



Heritage Brodiaea Preserve
2025 Summary Monitoring Report (Year 8)
San Diego, California

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May 11, 2026

A handwritten signature in black ink, appearing to read "JR Sundberg".

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1.0 Introduction

This monitoring report presents the results of activities conducted within the Heritage Brodiaea Preserve (HBP) during the period of January 1 to December 31, 2025. Activities discussed in this report include site maintenance activities, thread-leaved brodiaea (*Brodiaea filifolia*) 2025 population (vegetative) counts and flowering data, native grassland mitigation progress, and other activities.

The HBP is an approximately 14-acre biological open space area that was dedicated as part of the Heritage Bluffs II development project. The HBP is located in the northern part of the City of San Diego (Figure 1), south of Carmel Valley Road and east of the Black Mountain Open Space Preserve (Figure 2). The City of San Diego has now included the HBP area into its Multiple Species Conservation Program Subarea Plan's Multi-Habitat Planning Area.

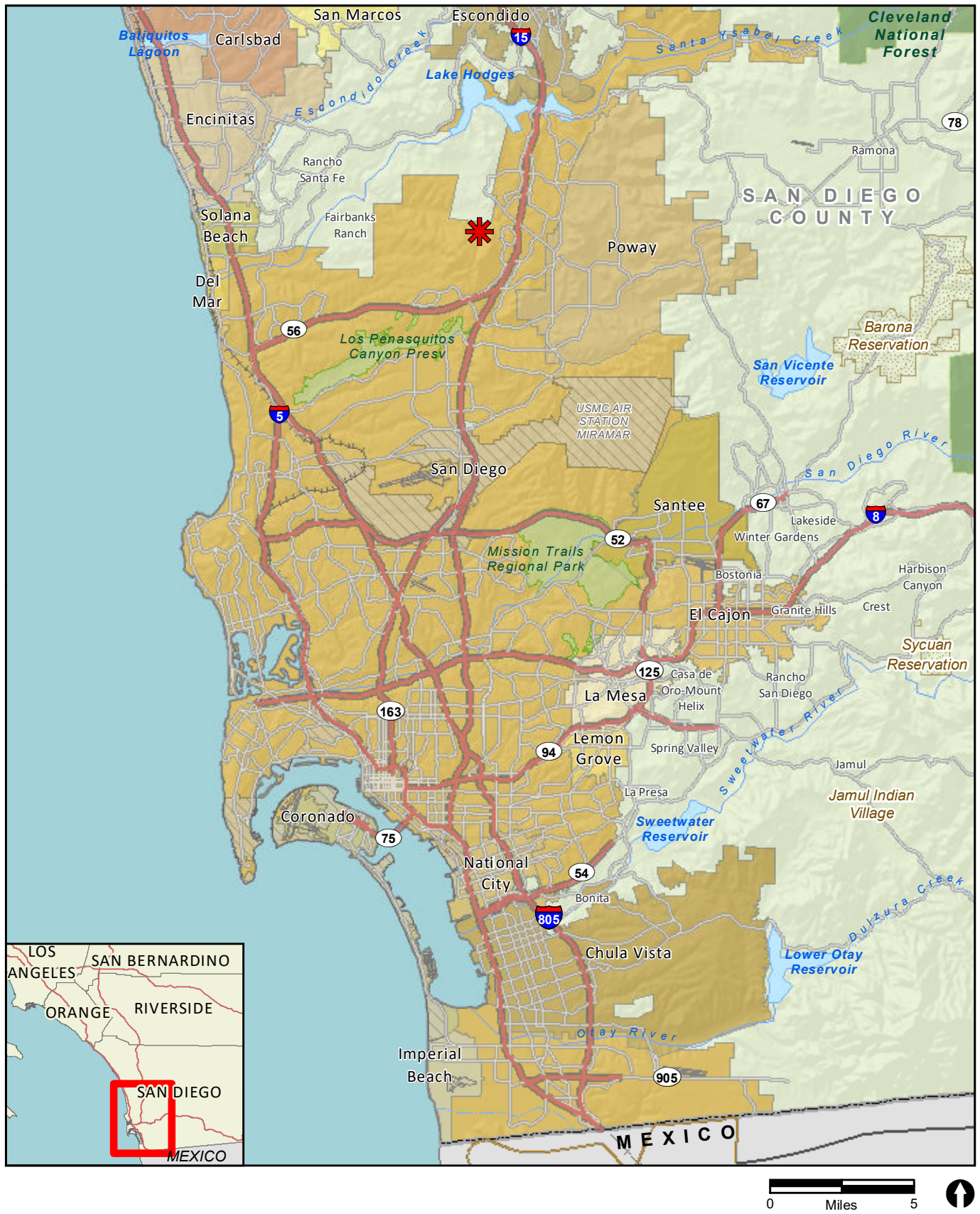
The goal of the HBP is to facilitate the conservation, preservation, and enhancement of biological resources as part of mitigation for impacts associated with development of the Heritage Bluffs II and East Clusters development project sites. The HBP has preserved a regionally significant population of thread-leaved brodiaea in a Conservation Easement dedicated for that purpose. The HBP has been implemented, monitored, and maintained per the Interim Management Plan for the Heritage Brodiaea Preserve (RECON 2020).

