plants over approximately 2 acres at HA 37 as shown in Figure 6 in Appendix D. Due to compacted soil conditions at this site, a jackhammer and bobcat with an auger attachment were used. Plant targets for 2015 were met with the exception of two species: coast silk tassel (*Garrya elliptica*) and silver bush lupine (*Lupinus chamissonis*). The silver bush lupine missed target was due to low seed viability and the coast silk tassel missed target was due to low success from plant cuttings. These missed targets were substituted with other plant species suitable for HA 37. An additional 947 plants were installed at HA 37 to make up for the missed sandmat manzanita targets at HA 28, as discussed in Section 5.2.1. Table A-11 in Appendix A depicts the plant species and quantities planted at HA 37.

5.2.4 HA 38 Active Restoration

Burleson completed active restoration activities at HA 38 in early 2015 by installing the remaining 2013-2014 plant targets for coast silk tassel, silver bush lupine, and sandmat manzanita. See Table A-12 in Appendix A for the plant species and quantities planted at HA 38. See Figure 7 in Appendix D for planting locations.

6.0 MONITORING, RESULTS AND DISCUSSION

Burleson conducted photo point documentation, HMP forb density surveys, random quadrat surveys, and plant survivorship monitoring surveys at appropriate HAs in 2015. Monitoring activities are guided by the HRP (Shaw 2009) and Vegetation Sampling Protocol (Burleson 2009). Table 3 below provides a breakdown of monitoring activities conducted in 2015. The following sections provide detailed descriptions of monitoring activities and results. Full 2015 monitoring results are presented in Appendix B.

Table 3. 2015 Summary of Monitoring Activities per Historic Area

HA	Photo Point	HMP Forb Density	Quadrat	Plant Survivorship
18	●	●		
19	●	●		●
22	●	●		
23	●	●		
27	●			
27A	●			
28	●	●		●
29	●			●
33	●	●		
34			●	
36	●			
37	●	●	●	●
38	●	●		●
39/40	●	●		
43	●	●		

6.1 Photo Points and Photo Documentation

Multiple permanent photo points have been established at each restoration site to document restoration progress. Photos are taken annually from every photo point and more frequently at select photo points. See Appendix E for representative photos from HAs 18, 19, 22, 23, 27, 27A, 28, 29, 33, 36, 37, 38, 39/40, and 43.

Photo documentation of restoration activities occurs throughout the year. See Appendix C for a photo log of 2015 activities.

6.2 HMP Forbs Density Surveys and Results

Density surveys for HMP forbs sand gilia, Monterey spineflower, and Seaside bird's beak (*Cordyanthus rigidus* ssp. *littoralis*) are performed at restoration sites in years 1, 2, 3, 4, 5, and 8 during peak bloom for each species according to the HRP guidelines. In 2015, HMP forb density surveys were only conducted in HMP forb restoration plots. Forb density is obtained by counting

every individual HMP forb within a restoration plot and calculating the number of plants per 100 ft². Density classes were derived from the HRP and are as follows:

Density Class	Plants Counted per 100 ft²
Not Present	0
Low	1-50
Medium	51-100
High	101-500
Very High	>500

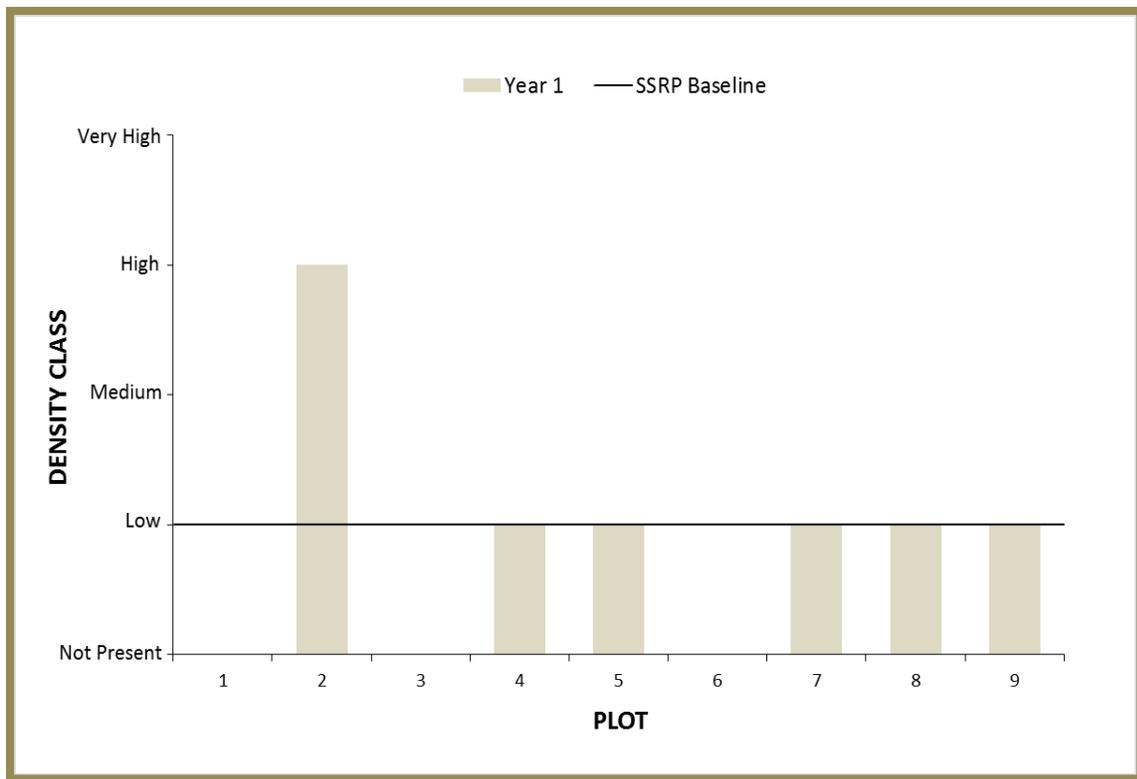
In this report, HMP forb restoration plot density classes are compared to the SSRP baseline density class. SSRP baseline data was obtained by reviewing previous biological monitoring reports. See SSRPs and HRP for detailed background information.

6.2.1 Sand Gilia Density Surveys

In 2015, density surveys for sand gilia were performed for years 1, 2 and 3 at HAs 19, 39/40, and 43. All 2015 sand gilia monitoring occurred during peak bloom, April through May.

HA 19 Sand Gilia Density Survey Results and Discussion

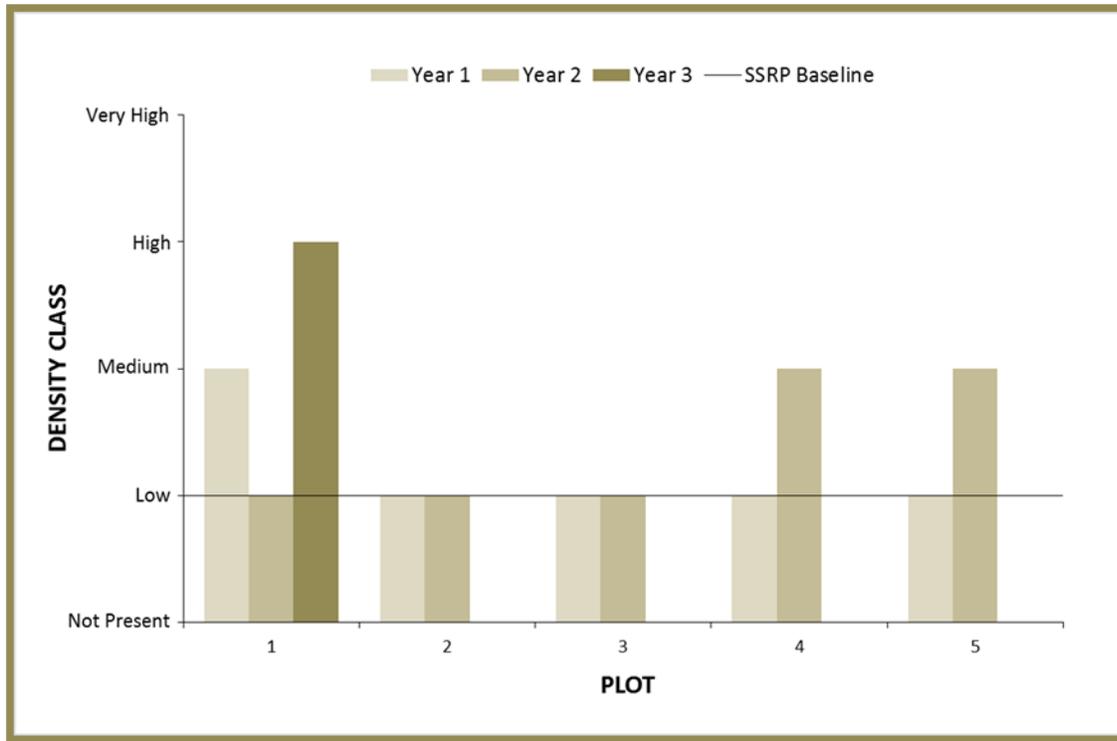
Nine sand gilia plots were surveyed for year 1 density at HA 19 in 2015. The plots are numbered 1-9 and are primarily located on the southwestern part of the site. SSRP baseline density class for sand gilia at HA 19 was low. Six of the nine plots met or exceeded the SSRP baseline density. Sand gilia was absent at plots 1, 3, and 6. Sand gilia was present in low density at plots 4, 5, 7, 8, and 9. Plot 2 had a high density of sand gilia. Graph 1 below represents all the sand gilia density data for HA 19. Table B-1 in Appendix B lists detailed results and Figure 8 in Appendix D show plot locations at HA 19.



Graph 1. HA 19 Comparison of Sand Gilia Density Classes to the SSRP Baseline Density Class for Year 1 at Restoration Plots 1-9.

HA 39/40 Sand Gilia Density Survey Results and Discussion

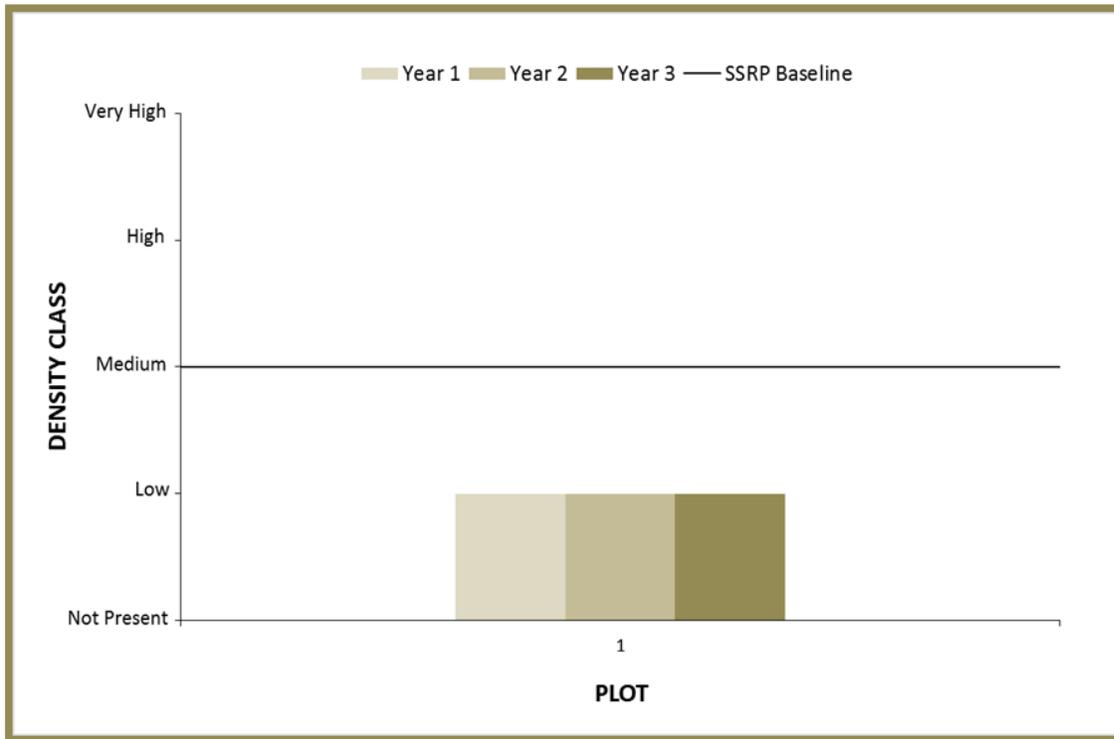
Five sand gilia plots are present at HA 39/40. In 2015, plot 1 was surveyed for year 3 density and plots 2 through 5 were surveyed for year 2 density. SSRP baseline density class for sand gilia at HA 39/40 was low. All five plots met or exceeded SSRP baseline density in 2015. Plot 1 year 3 density was high. Year 2 density at plots 2 and 3 were low, and year 2 density at plots 4 and 5 were medium. Graph 2 below represents all of the sand gilia density data for HA 39/40. Table B-1 in Appendix B lists detailed results and Figure 9 in Appendix D show plot locations at HA 39/40.



Graph 2. HA 39/40 Comparison of Sand Gilia Density Classes to the SSRP Baseline Density Class for Years 1, 2, and 3 at Restoration Plots 1-5.

HA 43 Sand Gilia Density Survey Results and Discussion

One sand gilia plot at HA 43 was surveyed for year 3 monitoring in 2015. SSRP baseline density class for sand gilia at HA 43 is medium. This plot had a low density for sand gilia for year 3. This plot has not met SSRP baseline density in years 1, 2, and 3. Graph 3 below represents all the sand gilia density data for HA 43. Table B-1 in Appendix B lists detailed results and Figure 10 in Appendix D shows plot location at HA 43.



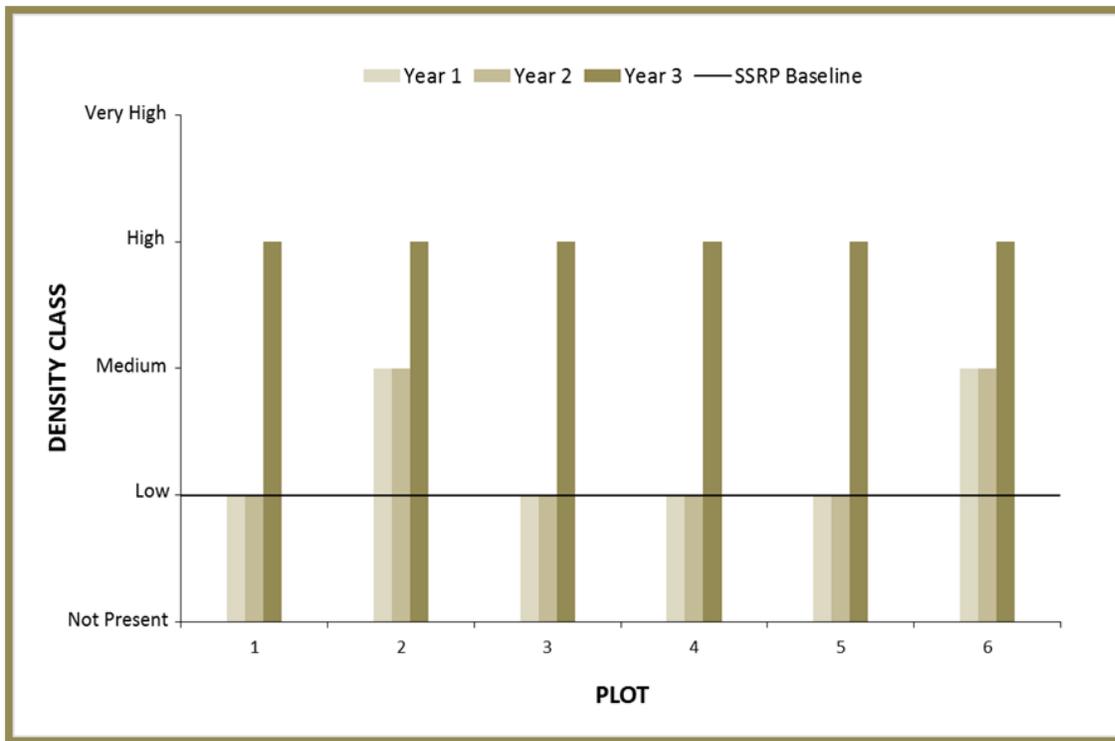
Graph 3. HA 43 Comparison of Sand Gilia Density Classes to the SSRP Baseline Density Class for Years 1, 2, and 3 at Restoration Plot 1.

6.2.2 Monterey Spineflower Density Surveys

In 2015, density surveys for Monterey spineflower were performed for years 1 and 3 at HAs 18, 22, 23, 28, 33, 37, 38, 39/40, and 43. All 2015 Monterey spineflower monitoring occurred during peak bloom, April through May.

HA 18 Monterey Spineflower Density Survey Results and Discussion

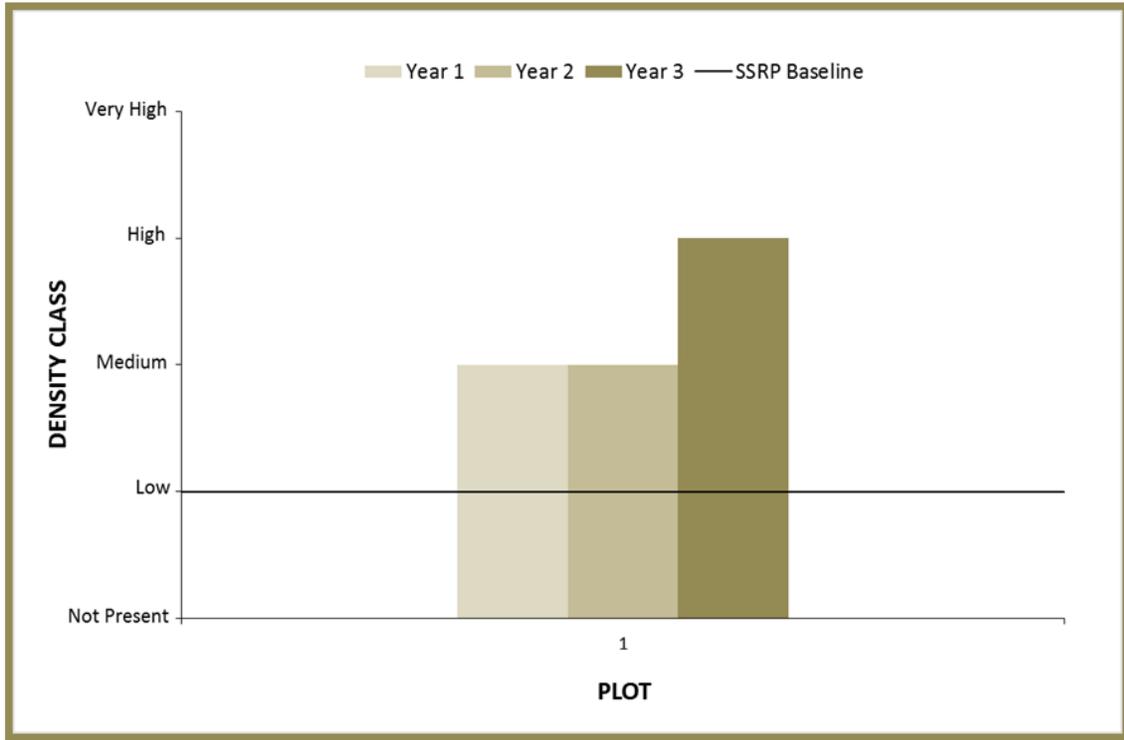
Year 3 monitoring occurred at six Monterey spineflower plots at HA 18 in 2015. SSRP baseline density for Monterey spineflower at HA 18 is low. The plots are scattered mainly around the northern section of the site in suitable habitat. All six plots had high densities of Monterey spineflower. All six have met or exceeded SSRP baseline density in years 1, 2, and 3. Graph 4 below represents all the Monterey spineflower density data for HA 18. Table B-2 in Appendix B lists detailed results and Figure 11 in Appendix D shows locations of the plots at HA 18.



Graph 4. HA 18 Comparison of Monterey Spineflower Density Classes to the SSRP Baseline Density Class for Years 1, 2, and 3 at Restoration Plots 1-6.

HA 22 Monterey Spineflower Survey Results and Discussion

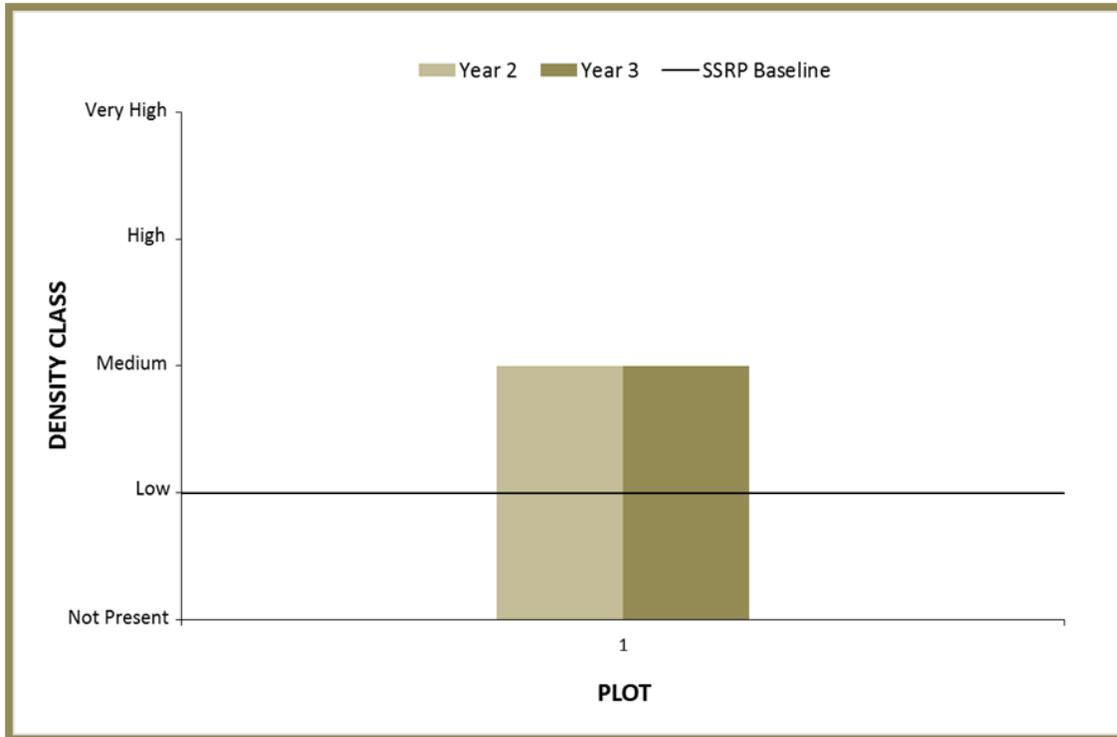
One Monterey spineflower plot at HA 22 was surveyed for year 3 monitoring in 2015. SSRP baseline density for Monterey spineflower at HA 22 is low. This plot had a high density of Monterey spineflower in 2015. This plot has exceeded SSRP baseline density in years 1, 2, and 3. Graph 5 below represents all Monterey spineflower density data for HA 22. Table B-2 in Appendix B lists detailed results and Figure 12 in Appendix D shows the location of the plot.



