



Coastal Dune Community Stewardship Project Year 3 Report

31 March 2019

Prepared for California State Coastal Conservancy
by The Bay Foundation



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SCC 15-110 Explore the Coast Grant
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Prepared for: California State Coastal Conservancy

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TBF would like to acknowledge Los Angeles World Airports, Friends of LAX Dunes, Loyola Marymount University's Coastal Research Institute, and hundreds of volunteers that contribute towards successful community restoration events at the LAX Dunes.

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This report summarizes activities that occurred during Year 3 (1 July 2018 to 31 March 2019) as part of the Coastal Dune Community Stewardship Project (SC 15-110). The Coastal Dune Community Stewardship Project was awarded through the State Coastal Conservancy's Explore the Coast Grant Program in 2016. Over the course of Year 3, 208 volunteers participated in 9 community-based restoration events, contributing 624 hours and removing 381 bags of invasive vegetation at the LAX Dunes Preserve. Additional restoration activities took place with the LA Conservation Corps (LACC) and interns from Loyola Marymount University's Coastal Research Institute (CRI). TBF staff and interns also conducted vegetation monitoring and mapping of the approximately 48-acre northern LAX Dune area.



Figure 1. Great blue heron (*Ardea herodias*) photographed in back dune area of LAX Dunes.

Community Restoration Events

TBF continued to coordinate with Friends of the LAX Dunes (FOLD) and Los Angeles World Airports (LAWA) to lead monthly restoration events focused on removing non-native vegetation. Before each restoration event, an ecological and cultural history of the LAX Dunes was given. These educational talks also discussed the state and significance of the Dunes in present day, including its role as vital habitat for rare species of plants and animals, such as the federally endangered El Segundo Blue Butterfly (*Euphilotes battoides allyni*) and its host plant, Seacliff buckwheat (*Eriogonum parvifolium*).

From 1 July 2018 to 31 March 2019, nine community restoration events were held at the LAX Dunes, including our annual Coastal Cleanup Day and two special restoration events, one with employees from AT&T's El Segundo facilities and another with members from several Los Angeles based Boy Scout troops. During this period, **208 volunteers contributed 624 hours and removed 381 bags of invasive vegetation from the LAX Dunes.**

Community Restoration Event Summary (14 July 2018)

A community restoration event was held on 14 July 2018, with 22 volunteer participants and five CRI internship students (including students from Marymount High School). The event focused on pulling non-native grasses and Russian thistle. Participants came from 11 unique zip codes, with the furthest being from Santa Ana in Orange County.

Community Restoration Event Summary (4 August 2018)

On 4 August 2018, 16 volunteers and interns participated in a community restoration event which focused on pulling invasive Russian thistle, iceplant, and non-native grasses from the foredune area. Volunteers came from nine unique zip codes in the greater Los Angeles region. Interns that participated in the event were from CRI and Marymount High School.

Community Restoration Event Summary (15 September 2018)

On 15 September 2018, TBF and project partners LAWA and FOLD hosted the 4th annual Coastal Cleanup Day at the LAX Dunes. 49 volunteers and 13 TBF staff and interns removed 181 bags of iceplant and 31 bags of mustard (212 total bags) totaling an estimated 6,485 pounds. The event was sponsored by Patagonia and Chipotle who donated raffle items and giveaways. Additionally, Heal the Bay and FOLD provided supplies including snacks, water, and trash bags. Participants were divided into two teams, the “Red-tailed Hawks” and “El Segundo Blues” and competed in a friendly challenge to pull the most invasive species during the event. Participants came from 23 unique zip codes, with an additional volunteer from England.





Figure 2. Coastal Cleanup Day at the LAX Dunes on 15 September 2018.

Community Restoration Event Summary (6 October 2018)

A community restoration event was held on 6 October 2018, with TBF and LAWA staff, CRI interns, and two additional volunteers with two unique zip codes. The event focused on removing black mustard and Russian thistle from a portion of the foredune area. A total of 15 bags were removed.

Community Restoration Event Summary (3 November 2018)

On 3 November 2018, 18 volunteers and CRI interns participated in a community restoration event which focused on pulling invasive Russian thistle and filaree from the foredune area. Volunteers came from seven unique zip codes in the greater Los Angeles region. A total of four bags were removed.



Figure 3. Community restoration event on 3 November 2018.

Community Restoration Event Summary (27 November 2018)

On 27 November 2018, 26 employees from AT&T's El Segundo facilities participated in a special restoration event. A total of nine bags of black mustard and filaree were removed from the foredune area. AT&T volunteers came from 18 unique zip codes.



Figure 4. Photographs from community restoration event on 27 November 2018, including before (top left) and after (top right) photo of restoration area.

Community Restoration Event Summary (1 December 2018)

On 1 December 2018, 22 volunteers from Loyola Marymount University, Santa Monica College, and the local community participated in a restoration event focused on the removal of black mustard and filaree. A total of nine bags were removed from the foredune area. Volunteers came from 14 unique zip codes.



Figure 5. Community restoration event on 1 December 2018.

Community Restoration Event Summary (5 January 2019)

On 5 January 2019, TBF and LAWA staff held a community restoration event which focused on the hand removal of invasive black mustard and filaree. 22 volunteers, from 14 unique zip codes, pulled a total of 51 bags of exotic vegetation.

Community Restoration Event Summary (23 February 2019)

A special community restoration event was held on 23 February 2019 with TBF and LAWA staff and members from several Los Angeles based Boy Scout troops. The 20 event participants came from 7 unique zip codes. The event focused on the hand pulling of invasive black mustard, filaree, wild radish, and brome grass. A total of 16 bags were removed.



Figure 6. Photographs of community restoration event on 23 February 2019, including before (top left) and after (top right) picture of restoration area.

Over the duration of Year 3, 208 volunteers contributed 624 hours during four community restoration events. **Since the inception of this grant, TBF and project partners have recruited 1,584 volunteers contributing approximately 4,800 hours over 47 community restoration events at the LAX Dunes.**

Target estimates going into the grant aimed at bringing 1,080 volunteers to the LAX Dunes over the course of 36 events. This project exceeded expectations and brought 1,566 volunteers, nearly half (42%) of whom were students, to the LAX Dunes through 47 community restoration events. Additionally, this project aimed to recruit an estimated 3,240 volunteer hours towards restoration and stewardship at the

LAX Dunes and exceeded that expectation by logging a total of 4,799 volunteer hours. The following tables summarize the number of participants, restoration activity, and unique zip codes of all community restoration events held as part of this grant project.