2.0 HBP Translocation History

The translocation of salvaged thread-leaved brodiaea occurred as part of the East Clusters Unit 3 and Heritage Bluffs II development projects as shown on Figure 3. These translocation efforts established the baseline numbers of thread-leaved brodiaea plants for the mitigation monitoring effort. The 2025 monitoring year represents the eighth year after translocation for the Heritage Bluffs II thread-leaved brodiaea and the ninth year after translocation for the East Clusters Unit 3 effort.

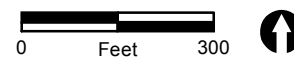
3.0 HBP 2025 Maintenance Activities

Maintenance activities conducted within the HBP area during 2025 focused on the control of broadleaf weeds and reduction of non-native grass thatch. General weed control occurred throughout the year in response to seasonal weather patterns and rain events. During the late summer and fall months, weeding was conducted around thread-leaved brodiaea locations to remove excess thatch of non-native grasses.



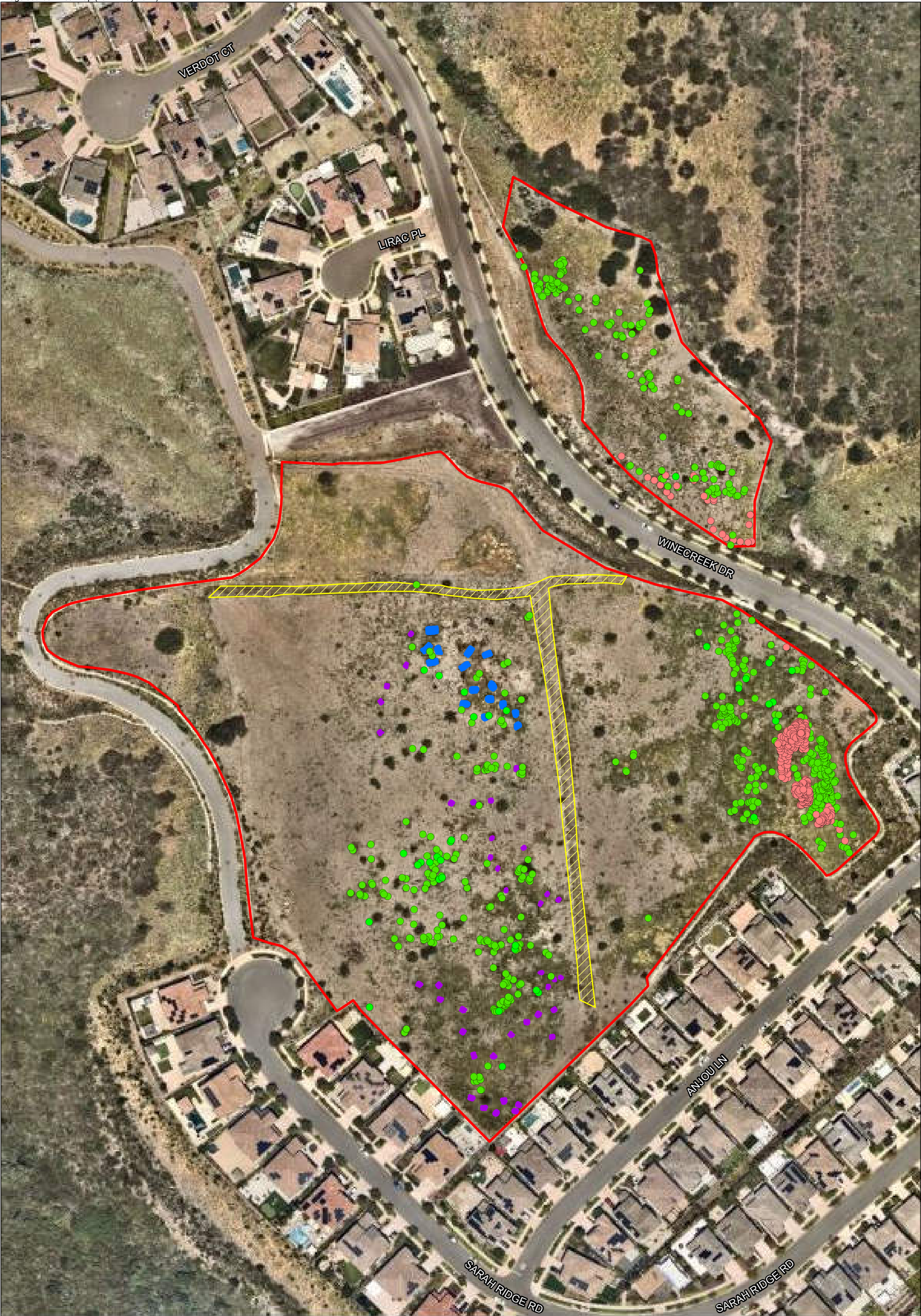
 Project Location

FIGURE 1
Regional Location



 HBP Boundary

FIGURE 2
HBP Location on Aerial Photograph



- HBP Boundary
- East Clusters Unit 3 Transplant
- Heritage Bluffs II Corm Transplant
- Natural Brodiaea
- Heritage Bluffs II Cut/Block Transplant
- Native Grassland Mitigation Area



FIGURE 3

Distribution of Natural and Translocated Thread-leaved Brodiaea in the HBP

4.0 HBP 2025 Thread-Leaved Brodiaea Vegetative Counts

A census of the number of thread-leaved brodiaea expressing vegetative growth for the translocation areas in the HBP was conducted during February of 2025 (Photographs 1-3). The census involved the mapping of expressed natural thread-leaved brodiaea plants not previously located, and all translocated thread-leaved brodiaea plant locations (i.e., corm and cut/block) now within the HBP. A census of the natural thread-leaved brodiaea plants expressing vegetatively in the HBP was not conducted this year, but will be conducted in Year 10 at the end of the project.

Each thread-leaved brodiaea translocation location was visited and the vegetative individuals expressed at the location were counted directly. The last vegetative count data for the HBP natural population conducted in 2021 is given in Table 1. The 2025 vegetative counts for all translocated/transplanted thread-leaved brodiaea are presented in Table 2 (Heritage Bluffs II translocated) and Table 3 (East Clusters Unit 3 translocated and transplanted), along with vegetated count data from previous years and the baseline reference counts (Photographs 4 and 5).

Table 1 HBP Thread-Leaved Brodiaea Vegetative Counts for Natural Population					
	Vegetative Count*				
	2017	2018	2019	2010	2021
