



Invasive Plant Monitoring in the Mediterranean Coast Network

Santa Monica Mountains National Recreation Area 2016–2020 Annual Report



Italian thistle (*Carduus pycnocephalus*).
NPS / TONY VALOIS

Invasive plant monitoring in the Mediterranean Coast Network: Santa Monica Mountains National Recreation Area 2016–2020 annual report

Science Report NPS/SR—2024/191

Mark Mendelsohn ¹, Joseph Algiers¹, Irina Irvine ¹, Tarja Sagar¹, John Tiszler¹, Lena Lee²

¹ Santa Monica Mountains National Recreation Area

1 Baxter Way, Suite 180

Thousand Oaks, CA 91362

² Inventory and Monitoring Program

Mediterranean Coast Network

1 Baxter Way, Suite 180

Thousand Oaks, CA 91362

Please cite this publication as:

Mendelsohn, M., J. Algiers, I. Irvine, T. Sagar, J. Tiszler, and L. Lee. 2024. Invasive plant monitoring in the Mediterranean Coast Network: Santa Monica Mountains National Recreation Area 2016–2020 annual report. Science Report NPS/SR—2024/191. National Park Service, Fort Collins, Colorado. <https://doi.org/10.36967/2305515>

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Abstract

The purpose of the National Park Service's Mediterranean Coast Network Invasive Plant Monitoring Program is to determine the status and trends in the distribution and cover of a targeted list of nonnative plant species in the Santa Monica Mountains National Recreation Area (SAMO), and to provide information to assist park managers with control of invasive plants. The monitoring is conducted at all point of entry survey sites (trailheads, parking lots, ports and campgrounds) and at randomly selected locations along dirt roads and trails on public lands throughout SAMO. This report summarizes the first five years (2016–2020) of monitoring points of entry and dirt roads and trails at SAMO with the approved protocol. The 2013–2014 annual report summarized the pilot data collected. The pilot methodology was modified to simplify data collection and to improve detection of invasive plants on dirt roads and trails. As with the pilot data, most invasive plants were found at points of entry, close to roads, trails, or other disturbances.

Acknowledgments

We thank a multitude of interns and technicians, as well as park staff, for assistance with field work and data entry. We appreciate the logistical and funding support of SAMO Plant Ecologist John Tiszler and MEDN Inventory & Monitoring Program Manager Stacey Ostermann-Kelm. We also thank our colleagues and park partners at California State Parks, City of Malibu, Conejo Open Space Conservation Authority, Mountains Recreation and Conservation Authority, and Rancho Simi Recreation & Park District. We thank Sonya Daw for copy editing.

List of Acronyms

BBT: Backbone Trail

COSCA: Conejo Open Space Conservation Authority

DRT: Dirt Roads and Trails

GIS: geographic information system

GPS: geographic positioning system

GRTS: generalized random tessellation stratification

MCSP: Malibu Creek State Park

MEDN: Mediterranean Coast Network of the NPS Inventory and Monitoring Program

NNIS: Nonnative Invasive Species

POE: Point of Entry

SAMO: Santa Monica Mountains National Recreation Area

SMM: Santa Monica Mountains

Introduction

The National Park Service Mediterranean Coast Network (MEDN) parks (Figure 1) protect a unique and diverse flora within California's South Coast Ecoregion (Bailey et al. 1994; Baldwin et al. 2012). This ecoregion contains more than 30% of California's native plant species in less than 10% of the state's land area (California Department of Fish and Game 2008). Vegetation communities in Mediterranean-type climate regions, such as coastal southern California, typically have high species richness, including evergreen chaparral and summer-deciduous sage scrub occurring in association with woodland, grassland, riparian, and coastal bluff communities (Rundel and Tiszler 2007).

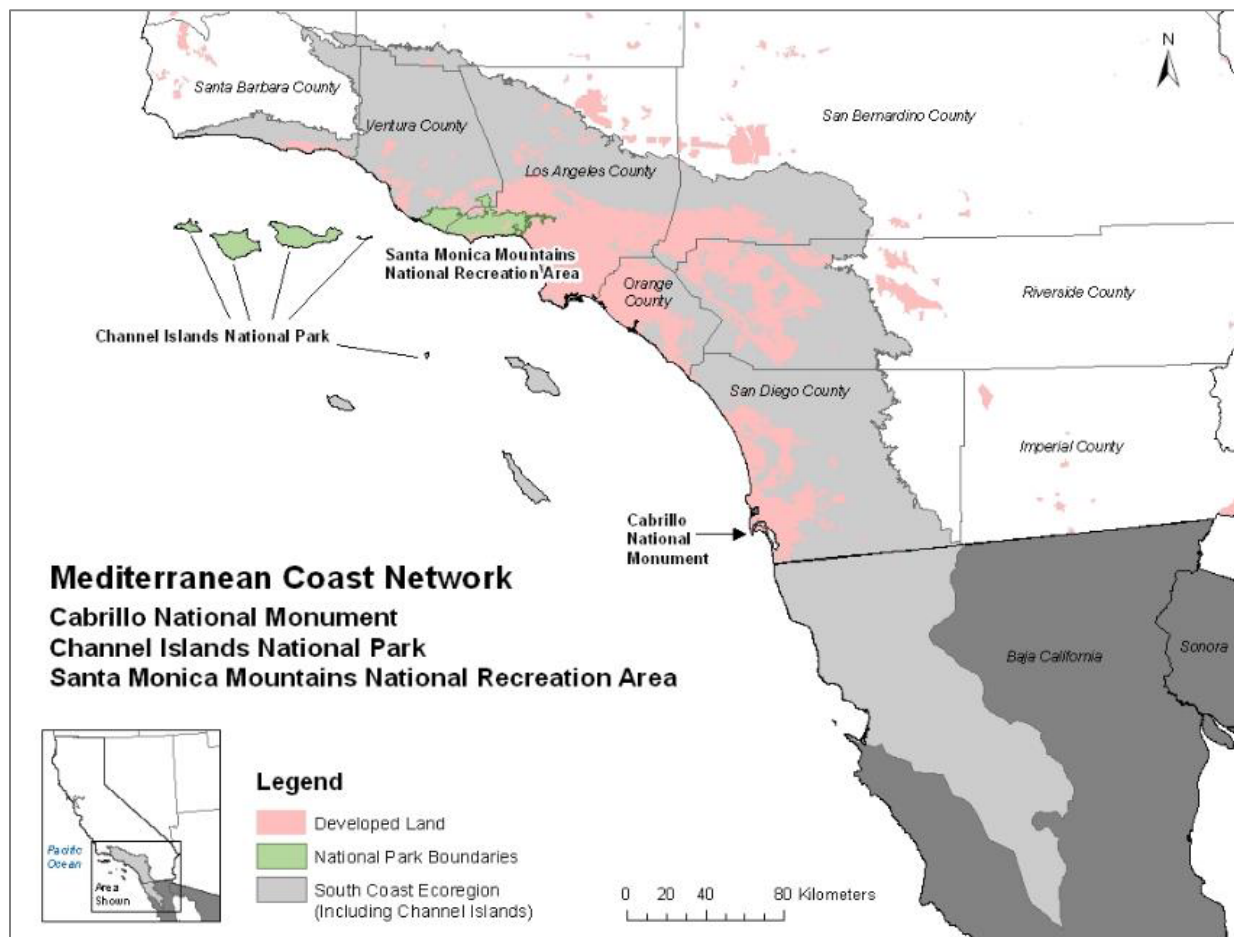


Figure 1. Location of the three national park units in the Mediterranean Coast Inventory and Monitoring Network within the South Coast Ecoregion boundary in southern California.

The South Coast Ecoregion is also notable for the tremendous human population growth and urban expansion that has occurred since the mid-20th century. The establishment and spread of nonnative plant species that follows urban expansion is one of the most significant threats to native plant diversity in the MEDN parks. Presently, nonnative plants comprise 31% of the Santa Monica Mountains flora (NPSpecies 2011). While many nonnatives become relatively minor elements in the landscape, others are invasive and have the capacity to transform ecosystems (e.g., by displacing

native plants, altering habitat, and reducing native wildlife habitat quality (Pimentel et al. 1999; Bossard et al. 2000)).

Because nonnative invasive species tend to establish in disturbed areas and impact native biota, the frequency and distribution of plant invasions are valuable measures of ecosystem health. Invasive plant monitoring was the top-ranked MEDN Vital Sign for implementation (Cameron et al. 2005). The overall goal of the monitoring in MEDN parks is to determine the status and trends of selected nonnative invasive plants in the Santa Monica Mountains National Recreation Area (SAMO) and to provide information to assist park managers with strategic and cost-effective control of invasive plants.

Our specific monitoring objectives are to:

1. Determine the status and trends in distribution and cover of target nonnative invasive plant species at points of entry, and dirt roads and trails on public lands throughout SAMO.
2. Provide regular updates (annually or more frequently) on all target nonnative invasive plant populations to SAMO invasive plant management programs. Provide immediate notification if any previously unknown nonnative plant species are detected during monitoring, or if a new location of a known target species is discovered.

In this report we summarize the first five years of implementing the approved protocol to systematically record and monitor invasive plant species at SAMO. We also include summaries of data collected through the MEDN Terrestrial Vegetation Monitoring Program (Tiszler et al. 2016). This report is only meant to provide summary information. Periodic trend or synthesis reports may also be prepared at approximately five- to ten-year intervals.

Methods

Monitored species

Only high priority nonnative invasive plant species (invasives; NNIS) were targeted for monitoring. These consisted of the 25 species known to occur at SAMO (Table 1). New introductions were also sought and recorded during monitoring. All nonnative invasive plant species newly discovered within the park are part of the target species list until a decision is made to remove that species from the target list.

Table 1. List of 25 target invasive plant species that are monitored and treated at Santa Monica Mountains National Recreation Area and their detection result at dirt roads and trails (DRT) or point of entry (POE) survey units between 2016 and 2020.

Species	Common Name	Species Code	Detected at DRTs or POEs in				
			2016	2017	2018	2019	2020
<i>Ailanthus altissima</i>	tree of heaven	AILALT	Yes	No	No	Yes	Yes
<i>Arundo donax</i>	giant reed	ARUDON	Yes	No	No	Yes	Yes
<i>Asphodelus fistulosus</i>	onionweed	ASPFIS	Yes	Yes	No	Yes	No
<i>Carduus pycnocephalus</i>	Italian thistle	CARPYC	Yes	Yes	Yes	Yes	Yes
<i>Carthamus lanatus</i>	wooly distaff thistle	CARLAN	No	No	No	No	No
<i>Centaurea solstitialis</i>	yellow star thistle	CENSOL	Yes	Yes	Yes	Yes	Yes
<i>Cirsium vulgare</i>	bull thistle	CIRVUL	Yes	No	Yes	Yes	Yes
<i>Conium maculatum</i>	poison hemlock	CONMAC	Yes	Yes	Yes	Yes	Yes
<i>Cortaderia selloana</i>	pampas grass	CORSEL	No	Yes	Yes	Yes	Yes
<i>Cynara cardunculus</i>	artichoke thistle	CYNCAR	No	No	Yes	Yes	Yes
<i>Cyperus involucratus</i>	umbrella sedge	CYPINV	Yes	No	Yes	Yes	Yes
<i>Delairea odorata</i>	Cape ivy	DELODO	Yes	Yes	Yes	Yes	Yes
<i>Euphorbia terracina</i>	carnation spurge	EUPTER	Yes	Yes	Yes	Yes	Yes
<i>Foeniculum vulgare</i>	sweet fennel	FOEVUL	Yes	Yes	Yes	Yes	Yes
<i>Lepidium latifolium</i>	perennial pepperweed	LEPLAT	Yes	Yes	Yes	Yes	Yes
<i>Myoporum laetum</i>	myoporum	MYOLAE	No	No	No	Yes	Yes
<i>Nicotiana glauca</i>	tree tobacco	NICGLA	Yes	Yes	Yes	Yes	Yes
<i>Pennisetum setaceum</i>	fountain grass	PENSET	Yes	Yes	Yes	Yes	Yes
<i>Phalaris aquatica</i>	Harding grass	PHAAQU	Yes	Yes	Yes	Yes	Yes
<i>Rhaponticum repens</i>	Russian knapweed	RHAREP	No	No	No	No	No
<i>Ricinus communis</i>	castor bean	RICCOM	Yes	Yes	Yes	Yes	Yes
<i>Salsola australis</i>	southern Russian thistle	SALAU	Yes	Yes	Yes	Yes	Yes
<i>Silybum marianum</i>	milk thistle	SILMAR	Yes	Yes	Yes	Yes	Yes
<i>Spartium junceum</i>	Spanish broom	SPAJUN	Yes	Yes	Yes	Yes	Yes
<i>Vinca major</i>	periwinkle	VINMAJ	Yes	Yes	Yes	Yes	Yes

Field methods

Point of entry surveys

We defined a point of entry (POE) as a trailhead, parking lot or campground (Irvine et al. 2016). More specifically, the POE is defined as the hardscape area of these locations plus the first 50 m of any road or trail connected to the POE, in addition to a 20 m buffer surrounding the entire area (Figure 2). We identified 123 total POEs, grouped into four panels (labeled A, B, C, and D). Each panel has 31 POEs, except that the D panel has 30 POEs, so that annual surveys can be completed within the available time period. (See Appendix A for POE monitoring sites.)

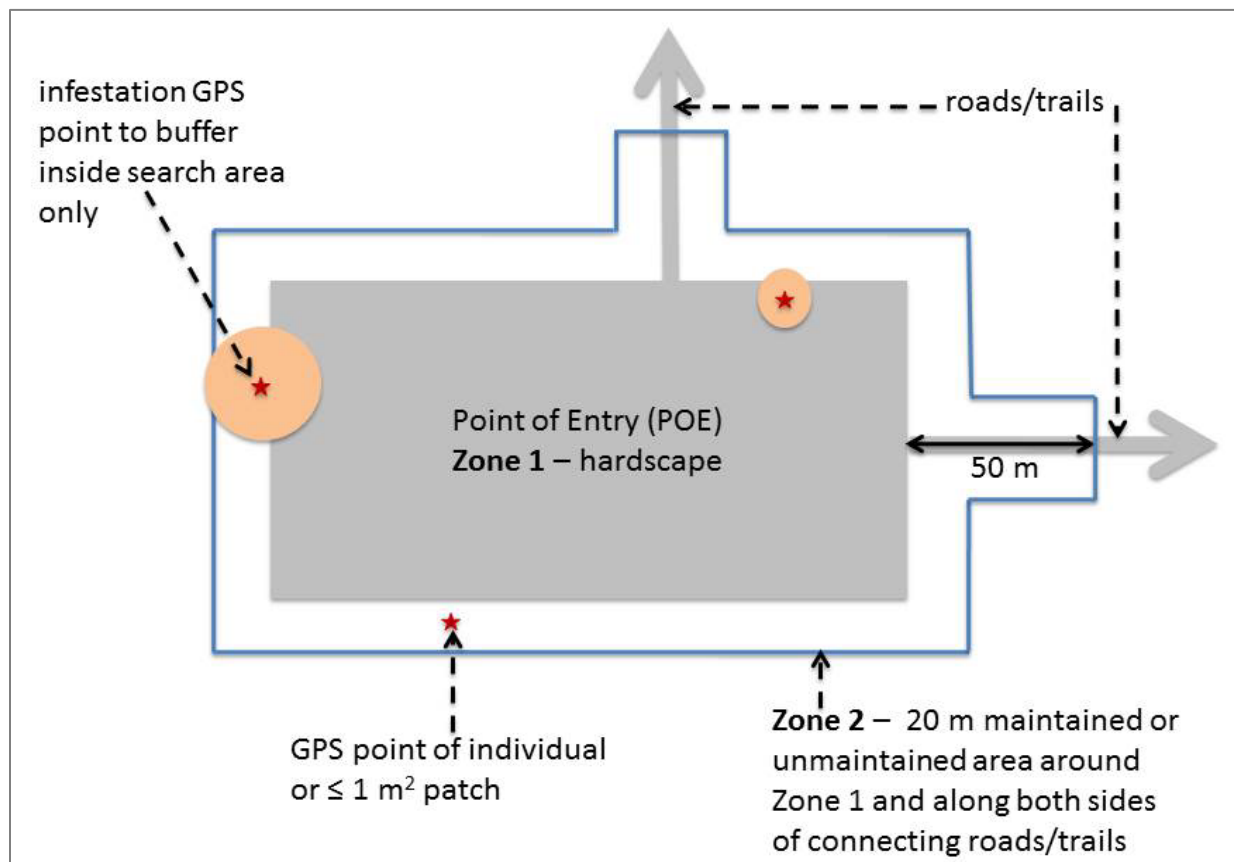


Figure 2. Diagram of an example point of entry (POE). The POE search area includes the hardscaped area and continues along the first 50 m of any connected dirt roads or trails (Zone 1). Zone 2 is the maintained or unmaintained 20 m area around Zone 1.

Within the POE survey area (the hardscape and 50 m along any official connected dirt road or trail, plus a 20 m zone surrounding this area), we mapped target NNIS infestations. For infestations that covered isolated or scattered points on the ground, we recorded point features. For infestations that were more linear in nature, we recorded line features, with starting and ending points, as well as intermediate vertices for any bends in a line.

We used a GPS unit in 2016, while in all years thereafter we used an iPad. The iPad was connected via Bluetooth to a Bad Elf GPS Pro to collect the spatial information (see the protocol “[Using](#)

[ArcGIS Collector for MEDN POE Weed Surveys](#),” which was not included in Irvine et al. 2016). We estimated the area of the target NNIS within the survey area using buffered points or buffered lines. For infestation areas that contained just one plant, we used a minimum radius of 0.25 m. Field crews attempted to limit data collection to the survey area. However, in practice, an insignificant total amount was recorded when a small number of infested patches started within the survey area and extended outside the survey area or occurred solely outside the survey area a small distance away. Individual NNIS within 2 m of each other were recorded as one patch, whereas individuals separated by >2 m were recorded as different patches.

For each NNIS infestation, we recorded the following:

- Date, recorders, and location (including zone, see Figure 2).
- Species name.
- Density class of target NNIS within the infestation (classes: <10, 10–100, >100 individuals).
- The spatial distribution of the population within the infestation (none, isolated, linear, scattered, patchy, continuous or monoculture; see Irvine et al. 2016).
- Additionally, once per year for each POE surveyed, we recorded three additional metrics:
 - Most Abundant Vegetation Community Type (classes: chaparral, coastal sage scrub, grassland, oak woodland, riparian, other)
 - Vegetation Status (classes: intact (>90% native cover), intermediate (50–90% native cover), disturbed (<50% native cover))
 - Burned in Recent Fire (yes/no)

For NNIS detected outside of the POE survey area but within eyesight, we noted the species name and location to alert park managers to the infestation(s).

Dirt roads and trails

To determine the distribution and relative abundance of invasives along recreation and utilitarian paths throughout SAMO, we monitored a set of transects at random locations along dirt roads and trails (DRT). Specifically, we used a procedure called generalized random tessellation stratification (GRTS) that produces sets of randomly selected, spatially balanced monitoring locations (Stevens and Olsen 2003, 2004). Two panel types were used each year. GRTS-selected DRT locations that fell at the top of the list when organized numerically by draw number were grouped into three serially alternating panels (A, B, and C) of 30 locations each, each panel of which were visited one year and rested the following two years. These permanent sites are contrasted with GRTS-selected DRT locations that were randomly drawn into positions further down the list, which were then pulled from, annually and sequentially, into a panel of 30 new sites, and were never revisited. For example, if sites 1-30, 31-60, and 61-90 fell into panels A, B, and C, respectively, then sites in panel A were surveyed in Year 1, along with 91-120 as never-revisit sites; in Year 2, Panel B, along with sites 121-150 as never-revisit sites, were surveyed; Year 4 would see panel A’s sites visited again, along with never-revisit sites 181-210; and so on. The response design (i.e., measurements taken at the site)

were the same for both types of panels. The results from the never-revisit sites could be compared to results from the permanent sites to determine if NNIS treatment at permanent monitoring sites is causing them to become unrepresentative of the population as a whole, and adjustments made as deemed necessary.

A 500 m strip transect the width of the road or trail and 2 m strip transects on each side of the road/trail were centered on a randomly selected point on the road/trail centerline (Figure 3). The 500 m transect was equally divided into ten 50 m sub-transects. Presence/absence, distribution pattern, and density class of NNIS were recorded within each sub-transect, and road/trail bed width was recorded at the beginning and end of each transect. At each DRT location, we also collected data on the following metrics: Most Abundant Vegetation Community Type, Vegetation Status, and Burned in Recent Fire. For NNIS patches located outside of the DRT survey area but within eyesight, we recorded the species name and bearing/direction of the infestation from a GPS point taken along the trail to alert park managers to the infestation(s).

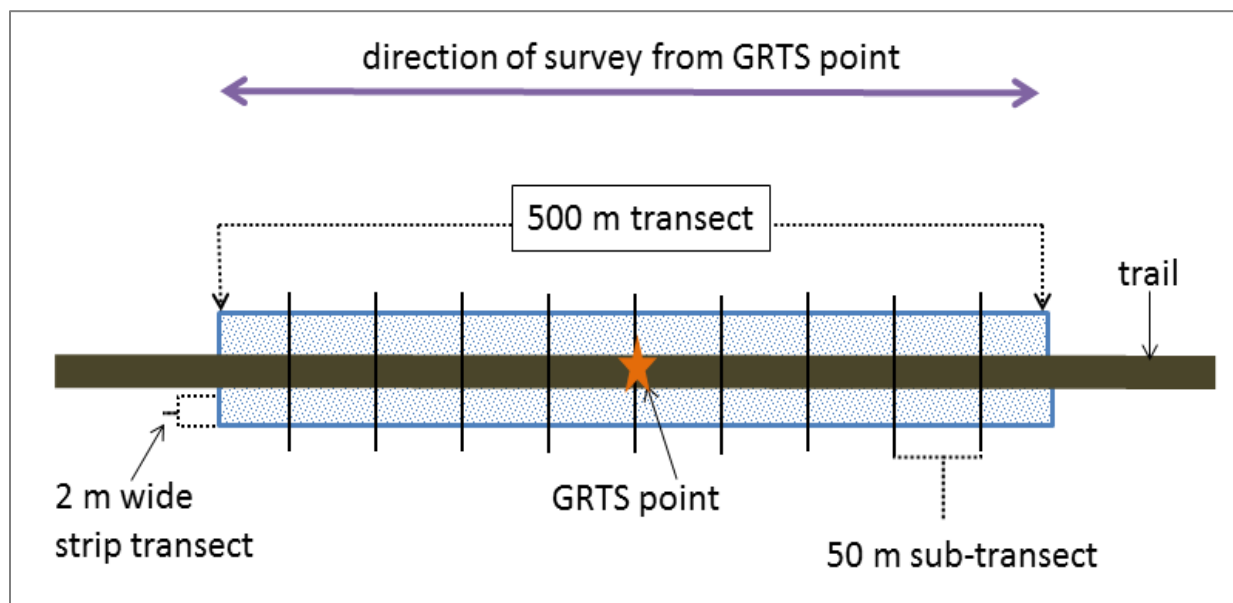


Figure 3. Diagram of strip transects at a GRTS point used to monitor nonnative invasive species on official dirt roads and trails (DRT). The 500 m transect is equally divided into ten 50 m sub-transects.

Interior parklands

Monitoring of invasives in areas away from roads, trails, and developments is conducted by the MEDN Terrestrial Vegetation Monitoring Program (Tiszler et al. 2016). The MEDN terrestrial vegetation program records percent canopy cover, density, richness, and frequency of invasive plant species at randomly selected locations throughout SAMO. Detailed summary data on nonnative invasive plant species is in the annual and trend reports for the MEDN terrestrial vegetation program; however, in this invasive plants report, we list the NNIS and general cover numbers recorded in that program.

Results and Discussion

This initial report combines monitoring years 2016, 2017, 2018, 2019 and 2020. In the following sections, we will display and discuss results for each year on its own, and then follow with a discussion of trends across the years. Subsequent reports are scheduled to be compiled annually; therefore, they will have less material to cover and limited trend discussions.

Monitors

Staff, technicians, and interns worked together to collect the data for the Invasive Plant Monitoring Program in years 2016–2020 (Table 2). POE, DRT, and the interior parkland monitoring components were initiated during the 2016 field season and continued in years 2017, 2018, 2019 and 2020.

All data were entered into the Microsoft Access MEDN Invasive Weeds Database by park staff, technicians, and interns. Data were checked and verified by the program staff. Validation queries were run to highlight field values that were not consistent with expected results (i.e., out-of-range values). These values were double-checked against field datasheets and discrepancies were corrected as appropriate and/or noted in the database.

Table 2. Dates and staffing of point of entry (POE), dirt roads and trails (DRT), and interior parkland (IP) monitoring surveys, by year, for the Mediterranean Coast Network Invasive Plant Monitoring Program. “X” indicates the crewmember surveyed that year. An asterisk (*) denotes interns in 2018 who became technicians in 2019.

Field Crew Type	Field Crewmember	2016 POE 2 May–7 Jun DRT 1 Jun–7 Jul IP 27 Jan–26 May	2017 POE 6 Jun–20 Jun DRT 26 May–17 Jul IP 31 Jan–26 May	2018 POE 9 Aug–22 Aug DRT 19 Jun–19 Sep IP 5 Mar–16 Jul	2019 POE 25 Jul–23 Aug DRT 30 May–23 Jul IP 12 Feb–1 Jul	2020 POE 20 Jul–18 Aug DRT 24 Jun–17 Sep IP 4 Feb–17 Jun
Staff	Joseph Algiers	–	–	X	X	X
	Brendan Clarke	X	–	–	–	–
	Mark Mendelsohn	–	–	X	X	X
	Tarja Sagar	X	X	–	–	–
	John Tiszler	–	X	–	–	–
	<i>Total Staff</i>	2	2	2	2	2
Tech-nician	Jake Alcaraz *	–	–	X	X	–
	Ivan Castillo	–	–	–	X	–
	Sarah Keller	–	–	–	X	–
	David Lewis	–	X	–	–	–
	Ryan McRae	–	–	–	X	–
	Ian Pohl	–	–	–	X	–
	Richard Rachman *	–	–	X	X	–
	Ashleigh Townsend *	–	–	X	X	X
	Matt Wells	–	–	–	X	–
	Jia Wiebe	–	–	–	X	–
	<i>Total Technicians</i>	0	1	3	9	1
Intern	Makenna Brown	–	–	–	–	X
	Janell Balmaceda	–	–	–	X	–
	Lauren Bradt	X	–	–	–	–
	Bridget Canning	X	–	–	–	–
	Samantha Castro	–	X	–	–	–

Table 2 (continued). Dates and staffing of point of entry (POE), dirt roads and trails (DRT), and interior parkland (IP) monitoring surveys, by year, for the Mediterranean Coast Network Invasive Plant Monitoring Program. “X” indicates the crewmember surveyed that year. An asterisk (*) denotes interns in 2018 who became technicians in 2019.

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Intern (cont'd)	Leanna Cherrette	–	–	–	–	X
	Takuma Chipman	–	–	–	–	X
	Daniel Cisneros	–	–	–	–	X
	Tawny DeGuzman	–	–	–	X	–
	Lars Engstrom	–	–	–	–	X
	Patrick Feyh	–	–	X	–	–
	Rhay Flores	–	–	–	–	X
	Mark Fiege	–	X	–	–	–
	Giancarlo Gomez	–	–	–	–	X
	Kori Groenveld	–	X	–	–	–
	Luke Groenveld	–	–	–	X	–
	Eric Joensuu	–	–	–	–	X
	Shane Jordan	–	–	X	–	–
	Anna Kowalczyk	–	X	–	–	–
	Andrea Laltoo	–	–	–	X	–
	Rochelle Larson	–	–	–	–	X
	Izzy Lopez	–	–	–	–	X
	Sam Love	–	–	–	–	X
	Alicia McCracken	–	–	–	X	–
	Patrick McMabell	–	–	–	X	–
	Ashley Meier	–	–	–	–	X
	Anderson Newman	–	–	–	X	–

Table 2 (continued). Dates and staffing of point of entry (POE), dirt roads and trails (DRT), and interior parkland (IP) monitoring surveys, by year, for the Mediterranean Coast Network Invasive Plant Monitoring Program. “X” indicates the crewmember surveyed that year. An asterisk (*) denotes interns in 2018 who became technicians in 2019.

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Intern (cont'd)	Morgan Oviedo	–	–	–	–	X
	Natalie Ramirez	–	X	–	–	–
	Gabino Rezendis	–	X	–	–	–
	Meagan Richards	X	–	–	–	–
	Jasmine Rios	–	–	–	–	X
	Fernando Rodriguez	X	–	–	–	–
	Jason Suddith	–	–	–	–	X
	Justin Tate	–	–	X	–	–
	Jake Tenkate	–	–	–	X	–
	Sarah Tian	–	–	–	X	–
	Diego Walder	–	–	–	X	–
	Michael Walsh	–	–	–	X	–
	Emily Zakowski	X	–	–	–	–
	Jackie Zhang	–	–	–	X	–
	<i>Total Interns</i>	5	6	3	12	15

Point of entry surveys

2016

In 2016, our assignment was to monitor the first panel (A), 31 sites of the 123 POEs in SAMO (Appendix A). We were able to visit all but one site in Panel A: Runyon Cyn Rd Trailhead North, (Runyon Canyon Park), which was closed and inaccessible due to construction on a water project. Additionally, however, we monitored Franklin Canyon Park - Ranch, BBT - Ray Miller Trailhead / La Jolla Canyon (Point Mugu State Park), and all but three of the 30 Panel D POEs (numbered 094 through 123). Within Panel D, Runyon Cyn Rd Trailhead South (Runyon Canyon Park) was inaccessible for the same reason mentioned above, and it is unclear why Big Sycamore Canyon Horse Camp (Danielson Ranch, Point Mugu State Park) and Malibu Creek State Park / Lookout Rd were not visited. Our data included a note that at Hastain Trailhead (Franklin Canyon - upper), *Euphorbia terracina* (carnation spurge) was observed to be “very messy” and it “looks like *Pennisetum setaceum* (fountain grass) was planted around utilities to conceal concrete pad”; however, no spatial data (or area totals) were recorded. **In total, we surveyed 59 POEs in 2016.** The reason for the extra surveys of Franklin Canyon Park - Ranch, BBT - Ray Miller Trailhead / La Jolla Canyon, and nearly all of the Panel D POEs was a misunderstanding between the project leads and field personnel with respect to the assignment.

Eighteen target species were observed and 13 POEs were free of target invasives. No new nonnative species were detected in 2016. See Appendix A for POE sites that include target invasives and their areas of infestation.

The most common target species at POEs were southern Russian thistle (*Salsola australis*), found at 22 sites distributed essentially throughout the range, fennel (*Foeniculum vulgare*), encountered at 19 sites, and Italian thistle (*Carduus pycnocephalus*) at 17 sites (Table 3 and Appendix A). Tree of heaven (*Ailanthus altissima*), giant reed (*Arundo donax*), yellow star thistle (*Centaurea solstitialis*), umbrella plant (*Cyperus involucratus*), and milk thistle (*Silybum marianum*) were found at only one POE each. There were no observations for onionweed (*Asphodelus fistulosus*), woolly distaff thistle (*Carthamus lanatus*), pampas grass (*Cortaderia selloana*), artichoke thistle (*Cynara cardunculus*), myoporum (*Myoporum laetum*), Harding grass (*Phalaris aquatica*), and Russian knapweed (*Rhaponticum repens*). All of these target species, however, are known to occur at other locations in SAMO along roads and trails.

Table 3. 2016 Santa Monica Mountains National Recreation Area target species, with number and percentage of monitoring sites where the species was observed. POE = point of entry. DRT = dirt roads and trails.