Table 1. Projected outcomes versus actual outcomes.

Outcome Metric	Projected	Actual
# of events held	36	47
# of volunteers recruited	1,080	1,584
# of volunteer hours logged	3,240	4,799
# of bags of invasive vegetation removed	1,080	1,710

Table 2. Summary of monthly community restoration events held at the LAX Dunes.

	Date	# of Volunteers	Hours	Bags	Invasive Vegetation	Demographics
Year 1, Quarter 1 (22 June 2016 - 30 September 2016)	7/9/2016	15	45	17	Russian thistle	7 unique zip codes. Participants represented the Audubon Society, California Native Plant Society (CNPS), and accounting firm Moss Adams.
	7/13/2016	79	237	47	Russian thistle, iceplant, acacia	Participants included middle school & high school students attending the International Youth Fellowship's (IYF) summer camp program. IYF did not want to disclose student zip codes because of privacy concerns. Students were from several states west of the Mississippi, Korea, and China.
	8/6/2016	15	45	26	Russian thistle, iceplant, acacia, castor bean, carnation spurge	11 unique zip codes. Participants included 5 students from CAMS Key Club from Cal State University Dominguez Hills (CSUDH).
	9/17/2016	132	396	206	Russian thistle, iceplant	37 unique zip codes.
Y1Q1	Total	241	723	296	----	----

	Date	# of Volunteers	Hours	Bags	Invasive Vegetation	Demographics
Year 1, Quarter 2 (1 October 2016 - 31 December 2016)	10/1/2016	25	75	36	Russian thistle, iceplant	14 unique zip codes. Participants represented CSULA's service-based fraternity Alpha Phi Omega (10), Montessori's Dragon Kids (90266), and Shire Pharmaceuticals.
	11/5/2016	17	51	55	Russian thistle, iceplant, acacia	5 unique zip codes. Participants represented Franklin Elementary School (Santa Monica), Lincoln Middle School (Santa Monica), CSULA, and LMU.
	12/3/2016	16	48	25	Iceplant	5 unique zip codes. Participants represented Grades of Green Youth Eco-Leadership Program (2nd-12th grades), CNPS, and several middle schools.
Y1Q2	Total	58	174	116	----	----
Year 1, Quarter 3 (1 January 2017 - 31 March 2017)	2/4/2017	15	45	27	Mustard, filaree, iceplant, carnation spurge	11 unique zip codes. Participants represented West Torrance High School's Interact Club (Rotary Club), LMU's Engineer's without Borders club, Starbucks Community Outreach, LAWA, and CNPS.
	2/25/2017	20	60	21	Mustard, filaree, carnation spurge	7 unique zip codes. Participants primarily included members of three Boy Scout Troops.
	3/4/2017	11	33	11	Mustard, filaree, carnation spurge, non-native grasses	6 unique zip codes. Participants included LMU, El Camino College, CNPS, and LAWA.
Y1Q3	Total	46	138	59	----	----
Year 1, Quarter 4 (1 April 2017 - 30 September 2017)	4/1/2017	77	231	90	Mustard, filaree, non-native grasses	21 unique zip codes. Participants included LMU, LAWA, and John C Fremont High School.
	5/6/2017	47	141	80	Carnation spurge	Participants included mostly UCLA students.

	Date	# of Volunteers	Hours	Bags	Invasive Vegetation	Demographics
	5/25/2017	116	348	71	Russian thistle, iceplant, non-native grasses, and carnation spurge	2 unique zip codes. Participants included Patagonia, the Girls Athletic Leadership School, and LMU.
Y1Q4	Total	240	720	241	----	----
Year 2, Quarter 1 (1 July 2017 - 31 September 2017)	7/8/2017	24	72	21	Russian thistle, acacia, carnation spurge, and non-native grasses	8 unique zip codes. Participants represented CaleNow, Girl Scouts, Culver City High School, LMU, Santa Monica College, and LAWA.
	8/5/217	10	30	8	Russian thistle, iceplant, and non-native grasses	7 unique zip codes. Participants represented the Apple Store (Glendale), Farmers Insurance (Playa del Rey), LMU, and return volunteers.
	8/19/2017	60	180	52	Russian thistle, iceplant, non-native grasses, and carnation spurge	11 unique zip codes. Participants included JustServe affiliated volunteers.
	9/16/2017	45	135	56	Russian thistle, iceplant, non-native grasses, and carnation spurge	19 unique zip codes.
	9/22/2017	12	36	15	Russian thistle, iceplant, and non-native grasses	7 unique zip codes. Participants included students from an LMU Environmental Business class.
	9/26/2017	20	60	55	Russian thistle, iceplant, acacia, and non-native grasses	4 unique zip codes. Participants included most of the employees of Patagonia - Santa Monica store.
	Y2Q1	Total	171	513	207	----
Year 2, Quarter 2 (1 October	10/7/2017	10	30	10	Russian thistle, iceplant	7 unique zip codes. Participants included a noted CSUDH/Guggenheim Fellow photographer, UCLA students, Mountains

	Date	# of Volunteers	Hours	Bags	Invasive Vegetation	Demographics
						Recreation and Conservation Authority, Playa Del Rey neighbors, and LAWA.
	11/4/2017	24	72	16	Russian thistle, carnation spurge, and non-native grasses	16 unique zip codes. Participants included students from LMYU, UCLA, Santa Monica College, Brentwood School, Santa Monica High School, and Boy Scouts of America.
	12/2/2017	63	189	77	Russian thistle, filaree, and iceplant	34 unique zip codes. Participants included students from LMU, UCLA, Brentwood School, Saint Anastasia School, and the Meetup group - "I wanted to do that...just not alone!"
Y2Q2	Total	97	291	103	----	----
Year 2, Quarter 3 (1 January 2018 - 31 March 2018)	1/13/2018	20	60	5	Long-billed filaree and Saharan mustard	4 unique zip codes. Participants included students from LMU, UCLA, Santa Monica College, and the Brentwood School.
	2/3/2018	77	231	10		16 unique zip codes. Participants represented LMU, UCLA, meetup.com, and individuals.
	2/4/2018	10	30	--		CNPS Conference Tour. No restoration activities.
	2/24/2018	7	21	--	Long-billed filaree and Saharan mustard	Participants represented the Boy Scout Troop from the Thunderbird District.
	3/3/2018	--	--	--		Canceled due to rain.
	3/10/2018	--	--	--		Special UCLA Silicon Beach Alumni event canceled due to rain.
Y2Q3	Total	114	342	15	----	----