Graph 5. HA 22 Comparison of Monterey Spineflower Density Classes to the SSRP Baseline Density Class for Years 1, 2 and 3 at Restoration Plot 1.

HA 23 Monterey Spineflower Results and Discussion

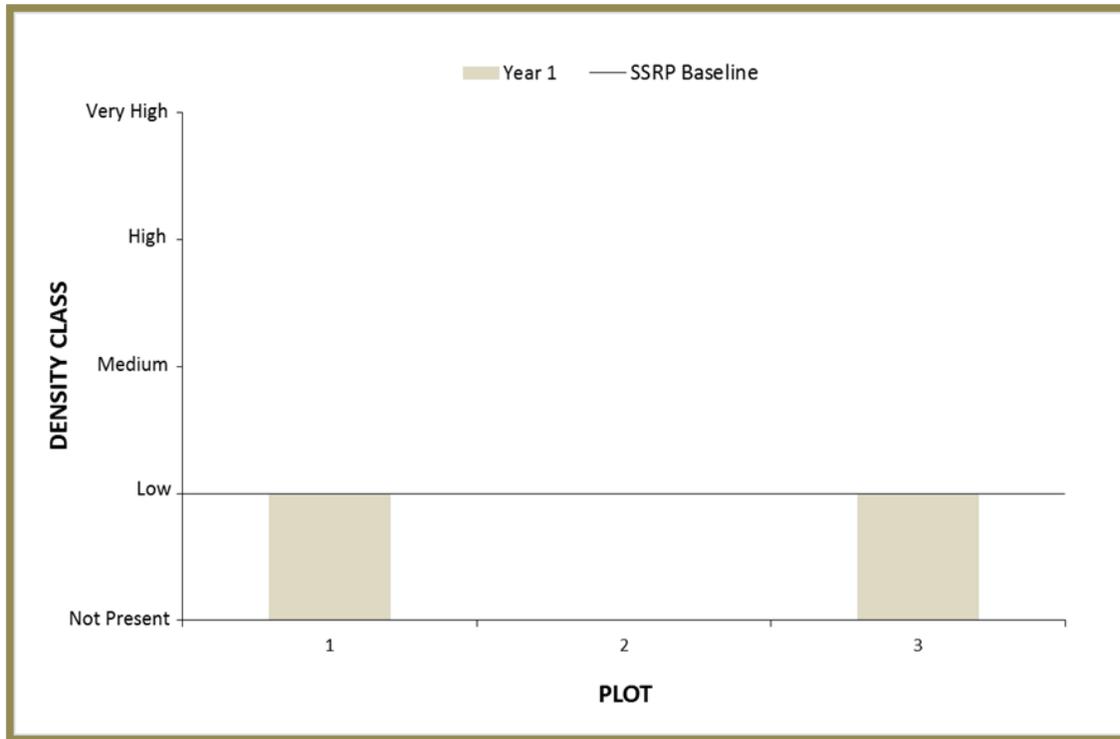
One Monterey spineflower plot at HA 23 was surveyed for year 3 monitoring in 2015. SSRP baseline density for Monterey spineflower at HA 23 is low. This plot had a medium density of Monterey spineflower in 2015. This plot exceeded SSRP baseline density in years 2 and 3. No data is available for year 1. The plot was inaccessible during the 2013 survey season due to mastication activities in the nearby burn unit. Graph 6 below represents all Monterey spineflower density data for HA 23. Table B-2 in Appendix B lists detailed results and Figure 13 in Appendix D shows location of the plot.



Graph 6. HA 23 Comparison of Monterey Spineflower Density Classes to the SSRP Baseline Density Class for Years 2 and 3 at Restoration Plot 1.

HA 28 Monterey Spineflower Results and Discussion

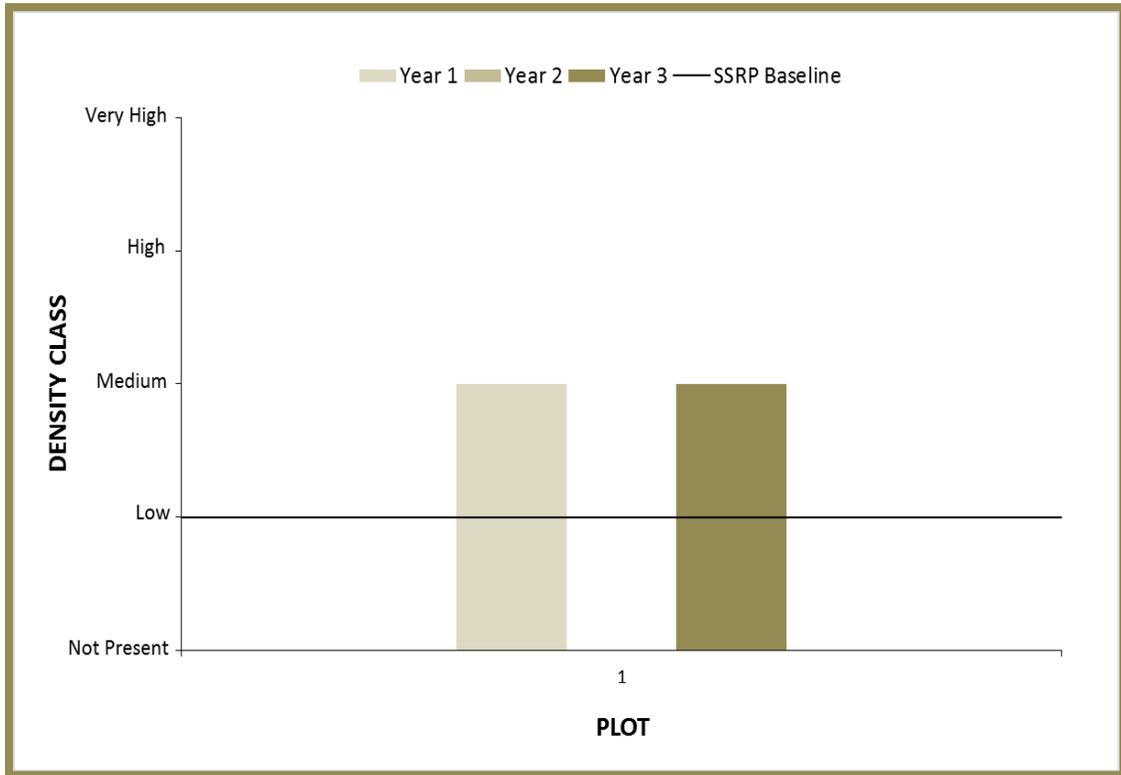
In 2015, three Monterey spineflower plots were surveyed for year 1 monitoring at HA 28. SSRP baseline density for Monterey spineflower at HA 28 is low. Plots 1 and 2 are located in the eastern part of the site and plot 3 is located in the northwestern part of the site. Monterey spineflower was present in low density at plots 1 and 3 and absent in plot 2. Graph 7 below represents all Monterey spineflower density data at HA 28. Table B-2 in Appendix B lists detailed results and Figure 14 in Appendix D shows locations of the plots at HA 28.



Graph 7. HA 28 Comparison of Monterey Spineflower Density Classes to the SSRP Baseline Density Class for Year 1 at Restoration Plots 1-3.

HA 33 Monterey Spineflower Results and Discussion

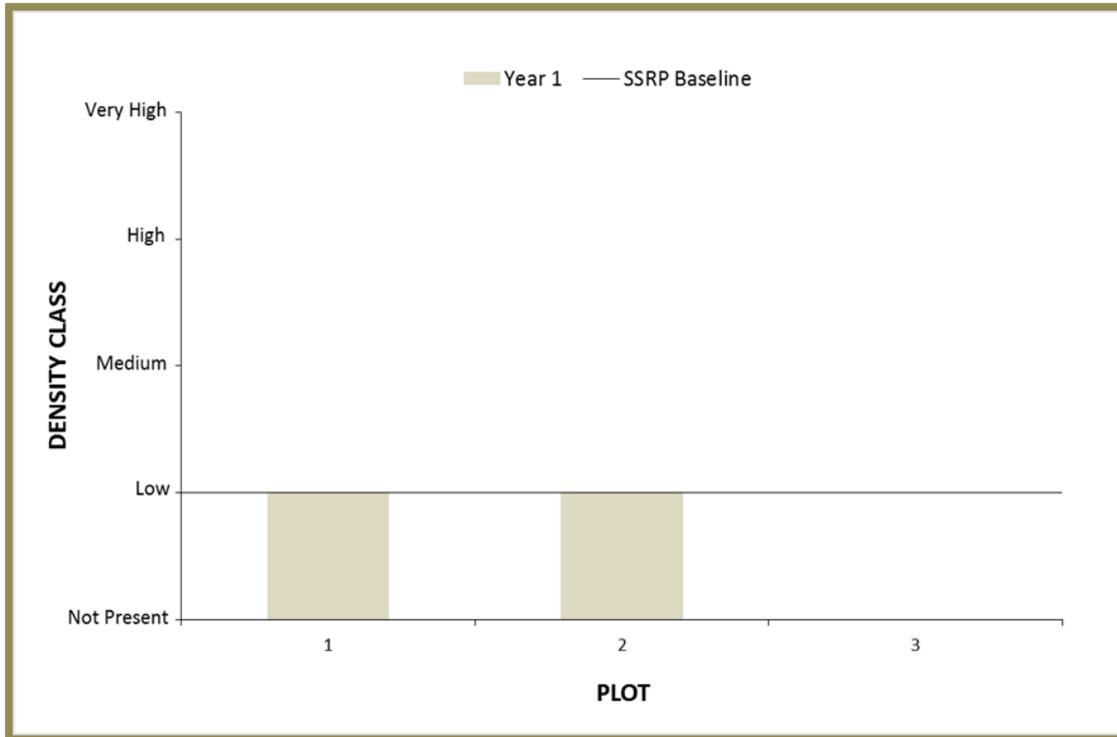
One Monterey spineflower plot at HA 33 was surveyed for year 3 monitoring in 2015. SSRP baseline density for Monterey spineflower at HA 33 is low. This plot had a medium density of Monterey spineflower in 2015. The plot exceeded SSRP baseline density in years 1 and 3, and was not present in year 2. Graph 8 below represents all Monterey spineflower density data at HA 33. Table B-2 in Appendix B lists detailed results and Figure 15 in Appendix D shows location of the plot.



Graph 8. HA 33 Comparison of Monterey Spineflower Density Classes to the SSRP Baseline Density Class for Years 1, 2, and 3 at Restoration Plot 1.

HA 37 Monterey Spineflower Results and Discussion

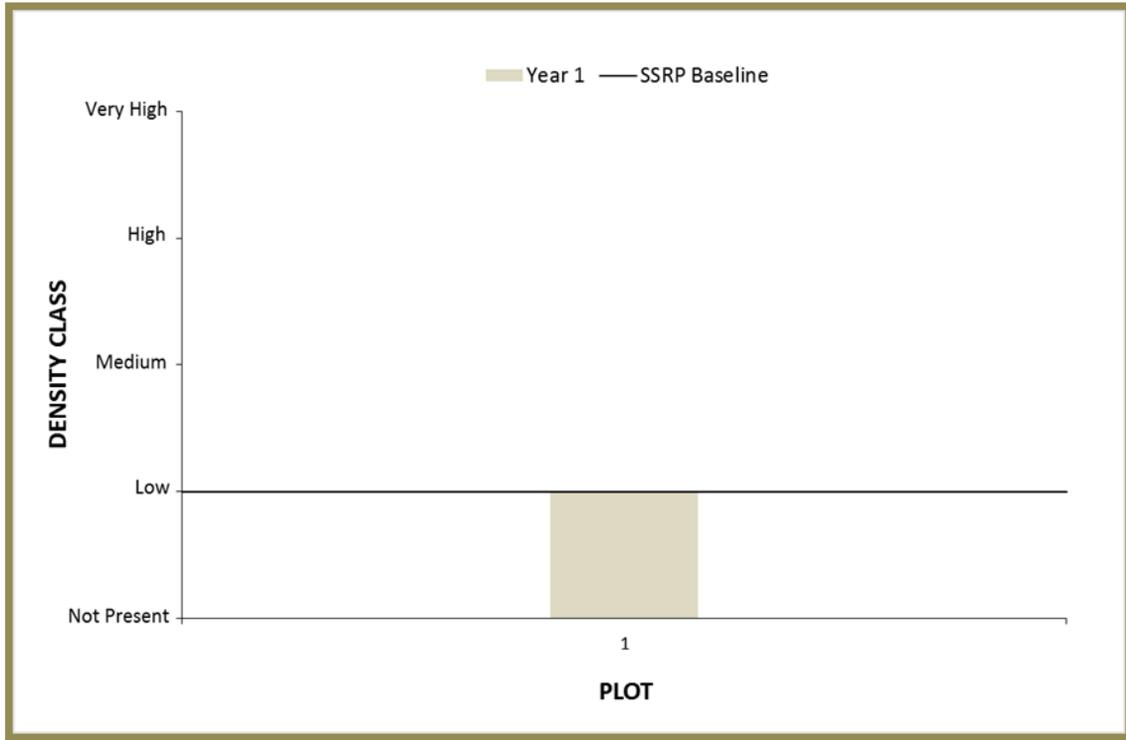
Four Monterey spineflower plots are present at HA 37. Year 1 monitoring was conducted at plots 1 through 3 in 2015. Plot 4 was created in November 2015. SSRP baseline density for Monterey spineflower at HA 37 was low. The plots are located in the southern part of the site in suitable habitat. Monterey spineflower was present in low density at plots 1 and 2 and was absent in plot 3. Graph 9 below represents all Monterey spineflower density data at HA 37. Table B-2 in Appendix B for lists detailed results and Figure 16 in Appendix D shows the locations of the plots in HA 37.



Graph 9. HA 37 Comparison of Monterey Spineflower Density Classes to the SSRP Baseline Density Class for Year 1 at Restoration Plots 1-3.

HA 38 Monterey Spineflower Results and Discussion

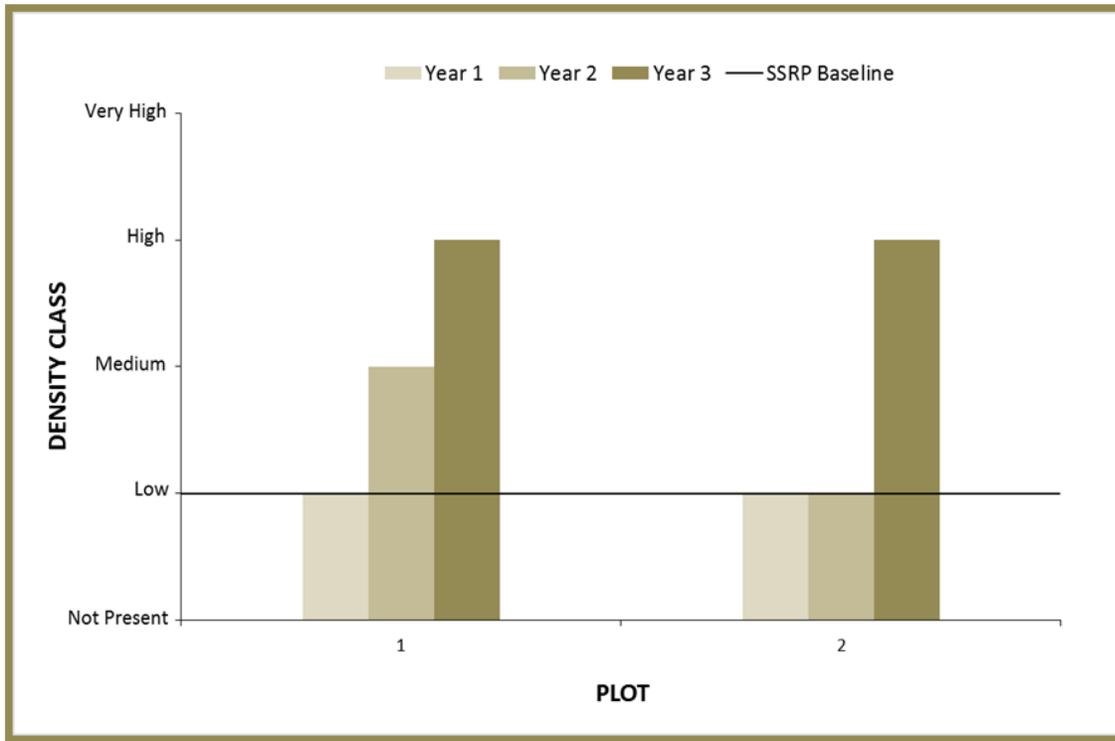
One Monterey spineflower plot at HA 38 was surveyed for year 1 monitoring in 2015. SSRP baseline density for Monterey spineflower at HA 38 is low. Monterey spineflower was present in low density in this plot located in the western part of the site. Graph 10 below represents all Monterey spineflower density data at HA 38. Table B-2 in Appendix B lists detailed results and Figure 17 in Appendix D shows the location of the plot.



Graph 10. HA 38 Comparison of Monterey Spineflower Density Classes to the SSRP Baseline Density Class for Year 1 at Restoration Plot 1.

HA 39/40 Monterey Spineflower Results and Discussion

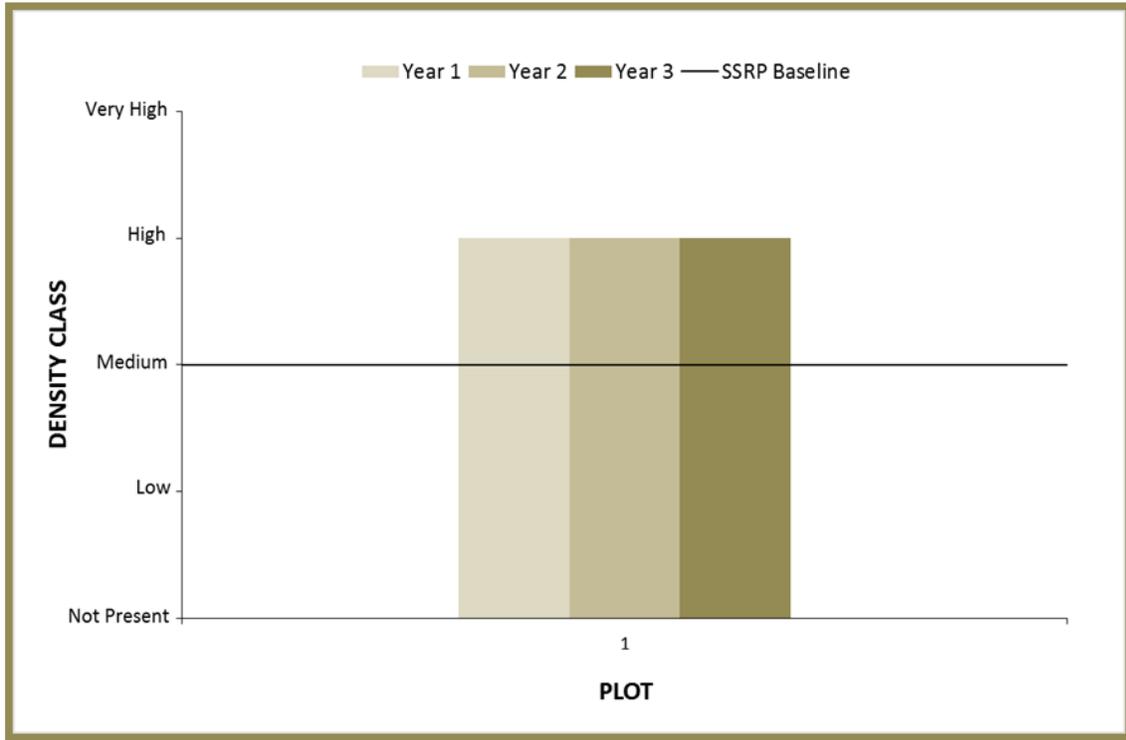
Two Monterey spineflower plots at HA 39/40 were surveyed for year 3 monitoring in 2015. SSRP baseline density for Monterey spineflower at HA 39/40 was low. Both plots are located on the southern part of the site and had high densities of Monterey spineflower in 2015. Both plots have met or exceeded baseline density in years 1, 2, and 3. Graph 11 below represents all Monterey spineflower density data at HA 39/40. Table B-2 in Appendix B lists detailed results and Figure 18 in Appendix D shows the locations of the plots in HA 39/40.



Graph 11. HA 39/40 Comparison of Monterey Spineflower Density Classes to the SSRP Baseline Density Class for Years 1, 2, and 3 at Restoration Plots 1 and 2.