Species	N Sites Species Observed			% of Sites Species Observed		
	POE	DRT	Total	POE	DRT	Total
<i>Ailanthus altissima</i>	1	0	1	2	0	1
<i>Arundo donax</i>	1	0	1	2	0	1
<i>Asphodelus fistulosus</i>	0	1	1	0	2	1
<i>Carduus pycnocephalus</i>	17	18	35	29	30	29
<i>Carthamus lanatus</i>	0	0	0	0	0	0
<i>Centaurea solstitialis</i>	1	1	2	2	2	2
<i>Cirsium vulgare</i>	2	1	3	3	2	3
<i>Conium maculatum</i>	2	0	2	3	0	2
<i>Cortaderia selloana</i>	0	0	0	0	0	0
<i>Cynara cardunculus</i>	0	0	0	0	0	0
<i>Cyperus involucratus</i>	1	0	1	2	0	1
<i>Delairea odorata</i>	2	0	2	3	0	2
<i>Euphorbia terracina</i>	6	1	7	10	2	6
<i>Foeniculum vulgare</i>	19	8	27	32	13	23
<i>Lepidium latifolium</i>	2	0	2	3	0	2
<i>Myoporum laetum</i>	0	0	0	0	0	0
<i>Nicotiana glauca</i>	7	1	8	12	2	7
<i>Pennisetum setaceum</i>	7	0	7	12	0	6
<i>Phalaris aquatica</i>	0	4	4	0	7	3
<i>Rhaponticum repens</i>	0	0	0	0	0	0
<i>Ricinus communis</i>	8	1	9	14	2	8
<i>Salsola australis</i>	22	34	56	37	56	47
<i>Silybum marianum</i>	1	5	6	2	8	5
<i>Spartium junceum</i>	2	2	4	3	3	3
<i>Vinca major</i>	2	2	4	3	3	3

Of the 46 sites with invasive species, 43 POEs had 1 to 5 target species and 3 sites had 6 or more target species (Figure 4, Appendix A). We observed eight target invasives—the highest number found at one site—at Sycamore Canyon Campground Entrance. The largest infestation was at Olympia Farms, at over 6,000 m² infested with fennel, followed by Thornhill Broome Beach Camping (mouth of La Jolla Canyon), at little more than 2,600 m² infested with fountain grass. Busch Trailhead (Zuma/Trancas Canyons) had one infestation of southern Russian thistle at nearly 2,100 m². All other POEs had infestations at less than 2,000 m² infested. Eight sites had infestations at less than 10 m² total infested area, in addition to the 13 sites that had no target invasives present

(Appendix A). When reviewing Tables 8–12 in Appendix A, note that rarely was all ground within the gross infested area listed in the column “Gross Area Infested (sq. m)” covered by the given species. At these recorded locations, there was typically intervening space that was unvegetated or covered by other species.

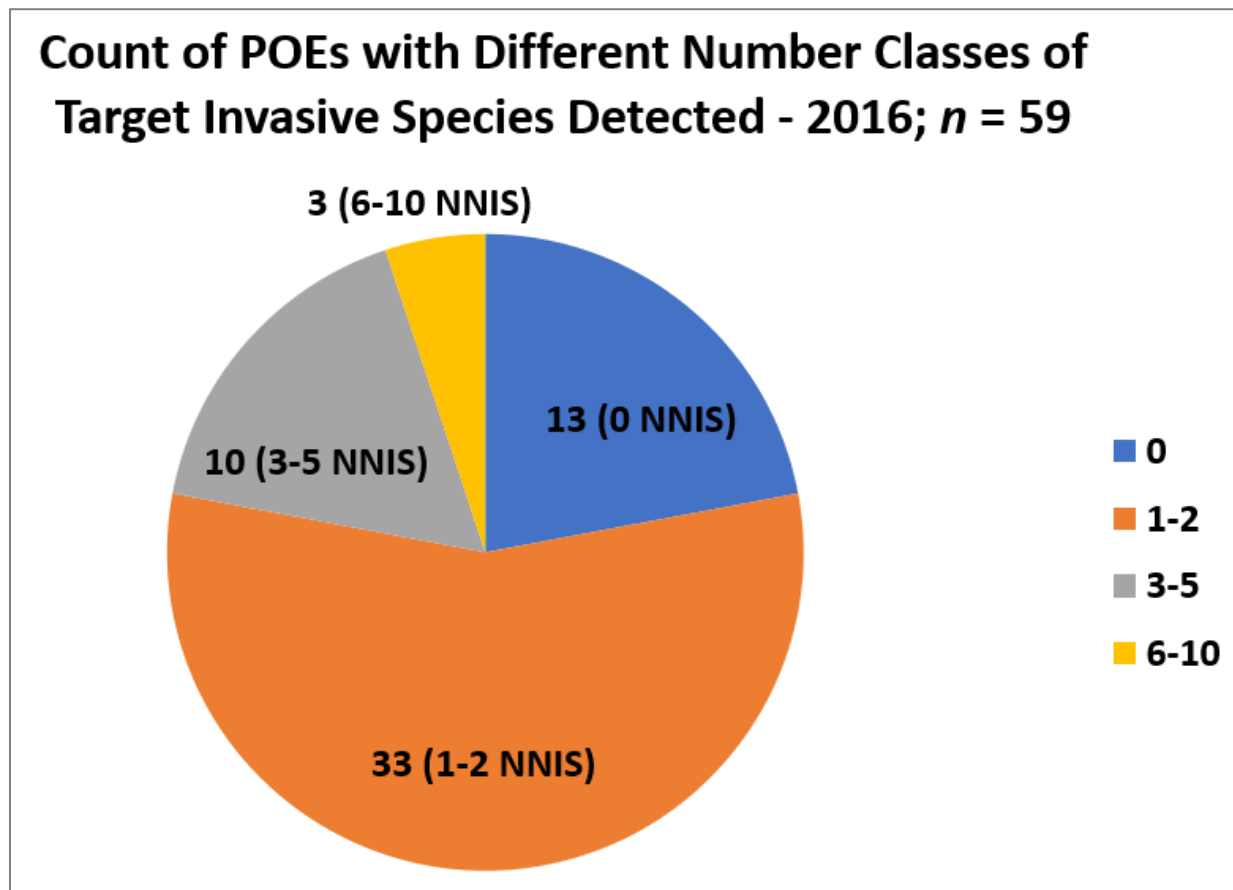


Figure 4. Number of point of entry (POE) sites containing each category of target nonnative invasive species (NNIS) counts in 2016 in Santa Monica Mountains National Recreation Area. For example, each of 10 POEs had between 3 and 5 target invasive species detected.

Sycamore Canyon Campground entrance had the most target invasives present: eight species. This campground is open year-round for campers and additionally is an entry point for several trails popular with hikers and bikers. In contrast, Top of Topanga, a high use viewpoint at the junction of three roads and three trailheads, had only one target invasive present.

2017

In 2017, our assignment was to monitor the second panel (B), 31 POEs, and we were able to visit all sites. Fifteen target species were observed, and five POEs were free of target invasives. No new nonnative species were detected in 2017. (See Appendix A for POE sites that include target invasives and their areas of infestation.)

The most common target species at POEs was Italian thistle, found at 18 sites. Two species, fennel and southern Russian thistle, were found at seven sites (Table 4 and Appendix A). Onionweed, poison hemlock (*Conium maculatum*), perennial pepperweed (*Lepidium latifolium*), and Harding grass were found at only one POE each. There were no observations for tree of heaven, giant reed, woolly distaff thistle, bull thistle (*Cirsium vulgare*), pampas grass, artichoke thistle, umbrella plant, myoporum, Russian knapweed, and milk thistle. All of these target species, however, are known to occur at other locations in SAMO along roads and trails.

Table 4. 2017 Santa Monica Mountains National Recreation Area target species, with number and percentage of monitoring sites where the species was observed. POE = point of entry. DRT = dirt roads and trails.

Species	N Sites Species Observed			% of Sites Species Observed		
	POE	DRT	Total	POE	DRT	Total
<i>Ailanthus altissima</i>	0	0	0	0	0	0
<i>Arundo donax</i>	0	0	0	0	0	0
<i>Asphodelus fistulosus</i>	1	0	1	3	0	1
<i>Carduus pycnocephalus</i>	18	19	37	58	32	41
<i>Carthamus lanatus</i>	0	0	0	0	0	0
<i>Centaurea solstitialis</i>	3	2	5	10	3	6
<i>Cirsium vulgare</i>	0	0	0	0	0	0
<i>Conium maculatum</i>	1	2	3	3	3	3
<i>Cortaderia selloana</i>	0	1	1	0	2	1
<i>Cynara cardunculus</i>	0	0	0	0	0	0
<i>Cyperus involucratus</i>	0	0	0	0	0	0
<i>Delairea odorata</i>	2	2	4	6	3	4
<i>Euphorbia terracina</i>	6	7	13	19	12	14
<i>Foeniculum vulgare</i>	7	9	16	23	15	18
<i>Lepidium latifolium</i>	1	0	1	3	0	1
<i>Myoporum laetum</i>	0	0	0	0	0	0
<i>Nicotiana glauca</i>	5	6	11	16	10	12
<i>Pennisetum setaceum</i>	2	1	3	6	2	3
<i>Phalaris aquatica</i>	1	2	3	3	3	3
<i>Rhaponticum repens</i>	0	0	0	0	0	0
<i>Ricinus communis</i>	5	2	7	16	3	8
<i>Salsola australis</i>	7	26	33	23	44	37
<i>Silybum marianum</i>	0	2	2	0	3	2
<i>Spartium junceum</i>	5	4	9	16	7	10
<i>Vinca major</i>	4	1	5	13	2	6

Of the 26 sites with invasive species, 24 POEs had 1 to 5 target species and 2 sites had 6 or more target species (Figure 5, Appendix A). We observed 10 target invasives—the highest number found at one site—at Temescal Gateway Park. The largest infestation was at Malibu Creek State Park/Tapia Park. It had over 78,000 m² (over 19 acres!) infested with Italian thistle, including nearly 20,000 m² in areas along the boundary of Zones 1 & 2, over 41,000 m² in Zone 1, and over 17,000 m² in Zone 2. There were many other infestations that were large in 2017, including one of tree tobacco (*Nicotiana glauca*), at over 36,000 m², as well as one of fountain grass over 35,000 m², both at BBT - Ray Miller Trailhead / La Jolla Canyon (Point Mugu State Park). Just three sites had infestations at less than 10 m² total infested area, in addition to the five sites that had no target invasives present (Appendix A).

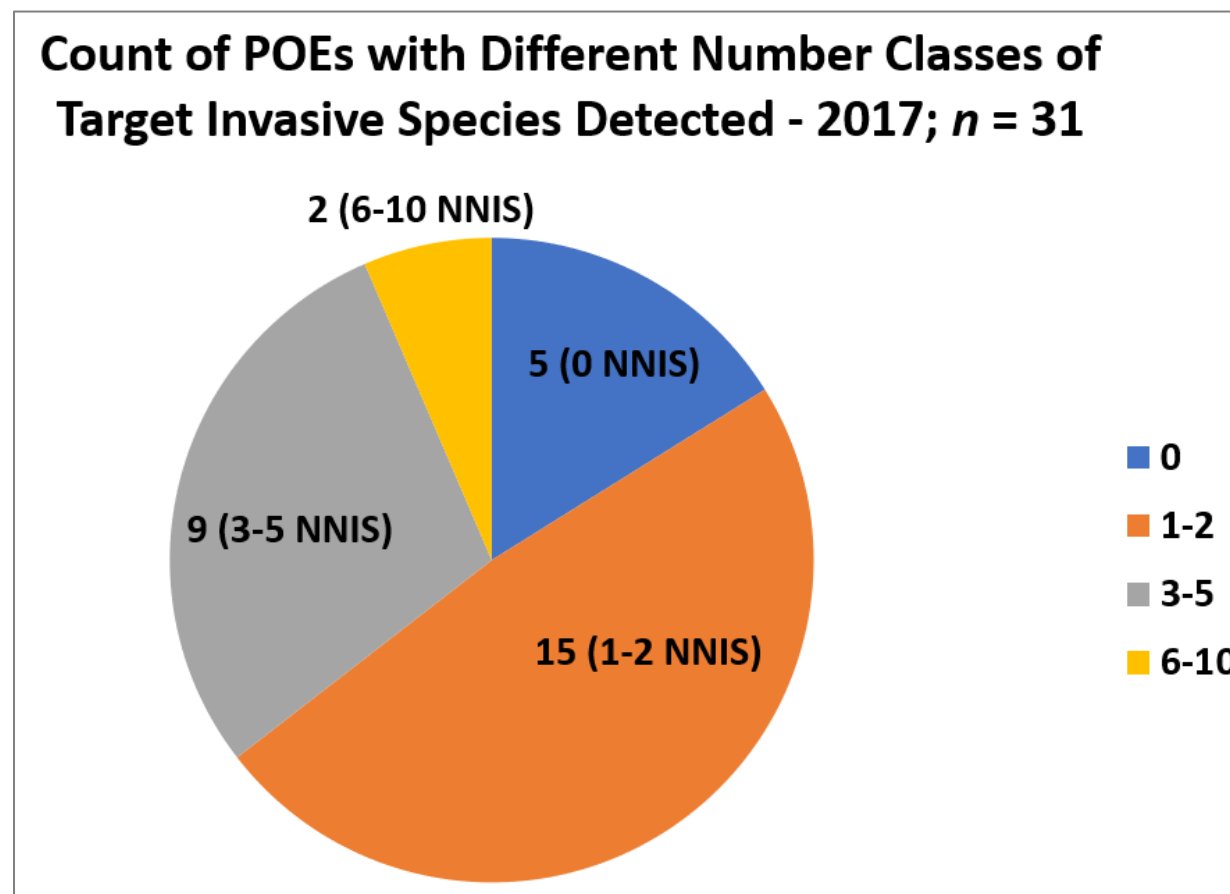


Figure 5. Number of point of entry (POE) sites containing each category of target nonnative invasive species (NNIS) counts in 2017 in Santa Monica Mountains National Recreation Area.

Temescal Gateway Park had the most target invasives present: 10 species. This day use area is one of the most popular parks in the Santa Monica Mountains and has significant acreage, parking spots, meeting facilities, and several trailheads. Point Dume State Preserve Main Entry, which is another popular, albeit smaller trailhead, had just one target species detected. The Cistern Trailhead, which is another access point in Malibu Creek State Park (to compare to Tapia Park, which had the large Italian thistle infestation mentioned above), had no target species detected.

2018

In 2018, our assignment was to monitor the third panel (C), 31 POEs, and we were able to visit all sites. Fifteen target species were observed, and four POEs were free of target invasives. No new nonnative species were detected in 2018. (See Appendix A for POE sites that include target invasives and their areas of infestation.)

The most common target species at POEs was southern Russian thistle, found at 19 sites, followed by Italian thistle, encountered at 14 sites (Table 5 and Appendix A). Yellow star thistle, artichoke thistle, Cape ivy (*Delairea odorata*), and milk thistle were found at only one POE each. There were no observations for tree of heaven, giant reed, onionweed, woolly distaff thistle, pampas grass, poison hemlock, umbrella plant, myoporum, Harding grass, and Russian knapweed. All of these target species, however, are known to occur at other locations in SAMO along roads and trails.

Table 5. 2018 Santa Monica Mountains National Recreation Area target species, with number and percentage of monitoring sites where the species was observed. POE = point of entry. DRT = dirt roads and trails.

Species	N Sites Species Observed			% of Sites Species Observed		
	POE	DRT	Total	POE	DRT	Total
<i>Ailanthus altissima</i>	0	0	0	0	0	0
<i>Arundo donax</i>	0	0	0	0	0	0
<i>Asphodelus fistulosus</i>	0	0	0	0	0	0
<i>Carduus pycnocephalus</i>	14	23	37	45	40	42
<i>Carthamus lanatus</i>	0	0	0	0	0	0
<i>Centaurea solstitialis</i>	1	3	4	3	5	4
<i>Cirsium vulgare</i>	3	6	9	10	10	10
<i>Conium maculatum</i>	0	1	1	0	2	1
<i>Cortaderia selloana</i>	0	1	1	0	2	1
<i>Cynara cardunculus</i>	1	0	1	3	0	1
<i>Cyperus involucratus</i>	0	1	1	0	2	1
<i>Delairea odorata</i>	1	1	2	3	2	2
<i>Euphorbia terracina</i>	2	3	5	6	5	6
<i>Foeniculum vulgare</i>	10	9	19	32	16	21
<i>Lepidium latifolium</i>	2	5	7	6	9	8
<i>Myoporum laetum</i>	0	0	0	0	0	0
<i>Nicotiana glauca</i>	7	5	12	23	9	13
<i>Pennisetum setaceum</i>	2	0	2	6	0	2
<i>Phalaris aquatica</i>	0	2	2	0	3	2
<i>Rhaponticum repens</i>	0	0	0	0	0	0
<i>Ricinus communis</i>	4	1	5	13	2	6
<i>Salsola australis</i>	19	25	44	61	43	49

Table 5 (continued). 2018 Santa Monica Mountains National Recreation Area target species, with number and percentage of monitoring sites where the species was observed. POE = point of entry. DRT = dirt roads and trails.

Species	N Sites Species Observed			% of Sites Species Observed		
	POE	DRT	Total	POE	DRT	Total
<i>Silybum marianum</i>	1	4	5	3	7	6
<i>Spartium junceum</i>	5	5	10	16	9	11
<i>Vinca major</i>	4	3	7	13	5	8

Of the 27 sites with invasive species, 25 POEs had 1 to 5 target species and 2 sites had 6 or more target species (Figure 6, Appendix A). We observed six target invasives—the highest number found among sites—at two POEs: WODOC parking lot (Franklin Canyon - upper), and Juan Bautista de Anza Trailhead East. The largest infestation was at Nike Missile Overlook (Westridge-Canyonback Wilderness Park), at over 2,400 m² infested with Spanish broom (*Spartium junceum*), followed by Juan Bautista de Anza Trailhead West, at little more than 2,300 m² infested with southern Russian thistle. The next largest infestations were of southern Russian thistle at BBT - Lois Ewen Overlook, with over 1,500 m², and Point Dume State Preserve - Admin Rd, with over 1,400 m² infested. All other POEs had infestations at less than 1,000 m² infested per species. Just three sites had infestations at less than 10 m² total infested area, in addition to the four sites that had no target invasives present (Appendix A).

Count of POEs with Different Number Classes of Target Invasive Species Detected - 2018; $n = 31$

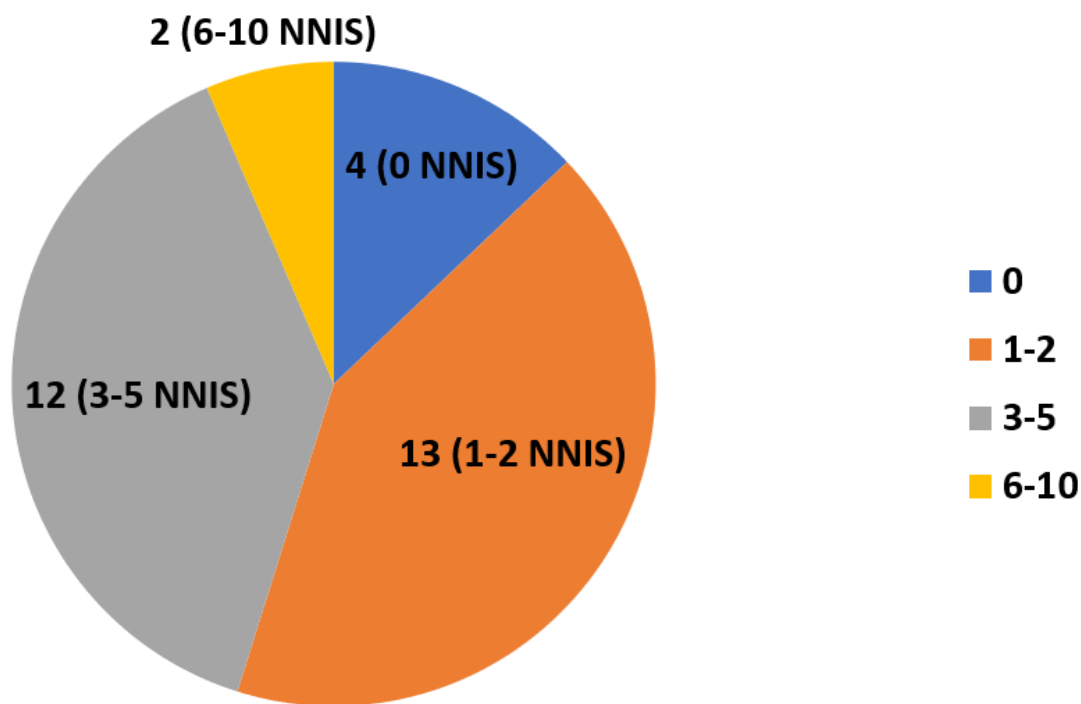


Figure 6. Number of point of entry (POE) sites containing each category of target nonnative invasive species (NNIS) counts in 2018 in Santa Monica Mountains National Recreation Area.

The POEs at WODOC parking lot (Franklin Canyon - upper) and Juan Bautista de Anza Trailhead East had the most target invasives present: six species at each site. These numbers are lower than the maximum invasives diversity in both 2016 (8 species) and 2017 (10 species) and may reflect the smaller size and lower popularity of the WODOC and Juan Bautista de Anza Trailhead East sites relative to Sycamore Canyon Campground and Temescal Gateway Park. Notably, just about 700 m up the road from the WODOC parking lot, the Tree People parking lot (Coldwater Cyn/Wilacre)—which is of similar size and also has multiple trailheads—had only one target species detected. Southern Russian thistle seemed to be a key player in 2018 as the most widely encountered target invasive and accounting for 8,669 m², or 37%, of the observed infested area.

2019

In 2019, the MEDN Inventory and Monitoring program team decided to expand the survey efforts by including all panels (A, B, C and D) to more thoroughly assess the effects of the nearly 100,000-acre Woolsey Fire of November 2018 on the distribution of NNIS around SAMO's point of entry survey sites. This included the 2019 originally scheduled assignment to monitor the fourth panel (D) of 30 POEs. Roughly half of the 123 POEs burned in 2018. To staff this large increase in effort, as well as

surveying the DRTs (detailed below), we greatly boosted our technician and intern staff levels (Table 2) and were therefore able to survey all 123 sites.

Twenty-three target species were observed, and seven POEs were free of target invasives. No new nonnative species were detected in 2019. (See Appendix A for POE sites that include target invasives and their areas of infestation.)

The most common target species at POEs was southern Russian thistle, found at 71 sites, Italian thistle, encountered at 63 sites, and tree tobacco at 56 sites (Table 6 and Appendix A). Onionweed, artichoke thistle, and myoporum were found at only one POE each. There were no observations for just two species—woolly distaff thistle and Russian knapweed—which are, however, known to occur at other locations in SAMO along roads and trails.

Table 6. 2019 Santa Monica Mountains National Recreation Area target species, with number and percentage of monitoring sites where the species was observed. POE = point of entry. DRT = dirt roads and trails.

Species	N Sites Species Observed			% of Sites Species Observed		
	POE	DRT	Total	POE	DRT	Total
<i>Ailanthus altissima</i>	3	0	3	2	0	1
<i>Arundo donax</i>	6	0	6	5	0	2
<i>Asphodelus fistulosus</i>	1	0	1	1	0	0
<i>Carduus pycnocephalus</i>	63	93	156	51	47	49
<i>Carthamus lanatus</i>	0	0	0	0	0	0
<i>Centaurea solstitialis</i>	9	8	17	7	4	5
<i>Cirsium vulgare</i>	22	13	35	18	7	11
<i>Conium maculatum</i>	13	7	20	11	4	6
<i>Cortaderia selloana</i>	8	3	11	7	2	3
<i>Cynara cardunculus</i>	1	0	1	1	0	0
<i>Cyperus involucratus</i>	20	3	23	16	2	7
<i>Delairea odorata</i>	8	6	14	7	3	4
<i>Euphorbia terracina</i>	25	16	41	20	8	13
<i>Foeniculum vulgare</i>	47	37	84	38	19	26
<i>Lepidium latifolium</i>	11	4	15	9	2	5
<i>Myoporum laetum</i>	1	0	1	1	0	0
<i>Nicotiana glauca</i>	56	29	85	46	15	27
<i>Pennisetum setaceum</i>	19	6	25	15	3	8
<i>Phalaris aquatica</i>	9	10	19	7	5	6
<i>Rhaponticum repens</i>	0	0	0	0	0	0
<i>Ricinus communis</i>	29	5	34	24	3	11
<i>Salsola australis</i>	71	87	158	58	44	49
<i>Silybum marianum</i>	25	41	66	20	21	21

Table 6 (continued). 2019 Santa Monica Mountains National Recreation Area target species, with number and percentage of monitoring sites where the species was observed. POE = point of entry. DRT = dirt roads and trails.

Species	N Sites Species Observed			% of Sites Species Observed		
	POE	DRT	Total	POE	DRT	Total
<i>Spartium junceum</i>	11	13	24	9	7	8
<i>Vinca major</i>	20	7	27	16	4	8

Of the 116 sites with invasive species, 87 POEs had 1 to 5 target species and 27 sites had between 6 and 10 target species (Figure 7, Appendix A). We observed 12 target invasives—the highest number found at one site—at Temescal Gateway Park, while Peter Strauss Ranch had 11 species. The largest infestation was at Malibu Creek State Park/Tapia Park, at over 39,000 m² infested with Italian thistle, all in Zone 2, which is half the amount that was observed across all of Tapia Park’s POE Zones in 2017. Interestingly, there were no Italian thistle infestations reported in Zone 1 or on the border of Zones 1 and 2 in 2019, in contrast to the large infestations there in 2017—over 41,000 m² and nearly 20,000 m², respectively. There were many other infestations that were large in 2019, including another of Italian thistle, at over 18,000 m², as well as one of milk thistle over 16,000 m², both at Malibu Creek State Park Campground. Thirteen sites had infestations at less than 10 m² total infested area, in addition to the seven sites that had no target invasives present (Appendix A).

Count of POEs with Different Number Classes of Target Invasive Species Detected - 2019; $n = 123$

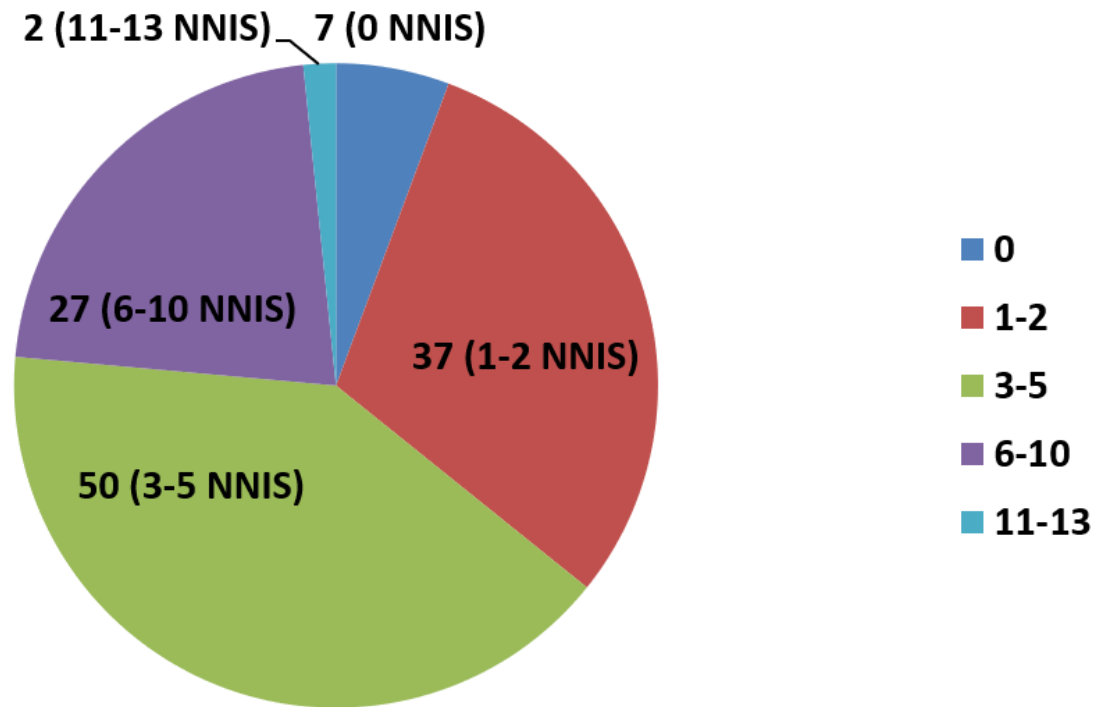


Figure 7. Number of point of entry (POE) sites containing each category of target nonnative invasive species (NNIS) counts in 2019 in Santa Monica Mountains National Recreation Area. Note the higher number class that is necessarily included now, 11–13 species.

Like in 2017, Temescal Gateway Park in 2019 had the most target invasives present: 12 species, which was two more species than in 2017. Temescal Gateway Park did not burn in the 2018 Woolsey Fire. Peter Strauss Ranch, which had only three invasives detected in 2017, did burn in 2018, and jumped up to 11 species detected in 2019. Peter Strauss Ranch has a long history of use as a recreational, commercial, and filming site, and features two parking lots with a creek running between the two lots, as well as multiple trailheads. A considerable proportion of the 123 POEs surveyed in 2019 had only one target species detected: 20 (16%). An additional 17 sites (14%) had just two targets found at each. Combining the POEs with 0, 1, or 2 NNIS found in each totals 44 POEs, representing 36% of the full set. This 2019 proportion, following the far-reaching wildfire, can be compared to the 46 sites (78%) found to contain 0, 1, or 2 NNIS in 2016, when many (59) POEs were surveyed but there was no wildfire immediately preceding the count.

2020

In 2020, we again surveyed the 123 POEs from all panels (A, B, C and D) to look at the effects of the 2018 Woolsey Fire on distribution of the NNIS for a second year. The subset up for surveying in the regular rotation in 2020 was Panel A, thereby starting the second round through the panels. Our team

was once again bolstered by an increased staff size relative to the pre-fire survey years (Table 2). Twenty-two target species were observed, and just three POEs were free of target invasives. No new nonnative species were detected in 2020. (See Appendix A for POE sites that include target invasives and their areas of infestation.)

Similar to 2019, the most common target species at POEs in 2020 were southern Russian thistle, found at 68 sites, Italian thistle, encountered at 65 sites, and tree tobacco at 56 sites (Table 7 and Appendix A). Tree of heaven, artichoke thistle, and myoporum were found at only two POEs each; no NNIS were found at just one site in 2020. There were no observations for three species—onionweed, woolly distaff thistle, and Russian knapweed—which are, however, known to occur at other locations in SAMO along roads and trails.

Table 7. 2020 Santa Monica Mountains National Recreation Area target species, with number and percentage of monitoring sites where the species was observed. POE = point of entry. DRT = dirt roads and trails.

Species	N Sites Species Observed			% of Sites Species Observed		
	POE	DRT	Total	POE	DRT	Total
<i>Ailanthus altissima</i>	2	0	2	2	0	1
<i>Arundo donax</i>	7	0	7	6	0	2
<i>Asphodelus fistulosus</i>	0	0	0	0	0	0
<i>Carduus pycnocephalus</i>	65	107	172	53	48	49
<i>Carthamus lanatus</i>	0	0	0	0	0	0
<i>Centaurea solstitialis</i>	12	9	21	10	4	6
<i>Cirsium vulgare</i>	30	38	68	24	17	20
<i>Conium maculatum</i>	12	7	19	10	3	5
<i>Cortaderia selloana</i>	4	3	7	3	1	2
<i>Cynara cardunculus</i>	2	0	2	2	0	1
<i>Cyperus involucratus</i>	14	3	17	11	1	5
<i>Delairea odorata</i>	10	8	18	8	4	5
<i>Euphorbia terracina</i>	22	17	39	18	8	11
<i>Foeniculum vulgare</i>	49	43	92	40	19	26
<i>Lepidium latifolium</i>	9	6	15	7	3	4
<i>Myoporum laetum</i>	2	0	2	2	0	1
<i>Nicotiana glauca</i>	56	32	88	46	14	25
<i>Pennisetum setaceum</i>	18	7	25	15	3	7
<i>Phalaris aquatica</i>	18	17	35	15	8	10
<i>Rhaponticum repens</i>	0	0	0	0	0	0
<i>Ricinus communis</i>	28	10	38	23	4	11
<i>Salsola australis</i>	68	91	159	55	40	46
<i>Silybum marianum</i>	29	42	71	24	19	20

Table 7 (continued). 2020 Santa Monica Mountains National Recreation Area target species, with number and percentage of monitoring sites where the species was observed. POE = point of entry. DRT = dirt roads and trails.