TOTAL	10,211	15,263	13,811	13,848	13,161
*Based on count of individuals that expressed vegetatively					

Table 2 Heritage Bluffs II Thread-Leaved Brodiaea Translocation Summary: 2017 Through 2025										
Translocation Method	Initial Translocation Estimate	Vegetative Count*								
		2017	2018 Year 1	2019 Year 2	2020 Year 3	2021 Year 4	2022 Year 5	2023 Year 6	2024 Year 7	2025 Year 8
Corm Translocation	2,690	2,556	2,727	3,192	3,840	4,859	4,934	4,269	4,539	4,192
Corm Translocation†	1,166	1,161	1,262	1,389	1,413	1,774	1,435	1,155	1,287	1,240
Cut-Block Salvage‡	1,850	2,414	2,477	3,816	3,789	3,496	3,574	2,557	2,703	2,626
TOTAL	5,706**	6,131	6,556	8,397	9,013	10,129	9,943	7,981	8,529	8,058
*Based on count of individuals that expressed vegetatively										
†Salvaged from East Clusters										
‡Salvaged and planted March 2017										
**Total planted individuals to be used as baseline for subsequent site assessments										

Table 3
East Clusters Unit 3 Thread-Leaved Brodiaea Translocation Summary:
2016 through 2024

Translocation Method	Vegetative Count*									
	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Corm Translocation	3,175	3,281	3,569	5,311	5,306	7,358	8,471	7,750	8,378	9,275
TOTAL	3,175	3,281	3,569	5,311	5,306	7,358	8,471	7,750	8,378	9,275

*Based on count of individuals that expressed vegetatively

Herbivory of the natural thread-leaved brodiaea populations was relatively low during 2025. The average amount of precipitation coupled with the frequency of rain events were good for vegetation growth in the HBP. The primary cause of herbivory was from animals grazing on the vegetative shoots during the late winter months.

Precipitation amounts for this portion of San Diego County were below normal during the 2024-2025 rainfall season. The delayed onset of significant precipitation until late January shortened the growing season. Reduced annual grass competition and thatch accumulation are good for many of the native species. As such, the number of the thread-leaved brodiaea that expressed vegetatively within the translocation areas was similar to the previous year vegetative counts. Representative photographs of vegetative growth observed during the 2025 counts are shown in Photographs 2 through 5. All photographs referenced in this report are located in Attachment 1.

5.0 HBP 2025 Thread-Leaved Brodiaea Flowering Individuals Count

A count of the number of thread-leaved brodiaea individuals that produced a flower stalk during the spring of 2025 was conducted within the HBP. The flower stalk count included all the translocated locations. The data on flowering individuals are given in Table 4. Representative photographs of flowering individuals of thread-leaved brodiaea are shown in Photographs 6 through 9.