	Date	# of Volunteers	Hours	Bags	Invasive Vegetation	Demographics
Year 2, Quarter 4 (1 April 2018 - 30 June 2018)	4/7/2018	47	141	40	Filaree, black mustard, and carnation spurge	18 unique zip codes. Participants included students from LMU, UCLA, and Santa Monica College, and a Chapman University professor and CNPS member.
	4/12/2018	12	36	13	Black mustard and filaree	Participants represented employees from the AT&T's El Segundo office and all participants listed their office zip code.
	4/20/2018	105	315	100	Wild radish, filaree, and Saharan mustard	Participants included nearly 100 sixth grade students from an all-girls LAUSD charter school, Girls Athletic Leadership School. School staff listed only the school's zip code and most of the students are from predominantly low-income neighborhoods.
	4/21/2018	13	39	15	Filaree, black mustard, and wild radish	7 unique zip codes. This event was a private volunteer event held for the local Kent State Alumni Associate.
	4/24/2018	36	108	23	Black mustard and Saharan mustard	11 unique zip codes. The second of three volunteer events for AT&T's El Segundo office employees.
	4/27/2018	92	276	78	Wild radish, black mustard, and filaree	41 unique zip codes. The third of three volunteer events for AT&T's El Segundo office employees.
	5/5/2018	52	156	35	Wild radish, black mustard, and filaree	33 unique zip codes. "Big Sunday" volunteer event included participants from Kaiser Permanente, meetup.com, and students.
	5/19/2018	20	60	17	Filaree, black mustard, and carnation spurge	13 unique zip codes. Participants included volunteers from UCLA Silicon Beach Alumni.

	Date	# of Volunteers	Hours	Bags	Invasive Vegetation	Demographics
	6/2/2018	15	45	10	Filaree, black mustard, carnation spurge, and brome grass	8 unique zip codes. Participants represented students from LMU, Ventura Community College, and Stonebridge University.
	6/30/2018	7	21	4	Russian thistle, wild radish, and filaree	3 unique zip codes. This is the second year CALE Now! has brought students to participate.
Y2Q4	Total	399	1197	335	----	----
Year 3, Quarter 1 (1 July 2018 - 30 September 2018)	7/14/2018	27	66	40	Russian thistle and brome grass	11 unique zip codes. Participants represented community members and LMU's Coastal Research Institute (CRI) interns.
	8/4/2018	16	48	24	Russian thistle, iceplant, and brome grass	9 unique zip codes. Participants represented community members, LMU's Coastal Research (CRI) interns, and Loyola Marymount High School interns.
	9/15/2018	62	248	212	Iceplant, black mustard, and brome grass	23 unique zip codes. Coastal Cleanup Day participants included local residents, school groups (Palms Middle School and LMU), and LAWA.
Y3Q1	Total	105	362	276	----	----
Year 3, Quarter 2 (1 October 2018 - 31 December 2018)	10/6/2018	4	12	15	Black mustard and Russian thistle	2 unique zip codes. Participants included community members and CRI interns.
	11/3/2018	19	57	4	Russian thistle and filaree	7 unique zip codes. Participants represented community members, LMU, and UCLA.
	11/27/2018	26	78	9	Black mustard and filaree	18 unique zip codes. Participants were from AT&T's El Segundo facilities.

	Date	# of Volunteers	Hours	Bags	Invasive Vegetation	Demographics
	12/1/2018	22	66	9	Black mustard and filaree	14 unique zip codes. Participants represented community members, LMU, and Santa Monica College.
Y3Q2	Total	71	213	37	----	----
Year 3, Quarter 3 (1 January 2019 - 31 March 2019)	1/5/2019	22	66	9	Filaree, black mustard, and brome grass	14 unique zip codes. Participants represented LMU, UCLA, and Outdoor Afro.
	2/23/2019	20	60	16	Filaree, black mustard, wild radish, and brome grass	7 unique zip codes. Volunteers were from several Los Angeles based Boy Scout troops.
Y3Q3	Total	42	126	25		
Total (July 2016 – March 2018)		1584	4799	1710		

Demographics

From 1 July 2018 to 30 March 2019, TBF held 9 restoration events at the LAX Dunes. A total of 208 volunteers participated in the events, with 76 of those who released demographic data identifying as students. Figure 7 shows the total number of participants during each community restoration event in Year 3. The event with the most volunteers was on 15 September 2018 for Coastal Cleanup Day.

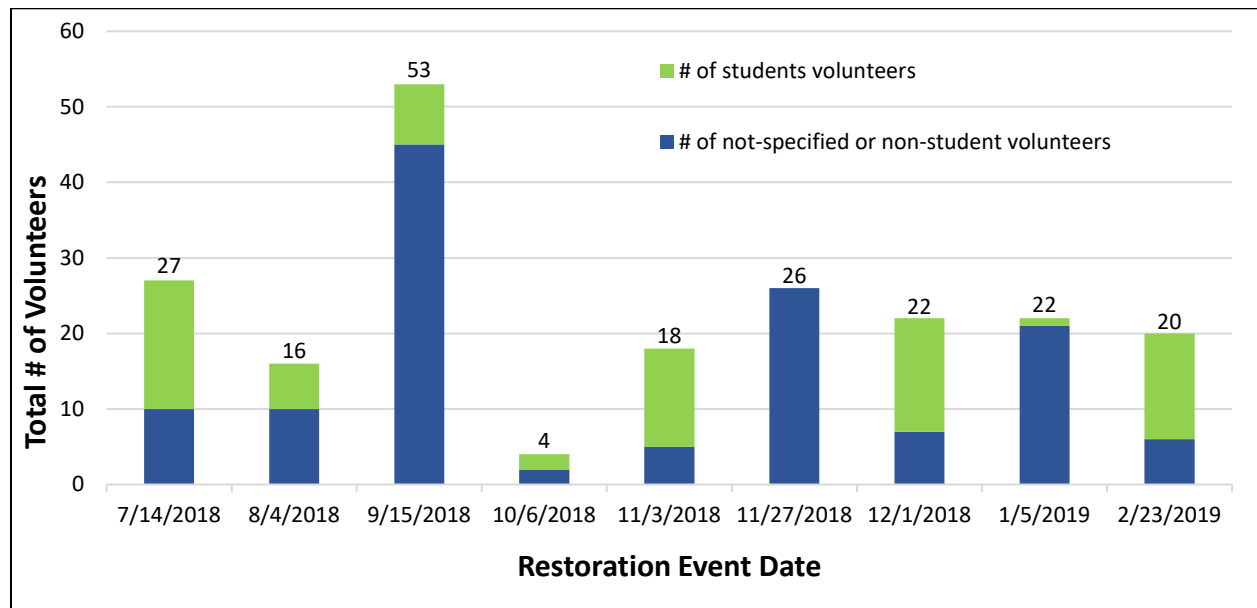


Figure 7. Total number of volunteer participants divided into those self-identified as students and those who are either non-student or did not specify.