Species	N Sites Species Observed			% of Sites Species Observed		
	POE	DRT	Total	POE	DRT	Total
<i>Spartium junceum</i>	12	18	30	10	8	9
<i>Vinca major</i>	15	6	21	12	3	6

Of the 120 sites with invasive species, 92 POEs had 1 to 5 target species and 25 sites had between 6 and 10 target species (Figure 8, Appendix A). We observed 13 target invasives—the highest number found at one site in 2020 and thus far in this monitoring program—at both Temescal Gateway Park (which had 12 targets in 2019) as well as King Gillette Ranch. WODOC parking lot (Franklin Canyon - upper) had 12 species. The three largest infestations were all at Temescal Gateway Park, with Cape ivy infesting nearly 33,000 m², periwinkle (*Vinca major*) over 31,000 m², and fennel over 27,000 m²; the fifth and sixth largest infestations were also at this site, where Italian thistle infested over 17,000 m² and castor bean (*Ricinus communis*) infested over 13,000 m². There were many other infestations that were large in 2020, including one of Italian thistle at over 23,000 m² at Malibu Creek State Park/Tapia Park, smaller than the 39,000 m² area in 2019, and just about 30% of the size of 2017's infestation. Eight sites had infestations at less than 10 m² total infested area, in addition to the three sites that had no target invasives present (Appendix A).

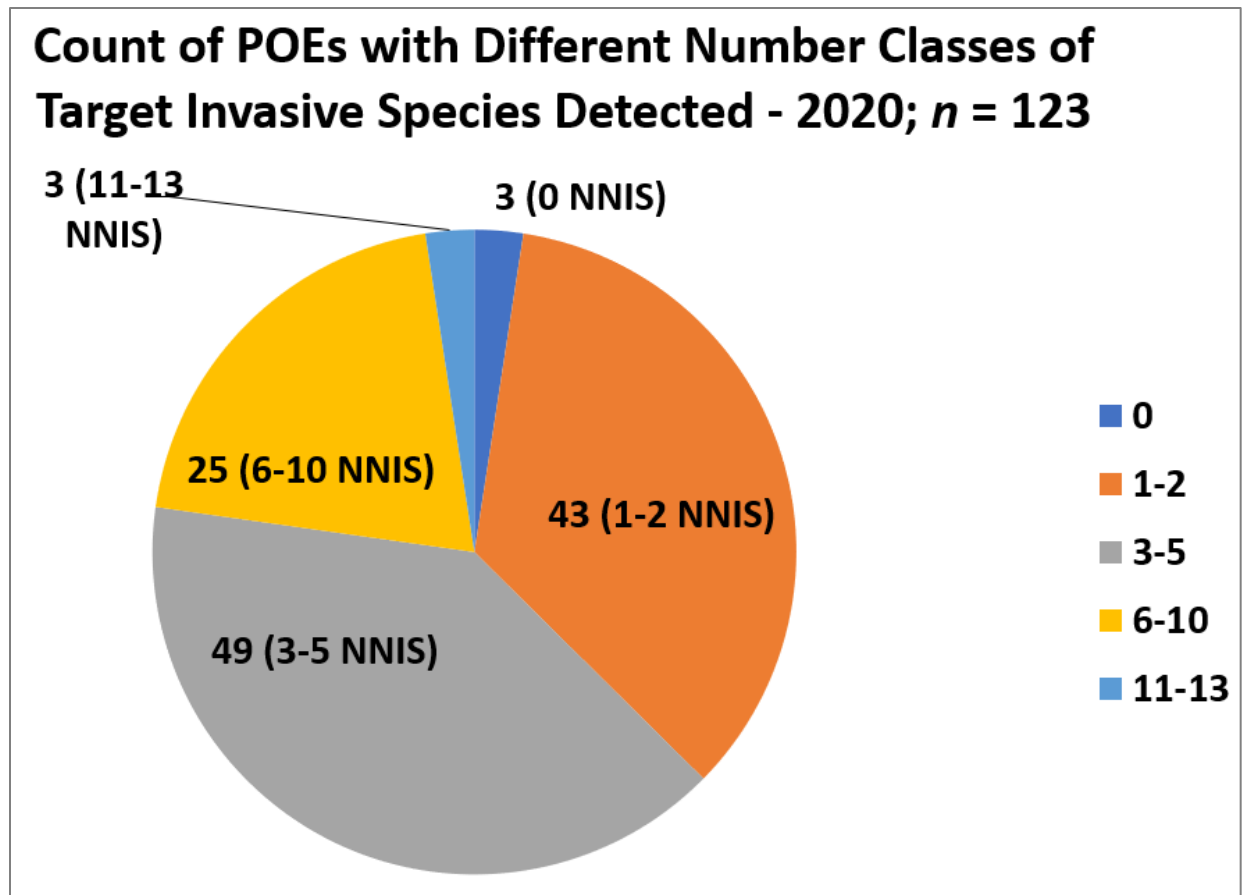


Figure 8. Number of point of entry (POE) sites containing each category of target nonnative invasive species (NNIS) counts in 2020 in Santa Monica Mountains National Recreation Area.

None of the three POEs with 12 and 13 NNIS detected in 2020 burned in the 2018 fire. Likewise, the WODOC parking lot, which was tied for the most NNIS in 2018 with 6 target species, did not burn in 2018; however, its target species doubled to 12 just two years later (2020). A considerable proportion of the 123 POEs surveyed in 2020 had just two target species detected: 28 sites (23%). An additional 15 POEs (12%) had just one NNIS found at each. Combining the POEs with 0, 1, or 2 NNIS found in each totals 46 POEs, representing 37% of the full set. This number of 46 POEs in 2020 found to contain 0, 1, or 2 NNIS is similar to 2019's 44 POEs with 0 to 2 NNIS, and equals the 46 POEs containing 0 to 2 NNIS in 2016. (Note, however that just 59 POEs were surveyed in total in 2016, compared to 123 POEs surveyed in 2019 and 2020.)

Dirt roads and trails surveys

2016

DRT data collection beginning in 2016 was different from previous years because power analysis results on 2013–2014 data collected under a pilot protocol did not yield sufficient power. Therefore, under the newly published monitoring protocol (Irvine et al. 2016), we began at SAMO in 2016 with the first year of a rotating panel monitoring design in which we planned to visit 60 DRTs—30 permanent sites from the first (A) panel and 30 “never-revisit” sites. We ended up surveying 61

DRTs in 2016, including one extra never-revisit DRT for an unspecified reason. In general, we did not observe high numbers of target species at the DRT transects; however, all species on the target list have known locations throughout the range, including occurrences along dirt roads or trails.

Thirteen of the 25 target species were found on DRTs in 2016. Forty-seven of the 61 sites surveyed had at least one species—including 28 transects with one species and 10 transects with two species—while 14 transects had no target species (Table 3, Figure 9, and Appendix B). Southern Russian thistle was the most common target invasive, recorded at 34 sites distributed throughout the study area. Italian thistle occurred at 18 sites, also distributed throughout the range in diverse conditions. In a few instances, target species were found somewhere along the trail/road between the trailhead and the sampling site (e.g., yellow star thistle in Hennessey) or the NNIS were known from nearby areas (e.g., carnation spurge along Zuma Ridge Motorway). Appendix B provides a list of DRT monitoring sites with invasive species found and their distribution by transect.

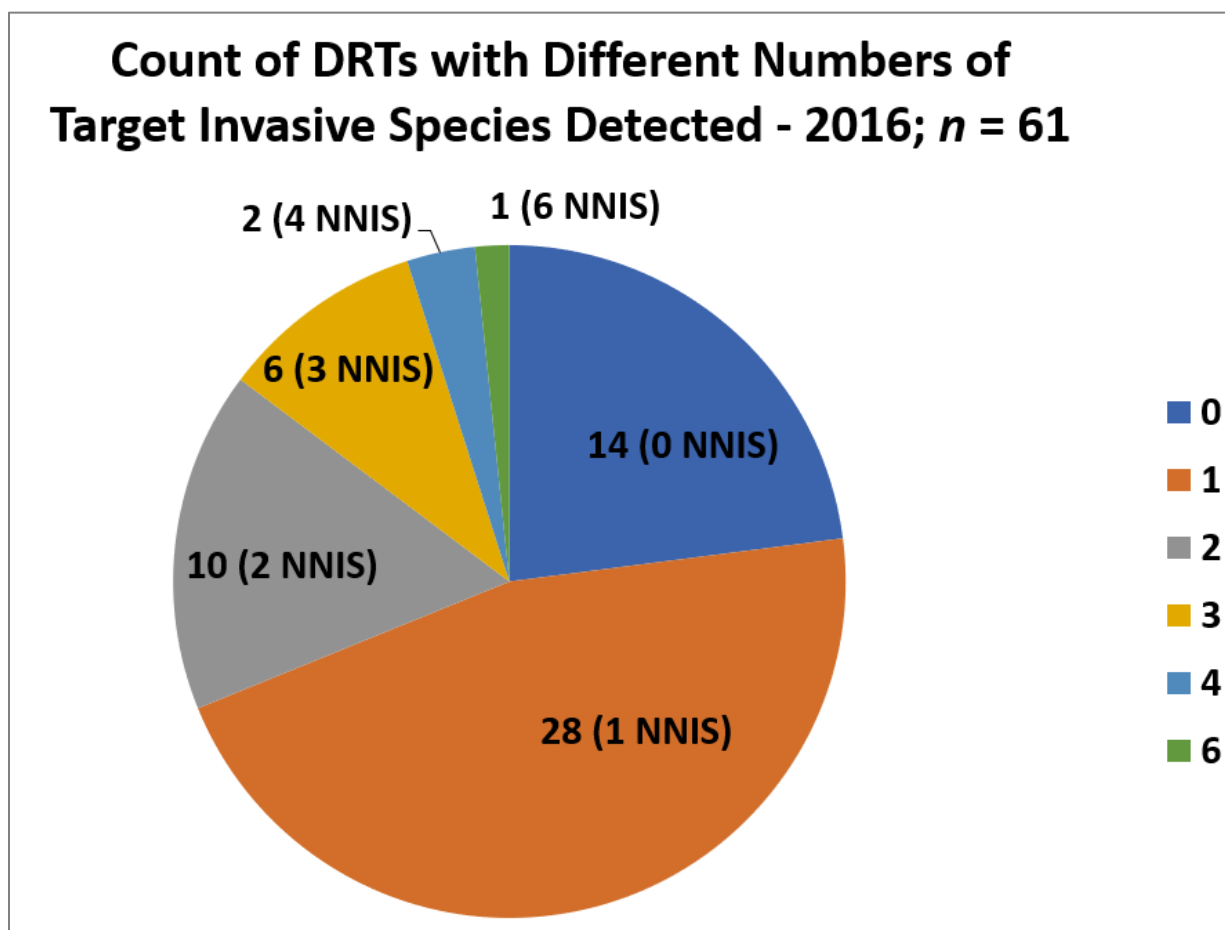


Figure 9. Number of dirt roads and trails (DRT) sites containing each category of target nonnative invasive species (NNIS) counts at 61 randomly located points along dirt roads and trails in Santa Monica Mountains National Recreation Area during 2016. Note that there were no DRTs with five species present.

Certain DRTs have idiosyncrasies that are reported here. DRT-006 at Malibu Creek State Park Reagan Meadows is mowed annually for fuel reduction purposes. Depending on the timing of the mowing, we may not be able to detect or identify target species at that site. The western two-thirds of DRT-028 at Tree People is mulched and actively maintained weed-free. Fire roads are generally graded annually or every few years, which may in some cases serve to spread the weeds along the fire road (e.g., possibly Italian thistle and carnation spurge along Zuma Ridge, the latter not found on the transect but abundant down the road nearby). No target species were recorded from transects along several fire roads popular with hikers and bikers (e.g., Trancas Canyon Fire Road, Bulldog Motorway, Temescal Ridge, Westridge Fire Road, and Castro Peak Motorway), even though some weeds occurred at the trailhead (e.g., fennel and tree tobacco at Westridge Fire Road trailhead). These dirt roads appeared to have been graded fairly recently, which, depending on timing, may have cleared out seedlings and young plants before they had a chance to mature and go to seed.

2017

In 2017, we planned to visit 60 DRTs—30 permanent sites from the second (B) panel and 30 never-revisit sites. We ended up surveying 59 DRTs in 2017 because one of the never-revisit sites fell on private property and had to be dropped from the study. In general, we did not observe high numbers of target species at the DRT transects; however, all species on the target list have known locations throughout the range, including occurrences along dirt roads or trails.

Fifteen of the 25 target species were found on DRTs in 2017. Forty-four of the 59 sites surveyed had at least one species—including 20 transects with one species and 14 transects with two species—while 15 transects had no target species (Table 4, Figure 10, and Appendix B). Southern Russian thistle was the most common target invasive, recorded at 26 sites, and Italian thistle occurred at 19 sites. Appendix B provides a list of DRT monitoring sites with invasive species found and their distribution by transect.

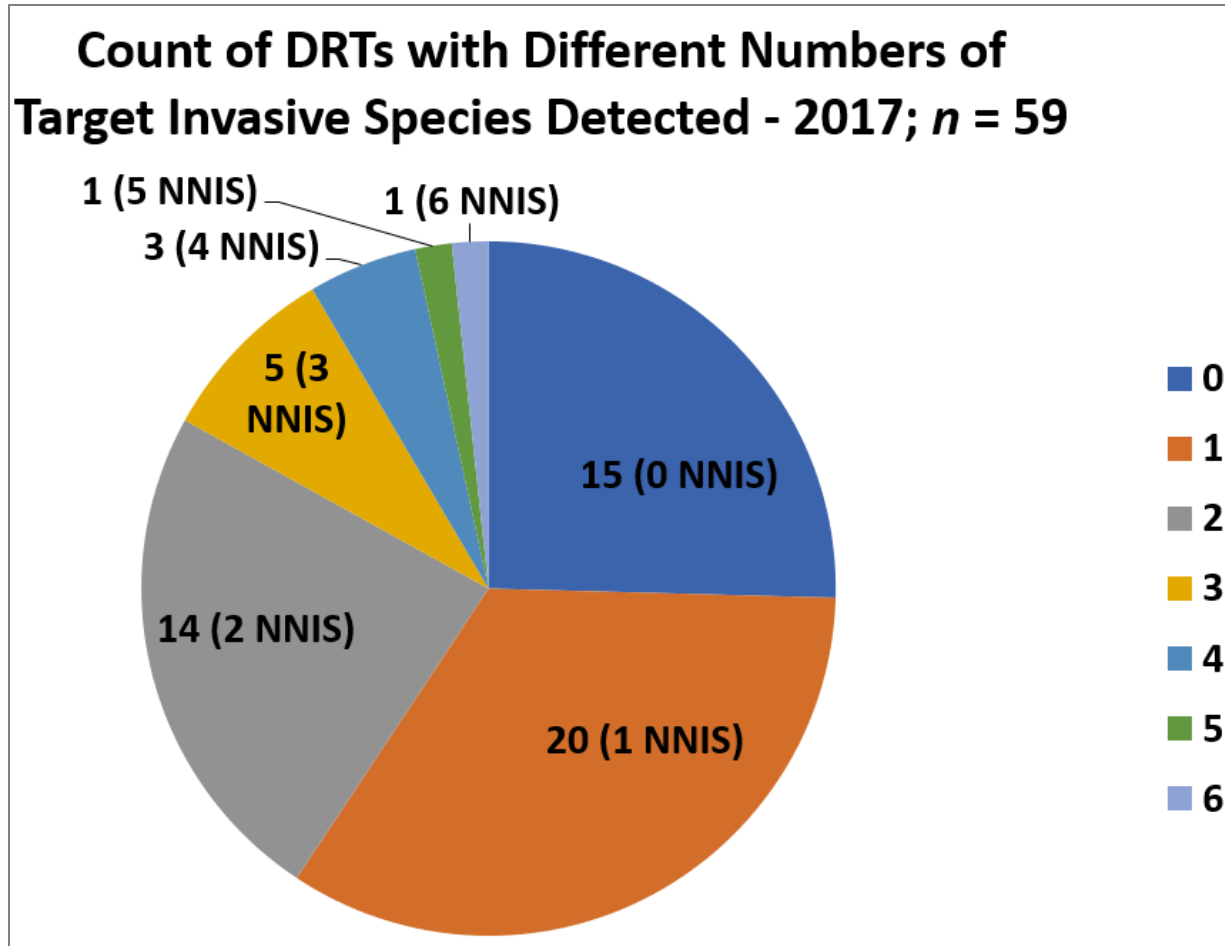


Figure 10. Number of dirt roads and trails (DRT) sites containing each category of target nonnative invasive species (NNIS) counts at 59 randomly located points along dirt roads and trails in Santa Monica Mountains National Recreation Area during 2017.

2018

In 2018, we planned to visit 60 DRTs—30 permanent sites from the third (C) panel and 30 never-revisit sites. We ended up surveying 58 DRTs in 2018 because one of the Panel C sites and one of the never-revisit sites fell on private property and had to be dropped from the study. In general, we did not observe high numbers of target species at the DRT transects; however, all species on the target list have known locations throughout the range, including occurrences along dirt roads or trails.

Seventeen of the 25 target species were found on DRTs in 2018. Forty-two of the 58 sites surveyed had at least one species—including 16 transects with one species and 9 transects with two species—while 16 transects had no target species (Table 5, Figure 11, and Appendix B). Southern Russian thistle was the most common target invasive, recorded at 25 sites, and Italian thistle occurred at 23 sites. Appendix B provides a list of DRT monitoring sites with invasive species found and their distribution per transect.

Count of DRTs with Different Numbers of Target Invasive Species Detected - 2018; $n = 58$

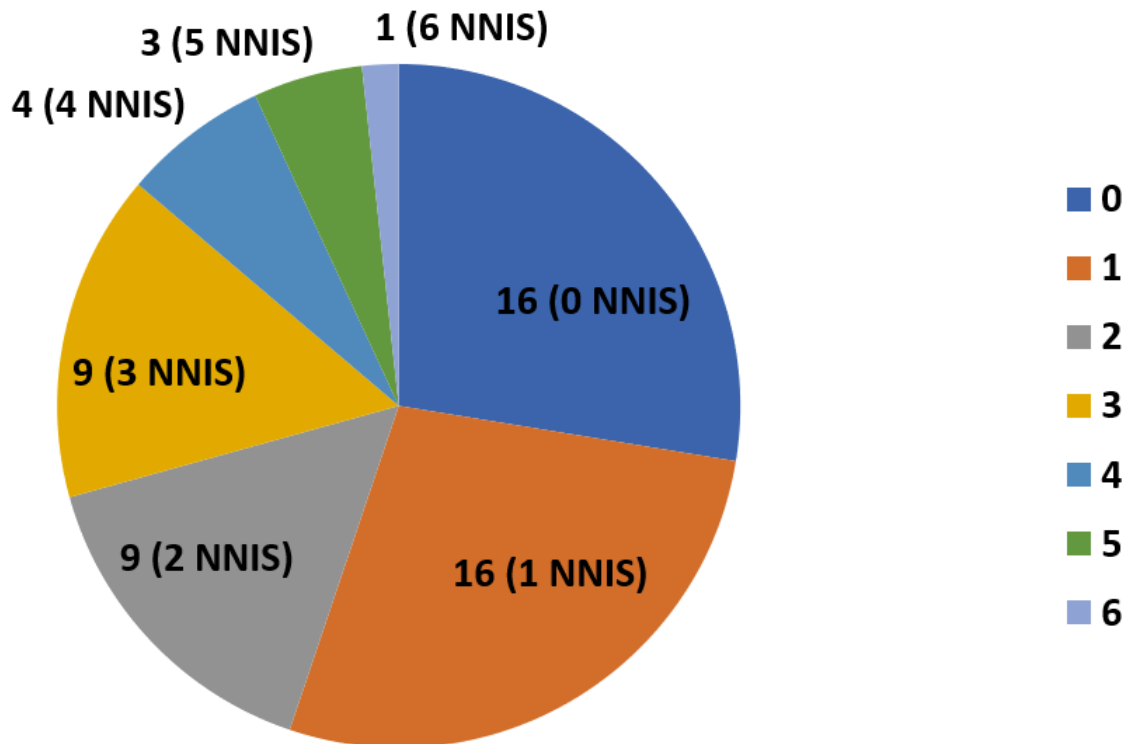


Figure 11. Number of dirt roads and trails (DRT) sites containing each category of target nonnative invasive species (NNIS) counts at 59 randomly located points along dirt roads and trails in Santa Monica Mountains National Recreation Area during 2018.

2019

In 2019, the MEDN Inventory and Monitoring program team decided to expand the survey efforts, similar to what was done with the POEs, by including all DRT panels (A, B, and C) and all previously surveyed never-revisit DRTs. The purpose was to more thoroughly assess the effects of the Woolsey Fire on the distribution of NNIS around SAMO's dirt roads and trails. This included the 2019 originally scheduled assignment to re-monitor the first panel (A) of 30 DRTs, thereby starting the second round through the panels. In 2019, we also added 30 new, never-revisit sites, as scheduled. In total, we ended up surveying 197 DRTs in 2019. Almost exactly half of the 197 DRTs burned in 2018. In general, we observed higher numbers of target species at the DRT transects than in the pre-fire years (2016–2018). That is, the proportions of DRTs with 0, 1 and 2 target species were smaller than in previous years, while the class with 3 target species was larger, and for the first time, we recorded 7 species in one DRT and 9 species in two DRTs. Again, in this post-fire landscape, all species on the target list have known locations throughout the range, including occurrences along dirt roads or trails.

Eighteen of the 25 target species were found on DRTs in 2019. At least one species was found at 158 of the 197 sites surveyed—including 54 transects with one species and 40 transects with two species—while 39 transects had no target species (Table 6, Figure 12, and Appendix B). For the first year in our monitoring, Italian thistle surpassed southern Russian thistle as the most common target invasive, recorded at 93 sites for the former, and 87 sites for the latter. Appendix B provides a list of DRT monitoring sites with invasive species found and their distribution by transect.

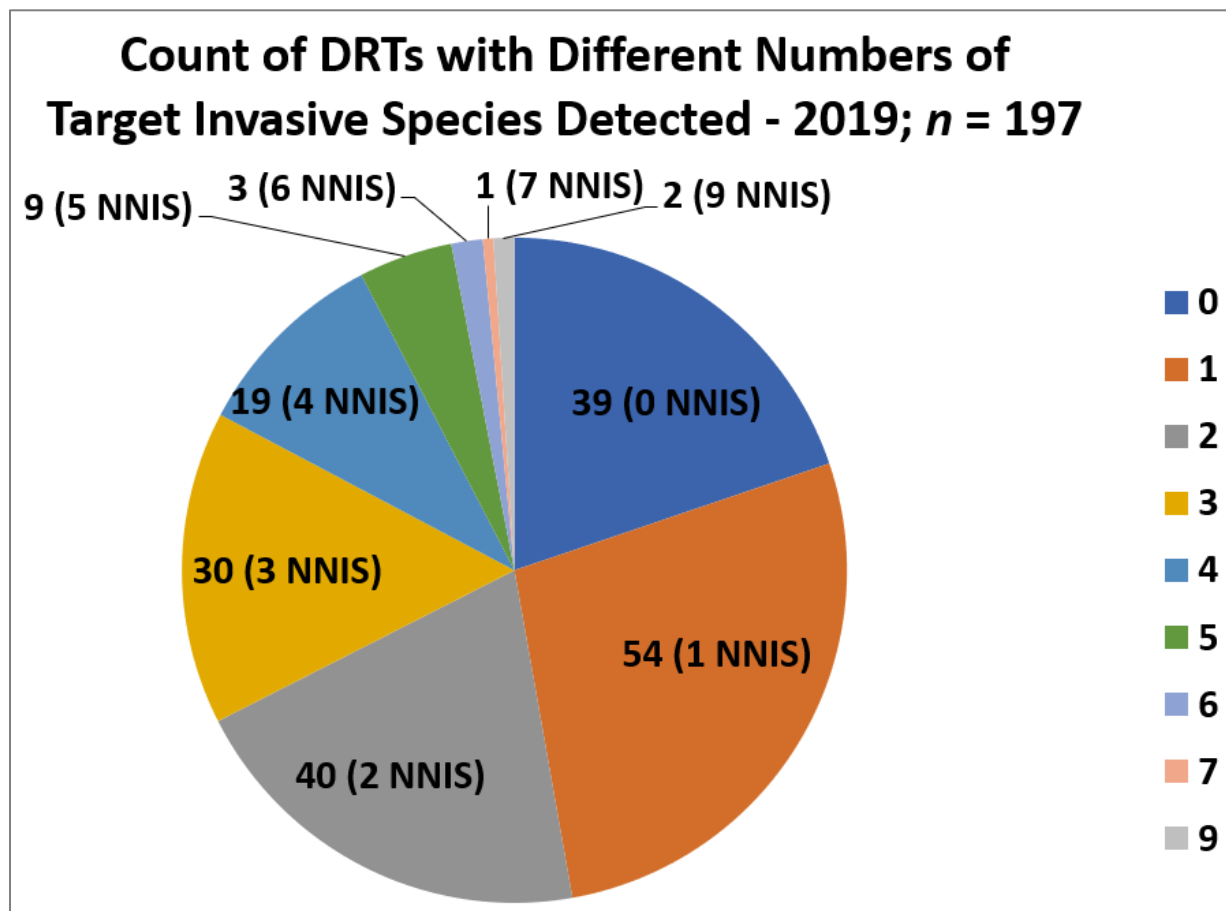


Figure 12. Number of dirt roads and trails (DRT) sites containing each category of target nonnative invasive species (NNIS) counts at 197 randomly located points along dirt roads and trails in Santa Monica Mountains National Recreation Area during 2019. Note that there were no DRTs with eight species present.

2020

In 2020, we again surveyed all DRT panels (A, B, and C) and all previously surveyed never-revisit DRTs to look at the effects of the 2018 Woolsey Fire on distribution of the NNIS for a second year. The subset up for surveying in the regular rotation in 2020 was Panel B. Again in 2020, we also added 30 new, never-revisit sites, as scheduled. In total, we ended up surveying 226 DRTs in 2020; one fewer than $197 + 30$ because we had to drop one that fell on private property. Although it was surveyed in 2020, we will also need to drop DRT-235 at Middle Corral Canyon Trail going forward because it was visited twice and the trail was completely overgrown with native shrubs after the first

50 m. In general, we observed very similar proportions of numbers of target species at the DRT transects as reported in 2019. Some differences between the two post-fire years were that 1) in 2020, seven sites had seven or more target species, compared to just three sites in 2019, and 2) two sites had nine target species each in 2019, but only one site had more than seven species in 2020 – eight species. This suggests that target species were more widely distributed across the region two years after the fire compared to just one. Again, in this post-fire landscape, all species on the target list have known locations throughout the range, including occurrences along dirt roads or trails.

Eighteen of the 25 target species were found on DRTs in 2020. At least one species was found on 186 of the 226 sites surveyed—including 58 transects with one species and also 58 transects with two species, while 40 transects had no target species (Table 7, Figure 13, and Appendix B). In 2020, as in 2019, Italian thistle exceeded southern Russian thistle as the most common target invasive, recorded at 107 sites for the former, and 91 sites for the latter. Appendix B provides a list of DRT monitoring sites with invasive species found and their distribution per transect.

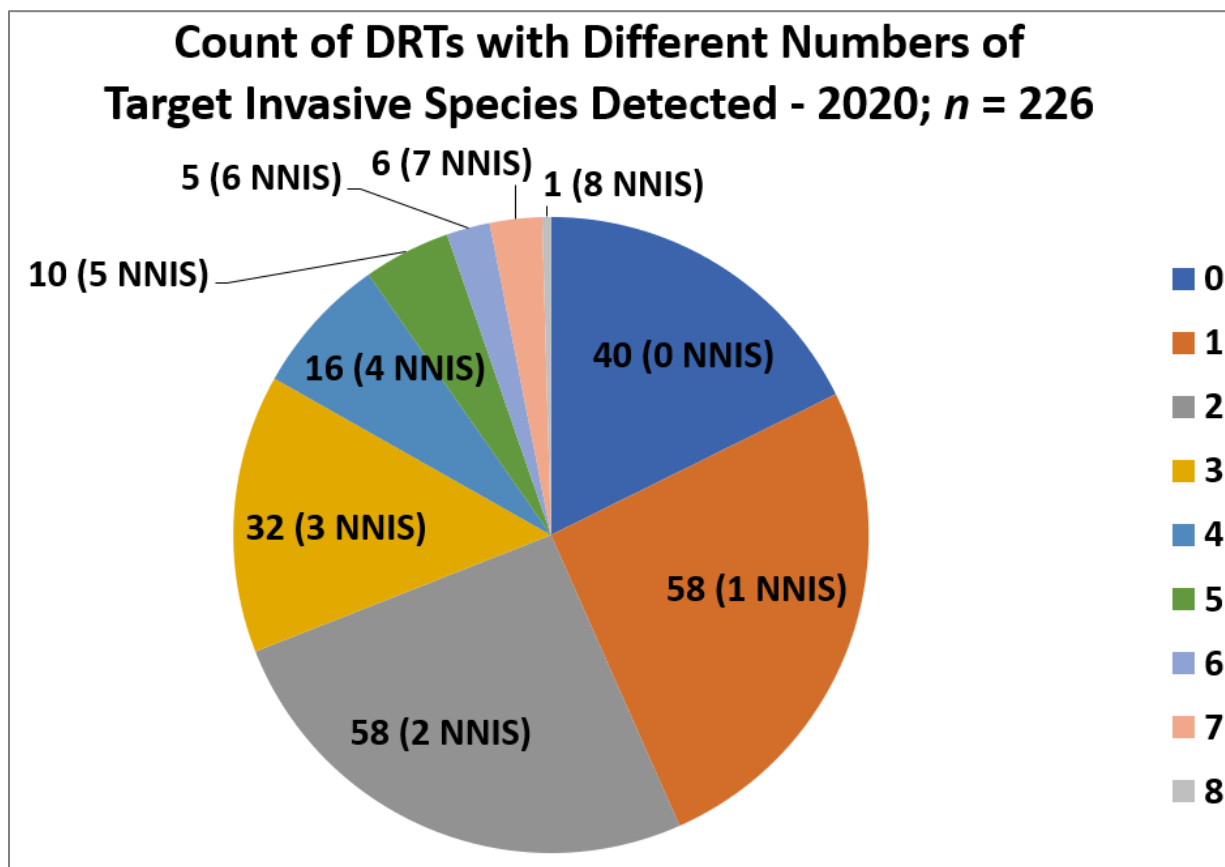
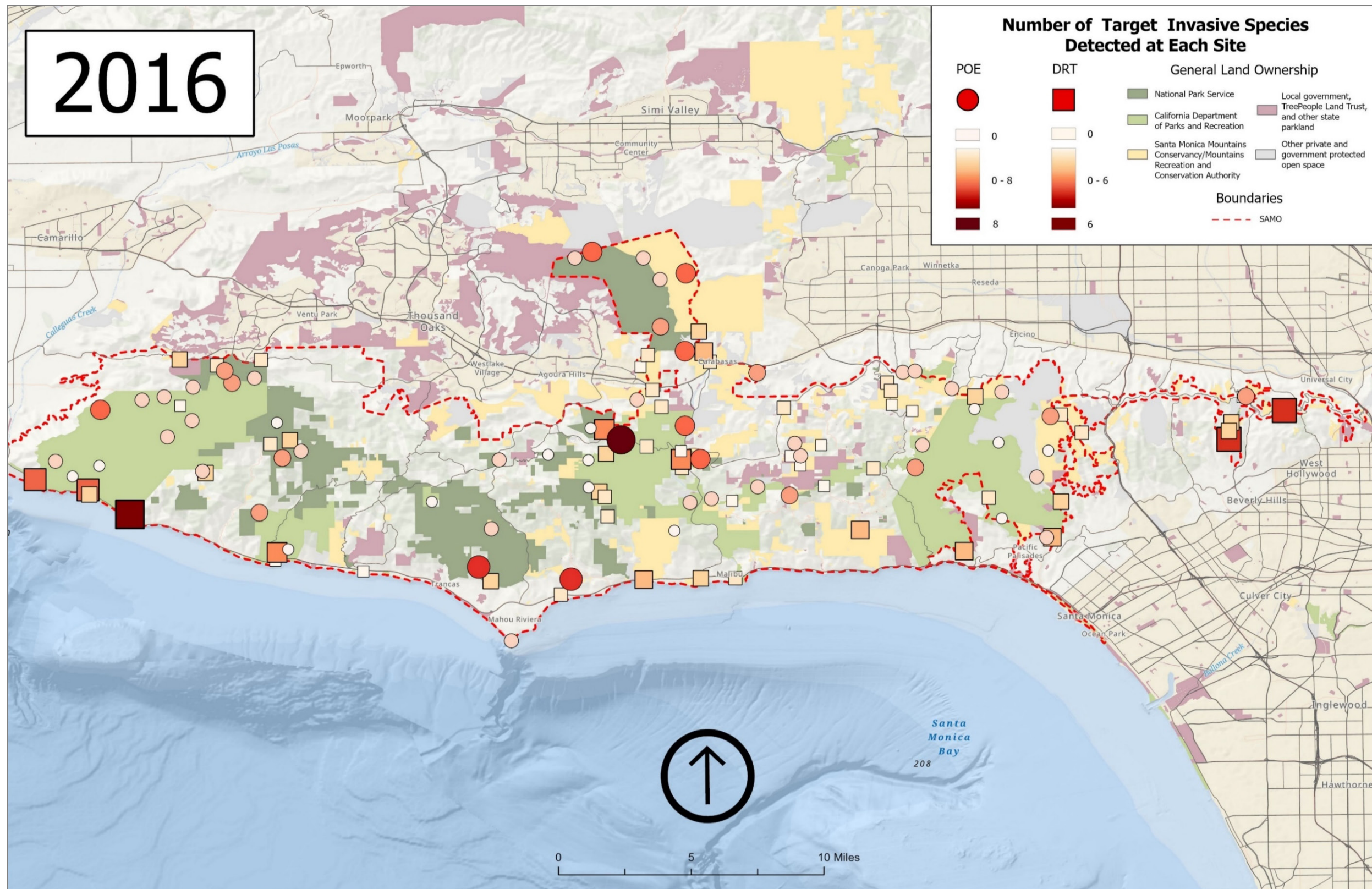


Figure 13. Number of dirt roads and trails (DRT) sites containing each category of target nonnative invasive species (NNIS) counts at 226 randomly located points along dirt roads and trails in Santa Monica Mountains National Recreation Area during 2020.