Table 4
HBP Thread-Leaved Brodiaea Flowering Individuals (2025)

Brodiaea Type	Flowering Individuals	Percent Vegetative Individuals Flowering
Heritage Bluffs II Corm Translocation	279	6.66
Heritage Bluffs II Corm Translocation	66	5.32
Heritage Bluffs II Cut-Block Translocation	172	6.55
East Clusters Unit 3 Corm Translocation	645	6.95

The percentage of those thread-leaved brodiaea that expressed vegetatively and then flowered ranged between 5.32 percent and 6.95 percent during the spring of 2025. This flowering data is slightly higher than in 2024, but consistent with other years where rainfall was at or below average.

Vegetative expression was similar to what was observed in 2024; however, the time of leaf emergence observed in 2025 was significantly delayed due to the lack of rain until January. This allowed a shorter season of growth and accumulation of energy stores before flowering and may have reduced the number of flowering individuals. After flowering, fruit development and seed production were noted (Photographs 10 and 11).

6.0 Plant and Wildlife Observations

Vegetation cover estimates were conducted visually. Native plant cover in the HBP primarily consists of native bunchgrasses along with scattered individuals of native perennial plants, for example, gumplant (*Grindelia camporum*), lemonadeberry (*Rhus integrifolia*), redberry (*Rhamnus crocea*), coastal goldenbush (*Isocoma menzessii*), long-stemmed golden yarrow (*Eriophyllum confertiflorum*; Photograph 12), and California buckwheat (*Eriogonum fasciculatum*). The estimated vegetative plant cover for the HBP is approximately 50 percent.

A list of plant species observed within the HBP, compiled during monitoring visits, is provided as Attachment 2. A total of 65 plant species were documented. Examples of native species observed in the preserve areas include blue-eyed grass (*Sisyrinchium bellum*; Photograph 13), California poppy (*Eschscholzia californica*), deerweed (*Acmispon glaber*), small-flowered morning glory (*Convolvulus simulans*; Photograph 14), common golden stars (*Bloomeria crocea*; Photograph 15), white nightshade (*Solanum americanum*), cryptantha (*Cryptantha* sp.), and common goldfields (*Lasthenia gracilis*).

A list of general wildlife species observed within the HBP was compiled during monitoring visits and is provided as Attachment 3. Observed wildlife included 7 species of insect, 1 snail species, 4 reptile species, 25 bird species, and 4 mammal species. Notable wildlife species observed on the site this past year were greater roadrunner (*Geococcyx californianus*; Photograph 16), coyote (*Canis latrans*), California quail (*Callipepla californica*; Photograph 17), southern Pacific rattlesnake (*Crotalus oreganus helleri*), and San Diego gophersnake (*Pituophis catenifer annectens*). An owl box was installed in the larger western preserve area in the fall of 2021 to attract barn owls; however, no owls have occupied the box to date. Owl pellets have been noted on-site (Photograph 18), so although they are not nesting in the box, they are using the habitat for hunting.

7.0 Native Grassland Mitigation (Year 5)

The Heritage Bluffs II development project conditions of approval required the implementation of native grassland mitigation element. A mitigation plan was approved that outlined the mitigation requirement that included the establishment of a minimum 0.15 acres of native grassland and the enhancement of a 0.30-acre buffer within a 0.45-acre restoration area (Helix 2017). The restoration area rehabilitated two old dirt roads that previously existed in the HBP (see Figure 3).

Implementation of the native grassland mitigation within the HBP began with the planting of the native bunch grasses in December 2020. Weed control was the primary maintenance activity conducted in the native grassland mitigation area during 2025.

The success criteria for the native grassland mitigation include the assessment of species richness/recruitment, native vegetation cover, non-native vegetation cover, and target invasive species (Table 5). The assessment of these criteria for Year 5 of the five-year monitoring period is as follows:

- **Species Richness and Recruitment:** Evaluation of the number of native species observed in the native grassland mitigation area found six native plant species: purple needlegrass (*Stipa pulchra*), foothill needlegrass (*Stipa lepida*), California encelia (*Encelia californica*), willow herb (*Epilobium brachycarpum*), long-stemmed golden yarrow (*Eriophyllum confertiflorum*), and blue-eyed grass (*Sisyrinchium bellum*) (Photograph 13). The presence of six native species meets the Year 5 success criteria milestone which requires six native species to be present.
- **Native Vegetation Cover:** Native vegetation cover was estimated to be 60 percent, meeting the Year 5 success criteria milestone of 60 percent.
- **Non-Native Vegetation Cover:** Cover of non-native vegetation was less than 1 percent due to the regular control of non-native species. This exceeds the Year 5 success criterion of maximum 20 percent cover of non-native species.
- **Target Invasive Species:** There were no significant numbers of target invasive species (e.g., artichoke thistle [*Cynara cardunculus*], fennel [*Foeniculum vulgare*], Australian saltbush [*Atriplex semibaccata*], black mustard [*Brassica nigra*], bristly ox-tongue [*Helminthotheca echinoides*], Russian thistle [*Salsola tragus*]) within the native grassland mitigation area due to regular control of these species during maintenance visits. The success goal for this criterion for Year 5 was no target invasive species present.