In addition to total number of participants, Figure 7, as well as Table 2, displays the breakdown of number of student volunteers versus non-student volunteers or those who did not specify. Over 1/3 of Year 3 volunteers identified themselves as students. The only event which had no student volunteers was the 27 November 2018 special restoration event, which was organized for employees from AT&T's El Segundo facilities. The cumulative total for all three years came out to 1566 volunteers of which 660 individuals (42%) were students.

Table 3. Total number of non-students and students that participated in restoration events.

	Event Date	# Not-Specified or Non-Student Participants	# Students Participants	# of total Participants
Year 1	7/9/2016	13	2	15
	7/13/2016	13	66	79
	8/6/2016	5	10	15
	9/17/2016	29	64	132
	10/1/2016	3	15	25
	11/5/2016	8	9	17
	12/3/2016	5	9	16
	2/4/2017	7	8	15
	2/25/2017	1	14	20
	3/4/2017	6	5	11
	4/1/2017	17	29	77
	5/6/2017	4	43	47
	5/25/2017	5	111	116
	Total Volunteers (Year 1)		116	385
Year 2	7/8/2017	9	15	24
	8/5/2017	10	2	12
	8/19/2017	60	0	60
	9/16/2017	36	9	45
	9/22/2017	2	10	12
	9/25/2017	20	0	20
	10/7/2017	8	2	10
	11/4/2017	20	4	24
	12/2/2017	53	10	63
	1/13/2018	19	1	20
	2/3/2018	77	0	77
	2/24/2018	6	1	7
	4/7/2018	15	32	47
	4/12/2018	12	0	12
	4/20/2018	5	100	105
	4/21/2018	13	0	13
4/24/2018	36	0	36	

	Event Date	# Not-Specified or Non-Student Participants	# Students Participants	# of total Participants
	4/27/2018	92	0	92
	5/5/2018	50	2	52
	5/19/2018	18	2	20
	6/2/2018	10	5	15
	6/30/2018	3	4	7
	Total Volunteers (Year 2)	574	199	773
Year 3	7/14/2018	10	17	27
	8/4/2018	10	6	16
	9/15/2018	45	8	53
	10/6/2018	2	2	4
	11/3/2018	5	13	18
	11/27/2018	26	0	26
	12/1/2018	7	15	22
	1/5/2019	21	1	22
	2/23/2019	6	13	20
	Total Volunteers (Year 3)	132	76	208
	Total Volunteers	822	660	1566

This ETC grant specifically focuses on bringing students and youth to participate in stewardship and habitat restoration at the LAX Dunes. During the duration of the grant (July 2016 to March 2019), TBF and project partners hosted 660 students during restoration and stewardship events at the LAX Dunes. Of the total number of Year 3 student participants (76), 34.2% were K-12 students and 65.8% were college and university students (Table 4). Figure 9 shows the reach of volunteers by zip code that attended events from July 2016 to March 2019. Table 5 shows the number of zip codes reached, number of volunteers, and number of students by distance away from the LAX Dunes that participated in LAX Dunes events throughout the duration of the grant. The program attracted many inland and underserved communities of Los Angeles County.

Table 4. Student participants in restoration events.

	Total # of Students	# of K-12 Student	# College and University Students	# Did Not Identify if K-12 or College/University Student	# Students Female	# Students Male
Year 1	385	274	98	13	254	128
Year 2	199	112	60	2	136	30
Year 3	76	26	50	0	32	35
Total	659	411	208	15	422	193

Table 5. Number of total volunteers and students by zip code measured by distance away from project site (only includes totals for those who released their zip code information).

	Distance from LAX Dunes					Total
	0-5 miles	5-10 miles	10-15 miles	15-20 miles	20-40 miles	
# of zip codes reached	10	39	39	42	49	179
# of total volunteers	367	338	163	200	191	1259
# of students	96	118	95	136	119	564

To measure the demographics of the communities where LAX Dunes restoration event volunteers reside, TBF used the Disadvantaged Communities (DAC) Mapping Tool developed by Integrated Regional Water Management (IRWM). DAC data were downloaded and used to analyze participant demographics in GIS. The DAC dataset uses census data (US Census American Community (ACS) 5-Year Data: 2010-2014) to determine Disadvantaged Communities (DAC) and Severely Disadvantaged Communities (SDAC). DAC designations include geographies with an annual median household income (MHI) that is less than 80% of the statewide annual MHI and SDAC designations have an annual MHI that is less than 60% of the statewide annual MHI. Figure 10 identified the DAC and SDAC communities where at least one individual participated in a LAX Dunes restoration event during the duration of this grant. A total of 35 Disadvantaged Communities (DAC) and 41 Severely Disadvantaged Communities (SDAC) were reached throughout the nearly 3-year duration of this grant. During Year 3 an additional 5 DACs and 2 SDACs were identified and included in the volunteer demographic analysis. The minimum, median household income (MHI) for participants based on zip code census data was \$17,443 and came from South Los Angeles in the Inglewood area. The maximum, median household (MHI) for participants based on zip code census data was \$154,000 coming from Pacific Palisades.

Student participants from Disadvantaged (DAC) and Severely Disadvantaged Communities (SDAC) are shown in Table 7. The highest number of student participants from DAC and SDAC areas came from 10 or more miles away from the LAX Dunes site. More than half of all students that participated in restoration events came from SDAC areas. In total, 73% of all students that participated in restoration events came from a DAC or SDAC area.

Table 7. Student participants from Disadvantaged (DAC) and Severely Disadvantaged Communities (SDAC).