HA 43 Monterey Spineflower Results and Discussion

One Monterey spineflower plot at HA 43 was surveyed for year 3 monitoring in 2015. SSRP baseline density for Monterey spineflower at HA 43 was medium. There was a high density of Monterey spineflower in this plot in 2015. This plot exceeded SSRP baseline density in years 1, 2, and 3. Graph 12 below represents all Monterey spineflower density data HA 43. Table B-2 in Appendix B lists detailed results and Figure 19 in Appendix D shows the location of plot.



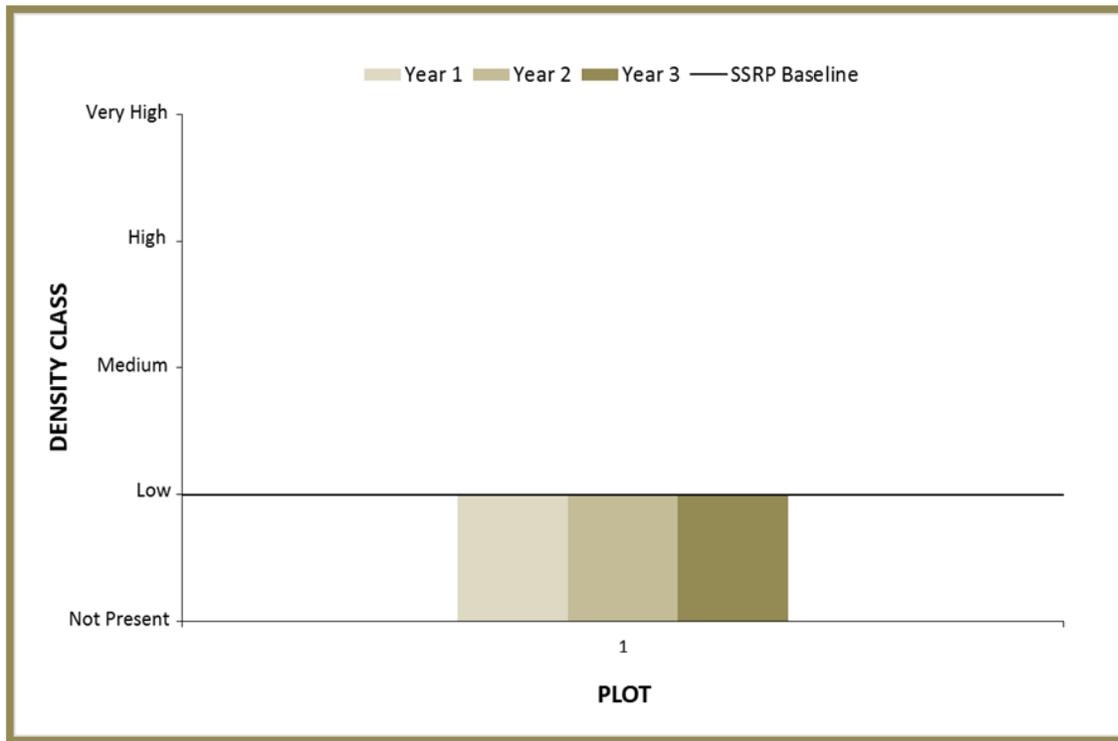
Graph 12. HA 43 Comparison of Monterey Spineflower Density Classes to the SSRP Baseline Density Class for Years 1, 2, and 3 at Restoration Plot 1.

6.2.3 Seaside Bird’s Beak Surveys

In 2015, density surveys for Seaside bird’s beak were performed for year 3 at HAs 39/40 and 43. Monitoring occurred during peak bloom, June-July.

HA 39/40 Seaside Bird’s Beak Survey Results and Discussion

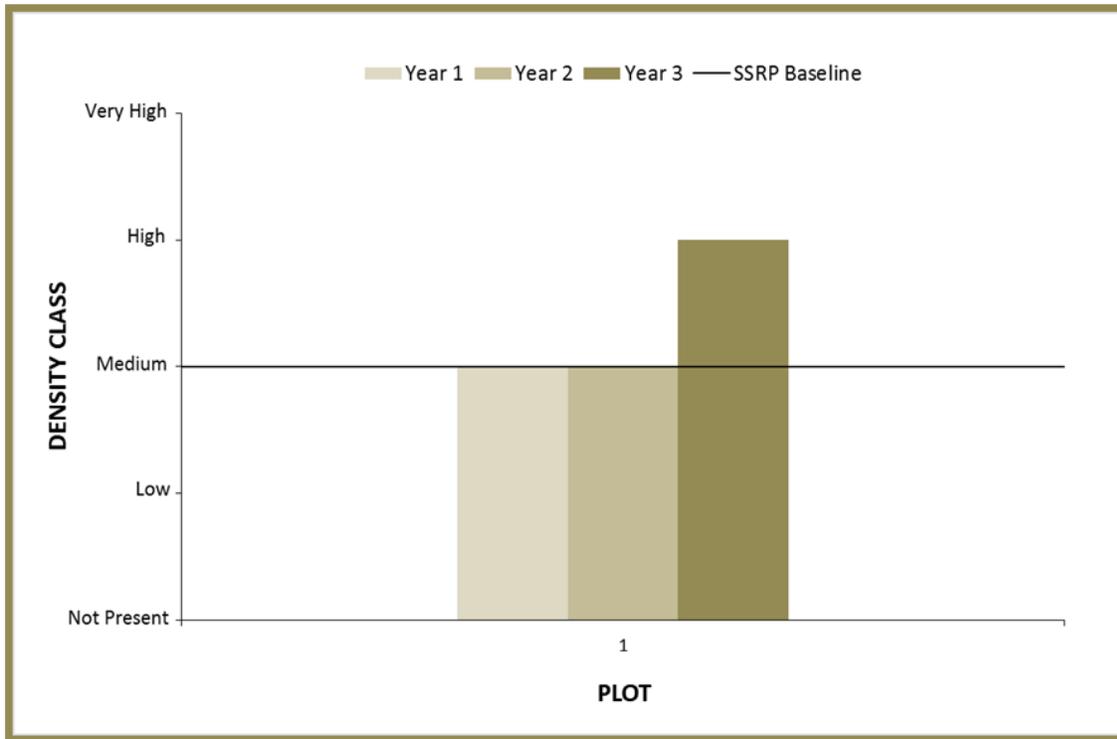
One Seaside bird’s beak plot at HA 39/40 was surveyed for year 3 monitoring in 2015. SSRP baseline density for Seaside bird’s beak at HA 39/40 is low. This plot, located on the southeastern part of the site, had a low density of Seaside bird’s beak in 2015. This plot has met SSRP baseline density in years 1, 2, and 3. Graph 13 below represents all Seaside bird’s beak density data at HA 39/40. Table B-3 in Appendix B lists detailed results and Figure 20 in Appendix D shows the location of the plot.



Graph 13. HA 39/40 Comparison of Seaside Bird’s Beak Density Classes to the SSRP Baseline Density Class for Years 1, 2, and 3 at Restoration Plot 1.

HA 43 Seaside Bird’s Beak Survey Results and Discussion

One Seaside bird’s beak plot at HA 43 was surveyed for year 3 density monitoring in 2015. SSRP baseline density for Seaside bird’s beak at HA 43 was medium. The plot located on the northern part of the site, had a high density of Seaside bird’s beak in 2015. This plot met SSRP baseline density in years 1 and 2, and exceeded in year 3. Graph 14 below represents all Seaside bird’s beak density data at HA 43. Table B-3 in Appendix B lists detailed results and Figure 21 in Appendix D shows the location of the plot.



Graph 14. HA 43 Comparison of Seaside Bird’s Beak Density Classes to the SSRP Baseline Density Class for Years 1, 2, and 3 at Restoration Plot 1.

6.3 Random Quadrat Sampling

Random quadrat sampling was conducted at HAs 34 and 37 in 2015. It should be noted, that random quadrat sampling is not a required monitoring activity in the HRP or SSRP. This monitoring activity was performed at the request of the client to obtain a better understanding of how well broadcast species germinate and persist in recently seeded areas. The client determined the success criteria for seeded areas would be an average of at least two plants of the broadcast species found for every square foot three to six months after germination.

In 2015, it was assumed that germination peaked at both HAs in March, therefore it was determined that random quadrat sampling should occur between June and August. Seeded areas were sampled using one meter square quadrats at an approximate density of ten quadrats per acre within the seeded area. The general location of the quadrat was determined by the field biologist based on visual indication of recent seeding efforts (i.e. straw). After determining a seeded area, a random number generator was used to give a random bearing and distance within the seeded area to determine the random quadrat location. At quadrat locations the total number plants, species and percent cover was recorded.

HA 34 Random Quadrat Sampling Results and Discussion

In August 2015, Burleson performed a random quadrat sampling at HA 34. Ten quadrats were randomly placed in seeded areas, shown in Figure 22 in Appendix D. HA 34 averaged slightly less than two plants per square foot and 6% native cover, as shown in Table B-4 in Appendix B.

HA 34 results were less than the success criteria identified by the client of at least two plants observed for every square foot. This is not surprising given that the region was experiencing a severe drought during that period of time. It is possible that a significant portion of the seed did not germinate in 2015 and that it could germinate in 2016.

HA 37 Random Quadrat Sampling Results and Discussion

In August 2015, Burleson performed a random quadrat sampling at HA 37. Ten quadrats were randomly placed in seeded areas, shown in Figure 23 in Appendix D. Results show HA 37 exceeded two plants per square foot and 3% native cover, as shown in Table B-5 in Appendix B.

HA 37 results were low but met the success criteria identified by the client. Again, these low results are not surprising given the drought conditions. It is possible that a significant portion of the seed did not germinate in 2015 and may germinate in 2016.

6.4 Plant Survivorship Monitoring

Annual plant survivorship surveys occurs for a minimum of three years after plants have been installed. A random sample of approximately 10% of each shrub species are permanently tagged and monitored annually. Survivorship monitoring events occur in the fall at the end of the dry season when plant mortality rates are highest. During monitoring visits, all tagged plants are counted as alive or dead to calculate survivorship percentages. All plants being monitored are evergreens and should have live leaves year round. Plants that exhibit live leaves are recorded

as alive. If plants have no leaves or if leaves appear dead, then the plants are recorded as dead. Survivorship results are considered the following:

Plant Survivorship	Percent Alive
High	80-100%
Moderate	50-79%
Low	≤49%

HA 19 Year 3 Plant Survivorship Monitoring, Results and Discussion

Nine shrub species at HA 19 were monitored for year 3 plant survivorship in 2015. Overall plant survivorship was moderate at 58%; Eastwood's golden fleece and sandmat manzanita had a high survivorship, chamise (*Adenostoma fasciculatum*), shaggy-bark manzanita (*Arctostaphylos tomentosa*), coyote brush (*Baccharis pilularis*), and mock heather (*Ericameria ericoides*) were moderate, and California sagebrush (*Artemisia californica*), Monterey ceanothus, and black sage (*Salvia mellifera*) were low. See Table B-6 in Appendix B for detailed survivorship results.

Overall plant survivorship increased from 46% in year 1, to 54% in year 2, and to 58% in year 3. The increase in survivorship was attributed to some plants being recorded as dead in year 1 but then recorded as alive in years 2 and 3 because they showed new growth.

The moderate plant survivorship results at HA 19 are attributed to difficult site conditions. The planting area at HA 19 is located on top of a sandy hill exposed to high winds.

Wind erosion is evident with signs of wind scour and deposition of sand, making it difficult for plants to get established. The three plant species that had low survivorship, California sagebrush, Monterey ceanothus, and black sage, appear to be more sensitive to high winds than the other species. If future plantings occur at HA 19, it is recommended that wind breaks are installed to protect the plants from high winds and wind erosion.

HA 28 Year 1 Plant Survivorship Monitoring, Results and Discussion

Eight shrub species at HA 28 were monitored for year 1 plant survivorship in 2015. Overall plant survivorship was high at 87%; chamise, Hooker's manzanita (*Arctostaphylos hookeri*), Toro manzanita (*Arctostaphylos montereyensis*), shaggy-bark manzanita, Eastwood's golden fleece and black sage, had high survivorship and coyote brush and black sage were moderate. See Table B-7 in Appendix B for detailed survivorship results.

HA 29 Year 3 Plant Survivorship Monitoring, Results and Discussion

Nine shrub species at HA 29 were monitored for year 3 plant survivorship in 2015. Overall plant survivorship was high at 87%; chamise, Hooker's manzanita, Toro manzanita, sandmat manzanita, shaggy-bark manzanita, Monterey ceanothus, Eastwood's golden fleece, and black sage, had high survivorship and coyote brush was moderate. See Table B-8 in Appendix B for detailed survivorship results.

Overall survivorship increased from 84% in year 1, to 89% in year 2 and to 87% in year 3. The increase in survivorship between years 1 and 2 was attributed to some plants being recorded as dead in year 1 but then recorded as alive in year 2 because they showed new growth. Due to natural plant mortality over time, year 3 survivorship results slightly decreased from year 2.

HA 37 Year 2 Plant Survivorship Monitoring, Results and Discussion

Eight shrub species at HA 37 were monitored for year 2 plant survivorship in 2015. Overall plant survivorship was moderate at 72%; chamise, coyote brush, and black sage had high survivorship, Hooker's manzanita, Toro manzanita, and shaggy-bark manzanita were moderate, and Monterey ceanothus and yellow bush lupine (*Lupinus arboreus*) were low. See Table B-9 in Appendix B for species detailed survivorship results.

Overall survivorship decreased from 80% to 72% between year 1 and year 2 monitoring. An 8% decrease is within the range of expectations, especially during drought conditions.

HA 37 Year 1 Plant Survivorship Monitoring, Results and Discussion

Nine shrub species at HA 37 were monitored for year 1 plant survivorship in 2015. Overall plant survivorship was moderate at 57%; chamise and black sage had high survivorship, Hooker's manzanita, coyote brush, and silver bush lupine were moderate, and Toro manzanita, shaggy-bark manzanita, Monterey ceanothus, and yellow bush lupine were low. See Table B-10 in Appendix B for detailed survivorship results.

HA 38 Year 2 Plant Survivorship Monitoring, Results and Discussion

Seven shrub species at HA 38 were monitored for year 2 plant survivorship in 2015. Overall survivorship was high at 95%; chamise, Hooker's manzanita, Toro manzanita, shaggy-bark manzanita, and black sage had high survivorship and coyote brush and Monterey ceanothus were moderate. See Table B-11 in Appendix B for detailed survivorship results.

Overall survivorship was stable at 95% between year 1 and year 2. HA 38 soil conditions appear to be very favorable for active restoration.

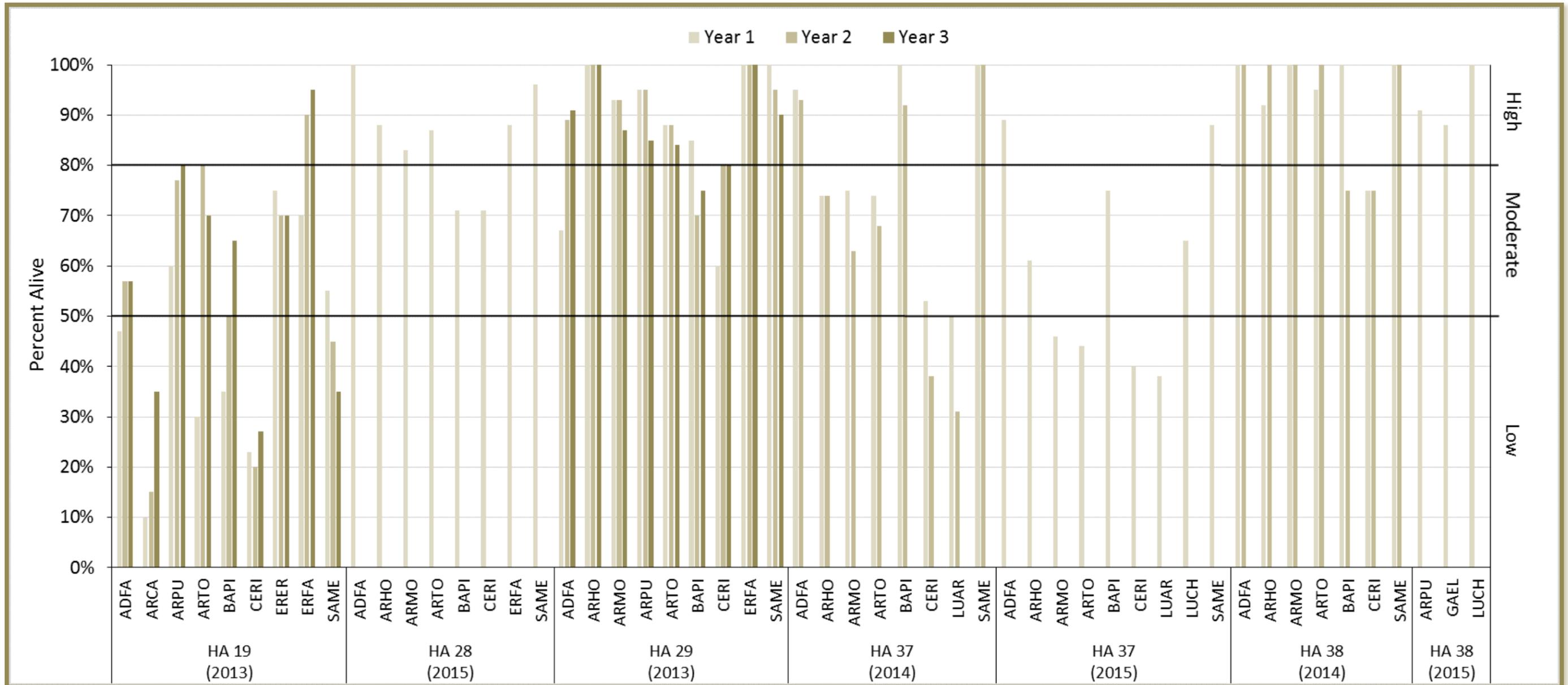
HA 38 Year 1 Plant Survivorship Monitoring, Results and Discussion

Three shrub species at HA 38 were monitored for year 1 plant survivorship. Overall survivorship was high at 92%. All three species, sandmat manzanita, coast silk tassel, and silver bush lupine, had high survivorship. See Table B-12 in Appendix B for detailed survivorship results.

6.4.1 Overall Plant Survivorship Discussion

To investigate if plant survivorship trends are occurring for individual plant species across all restoration sites or if there are any trends between restoration sites, all plant survivorship results (all sites and all years) were combined in Graph 15 below. There is no obvious trend for any one particular plant species as doing well or poor across all restoration sites. However, it does appear that the success of plant survivorship for all species is related to the characteristics (i.e. soil, exposure, aspect, etc.) of the restoration site itself. Plant survivorship success for all

species at HAs 28, 29, and 38 was typically high with some moderate results. Plant survivorship success at HAs 19 and 37 however varies significantly between plant species and overall survivorship results are on the low end of moderate. These results indicate that restoration site conditions are a major factor in driving plant survivorship success. Further exploration of the characteristics of each site in comparison to each species, may provide a better understanding on what factors are impacting plant survivorship.



Graph 15. Plant Survivorship Results for All Restoration Sites and for All Years.

This page intentionally left blank.

7.0 EROSION CONTROL

Before the onset of the wet season, Burleson installed erosion control measures for minor stormwater related damage at HAs 28 and 37. Photographs C-33 through C-40 in Appendix C show erosion control field activities.

At HA 28, the following work was performed in 2015:

- Repaired approximately 200 linear feet of rill erosion ranging from 6"-36"
- Installed 550 linear feet of straw rolls
- Broadcast erosion control seed mix on 0.25 acre
- Broadcast and crimped straw mulch on 0.25 acre
- Installed 3,000 ft² of coir fabric

At HA 37, the following work was performed in 2015:

- Repaired approximately 300 linear feet of rill erosion averaging 6"-12"
- Installed 1,450 linear feet of straw rolls
- Broadcast erosion control seed mix on 0.25 acre
- Broadcast and crimped straw mulch on 0.25 acre
- Installed 1,000 ft² of coir fabric

Following erosion control repairs in the fall, several storm events occurred in late 2015, and no major erosion damage was observed at either site.

8.0 COMMUNITY INVOLVEMENT WORKSHOP / OPEN HOUSE BUS TOUR

In addition to general restoration activities, Burleson participated in the former Fort Ord Clean-Up Open House at the Kemron Building and Bus Tour of Site 39 Inland Range held on both February 21, 2015 and July 18, 2015. The Open House provided an opportunity to inform members of the community about the cleanup efforts happening at former Fort Ord.

Burleson personnel prepared a poster highlighting the restoration efforts within Site 39 Inland Ranges, along with a display of native seeds and plants (Photo C-46 in Appendix C). Burleson's biologists interpreted the poster and provided community engagement during the open house and bus tour.

9.0 FIFTH ANNUAL SITE 39 HABITAT RESTORATION MEETING

In accordance with the HRP, annual meetings are held with regulatory agencies and USACE to review and discuss restoration site data, restoration activities, annual monitoring results, and proposed adaptive management strategies to improve restoration success. These meetings also evaluate weed management, sampling protocols, “passive” versus “active” restoration approaches, the need to implement corrective measures, and assessment of the 13-year monitoring end point proposed in the HRP.

The Fifth Annual Site 39 Habitat Restoration and Habitat Monitoring Meeting was held at the Base Realignment and Closure (BRAC) conference room on January 27, 2015, at former Fort Ord, California. Participants included Burleson, USACE, CDFW, Bureau of Land Management, USFWS, HydroGeologic Inc., Ahtna, Arcadis, EcoSystems West, Tetra Tech, and Kemron/Gilbane.

Burleson presented information on Site 39 habitat restoration activities for the 2015 calendar year and the overall status of restoration progress.