Table 5 Year 5 Quantitative Monitoring Results Relative to Success Criteria				
	Species Richness (minimum) ¹	Native Vegetation Cover (minimum %)	Non-Native Vegetation Cover (maximum %) ²	Target Invasive Species (maximum) ³
Year 5 Criterion	6	60	20	0
Quantitative Monitoring Results	6	60	1	0
¹ Number of native species ² Excluding non-native grass species ³ Target invasive species are defined in the mitigation plan (Helix 2017) and consist primarily of California Invasive Plant Council (Cal-IPC) listed “high” species (Cal-IPC 2025), excluding non-native grasses. BOLD text = Meets Year 5 performance standards				

The native grassland mitigation area is progressing well (Photograph 22). Regular control of non-native plant species and continued recruitment of native grasses and other native plants continues to improve the overall habitat quality. The native grassland mitigation requirement is considered complete; however, regular weed control will continue in conjunction with the Year 9 (2026) and Year 10 (2027) management of the HBP.

8.0 Supplemental Planting

Supplemental planting within the HBP occurred during the winter of 2025 (Photographs 19 and 20). One-gallon container stock of purple needlegrass and foothill needlegrass were planted in portions of the larger western preserve area (Photograph 23). The native grass container stock had a relatively high survivorship and contributed to the native plant cover observed in 2025.

9.0 Annual Dethatch

Annual dethatching of the translocation/transplant plots and the natural thread-leaved brodiaea locations was conducted in the fall of 2025 (Photograph 24). The dethatch is necessary to remove the dead vegetative biomass from the non-native grasses that grow within and adjacent to these areas so that thread-leaved brodiaea emergence the following winter would not be inhibited. Line trimmers were used to cut the dead grass, and the biomass was raked and removed from the site so the thread-leaved brodiaea locations are prepared for next winter's reemergence. Without removal of the dense thatch, the thread-leaved brodiaea may not be able to grow through the dead biomass and thus be shaded, resulting in high mortality rates.

10.0 Management Activities for 2026 (Year 9)

Management activities to be conducted during 2026 will focus on the continued control of perennial non-native plant species (e.g., artichoke thistle resprouts, fennel resprouts, Russian thistle, prickly lettuce [*Lactuca serriola*], flaxed-leaved horseweed [*Erigeron bonariensis*] and other weed species). Although significant progress was made in the control of perennial non-native plant species in 2025, control efforts will continue in an effort to keep vegetative cover of these non-native species at low levels. Annual dethatching of the thread-leaved brodiaea translocation/transplant plots and natural locations is anticipated to occur in the fall of 2026 to reduce dead biomass. The maintenance of the native grassland mitigation area will concentrate on the control of invasive plant species.

11.0 References Cited

Helix

2017 Heritage Bluffs II Project, Conceptual Native Grassland Habitat Restoration Plan. February.

California Invasive Plant Council (Cal-IPC)

2025 The Cal-IPC Inventory. <http://www.cal-ipc.org/plants/inventory/>.

RECON Environmental, Inc. (RECON)

2020 Interim Management Plan for the Heritage Brodiaea Preserve. June.

ATTACHMENTS

ATTACHMENT 1

Photographs



PHOTOGRAPH 1
Vegetative Growth at a Translocated Thread-Leaved Brodiaea Location
(March 20, 2025)



PHOTOGRAPH 2
Using Wooden Stakes to Divide a Translocated Thread-Leaved Brodiaea Plot
to Aid in Counting the Vegetative Individuals (March 28, 2025)



PHOTOGRAPH 3

Using Mason Line and Wooden Stakes to Divide a Cut Block Thread-Leaved Brodiaea Plot to Aid in Counting the Vegetative Individuals (March 28, 2025)



PHOTOGRAPH 4

Cut Block Thread-Leaved Brodiaea Plot during Vegetative Growth (April 3, 2025)



PHOTOGRAPH 5
Translocated Thread-Leaved Brodiaea Plots During Vegetative Growth
(April 3, 2025)



PHOTOGRAPH 6
One Thread-Leaved Brodiaea Flower
(May 21, 2025)



PHOTOGRAPH 7
Thread-Leaved Brodiaea Flower and Flower Bud
(May 21, 2025)