	Distance from LAX Dunes					Total
	0-5 miles	5-10 miles	10-15 miles	15-20 miles	20-40 miles	
Total # of student participants	96	118	95	136	119	564
# of student participants from DAC (% of student participants from DAC)	7 (1.24%)	13 (2.3%)	76 (13.48%)	5 (0.89%)	6 (1.06%)	107 (18.97%)
# of students participants from SDAC (% of student participants from SDAC)	54 (9.57%)	25 (4.43%)	15 (2.66%)	114 (20.21%)	97 (17.2%)	305 (54.08%)
# of students DAC and SDAC (% of students from DAC and SDAC)	61 (10.82%)	38 (6.74%)	91 (16.13%)	119 (21.1%)	103 (18.26%)	412 (73.05%)



Figure 8. High School students participating in a restoration event on 8 June 2018.

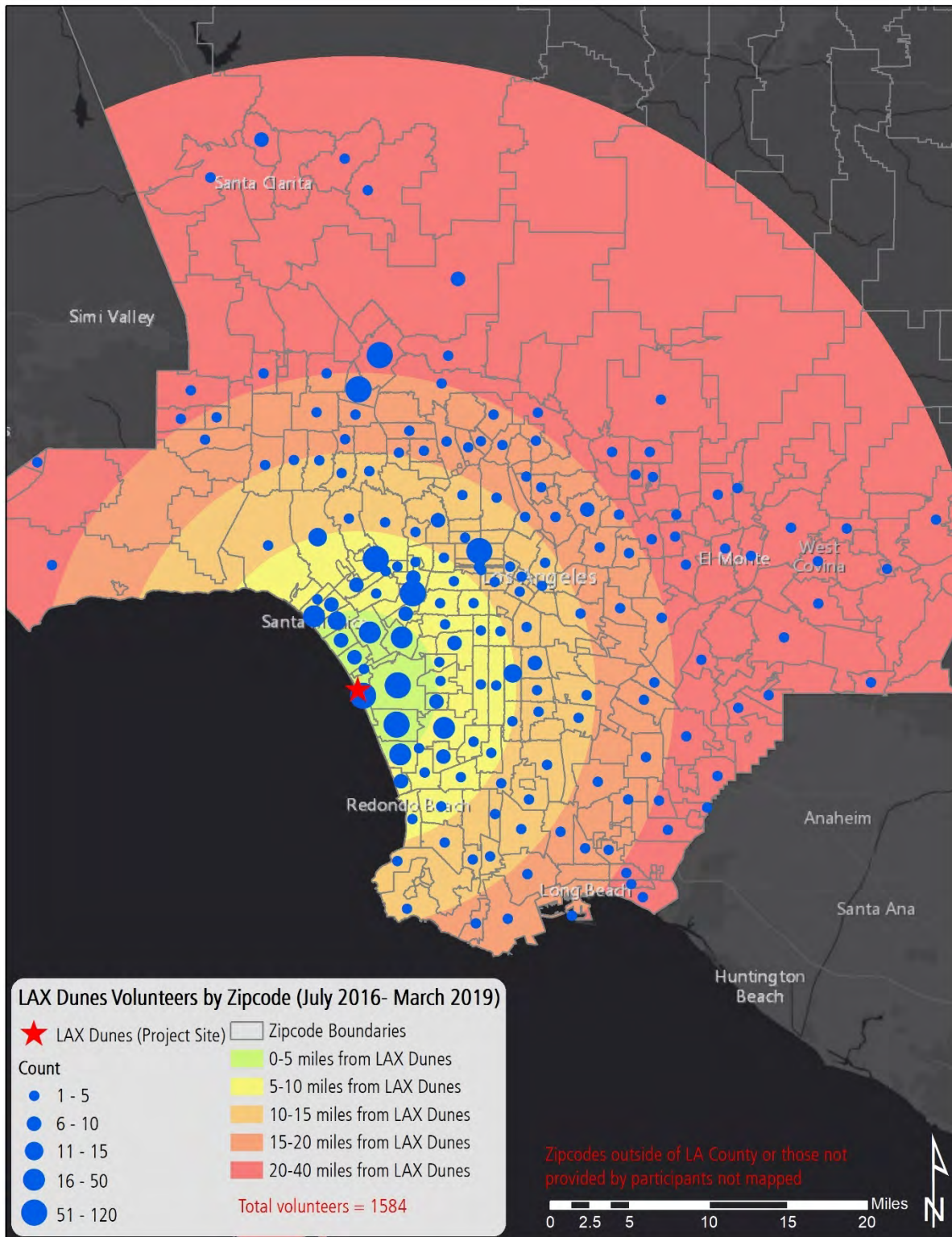


Figure 9. LAX Dunes volunteers by zip code from events held from July 2016 to March 2019.