Figures 14 to 18 present the target invasives observed for each component (POE and DRT) spatially at the site level for 2016–2020.



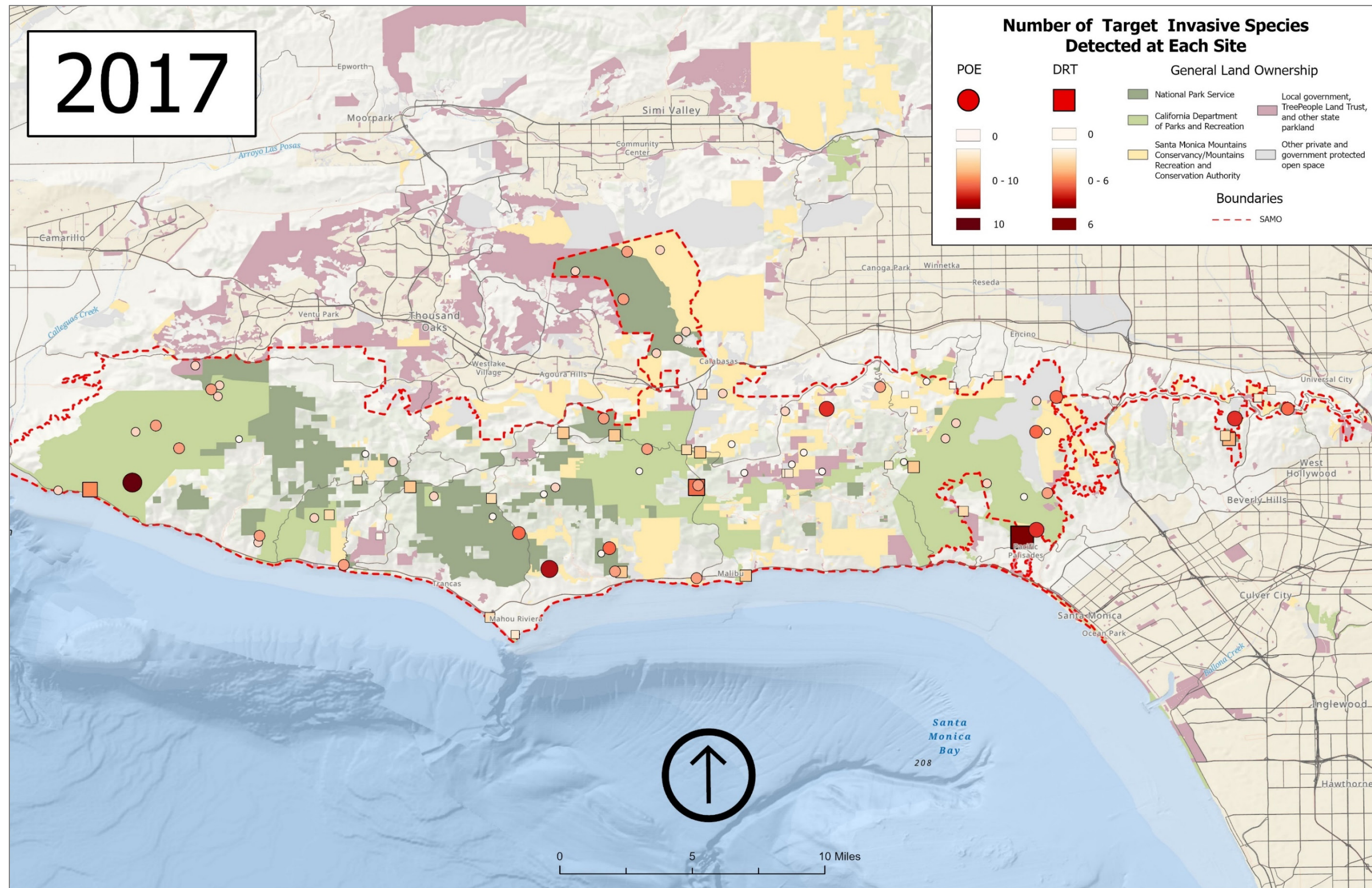


Figure 15. Number and location of target nonnative invasive species detected in 2017 at point of entry (POE) survey sites and at sampling sites along dirt roads and trails (DRT) in Santa Monica Mountains National Recreation Area.

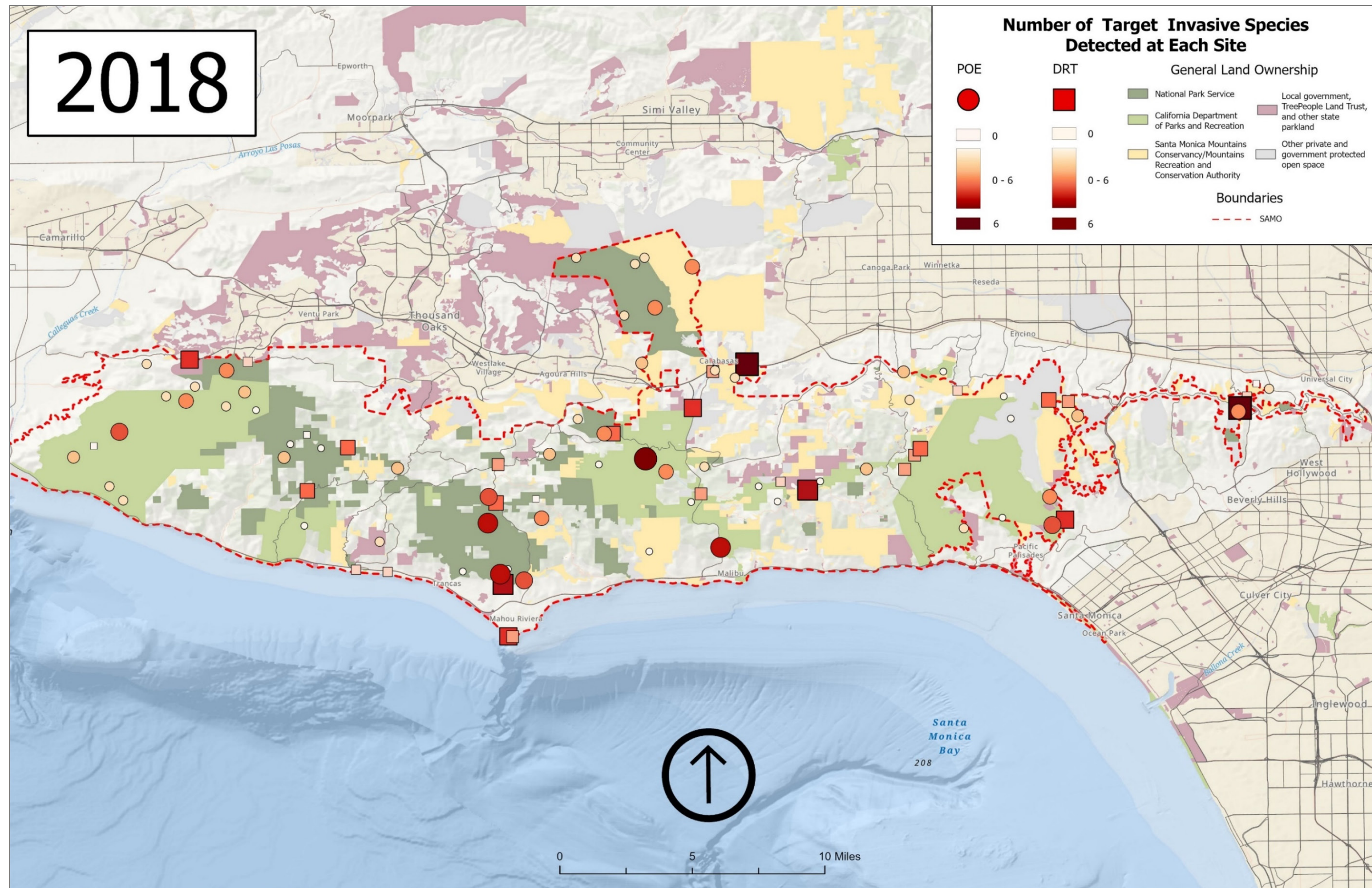


Figure 16. Number and location of target nonnative invasive species detected in 2018 at point of entry (POE) survey sites and at sampling sites along dirt roads and trails (DRT) in Santa Monica Mountains National Recreation Area.

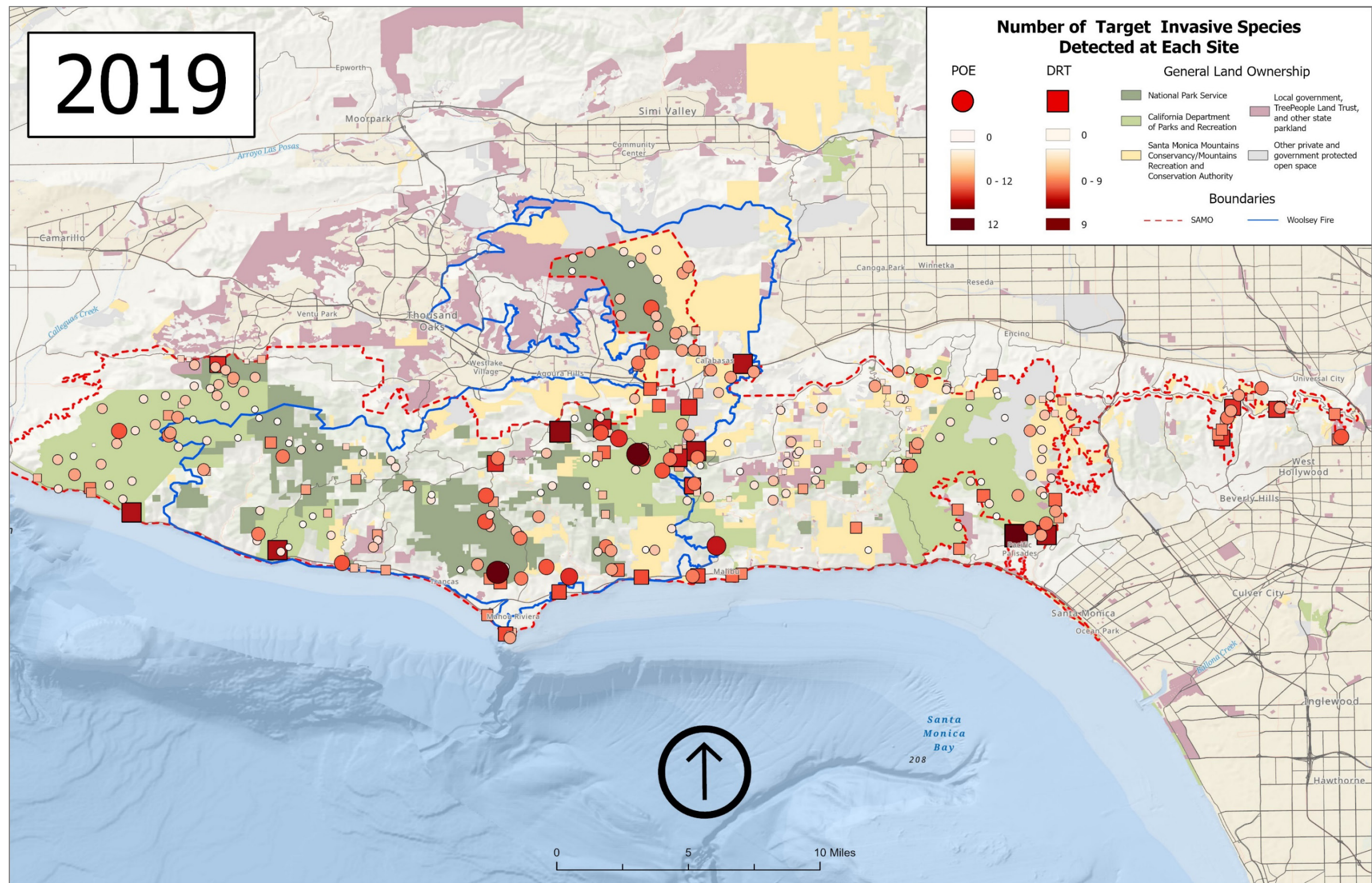


Figure 17. Number and location of target nonnative invasive species detected in 2019 at point of entry (POE) survey sites and at sampling sites along dirt roads and trails (DRT) in Santa Monica Mountains National Recreation Area. See Woolsey Fire outline.

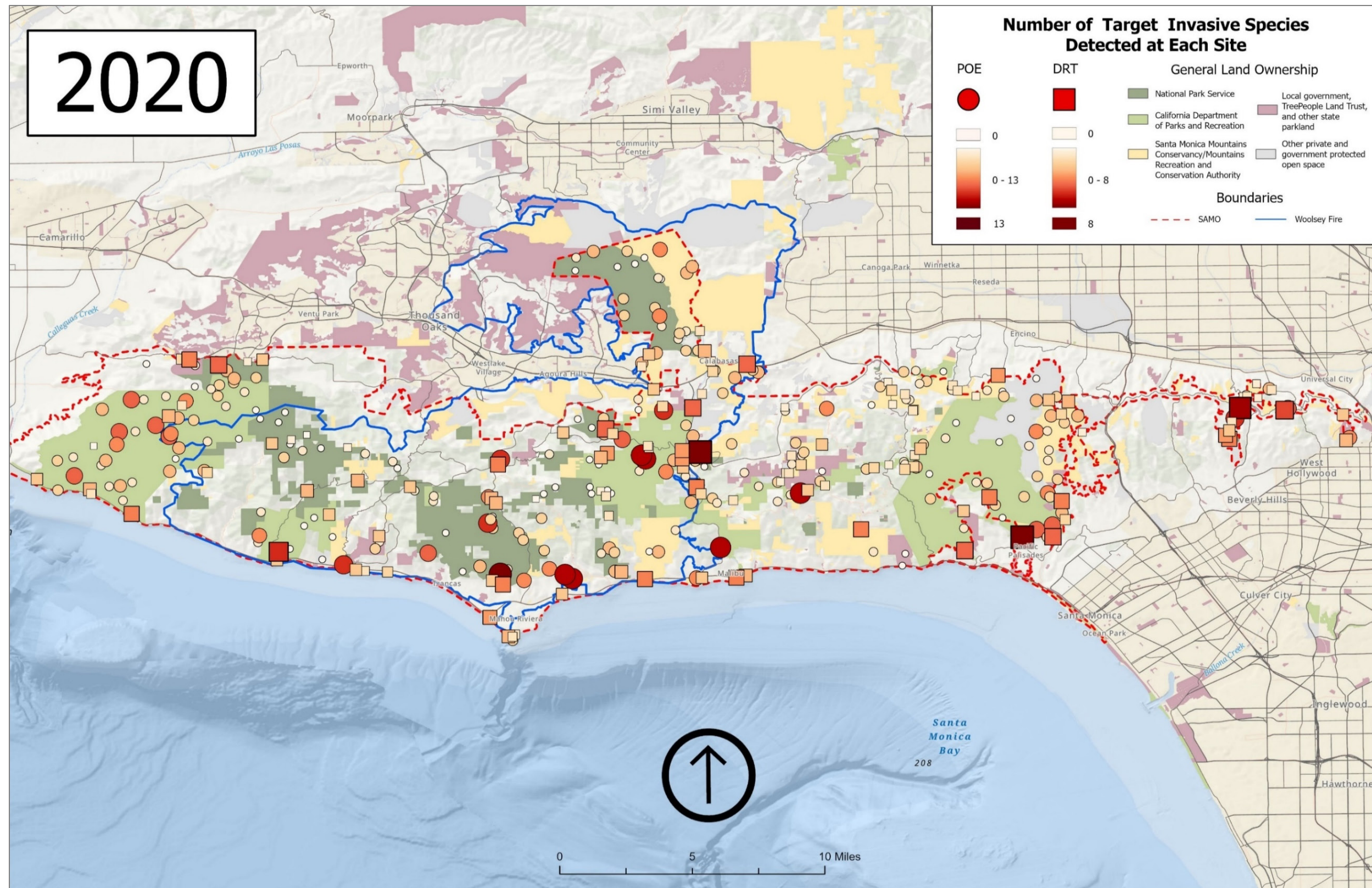


Figure 18. Number and location of target nonnative invasive species detected in 2020 at point of entry (POE) survey sites and at sampling sites along dirt roads and trails (DRT) in Santa Monica Mountains National Recreation Area. See Woolsey Fire outline.

Interior parkland

2016

Five target invasive species were found across 35 sites during the MEDN Terrestrial Vegetation Monitoring Program surveys. Data were collected via point-line intercept transects, 1 × 30 m species richness belts, and 10 × 30 m fire species richness belts at 117 sites overall in 2016. The following is a list of NNIS recorded, along with their total absolute cover when the species was reported from the point-line transect, in decreasing order of the number of total sites where detected: southern Russian thistle at 27 sites (1–8% cover), Italian thistle at seven sites (1% cover), fountain grass at one site, Harding grass at one site (4% cover), and milk thistle at one site (1% cover).

More context for invasive plant detections at interior parkland sites in years 2016–2020 is provided in the terrestrial vegetation monitoring combined report for years 2014–2020 (Mendelsohn et al. 2023).

2017

Seven target invasive species were found across 32 sites during the MEDN Terrestrial Vegetation Monitoring Program surveys. Data were collected via point-line intercept transects, 1 × 30 m species richness belts, and 10 × 30 m fire species richness belts at 101 sites overall in 2017. The following is a list of NNIS recorded, along with their total absolute cover when the species was reported from the point-line transect, in decreasing order of the number of total sites where detected: southern Russian thistle at 19 sites (1–13% cover), Italian thistle at nine sites (1–15% cover), Harding grass at two sites (6% cover), poison hemlock at one site, Cape ivy at one site, tree tobacco at one site, and milk thistle at one site.

2018

Eight target invasive species were found across 32 sites during the MEDN Terrestrial Vegetation Monitoring Program surveys. Data were collected via point-line intercept transects, 1 × 30 m species richness belts, and 10 × 30 m fire species richness belts at 100 sites overall in 2018. The following is a list of NNIS recorded, along with their total absolute cover when the species was reported from the point-line transect, in decreasing order of the number of total sites where detected: southern Russian thistle at 17 sites (1–14% cover), Italian thistle at 14 sites (1–18% cover), Cape ivy at one site, carnation spurge at one site, tree tobacco at one site (2%), fountain grass at one site, Harding grass at one site (3% cover), and milk thistle at one site.

2019

Thirteen target invasive species were found across 60 sites during the MEDN Terrestrial Vegetation Monitoring Program surveys. Similar to our efforts expanding the number of POE and DRT sites visited post-fire, we dramatically increased our monitoring sites in the terrestrial vegetation protocol to look at Woolsey Fire effects. Data were collected via point-line intercept transects, 1 × 30 m species richness belts, and 10 × 30 m fire species richness belts at 209 sites overall in 2019. The following is a list of NNIS recorded, along with their total absolute cover when the species was reported from the point-line transect, in decreasing order of the number of total sites where detected: Italian thistle at 40 sites (1–22% cover), southern Russian thistle at 10 sites (2% cover), milk thistle

at 10 sites (11% cover), carnation spurge at four sites (1% cover), castor bean at three sites, bull thistle at two sites, fennel at two sites (2% cover), tree tobacco at two sites (2–3% cover), fountain grass at two sites, Harding grass at two sites (6% cover), poison hemlock at one site (6% cover), umbrella plant at one site, and periwinkle at one site.

2020

Thirteen target invasive species were found across 73 sites during the MEDN Terrestrial Vegetation Monitoring Program surveys. Data were collected via point-line intercept transects, 1 × 30 m species richness belts, and 10 × 30 m fire species richness belts at 210 sites overall in 2020. The following is a list of NNIS recorded, along with their total absolute cover when the species was reported from the point-line transect, in decreasing order of the number of total sites where detected: Italian thistle at 55 sites (1–64% cover), milk thistle at 11 sites (3% cover), fennel at five sites, southern Russian thistle at five sites (1% cover), carnation spurge at four sites (6–15% cover), fountain grass at four sites, tree tobacco at two sites (1% cover), Harding grass at two sites (2% cover), castor bean at two sites, onionweed at one site, bull thistle at one site (1% cover), poison hemlock at one site (46% cover), and periwinkle at one site.

Non-target weeds pre- and post-fire

Two invasive, nonnative mustards—*Brassica nigra* (black mustard) and *Hirschfeldia incana* (Mediterranean mustard)—are the most common species of mustards and among the most common forbs in general in the Santa Monica Mountains and Simi Hills. Due to their abundance and widespread distribution, these two mustard species are not included in our list of 25 target invasives for which control or eradication remains attainable. While our POE and DRT surveys do not document the abundance of these two species, our MEDN Terrestrial Vegetation Monitoring Program surveys on interior parkland do. Following the 2018 Woolsey Fire in particular, the presence of black and Mediterranean mustards skyrocketed to being some of the most noticeable, and often bothersome, features on the landscape (Figure 19). Year 2019 experienced a large increase in black mustard, while 2020 saw Mediterranean mustard become dominant even while black mustard remained on the landscape in higher than pre-fire abundance levels.

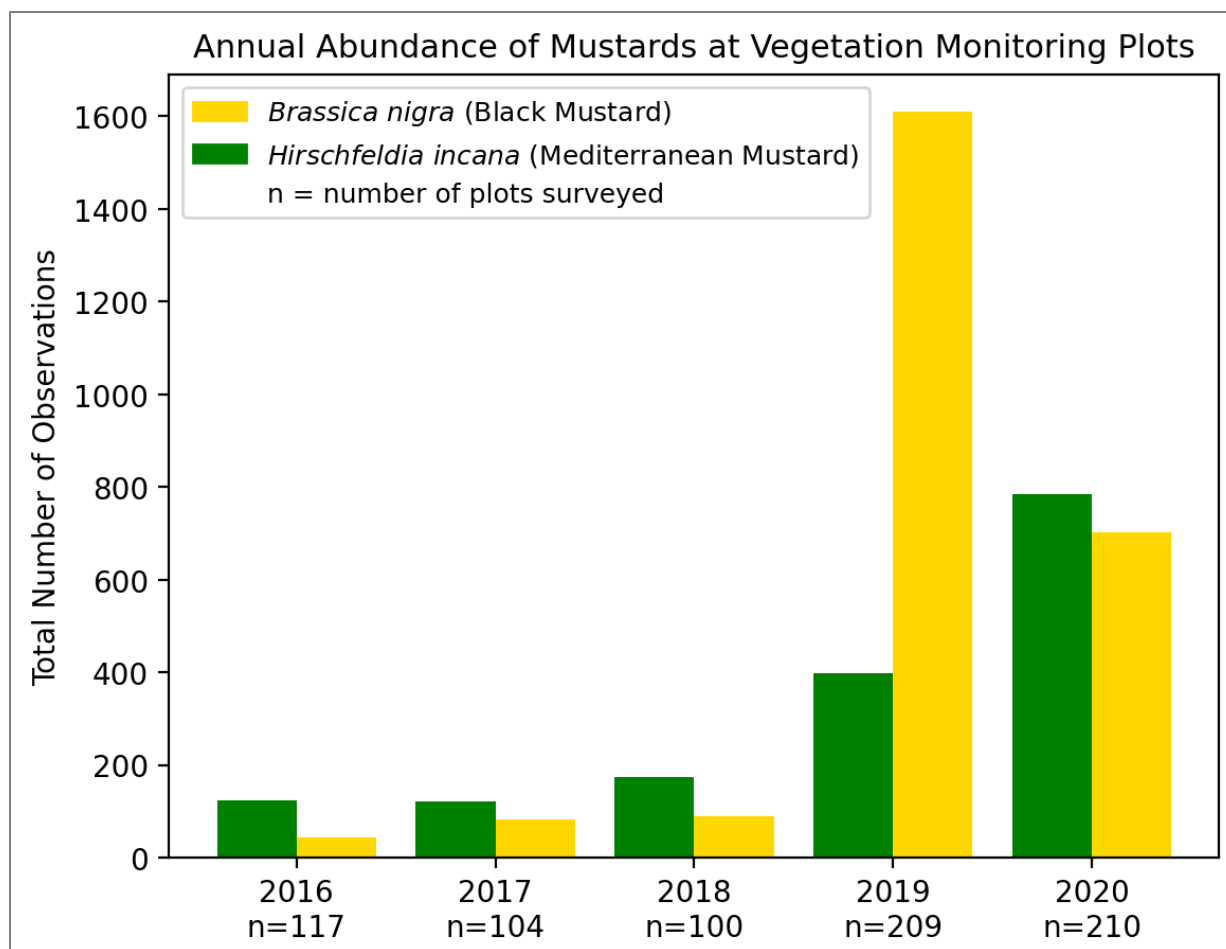


Figure 19. Observations of the two most common mustards detected at Interior Parkland plots in years 2016–2020 in Santa Monica Mountains National Recreation Area. Note that plots burned in the Woolsey, Hill, and Peak Fires in November 2018, following the 2018 and preceding the 2019 survey data shown above.

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Appendix A. Point of Entry (POE) Surveys

Target nonnative invasive species covered differing areas across the point of entry sites in Santa Monica Mountains National Recreation Area, as documented during years 2016 through 2020 (Tables 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, and 18).

Table 8. Santa Monica Mountains National Recreation Area point of entry (POE) monitoring sites in 2016 where target nonnative invasive plant species were detected. Table shows general POE location, gross area infested, as well as the area within the POE in which the infested area was found (hardscape or trail, buffer, or along the border). Species codes are in Table 1. Species codes are in Table 1.

POE # and Location	Species	Gross Area Infested (sq. m)	Zone
POE-001 Sycamore Canyon Campground Entrance (Point Mugu State Park)	ARUDON	314.16	Buffer
	CARPYC	0.79	Buffer
	CONMAC	120.79	Buffer
	FOEVUL	3.14	Hardscape or Trail
	FOEVUL	160.86	Buffer
	NICGLA	159.29	Buffer
	RICCOM	202.59	Buffer
	SALAU	159.13	Buffer
	SILMAR	0.79	Buffer
POE-002 BBT - Sandstone Peak Trailhead (Circle X Ranch)	PENSET	3.14	Buffer
	SALAU	1.57	Buffer
POE-005 Busch Trailhead (Zuma/Trancas Canyons)	EUPTR	330.41	Buffer
	SALAU	63.11	Border
	SALAU	2095.96	Buffer
POE-006 Malibu Creek State Park Campground	CARPYC	582.79	Buffer
POE-007 Top of Topanga Overlook	CARPYC	17.49	Buffer
POE-008 Fryman Canyon / Nancy Hoover Pohl Overlook (Fryman Canyon Park)	CARPYC	3.14	Buffer
	FOEVUL	3.14	Buffer
	NICGLA	6.28	Buffer
	PENSET	22.64	Buffer
	RICCOM	36.60	Buffer
	SPAJUN	84.82	Buffer
POE-010 Malibu Crk St Pk / Craggs Dr	CARPYC	38.18	Buffer
	SPAJUN	12.57	Buffer
POE-012 Mandeville / Garden Land Rd	VINMAJ	28.27	Buffer

Table 8 (continued). Santa Monica Mountains National Recreation Area point of entry (POE) monitoring sites in 2016 where target nonnative invasive plant species were detected. Table shows general POE location, gross area infested, as well as the area within the POE in which the infested area was found (hardscape or trail, buffer, or along the border). Species codes are in Table 1.

POE # and Location	Species	Gross Area Infested (sq. m)	Zone
POE-013 Tuna Cyn Rd	CARPYC	105.51	Buffer
	FOEVUL	3.14	Buffer
	SALAU	3.14	Buffer
POE-014 Zev Yaroslavsky LV Highlands Trailhead	SALAU	282.14	Border
	SALAU	29.72	Buffer
POE-015 BBT - Hondo Canyon	CARPYC	15.85	Buffer
POE-017 Winding Way Trail (Escondido Cyn Natural Area)	FOEVUL	1.57	Buffer
POE-018 Circle X Ranch Campground Entrance	CARPYC	103.46	Buffer
POE-019 Malibu Creek State Pk / Liberty Cyn	CIRVUL	0.79	Buffer
POE-020 Serrano Rd Terminus	CARPYC	3.93	Buffer
	FOEVUL	9.88	Buffer
POE-022 BBT - Corral Canyon Trailhead (Malibu Creek State Park)	FOEVUL	1.57	Buffer
	SALAU	0.79	Buffer
POE-025 Malibu Bluffs, Michael Landon Center	EUPTR	1174.90	Border
	EUPTR	135.56	Buffer
	SALAU	76.65	Buffer
POE-026 Paramount Ranch Main Entrance (Paramount Ranch)	CARPYC	13.35	Hardscape or Trail
	CARPYC	12.57	Buffer
	CENSOL	0.79	Buffer
	CONMAC	16.49	Hardscape or Trail
	CONMAC	299.00	Buffer
	LEPLAT	21.02	Buffer
POE-028 Canyonback Rd (N end of Mtn Gate development)	SALAU	3.93	Buffer
POE-029 Los Robles Trail (COSCA Lands)	SALAU	250.03	Buffer
POE-030 Morrison Trailhead	AILALT	1035.83	Buffer
	CARPYC	3.14	Hardscape or Trail
	CARPYC	25.13	Buffer
	SALAU	3.14	Hardscape or Trail

Table 8 (continued). Santa Monica Mountains National Recreation Area point of entry (POE) monitoring sites in 2016 where target nonnative invasive plant species were detected. Table shows general POE location, gross area infested, as well as the area within the POE in which the infested area was found (hardscape or trail, buffer, or along the border). Species codes are in Table 1.

POE # and Location	Species	Gross Area Infested (sq. m)	Zone
POE-031 Olympia Farms Trailhead	FOEVUL	0.79	Hardscape or Trail
	FOEVUL	6114.25	Buffer
	SALAU	12.57	Buffer
POE-036 Franklin Canyon Park - Ranch	CARPYC	138.71	Buffer
	DELODO	65.02	Buffer
	FOEVUL	131.64	Buffer
	NICGLA	3.14	Hardscape or Trail
	NICGLA	56.55	Buffer
	PENSET	28.27	Hardscape or Trail
	RICCOM	160.02	Buffer
POE-047 BBT - Ray Miller Trailhead / La Jolla Canyon (Point Mugu State Park)	FOEVUL	33.14	Buffer
	NICGLA	7.85	Buffer
	PENSET	1212.60	Buffer
	RICCOM	1.57	Buffer
	SALAU	29.72	Buffer
POE-094 Cheeseboro Canyon Trailhead (Simi Hills)	SALAU	1.57	Hardscape or Trail
	SALAU	147.34	Buffer
POE-095 Abrams Trailhead	FOEVUL	1551.01	Buffer
POE-097 Corral Cyn / Mesa Peak Mtwy	FOEVUL	0.79	Buffer
POE-098 Secret Trail Trailhead	SALAU	206.74	Border
	SALAU	29.06	Buffer
POE-101 Temescal Ridge Trailhead (Topanga State Park)	SALAU	148.93	Buffer
POE-103 Lake & Franklin Cyn fork	DELODO	1334.79	Buffer
	VINMAJ	84.82	Buffer
POE-104 Malibu Creek State Park	CARPYC	0.79	Hardscape or Trail
	CARPYC	6.28	Buffer
	FOEVUL	0.79	Hardscape or Trail
	FOEVUL	0.08	Buffer
	LEPLAT	3.14	Buffer
	SALAU	51.05	Buffer
POE-106 Malibu Lagoon State Beach	EUPTER	0.79	Buffer

Table 8 (continued). Santa Monica Mountains National Recreation Area point of entry (POE) monitoring sites in 2016 where target nonnative invasive plant species were detected. Table shows general POE location, gross area infested, as well as the area within the POE in which the infested area was found (hardscape or trail, buffer, or along the border). Species codes are in Table 1.