PHOTOGRAPH 8

Flowering Stalks of Three Thread-Leaved Brodiaea
Individuals with Flowers and Flower Buds (May 21, 2025)



PHOTOGRAPH 9

Many Flowers in a Translocated Thread-Leaved Brodiaea Plot (May 21, 2025)



PHOTOGRAPH 10

Thread-Leaved Brodiaea Immature Fruits (July 9, 2025)



PHOTOGRAPH 11
Thread-Leaved Brodiaea Mature Fruits with Seeds (July 9, 2025)



PHOTOGRAPH 12
Abundant Golden Yarrow in Areas of the Project Area (May 21, 2025)



PHOTOGRAPH 13

Blue-Eyed Grass is a Common Perennial in the Native Grassland Areas
(May 21, 2025)



PHOTOGRAPH 14

Small-Flowered Morning Glory is Abundant in Friable Clay Areas of the
Native Grassland (April 21, 2025)



PHOTOGRAPH 15

Common Goldenstar Occurs in Areas of the Project Area (May 21, 2025)



PHOTOGRAPH 16

Roadrunners Forage in Habitat Present in the Project Area
(February 20, 2025)



PHOTOGRAPH 17
California Quail often Forage in the Project Area
(April 22, 2025)



PHOTOGRAPH 18
Owls Hunt in the Native Grassland as Evidenced by the
Prescence of Owl Pellets (February 20, 2025)



PHOTOGRAPH 19

Grasses in the Native Grassland were Planted in Groups of Five to Seven to Promote Pollination (February 25, 2025)



PHOTOGRAPH 20

Irrigating Grasses Deeply for Establishment of Strong Roots. Basins Limit the Spread of the Water and Minimize Weed Growth. (April 21, 2025)



PHOTOGRAPH 21

Weed Treatments were Necessary to Prevent Broadleaf Weeds from Establishing Between the Native Grasses. Late Season Weeds such as Bristly Ox-Tongue and Flax-Leaved Horseweed Occur in the Native Grassland Area (July 25, 2025).



PHOTOGRAPH 22

The Native Grassland is on the West Side of the Project Area. Facing East from Just West of the Project Area (April 21, 2025)



PHOTOGRAPH 23

Native Grasses in Containers were Planted to Quickly Establish Cover in the Native Grassland Area (February 24, 2025)



PHOTOGRAPH 24

Thread-Leaved Brodiaea Plots were Dethatched in the Dry Season (November 14, 2025)

ATTACHMENT 2

Plant Species Observed

Attachment 2 Plant Species Observed			
Major Plant Group	Family	Scientific Name / Common Name	Origin
Angiosperms: Monocots	Alliaceae / Onion Family	<i>Allium praecox</i> / early onion	N
	Iridaceae / Iris Family	<i>Sisyrinchium bellum</i> / western blue-eyed grass	N
	Melanthiaceae / False-hellebore Family	<i>Toxicoscordion fremontii</i> [= <i>Zigadenus fremontii</i>] / Fremont's camas	N
	Poaceae (Gramineae) / Grass Family	<i>Avena barbata</i> / slender wild oat	I
		<i>Brachypodium distachyon</i> / purple falsebrome	I
		<i>Bromus diandrus</i> / ripgut grass	I
		<i>Bromus hordeaceus</i> / soft chess	I
		<i>Bromus rubens</i> [= <i>Bromus madritensis</i> ssp. <i>rubens</i>] / red brome	I
		<i>Festuca perennis</i> [= <i>Lolium multiflorum</i> and <i>Lolium perenne</i>] / rye grass	I
		<i>Stipa lepida</i> [= <i>Nassella lepida</i>] / foothill needle grass	N
		<i>Stipa pulchra</i> [= <i>Nassella pulchra</i>] / purple needle grass	N
		<i>Stipa tenuissima</i> / Finestem needle grass	I
	Themidaceae / Brodiaea Family	<i>Bloomeria crocea</i> / common goldenstar	N
		<i>Brodiaea filifolia</i> / thread-leaved brodiaea	N
		<i>Dipterostemon capitatus</i> [= <i>Dichelostemma capitatum</i>] / blue dicks	N
Angiosperms: Eudicots	Amaranthaceae / Amaranth Family	<i>Amaranthus albus</i> / tumbleweed	I
	Anacardiaceae / Sumac or Cashew Family	<i>Rhus integrifolia</i> / lemonade berry	N
	Apiaceae (Umbelliferae) / Carrot Family	<i>Foeniculum vulgare</i> / fennel	I
	Asteraceae / Sunflower Family	<i>Ambrosia psilostachya</i> / western ragweed	N
		<i>Baccharis pilularis</i> / chaparral broom, coyote brush	N
		<i>Corethrogyne filaginifolia</i> var. <i>filaginifolia</i> / California sand-aster	N
		<i>Deinandra fasciculata</i> [= <i>Hemizonia fasciculata</i>] / fascicled tarweed	N
		<i>Encelia californica</i> / California encelia	N
		<i>Erigeron bonariensis</i> [= <i>Conyza bonariensis</i>] / flax-leaved horseweed	I
		<i>Eriophyllum confertiflorum</i> var. <i>confertiflorum</i> / long-stem golden-yarrow	N
		<i>Grindelia camporum</i> [= <i>Grindelia camporum</i> var. <i>bracteosa</i>] / gumplant	N
		<i>Hedypnois cretica</i> / Crete weed	I
		<i>Helminthotheca echioides</i> [= <i>Picris echioides</i>] / bristly ox-tongue	I
		<i>Isocoma menziesii</i> var. <i>menziesii</i> / spreading goldenbush	N
		<i>Lactuca serriola</i> / prickly lettuce	I
		<i>Lasthenia gracilis</i> [<i>L. californica</i> Lindley, misapplied in San Diego County] / common goldfields	N
	Asteraceae / Sunflower Family	<i>Pseudognaphalium beneolens</i> [= <i>Gnaphalium canescens</i> ssp. <i>beneolens</i>] / fragrant everlasting	N
		<i>Pseudognaphalium californicum</i> [= <i>Gnaphalium californicum</i>] / California everlasting, green everlasting	N
		<i>Sonchus oleraceus</i> / common sow thistle	I