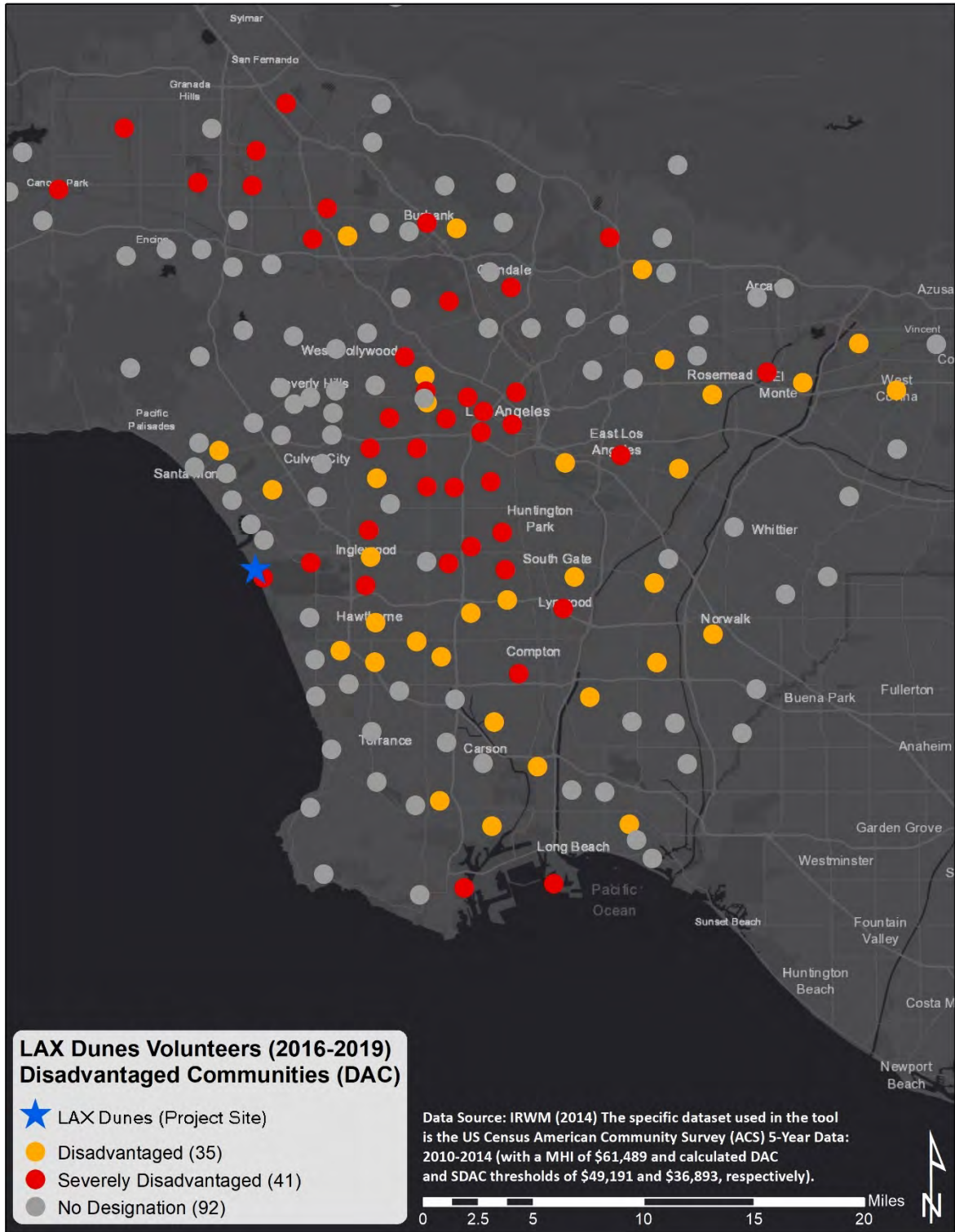


Figure 10. Map of Disadvantaged Communities (DAC) and Severely Disadvantaged Communities (SDAC) reached through LAX Dunes events.

Additional Restoration Activities

TBF has a long-standing partnership with Loyola Marymount University (LMU) and has been able to engage students from LMU's Seaver College of Science and Engineering to participate in restoration events, vegetation monitoring, and research opportunities at the LAX Dunes. This partnership became more formalized in 2017 when TBF and LMU jointly launched the Coastal Research Institute (CRI). As part of the CRI internship program, students gain first-hand experience in habitat restoration and monitoring techniques under the supervision of TBF staff. In the Summer of 2018, students from Marymount High School also took part in the CRI Summer Internship Program.



Figure 11. CRI interns participating in various vegetation monitoring and habitat restoration activities at the LAX Dunes.

Finally, TBF coordinated with Los Angeles Conservation Corps (LACC) to remove non-native iceplant and weed-whip non-native grasses as part of an agreement with LAWA. In August of Year 3, TBF and LACC removed approximately two acres of iceplant in the backdune area (Figure 12).

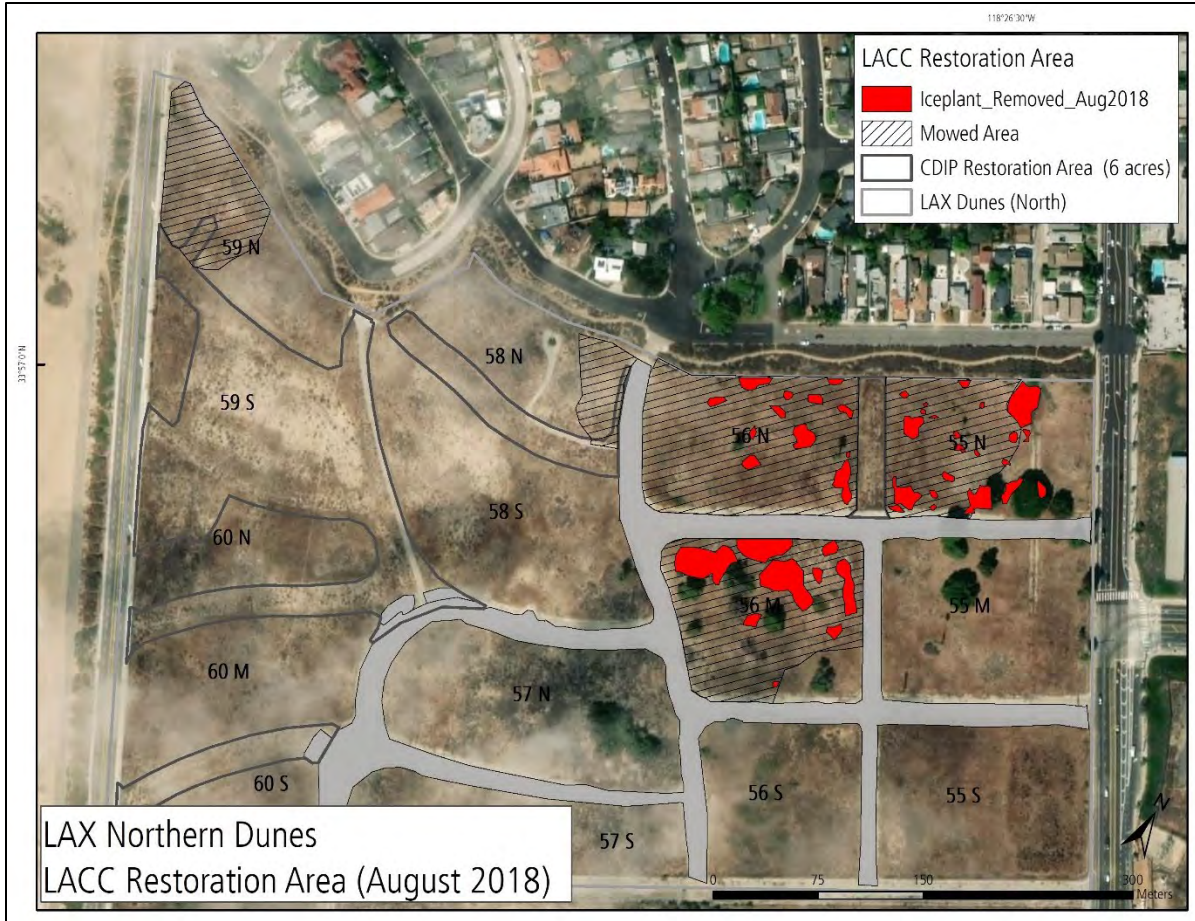


Figure 12. Map showing backdune area where TBF and LACC removed iceplant and cut non-native grasses (top). Los Angeles Conservation Corps crew (bottom).