10.0 REFERENCES

Burleson 2009. Protocol for Conducting Vegetation Monitoring in Compliance with the Installation-Wide Multispecies Habitat Management Plan at Former Fort Ord, California.

Burleson 2010. Site 39 Plant Material Collection, Storage, and Propagation Protocols for Former Fort Ord, California.

Burleson 2013. Site Specific Restoration Plans Historic Areas 18, 19, 22, 23, 26, 27, 27A, 28, 29, 33, 34, 36, 37, 38, 39/40, 43, 44, 48, and Austin Road Stockpile. Former Fort Ord, California.

Shaw Environmental 2009. Final Habitat Restoration Plan Site 39 Inland Ranges Former Fort Ord, California.

APPENDIX A

Seed and Plant Tables

This page intentionally left blank

**Table A-1
COMMON SPECIES SEED INVENTORY**

SPECIES	2015 TARGET (lb)	2015 COLLECTED (lb)
<i>Achillea millefolium</i> (common yarrow)	9.27	9.27
<i>Acmispon glaber</i> (deerweed)	18.54	18.54
<i>Artemisia californica</i> (California sagebrush)	3.40	3.40
<i>Baccharis pilularis</i> (coyote brush)	1.84	1.84
<i>Eriophyllum confertiflorum</i> (golden yarrow)	6.96	6.96
<i>Garrya elliptica</i> (coast silk tassel)	0.27	0.27
<i>Helianthemum scoparium</i> (rush-rose)	8.08	8.08
<i>Horkelia cuneata</i> (wedge leaf horkelia)	18.54	18.54
<i>Lupinus arboreus</i> (yellow bush lupine)	3.40	3.40
<i>Lupinus chamissonis</i> (silver bush lupine)	0.20	0.20
<i>Lupinus nanus</i> (sky lupine)	0.27	0.27
<i>Mimulus aurantiacus</i> (sticky monkey flower)	3.18	3.18
<i>Salvia mellifera</i> (black sage)	9.54	9.54
<i>Stipa cernua</i> (nodding needlegrass)	0.54	0.54
<i>Stipa pulchra</i> (purple needlegrass)	7.34	6.34
TOTAL	91.4	90.4

Table A-2
HMP SPECIES SEED INVENTORY
 Historic Areas 26, 34, & 37

SPECIES	HA 26		HA 34		HA 37	
	TARGET (lb)	CURRENT TOTAL (lb)	TARGET (lb)	CURRENT TOTAL (lb)	TARGET (lb)	CURRENT TOTAL (lb)
<i>Ceanothus cuneatus</i> var. <i>rigidus</i> (Monterey ceanothus)	5.6	5.6	3.4	3.4	0.27	0.27
<i>Chorizanthe pungens</i> var. <i>pungens</i> (Monterey spineflower)	0.84	0.84	0.51	0.51	0.04	0.04
<i>Ericameria fasciculata</i> (Eastwood's golden fleece)	0.56	0.56	--	--	0.05	0.05
TOTAL	7	7	3.91	3.91	0.36	0.36

Table A-3
HISTORIC AREA 34 PLANT INVENTORY

SPECIES	QUANTITY
<i>Achillea millefolium</i> (common yarrow)	48
<i>Acmispon glaber</i> (deerweed)	354
<i>Adenostoma fasciculatum</i> (chamise)	143
<i>Arctostaphylos hookeri</i> ¹ (Hooker's manzanita)	71
<i>Arctostaphylos montereyensis</i> ¹ (Toro manzanita)	76
<i>Arctostaphylos tomentosa</i> (shaggy-bark manzanita)	54
<i>Artemisia californica</i> (California sagebrush)	165
<i>Baccharis pilularis</i> (coyote brush)	81
<i>Ceanothus cuneatus</i> var. <i>rigidus</i> ¹ (Monterey ceanothus)	157
<i>Eriophyllum confertiflorum</i> (golden yarrow)	1
<i>Helianthemum scoparium</i> (rush-rose)	243
<i>Horkelia cuneata</i> (wedge-leaved horkelia)	35
<i>Lupinus arboreus</i> (yellow bush lupine)	81
<i>Mimulus aurantiacus</i> (sticky monkey flower)	187
<i>Salvia mellifera</i> (black sage)	87
TOTAL	1,783

¹HMP species

Table A-4
HISTORIC AREA 37 PLANT INVENTORY

SPECIES	QUANTITY
<i>Achillea millefolium</i> (common yarrow)	150
<i>Acmispon glaber</i> (deerweed)	257
<i>Adenostoma fasciculatum</i> (chamise)	299
<i>Arctostaphylos hookeri</i> ¹ (Hooker's manzanita)	274
<i>Arctostaphylos montereyensis</i> ¹ (Toro manzanita)	149
<i>Arctostaphylos pumila</i> ¹ (Sandmat manzanita)	265
<i>Arctostaphylos tomentosa</i> (shaggy-bark manzanita)	524
<i>Baccharis pilularis</i> (coyote brush)	375
<i>Ceanothus cuneatus</i> var. <i>rigidus</i> ¹ (Monterey ceanothus)	223
<i>Garrya elliptica</i> (coast silk tassel)	17
<i>Helianthemum scoparium</i> (rush-rose)	38
<i>Lupinus arboreus</i> (yellow bush lupine)	188
<i>Lupinus chamissonis</i> (sliver bush lupine)	97
<i>Mimulus aurantiacus</i> (sticky monkey flower)	559
TOTAL	3,415

¹HMP species

Table A-5
HISTORIC AREA 19 SEED BROADCAST

SPECIES	AMOUNT (lb)
<i>Gilia tenuiflora</i> ssp. <i>arenaria</i> ¹ (sand gilia)	0.2
TOTAL	0.2

¹HMP species

Table A-6
HISTORIC AREA 28 SEED BROADCAST

SPECIES	AMOUNT (lb)
<i>Achillea millefolium</i> (common yarrow)	1.14
<i>Acmispon glaber</i> (deerweed)	0.72
<i>Baccharis pilularis</i> (coyote brush)	0.07
<i>Ceanothus cuneatus</i> var. <i>rigidus</i> ¹ (Monterey ceanothus)	0.36
<i>Elymus glaucus</i> (blue wildrye)	5.7
<i>Eriophyllum confertiflorum</i> (golden yarrow)	0.36
<i>Ericameria fasciculata</i> ¹ (Eastwood's golden fleece)	0.04
<i>Helianthemum scorparium</i> (rush-rose)	0.29
<i>Hordeum</i> sp. (common barley)	11.4
<i>Horkelia cuneata</i> (wedge-leaved horkelia)	0.72
<i>Mimulus aurantiacus</i> (sticky monkey flower)	0.18
<i>Salvia mellifera</i> (black sage)	0.36
TOTAL	21.3

¹HMP species

Table A-7
HISTORIC AREA 34 SEED BROADCAST

SPECIES	AMOUNT (lb)
<i>Achillea millefolium</i> (common yarrow)	1.69
<i>Acmispon glaber</i> (deerweed)	3.37
<i>Baccharis pilularis</i> (coyote brush)	0.25
<i>Elymus glaucus</i> (blue wildrye)	36.74
<i>Eriophyllum confertiflorum</i> (golden yarrow)	2.11
<i>Helianthemum scorparium</i> (rush-rose)	1.26
<i>Hordeum</i> sp. (common barley)	33.7
<i>Horkelia cuneata</i> (wedge-leaved horkelia)	3.37
<i>Mimulus aurantiacus</i> (sticky monkey flower)	0.25
<i>Salvia mellifera</i> (black sage)	3.37
TOTAL	86.1

Table A-8
HISTORIC AREA 37 SEED BROADCAST

SPECIES	AMOUNT (lb)
<i>Achillea millefolium</i> (common yarrow)	0.27
<i>Acmispon glaber</i> (deerweed)	0.54
<i>Baccharis pilularis</i> (coyote brush)	0.04
<i>Ceanothus cuneatus</i> var. <i>rigidus</i> ¹ (Monterey ceanothus)	0.27
<i>Chorizanthe pungens</i> var. <i>pungens</i> ¹ (Monterey spineflower)	0.36
<i>Elymus glaucus</i> (blue wildrye)	0.81
<i>Eriophyllum confertiflorum</i> (golden yarrow)	0.34
<i>Ericameria fasciculata</i> ¹ (Eastwood's golden fleece)	0.05
<i>Helianthemum scorparium</i> (rush-rose)	0.2
<i>Hordeum</i> sp. (common barley)	2.7
<i>Horkelia cuneata</i> (wedge-leaved horkelia)	0.54
<i>Lupinus chamissonis</i> (silver bush lupine)	0.20
<i>Lupinus nanus</i> (sky lupine)	0.27
<i>Mimulus aurantiacus</i> (sticky monkey flower)	0.04
<i>Salvia mellifera</i> (black sage)	0.54
<i>Stipa cernua</i> (nodding needlegrass)	0.54
<i>Stipa pulchra</i> (purple needlegrass)	0.54
TOTAL	8.25

¹HMP species

Table A-9
HISTORIC AREA 38 SEED BROADCAST

Species	AMOUNT (lb)
<i>Chorizanthe pungens</i> var. <i>pungens</i> ¹ (Monterey spineflower)	0.01
TOTAL	0.01

¹HMP species

Table A-10
HISTORIC AREA 28 SPECIES PLANTED

SPECIES	AMOUNT (#)
<i>Acmispon glaber</i> (deerweed)	237
<i>Adenostoma fasciculatum</i> (chamise)	473
<i>Arctostaphylos hookeri</i> ¹ (Hooker's manzanita)	237
<i>Arctostaphylos montereyensis</i> ¹ (Monterey manzanita)	237
<i>Arctostaphylos pumila</i> ¹ (sandmat manzanita)	0
<i>Arctostaphylos tomentosa</i> (shaggy-bark manzanita)	592
<i>Baccharis pilularis</i> (coyote brush)	237
<i>Ceanothus rigidus</i> var. <i>rigidus</i> ¹ (Monterey ceanothus)	375
<i>Ericameria fasciculata</i> ¹ (Eastwood's golden fleece)	161
<i>Eriophyllum confertiflorum</i> (golden yarrow)	175
<i>Helianthemum scoparium</i> (rush-rose)	237
<i>Horkelia cuneata</i> (wedge-leaved horkelia)	237
<i>Salvia mellifera</i> (black sage)	237
TOTAL	3,435

¹HMP species

Table A-11
HISTORIC AREA 37 SPECIES PLANTED

SPECIES	AMOUNT (#)
<i>Achillea millefolium</i> (common yarrow)	252
<i>Acmispon glaber</i> (deerweed)	208
<i>Adenostoma fasciculatum</i> (chamise)	363
<i>Arctostaphylos hookeri</i> ¹ (Hooker's manzanita)	325
<i>Arctostaphylos montereyensis</i> ¹ (Monterey manzanita)	370
<i>Arctostaphylos pumila</i> ¹ (sandmat manzanita)	100
<i>Arctostaphylos tomentosa</i> (shaggy-bark manzanita)	554
<i>Baccharis pilularis</i> (coyote brush)	284
<i>Ceanothus rigidus</i> var. <i>rigidus</i> ¹ (Monterey ceanothus)	652
<i>Eriophyllum confertiflorum</i> (golden yarrow)	182
<i>Helianthemum scoparium</i> (rush-rose)	208
<i>Horkelia cuneata</i> (wedge-leaved horkelia)	258
<i>Lupinus arboreus</i> (yellow bush lupine)	243
<i>Lupinus chamissonis</i> (silver bush lupine)	165
<i>Mimulus aurantiacus</i> (sticky monkey flower)	250
<i>Salvia mellifera</i> (black sage)	250
TOTAL	4,664

¹HMP species

Table A-12
HISTORIC AREA 38 SPECIES PLANTED

SPECIES	AMOUNT (#)
<i>Arctostaphylos pumila</i> ¹ (sandmat manzanita)	327
<i>Garrya elliptica</i> (coast silk tassel)	82
<i>Lupinus chamissonis</i> (silver bush lupine)	82
TOTAL	491

¹HMP species

APPENDIX B

Monitoring Results

This page intentionally left blank

Table B-1
SAND GILIA DENSITY SURVEYS
 Per Historic Areas 19, 39/40 & 43

HA	DATE CASTED	SEED CASTED (g)	YEAR	PLOT NAME	PLOT ID	AREA (FT ²)	# PLANTS	# PLANTS / 100 FT ²	DENSITY CLASS	SUITABLE HABITAT
19	Jan 2015	10	1	1	HA19_GITEA_01	201	0	0	Not Present	100%
	Jan 2015	10	1	2	HA19_GITEA_02	465	564	121	High	100%
	Jan 2015	10	1	3	HA19_GITEA_03	1,002	0	0	Not Present	100%
	Jan 2015	10	1	4	HA19_GITEA_04	631	192	30	Low	100%
	Jan 2015	10	1	5	HA19_GITEA_05	572	223	39	Low	100%
	Jan 2015	10	1	6	HA19_GITEA_06	2,502	0	0	Not Present	100%
	Jan 2015	10	1	7	HA19_GITEA_07	2,539	170	7	Low	100%
	Jan 2015	10	1	8	HA19_GITEA_08	2,593	318	12	Low	100%
	Jan 2015	10	1	9	HA19_GITEA_09	2,770	1,133	41	Low	100%
39/40	Dec 2012	8.2	3	1	HA39/40_GITEA_01	600	636	106	High	100%
	Oct 2013	1	2	2	HA39/40_GITEA_02	300	1	1	Low	85%
	Oct 2013	7	2	3	HA39/40_GITEA_03	2,000	86	4	Low	95%
	Oct 2013	0.8	2	4	HA39/40_GITEA_04	189	105	55	Medium	85%
	Oct 2013	1	2	5	HA39/40_GITEA_05	345	177	51	Medium	85%
43	Nov 2012	0.9	3	1	HA43_GITEA_01	100	19	19	Low	100%

DENSITY KEY OUTLINED BY THE HABITAT RESTORATION PLAN	
Density Class	Plants Counted per 100ft ²
Not Present	0
Low	1-50
Medium	51-100
High	101-500
Very High	>500

Table B-2
MONTEREY SPINEFLOWER DENSITY SURVEYS
 Per Historic Areas 18, 22, 23, 28, 33, 37, 38, 39/40 & 43

HA	DATE CASTED	SEED CASTED (g)	YEAR	PLOT NAME	PLOT ID	AREA (FT ²)	# PLANTS	# PLANTS / 100 FT ²	DENSITY CLASS	SUITABLE HABITAT
18	Dec 2012	1.4	3	1	HA18_CHPUP_01	859	902	105	High	100%
	Dec 2012	1.4	3	2	HA18_CHPUP_02	632	964	153	High	100%
	Dec 2012	1.8	3	3	HA18_CHPUP_03	1,832	1,852	101	High	100%
	Dec 2012	1.7	3	4	HA18_CHPUP_04	941	1,490	158	High	100%
	Dec 2012	2.6	3	5	HA18_CHPUP_05	560	1,170	209	High	100%
	Dec 2012	12.3	3	6	HA18_CHPUP_06	707	1,692	239	High	100%
22	Oct 2012	2.2	3	1	HA22_CHPUP_01	132	416	315	High	100%
23	Nov 2012	1.5	3	1	HA23_CHPUP_01	118	89	75	Medium	100%
28	Nov 2014	8.3	1	1	HA28_CHPUP_01	5,729	52	1	Low	85%
	Nov 2014	1.7	1	2	HA28_CHPUP_02	1,200	0	0	Not Present	90%
	Nov 2014	3.6	1	3	HA28_CHPUP_03	2,500	152	6	Low	95%
33	Dec 2012	0.5	3	1	HA33_CHPUP_01	54	34	63	Medium	100%
37	Jan 2015	18.9	1	1	HA37_CHPUP_01	4,253	21	1	Low	75%
	Jan 2015	8.35	1	2	HA37_CHPUP_02	1,914	62	3	Low	75%
	Jan 2015	8.8	1	3	HA37_CHPUP_03	1,981	0	0	Not Present	65%
38	Jan 2015	4.5	1	1	HA38_CHPUP_01	521	58	11	Low	100%
39/40	Dec 2012	13.9	3	1	HA39/40_CHPUP_01	2,350	3,555	151	High	100%
	Dec 2012	4.5	3	2	HA39/40_CHPUP_02	600	860	143	High	100%
43	Nov 2012	1	3	1	HA43_CHPUP_01	224	324	145	High	100%

DENSITY KEY OUTLINED BY THE HABITAT RESTORATION PLAN	
Density Class	Plants Counted per 100ft ²
Not Present	0
Low	1-50
Medium	51-100
High	101-500
Very High	>500

Table B-3
SEASIDE BIRD'S BEAK DENSITY SURVEYS
 Per Historic Areas 39/40 & 43

HA	Date Casted	SEED CASTED (g)	YEAR	PLOT NAME	PLOT ID	AREA (FT ²)	# PLANTS	# PLANTS / 100 FT ²	DENSITY CLASS	SUITABLE HABITAT
39/40	Dec 2012	18.1	3	1	HA39/40_CORIL_01	240	16	7	Low	100%
43	Nov 2012	3.2	3	1	HA43_CORIL_01	114	125	110	High	100%

DENSITY KEY OUTLINED BY THE HABITAT RESTORATION PLAN	
Density Class	Plants Counted per 100ft ²
Not Present	0
Low	1-50
Medium	51-100
High	101-500
Very High	>500

Table B-4
RANDOM QUADRAT SAMPLING AUGUST 19, 2015
 Per Historic Area 34

QUADRAT #	AREA OF QUADRAT (FT ²)	TARGET NUMBER OF NATIVE PLANTS	ACTUAL NUMBER OF NATIVE PLANTS	PERCENT COVER OF NATIVE PLANTS	NATIVE PLANT QUANTITIES, SPECIES AND PERCENT COVER
Q01	2.7	5.4	2	1%	2 STPU (1%)
Q02	2.7	5.4	1	36%	1 LOSC (36%)
Q03	2.7	5.4	0	0%	
Q04	2.7	5.4	2	2%	1 BAPI (1%), 1 HOCU (1%)
Q05	2.7	5.4	18	5%	15 HOCU (4%), 3 STPU (1%)
Q06	2.7	5.4	0	0%	
Q07	2.7	5.4	7	5%	2 ELGL (2%), 2 STPU (1%), 2 HOCU (1%), 1 BAPI (1%)
Q08	2.7	5.4	5	2%	3 HOCU (1%), 1 BAPI (0.5%), 1 STPU (0.5%)
Q09	2.7	5.4	10	8%	5 STPU (2%), 4 HOCU (5%), 1 ARCA (1%)
Q10	2.7	5.4	3	2%	3 BAPI (2%)
SUM OF ALL QUADRATS	27	54	48	6%	

Species common name and code:

ARCA = California sagebrush

BAPI = coyote brush

ELGL = blue wildrye

HOCU = horkelia

LOSC = deerweed

STPU = purple needlegrass

Notes:

HA 34 was slightly below meeting success criteria (2 plants/ft²) which is likely due to site conditions and the drought.

It is believed the seed is still in place and will likely germinate in wetter conditions.

It is recommended that random quadrat sampling should continue in 2016 to monitor seeding areas.

Table B-5
RANDOM QUADRAT SAMPLING AUGUST 19, 2015
Per Historic Area 37

QUADRAT #	AREA OF QUADRAT (FT ²)	TARGET NUMBER OF NATIVE PLANTS	ACTUAL NUMBER OF NATIVE PLANTS	PERCENT COVER OF NATIVE PLANTS	NATIVE PLANT QUANTITIES, SPECIES AND PERCENT COVER
Q01	2.7	5.4	11	5%	11 STPU (5%)
Q02	2.7	5.4	3	3%	2 LUAR (1%)
Q03	2.7	5.4	1	4%	1 ELGL (4%)
Q04	2.7	5.4	39	6.5%	34 STPU (3%), 3 LUAR (3%), 2 HOCU (0.5%)
Q05	2.7	5.4	0	0%	
Q06	2.7	5.4	3	1%	3 ELGL (1%)
Q07	2.7	5.4	3	1.5%	2 HOCU (0.5%), 1 ARCA (1%)
Q08	2.7	5.4	2	1%	1 BAPI (0.5%), 1 HOCU (0.5%)
Q09	2.7	5.4	3	2%	2 ACMI (1%), 1 ARCA (1%)
Q10	2.7	5.4	2	2.5%	1 ARCA (2%), 1 HOCU (0.5%)
SUM OF ALL QUADRATS	27	54	67	3%	

Species common name and code:

ARCA = California sagebrush

BAPI = coyote brush

ELGL = blue wildrye

HOCU = horkelia

LUAR = yellow bush lupine

STPU = purple needlegrass

Notes:

HA 37 met success criteria for seed broadcast.