Attachment 2 Plant Species Observed			
Major Plant Group	Family	Scientific Name / Common Name	Origin
Angiosperms: Eudicots (cont.)	Boraginaceae / Borage Family	<i>Cryptantha intermedia</i> / nievitas cryptantha	N
	Brassicaceae (Cruciferae) / Mustard Family	<i>Brassica nigra</i> / black mustard	I
	Caryophyllaceae / Pink Family	<i>Silene gallica</i> / small-flower catchfly, windmill pink	I
	Chenopodiaceae / Goosefoot Family	<i>Atriplex semibaccata</i> / Australian saltbush	I
		<i>Salsola tragus</i> / Russian thistle, tumbleweed	I
	Convolvulaceae / Morning-Glory Family	<i>Calystegia macrostegia</i> / morning-glory	N
		<i>Convolvulus arvensis</i> / bindweed, orchard morning-glory	I
		<i>Convolvulus simulans</i> / small-flowered morning-glory	N
	Cucurbitaceae / Gourd Family	<i>Marah macrocarpa</i> / wild cucumber	N
	Fabaceae (Leguminosae) / Legume Family	<i>Acmispon glaber</i> [= <i>Lotus scoparius</i>] / deerweed, California broom	N
		<i>Lathyrus splendens</i> / pride-of-California, Campo pea	N
		<i>Lupinus bicolor</i> / miniature lupine	N
		<i>Lupinus succulentus</i> / arroyo lupine	N
		<i>Medicago polymorpha</i> / California burclover	I
		<i>Melilotus officinalis</i> / yellow sweetclover	I
		<i>Vicia americana</i> ssp. <i>americana</i> / American vetch	N
	Geraniaceae / Geranium Family	<i>Erodium cicutarium</i> / redstem filaree	I
		<i>Zeltnera</i> [= <i>Centaurium</i>] <i>venusta</i> / California centaury	N
	Hydrophyllaceae / Waterleaf Family	<i>Pholistoma auritum</i> var. <i>auritum</i> / fiesta flower	N
	Lamiaceae / Mint Family	<i>Stachys rigida</i> var. <i>rigida</i> [= <i>Stachys ajugoides</i> var. <i>rigida</i>] / hedge nettle	N
	Malvaceae / Mallow Family	<i>Sidalcea sparsifolia</i> [= <i>Sidalcea malviflora</i> ssp. <i>sparsifolia</i>] / southern checkerbloom	N
	Myrsinaceae / Myrsine Family	<i>Lysimachia arvensis</i> [= <i>Anagallis arvensis</i>] / scarlet pimpernel	I
	Onagraceae / Evening-Primrose Family	<i>Epilobium brachycarpum</i> / willow herb, fireweed	N
	Papaveraceae / Poppy Family	<i>Eschscholzia californica</i> / California poppy	N
	Polygonaceae / Buckwheat Family	<i>Eriogonum fasciculatum</i> / California buckwheat	N
		<i>Rumex crispus</i> / curly dock	I
	Rhamnaceae / Buckthorn Family	<i>Rhamnus crocea</i> / spiny redberry	N
	Rubiaceae / Madder Family	<i>Galium</i> sp. / bedstraw, cleavers	N
	Solanaceae / Nightshade Family	<i>Datura wrightii</i> / western Jimson weed	N
		<i>Solanum americanum</i> / white nightshade	N
	Violaceae / Violet Family	<i>Viola pedunculata</i> / johnny-jump-up	N
ORIGIN N = Native to locality I = Introduced species from outside locality			