Vegetation Monitoring

Vegetation monitoring helps TBF identify priority areas that should be targeted in future restoration events. Over the course of Year 3, rigorous scientific monitoring protocols were conducted quarterly along 20 established transects throughout the LAX Dunes to assess both qualitative and quantitative changes in vegetation over time. In addition, TBF completed species specific vegetation mapping of the entire 48-acre northern section of the Dunes. Mapping results show a noticeably higher relative native vegetation cover in the foredune area of the LAX Dunes, where the majority of past restoration events have occurred (Figure 13).

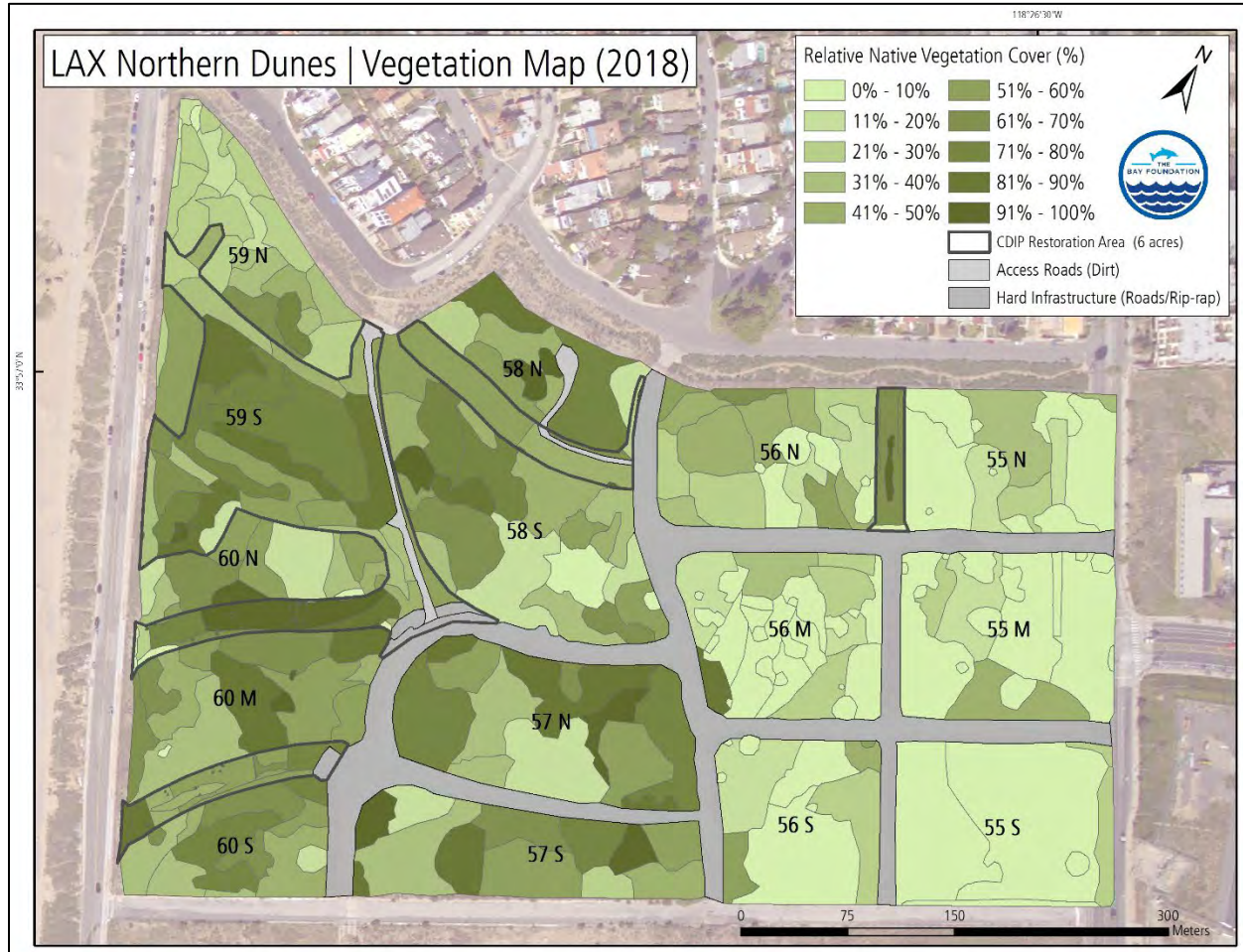


Figure 13. LAX Dunes relative native vegetation cover.

Public Relations, Media, and Community Engagement

Monthly community restoration events continued to be promoted through TBF's webpage and social media, LAWA Community Relations, and FOLD. As a Patagonia grantee, TBF was also able to utilize Patagonia Action Works as a platform to increase participation in restoration events.

On Tuesday, 17 July 2018, TBF and LAWA released a joint press release highlighting the restoration successes described in the Ecological Monitoring Report. The report was also sent to the California Coastal Commission and posted publicly on TBF's website.

In July 2018, Ayanna Neal, founder of the Friends of the LAX Dunes (FOLD), won the US Environmental Protection Agency's 2018 President's Environmental Youth Award for the FOLD program, which is a partnership of LAWA and TBF. There was an award ceremony held in Washington D.C. on 21 September 2018 to recognize students from across the country.

A media article called "Life Finds a Way" in the Argonaut newspaper came out on 5 September 2018 highlighting restoration efforts at the LAX Dunes, including a brief history of the site and highlights from the restoration work of TBF and LAWA. Several additional forms of communication came out of the press release, including being highlighted in multiple newsletters (e.g. OCA News Splash, CalCoast WAVE, and Santa Monica Bay National Estuary Program's BAYWIRE).