POE # and Location	Species	Gross Area Infested (sq. m)	Zone
POE-107 Pt Mugu SP/Chumash Trail	FOEVUL	3.14	Buffer
	NICGLA	80.71	Buffer
	PENSET	882.22	Buffer
	RICCOM	0.79	Buffer
	SALAU	97.14	Buffer
POE-108 Topanga SP - Los Liones Dr (Topanga State Park)	EUPTR	272.74	Buffer
	FOEVUL	208.13	Buffer
	RICCOM	201.06	Buffer
POE-112 Corral Cyn Rd/Baller Mtwy	FOEVUL	0.79	Buffer
POE-113 Top of Reseda	CIRVUL	12.57	Buffer
	FOEVUL	12.57	Buffer
POE-114 Thornhill Broome Beach Camping (mouth of La Jolla Canyon)	PENSET	2638.38	Buffer
	SALAU	107.41	Buffer
POE-115 BBT - Will Rogers SHP Main Entrance (Topanga State Park)	NICGLA	697.79	Buffer
	RICCOM	400.67	Buffer
	SALAU	302.59	Buffer
POE-116 Las Virgenes Canyon Trailhead	CARPYC	1.57	Buffer
	SALAU	105.24	Buffer
POE-117 Topanga Cyn BI / Henry Ridge Mtw	CARPYC	113.10	Buffer
POE-118 Leo Carillo Campground	CARPYC	0.79	Hardscape or Trail
	CARPYC	1.57	Buffer
	FOEVUL	4.71	Buffer
	NICGLA	5.50	Buffer
	RICCOM	33.77	Hardscape or Trail
	RICCOM	5.40	Buffer
POE-119 Malibu Crk St Pk / Phantom Trail	CARPYC	174.06	Buffer
POE-120 Corral Canyon Trailhead	EUPTR	17.37	Buffer
	FOEVUL	38.60	Buffer
	SALAU	3.14	Buffer
POE-122 Rancho Sierra Vista Main Entrance	SALAU	29.06	Hardscape or Trail

Table 9. Santa Monica Mountains National Recreation Area point of entry (POE) monitoring sites in 2017 where target nonnative invasive plant species were detected. Table shows general POE location, gross area infested, as well as the area within the POE in which the infested area was found (hardscape or trail, buffer, or along the border). Species codes are in Table 1. Species codes are in Table 1.

POE # and Location	Species	Gross Area Infested (sq. m)	Zone
POE-123 end of Queensferry Rd	CYPINV	24.58	Border
	FOEVUL	0.79	Hardscape or Trail
POE-032 Santa Ynez Cyn Park Trailhead	FOEVUL	2827.43	Border
	FOEVUL	0.79	Hardscape or Trail
	RICCOM	2827.43	Border
	RICCOM	0.79	Hardscape or Trail
POE-033 Point Dume State Preserve Main Entry	EUPTER	20734.51	Border
	EUPTER	1335.18	Buffer
POE-034 Arroyo Sequit	CARPYC	47.80	Buffer
POE-036 Franklin Canyon Park - Ranch	CARPYC	1256.64	Border
	DELODO	1256.64	Buffer
	NICGLA	12.57	Hardscape or Trail
	NICGLA	78.54	Buffer
	RICCOM	1256.64	Border
	RICCOM	1256.64	Buffer
POE-038 Las Virgenes View Trail Trailhead	CARPYC	157.87	Buffer
	SAL AUS	1.57	Hardscape or Trail
	SAL AUS	0.79	Buffer
POE-039 Stunt Ranch/Stunt Rd	SPAJUN	28.27	Buffer
POE-040 Iredell Ln at Fire Road	CARPYC	2827.43	Border
	CARPYC	0.79	Hardscape or Trail
POE-041 PCH, Adamson House (Malibu Lagoon State Beach)	EUPTER	1.57	Hardscape or Trail
	EUPTER	316.52	Buffer
	NICGLA	0.79	Buffer
	SAL AUS	0.79	Hardscape or Trail
	SAL AUS	79.33	Buffer
POE-042 Malibu Creek SP/Reagan Meadows	ASPFIS	706.86	Buffer
	CARPYC	502.28	Buffer
	CENSOL	501.50	Buffer
POE-043 BBT - Topanga State Park Main Entrance	CARPYC	286.49	Hardscape or Trail
	CARPYC	18539.32	Buffer

Table 9 (continued). Santa Monica Mountains National Recreation Area point of entry (POE) monitoring sites in 2017 where target nonnative invasive plant species were detected. Table shows general POE location, gross area infested, as well as the area within the POE in which the infested area was found (hardscape or trail, buffer, or along the border). Species codes are in Table 1.

POE # and Location	Species	Gross Area Infested (sq. m)	Zone
POE-043 BBT - Topanga State Park Main Entrance (continued)	FOEVUL	3.93	Hardscape or Trail
	VINMAJ	314.16	Buffer
POE-045 BBT - Kanan Dume Rd N - overflow	CARPYC	393.48	Border
	CARPYC	0.79	Hardscape or Trail
	CARPYC	12.57	Buffer
	SPAJUN	270.18	Border
	SPAJUN	19.63	Buffer
POE-046 Gillette Ranch	CARPYC	4723.17	Buffer
	SALAU	0.79	Hardscape or Trail
	SALAU	1.57	Buffer
	VINMAJ	2.36	Buffer
POE-047 BBT - Ray Miller Trailhead / La Jolla Canyon (Point Mugu State Park)	FOEVUL	63.88	Border
	FOEVUL	3.93	Hardscape or Trail
	FOEVUL	2042.39	Buffer
	NICGLA	2905.97	Border
	NICGLA	1.57	Hardscape or Trail
	NICGLA	33402.20	Buffer
	PENSET	314.16	Border
	PENSET	34885.02	Buffer
	RICCOM	1.57	Buffer
	SALAU	78.54	Border
	SALAU	2055.38	Buffer
POE-048 Temescal Gateway Park	CARPYC	0.79	Buffer
	CONMAC	314.16	Hardscape or Trail
	DELODO	314.16	Border
	DELODO	8155.50	Hardscape or Trail
	DELODO	1735.41	Buffer
	EUPTR	1678.40	Hardscape or Trail
	EUPTR	337.39	Buffer
	FOEVUL	22065.80	Border
	FOEVUL	3.93	Hardscape or Trail
	FOEVUL	706.86	Buffer
	NICGLA	314.16	Hardscape or Trail
	PENSET	14028.30	Border

Table 9 (continued). Santa Monica Mountains National Recreation Area point of entry (POE) monitoring sites in 2017 where target nonnative invasive plant species were detected. Table shows general POE location, gross area infested, as well as the area within the POE in which the infested area was found (hardscape or trail, buffer, or along the border). Species codes are in Table 1.

POE # and Location	Species	Gross Area Infested (sq. m)	Zone
POE-048 Temescal Gateway Park (continued)	RICCOM	10709.69	Border
	RICCOM	706.86	Hardscape or Trail
	SALAU	12880.53	Border
	SALAU	3.14	Hardscape or Trail
	VINMAJ	2935.03	Border
	VINMAJ	7227.08	Hardscape or Trail
	VINMAJ	6791.18	Buffer
POE-049 Point Dume / Zuma, Westward Beach Rd	EUPTE	1.57	Buffer
	FOEVUL	0.79	Hardscape or Trail
POE-050 BBT - Encinal Cyn Rd	CARPYC	0.79	Border
	CARPYC	0.79	Buffer
	FOEVUL	0.79	Buffer
	SPAJUN	78.54	Hardscape or Trail
POE-052 Hillcrest Dr / Beverly Dr	NICGLA	5026.55	Buffer
	RICCOM	5026.55	Buffer
POE-053 Nicholas Flat Trailhead	CARPYC	91.11	Buffer
	PHAAQU	1570.80	Buffer
POE-055 Stunt Ranch Entrance	SPAJUN	0.79	Buffer
POE-056 Wilacre Park Main Entrance	CARPYC	1259.78	Border
	CARPYC	2907.54	Buffer
POE-057 Solstice Canyon Trailhead - inner lot	CARPYC	1807.99	Buffer
	EUPTE	3146.31	Buffer
	FOEVUL	1443.56	Buffer
POE-058 Bark Park Trailhead (Baldwin OS)	CARPYC	0.79	Buffer
	NONE	0.79	Buffer
	SALAU	0.79	Buffer
POE-059 BBT - Dead Horse Trail Trailhead (Topanga State Park)	CARPYC	80.90	Buffer
POE-060 Caballero Cyn Trailhead	CARPYC	79.33	Buffer
POE-061 Peter Strauss Ranch	CARPYC	1375.57	Border
	CARPYC	314.94	Hardscape or Trail
	CARPYC	91.89	Buffer

Table 9 (continued). Santa Monica Mountains National Recreation Area point of entry (POE) monitoring sites in 2017 where target nonnative invasive plant species were detected. Table shows general POE location, gross area infested, as well as the area within the POE in which the infested area was found (hardscape or trail, buffer, or along the border). Species codes are in Table 1.

POE # and Location	Species	Gross Area Infested (sq. m)	Zone
POE-061 Peter Strauss Ranch (continued)	CENSOL	3.93	Hardscape or Trail
	CENSOL	1335.96	Buffer
	EUPTER	0.79	Hardscape or Trail
POE-062 Malibu Ck St Pk/Tapia Park (Malibu Creek State Park)	CARPYC	19790.38	Border
	CARPYC	41390.48	Hardscape or Trail
	CARPYC	17135.03	Buffer
	CENSOL	11309.73	Border
	LEPLAT	11309.73	Border
	LEPLAT	314.16	Hardscape or Trail
	SALAU	314.16	Hardscape or Trail
	SPAJUN	2277.65	Buffer
	VINMAJ	2513.27	Border
	VINMAJ	2827.43	Hardscape or Trail
	VINMAJ	7853.98	Buffer

Table 10. Santa Monica Mountains National Recreation Area point of entry (POE) monitoring sites in 2018 where target nonnative invasive plant species were detected. Table shows general POE location, gross area infested, as well as the area within the POE in which the infested area was found (hardscape or trail, buffer, or along the border). Species codes are in Table 1. Species codes are in Table 1.

POE # and Location	Species	Gross Area Infested (sq. m)	Zone
POE-064 Casale Rd. End	DELODO	150.31	Buffer
	FOEVUL	0.79	Hardscape or Trail
	FOEVUL	103.19	Buffer
	NICGLA	29.85	Buffer
	SALAU	9.40	Buffer
POE-066 BBT - Kanan Trailhead (Zuma/Trancas Canyons)	FOEVUL	6.28	Hardscape or Trail
	FOEVUL	74.47	Buffer
	SPAJUN	3.14	Hardscape or Trail
	SPAJUN	242.14	Buffer
POE-067 Tree People parking lot (Coldwater Cyn/Wilacre)	VINMAJ	609.63	Buffer

Table 10 (continued). Santa Monica Mountains National Recreation Area point of entry (POE) monitoring sites in 2018 where target nonnative invasive plant species were detected. Table shows general POE location, gross area infested, as well as the area within the POE in which the infested area was found (hardscape or trail, buffer, or along the border). Species codes are in Table 1.

POE # and Location	Species	Gross Area Infested (sq. m)	Zone
POE-068 BBT - Lois Ewen Overlook	CARPYC	3.14	Buffer
	FOEVUL	6.28	Buffer
	NICGLA	15.71	Buffer
	SALAU	33.51	Border
	SALAU	0.79	Hardscape or Trail
	SALAU	1513.44	Buffer
	SPAJUN	3.14	Buffer
POE-069 East End Dirt Mulholland	RICCOM	317.30	Buffer
	SALAU	230.87	Border
	SALAU	471.15	Buffer
POE-070 Juan Bautista de Anza Trailhead West	FOEVUL	0.79	Buffer
	SALAU	95.10	Hardscape or Trail
	SALAU	2219.65	Buffer
POE-071 Rancho Potrero Trailhead	CARPYC	0.79	Buffer
	CYNCAR	0.79	Buffer
	FOEVUL	650.46	Buffer
	SALAU	0.79	Hardscape or Trail
	SALAU	453.46	Buffer
POE-072 Pt Dume, Lower Trailhead from Beach (Point Dume State Preserve)	FOEVUL	32.20	Buffer
	NICGLA	731.74	Buffer
	RICCOM	314.16	Buffer
	SALAU	644.03	Buffer
POE-073 Wendy Trailhead	SALAU	94.11	Hardscape or Trail
	SALAU	0.79	Buffer
POE-074 El Pescador State Beach Parking Lot	SALAU	230.68	Buffer
POE-075 WODOC parking lot (Franklin Canyon - upper)	CARPYC	317.30	Buffer
	NICGLA	28.27	Buffer
	PENSET	0.79	Buffer
	RICCOM	409.27	Buffer
	SALAU	297.91	Buffer
	VINMAJ	153.44	Buffer
POE-076 Topanga / Hillside Dr	CARPYC	6.28	Buffer
	CIRVUL	0.79	Buffer

Table 10 (continued). Santa Monica Mountains National Recreation Area point of entry (POE) monitoring sites in 2018 where target nonnative invasive plant species were detected. Table shows general POE location, gross area infested, as well as the area within the POE in which the infested area was found (hardscape or trail, buffer, or along the border). Species codes are in Table 1.

POE # and Location	Species	Gross Area Infested (sq. m)	Zone
POE-077 Vanalden Ave S terminus	SAL AUS	8.64	Buffer
POE-078 Rocky Oaks	CARPYC	830.56	Buffer
	SPA JUN	4.08	Buffer
POE-079 Juan Bautista de Anza Trailhead East	CARPYC	59.44	Buffer
	CIRVUL	2.36	Buffer
	FOEVUL	120.17	Buffer
	LEPLAT	0.79	Buffer
	SAL AUS	221.42	Buffer
	SILMAR	0.79	Buffer
POE-080 Point Dume State Preserve, Admin Rd	EUP TER	808.49	Buffer
	SAL AUS	694.74	Border
	SAL AUS	747.12	Buffer
POE-081 BBT - Yerba Buena Rd	FOEVUL	0.79	Buffer
	PEN SET	0.79	Buffer
	SAL AUS	30.42	Buffer
POE-082 El Matador State Beach Parking Lot	SAL AUS	1.57	Buffer
POE-084 Paramount Ranch/Mulholland Hwy	CARPYC	6.28	Buffer
	LEPLAT	120.00	Buffer
	SAL AUS	0.79	Hardscape or Trail
	SAL AUS	1.57	Buffer
POE-085 Musch Camp (Topanga State Park)	CARPYC	967.59	Buffer
	SAL AUS	1.05	Buffer
	VINMAJ	181.84	Buffer
POE-087 BBT - Tapia Trailhead (MCSP BBT)	CARPYC	477.52	Buffer
	CENSOL	314.16	Border
	CENSOL	1.57	Hardscape or Trail
POE-088 Bonsall Trailhead (Zuma/Trancas Canyons)	CARPYC	28.27	Hardscape or Trail
	CARPYC	72.46	Buffer
	EUP TER	70.71	Border
	EUP TER	32.99	Hardscape or Trail
	EUP TER	371.98	Buffer
	FOEVUL	81.68	Buffer

Table 10 (continued). Santa Monica Mountains National Recreation Area point of entry (POE) monitoring sites in 2018 where target nonnative invasive plant species were detected. Table shows general POE location, gross area infested, as well as the area within the POE in which the infested area was found (hardscape or trail, buffer, or along the border). Species codes are in Table 1.

POE # and Location	Species	Gross Area Infested (sq. m)	Zone
POE-088 Bonsall Trailhead (Zuma/Trancas Canyons) (continued)	NICGLA	263.33	Buffer
	RICCOM	141.37	Buffer
POE-089 BBT - Stunt Rd	SAL AUS	246.24	Hardscape or Trail
POE-090 Nike Missile Overlook (Westridge-Canyonback Wilderness Park)	NICGLA	0.79	Hardscape or Trail
	NICGLA	659.73	Buffer
	SAL AUS	78.54	Hardscape or Trail
	SAL AUS	314.94	Buffer
	SPA JUN	78.54	Hardscape or Trail
	SPA JUN	2342.49	Buffer
POE-091 De Anza Park (Malibu Creek SP)	CARPYC	3.14	Buffer
	CIRVUL	29.06	Buffer
	NICGLA	12.57	Buffer
	SAL AUS	25.92	Buffer
POE-092 92 Trail / Entrada Rd	CARPYC	599.01	Buffer
	VINMAJ	697.99	Buffer
POE-093 Malibu Springs/Mulholland Hwy	CARPYC	138.29	Buffer
	FOEVUL	43.20	Buffer
	SPA JUN	0.79	Buffer

Table 11. Santa Monica Mountains National Recreation Area point of entry (POE) monitoring sites in 2019 where target nonnative invasive plant species were detected. Table shows general POE location, gross area infested, as well as the area within the POE in which the infested area was found (hardscape or trail, buffer, or along the border). Species codes are in Table 1. Species codes are in Table 1.

POE # and Location	Species	Gross Area Infested (sq. m)	Zone
POE-001 Sycamore Canyon Campground Entrance (Point Mugu State Park)	ARUDON	0.79	Hardscape or Trail
	ARUDON	314.16	Buffer
	CARPYC	267.94	Buffer
	CONMAC	579.74	Buffer
	CYPINV	28.27	Buffer
	EUPTER	57.33	Buffer
	FOEVUL	730.62	Buffer

Table 11 (continued). Santa Monica Mountains National Recreation Area point of entry (POE) monitoring sites in 2019 where target nonnative invasive plant species were detected. Table shows general POE location, gross area infested, as well as the area within the POE in which the infested area was found (hardscape or trail, buffer, or along the border). Species codes are in Table 1.

POE # and Location	Species	Gross Area Infested (sq. m)	Zone
POE-001 Sycamore Canyon Campground Entrance (Point Mugu State Park) (continued)	NICGLA	910.85	Buffer
	PENSET	22.96	Buffer
	RICCOM	916.92	Buffer
	SALAUUS	29.06	Hardscape or Trail
	SALAUUS	292.16	Buffer
POE-002 BBT - Sandstone Peak Trailhead (Circle X Ranch)	PENSET	1.57	Buffer
POE-003 Morrison Ranch	CARPYC	4.94	Buffer
	CIRVUL	3.14	Buffer
	NICGLA	1.57	Buffer
	SALAUUS	0.79	Buffer
POE-004 Big Sycamore Canyon Horse Corral (just north of Danielson Ranch)	CARPYC	36.22	Buffer
	SALAUUS	30.85	Border
	SALAUUS	0.79	Buffer
POE-005 Busch Trailhead (Zuma/Trancas Canyons)	EUPTER	770.03	Buffer
	FOEVUL	3.14	Buffer
	NICGLA	3.93	Buffer
	RICCOM	17.28	Buffer
	SALAUUS	16.49	Hardscape or Trail
	SALAUUS	96.82	Buffer
POE-006 Malibu Creek State Park Campground	CARPYC	18629.80	Buffer
	EUPTER	13.35	Buffer
	SALAUUS	0.79	Hardscape or Trail
	SALAUUS	187.01	Buffer
	SILMAR	16691.32	Buffer
POE-007 Top of Topanga Overlook	CARPYC	3.14	Buffer
POE-008 Fryman Canyon / Nancy Hoover Pohl Overlook (Fryman Canyon Park)	CORSEL	314.16	Buffer
	EUPTER	0.79	Buffer
	FOEVUL	788.04	Buffer
	NICGLA	516.01	Buffer
	PENSET	306.43	Buffer
	RICCOM	250.54	Buffer

Table 11 (continued). Santa Monica Mountains National Recreation Area point of entry (POE) monitoring sites in 2019 where target nonnative invasive plant species were detected. Table shows general POE location, gross area infested, as well as the area within the POE in which the infested area was found (hardscape or trail, buffer, or along the border). Species codes are in Table 1.

POE # and Location	Species	Gross Area Infested (sq. m)	Zone
POE-008 Fryman Canyon / Nancy Hoover Pohl Overlook (Fryman Canyon Park) (continued)	SAL AUS	1.57	Buffer
	SPA JUN	582.11	Buffer
POE-009 Leo Carrillo SP / Yellow Hill Rd	FOE VUL	0.79	Hardscape or Trail
POE-010 Malibu Crk St Pk / Craggs Dr	CAR PYC	519.67	Buffer
	CIR VUL	214.25	Buffer
	EUP TER	0.79	Buffer
	NIC GLA	0.79	Buffer
	SIL MAR	774.84	Buffer
	VIN MAJ	314.94	Buffer
POE-011 Lower Stunt High Trail Trailhead	SAL AUS	3.93	Hardscape or Trail
	SAL AUS	0.79	Buffer
POE-012 Mandeville / Garden Land Rd	AR UDON	28.27	Buffer
	NIC GLA	0.79	Buffer
POE-013 Tuna Cyn Rd	CAR PYC	265.19	Buffer
	CENS OL	45.43	Border
	CENS OL	201.85	Buffer
	CIR VUL	321.30	Buffer
	FOE VUL	0.79	Buffer
	SAL AUS	0.79	Buffer
POE-014 Zev Yaroslavsky LV Highlands Trailhead	SAL AUS	46.16	Buffer
POE-015 BBT - Hondo Canyon	CAR PYC	796.35	Buffer
POE-016 Runyon Cyn Rd Trailhead North (Runyon Canyon Park)	FOE VUL	28.27	Buffer
	NIC GLA	119.47	Buffer
	PENS ET	0.79	Hardscape or Trail
	PENS ET	380.32	Buffer
	RIC COM	260.84	Buffer
	SAL AUS	13.35	Hardscape or Trail
	SAL AUS	523.26	Buffer
POE-017 Winding Way Trail (Escondido Cyn Natural Area)	CAR PYC	12.57	Buffer
	EUP TER	456.57	Buffer
	FOE VUL	45.55	Buffer

Table 11 (continued). Santa Monica Mountains National Recreation Area point of entry (POE) monitoring sites in 2019 where target nonnative invasive plant species were detected. Table shows general POE location, gross area infested, as well as the area within the POE in which the infested area was found (hardscape or trail, buffer, or along the border). Species codes are in Table 1.

POE # and Location	Species	Gross Area Infested (sq. m)	Zone
POE-017 Winding Way Trail (Escondido Cyn Natural Area) (continued)	LEPLAT	7.07	Buffer
	RICCOM	14.14	Buffer
	SALAU	77.98	Buffer
	SILMAR	0.79	Buffer
POE-018 Circle X Ranch Campground Entrance	CARPYC	255.25	Buffer
	CONMAC	12.57	Buffer
	NICGLA	0.79	Buffer
	RICCOM	57.64	Buffer
	SILMAR	85.92	Buffer
POE-019 Malibu Creek State Pk / Liberty Cyn	CIRVUL	7.07	Buffer
	CORSEL	75.70	Buffer
	LEPLAT	50.27	Buffer
	SALAU	72.26	Buffer
	SILMAR	0.79	Buffer
	VINMAJ	78.54	Buffer
POE-020 Serrano Rd Terminus	CARPYC	398.35	Buffer
	FOEVUL	418.16	Buffer
	NICGLA	0.79	Buffer
POE-021 La Piedra State Beach Parking Lot	NICGLA	37.70	Buffer
	RICCOM	27.49	Buffer
POE-023 Saddle Peak Rd / Hondo Cyn Trail	CARPYC	12.57	Buffer
	NICGLA	12.57	Buffer
	SALAU	2.36	Hardscape or Trail
	SALAU	12.57	Buffer
POE-024 Barker Fire Rd	VINMAJ	40.84	Buffer
POE-025 Malibu Bluffs, Michael Landon Center	ASPFIS	0.79	Buffer
	EUPTR	185.41	Border
	EUPTR	5273.36	Buffer
	FOEVUL	324.17	Buffer
	NICGLA	15.71	Buffer
	PENSET	0.79	Buffer
	RICCOM	18.62	Buffer
	SALAU	393.17	Buffer

Table 11 (continued). Santa Monica Mountains National Recreation Area point of entry (POE) monitoring sites in 2019 where target nonnative invasive plant species were detected. Table shows general POE location, gross area infested, as well as the area within the POE in which the infested area was found (hardscape or trail, buffer, or along the border). Species codes are in Table 1.

POE # and Location	Species	Gross Area Infested (sq. m)	Zone
POE-026 Paramount Ranch Main Entrance (Paramount Ranch)	AILALT	12.57	Buffer
	CARPYC	136.76	Border
	CARPYC	1300.20	Buffer
	CENSOL	136.76	Border
	CENSOL	3486.99	Buffer
	CIRVUL	0.79	Buffer
	CONMAC	136.76	Border
	CONMAC	3102.03	Buffer
	LEPLAT	568.79	Buffer
	NICGLA	3.14	Buffer
	SALAUUS	1956.96	Buffer
	SILMAR	2195.09	Buffer
POE-027 Red Rock Cyn Entrance	CARPYC	635.14	Buffer
	CYPINV	182.09	Buffer
POE-028 Canyonback Rd (N end of Mtn Gate development)	EUPTER	0.79	Buffer
	NICGLA	0.79	Buffer
	SALAUUS	12.57	Hardscape or Trail
	SALAUUS	87.15	Buffer
POE-029 Los Robles Trail (COSCA Lands)	NICGLA	2.36	Buffer
	PHAAQU	46.88	Buffer
	SALAUUS	555.51	Buffer
POE-030 Morrison Trailhead	AILALT	722.95	Border
	CARPYC	821.97	Border
	CIRVUL	4.71	Buffer
	SALAUUS	8.02	Border
	SALAUUS	27.49	Buffer
POE-031 Olympia Farms Trailhead	FOEVUL	1819.62	Buffer
	SALAUUS	137.90	Buffer
POE-032 Santa Ynez Cyn Park Trailhead	ARUDON	153.94	Buffer
	DELODO	204.20	Buffer
	FOEVUL	0.79	Hardscape or Trail
	FOEVUL	1273.92	Buffer
	PENSET	28.27	Buffer
	RICCOM	1259.78	Buffer

Table 11 (continued). Santa Monica Mountains National Recreation Area point of entry (POE) monitoring sites in 2019 where target nonnative invasive plant species were detected. Table shows general POE location, gross area infested, as well as the area within the POE in which the infested area was found (hardscape or trail, buffer, or along the border). Species codes are in Table 1.

POE # and Location	Species	Gross Area Infested (sq. m)	Zone
POE-033 Point Dume State Preserve Main Entry	EUPTE	4526.56	Buffer
	PENSET	0.79	Buffer
	SALAU	0.79	Buffer
POE-034 Arroyo Sequit	FOEVUL	13.35	Buffer
	NICGLA	60.96	Buffer
	RICCOM	108.08	Buffer
	SALAU	3.14	Buffer
POE-035 Santa Maria Road	NICGLA	3.14	Buffer
POE-036 Franklin Canyon Park - Ranch	CARPYC	79.33	Buffer
	CONMAC	91.89	Buffer
	CYPINV	3.93	Buffer
	DELODO	169.01	Buffer
	FOEVUL	2.36	Buffer
	NICGLA	3.14	Buffer
	PENSET	28.27	Buffer
	RICCOM	110.74	Buffer
POE-037 Charmlee Regional Park / Charmlee Natural Area	CARPYC	0.79	Buffer
	FOEVUL	14.14	Buffer
	NICGLA	0.79	Hardscape or Trail
	PHAAQU	201.71	Buffer
POE-038 Las Virgenes View Trail Trailhead	CARPYC	12.57	Buffer
	FOEVUL	12.57	Buffer
	SALAU	17.28	Hardscape or Trail
	SALAU	0.79	Buffer
POE-039 Stunt Ranch/Stunt Rd	CARPYC	1.57	Buffer
	SPAJUN	0.79	Buffer
POE-040 Iredell Ln at Fire Road	CARPYC	0.79	Buffer
	EUPTE	17.93	Buffer
POE-041 PCH, Adamson House (Malibu Lagoon State Beach)	ARUDON	3.14	Buffer
	EUPTE	184.75	Buffer
	NICGLA	8.64	Buffer
	RICCOM	0.79	Buffer
	SALAU	18.85	Buffer

Table 11 (continued). Santa Monica Mountains National Recreation Area point of entry (POE) monitoring sites in 2019 where target nonnative invasive plant species were detected. Table shows general POE location, gross area infested, as well as the area within the POE in which the infested area was found (hardscape or trail, buffer, or along the border). Species codes are in Table 1.

POE # and Location	Species	Gross Area Infested (sq. m)	Zone
POE-043 BBT - Topanga State Park Main Entrance	CARPYC	1085.41	Buffer
	CIRVUL	0.79	Buffer
	CYPINV	64.90	Buffer
	NICGLA	18.06	Buffer
	PHAAQU	92.82	Buffer
	VINMAJ	621.60	Buffer
POE-044 Dirt Mulholland / Greenbriar Dr	NICGLA	4.71	Buffer
	SALAU	772.54	Buffer
POE-045 BBT - Kanan Dume Rd N - overflow	SPAJUN	18.85	Buffer
POE-046 Gillette Ranch	AILALT	1527.76	Buffer
	CARPYC	2827.68	Buffer
	CIRVUL	0.79	Buffer
	CYPINV	47.55	Border
	CYPINV	68.54	Buffer
	LEPLAT	87.48	Border
	LEPLAT	3.14	Buffer
	NICGLA	1.57	Buffer
	SALAU	39.94	Border
	SALAU	942.97	Buffer
	SILMAR	3.14	Buffer
	SPAJUN	0.79	Buffer
	VINMAJ	1956.62	Buffer
POE-047 BBT - Ray Miller Trailhead / La Jolla Canyon (Point Mugu State Park)	FOEVUL	106.81	Buffer
	NICGLA	183.00	Buffer
	PENSET	751.83	Buffer
	RICCOM	6.28	Buffer
	SALAU	25.13	Border
	SALAU	932.32	Buffer
POE-048 Temescal Gateway Park	CIRVUL	19.63	Buffer
	CORSEL	15.71	Buffer
	CONMAC	1127.70	Buffer
	CYPINV	1103.12	Border
	CYPINV	1744.33	Buffer

Table 11 (continued). Santa Monica Mountains National Recreation Area point of entry (POE) monitoring sites in 2019 where target nonnative invasive plant species were detected. Table shows general POE location, gross area infested, as well as the area within the POE in which the infested area was found (hardscape or trail, buffer, or along the border). Species codes are in Table 1.

POE # and Location	Species	Gross Area Infested (sq. m)	Zone
POE-048 Temescal Gateway Park (continued)	DELODO	1103.12	Border
	DELODO	8553.99	Buffer
	EUPTR	1869.75	Buffer
	FOEVUL	2410.33	Buffer
	NICGLA	7.07	Buffer
	PENSET	3230.83	Buffer
	RICCOM	2048.10	Buffer
	SALAU	567.56	Buffer
	VINMAJ	1103.12	Border
	VINMAJ	9995.27	Buffer
POE-049 Point Dume / Zuma, Westward Beach Rd	CORSEL	12.57	Buffer
	EUPTR	9.72	Buffer
	FOEVUL	3.14	Buffer
	RICCOM	0.79	Buffer
	SALAU	47.03	Buffer
POE-050 BBT - Encinal Cyn Rd	CARPYC	26.26	Buffer
	NICGLA	16.49	Buffer
	SALAU	0.79	Buffer
	SPAJUN	43.91	Buffer
POE-051 Viewridge Trailhead	NICGLA	0.79	Buffer
POE-052 Hillcrest Dr / Beverly Dr	FOEVUL	13.35	Buffer
	NICGLA	3.14	Buffer
	PENSET	26.30	Buffer
	RICCOM	7.07	Buffer
	SALAU	13.35	Buffer
POE-053 Nicholas Flat Trailhead	CARPYC	42.96	Buffer
	NICGLA	0.79	Buffer
	PHAAQU	84.82	Buffer
POE-054 Malibu Crk St Pk / Cistern Trail	CARPYC	3.14	Hardscape or Trail
	SALAU	3.14	Hardscape or Trail
POE-055 Stunt Ranch Entrance	SALAU	39.33	Border
	SALAU	15.60	Buffer

Table 11 (continued). Santa Monica Mountains National Recreation Area point of entry (POE) monitoring sites in 2019 where target nonnative invasive plant species were detected. Table shows general POE location, gross area infested, as well as the area within the POE in which the infested area was found (hardscape or trail, buffer, or along the border). Species codes are in Table 1.