**Table B-6
HA 19 YEAR THREE SURVIVORSHIP MONITORING**

SPECIES	PLANTED	MONITORED	% ALIVE
<i>Adenostoma fasciculatum</i> (chamise)	100	37	57%
<i>Artemisia californica</i> (California sagebrush)	52	20	35%
<i>Arctostaphylos pumila</i> ¹ (sandmat manzanita)	80	30	80%
<i>Arctostaphylos tomentosa</i> (shaggy-bark manzanita)	24	10	70%
<i>Baccharis pilularis</i> (coyote brush)	150	20	65%
<i>Ceanothus cuneatus</i> var. <i>rigidus</i> ¹ (Monterey ceanothus)	50	30	27%
<i>Ericameria ericoides</i> (mock heather)	50	20	70%
<i>Ericameria fasciculata</i> ¹ (Eastwood's golden fleece)	50	20	95%
<i>Salvia mellifera</i> (black sage)	250	20	35%
TOTAL	806	207	58%

¹HMP species

Plant Survivorship	Percent Alive
High	80-100%
Moderate	50-79%
Low	≤49%

**Table B-7
HA 28 YEAR ONE SURVIVORSHIP MONITORING**

SPECIES	PLANTED	MONITORED	% ALIVE
<i>Adenostoma fasciculatum</i> (chamise)	473	47	100%
<i>Arctostaphylos hookeri</i> ¹ (Hooker's manzanita)	237	24	88%
<i>Arctostaphylos montereyensis</i> ¹ (Toro manzanita)	237	24	83%
<i>Arctostaphylos tomentosa</i> (shaggy-bark manzanita)	592	60	87%
<i>Baccharis pilularis</i> (coyote brush)	237	24	71%
<i>Ceanothus cuneatus</i> var. <i>rigidus</i> ¹ (Monterey ceanothus)	237	24	71%
<i>Ericameria fasciculata</i> ¹ (Eastwood's golden fleece)	161	16	88%
<i>Salvia mellifera</i> (black sage)	237	24	96%
TOTAL	2,411	243	87%

¹HMP species

Plant Survivorship	Percent Alive
High	80-100%
Moderate	50-79%
Low	≤49%

**Table B-8
HA 29 YEAR THREE SURVIVORSHIP MONITORING**

SPECIES	PLANTED	MONITORED	% ALIVE
<i>Adenostoma fasciculatum</i> (chamise)	120	45	91%
<i>Arctostaphylos hookeri</i> ¹ (Hooker's manzanita)	5	5	100%
<i>Arctostaphylos montereyensis</i> ¹ (Toro manzanita)	15	15	87%
<i>Arctostaphylos pumila</i> ¹ (sandmat manzanita)	20	20	85%
<i>Arctostaphylos tomentosa</i> (shaggy-bark manzanita)	25	25	84%
<i>Baccharis pilularis</i> (coyote brush)	91	20	75%
<i>Ceanothus cuneatus</i> var. <i>rigidus</i> ¹ (Monterey ceanothus)	5	5	80%
<i>Ericameria fasciculata</i> ¹ (Eastwood's golden fleece)	5	5	100%
<i>Salvia mellifera</i> (black sage)	225	20	90%
TOTAL	511	160	87%

¹HMP species

Plant Survivorship	Percent Alive
High	80-100%
Moderate	50-79%
Low	≤49%

**Table B-9
HA 37 YEAR TWO SURVIVORSHIP MONITORING**

SPECIES	PLANTED	MONITORED	% ALIVE
<i>Adenostoma fasciculatum</i> (chamise)	636	61	93%
<i>Arctostaphylos hookeri</i> ¹ (Hooker's manzanita)	234	23	74%
<i>Arctostaphylos montereyensis</i> ¹ (Toro manzanita)	389	40	63%
<i>Arctostaphylos tomentosa</i> (shaggy-bark manzanita)	621	62	68%
<i>Baccharis pilularis</i> (coyote brush)	234	24	92%
<i>Ceanothus cuneatus</i> var. <i>rigidus</i> ¹ (Monterey ceanothus)	315	32	38%
<i>Lupinus arboreus</i> (yellow bush lupine)	208	16	31%
<i>Salvia mellifera</i> (black sage)	362	25	100%
TOTAL	2,999	283	72%

¹HMP species

Plant Survivorship	Percent Alive
High	80-100%
Moderate	50-79%
Low	≤49%

**Table B-10
HA 37 YEAR ONE SURVIVORSHIP MONITORING**

SPECIES	PLANTED	MONITORED	% ALIVE
<i>Adenostoma fasciculatum</i> (chamise)	363	36	89%
<i>Arctostaphylos hookeri</i> ¹ (Hooker's manzanita)	325	33	61%
<i>Arctostaphylos montereyensis</i> ¹ (Toro manzanita)	370	37	46%
<i>Arctostaphylos tomentosa</i> (shaggy-bark manzanita)	554	55	44%
<i>Baccharis pilularis</i> (coyote brush)	284	28	75%
<i>Ceanothus cuneatus</i> var. <i>rigidus</i> ¹ (Monterey ceanothus)	652	65	40%
<i>Lupinus arboreus</i> (yellow bush lupine)	243	24	38%
<i>Lupinus chamissonis</i> (silver bush lupine)	165	17	65%
<i>Salvia mellifera</i> (black sage)	250	25	88%
TOTAL	3,206	320	57%

¹HMP species

Plant Survivorship	Percent Alive
High	80-100%
Moderate	50-79%
Low	≤49%

**Table B-11
HA 38 YEAR TWO SURVIVORSHIP MONITORING**

SPECIES	PLANTED	MONITORED	% ALIVE
<i>Adenostoma fasciculatum</i> (chamise)	163	16	100%
<i>Arctostaphylos hookeri</i> ¹ (Hooker's manzanita)	123	12	100%
<i>Arctostaphylos montereyensis</i> ¹ (Toro manzanita)	123	12	100%
<i>Arctostaphylos tomentosa</i> (shaggy-bark manzanita)	204	20	100%
<i>Baccharis pilularis</i> (coyote brush)	82	8	75%
<i>Ceanothus cuneatus</i> var. <i>rigidus</i> ¹ (Monterey ceanothus)	82	8	75%
<i>Salvia mellifera</i> (black sage)	82	8	100%
TOTAL	859	84	95%

¹HMP species

Plant Survivorship	Percent Alive
High	80-100%
Moderate	50-79%
Low	≤49%

**Table B-12
HA 38 YEAR ONE SURVIVORSHIP MONITORING**

SPECIES	PLANTED	MONITORED	% ALIVE
<i>Arctostaphylos pumila</i> ¹ (sandmat manzanita)	327	33	91%
<i>Garrya elliptica</i> (coast silk tassel)	82	8	88%
<i>Lupinus chamissonis</i> (silver bush lupine)	82	8	100%
TOTAL	491	49	92%

¹HMP species

Plant Survivorship	Percent Alive
High	80-100%
Moderate	50-79%
Low	≤49%

APPENDIX C

Photo Log

This page intentionally left blank

PHOTO DESCRIPTION	PHOTO
<p>Plant Salvage</p> <p>Burleson biologists collecting <i>Stipa pulchra</i> on BLM land.</p> <p>C-1</p>	 A wide-angle photograph of two biologists in a grassy field. One biologist, wearing a green shirt and a hat, is kneeling on the left, working with an orange bucket. The other biologist, wearing a bright orange shirt and khaki pants, is bent over on the right, working with a white bucket. The field is filled with tall grasses and small purple flowers. In the background, there are rolling hills under a clear sky.
<p>Plant Salvage</p> <p>Burleson biologists collecting <i>Lupinus nanus</i> on BLM land.</p> <p>C-2</p>	 A close-up photograph showing a pair of hands. The left hand holds a silver folding knife, and the right hand holds a cluster of green and purple seed pods of a lupine plant. The background is slightly blurred, showing more of the field and the legs of the biologists.

PHOTO DESCRIPTION	PHOTO
<p>Plant Salvage</p> <p>Burleson biologists collecting <i>Horkelia cuneata</i>.</p> <p>C-3</p>	
<p>Plant Salvage</p> <p>Burleson biologists collecting <i>Acmispon glaber</i>.</p> <p>C-4</p>	

PHOTO DESCRIPTION	PHOTO
<p>Plant Material Storage, Processing and Propagation</p> <p>Processed <i>Lupinus nanus</i>.</p> <p>C-5</p>	
<p>Plant Material Storage, Processing and Propagation</p> <p>Processed <i>Helianthemum scoarium</i>.</p> <p>C-6</p>	

PHOTO DESCRIPTION	PHOTO
<p>Plant Material Storage, Processing and Propagation.</p> <p><i>Lupinus arboreus</i> in the greenhouse.</p> <p>C-7</p>	
<p>Plant Material Storage, Processing and Propagation.</p> <p><i>Arctostaphylos tomentosa</i> propagating in the sun area.</p> <p>C-8</p>	

PHOTO DESCRIPTION	PHOTO
<p>Plant Material Storage, Processing and Propagation</p> <p><i>Adenostoma fasciculatum</i> and <i>Arctostaphylos montereyensis</i> propagating in the shade area.</p> <p>C-9</p>	
<p>Plant Material Storage, Processing and Propagation</p> <p><i>Baccharis pilularis</i> propagating in the sun area.</p> <p>C-10</p>	

PHOTO DESCRIPTION	PHOTO
<p>Seed Production</p> <p><i>Achillea millefolium</i> seed production plot.</p> <p>C-11</p>	
<p>Seed Production</p> <p><i>Achillea millefolium</i> growing in the seed production plot.</p> <p>C-12</p>	

PHOTO DESCRIPTION	PHOTO
<p>Seed Production</p> <p><i>Stipa pulchra</i> seed production plot.</p> <p>C-13</p>	
<p>Seed Production</p> <p><i>Stipa pulchra</i> growing in the seed production plot.</p> <p>C-14</p>	

PHOTO DESCRIPTION	PHOTO
<p>Seed Production</p> <p><i>Acmispon glaber</i> seed production plot.</p> <p>C-15</p>	
<p>Seed Production</p> <p><i>Acmispon glaber</i> growing in the seed production plot.</p> <p>C-16</p>	

PHOTO DESCRIPTION	PHOTO
<p>Seed Production</p> <p><i>Achillea millefolium</i> seed from the production plot and stored at the Burleson office.</p> <p>C-17</p>	
<p>Restoration Activities</p> <p>Nine 10-gram batches of <i>Gilia tenuiflora</i> ssp. <i>arenaria</i> seed ready to be broadcast at HA 19.</p> <p>C-18</p>	

PHOTO DESCRIPTION	PHOTO
<p>Restoration Activities</p> <p>Clearing straw in preparation for <i>Gilia tenuiflora</i> ssp. <i>arenaria</i> broadcast at HA 19.</p> <p>C-19</p>	
<p>Restoration Activities</p> <p>Broadcasting <i>Gilia tenuiflora</i> ssp. <i>arenaria</i> at HA 19.</p> <p>C-20</p>	

PHOTO DESCRIPTION	PHOTO
<p>Restoration Activities</p> <p>Plants staged and ready to be installed at HA 28.</p> <p>C-21</p>	 A photograph showing a field of potted plants, likely for restoration. The plants are in black pots and have bright pink tags attached to them. They are arranged in rows on a yellow and black striped pallet. The background shows a dry, hilly landscape under a clear blue sky.
<p>Restoration Activities</p> <p>Staging plants where they will be installed at HA 28.</p> <p>C-22</p>	 A wide-angle photograph of a field where many potted plants are staged for installation. The plants are arranged in rows across a dry, hilly landscape. A worker wearing a yellow safety vest and a hat is visible in the distance on the right side of the field. The sky is clear and blue.

PHOTO DESCRIPTION	PHOTO
<p>Restoration Activities</p> <p>Digging holes with an auger for plant installation at HA 28.</p> <p>C-23</p>	
<p>Restoration Activities</p> <p>Staged plants in dug holes at HA 28.</p> <p>C-24</p>	

PHOTO DESCRIPTION	PHOTO
<p>Restoration Activities</p> <p>Staging plants for installation at HA 37.</p> <p>C-25</p>	
<p>Restoration Activities</p> <p>Bobcat with auger attachment digging holes for plant installation at HA 37.</p> <p>C-26</p>	

PHOTO DESCRIPTION	PHOTO
<p>Restoration Activities Installing plants at HA 37. C-27</p>	
<p>Restoration Activities Installed plants at HA 37. C-28</p>	

PHOTO DESCRIPTION	PHOTO
<p>Restoration Activities</p> <p>Staging plant at HA 38 for installation.</p> <p>C-29</p>	
<p>Restoration Activities</p> <p>Seed broadcasting at HA 34.</p> <p>C-30</p>	

PHOTO DESCRIPTION	PHOTO
<p>Restoration Activities</p> <p>Selectively seeding <i>Chorizanthe pungens</i> var. <i>pungens</i> at HA 37.</p> <p>C-31</p>	
<p>Restoration Activities.</p> <p>Burleson biologist applying native seed to erosion control area at HA 28.</p> <p>C-32</p>	

PHOTO DESCRIPTION	PHOTO
<p>Erosion Control Activities</p> <p>Digging trenches for straw wattles at HA 28.</p> <p>C-33</p>	
<p>Erosion Control Activities</p> <p>Filling the trench to key in the coir fabric at HA 28.</p> <p>C-34</p>	

PHOTO DESCRIPTION	PHOTO
<p>Erosion Control Activities</p> <p>Seeding erosion control footprint at HA 28.</p> <p>C-35</p>	
<p>Erosion Control Activities</p> <p>Coir fabric and straw wattles installed at HA 28.</p> <p>C-36</p>	

PHOTO DESCRIPTION	PHOTO
<p>Erosion Control Activities</p> <p>Digging trenches for straw wattles and crimping straw behind the wattles for support at HA 37.</p> <p>C-37</p>	
<p>Erosion Control activities</p> <p>Placing coir fabric down at HA 37.</p> <p>C-38</p>	

PHOTO DESCRIPTION	PHOTO
<p>Erosion Control Activities</p> <p>Collapsing rills and installing straw wattles at HA 37.</p> <p>C-39</p>	
<p>Erosion Control Activities</p> <p>Wattles installed at HA 37 with casted <i>Hordeum</i> germinating behind the wattles.</p> <p>C-40</p>	

PHOTO DESCRIPTION	PHOTO
<p>Monitoring Activities.</p> <p>Burleson biologist conducting HMP forb density surveys at HA 39/40.</p> <p>C-41</p>	 A wide-angle photograph showing a biologist in an orange shirt and blue jeans kneeling in a field of sparse, dry vegetation. The field is marked with several white stakes. The background shows a clear blue sky and distant hills.
<p>Monitoring Activities</p> <p><i>Gilia tenuiflora</i> ssp. <i>arenaria</i> growing in restoration plot HA 39/40 during HMP forb density surveys.</p> <p>C-42</p>	 A close-up photograph of small, five-petaled purple flowers with dark centers growing from sandy soil. A person's finger is placed in the foreground to provide a sense of scale.

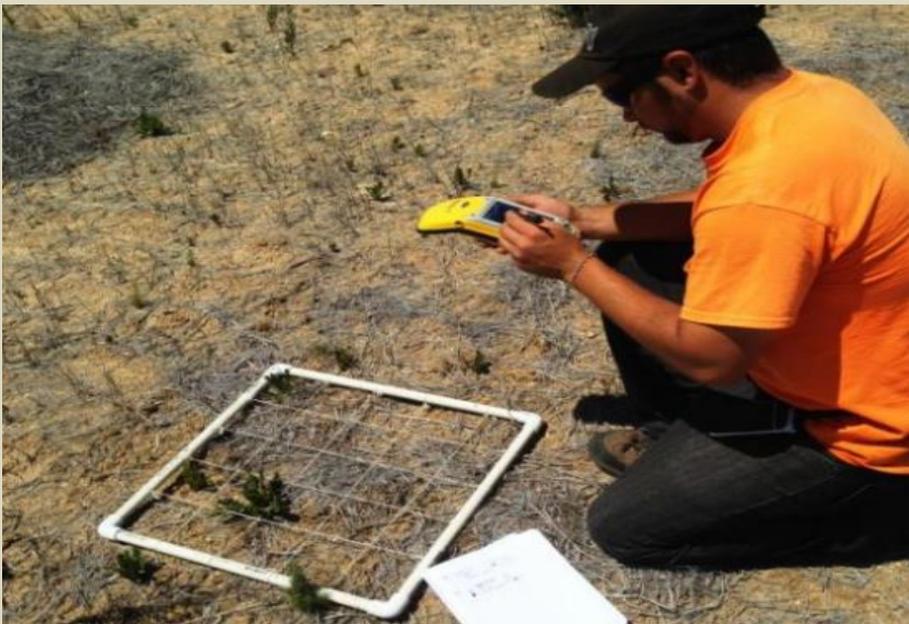
PHOTO DESCRIPTION	PHOTO
<p>Monitoring Activities</p> <p>Burleson biologist performing random quadrat surveys at HA 34.</p> <p>C-43</p>	 A biologist wearing an orange t-shirt and a dark cap is kneeling on the ground in a dry, brushy field. He is holding a yellow handheld electronic device, possibly a GPS or data logger. In front of him is a white quadrat grid with a metal mesh inside, placed on the ground. A white piece of paper is also visible on the ground near the grid.
<p>Monitoring Activities</p> <p>Burleson biologist establishing grids to conduct survivorship monitoring at HA 37.</p> <p>C-44</p>	 A biologist wearing an orange long-sleeved shirt, grey pants, and a white hat is standing in a field. He is using a tool to establish a grid on the ground. To his left is a red bucket filled with wooden sticks. The field is dry with sparse vegetation, and there are hills in the background under a clear blue sky.

PHOTO DESCRIPTION	PHOTO
<p>Monitoring Activities</p> <p>Burleson biologist conducting survivorship monitoring at HA 28.</p> <p>C-45</p>	
<p>BRAC Open House</p> <p>Burleson senior biologist showing the public native plants at the BRAC Open House.</p> <p>C-46</p>	

This page intentionally left blank

APPENDIX D

Figures

This page intentionally left blank

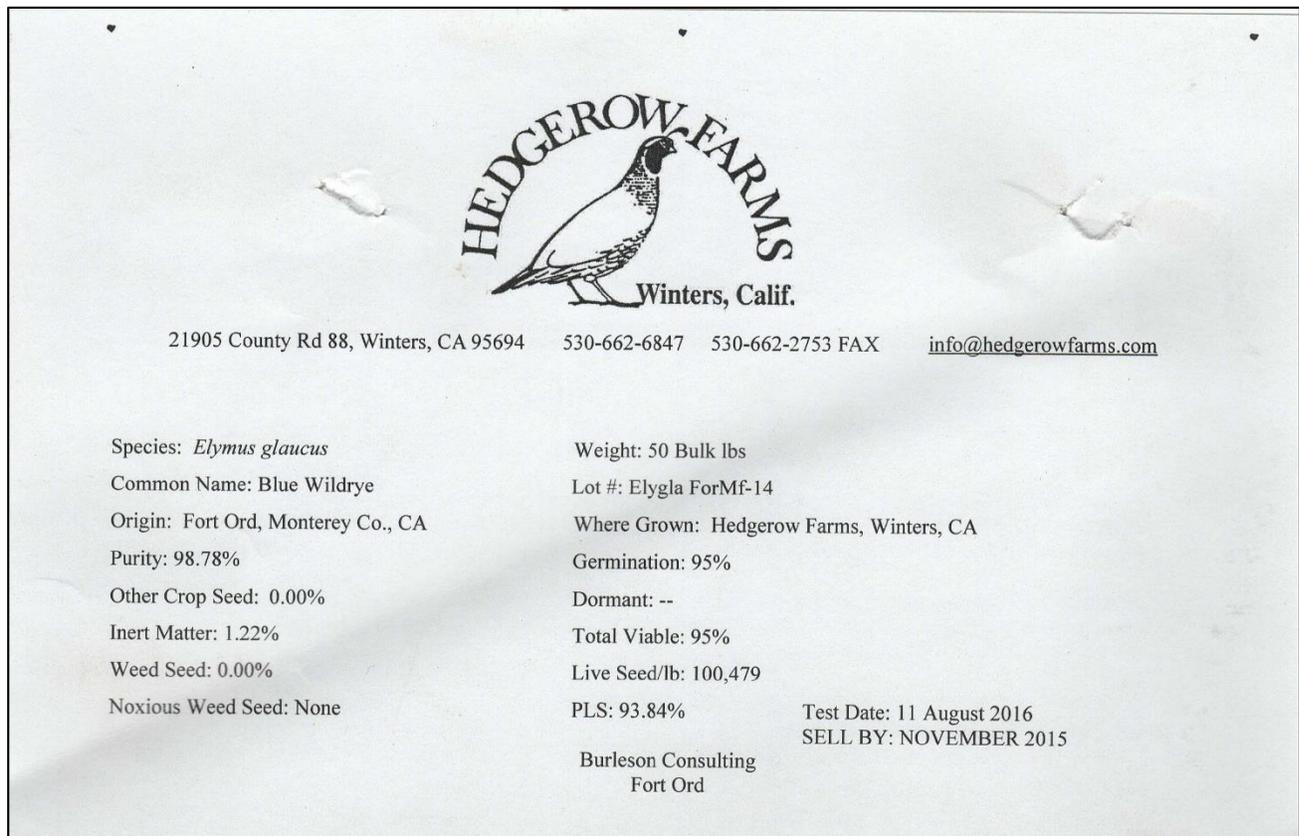


Figure 1
Elymus glaucus seed information card.



MD Seed Analysis Inc
 PO Box 40335
 Santa Barbara, CA 93140
Laboratory Report Of Analysis

S & S Seeds
 P.O. Box 1275
 Carpinteria, CA 93014-1275

Account No. 7	Date Received 09/09/15	Date Completed 09/29/15	Lab Number 15-2403
------------------	---------------------------	----------------------------	-----------------------

Information Provided by Sender	
Product	VNS
Kind	Achillea millefolium
Genus/Species	Achillea millefolium
Lot Number	ACHMIL L7448

Purity Analysis		Viability Analysis				
Component	Purity	Germ Date	Germ	Dormant	Hard	Viable
Achillea millefolium	38.38%	09/29/15	79	-N-	-N-	79
Weed seed	0.01%					
Crop seed	0.00%					
Inert matter	61.61%					

Other Crop Seeds	None Found
-------------------------	------------

Noxious Weed Seeds in 4 grams	# per lb
For: All States	
Purslane, common <i>Portulaca oleracea</i>	113

Weed Seeds in 4 grams	# per lb
Pigweed <i>Amaranthus sp.</i>	113

Other Determinations	
Inert matter: Plant material.	
Live Seed / lb = 807,336	
PLS = 30.32%	

Remarks
 Achillea millefolium - AOSA Requirements (Purity: 0.4 grams; Noxious: 4 grams)
 Purity Grams Required is less due to high percentage of inert in sample.
 Actual seeds found: 1 Purslane, common (*Portulaca oleracea*) seeds in the noxious portion.
 Purity Analysis includes a Bulk Examination and Noxious Weed Seed Examination for All States.
 Germination Test 14 Days

Status: None.