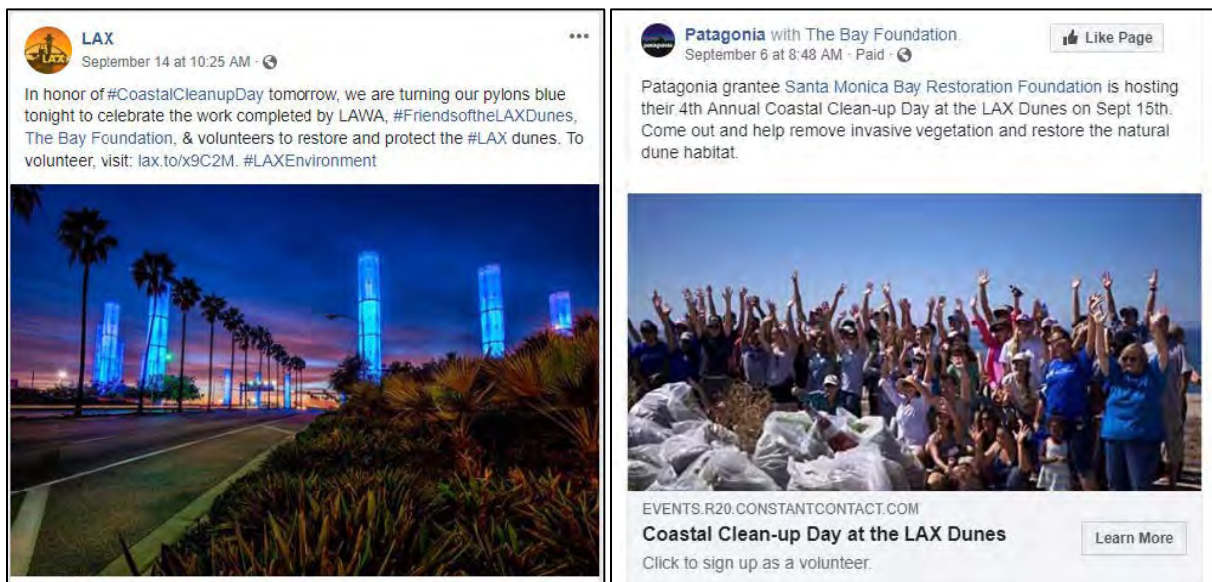


Figure 14. Promotions for Coastal Cleanup Day through LAX's social media (left) and Patagonia Action Works (right).

Year 3 social media highlights included LAWA promoting Coastal Cleanup Day and the work TBF, FOLD, and volunteers have been doing to protect and restore the LAX Dunes. In a massive show of support for the restoration work and the LAX Dunes, and to honor Coastal Cleanup Day, LAX Airport turned their pylons blue the night before Coastal Cleanup Day (Figure 14). This unprecedented recognition received dozens of re-tweets and countless views from people driving in and around the airport. Additional efforts to promote Coastal Cleanup Day included working again with the Patagonia's Action Works platform, which included Patagonia staff promoting the event on Facebook through their "Social Amplification" program. The event was also listed on the Restore America's Estuaries website as an

official “National Estuaries Week” event, on Heal the Bay’s Coastal Cleanup Event Signup Webpage, on TBF’s events page, and additional social media notifications.

Another article titled, “This LAX-Adjacent Ghost Town is now ‘Priceless Real Estate’ for Rare Owls”, was released on 17 February 2019 in the Los Angeles Times (Figure 15). The story discusses the many rare species which inhabit the LAX Dunes, specifically the burrowing owl (*Athene cunicularia*). The article goes on to highlight the success of the monthly restoration events held by TBF and LAWA. In the first restoration event (2 March 2019) following the release of the article, approximately 200 people had registered.



Figure 15. Article released by the Los Angeles Times on 17 February 2019.

TBF continues to explore different avenues to promote our monthly events in hopes to increase our reach to various demographics and bring them to the coast to learn about stewardship and hands-on habitat restoration. On 21 March and 22 March 2019, the upcoming April LAX Dunes Restoration Event was promoted on NBC4’s “I am a Volunteer” segment during the News. Additionally, it was promoted in the calendar section on their website (Figure 16).



Figure 16. TBF and the April 2019 LAX Dunes Restoration Event promoted through NBC’s “I am a Volunteer” calendar on their website.

Moving Forward

Through this ETC grant, TBF has been able to reach community members from the greater Los Angeles area and give them an opportunity to experience hands-on stewardship of a unique coastal habitat. TBF will continue to use strategies that have been successful at increasing restoration event participation. This includes working closely with LAWA to promote events through social media and press articles, use of the Patagonia Action Works platform, and outreach to schools and colleges.

TBF continues to develop new strategies for increasing participation in monthly restoration events, particularly from underserved and inland communities. By utilizing the demographic maps (Figures 9 & 10), TBF can identify gaps and reach out to communities that have yet to be engaged. This can be accomplished through continued connections established with additional Los Angeles based schools and colleges. To encourage participation from news schools, TBF is exploring the possibility of making the LAX Dunes a Los Angeles Unified School District (LAUSD) pre-approved field trip site. This would authorize LAUSD schools to attend field trips at the Dunes without having to wait for the processing of approval request paperwork through the school district. Additionally, TBF will continue to look for opportunities for grant funding to support community-based restoration at the LAX Dunes.

Appendix A: LAX Dunes Photos (Year 3)



Vegetation mapping with TBF staff and CRI interns on 3 August 2018.



Community Restoration Event on 6 August 2018.



Vegetation mapping on 10 August 2018.



Blainville's Horned Lizard (*Phrynosoma blainvillii*) spotted, despite its cryptic coloring, on 22 August 2018.



Restoration work with TBF and LACC on 27-29 August 2018. Photographs include piles of removed iceplant (bottom left) and California common scorpion (*Paruroctonus silverestrii*) (bottom right).





Photos from Coastal Cleanup Day on 15 September 2019.



Community Restoration Event on 6 October 2019.



Site tour given by TBF staff to an urban ecology class from LMU.



Community Restoration Event on 3 November 2018.



Special restoration event with AT&T on 27 November 2018 (left) and community restoration event on 1 December 2018.



Community restoration event on 5 January 2019.



Wildlife Survey with TBF and USGS on 9 February 2019. Bottom photo is of a California legless lizard (*Anniella pulchra*) found during the survey.



Community restoration event with Boy Scout troop on 23 February 2019.