POE # and Location	Species	Gross Area Infested (sq. m)	Zone
POE-056 Wilacre Park Main Entrance	CARPYC	361.28	Buffer
	SILMAR	78.54	Buffer
POE-057 Solstice Canyon Trailhead - inner lot	CARPYC	1.57	Buffer
	EUPTER	643.33	Buffer
	FOEVUL	27.49	Buffer
	NICGLA	0.79	Buffer
	RICCOM	2.36	Buffer
	SILMAR	192.02	Buffer
POE-058 Bark Park Trailhead (Baldwin OS)	CARPYC	91.11	Buffer
	CIRVUL	97.39	Buffer
	CYPINV	0.79	Buffer
	SAL AUS	20.45	Buffer
POE-059 BBT - Dead Horse Trail Trailhead (Topanga State Park)	CARPYC	86.69	Buffer
POE-060 Caballero Cyn Trailhead	CARPYC	43.74	Border
	CARPYC	8.14	Buffer
	CENSOL	5.29	Buffer
	CYPINV	0.79	Buffer
	PENSET	27.31	Buffer
	VINMAJ	42.76	Buffer
POE-061 Peter Strauss Ranch	CARPYC	19.14	Border
	CARPYC	2938.80	Buffer
	CENSOL	15.11	Border
	CENSOL	1819.81	Buffer
	CIRVUL	35.34	Buffer
	CYPINV	58.12	Buffer
	EUPTER	160.43	Buffer
	LEPLAT	147.49	Buffer
	NICGLA	73.21	Buffer
	SAL AUS	42.45	Buffer
	SILMAR	51.05	Buffer
	SPAJUN	2.36	Buffer
	VINMAJ	34.56	Buffer

Table 11 (continued). Santa Monica Mountains National Recreation Area point of entry (POE) monitoring sites in 2019 where target nonnative invasive plant species were detected. Table shows general POE location, gross area infested, as well as the area within the POE in which the infested area was found (hardscape or trail, buffer, or along the border). Species codes are in Table 1.

POE # and Location	Species	Gross Area Infested (sq. m)	Zone
POE-062 Malibu Ck St Pk/Tapia Park (Malibu Creek State Park)	CARPYC	39364.32	Buffer
	CENSOL	4.36	Buffer
	CIRVUL	1256.64	Buffer
	CYPINV	314.16	Buffer
	EUPTER	113.88	Buffer
	LEPLAT	3.35	Border
	LEPLAT	39.27	Buffer
	SAL AUS	1.57	Buffer
	VINMAJ	4113.94	Buffer
POE-064 Casale Rd. End	DELODO	157.08	Buffer
	FOEVUL	137.08	Buffer
	NICGLA	120.23	Buffer
	SAL AUS	74.25	Buffer
POE-065 BBT - Mishe Mokwa Trailhead S	NONE	0.79	Border
POE-066 BBT - Kanan Trailhead (Zuma/Trancas Canyons)	CARPYC	6.76	Buffer
	CIRVUL	3.07	Buffer
	FOEVUL	3.93	Hardscape or Trail
	FOEVUL	232.97	Buffer
	SPAJUN	3.14	Hardscape or Trail
	SPAJUN	192.21	Buffer
POE-067 Tree People parking lot (Coldwater Cyn/Wilacre)	CARPYC	6.28	Buffer
	SAL AUS	1.57	Buffer
	VINMAJ	3542.88	Buffer
POE-068 BBT - Lois Ewen Overlook	CARPYC	28.53	Buffer
	FOEVUL	0.79	Buffer
	SAL AUS	174.81	Border
	SAL AUS	16.36	Buffer
	SPAJUN	6.28	Buffer
POE-069 East End Dirt Mulholland	CARPYC	2.55	Buffer
	RICCOM	7.07	Border
	RICCOM	1.57	Hardscape or Trail
	RICCOM	28.27	Buffer
	SAL AUS	7.85	Buffer

Table 11 (continued). Santa Monica Mountains National Recreation Area point of entry (POE) monitoring sites in 2019 where target nonnative invasive plant species were detected. Table shows general POE location, gross area infested, as well as the area within the POE in which the infested area was found (hardscape or trail, buffer, or along the border). Species codes are in Table 1.

POE # and Location	Species	Gross Area Infested (sq. m)	Zone
POE-070 Juan Bautista de Anza Trailhead West	CARPYC	2.36	Buffer
	FOEVUL	0.79	Buffer
	SALAU	818.97	Hardscape or Trail
	SALAU	52.62	Buffer
	SILMAR	69.92	Hardscape or Trail
	SILMAR	0.79	Buffer
POE-071 Rancho Potrero Trailhead	SALAU	11.00	Buffer
POE-072 Pt Dume, Lower Trailhead from Beach (Point Dume State Preserve)	ARUDON	0.79	Buffer
	CORSEL	12.57	Buffer
	EUPTER	417.23	Buffer
	FOEVUL	642.46	Buffer
	NICGLA	1253.50	Buffer
	RICCOM	314.16	Buffer
	SALAU	0.20	Border
	SALAU	244.33	Buffer
POE-073 Wendy Trailhead	SALAU	51.84	Border
	SALAU	31.42	Buffer
POE-074 El Pescador State Beach Parking Lot	FOEVUL	12.57	Buffer
	NICGLA	62.83	Buffer
	SALAU	12.57	Buffer
POE-075 WODOC parking lot (Franklin Canyon - upper)	CARPYC	220.40	Buffer
	CONMAC	9.42	Buffer
	FOEVUL	55.07	Buffer
	NICGLA	0.79	Buffer
	RICCOM	130.54	Buffer
	SALAU	40.68	Border
	SALAU	7.46	Buffer
	SILMAR	79.40	Buffer
	VINMAJ	72.33	Buffer
POE-076 Topanga / Hillside Dr	CARPYC	5.50	Buffer
	CIRVUL	0.79	Buffer
POE-077 Vanalden Ave S terminus	SALAU	2.36	Buffer

Table 11 (continued). Santa Monica Mountains National Recreation Area point of entry (POE) monitoring sites in 2019 where target nonnative invasive plant species were detected. Table shows general POE location, gross area infested, as well as the area within the POE in which the infested area was found (hardscape or trail, buffer, or along the border). Species codes are in Table 1.

POE # and Location	Species	Gross Area Infested (sq. m)	Zone
POE-078 Rocky Oaks	CARPYC	1827.24	Buffer
	CENSOL	3.14	Buffer
	CIRVUL	23.13	Buffer
	FOEVUL	2.36	Buffer
	NICGLA	0.79	Hardscape or Trail
	NICGLA	33.20	Buffer
	PHAAQU	1.57	Buffer
	SALAUUS	0.79	Buffer
	SILMAR	664.73	Buffer
POE-079 Juan Bautista de Anza Trailhead East	CARPYC	3056.45	Buffer
	CIRVUL	62.83	Buffer
	CONMAC	6.28	Buffer
	CYNCAR	50.27	Buffer
	FOEVUL	82.94	Buffer
	LEPLAT	62.83	Buffer
	NICGLA	9.42	Buffer
	RICCOM	78.54	Buffer
	SALAUUS	78.54	Buffer
	SILMAR	2511.65	Buffer
POE-080 Point Dume State Preserve, Admin Rd	EUPTER	1403.70	Buffer
	SALAUUS	1096.37	Buffer
POE-081 BBT - Yerba Buena Rd	FOEVUL	0.79	Buffer
	PENSET	0.79	Buffer
POE-082 El Matador State Beach Parking Lot	EUPTER	0.79	Buffer
	FOEVUL	5.50	Buffer
	NICGLA	10.21	Buffer
	SALAUUS	21.40	Buffer
POE-084 Paramount Ranch/Mulholland Hwy	CARPYC	57.26	Buffer
	LEPLAT	51.35	Buffer
POE-085 Musch Camp (Topanga State Park)	CARPYC	2651.86	Buffer
	CONMAC	3.14	Buffer
	SALAUUS	7.85	Buffer
	SILMAR	611.89	Buffer
	VINMAJ	205.05	Buffer

Table 11 (continued). Santa Monica Mountains National Recreation Area point of entry (POE) monitoring sites in 2019 where target nonnative invasive plant species were detected. Table shows general POE location, gross area infested, as well as the area within the POE in which the infested area was found (hardscape or trail, buffer, or along the border). Species codes are in Table 1.

POE # and Location	Species	Gross Area Infested (sq. m)	Zone
POE-087 BBT - Tapia Trailhead (MCSP BBT)	CARPYC	88.61	Buffer
	CENSOL	7.07	Hardscape or Trail
	CENSOL	27.91	Buffer
POE-088 Bonsall Trailhead (Zuma/Trancas Canyons)	CARPYC	361.99	Buffer
	EUPTER	3901.17	Buffer
	FOEVUL	0.79	Buffer
	NICGLA	276.29	Buffer
	RICCOM	7.85	Buffer
	SILMAR	27.16	Buffer
POE-089 BBT - Stunt Rd	CARPYC	8.55	Buffer
	SALAU	444.93	Buffer
POE-090 Nike Missile Overlook (Westridge-Canyonback Wilderness Park)	NICGLA	201.85	Hardscape or Trail
	NICGLA	80.11	Buffer
	SPAJUN	12.57	Border
	SPAJUN	318.87	Hardscape or Trail
	SPAJUN	1512.09	Buffer
POE-091 De Anza Park (Malibu Creek SP)	CARPYC	179.76	Buffer
	CIRVUL	110.75	Buffer
	CONMAC	47.01	Buffer
	CYPINV	13.64	Buffer
	LEPLAT	6.28	Buffer
	NICGLA	7.07	Buffer
	SALAU	19.63	Buffer
	SILMAR	182.12	Buffer
POE-092 92 Trail / Entrada Rd	CARPYC	566.62	Buffer
	PHAAQU	0.79	Buffer
	VINMAJ	572.18	Buffer
POE-093 Malibu Springs/Mulholland Hwy	CARPYC	54.96	Buffer
	FOEVUL	117.79	Buffer
	PHAAQU	25.13	Buffer
	SPAJUN	25.13	Buffer
POE-094 Cheeseboro Canyon Trailhead (Simi Hills)	CARPYC	0.79	Buffer
	CIRVUL	1.57	Buffer

Table 11 (continued). Santa Monica Mountains National Recreation Area point of entry (POE) monitoring sites in 2019 where target nonnative invasive plant species were detected. Table shows general POE location, gross area infested, as well as the area within the POE in which the infested area was found (hardscape or trail, buffer, or along the border). Species codes are in Table 1.

POE # and Location	Species	Gross Area Infested (sq. m)	Zone
POE-094 Cheeseboro Canyon Trailhead (Simi Hills) (continued)	SAL AUS	13.35	Buffer
	VINMAJ	76.84	Buffer
POE-095 Abrams Trailhead	CARPYC	56.12	Buffer
	CIRVUL	0.79	Buffer
	CONMAC	36.91	Buffer
	FOEVUL	106.38	Buffer
	NICGLA	0.79	Buffer
	SILMAR	30.50	Buffer
POE-096 Big Sycamore Canyon Horse Camp (Danielson Ranch, Point Mugu State Park)	CARPYC	76.85	Buffer
	FOEVUL	0.79	Hardscape or Trail
	NICGLA	1.57	Hardscape or Trail
	NICGLA	136.27	Buffer
	SAL AUS	0.79	Hardscape or Trail
POE-097 Corral Cyn / Mesa Peak Mtwy	FOEVUL	9.59	Buffer
	NICGLA	0.79	Buffer
	SAL AUS	0.79	Buffer
POE-098 Secret Trail Trailhead	SAL AUS	99.46	Border
POE-099 BBT - Piuma Rd Hairpin Trailhead	CARPYC	31.42	Buffer
POE-100 Malibu Ck St Pk / Lookout Rd	CARPYC	0.79	Buffer
	NICGLA	2.36	Buffer
	SPAJUN	4.71	Buffer
	VINMAJ	3.14	Buffer
POE-101 Temescal Ridge Trailhead (Topanga State Park)	CORSEL	0.79	Buffer
	FOEVUL	12.57	Buffer
	NICGLA	3.14	Buffer
	RICCOM	3.14	Buffer
	SAL AUS	12.57	Border
	SAL AUS	105.12	Buffer
	VINMAJ	427.40	Buffer
POE-103 Lake & Franklin Cyn fork	DELODO	684.66	Border
	DELODO	0.79	Buffer

Table 11 (continued). Santa Monica Mountains National Recreation Area point of entry (POE) monitoring sites in 2019 where target nonnative invasive plant species were detected. Table shows general POE location, gross area infested, as well as the area within the POE in which the infested area was found (hardscape or trail, buffer, or along the border). Species codes are in Table 1.

POE # and Location	Species	Gross Area Infested (sq. m)	Zone
POE-103 Lake & Franklin Cyn fork (continued)	NICGLA	0.79	Buffer
	VINMAJ	123.28	Buffer
POE-104 Malibu Creek State Park	CARPYC	2500.59	Buffer
	CENSOL	88.73	Buffer
	CIRVUL	0.79	Buffer
	CONMAC	10.21	Buffer
	FOEVUL	1.57	Hardscape or Trail
	FOEVUL	3.14	Buffer
	LEPLAT	0.79	Buffer
	SALAU	0.20	Buffer
	SILMAR	41.63	Buffer
	VINMAJ	2796.59	Buffer
POE-105 Yucca Trailhead	SALAU	151.00	Border
POE-106 Malibu Lagoon State Beach	CORSEL	6.28	Buffer
	EUPTR	25.13	Buffer
	FOEVUL	32.20	Buffer
	LEPLAT	240.46	Buffer
	PENSET	12.57	Buffer
	RICCOM	0.79	Buffer
POE-107 Pt Mugu SP/Chumash Trail	FOEVUL	5.50	Buffer
	NICGLA	134.00	Buffer
	PENSET	2286.85	Border
	PENSET	563.22	Buffer
POE-108 Topanga SP - Los Liones Dr (Topanga State Park)	CYPINV	1032.38	Buffer
	DELODO	2211.59	Border
	DELODO	58.80	Buffer
	EUPTR	2211.59	Border
	EUPTR	1597.86	Buffer
	FOEVUL	2211.59	Border
	FOEVUL	14.14	Buffer
	RICCOM	1852.86	Border
POE-109 Ed Edelman Park Trailhead	SILMAR	3.93	Buffer

Table 11 (continued). Santa Monica Mountains National Recreation Area point of entry (POE) monitoring sites in 2019 where target nonnative invasive plant species were detected. Table shows general POE location, gross area infested, as well as the area within the POE in which the infested area was found (hardscape or trail, buffer, or along the border). Species codes are in Table 1.

POE # and Location	Species	Gross Area Infested (sq. m)	Zone
POE-110 Hastain Trailhead (Franklin Canyon - upper)	ARUDON	278.48	Buffer
	CARPYC	0.79	Buffer
	CYPINV	1.57	Buffer
	DELODO	278.48	Buffer
	NICGLA	0.79	Buffer
POE-111 Grasslands Trail North	CARPYC	1768.14	Buffer
	PHAAQU	157.08	Buffer
	SILMAR	1926.99	Buffer
POE-112 Corral Cyn Rd/Baller Mtwy	CARPYC	18.02	Buffer
	FOEVUL	107.46	Buffer
	SALAU	0.79	Hardscape or Trail
	SALAU	36.43	Buffer
POE-113 Top of Reseda	CENSOL	22.90	Buffer
	CYPINV	33.32	Buffer
	SALAU	0.79	Buffer
POE-114 Thornhill Broome Beach Camping (mouth of La Jolla Canyon)	MYOLAE	12.57	Buffer
	NICGLA	25.92	Buffer
	PENSET	3597.74	Buffer
	SALAU	433.68	Buffer
POE-115 BBT - Will Rogers SHP Main Entrance (Topanga State Park)	CIRVUL	1.57	Buffer
	CONMAC	1.57	Buffer
	CYPINV	3.14	Hardscape or Trail
	CYPINV	3.14	Buffer
	DELODO	0.79	Hardscape or Trail
	DELODO	5712.49	Buffer
	EUPTR	1258.84	Buffer
	FOEVUL	18.85	Buffer
	NICGLA	3.14	Border
	NICGLA	2.36	Hardscape or Trail
	NICGLA	4911.87	Buffer
	RICCOM	3891.73	Buffer
	SALAU	231.04	Border
	SALAU	154.41	Hardscape or Trail

Table 11 (continued). Santa Monica Mountains National Recreation Area point of entry (POE) monitoring sites in 2019 where target nonnative invasive plant species were detected. Table shows general POE location, gross area infested, as well as the area within the POE in which the infested area was found (hardscape or trail, buffer, or along the border). Species codes are in Table 1.

POE # and Location	Species	Gross Area Infested (sq. m)	Zone
POE-115 BBT - Will Rogers SHP Main Entrance (Topanga State Park) (continued)	SAL AUS	1721.75	Buffer
	VINMAJ	11.01	Buffer
POE-116 Las Virgenes Canyon Trailhead	CARPYC	119.34	Buffer
	SAL AUS	0.79	Buffer
	SILMAR	28.27	Buffer
POE-117 Topanga Cyn Bl / Henry Ridge Mtw	CARPYC	93.95	Buffer
	NICGLA	0.79	Hardscape or Trail
	SAL AUS	3.14	Hardscape or Trail
	SAL AUS	42.95	Buffer
POE-118 Leo Carillo Campground	CARPYC	3.93	Buffer
	CYPINV	109.28	Buffer
	EUP TER	0.79	Buffer
	FOEVUL	17.28	Buffer
	NICGLA	138.67	Border
	NICGLA	53.97	Hardscape or Trail
	NICGLA	1374.78	Buffer
	PENSET	41.68	Border
	PENSET	67.65	Buffer
	RICCOM	43.02	Border
	RICCOM	29.06	Hardscape or Trail
	RICCOM	2235.62	Buffer
	SAL AUS	41.63	Buffer
	SILMAR	64.51	Buffer
	VINMAJ	41.63	Buffer
POE-119 Malibu Crk St Pk / Phantom Trail	CARPYC	13.57	Buffer
POE-120 Corral Canyon Trailhead	CYPINV	0.79	Buffer
	EUP TER	53.19	Buffer
	FOEVUL	36.62	Buffer
	NICGLA	0.79	Buffer
	RICCOM	364.24	Buffer
	SAL AUS	170.39	Buffer
	SILMAR	174.48	Buffer

Table 11 (continued). Santa Monica Mountains National Recreation Area point of entry (POE) monitoring sites in 2019 where target nonnative invasive plant species were detected. Table shows general POE location, gross area infested, as well as the area within the POE in which the infested area was found (hardscape or trail, buffer, or along the border). Species codes are in Table 1.

POE # and Location	Species	Gross Area Infested (sq. m)	Zone
POE-121 Runyon Cyn Rd Trailhead South	CYPINV	0.79	Buffer
	NICGLA	423.47	Buffer
	PENSET	540.39	Buffer
	RICCOM	379.49	Buffer
	SAL AUS	12.57	Buffer
POE-122 Rancho Sierra Vista Main Entrance	CARPYC	55.50	Buffer
	CIRVUL	30.50	Buffer
	CONMAC	266.22	Buffer
	CYPINV	0.79	Buffer
	FOEVUL	21.21	Buffer
	PHAAQU	0.79	Buffer
	SAL AUS	14.99	Hardscape or Trail
	SAL AUS	61.24	Buffer
	SILMAR	4.78	Buffer
POE-123 end of Queensferry Rd	CORSEL	0.79	Buffer
	CYPINV	22.45	Buffer
	FOEVUL	2.36	Buffer
	NICGLA	1.57	Buffer
	PENSET	123.11	Buffer
	SAL AUS	19.85	Buffer

Table 12. Santa Monica Mountains National Recreation Area point of entry (POE) monitoring sites in 2020 where target nonnative invasive plant species were detected. Table shows general POE location, gross area infested, as well as the area within the POE in which the infested area was found (hardscape or trail, buffer, or along the border). Species codes are in Table 1.

POE # and Location	Species	Gross Area Infested (sq. m)	Zone
POE-001 Sycamore Canyon Campground Entrance (Point Mugu State Park)	ARUDON	105.91	Buffer
	CARPYC	54.18	Buffer
	CONMAC	1012.06	Buffer
	FOEVUL	0.79	Border
	FOEVUL	166.59	Buffer
	MYOLAE	54.18	Buffer
	NICGLA	0.79	Border

Table 12 (continued). Santa Monica Mountains National Recreation Area point of entry (POE) monitoring sites in 2020 where target nonnative invasive plant species were detected. Table shows general POE location, gross area infested, as well as the area within the POE in which the infested area was found (hardscape or trail, buffer, or along the border). Species codes are in Table 1.

POE # and Location	Species	Gross Area Infested (sq. m)	Zone
POE-001 Sycamore Canyon Campground Entrance (Point Mugu State Park) (continued)	NICGLA	127.55	Buffer
	RICCOM	127.83	Buffer
POE-002 BBT - Sandstone Peak Trailhead (Circle X Ranch)	PENSET	2.36	Buffer
POE-003 Morrison Ranch	LEPLAT	305.92	Buffer
	SALAU	5.08	Buffer
POE-004 Big Sycamore Canyon Horse Corral (just north of Danielson Ranch)	CARPYC	1.57	Border
	CARPYC	55.88	Buffer
	FOEVUL	14.00	Buffer
POE-005 Busch Trailhead (Zuma/Trancas Canyons)	EUPTR	2127.44	Border
	EUPTR	5541.49	Buffer
	FOEVUL	13.35	Buffer
	NICGLA	0.79	Hardscape or Trail
	NICGLA	27.49	Buffer
	SALAU	127.45	Border
	SALAU	14.18	Hardscape or Trail
	SALAU	268.38	Buffer
POE-006 Malibu Creek State Park Campground	CARPYC	334.09	Border
	CARPYC	78.70	Hardscape or Trail
	CARPYC	4706.57	Buffer
	EUPTR	10.03	Buffer
	SALAU	20.07	Hardscape or Trail
	SILMAR	613.74	Border
	SILMAR	20.40	Hardscape or Trail
	SILMAR	321.16	Buffer
POE-007 Top of Topanga Overlook	CARPYC	14.92	Buffer
POE-008 Fryman Canyon / Nancy Hoover Pohl Overlook (Fryman Canyon Park)	CARPYC	111.93	Buffer
	CIRVUL	0.79	Buffer
	CORSEL	314.16	Buffer
	FOEVUL	1390.11	Buffer
	NICGLA	28.27	Buffer
	PENSET	327.50	Buffer
	RICCOM	2.36	Buffer

Table 12 (continued). Santa Monica Mountains National Recreation Area point of entry (POE) monitoring sites in 2020 where target nonnative invasive plant species were detected. Table shows general POE location, gross area infested, as well as the area within the POE in which the infested area was found (hardscape or trail, buffer, or along the border). Species codes are in Table 1.

POE # and Location	Species	Gross Area Infested (sq. m)	Zone
POE-008 Fryman Canyon / Nancy Hoover Pohl Overlook (Fryman Canyon Park) (continued)	SALAU	0.79	Buffer
	SPAJUN	1027.34	Buffer
POE-009 Leo Carrillo SP / Yellow Hill Rd	CARPYC	0.79	Hardscape or Trail
	CARPYC	3.14	Buffer
	FOEVUL	15.71	Hardscape or Trail
	FOEVUL	0.79	Buffer
	NICGLA	0.79	Buffer
	RICCOM	62.87	Buffer
POE-010 Malibu Crk St Pk / Craggs Dr	CARPYC	63.60	Buffer
	CIRVUL	43.78	Buffer
	CYPINV	79.36	Buffer
	PHAAQU	19.72	Border
	PHAAQU	86.19	Buffer
	SALAU	6.13	Hardscape or Trail
	SILMAR	10.06	Buffer
POE-011 Lower Stunt High Trail Trailhead	CENSOL	0.79	Hardscape or Trail
	SALAU	2.36	Hardscape or Trail
	SPAJUN	292.86	Buffer
POE-012 Mandeville / Garden Land Rd	ARUDON	12.22	Buffer
	NICGLA	0.79	Buffer
	VINMAJ	2.99	Buffer
POE-013 Tuna Cyn Rd	CARPYC	686.31	Buffer
	CENSOL	14.99	Buffer
	CIRVUL	22.78	Buffer
	EUPTER	565.38	Buffer
	FOEVUL	22.79	Buffer
	PENSET	0.79	Buffer
	SALAU	4.74	Buffer
POE-014 Zev Yaroslavsky LV Highlands Trailhead	SALAU	8.93	Hardscape or Trail
	SALAU	94.38	Buffer
	SILMAR	0.79	Buffer
POE-015 BBT - Hondo Canyon	CARPYC	350.82	Buffer
	PHAAQU	3.92	Hardscape or Trail

Table 12 (continued). Santa Monica Mountains National Recreation Area point of entry (POE) monitoring sites in 2020 where target nonnative invasive plant species were detected. Table shows general POE location, gross area infested, as well as the area within the POE in which the infested area was found (hardscape or trail, buffer, or along the border). Species codes are in Table 1.

POE # and Location	Species	Gross Area Infested (sq. m)	Zone
POE-015 BBT - Hondo Canyon (continued)	VINMAJ	119.21	Buffer
POE-016 Runyon Cyn Rd Trailhead North (Runyon Canyon Park)	NICGLA	724.68	Buffer
	PENSET	0.79	Hardscape or Trail
	PENSET	892.06	Buffer
	RICCOM	712.11	Buffer
	SALAU	721.96	Buffer
POE-017 Winding Way Trail (Escondido Cyn Natural Area)	EUPTE	136.68	Buffer
	FOEVUL	39.17	Buffer
	RICCOM	38.19	Buffer
	SALAU	120.20	Buffer
POE-018 Circle X Ranch Campground Entrance	CARPYC	538.84	Buffer
	DELODO	3.14	Buffer
	RICCOM	6.28	Buffer
	SILMAR	15.71	Buffer
POE-019 Malibu Creek State Pk / Liberty Cyn	CIRVUL	1.57	Buffer
	EUPTE	12.83	Buffer
	SALAU	173.45	Border
	SALAU	23.01	Buffer
POE-020 Serrano Rd Terminus	CARPYC	28.27	Border
	CARPYC	13.35	Buffer
	FOEVUL	215.01	Border
	FOEVUL	0.79	Hardscape or Trail
	FOEVUL	14.14	Buffer
	NICGLA	0.79	Buffer
POE-021 La Piedra State Beach Parking Lot	NICGLA	116.76	Buffer
	RICCOM	144.06	Buffer
POE-022 BBT - Corral Canyon Trailhead (Malibu Creek State Park)	SALAU	6.96	Hardscape or Trail
POE-023 Saddle Peak Rd / Hondo Cyn Trail	CARPYC	8.58	Buffer
	FOEVUL	12.57	Buffer
POE-024 Barker Fire Rd	VINMAJ	0.79	Border

Table 12 (continued). Santa Monica Mountains National Recreation Area point of entry (POE) monitoring sites in 2020 where target nonnative invasive plant species were detected. Table shows general POE location, gross area infested, as well as the area within the POE in which the infested area was found (hardscape or trail, buffer, or along the border). Species codes are in Table 1.

POE # and Location	Species	Gross Area Infested (sq. m)	Zone
POE-025 Malibu Bluffs, Michael Landon Center	EUPTER	4504.04	Border
	EUPTER	1538.83	Buffer
	FOEVUL	133.58	Border
	FOEVUL	2.36	Hardscape or Trail
	FOEVUL	340.56	Buffer
	NICGLA	53.56	Buffer
	RICCOM	0.79	Hardscape or Trail
	RICCOM	1.57	Buffer
POE-026 Paramount Ranch Main Entrance (Paramount Ranch)	CARPYC	127.84	Buffer
	CENSOL	1066.80	Border
	CENSOL	3.14	Hardscape or Trail
	CENSOL	261.99	Buffer
	CIRVUL	6.28	Hardscape or Trail
	CIRVUL	70.93	Buffer
	CONMAC	6.28	Hardscape or Trail
	CONMAC	310.95	Buffer
	FOEVUL	0.79	Hardscape or Trail
	FOEVUL	41.63	Buffer
	LEPLAT	565.89	Border
	LEPLAT	374.11	Hardscape or Trail
	LEPLAT	790.96	Buffer
	PHAAQU	36.98	Buffer
	SALAUUS	113.90	Hardscape or Trail
	SALAUUS	159.87	Buffer
POE-027 Red Rock Cyn Entrance	CARPYC	1033.77	Buffer
	CYPINV	1024.35	Buffer
	PHAAQU	1021.20	Buffer
	SILMAR	3.14	Buffer
POE-028 Canyonback Rd (N end of Mtn Gate development)	SALAUUS	171.22	Border
	SALAUUS	0.79	Hardscape or Trail
	SALAUUS	2.07	Buffer
POE-029 Los Robles Trail (COSCA Lands)	CARPYC	0.79	Hardscape or Trail
	CARPYC	1.57	Buffer
	NICGLA	0.79	Buffer

Table 12 (continued). Santa Monica Mountains National Recreation Area point of entry (POE) monitoring sites in 2020 where target nonnative invasive plant species were detected. Table shows general POE location, gross area infested, as well as the area within the POE in which the infested area was found (hardscape or trail, buffer, or along the border). Species codes are in Table 1.

POE # and Location	Species	Gross Area Infested (sq. m)	Zone
POE-029 Los Robles Trail (COSCA Lands) (continued)	PHAAQU	1.57	Buffer
	SALAU	1251.03	Buffer
POE-030 Morrison Trailhead	AILALT	187.59	Buffer
	ARUDON	18.02	Buffer
	CARPYC	581.24	Border
	CIRVUL	0.79	Buffer
	LEPLAT	4.59	Buffer
POE-031 Olympia Farms Trailhead	EUPTER	0.79	Buffer
	FOEVUL	3413.22	Buffer
	SALAU	0.79	Border
	SALAU	2.36	Hardscape or Trail
	SALAU	23.77	Buffer
POE-032 Santa Ynez Cyn Park Trailhead	ARUDON	78.54	Buffer
	CONMAC	3.14	Border
	CONMAC	3.14	Buffer
	EUPTER	19.19	Buffer
	FOEVUL	799.97	Border
	FOEVUL	3.14	Buffer
POE-033 Point Dume State Preserve Main Entry	EUPTER	5797.54	Buffer
	SALAU	0.79	Border
POE-034 Arroyo Sequit	CYPINV	28.20	Buffer
	FOEVUL	0.79	Buffer
	NICGLA	2.36	Buffer
	PHAAQU	14.94	Buffer
	RICCOM	38.48	Buffer
POE-035 Santa Maria Road	CARPYC	3.14	Buffer
	NICGLA	3.93	Buffer
POE-036 Franklin Canyon Park - Ranch	CARPYC	19.38	Buffer
	CONMAC	301.06	Buffer
	DELODO	94.91	Buffer
	FOEVUL	0.79	Buffer
	NICGLA	2.36	Buffer
	PENSET	5.28	Buffer

Table 12 (continued). Santa Monica Mountains National Recreation Area point of entry (POE) monitoring sites in 2020 where target nonnative invasive plant species were detected. Table shows general POE location, gross area infested, as well as the area within the POE in which the infested area was found (hardscape or trail, buffer, or along the border). Species codes are in Table 1.