Tests Requested: Germination, Purity. No other tests requested.

WARRANTY: We warrant that the purity and germination test results reported on this form have been carried out in accordance with AOSA rules unless otherwise specified. Test results reflect the condition of the submitted sample and may not reflect the condition of the seed lot from which the sample was taken.
 DISCLAIMER OF WARRANTIES: WE MAKE NO OTHER WARRANTIES OF ANY KIND, EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

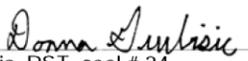
Signature: 
 Donna Grubisic, RST, seal # 24
 (805) 962-0739

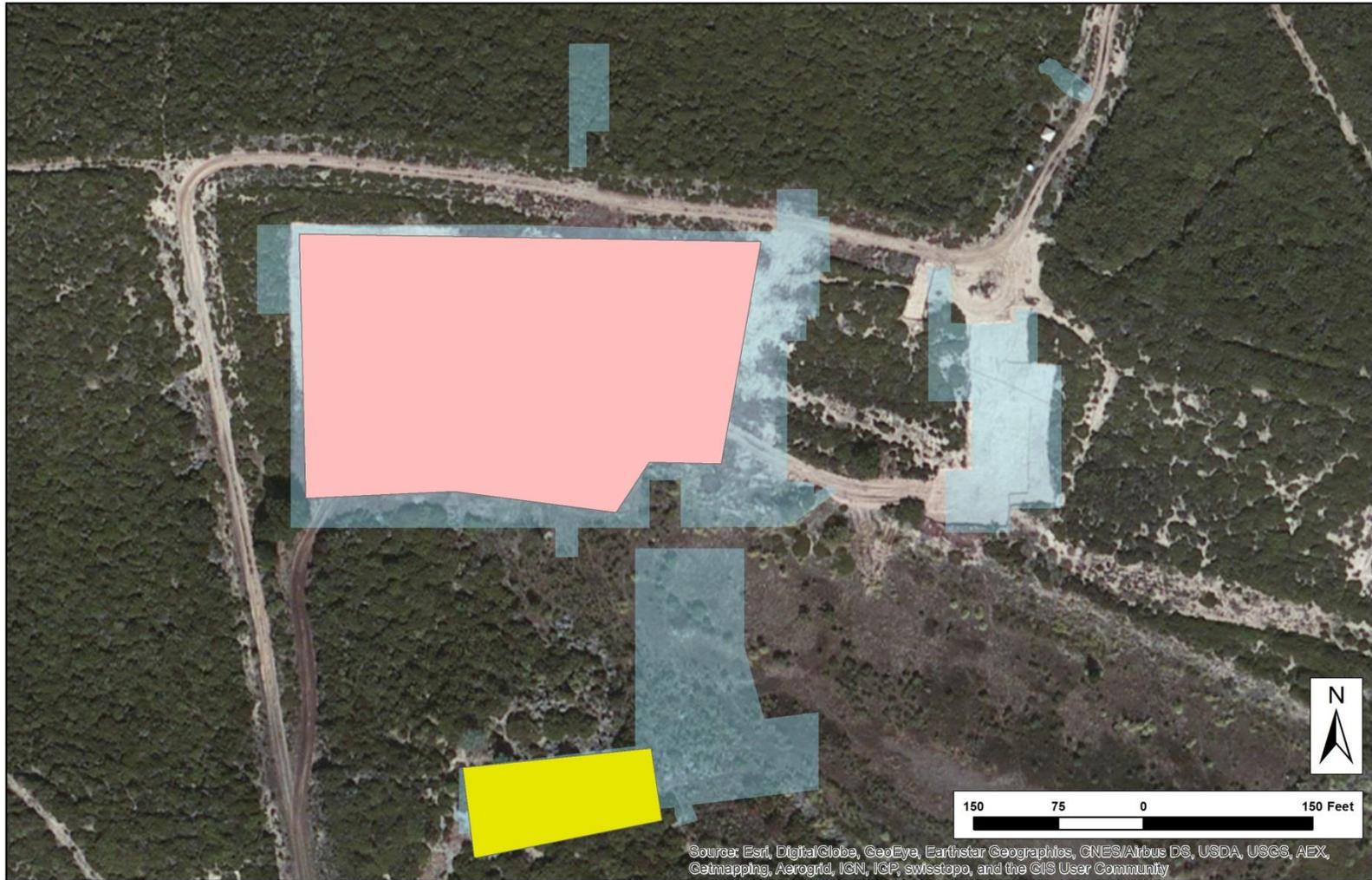


Figure 2
Achillea millefolium seed viability analysis.



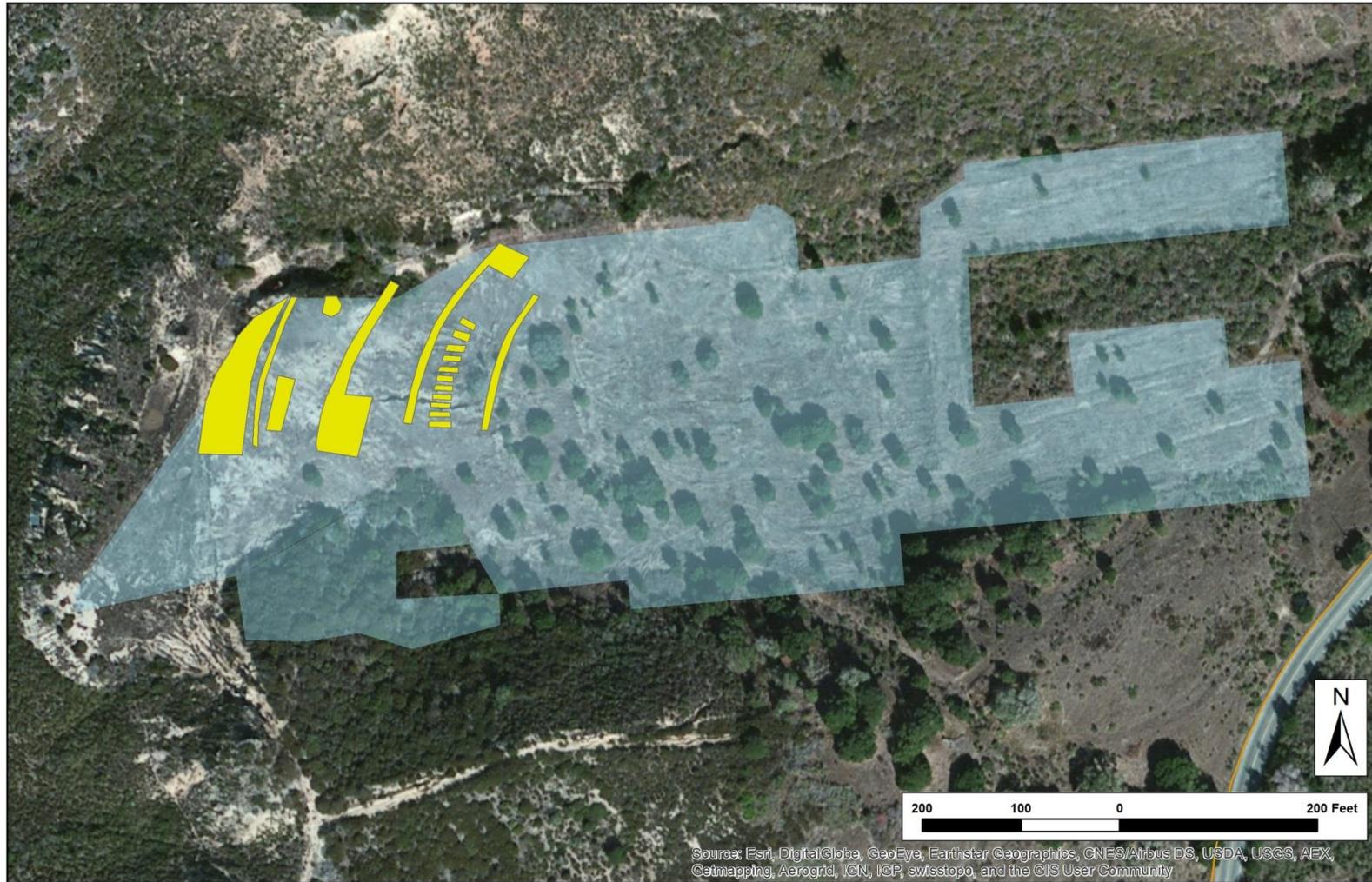
HA 19 2015 Sand Gilia Broadcast Plots			Site 39 Inland Ranges Historic Areas Location Map Former Fort Ord	
Sand Gilia Broadcast Plots (1-9)	Former Fort Ord Boundary		Source: U.S. Army Corps of Engineers Former Fort Ord Aerial and Restoration data provided by Fort Ord GIS website	
HA 19 Footprint	Impact Area	Burleson Consulting, Inc.	Figure 3	

Path: C:\Users\GIS\Desktop\GIS\2016\Fort Ord\2015 AReport Maps\HA 19\Fig3 HA 19 2015 Sand Gilia Broadcast Plots_160322b.mxd



HA 28 2015 Restoration Activities				Site 39 Inland Ranges Historic Areas Location Map Former Fort Ord	
Planting Area	HA 28 Footprint	Impact Area		Source: U.S. Army Corps of Engineers Former Fort Ord Aerial and Restoration data provided by Fort Ord GIS website	
Passive Seeding	Former Fort Ord Boundary		Burleson Consulting, Inc.	Figure 4	

Path: C:\Users\GIS\Desktop\GIS\2016\Fort Ord\2015 AReport Maps\HA 28\Fig4_ Year 1 HA 28 Restoration Activities_160325.mxd



HA 34 2015 Seed Broadcast Areas

- Passive Seeding
- Former Fort Ord Boundary
- HA 34 Footprint
- Impact Area

Path: C:\Users\GIS\Desktop\GIS\2016\Fort Ord\2015 AReport Maps\HA 34\Fig5_HA 34 Seed Broadcast Plots_160324.mxd

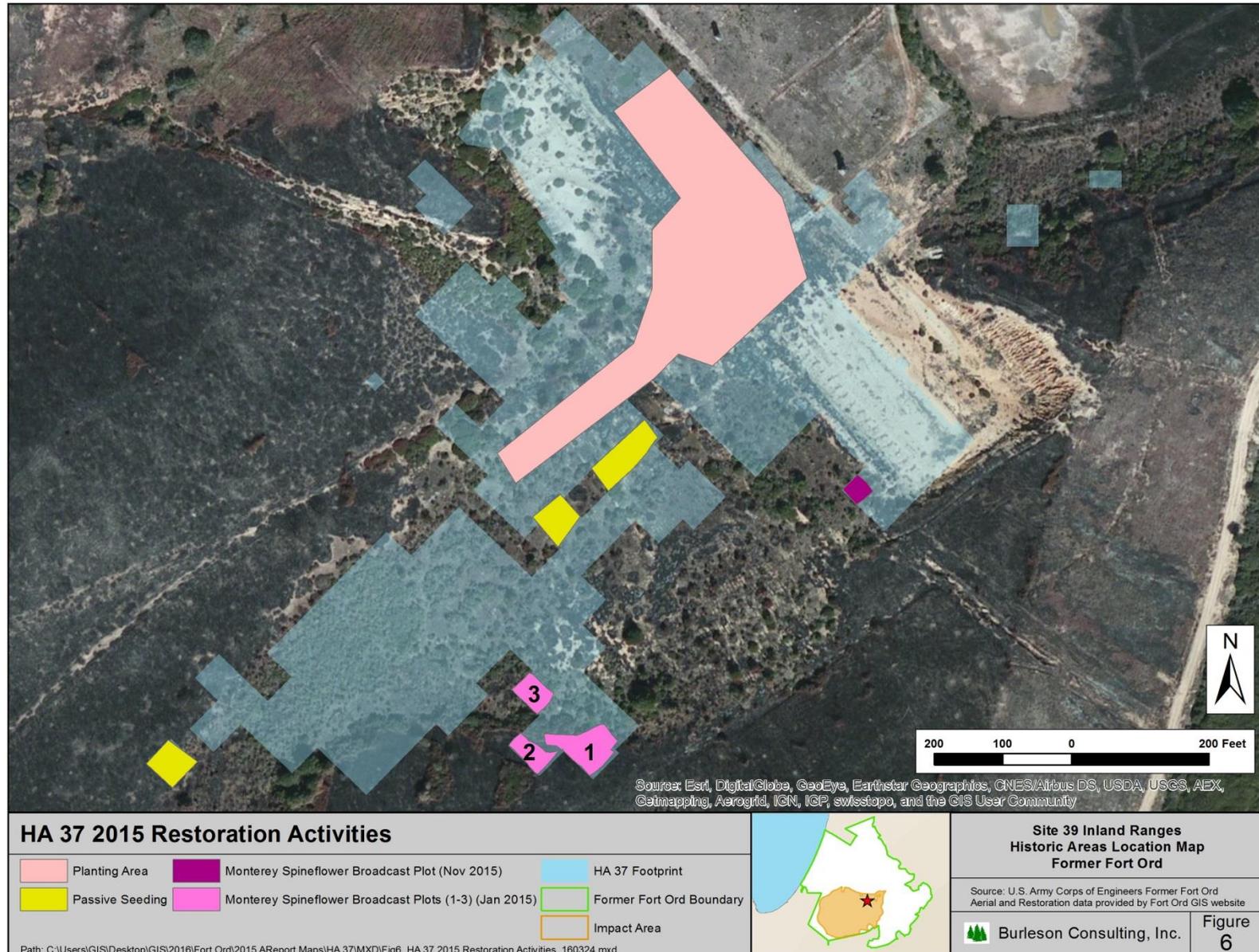


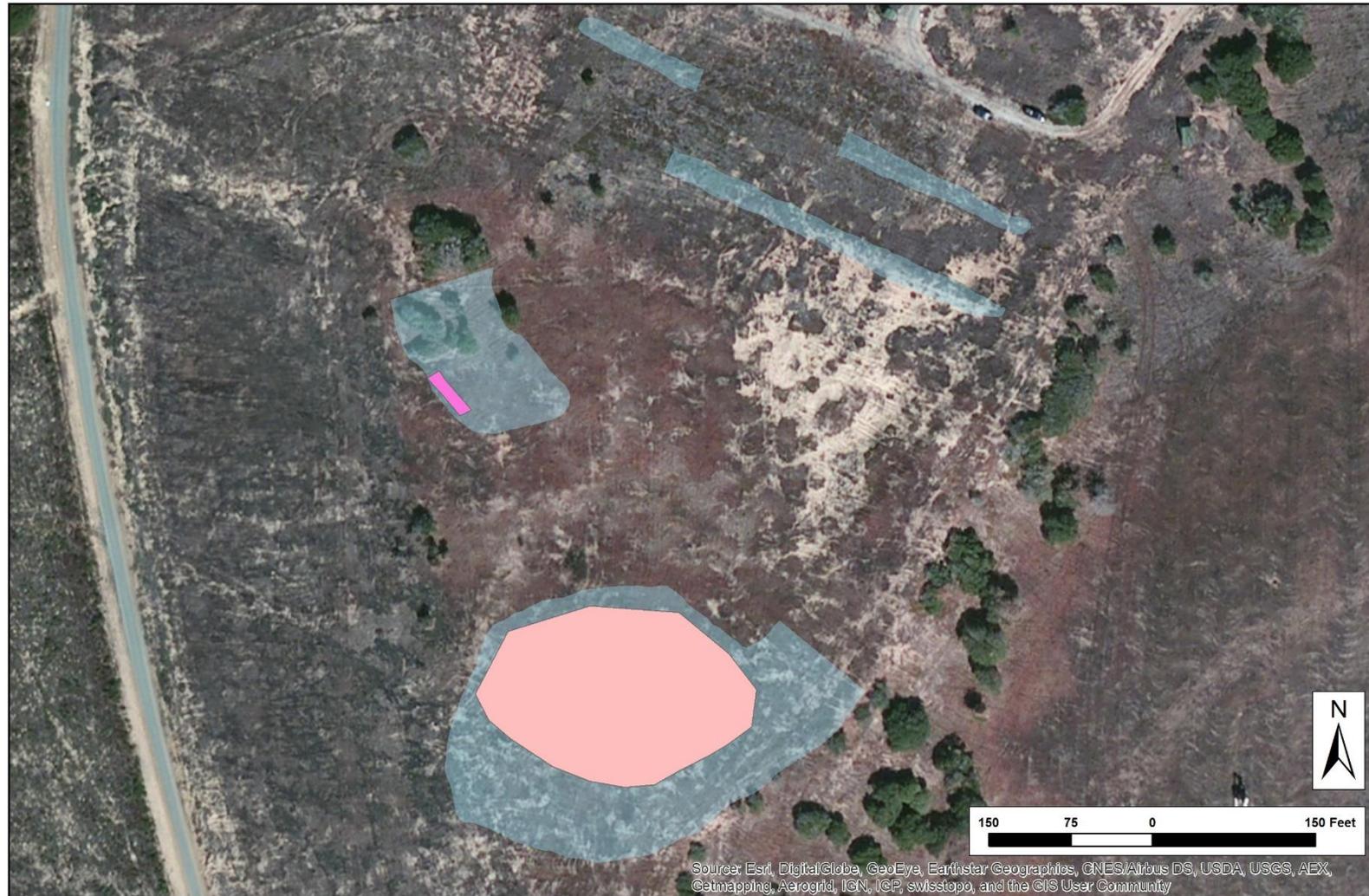
**Site 39 Inland Ranges
Historic Areas Location Map
Former Fort Ord**

Source: U.S. Army Corps of Engineers Former Fort Ord
Aerial and Restoration data provided by Fort Ord GIS website

Burlerson Consulting, Inc.

Figure
5





HA 38 2015 Restoration Activities

- Planting Area
- HA 38 Footprint
- Impact Area
- Monterey Spineflower Broadcast Plot
- Former Fort Ord Boundary



**Site 39 Inland Ranges
Historic Areas Location Map
Former Fort Ord**

Source: U.S. Army Corps of Engineers Former Fort Ord
Aerial and Restoration data provided by Fort Ord GIS website

Burlinson Consulting, Inc.

**Figure
7**

Path: C:\Users\GIS\Desktop\GIS\2016\Fort Ord\2015 AReport Maps\HA 38\MXD\Fig7 HA 38 2015 Restoration Activities 160328.mxd



<h3>HA 19 Year 1 Sand Gilia Density Survey</h3> <p>Density Classes</p> <ul style="list-style-type: none"> ■ High ■ Medium ■ Low Not Present <p>1-9 Sand Gilia Plots</p> <ul style="list-style-type: none"> ■ HA 19 Footprint Former Fort Ord Boundary Impact Area <p>Path: C:\Users\GIS\Desktop\GIS\2016\Fort Ord\2015 AReport Maps\HA 19\Fig8_HA 19 Year 1 Sand Gilia Density Survey_160324.mxd</p>			<h3>Site 39 Inland Ranges Historic Areas Location Map Former Fort Ord</h3> <p>Source: U.S. Army Corps of Engineers Former Fort Ord Aerial and Restoration data provided by Fort Ord GIS website</p> <p> Burlerson Consulting, Inc.</p>
		<p>Figure 8</p>	



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

HA 39/40 Year 2 and 3 Sand Gilia Density Surveys

- | | |
|--|---|
| Density Classes | 1-5 Sand Gilia Plots |
| ■ High | ■ HA 39/40 Footprint |
| ■ Medium | ■ Former Fort Ord Boundary |
| ■ Low | ■ Impact Area |
| ■ Not Present | |

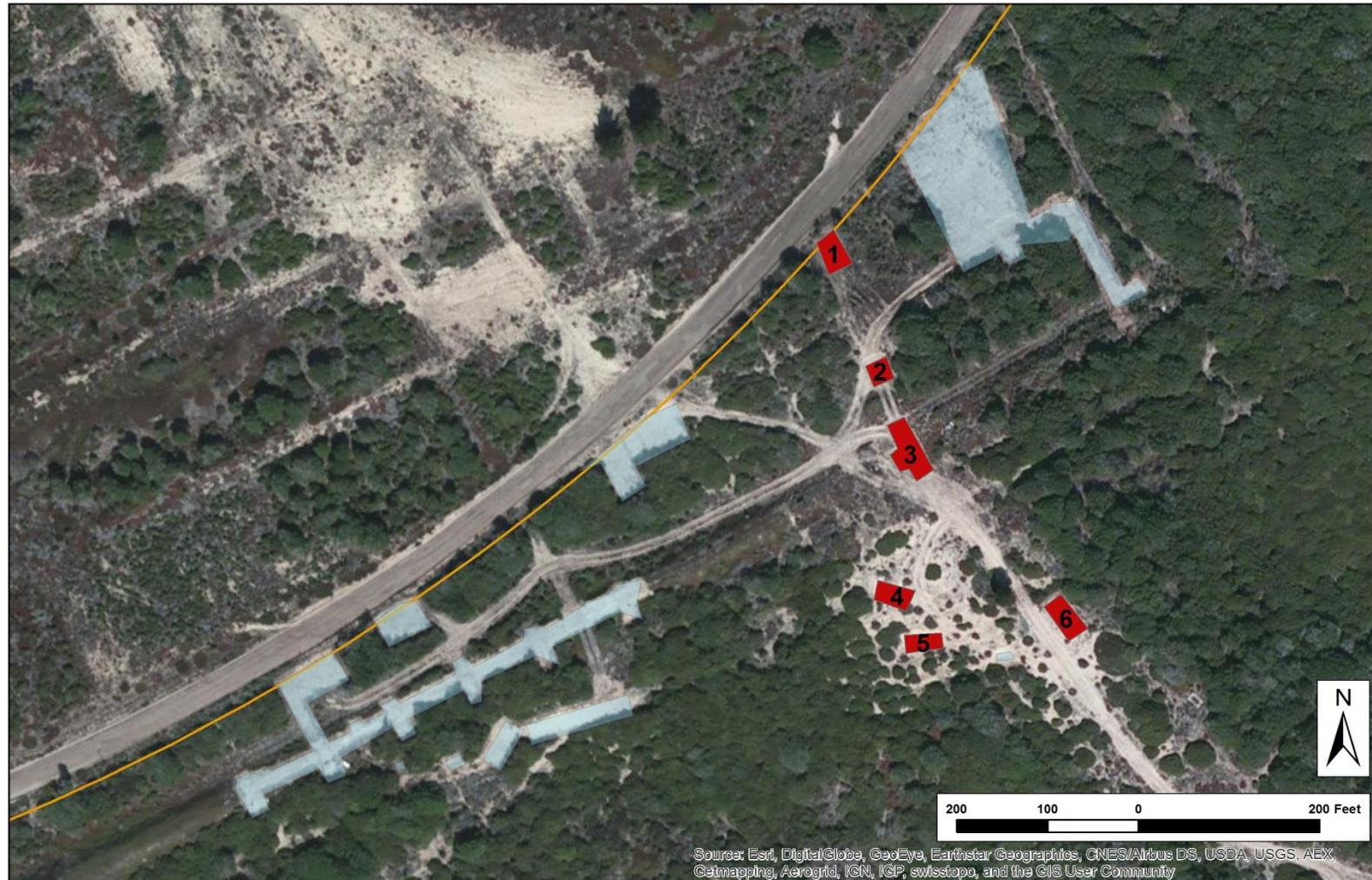


Site 39 Inland Ranges Historic Areas Location Map Former Fort Ord	
Source: U.S. Army Corps of Engineers Former Fort Ord Aerial and Restoration data provided by Fort Ord GIS website	
 Burleson Consulting, Inc.	Figure 9