ATTACHMENT 3

Wildlife Species Observed

Attachment 3 Wildlife Species Observed			
Major Wildlife Group	Family	Scientific / Common Name	Origin
Invertebrates	Apidae / Honey Bees, Bumble Bees, and Allies	<i>Apis mellifera</i> / honey bee	I
	Papilionidae / Parnassians & Swallowtails	<i>Papilio rutulus</i> / western tiger swallowtail	N
	Pieridae / Whites & Sulphurs	<i>Pontia protodice</i> / checkered [=common] white	N
	Nymphalidae / Brush-footed Butterflies	<i>Agraulis vanillae incarnata</i> / gulf fritillary	N
		<i>Junonia coenia grisea</i> / common buckeye	N
		<i>Vanessa cardui</i> / painted lady	N
	Land Snails / Helminthoglyptidae	<i>Hemimthoglypta traskii coelata</i> / Peninsular Range shoulderbrand snail	N
	Formicidae / Ants	<i>Linepithema humile</i> / Argentine ant	I
Reptiles	Phrynosomatidae / Spiny Lizards	<i>Sceloporus occidentalis longipes</i> / Great Basin fence lizard	N
		<i>Uta stansburiana elegans</i> / western side-blotched lizard	N
	Colubridae / Colubrid Snakes	<i>Pituophis catenifer annectens</i> / San Diego gophersnake	N
	Crotalidae / Rattlesnakes	<i>Crotalus oreganus helleri</i> / southern Pacific rattlesnake	N
Birds	Odontophoridae / New World Quail	<i>Callipepla californica</i> / California quail	N
	Cathartidae / New World Vultures	<i>Cathartes aura</i> / turkey vulture	N
	Accipitridae / Hawks, Kites, & Eagles	<i>Buteo jamaicensis</i> / red-tailed hawk	N
	Falconidae / Falcons	<i>Falco sparverius</i> / American kestrel	N
	Charadriidae / Lapwings & Plovers	<i>Charadrius vociferus</i> / killdeer	N
	Columbidae / Pigeons & Doves	<i>Zenaidura macroura</i> / mourning dove	N
	Cuculidae / Cuckoos & Roadrunners	<i>Geococcyx californianus</i> / greater roadrunner	N
	Tyrannidae / Tyrant Flycatchers	<i>Sayornis nigricans</i> / black phoebe	N
		<i>Sayornis saya</i> / Say's phoebe	N
		<i>Tyrannus verticalis</i> / western kingbird	N
	Corvidae / Crows, Jays, & Magpies	<i>Corvus brachyrhynchos</i> / American crow	N
	Alaudidae / Larks	<i>Eremophila alpestris actia</i> / California horned lark	N
	Aegithalidae / Bushtit	<i>Psaltiriparus minimus</i> / bushtit	N
	Troglodytidae / Wrens	<i>Thryomanes bewickii</i> / Bewick's wren	N
		<i>Troglodytes aedon</i> / house wren	N
	Turdidae / Thrushes	<i>Sialia mexicana</i> / western bluebird	N
	Sylviidae / Babblers	<i>Chamaea fasciata</i> / wrentit	N
	Mimidae / Mockingbirds & Thrashers	<i>Mimus polyglottos</i> / northern mockingbird	N
		<i>Toxostoma redivivum</i> / California thrasher	N
	Parulidae / Wood Warblers	<i>Setophaga [=Dendroica] coronata</i> / yellow-rumped warbler	N
	Passerellidae / New World Passerines	<i>Melospiza melodia</i> / song sparrow	N
		<i>Melospiza [=Pipilo] crissalis</i> / California towhee	N
		<i>Pipilo maculatus</i> / spotted towhee	N

Attachment 3 Wildlife Species Observed			
Major Wildlife Group	Family	Scientific / Common Name	Origin
Birds (cont.)	Passerellidae / New World Passerines	<i>Zonotrichia leucophrys</i> / white-crowned sparrow	N
	Fringillidae / Finches	<i>Haemorhous</i> [= <i>Carpodacus</i>] <i>mexicanus</i> / house finch	N
Mammals	Leporidae / Rabbits & Hares	<i>Sylvilagus bachmani</i> / brush rabbit	N
	Sciuridae / Squirrels & Chipmunks	<i>Otopermophilus</i> [= <i>Spermophilus</i>] <i>beecheyi</i> / California ground squirrel	N
	Geomyidae / Pocket Gophers	<i>Thomomys bottae</i> / Botta's pocket gopher	N
	Canidae / Canids	<i>Canis latrans</i> / coyote	N
ORIGIN N =Native to locality I = Introduced species from outside locality			