POE # and Location	Species	Gross Area Infested (sq. m)	Zone
POE-036 Franklin Canyon Park - Ranch (continued)	RICCOM	75.92	Border
	RICCOM	82.51	Buffer
POE-037 Charmlee Regional Park / Charmlee Natural Area	EUPTER	18.31	Buffer
	FOEVUL	0.79	Border
	FOEVUL	0.79	Hardscape or Trail
	FOEVUL	1.57	Buffer
	NICGLA	0.79	Buffer
	PHAAQU	13.85	Buffer
POE-038 Las Virgenes View Trail Trailhead	SALAU	3.14	Buffer
	SILMAR	0.79	Buffer
POE-039 Stunt Ranch/Stunt Rd	SALAU	0.79	Buffer
	SPAJUN	6.28	Buffer
POE-040 Iredell Ln at Fire Road	CARPYC	35.44	Hardscape or Trail
POE-041 PCH, Adamson House (Malibu Lagoon State Beach)	CARPYC	37.34	Buffer
	EUPTER	0.79	Border
	EUPTER	206.75	Buffer
	NICGLA	0.79	Border
	NICGLA	4.71	Buffer
	RICCOM	0.79	Buffer
	SALAU	325.79	Buffer
POE-042 Malibu Creek SP/Reagan Meadows	SILMAR	101.08	Buffer
POE-043 BBT - Topanga State Park Main Entrance	CARPYC	1195.34	Buffer
	PHAAQU	0.79	Buffer
	VINMAJ	293.89	Border
	VINMAJ	3887.05	Buffer
POE-044 Dirt Mulholland / Greenbriar Dr	NICGLA	3.14	Buffer
	SALAU	381.97	Border
	SALAU	627.52	Buffer
POE-045 BBT - Kanan Dume Rd N - overflow	CARPYC	0.79	Buffer
	EUPTER	3.19	Buffer
	NICGLA	0.79	Hardscape or Trail

Table 12 (continued). Santa Monica Mountains National Recreation Area point of entry (POE) monitoring sites in 2020 where target nonnative invasive plant species were detected. Table shows general POE location, gross area infested, as well as the area within the POE in which the infested area was found (hardscape or trail, buffer, or along the border). Species codes are in Table 1.

POE # and Location	Species	Gross Area Infested (sq. m)	Zone
POE-045 BBT - Kanan Dume Rd N - overflow (continued)	SAL AUS	1.57	Hardscape or Trail
	SPA JUN	44.48	Buffer
POE-046 Gillette Ranch	AIL ALT	0.79	Hardscape or Trail
	AIL ALT	78.54	Buffer
	AR UDON	0.79	Buffer
	CAR PYC	3.93	Border
	CAR PYC	4050.87	Buffer
	CIR VUL	0.79	Buffer
	CYP INV	0.79	Border
	CYP INV	60.61	Buffer
	DE LO DO	1140.55	Buffer
	LE PLAT	70.39	Buffer
	NIC GLA	40.97	Buffer
	PH AA QU	38.60	Buffer
	SAL AUS	33.10	Border
	SAL AUS	29.85	Buffer
	SIL MAR	0.79	Border
	SIL MAR	1.57	Buffer
	SPA JUN	123.80	Buffer
	VIN MAJ	1277.22	Buffer
POE-047 BBT - Ray Miller Trailhead / La Jolla Canyon (Point Mugu State Park)	FOE VUL	169.02	Buffer
	NIC GLA	134.57	Buffer
	PEN SET	2940.39	Buffer
	RIC COM	12.57	Buffer
	SAL AUS	2109.11	Buffer
POE-048 Temescal Gateway Park	CAR PYC	17220.16	Buffer
	CIR VUL	0.79	Buffer
	COR SEL	0.79	Border
	CYP INV	8678.77	Buffer
	DE LO DO	32755.62	Buffer
	EUP TER	1054.98	Border
	EUP TER	109.42	Buffer
	FOE VUL	864.59	Border
	FOE VUL	26725.30	Buffer

Table 12 (continued). Santa Monica Mountains National Recreation Area point of entry (POE) monitoring sites in 2020 where target nonnative invasive plant species were detected. Table shows general POE location, gross area infested, as well as the area within the POE in which the infested area was found (hardscape or trail, buffer, or along the border). Species codes are in Table 1.

POE # and Location	Species	Gross Area Infested (sq. m)	Zone
POE-048 Temescal Gateway Park (continued)	NICGLA	4102.79	Buffer
	PENSET	1278.86	Border
	PENSET	1097.57	Buffer
	PHAAQU	0.79	Buffer
	RICCOM	864.59	Border
	RICCOM	12184.57	Buffer
	SALAU	1068.05	Border
	SALAU	62.28	Hardscape or Trail
	SALAU	292.71	Buffer
	VINMAJ	31248.21	Buffer
POE-049 Point Dume / Zuma, Westward Beach Rd	CYPINV	16.90	Buffer
	FOEVUL	3.14	Buffer
	MYOLAE	287.32	Buffer
	NICGLA	0.79	Buffer
	SALAU	36.93	Buffer
	VINMAJ	272.78	Buffer
POE-050 BBT - Encinal Cyn Rd	CARPYC	0.79	Buffer
	NICGLA	0.79	Buffer
	SALAU	6.40	Buffer
	SPAJUN	3.24	Buffer
POE-051 Viewridge Trailhead	CARPYC	12.57	Buffer
	NICGLA	0.79	Buffer
POE-052 Hillcrest Dr / Beverly Dr	CARPYC	0.79	Border
	CARPYC	0.79	Buffer
	FOEVUL	5.88	Buffer
	NICGLA	20.74	Buffer
	PENSET	1.57	Border
	PENSET	19.44	Buffer
	RICCOM	6.87	Border
	RICCOM	62.58	Buffer
	SALAU	0.79	Border
	SALAU	2.09	Buffer

Table 12 (continued). Santa Monica Mountains National Recreation Area point of entry (POE) monitoring sites in 2020 where target nonnative invasive plant species were detected. Table shows general POE location, gross area infested, as well as the area within the POE in which the infested area was found (hardscape or trail, buffer, or along the border). Species codes are in Table 1.

POE # and Location	Species	Gross Area Infested (sq. m)	Zone
POE-053 Nicholas Flat Trailhead	CARPYC	127.62	Buffer
	CIRVUL	0.79	Buffer
	PHAAQU	76.81	Border
	PHAAQU	299.03	Buffer
	SILMAR	0.79	Buffer
POE-054 Malibu Crk St Pk / Cistern Trail	CARPYC	0.79	Hardscape or Trail
	CARPYC	9.25	Buffer
	SALAU	29.49	Hardscape or Trail
POE-055 Stunt Ranch Entrance	SALAU	3.93	Hardscape or Trail
	SALAU	40.05	Buffer
	SPAJUN	223.89	Buffer
POE-056 Wilacre Park Main Entrance	CARPYC	90.32	Buffer
	SILMAR	0.79	Buffer
POE-057 Solstice Canyon Trailhead - inner lot	CARPYC	33.40	Buffer
	CONMAC	1.57	Buffer
	EUPTR	10.02	Hardscape or Trail
	EUPTR	718.16	Buffer
	FOEVUL	2.36	Buffer
	SALAU	11.60	Buffer
POE-058 Bark Park Trailhead (Baldwin OS)	CIRVUL	44.48	Buffer
	SILMAR	0.79	Buffer
POE-059 BBT - Dead Horse Trail Trailhead (Topanga State Park)	CARPYC	309.97	Buffer
POE-060 Caballero Cyn Trailhead	CARPYC	291.72	Buffer
	CIRVUL	3.14	Buffer
	NICGLA	13.07	Buffer
	PENSET	164.14	Buffer
	SILMAR	3.14	Buffer
	VINMAJ	44.84	Buffer
POE-061 Peter Strauss Ranch	CARPYC	94.45	Border
	CARPYC	0.79	Hardscape or Trail
	CARPYC	1394.66	Buffer
	CENSOL	6.73	Hardscape or Trail

Table 12 (continued). Santa Monica Mountains National Recreation Area point of entry (POE) monitoring sites in 2020 where target nonnative invasive plant species were detected. Table shows general POE location, gross area infested, as well as the area within the POE in which the infested area was found (hardscape or trail, buffer, or along the border). Species codes are in Table 1.

POE # and Location	Species	Gross Area Infested (sq. m)	Zone
POE-061 Peter Strauss Ranch (continued)	CENSOL	83.56	Buffer
	CIRVUL	306.41	Buffer
	NICGLA	61.24	Buffer
POE-062 Malibu Ck St Pk/Tapia Park (Malibu Creek State Park)	CARPYC	1853.44	Border
	CARPYC	20882.34	Buffer
	CENSOL	25.88	Buffer
	CIRVUL	1256.64	Buffer
	FOEVUL	0.79	Buffer
	SAL AUS	89.91	Buffer
	SILMAR	314.16	Buffer
	VINMAJ	5891.36	Buffer
POE-064 Casale Rd. End	FOEVUL	22.49	Border
	FOEVUL	0.79	Hardscape or Trail
	FOEVUL	116.18	Buffer
	NICGLA	3.93	Buffer
	SAL AUS	9.22	Border
	SAL AUS	0.65	Buffer
POE-066 BBT - Kanan Trailhead (Zuma/Trancas Canyons)	CIRVUL	0.79	Buffer
	FOEVUL	0.79	Border
	FOEVUL	14.68	Hardscape or Trail
	FOEVUL	38.30	Buffer
	NICGLA	0.79	Border
	SILMAR	2.36	Buffer
	SPAJUN	69.31	Border
	SPAJUN	35.95	Buffer
POE-067 Tree People parking lot (Coldwater Cyn/Wilacre)	CARPYC	1101.05	Buffer
	VINMAJ	1319.31	Buffer
POE-068 BBT - Lois Ewen Overlook	CARPYC	16.97	Buffer
	FOEVUL	0.79	Hardscape or Trail
	FOEVUL	24.34	Buffer
	NICGLA	163.61	Buffer
	SAL AUS	27.36	Border
	SAL AUS	12.76	Hardscape or Trail
	SAL AUS	252.16	Buffer

Table 12 (continued). Santa Monica Mountains National Recreation Area point of entry (POE) monitoring sites in 2020 where target nonnative invasive plant species were detected. Table shows general POE location, gross area infested, as well as the area within the POE in which the infested area was found (hardscape or trail, buffer, or along the border). Species codes are in Table 1.

POE # and Location	Species	Gross Area Infested (sq. m)	Zone
POE-069 East End Dirt Mulholland	CARPYC	38.48	Buffer
	CENSOL	0.79	Buffer
	RICCOM	85.91	Buffer
	SALAU	45.52	Buffer
	SILMAR	12.57	Buffer
POE-070 Juan Bautista de Anza Trailhead West	FOEVUL	0.79	Buffer
	SALAU	82.72	Buffer
	SILMAR	50.44	Border
POE-071 Rancho Potrero Trailhead	CARPYC	1.57	Buffer
	CIRVUL	0.79	Buffer
	CONMAC	5.37	Buffer
	CYNCAR	0.79	Buffer
	EUPTE	3.93	Buffer
	FOEVUL	240.22	Buffer
	SALAU	0.79	Border
	SALAU	20.74	Buffer
POE-072 Pt Dume, Lower Trailhead from Beach (Point Dume State Preserve)	EUPTE	65.20	Buffer
	FOEVUL	12.67	Buffer
	NICGLA	672.17	Buffer
	RICCOM	1.57	Buffer
	SALAU	1043.28	Buffer
POE-073 Wendy Trailhead	SALAU	14.97	Hardscape or Trail
	SALAU	3.14	Buffer
POE-074 El Pescador State Beach Parking Lot	FOEVUL	0.79	Buffer
	NICGLA	0.79	Buffer
	RICCOM	0.79	Buffer
	SALAU	9.03	Buffer
POE-075 WODOC parking lot (Franklin Canyon - upper)	CARPYC	10.92	Border
	CARPYC	365.16	Buffer
	CONMAC	23.04	Buffer
	CORSEL	1025.33	Buffer
	DELODO	613.50	Buffer
	FOEVUL	0.79	Buffer
	NICGLA	317.89	Buffer

Table 12 (continued). Santa Monica Mountains National Recreation Area point of entry (POE) monitoring sites in 2020 where target nonnative invasive plant species were detected. Table shows general POE location, gross area infested, as well as the area within the POE in which the infested area was found (hardscape or trail, buffer, or along the border). Species codes are in Table 1.

POE # and Location	Species	Gross Area Infested (sq. m)	Zone
POE-075 WODOC parking lot (Franklin Canyon - upper) (continued)	PENSET	368.37	Border
	PENSET	0.79	Hardscape or Trail
	PHAAQU	7.98	Buffer
	RICCOM	19.82	Buffer
	SALAU	2.36	Buffer
	SILMAR	3.14	Buffer
	VINMAJ	230.05	Buffer
POE-076 Topanga / Hillside Dr	CARPYC	45.83	Buffer
	SILMAR	78.54	Buffer
POE-077 Vanalden Ave S terminus	NICGLA	0.79	Buffer
	SALAU	29.06	Buffer
POE-078 Rocky Oaks	CARPYC	2086.93	Buffer
	CIRVUL	9.42	Buffer
	CYNCAR	50.27	Buffer
	FOEVUL	0.79	Buffer
	NICGLA	14.92	Buffer
	PHAAQU	7.07	Buffer
	SILMAR	1771.59	Buffer
POE-079 Juan Bautista de Anza Trailhead East	CARPYC	1238.15	Buffer
	CENSOL	273.19	Buffer
	FOEVUL	563.36	Buffer
	LEPLAT	558.65	Buffer
	NICGLA	0.79	Buffer
	RICCOM	53.88	Buffer
	SALAU	103.89	Buffer
	SILMAR	558.65	Buffer
POE-080 Point Dume State Preserve, Admin Rd	EUPTER	275.87	Hardscape or Trail
	EUPTER	1057.97	Buffer
	SALAU	137.97	Border
	SALAU	275.87	Hardscape or Trail
	SALAU	94.56	Buffer
POE-081 BBT - Yerba Buena Rd	PENSET	0.79	Buffer

Table 12 (continued). Santa Monica Mountains National Recreation Area point of entry (POE) monitoring sites in 2020 where target nonnative invasive plant species were detected. Table shows general POE location, gross area infested, as well as the area within the POE in which the infested area was found (hardscape or trail, buffer, or along the border). Species codes are in Table 1.

POE # and Location	Species	Gross Area Infested (sq. m)	Zone
POE-082 El Matador State Beach Parking Lot	FOEVUL	6.28	Buffer
	NICGLA	5.50	Buffer
	SALAU	7.80	Buffer
POE-083 end of Shady Oak Rd	CARPYC	76.90	Buffer
POE-084 Paramount Ranch/Mulholland Hwy	CARPYC	98.87	Buffer
	CIRVUL	0.79	Buffer
	LEPLAT	217.92	Border
POE-085 Musch Camp (Topanga State Park)	CARPYC	1210.62	Buffer
	CONMAC	79.33	Buffer
	SILMAR	78.54	Buffer
	VINMAJ	103.39	Buffer
POE-087 BBT - Tapia Trailhead (MCSP BBT)	CARPYC	0.17	Border
	CARPYC	1042.18	Buffer
	CENSOL	21.77	Buffer
	SALAU	0.79	Buffer
POE-088 Bonsall Trailhead (Zuma/Trancas Canyons)	CARPYC	479.22	Buffer
	EUPTR	4626.95	Border
	EUPTR	1855.43	Buffer
	FOEVUL	6.28	Buffer
	NICGLA	136.78	Buffer
	PHAAQU	154.26	Buffer
	RICCOM	106.92	Buffer
	SILMAR	3.14	Buffer
POE-089 BBT - Stunt Rd	SALAU	127.16	Buffer
POE-090 Nike Missile Overlook (Westridge-Canyonback Wilderness Park)	CARPYC	0.79	Buffer
	NICGLA	216.37	Buffer
	RICCOM	2.47	Hardscape or Trail
	RICCOM	143.00	Buffer
	SPAJUN	61.07	Border
	SPAJUN	2.36	Hardscape or Trail
	SPAJUN	1383.36	Buffer

Table 12 (continued). Santa Monica Mountains National Recreation Area point of entry (POE) monitoring sites in 2020 where target nonnative invasive plant species were detected. Table shows general POE location, gross area infested, as well as the area within the POE in which the infested area was found (hardscape or trail, buffer, or along the border). Species codes are in Table 1.

POE # and Location	Species	Gross Area Infested (sq. m)	Zone
POE-091 De Anza Park (Malibu Creek SP)	CARPYC	43.05	Border
	CARPYC	148.64	Buffer
	CIRVUL	50.09	Buffer
	CONMAC	6.67	Border
	CONMAC	17.06	Buffer
	CYPINV	9.61	Buffer
	LEPLAT	14.22	Border
	NICGLA	0.79	Buffer
	SALAU	144.01	Buffer
	SILMAR	34.77	Buffer
POE-092 92 Trail / Entrada Rd	CARPYC	2091.93	Buffer
	CIRVUL	0.79	Buffer
	VINMAJ	1007.90	Buffer
POE-093 Malibu Springs/Mulholland Hwy	CARPYC	291.67	Buffer
	FOEVUL	260.42	Buffer
	NICGLA	6.28	Buffer
	PHAAQU	190.86	Buffer
	SPAJUN	3.14	Buffer
POE-094 Cheeseboro Canyon Trailhead (Simi Hills)	CIRVUL	0.79	Hardscape or Trail
	NICGLA	16.61	Buffer
	SALAU	10.21	Border
	SALAU	84.04	Hardscape or Trail
	SALAU	3.93	Buffer
	VINMAJ	758.99	Buffer
POE-095 Abrams Trailhead	CENSOL	0.79	Buffer
	CIRVUL	0.79	Buffer
	FOEVUL	298.12	Buffer
	SILMAR	10.76	Buffer
POE-096 Big Sycamore Canyon Horse Camp (Danielson Ranch, Point Mugu State Park)	CARPYC	0.79	Border
	CARPYC	581.49	Buffer
	CIRVUL	0.79	Buffer
	FOEVUL	29.80	Buffer

Table 12 (continued). Santa Monica Mountains National Recreation Area point of entry (POE) monitoring sites in 2020 where target nonnative invasive plant species were detected. Table shows general POE location, gross area infested, as well as the area within the POE in which the infested area was found (hardscape or trail, buffer, or along the border). Species codes are in Table 1.

POE # and Location	Species	Gross Area Infested (sq. m)	Zone
POE-096 Big Sycamore Canyon Horse Camp (Danielson Ranch, Point Mugu State Park) (continued)	NICGLA	10.02	Buffer
	SILMAR	0.79	Buffer
POE-097 Corral Cyn / Mesa Peak Mtwy	FOEVUL	44.54	Buffer
	NICGLA	1.57	Hardscape or Trail
POE-098 Secret Trail Trailhead	SAL AUS	330.43	Border
POE-099 BBT - Piuma Rd Hairpin Trailhead	CARPYC	2.28	Buffer
	CENSOL	0.26	Buffer
POE-100 Malibu Ck St Pk / Lookout Rd	CARPYC	16.56	Buffer
	CIRVUL	0.79	Buffer
	NICGLA	28.27	Buffer
	SILMAR	0.79	Buffer
	SPA JUN	90.62	Buffer
POE-101 Temescal Ridge Trailhead (Topanga State Park)	DELODO	620.05	Buffer
	FOEVUL	115.88	Buffer
	NICGLA	417.46	Buffer
	PENSET	19.31	Buffer
	RICCOM	37.34	Buffer
	SAL AUS	0.79	Buffer
	VINMAJ	670.96	Buffer
POE-102 Santa Maria Road	CARPYC	157.08	Buffer
	NICGLA	3.14	Buffer
POE-103 Lake & Franklin Cyn fork	DELODO	646.92	Buffer
	NICGLA	4.89	Buffer
POE-104 Malibu Creek State Park	CARPYC	225.94	Border
	CARPYC	24.15	Hardscape or Trail
	CARPYC	271.89	Buffer
	CENSOL	42.29	Border
	CENSOL	2.36	Hardscape or Trail
	CENSOL	37.53	Buffer
	CIRVUL	1.57	Buffer
	FOEVUL	2.36	Hardscape or Trail
	LEPLAT	2.36	Buffer

Table 12 (continued). Santa Monica Mountains National Recreation Area point of entry (POE) monitoring sites in 2020 where target nonnative invasive plant species were detected. Table shows general POE location, gross area infested, as well as the area within the POE in which the infested area was found (hardscape or trail, buffer, or along the border). Species codes are in Table 1.

POE # and Location	Species	Gross Area Infested (sq. m)	Zone
POE-104 Malibu Creek State Park (continued)	SAL AUS	0.79	Hardscape or Trail
	SAL AUS	0.79	Buffer
POE-105 Yucca Trailhead	SAL AUS	228.51	Border
	SAL AUS	0.79	Buffer
	SPA JUN	89.42	Buffer
POE-106 Malibu Lagoon State Beach	ARUDON	0.79	Buffer
	CYP INV	0.79	Buffer
	EUP TER	12.57	Border
	EUP TER	3.14	Hardscape or Trail
	FOEVUL	2.36	Buffer
	LEPLAT	8.85	Border
	LEPLAT	274.03	Buffer
	PEN SET	0.79	Buffer
	SAL AUS	12.57	Border
	SAL AUS	3.14	Hardscape or Trail
POE-107 Pt Mugu SP/Chumash Trail	FOEVUL	12.57	Buffer
	NICGLA	53.41	Buffer
	PEN SET	3926.48	Buffer
	SAL AUS	37.86	Border
	SAL AUS	135.09	Buffer
POE-108 Topanga SP - Los Liones Dr (Topanga State Park)	CARPYC	7.91	Buffer
	CYP INV	3.93	Buffer
	DELODO	1287.19	Buffer
	EUP TER	23.44	Hardscape or Trail
	EUP TER	1851.91	Buffer
	FOEVUL	122.25	Border
	FOEVUL	105.21	Buffer
	NICGLA	91.38	Buffer
	RICCOM	53.56	Buffer
	SAL AUS	12.73	Buffer
POE-109 Ed Edelman Park Trailhead	CARPYC	40.84	Buffer
POE-110 Hastain Trailhead (Franklin Canyon - upper)	ARUDON	88.05	Buffer
	DELODO	350.46	Buffer

Table 12 (continued). Santa Monica Mountains National Recreation Area point of entry (POE) monitoring sites in 2020 where target nonnative invasive plant species were detected. Table shows general POE location, gross area infested, as well as the area within the POE in which the infested area was found (hardscape or trail, buffer, or along the border). Species codes are in Table 1.

POE # and Location	Species	Gross Area Infested (sq. m)	Zone
POE-110 Hastain Trailhead (Franklin Canyon - upper) (continued)	NICGLA	0.79	Buffer
	RICCOM	0.79	Buffer
POE-111 Grasslands Trail North	CARPYC	457.32	Buffer
	CIRVUL	28.27	Buffer
	CONMAC	27.89	Buffer
	PHAAQU	0.79	Buffer
	SALAU	32.20	Buffer
	SILMAR	76.87	Buffer
POE-112 Corral Cyn Rd/Baller Mtwy	FOEVUL	123.13	Buffer
	SALAU	28.74	Border
	SALAU	14.32	Buffer
POE-113 Top of Reseda	CENSOL	364.10	Buffer
POE-114 Thornhill Broom Beach Camping (mouth of La Jolla Canyon)	PENSET	3264.03	Buffer
	SALAU	282.26	Buffer
POE-115 BBT - Will Rogers SHP Main Entrance (Topanga State Park)	CIRVUL	33.35	Buffer
	CONMAC	0.79	Buffer
	DELODO	0.79	Border
	DELODO	3276.50	Buffer
	EUPTR	6.27	Border
	EUPTR	615.49	Buffer
	FOEVUL	0.79	Border
	FOEVUL	30.57	Buffer
	NICGLA	935.65	Buffer
	RICCOM	298.81	Buffer
	SALAU	43.62	Border
	SALAU	769.82	Buffer
POE-116 Las Virgenes Canyon Trailhead	CARPYC	212.98	Buffer
	SALAU	0.79	Buffer
POE-117 Topanga Cyn BI / Henry Ridge Mtw	CARPYC	284.60	Buffer
	NICGLA	12.57	Buffer
	SALAU	57.60	Buffer

Table 12 (continued). Santa Monica Mountains National Recreation Area point of entry (POE) monitoring sites in 2020 where target nonnative invasive plant species were detected. Table shows general POE location, gross area infested, as well as the area within the POE in which the infested area was found (hardscape or trail, buffer, or along the border). Species codes are in Table 1.

POE # and Location	Species	Gross Area Infested (sq. m)	Zone
POE-118 Leo Carillo Campground	CARPYC	0.79	Hardscape or Trail
	CARPYC	157.74	Buffer
	CIRVUL	0.79	Buffer
	CYPINV	146.44	Buffer
	FOEVUL	38.06	Border
	FOEVUL	31.05	Buffer
	NICGLA	9.42	Hardscape or Trail
	NICGLA	225.65	Buffer
	PENSET	206.16	Buffer
	PHAAQU	3111.28	Buffer
	RICCOM	368.29	Buffer
	SAL AUS	3.34	Buffer
	SILMAR	15.89	Buffer
POE-119 Malibu Crk St Pk / Phantom Trail	CARPYC	269.35	Buffer
	SAL AUS	0.79	Hardscape or Trail
POE-120 Corral Canyon Trailhead	CIRVUL	1.57	Buffer
	CYPINV	36.06	Buffer
	EUP TER	0.79	Border
	EUP TER	355.24	Buffer
	FOEVUL	118.47	Buffer
	NICGLA	1.57	Buffer
	RICCOM	700.41	Buffer
	SAL AUS	4.96	Border
	SAL AUS	264.50	Buffer
POE-121 Runyon Cyn Rd Trailhead South	CYPINV	0.79	Buffer
	NICGLA	543.62	Buffer
	PENSET	564.47	Buffer
	RICCOM	12.57	Buffer
	SAL AUS	134.46	Buffer
POE-122 Rancho Sierra Vista Main Entrance	CARPYC	6.18	Border
	CARPYC	5.50	Hardscape or Trail
	CARPYC	1233.33	Buffer
	CIRVUL	0.79	Hardscape or Trail
	CIRVUL	224.76	Buffer

Table 12 (continued). Santa Monica Mountains National Recreation Area point of entry (POE) monitoring sites in 2020 where target nonnative invasive plant species were detected. Table shows general POE location, gross area infested, as well as the area within the POE in which the infested area was found (hardscape or trail, buffer, or along the border). Species codes are in Table 1.

POE # and Location	Species	Gross Area Infested (sq. m)	Zone
POE-122 Rancho Sierra Vista Main Entrance (continued)	CONMAC	0.79	Hardscape or Trail
	CONMAC	258.33	Buffer
	CYPINV	330.47	Buffer
	FOEVUL	30.79	Buffer
	PHAAQU	263.15	Buffer
	SALAU	35.32	Buffer
	SILMAR	1.57	Buffer
POE-123 end of Queensferry Rd	CIRVUL	2.36	Buffer
	CORSEL	0.79	Buffer
	CYPINV	17.93	Buffer
	FOEVUL	39.97	Border
	FOEVUL	3.14	Buffer
	NICGLA	3.93	Buffer
	PENSET	50.70	Buffer
	SALAU	1.57	Buffer

Table 13. Total area infested by nonnative invasives (sum of all point of entry sites, POEs) for 2016–2020 in Santa Monica Mountains National Recreation Area.

Year	N Sites Surveyed	N of NNIS Observed	N Sites w/ NNIS	N Sites w/o NNIS	% of Sites w/ NNIS	% of Target Species Detected	Area of Infestation (sq. m.)
2016	59	18	46	13	78	72	26,127
2017	31	15	26	5	84	60	371,935
2018	31	15	27	4	87	60	23,706
2019	123	23	116	7	94	92	272,778
2020	123	22	120	3	98	88	318,251

Table 14. Area of infestation by target nonnative invasive species at Santa Monica Mountains National Recreation Area in 2016.

Species	Area of Infestation (sq. m.)
<i>Ailanthus altissima</i>	1,036
<i>Arundo donax</i>	314
<i>Asphodelus fistulosus</i>	0
<i>Carduus pycnocephalus</i>	1,362
<i>Carthamus lanatus</i>	0
<i>Centaurea solstitialis</i>	1
<i>Cirsium vulgare</i>	13
<i>Conium maculatum</i>	436
<i>Cortaderia selloana</i>	0
<i>Cynara cardunculus</i>	0
<i>Cyperus involucratus</i>	25
<i>Delairea odorata</i>	1,400
<i>Euphorbia terracina</i>	1,932
<i>Foeniculum vulgare</i>	8,285
<i>Lepidium latifolium</i>	24
<i>Myoporum laetum</i>	0
<i>Nicotiana glauca</i>	1,017
<i>Pennisetum setaceum</i>	4,788
<i>Phalaris aquatica</i>	0
<i>Rhaponticum repens</i>	0
<i>Ricinus communis</i>	1,042
<i>Salsola australis</i>	4,241
<i>Silybum marianum</i>	1
<i>Spartium junceum</i>	97
<i>Vinca major</i>	113

Table 15. Area of infestation by target nonnative invasive species at Santa Monica Mountains National Recreation Area in 2017.

Species	Area of Infestation (sq. m.)
<i>Ailanthus altissima</i>	0
<i>Arundo donax</i>	0
<i>Asphodelus fistulosus</i>	707
<i>Carduus pycnocephalus</i>	115,077
<i>Carthamus lanatus</i>	0
<i>Centaurea solstitialis</i>	13,151
<i>Cirsium vulgare</i>	0
<i>Conium maculatum</i>	314
<i>Cortaderia selloana</i>	0
<i>Cynara cardunculus</i>	0
<i>Cyperus involucratus</i>	0
<i>Delairea odorata</i>	11,462
<i>Euphorbia terracina</i>	27,553
<i>Foeniculum vulgare</i>	29,164
<i>Lepidium latifolium</i>	11,624
<i>Myoporum laetum</i>	0
<i>Nicotiana glauca</i>	41,742
<i>Pennisetum setaceum</i>	49,227
<i>Phalaris aquatica</i>	1,571
<i>Rhaponticum repens</i>	0
<i>Ricinus communis</i>	21,786
<i>Salsola australis</i>	15,417
<i>Silybum marianum</i>	0
<i>Spartium junceum</i>	2,675
<i>Vinca major</i>	30,464

Table 16. Area of infestation by target nonnative invasive species at Santa Monica Mountains National Recreation Area in 2018.

Species	Area of Infestation (sq. m.)
<i>Ailanthus altissima</i>	0
<i>Arundo donax</i>	0
<i>Asphodelus fistulosus</i>	0
<i>Carduus pycnocephalus</i>	3,511
<i>Carthamus lanatus</i>	0
<i>Centaurea solstitialis</i>	316
<i>Cirsium vulgare</i>	32
<i>Conium maculatum</i>	0
<i>Cortaderia selloana</i>	0
<i>Cynara cardunculus</i>	1
<i>Cyperus involucratus</i>	0
<i>Delairea odorata</i>	150
<i>Euphorbia terracina</i>	1,284
<i>Foeniculum vulgare</i>	1,121
<i>Lepidium latifolium</i>	121
<i>Myoporum laetum</i>	0
<i>Nicotiana glauca</i>	1,742
<i>Pennisetum setaceum</i>	2
<i>Phalaris aquatica</i>	0
<i>Rhaponticum repens</i>	0
<i>Ricinus communis</i>	2,439
<i>Salsola australis</i>	8,669
<i>Silybum marianum</i>	1
<i>Spartium junceum</i>	2,675
<i>Vinca major</i>	1,643

Table 17. Area of infestation by target nonnative invasive species at Santa Monica Mountains National Recreation Area in 2019.

Species	Area of Infestation (sq. m.)
<i>Ailanthus altissima</i>	2,263
<i>Arundo donax</i>	780
<i>Asphodelus fistulosus</i>	1
<i>Carduus pycnocephalus</i>	84,957
<i>Carthamus lanatus</i>	0
<i>Centaurea solstitialis</i>	5,865
<i>Cirsium vulgare</i>	2,198
<i>Conium maculatum</i>	5,431
<i>Cortaderia selloana</i>	439
<i>Cynara cardunculus</i>	50
<i>Cyperus involucratus</i>	4,838
<i>Delairea odorata</i>	19,135
<i>Euphorbia terracina</i>	25,155
<i>Foeniculum vulgare</i>	11,934
<i>Lepidium latifolium</i>	1,269
<i>Myoporum laetum</i>	13
<i>Nicotiana glauca</i>	11,288
<i>Pennisetum setaceum</i>	12,040
<i>Phalaris aquatica</i>	612
<i>Rhaponticum repens</i>	0
<i>Ricinus communis</i>	14,475
<i>Salsola australis</i>	14,641
<i>Silybum marianum</i>	26,496
<i>Spartium junceum</i>	2,724
<i>Vinca major</i>	26,175

Table 18. Area of infestation by target nonnative invasive species at Santa Monica Mountains National Recreation Area in 2020.