Path: C:\Users\GIS\Desktop\GIS\2016\Fort Ord\2015 AReport Maps\HA 39-40\MXD\Fig9 HA 39and40 Year 1 Sand Gilia Density Survey 160324.mxd



<h3>HA 43 Year 3 Sand Gilia Density Survey</h3>			<h3>Site 39 Inland Ranges Historic Areas Location Map Former Fort Ord</h3>	
<p>Density Classes</p> <ul style="list-style-type: none"> ■ High ■ Medium ■ Low Not Present 	<ul style="list-style-type: none"> ■ HA 43 Footprint ■ Former Fort Ord Boundary ■ Impact Area 		<p>Source: U.S. Army Corps of Engineers Former Fort Ord Aerial and Restoration data provided by Fort Ord GIS website</p>	<p> Burlerson Consulting, Inc.</p>
<p>Path: C:\Users\GIS\Desktop\GIS\2016\Fort Ord\2015 AReport Maps\HA43\MXD\Fig10_HA 43 Year 1 Sand Gilia Density Survey_160324.mxd</p>				



HA 18 Year 3 Monterey Spineflower Density Survey

- | | |
|-----------------|---------------------------------------|
| Density Classes | 1-6 Monterey Spineflower Plots |
| High | HA 18 Footprint |
| Medium | Former Fort Ord Boundary |
| Low | Impact Area |
| Not Present | |

Path: C:\Users\GIS\Desktop\GIS\2016\Fort Ord\2015 AReport Maps\HA 18\MXD\Fig11_HA 18 Year 1 Monterey Spineflower Density Survey_160324.mxd



Site 39 Inland Ranges Historic Areas Location Map Former Fort Ord

Source: U.S. Army Corps of Engineers Former Fort Ord
Aerial and Restoration data provided by Fort Ord GIS website

Burleson Consulting, Inc.

Figure
11



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

<h3>HA 22 Year 3 Monterey Spineflower Density Survey</h3>			<h3>Site 39 Inland Ranges Historic Areas Location Map Former Fort Ord</h3>	
<p>Density Classes</p> <ul style="list-style-type: none"> ■ High ■ Medium ■ Low ■ Not Present 			<p>Source: U.S. Army Corps of Engineers Former Fort Ord Aerial and Restoration data provided by Fort Ord GIS website</p>	
<p>Path: C:\Users\GIS\Desktop\GIS\2016\Fort Ord\2015 AReport Maps\HA22\MXD\Fig12_HA 22 Year 1 Monterey Spineflower Density Survey_160324.mxd</p>		<p>Burleson Consulting, Inc.</p>		<p>Figure 12</p>



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Geomapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

<h3>HA 23 Year 3 Monterey Spineflower Density Survey</h3>			<h3>Site 39 Inland Ranges Historic Areas Location Map Former Fort Ord</h3>	
<p>Density Classes</p> <ul style="list-style-type: none"> ■ High ■ Medium ■ Low Not Present 	<ul style="list-style-type: none"> HA 23 Footprint Former Fort Ord Boundary Impact Area 		<p>Source: U.S. Army Corps of Engineers Former Fort Ord Aerial and Restoration data provided by Fort Ord GIS website</p>	<p> Burleson Consulting, Inc. Figure 13</p>

Path: C:\Users\GIS\Desktop\GIS\2016\Fort Ord\2015 AReport Maps\HA23\MXD\Fig13 HA 23 Year 1 Monterey Spineflower Density Survey 160324.mxd



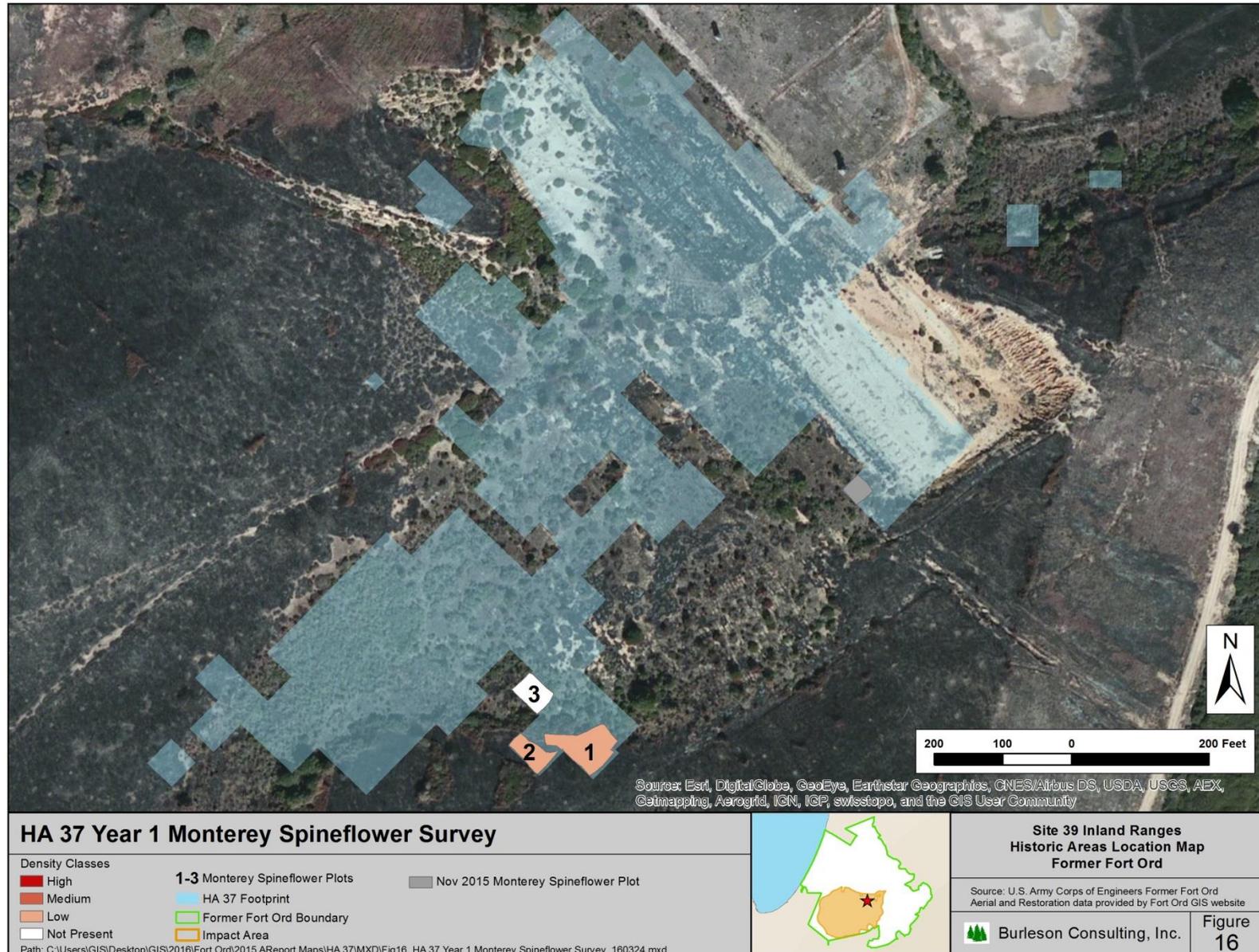
HA 28 Year 1 Monterey Spineflower Density Survey			Site 39 Inland Ranges Historic Areas Location Map Former Fort Ord	
Density Classes High Medium Low Not Present	1-3 Monterey Spineflower Plots HA 28 Footprint Former Fort Ord Boundary Impact Area		Source: U.S. Army Corps of Engineers Former Fort Ord Aerial and Restoration data provided by Fort Ord GIS website	Burleson Consulting, Inc.

Path: C:\Users\GIS\Desktop\GIS\2016\Fort Ord\2015 AReport Maps\HA 28\Fig14_HA 28 Year 1 Monterey Spineflower Density Survey_160324.mxd



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

<h3>HA 33 Year 3 Monterey Spineflower Survey</h3>			<h3>Site 39 Inland Ranges Historic Areas Location Map Former Fort Ord</h3>	
<p>Density Classes</p> <ul style="list-style-type: none"> High Medium Low Not Present 	<ul style="list-style-type: none"> HA 33 Footprint Former Fort Ord Boundary Impact Area 		<p>Source: U.S. Army Corps of Engineers Former Fort Ord Aerial and Restoration data provided by Fort Ord GIS website</p>	
<p>Path: C:\Users\GIS\Desktop\GIS\2016\Fort Ord\2015 AReport Maps\HA33\MXD\Fig15 HA 33 Year 1 Monterey Spineflower Density Survey 160324.mxd</p>		<p> Burleson Consulting, Inc.</p>	<p>Figure 15</p>	





Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

HA 38 Year 1 Monterey Spineflower Survey

Density Classes

- High
- Medium
- Low
- Not Present
- HA 38 Footprint
- Former Fort Ord Boundary
- Impact Area

Path: C:\Users\GIS\Desktop\GIS\2016\Fort Ord\2015 AReport Maps\HA 38\MXD\Fig17_HA 38 Year 1 Monterey Spineflower Survey_160324.mxd



Site 39 Inland Ranges Historic Areas Location Map Former Fort Ord

Source: U.S. Army Corps of Engineers Former Fort Ord
Aerial and Restoration data provided by Fort Ord GIS website

Burleson Consulting, Inc.

Figure
17



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

<h3>HA 39/40 Year 3 Monterey Spineflower Density Survey</h3>			<h3>Site 39 Inland Ranges Historic Areas Location Map Former Fort Ord</h3>	
<p>Density Classes</p> <ul style="list-style-type: none"> ■ High ■ Medium ■ Low Not Present 	<p>1-2 Monterey Spineflower Plots</p> <ul style="list-style-type: none"> HA 39/40 Former Fort Ord Boundary Impact Area 		<p>Source: U.S. Army Corps of Engineers Former Fort Ord Aerial and Restoration data provided by Fort Ord GIS website</p>	
<p>Path: C:\Users\GIS\Desktop\GIS\2016\Fort Ord\2015 AReport Maps\HA 39-40\MXD\Fig18_HA_39and40_Year 1 Monterey Spineflower Density Survey_160324.mxd</p>		<p>Burleson Consulting, Inc. Figure 18</p>		

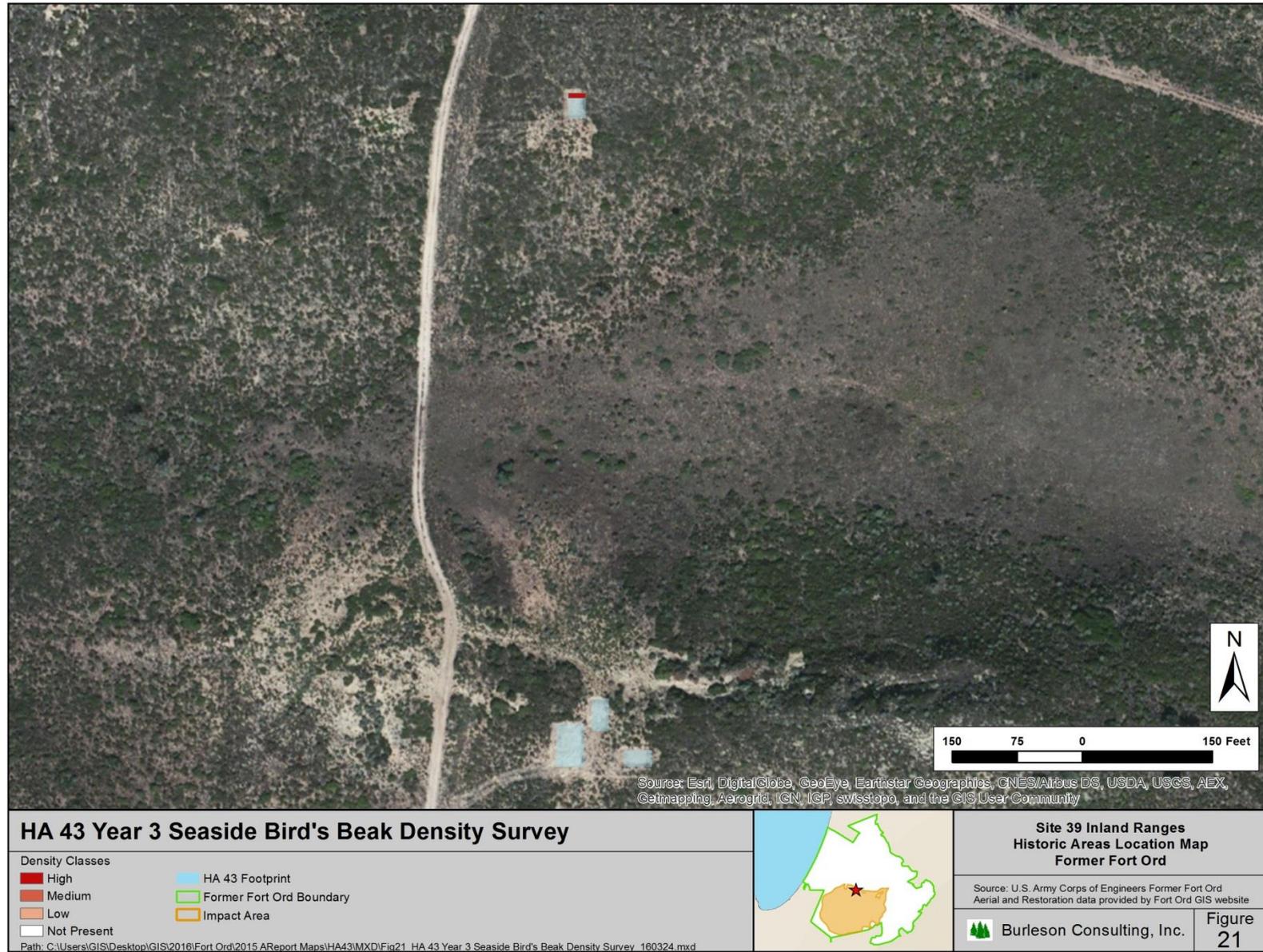


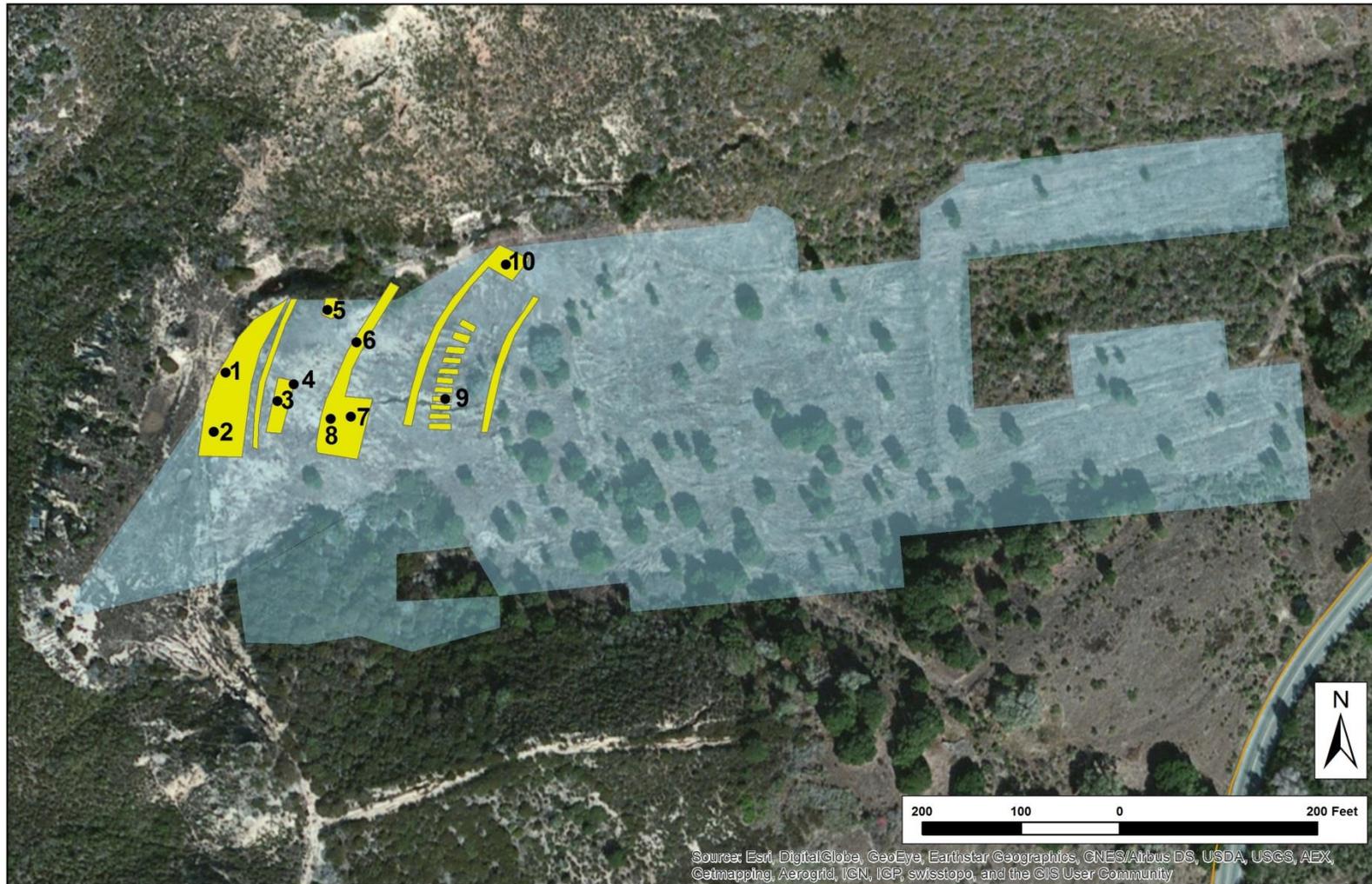
<h3>HA 43 Year 3 Monterey Spineflower Density Survey</h3>			<h3>Site 39 Inland Ranges Historic Areas Location Map Former Fort Ord</h3>	
<p>Density Classes</p> <ul style="list-style-type: none"> High Medium Low Not Present HA 43 Footprint Former Fort Ord Boundary Impact Area 			<p>Source: U.S. Army Corps of Engineers Former Fort Ord Aerial and Restoration data provided by Fort Ord GIS website</p>	
<p>Path: C:\Users\GIS\Desktop\GIS\2016\Fort Ord\2015 AReport Maps\HA 19\Fig19_HA 43 Year 1 Monterey Spineflower Density Survey_160324.mxd</p>		<p> Burlerson Consulting, Inc. Figure 19</p>		



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

<h3>HA 39/40 Year 3 Seaside Bird's Beak Density Survey</h3>			<h3>Site 39 Inland Ranges Historic Areas Location Map Former Fort Ord</h3>	
<p>Density Classes</p> <ul style="list-style-type: none"> High Medium Low Not Present 	<ul style="list-style-type: none"> HA 39/40 Footprint Former Fort Ord Boundary Impact Area 		<p>Source: U.S. Army Corps of Engineers Former Fort Ord Aerial and Restoration data provided by Fort Ord GIS website</p>	
<p>Path: C:\Users\GIS\Desktop\GIS\2016\Fort Ord\2015 AReport Maps\HA 39-40\MXD\Fig20 HA 39and40 Year 1 Seaside Bird's Beak Density Survey_160324.mxd</p>		<p> Burleson Consulting, Inc.</p>	<p>Figure 20</p>	





HA 34 Random Quadrat Sampling

- Random Quadrat Locations
- Passive Seeding
- Former Fort Ord Boundary
- HA 34 Footprint
- Impact Area

Path: C:\Users\GIS\Desktop\GIS\2016\Fort Ord\2015 AReport Maps\HA 34\Fig22 HA 34 Random Quadrat Sampling_160324.mxd

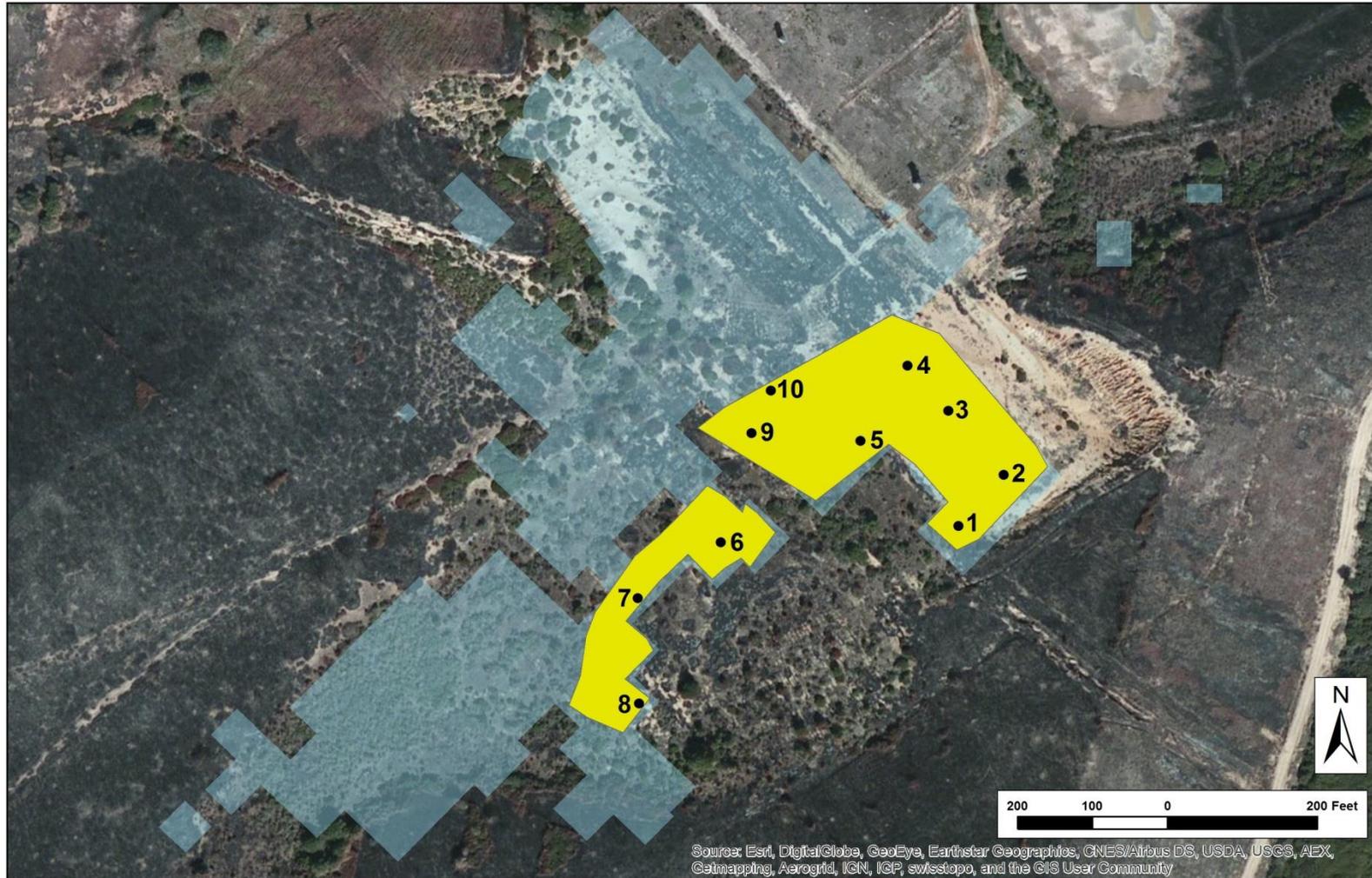


Site 39 Inland Ranges Historic Areas Location Map Former Fort Ord

Source: U.S. Army Corps of Engineers Former Fort Ord
Aerial and Restoration data provided by Fort Ord GIS website

Burlerson Consulting, Inc.

Figure
22



HA 37 Random Quadrat Sampling

- Random Quadrat Locations
- Passive Seeding
- Former Fort Ord Boundary
- HA 37 Footprint
- Impact Area



**Site 39 Inland Ranges
Historic Areas Location Map
Former Fort Ord**

Source: U.S. Army Corps of Engineers Former Fort Ord Aerial and Restoration data provided by Fort Ord GIS website

Burlerson Consulting, Inc. **Figure 23**

Path: C:\Users\GIS\Desktop\GIS\2016\Fort Ord\2015 AReport Maps\HA 37\MXD\Fig23_HA 37 Random Quadrat Sampling_160324.mxd

This page intentionally left blank

APPENDIX E

Photo Points

This page intentionally left blank

PHOTO POINTS



HA 18 | October 2011



HA 18 | April 2015

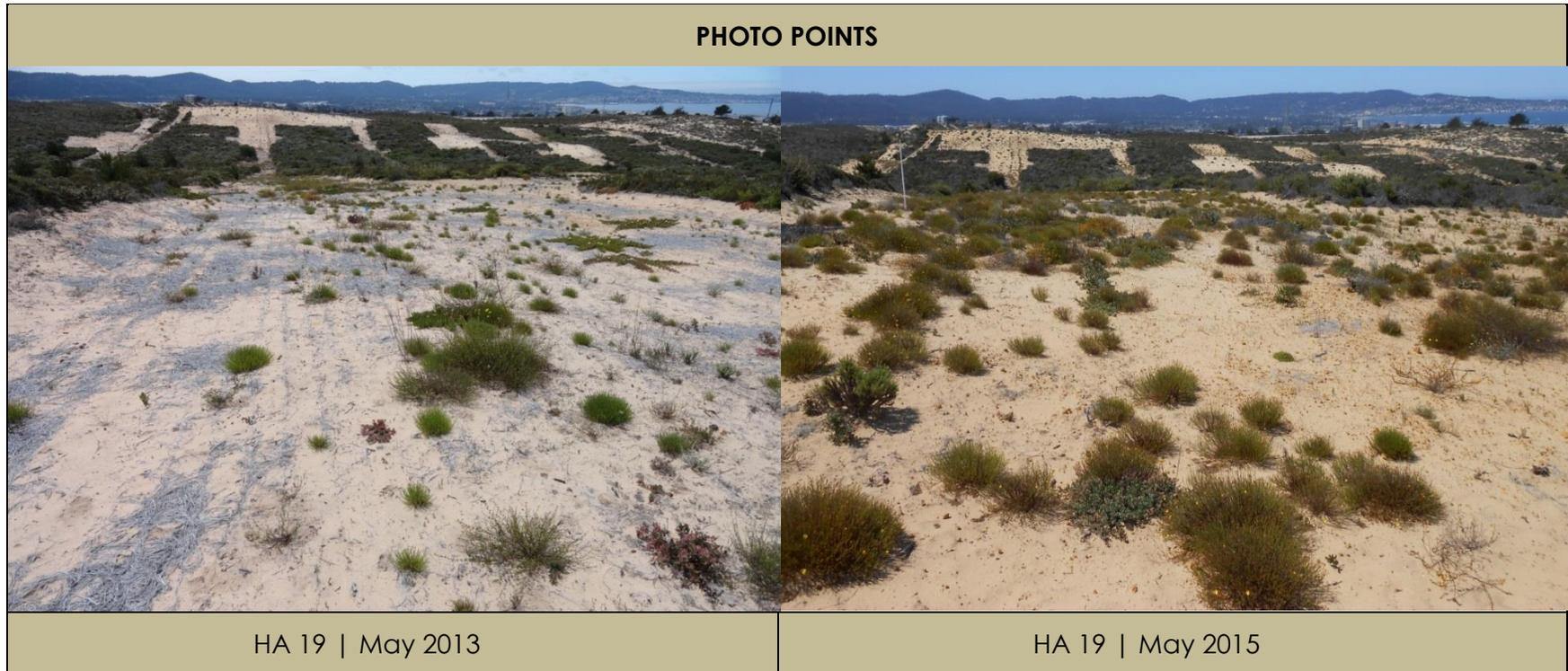


PHOTO POINTS



HA 22 | October 2011



HA 22 | April 2015

PHOTO POINTS



HA 23 | October 2011



HA 23 | April 2015

PHOTO POINTS



HA 27 | October 2011



HA 27 | April 2015

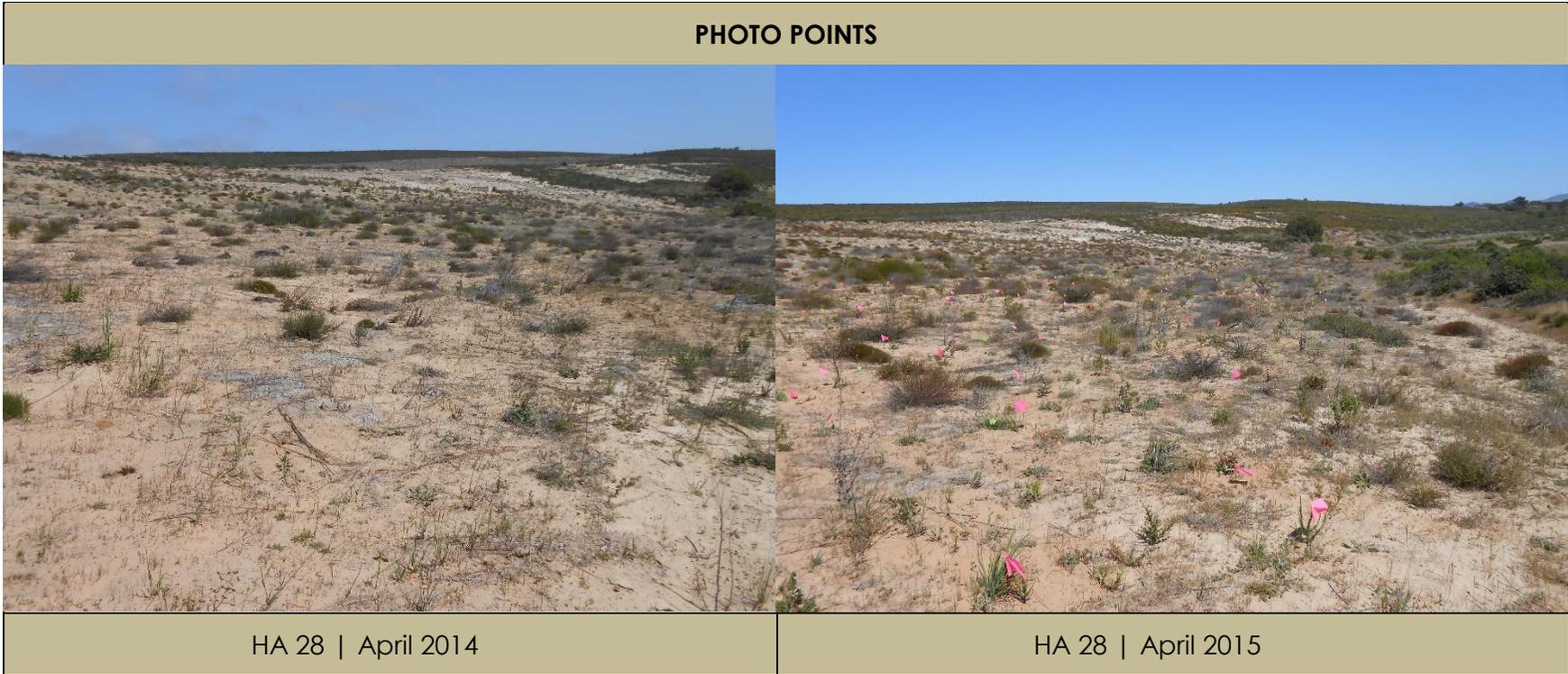
PHOTO POINTS

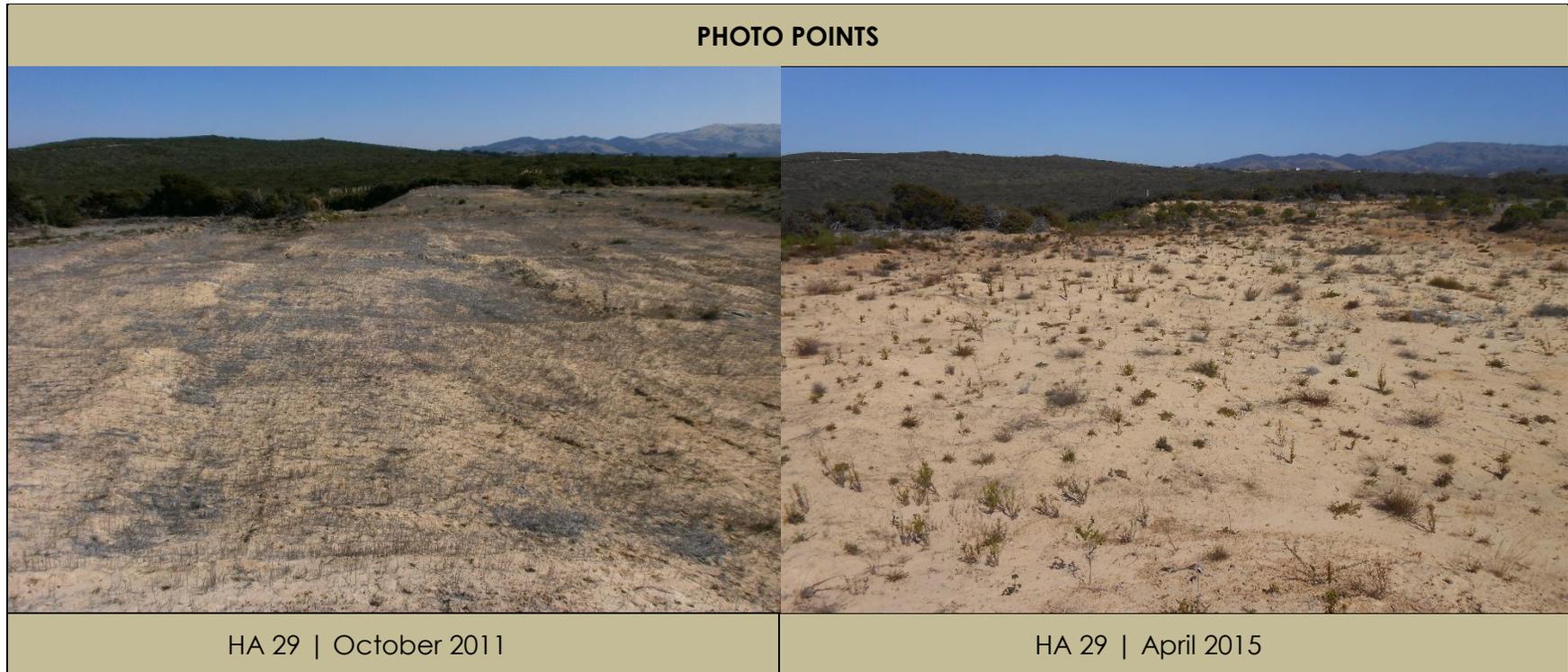


HA 27A | October 2011



HA 27A | April 2015





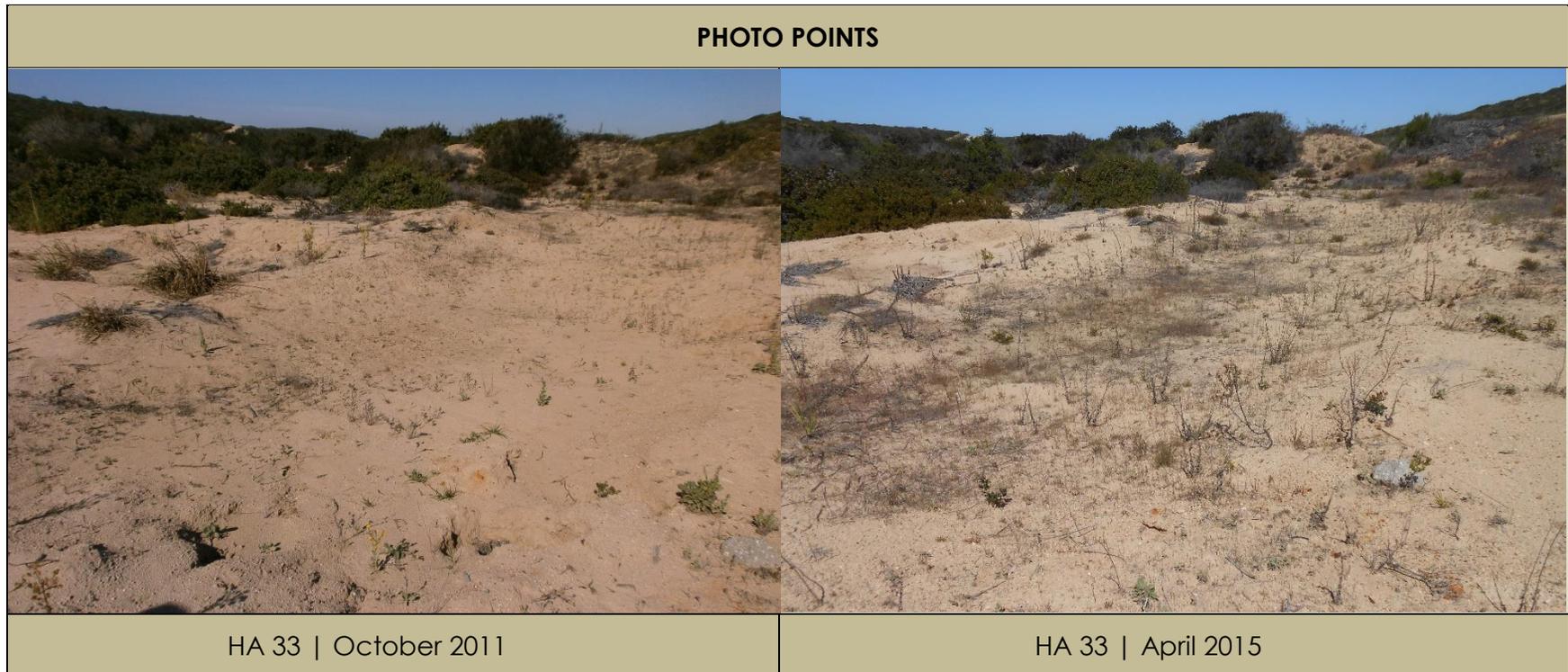


PHOTO POINTS



HA 36 | October 2011



HA 36 | April 2015

PHOTO POINTS



HA 37 | April 2014



HA 37 | April 2015

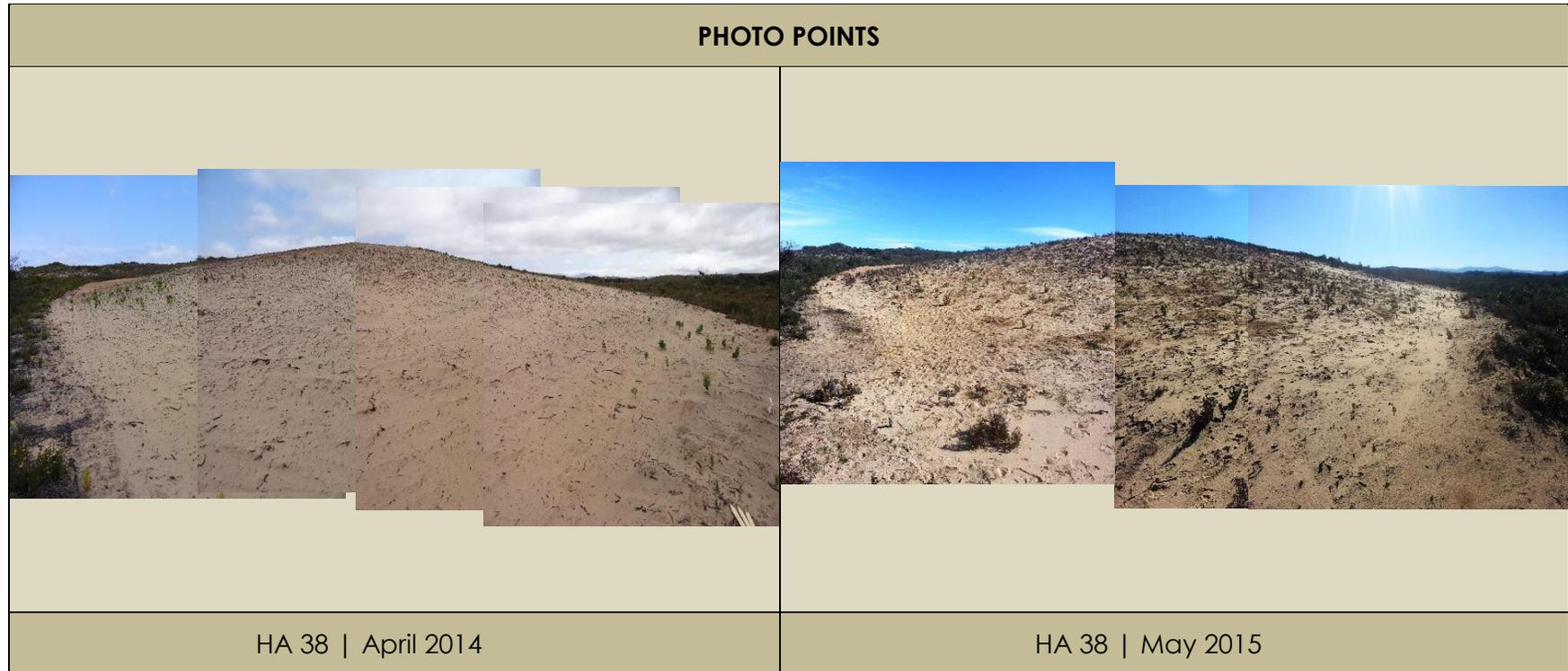


PHOTO POINTS



HA 39/40 | October 2011



HA 39/40 | April 2015

PHOTO POINTS



HA 43 | October 2011



HA 43 | April 2015