Species	Area of Infestation (sq. m.)
<i>Ailanthus altissima</i>	267
<i>Arundo donax</i>	304
<i>Asphodelus fistulosus</i>	0
<i>Carduus pycnocephalus</i>	70,813
<i>Carthamus lanatus</i>	0
<i>Centaurea solstitialis</i>	2,207
<i>Cirsium vulgare</i>	2,119
<i>Conium maculatum</i>	2,057
<i>Cortaderia selloana</i>	1,341
<i>Cynara cardunculus</i>	51
<i>Cyperus involucratus</i>	10,435
<i>Delairea odorata</i>	40,790
<i>Euphorbia terracina</i>	33,130
<i>Foeniculum vulgare</i>	36,877
<i>Lepidium latifolium</i>	3,188
<i>Myoporum laetum</i>	341
<i>Nicotiana glauca</i>	9,379
<i>Pennisetum setaceum</i>	15,133
<i>Phalaris aquatica</i>	5,350
<i>Rhaponticum repens</i>	0
<i>Ricinus communis</i>	16,311
<i>Salsola australis</i>	13,463
<i>Silybum marianum</i>	4,109
<i>Spartium junceum</i>	3,457
<i>Vinca major</i>	47,129

Appendix B. Dirt Roads and Trails (DRT) Surveys

Target nonnative invasive species were detected at many different locations, and in varying configurations along subtransects, across the dirt roads and trails surveys in Santa Monica Mountains National Recreation Area, as documented during years 2016 through 2020 (Tables 19, 20, 21, 22, 23, and 24).

Table 19. Santa Monica Mountains National Recreation Area dirt roads and trails (DRT) monitoring sites for 2016–2020, with number and percentage of sites with target nonnative invasive species (NNIS) observed.

Year	N Sites Surveyed	N of NNIS Observed	N Sites w/ NNIS	N Sites w/o NNIS	% of Sites w/ NNIS	% of Target Species Detected
2016	61	13	47	14	77	52
2017	59	15	44	15	75	60
2018	58	17	42	16	72	68
2019	197	18	158	39	80	72
2020	226	18	186	40	82	72

Table 20. Santa Monica Mountains National Recreation Area dirt roads and trails (DRT) monitoring sites with observed nonnative invasive plant species in 2016. “X” indicates presence and “–” indicates absence of the species within a specific subtransect. Species codes are in Table 1.

DRT # and Location	Species Code	Subtransects									
		1	2	3	4	5	6	7	8	9	10
DRT-001 Serrano Cyn Rd, W end	FOEVUL	–	X	–	–	X	X	–	–	–	X
DRT-004 Lower Cheeseboro past Morrison Ranch Rd	CARPYC	–	–	X	X	–	X	–	–	–	–
	SALAU	X	X	X	X	X	X	X	–	X	X
DRT-005 Old Boney Trail	SALAU	–	–	–	X	–	X	–	–	–	–
DRT-006 MCSP Regan Ranch driveway	ASPFIS	–	–	–	–	–	–	–	X	–	–
	CARPYC	X	X	–	–	X	–	–	–	–	–
	FOEVUL	–	–	X	–	–	–	–	–	–	–
	PHAAQU	–	–	–	–	–	–	–	X	–	–
	SALAU	–	–	–	–	X	–	–	–	X	X
	SILMAR	–	–	–	X	–	–	–	–	–	–
DRT-008 Morrison Road from Las Virgenes	CARPYC	–	–	–	–	–	X	–	–	–	–
	SALAU	X	X	X	X	X	–	X	–	–	–
	SILMAR	–	–	X	–	–	–	–	–	–	–
DRT-009 Old Boney Trail at Blue Canyon	SALAU	–	–	–	–	–	–	–	X	X	X
DRT-011 Red Rock - SE of junction Calabasas Motorway / Red Rock Fire Road	SALAU	–	X	–	–	–	–	–	–	–	–
DRT-012 Reseda - Caballero Canyon	MARVUL	–	–	X	–	–	–	–	–	–	–
DRT-013 Upper Sycamore	CARPYC	–	–	–	–	X	–	–	–	–	–
	SALAU	X	X	–	–	X	X	X	–	–	–
DRT-016 Westridge Fire Rd	NONE	–	–	–	–	–	–	–	–	–	–

Table 20 (continued). Santa Monica Mountains National Recreation Area dirt roads and trails (DRT) monitoring sites with observed nonnative invasive plant species in 2016. “X” indicates presence and “–” indicates absence of the species within a specific subtransect. Species codes are in Table 1.

DRT # and Location	Species Code	Subtransects									
		1	2	3	4	5	6	7	8	9	10
DRT-017 Leo Carrillo SP - S end Nicholas Flat Trail	NONE	–	–	–	–	–	–	–	–	–	–
DRT-020 Cheeseboro Ridge near Tower Access	SAL AUS	X	X	X	X	–	–	X	X	–	X
DRT-021 Lower Sycamore Canyon Overlook Trail	NONE	–	–	–	–	–	–	–	–	–	–
DRT-023 King Gillette Ranch	CARPYC	X	X	X	X	X	X	–	X	–	X
	CIRVUL	–	–	–	–	–	–	–	–	–	X
	SAL AUS	X	–	–	–	–	–	–	X	X	–
DRT-024 Albertson Motorway	CARPYC	–	–	X	–	–	–	–	–	–	–
	SAL AUS	X	X	X	–	–	–	X	X	–	–
	SILMAR	X	–	X	–	–	–	–	–	–	–
DRT-025 Ranch Center Road off Big Sycamore Canyon	SAL AUS	X	X	X	X	–	X	X	–	X	–
DRT-027 BBT west of junction Stunt Rd / Schueren Rd	FOEVUL	–	–	–	–	–	X	–	–	–	–
	SPAJUN	–	X	X	X	–	–	–	–	–	X
DRT-028 Tree People	SAL AUS	X	X	X	–	–	–	–	–	–	–
	VINMAJ	–	–	–	–	X	–	–	–	–	–
DRT-029 Zuma - Edison Road (Zuma Ridge)	FOEVUL	–	–	X	–	–	–	–	–	–	–
DRT-030 Escondido Falls – lower	EUP TER	–	X	X	–	–	–	–	X	X	X
	FOEVUL	–	X	X	X	X	–	X	X	–	X
	SAL AUS	X	–	–	–	–	–	–	–	–	–
	VINMAJ	–	–	–	–	–	X	–	–	–	–

Table 20 (continued). Santa Monica Mountains National Recreation Area dirt roads and trails (DRT) monitoring sites with observed nonnative invasive plant species in 2016. “X” indicates presence and “–” indicates absence of the species within a specific subtransect. Species codes are in Table 1.

DRT # and Location	Species Code	Subtransects									
		1	2	3	4	5	6	7	8	9	10
DRT-031 Greenbriar/Dirt Mulholland (Upper Topanga SP)	MARVUL	X	X	–	–	–	–	–	–	–	–
	SALAU	–	–	–	–	X	X	–	–	–	–
DRT-032 West Mandeville Fire Road	NICGLA	–	–	–	–	–	–	X	–	–	–
	SALAU	–	–	X	X	X	X	–	–	–	–
DRT-033 Yellow Hill	FOEVUL	–	–	X	–	–	–	–	–	–	–
	SALAU	–	–	–	–	–	–	–	X	–	–
DRT-034 Castro Peak Motorway	NONE	–	–	–	–	–	–	–	–	–	–
DRT-035 Topanga SP - Musch Camp	SALAU	–	X	X	–	–	–	–	–	–	–
DRT-036 Calabasas - De Anza Trail	CARPYC	–	–	–	–	–	–	–	X	X	–
	SALAU	–	–	–	X	–	X	–	X	–	–
DRT-037 La Jolla Valley Loop Trail	PHAAQU	–	–	X	X	X	X	X	–	–	–
DRT-040 Liberty Ridge Trail, Agoura	SALAU	–	–	–	–	–	X	–	–	X	–
DRT-041 Sandstone Peak	NONE	–	–	–	–	–	–	–	–	–	–
DRT-043 BBT E of Malibu Canyon Road at Piuma	CARPYC	–	–	–	–	X	X	X	X	X	X
DRT-107 BBT from Malibu Cyn Rd	CARPYC	X	X	X	X	X	X	X	X	X	X
DRT-117 Spur off Hiden Pond Trail, N toward Broome	SALAU	X	X	X	X	X	–	X	–	X	X
DRT-119 BBT connector W of Stunt Rd	CENMEL	–	–	–	–	–	–	–	–	X	–
	SALAU	–	X	X	–	–	–	–	–	–	–

Table 20 (continued). Santa Monica Mountains National Recreation Area dirt roads and trails (DRT) monitoring sites with observed nonnative invasive plant species in 2016. “X” indicates presence and “–” indicates absence of the species within a specific subtransect. Species codes are in Table 1.

DRT # and Location	Species Code	Subtransects									
		1	2	3	4	5	6	7	8	9	10
DRT-121 RSV/Satwiwa Cultural Center	CARPYC	–	–	–	–	X	–	–	–	–	–
	SALAU	–	X	–	–	–	X	–	–	–	–
DRT-123 Dirt Mulholland W	SALAU	–	–	–	–	–	X	X	X	X	X
DRT-124 Bienveneda Trail	NONE	–	–	–	–	–	–	–	–	–	–
DRT-127 Cheeseboro Ridge	SALAU	X	X	X	–	–	–	–	–	X	X
DRT-129 Circle X Grotto Trail	CARPYC	X	X	X	X	X	–	–	–	–	–
	SILMAR	–	X	–	–	–	–	–	–	–	–
DRT-134 Hennessey	NONE	–	–	–	–	–	–	–	–	–	–
DRT-136 China Flat S of Albertson MTW/Palo Comado	CARPYC	–	–	–	X	X	–	–	–	X	X
DRT-137 La Jolla Valley/Un-named trail off Ranch Ctr Rd	SALAU	X	X	X	X	X	X	X	X	X	X
DRT-139 Calabasas Motorway	SPAJUN	–	–	–	–	X	X	X	–	–	–
DRT-141 Spur off Guadalupe Trail toward Broome	FOEVUL	X	X	–	–	–	–	–	–	–	–
	PHAAQU	–	–	X	–	–	–	–	–	–	–
	SALAU	–	–	–	–	–	–	–	X	X	X
DRT-143 Reseda - unnamed trail on ridgeline	NONE	–	–	–	–	–	–	–	–	–	–
DRT-144 Sullivan Fire Road - mid/upper	CARPYC	–	–	X	–	–	–	–	–	–	–

Table 20 (continued). Santa Monica Mountains National Recreation Area dirt roads and trails (DRT) monitoring sites with observed nonnative invasive plant species in 2016. “X” indicates presence and “–” indicates absence of the species within a specific subtransect. Species codes are in Table 1.

DRT # and Location	Species Code	Subtransects									
		1	2	3	4	5	6	7	8	9	10
DRT-146 Lookout Road, MCSP	NONE	–	–	–	–	–	–	–	–	–	–
DRT-148 Upper Las Virgenes Canyon	CARPYC	–	–	–	–	–	X	–	–	–	–
	CENSOL	X	–	–	–	–	X	X	X	X	X
	SAL AUS	–	–	–	X	X	–	X	X	–	–
DRT-150 Rocky Oaks	CENMEL	X	X	X	X	X	X	–	–	–	–
	SAL AUS	–	–	–	–	–	–	–	–	–	X
DRT-151 Las Virgenes Trail S of Lost Hills	CARPYC	–	–	X	X	–	–	–	–	–	–
	SAL AUS	X	–	–	–	–	–	–	X	–	–
	SILMAR	–	–	X	X	–	–	–	–	–	–
DRT-153 RSV - Hidden Valley Overlook Trail	SAL AUS	–	–	X	X	–	–	–	X	X	–
DRT-154 Trancas Fire Road (from Encinal Cyn Rd)	NONE	–	–	–	–	–	–	–	–	–	–
DRT-155 Trail from Puerco Cyn Fire Road to Pepperdine	NONE	–	–	–	–	–	–	–	–	–	–
DRT-156 Will Rodgers SHP	SAL AUS	X	X	X	X	X	X	X	X	X	–
DRT-157 Zuma Ridge from Busch Drive	CARPYC	–	–	–	–	–	X	X	–	–	–
	FOEVUL	–	–	X	–	–	–	–	–	–	–
	RICCOM	–	–	–	X	–	–	–	–	–	–
	SAL AUS	–	–	X	–	–	–	–	–	–	X
DRT-158 Point Dume	SAL AUS	–	–	X	X	–	–	–	–	–	–

Table 20 (continued). Santa Monica Mountains National Recreation Area dirt roads and trails (DRT) monitoring sites with observed nonnative invasive plant species in 2016. “X” indicates presence and “–” indicates absence of the species within a specific subtransect. Species codes are in Table 1.

DRT # and Location	Species Code	Subtransects									
		1	2	3	4	5	6	7	8	9	10
DRT-159 Serrania Trail (off Dirt Mulholland)	SAL AUS	–	–	–	–	–	–	–	–	X	X
DRT-160 Topanga SP, BBT E of Temescal Ridge	NONE	–	–	–	–	–	–	–	–	–	–
DRT-162 Coyote Canyon / Overlook Trail, Paramount Ranch	NONE	–	–	–	–	–	–	–	–	–	–
DRT-163 Topanga SP Trippet Ranch	CARPYC	–	–	–	X	X	–	–	X	X	X
	PHAAQU	–	–	–	X	X	–	–	X	–	–
DRT-165 La Jolla Valley Loop, PMSP	NONE	–	–	–	–	–	–	–	–	–	–
DRT-166 BBT S of Mishe Mokwa Trailhead	CARPYC	–	–	–	–	–	–	–	–	–	X

Table 21. Santa Monica Mountains National Recreation Area dirt roads and trails (DRT) monitoring sites with observed nonnative invasive plant species in 2017. “X” indicates presence and “–” indicates absence of the species within a specific subtransect. Species codes are in Table 1.

DRT # and Location	Species Code	Subtransects									
		1	2	3	4	5	6	7	8	9	10
DRT-044 Temescal to Rivas Cyn (Will Rodgers) connector	DELODO	X	X	X	X	–	–	–	–	X	X
	FOEVUL	–	X	–	–	–	–	–	–	–	–
	NICGLA	X	–	–	–	–	–	–	–	–	–
	SAL AUS	–	–	–	–	–	–	–	–	–	X
DRT-045 Murphy Way	CARPYC	–	–	–	–	–	–	–	X	X	–
	EUP TER	–	–	–	X	–	–	–	–	X	–
	FOEVUL	–	–	–	X	X	X	X	–	X	–

Table 21 (continued). Santa Monica Mountains National Recreation Area dirt roads and trails (DRT) monitoring sites with observed nonnative invasive plant species in 2017. “X” indicates presence and “–” indicates absence of the species within a specific subtransect. Species codes are in Table 1.

DRT # and Location	Species Code	Subtransects									
		1	2	3	4	5	6	7	8	9	10
DRT-045 Murphy Way (continued)	RICCOM	–	–	–	–	–	–	–	X	–	–
	SALAU	X	X	X	–	–	–	–	–	–	–
DRT-047 Upper Topanga from Mulholland	NONE	–	–	–	–	–	–	–	–	–	–
DRT-048 Spencer Canyon W of Mandeville Fire Road	EUPTR	–	–	–	–	–	–	–	–	–	X
	FOEVUL	–	–	–	–	–	X	X	–	X	X
	SPAJUN	–	–	–	X	–	–	–	–	–	–
DRT-049 Overlook Trail, Lower Big Sycamore Canyon	CARPYC	–	–	–	–	–	X	–	X	–	X
	CONMAC	–	–	–	–	–	–	–	X	–	–
	FOEVUL	–	X	–	–	X	X	–	–	–	–
	NICGLA	X	–	X	–	–	–	X	–	–	–
	SALAU	–	–	–	–	–	X	–	X	X	X
	SILMAR	–	–	–	X	–	–	–	–	–	–
DRT-050 Lost Cabin Trail, Malibu Creek SP	NONE	–	–	–	–	–	–	–	–	–	–
DRT-051 BBT W of Trippet Ranch, Topanga SP	NONE	–	–	–	–	–	–	–	–	–	–
DRT-052 Lower Cheeseboro	SALAU	–	X	X	X	X	X	–	X	–	–
DRT-054 BBT S of Etz Meloy Fire Road	SALAU	–	–	–	–	X	X	–	–	–	–
DRT-055 Cold Canyon Trail	NONE	–	–	–	–	–	–	–	–	–	–
DRT-056 Palo Comado Main Trail, N of Ranch Center Connector	CARPYC	–	–	–	X	–	–	–	–	X	–
	SALAU	–	–	–	–	X	–	–	–	–	–

Table 21 (continued). Santa Monica Mountains National Recreation Area dirt roads and trails (DRT) monitoring sites with observed nonnative invasive plant species in 2017. “X” indicates presence and “–” indicates absence of the species within a specific subtransect. Species codes are in Table 1.

DRT # and Location	Species Code	Subtransects									
		1	2	3	4	5	6	7	8	9	10
DRT-057 Fossil Trail, Upper Big Sycamore Canyon	CARPYC	–	–	–	–	–	–	–	–	–	X
DRT-058 Nicolas Flat, trail to Malibu Springs, NE of pond	PHAAQU	X	X	–	–	–	–	–	–	–	–
DRT-059 Malibu Bluffs	EUPTER	–	–	–	X	X	X	–	X	–	X
	FOEVUL	–	–	X	–	X	X	X	X	–	–
DRT-060 Sullivan Fire Road - mid/lower	CARPYC	X	–	–	X	X	–	–	–	–	–
	FOEVUL	–	–	–	–	–	–	–	–	–	X
DRT-061 Off Kanan, S of BBT	CARPYC	X	–	–	–	X	X	–	–	–	–
	EUPTER	–	–	–	–	–	–	X	–	–	–
	SPAJUN	X	X	–	–	X	–	–	–	–	–
DRT-064 Franklin Canyon	CARPYC	–	–	X	–	X	X	X	X	–	X
	CONMAC	–	–	–	–	–	X	–	–	–	X
	CORJUB	X	–	–	–	–	–	–	–	–	–
	DELODO	–	–	–	–	–	X	–	–	–	–
DRT-065 Chamberlain trail (BBT SW of Tri Peaks)	NONE	–	–	–	–	–	–	–	–	–	–
DRT-066 Solstice Canyon - Sostomo Trail	CARPYC	X	X	X	X	–	–	–	–	–	–
	EUPTER	–	X	X	X	X	–	–	–	–	–
	SAL AUS	–	–	–	–	–	–	X	X	–	–
DRT-067 Garapito Trail, Topanga SP	SAL AUS	–	–	–	–	X	–	–	–	–	–
DRT-068 Ridgeline between Las Virgenes and Cheeseboro	SAL AUS	X	X	X	X	X	X	X	X	X	X

Table 21 (continued). Santa Monica Mountains National Recreation Area dirt roads and trails (DRT) monitoring sites with observed nonnative invasive plant species in 2017. “X” indicates presence and “–” indicates absence of the species within a specific subtransect. Species codes are in Table 1.

DRT # and Location	Species Code	Subtransects									
		1	2	3	4	5	6	7	8	9	10
DRT-069 North of Serrano Valley	FOEVUL	–	X	X	–	–	–	–	–	–	–
	SALAU	–	–	–	–	–	X	X	–	–	X
DRT-071 Gillette NE Quad Ridge Trail	NONE	–	–	–	–	–	–	–	–	–	–
DRT-072 Trail from top of China Flat Trail east on ridgeline	SALAU	–	–	–	X	X	–	X	X	X	X
DRT-073 Big Sycamore Canyon, south of Danielson Ranch	CARPYC	X	X	X	X	X	X	X	X	X	X
	SILMAR	–	–	X	–	–	–	X	–	–	X
DRT-075 Red Rock	NONE	–	–	–	–	–	–	–	–	–	–
DRT-077 Upper Big Sycamore Canyon Trail from horse bridge toward water fall	SALAU	X	X	X	X	X	X	X	X	X	–
DRT-079 Summit to Summit Motorway, Upper Topanga	NICGLA	–	X	–	–	–	–	–	–	–	–
	SALAU	–	–	X	X	X	X	–	X	–	–
DRT-081 Yellow Hill Fire Road - lower	SALAU	X	–	X	X	X	X	X	X	X	–
DRT-083 Temescal Ridge, Pacific Palisades	SALAU	–	–	–	–	–	–	–	–	–	X
DRT-179 Topanga Ridge Motorway - upper	NONE	–	–	–	–	–	–	–	–	–	–
DRT-180 Bark - New Millennium Loop Trail	SALAU	X	X	X	X	X	X	–	X	X	X
DRT-181 RSV West of Horse Parking	SALAU	–	–	–	–	–	X	–	–	–	–
DRT-182 Trancas Cyn Fire Rd from Encinal Cyn Rd	CARPYC	X	–	–	–	–	–	–	–	–	X

Table 21 (continued). Santa Monica Mountains National Recreation Area dirt roads and trails (DRT) monitoring sites with observed nonnative invasive plant species in 2017. “X” indicates presence and “–” indicates absence of the species within a specific subtransect. Species codes are in Table 1.

DRT # and Location	Species Code	Subtransects									
		1	2	3	4	5	6	7	8	9	10
DRT-183 Cold Creek Trail / Lower Stunt High Trail	NONE	–	–	–	–	–	–	–	–	–	–
DRT-184 Dirt Mulholland East of Sullivan Canyon	SPAJUN	X	X	X	X	–	–	–	–	–	X
DRT-185 Big Sycamore Canyon South of Horse Bridge	CARPYC	X	X	–	–	–	X	–	–	–	–
	SAL AUS	–	–	–	–	–	X	X	X	X	X
DRT-186 Nicolas Ridge Fire Road S	EUP TER	X	–	–	–	–	–	–	–	–	–
	SAL AUS	X	X	X	–	–	–	–	–	–	–
DRT-187 Summit to Summit	CARPYC	–	–	–	–	X	–	X	X	–	–
	NICGLA	–	–	–	–	–	–	–	X	–	–
	RICCOM	–	–	–	–	X	–	–	–	–	–
	SAL AUS	–	–	X	X	X	X	–	–	–	X
DRT-188 Rogers Road	NONE	–	–	–	–	–	–	–	–	–	–
DRT-189 Solstice - Sostomo upper	NONE	–	–	–	–	–	–	–	–	–	–
DRT-191 Upper Las Virgenes conector	CENSOL	X	X	–	X	–	–	X	–	X	X
DRT-192 Betty Dearing (Fryman)	CARPYC	–	–	–	–	X	X	X	X	–	–
	FOEVUL	–	–	–	–	–	–	–	–	X	–
	NICGLA	X	–	–	–	–	–	–	–	–	–
DRT-196 Las Virgenes West from LV Rd.	SAL AUS	X	X	X	X	X	X	X	X	X	X
DRT-198 Latigo Canyon BBT	NONE	–	–	–	–	–	–	–	–	–	–

Table 21 (continued). Santa Monica Mountains National Recreation Area dirt roads and trails (DRT) monitoring sites with observed nonnative invasive plant species in 2017. "X" indicates presence and "-" indicates absence of the species within a specific subtransect. Species codes are in Table 1.

DRT # and Location	Species Code	Subtransects									
		1	2	3	4	5	6	7	8	9	10
DRT-199 Tapia Park	CARPYC	-	X	X	X	X	X	-	-	-	-
	VINMAJ	-	-	-	-	-	-	-	-	X	X
DRT-200 Upper Cheese Ridge - South of upper LV connector	CARPYC	-	-	-	X	-	-	-	-	-	-
	SAL AUS	-	-	-	-	X	X	-	X	X	X
DRT-201 Coyote trail from Two Foxes	SAL AUS	-	X	-	-	-	X	X	-	-	X
DRT-204 Dirt Mullholland West of Nike Site	NICGLA	-	-	-	X	-	-	-	-	-	-
	SAL AUS	-	-	-	-	-	-	-	-	X	-
	SPA JUN	X	X	X	X	X	X	X	X	X	X
DRT-205 Zuma Bluff Killer Trail - upper	NONE	-	-	-	-	-	-	-	-	-	-
DRT-206 Solstice Main Trail	CARPYC	-	-	-	-	-	X	X	-	-	-
	EUP TER	X	X	-	-	-	-	-	-	-	-
DRT-208 West Mandeville Fire Rd Fuel Break	NONE	-	-	-	-	-	-	-	-	-	-
DRT-209 Yellow Hill Fire Road - middle	FOEVUL	-	-	-	X	X	-	-	-	-	-
	SAL AUS	-	-	-	X	X	-	X	-	-	-
DRT-211 East Topanga Fire Road at Cheney Fire Road	SAL AUS	-	-	X	X	-	X	X	X	X	X
DRT-212 Calabasas to Cold Creek	CARPYC	-	-	-	-	-	-	X	-	-	X
DRT-213 PCH East of Mugu State Beach	PEN SET	-	-	-	-	-	-	-	-	-	X
DRT-214 Etz Meloy West End	NONE	-	-	-	-	-	-	-	-	-	-

Table 21 (continued). Santa Monica Mountains National Recreation Area dirt roads and trails (DRT) monitoring sites with observed nonnative invasive plant species in 2017. “X” indicates presence and “–” indicates absence of the species within a specific subtransect. Species codes are in Table 1.

DRT # and Location	Species Code	Subtransects									
		1	2	3	4	5	6	7	8	9	10
DRT-215 Cistern Trail, MCSP	CARPYC	X	X	–	–	–	X	–	X	X	X
	PHAAQU	–	–	–	–	–	–	–	–	–	X
DRT-216 Paramount Backdrop Trail	CARPYC	–	–	–	–	–	X	–	–	–	–
	CENSOL	–	–	X	–	X	X	X	X	X	X

Table 22. Santa Monica Mountains National Recreation Area dirt roads and trails (DRT) monitoring sites with observed nonnative invasive plant species in 2018. “X” indicates presence and “–” indicates absence of the species within a specific subtransect. Species codes are in Table 1.

DRT # and Location	Species Code	Subtransects									
		1	2	3	4	5	6	7	8	9	10
DRT-084 Cheeseboro Ridge Road	CARPYC	–	–	–	–	X	X	X	X	–	X
	LEPLAT	–	–	–	–	–	–	–	–	–	X
	SALAU	–	–	–	–	–	–	–	X	–	–
DRT-085 La Jolla Valley/Loop Trail	PHAAQU	–	–	X	–	–	–	X	X	–	–
	SALAU	–	–	X	X	X	X	X	–	–	–
DRT-086 BBT south of Newton Falls	CARPYC	X	–	–	–	X	–	–	X	X	X
	EUPTR	–	–	–	X	X	–	–	–	–	–
	FOEVUL	–	X	X	X	–	–	–	–	–	–
	SPAJUN	–	–	–	X	X	X	X	X	–	–
DRT-087 E to W ridge at southern boundary of Gillette Ranch	SALAU	–	–	–	–	–	–	–	X	X	–
DRT-088 Cheeseboro Canyon, Shepherds Flat	SALAU	X	–	X	–	–	–	–	X	X	X

Table 22 (continued). Santa Monica Mountains National Recreation Area dirt roads and trails (DRT) monitoring sites with observed nonnative invasive plant species in 2018. “X” indicates presence and “–” indicates absence of the species within a specific subtransect. Species codes are in Table 1.

DRT # and Location	Species Code	Subtransects									
		1	2	3	4	5	6	7	8	9	10
DRT-089 Big Sycamore Canyon, Wood Canyon Connector	CARPYC	X	X	X	X	X	X	X	X	X	–
	CIRVUL	X	–	–	–	–	–	–	–	–	–
	SALAU	–	–	–	–	–	X	X	–	X	X
	SILMAR	–	X	–	–	–	X	–	–	–	–
DRT-091 West Saddle Peak Rd	NONE	–	–	–	–	–	–	–	–	–	–
DRT-092 Laurel Canyon/Fryman Road	CARPYC	X	X	X	X	X	X	X	X	X	X
DRT-093 Zuma Canyon Edison Road (close to 29)	CARPYC	–	–	–	–	–	–	X	X	X	X
	CIRVUL	–	–	–	–	–	–	X	X	X	–
	FOEVUL	–	–	–	X	X	X	X	X	X	X
	NICGLA	X	–	–	–	X	–	–	–	–	–
	SALAU	–	X	–	–	–	–	–	–	–	–
DRT-094 Kanan Road to Ocean View Connector	CARPYC	–	–	–	–	–	–	–	–	X	–
	FOEVUL	X	X	–	X	X	X	X	X	X	X
	SILMAR	–	–	–	–	–	–	–	–	X	–
	SPAJUN	–	X	–	X	–	–	–	–	–	–
DRT-095 Winnetka Ave/Corbin Canyon Trail	NONE	–	–	–	–	–	–	–	–	–	–
DRT-096 Canyonback Fire Road, up at the top	NICGLA	–	X	–	–	–	–	–	–	X	–
	SALAU	X	X	X	X	X	X	X	X	X	X
DRT-100 Juan de Anza W from Las Virgenes Road	SALAU	X	X	X	X	X	X	X	X	X	X

Table 22 (continued). Santa Monica Mountains National Recreation Area dirt roads and trails (DRT) monitoring sites with observed nonnative invasive plant species in 2018. “X” indicates presence and “–” indicates absence of the species within a specific subtransect. Species codes are in Table 1.

DRT # and Location	Species Code	Subtransects									
		1	2	3	4	5	6	7	8	9	10
DRT-101 BBT East of La Jolla Canyon	SAL AUS	–	X	X	X	X	X	X	–	–	–
DRT-102 CXR Canyon View Trail	NONE	–	–	–	–	–	–	–	–	–	–
DRT-103 Mott Rd, MCSP	CARPYC	X	X	X	X	X	X	X	X	X	X
	CENSOL	X	X	–	–	–	–	–	–	X	–
	VINMAJ	–	–	–	–	–	X	X	–	–	–
DRT-104 Coyote Cyn Overlook Trail	SAL AUS	–	–	–	X	X	–	–	–	–	–
DRT-105 Danielson Cabin to Tri Peaks - East Trail	NONE	–	–	–	–	–	–	–	–	–	–
DRT-106 Chumash Indian Trail	NONE	–	–	–	–	–	–	–	–	–	–
DRT-107 BBT from Malibu Cyn Rd	NONE	–	–	–	–	–	–	–	–	–	–
DRT-119 BBT connector W of Stunt Rd	NONE	–	–	–	–	–	–	–	–	–	–
DRT-121 RSV/Satwiwa Cultural Center	CARPYC	X	–	–	–	–	–	–	–	–	–
	PHAAQU	–	–	–	–	–	–	–	X	X	–
	SAL AUS	–	–	–	–	–	–	–	–	X	X
DRT-123 Dirt Mulholland W	CARPYC	–	–	–	–	–	–	–	–	X	X
	SAL AUS	–	X	–	X	X	–	–	–	–	–
DRT-124 Bienveneda Trail	NONE	–	–	–	–	–	–	–	–	–	–
DRT-127 Cheeseboro Ridge	SAL AUS	–	X	X	–	X	–	X	X	–	X

Table 22 (continued). Santa Monica Mountains National Recreation Area dirt roads and trails (DRT) monitoring sites with observed nonnative invasive plant species in 2018. “X” indicates presence and “–” indicates absence of the species within a specific subtransect. Species codes are in Table 1.

DRT # and Location	Species Code	Subtransects									
		1	2	3	4	5	6	7	8	9	10
DRT-129 Circle X Grotto Trail	CARPYC	–	X	X	X	X	X	–	–	–	–
	FOEVUL	–	–	–	X	–	–	–	–	–	–
DRT-134 Hennessey	CARPYC	–	–	–	–	–	–	X	–	X	–
	CENSOL	–	–	–	–	–	X	X	–	–	X
DRT-136 China Flat S of Albertson MTW/Palo Comado	CARPYC	–	X	–	X	–	X	–	X	–	–
DRT-137 La Jolla Valley/Un-named trail off Ranch Ctr Rd	SAL AUS	X	X	X	X	X	X	X	X	X	X
DRT-217 Old Cabin Trail, PMSP	CARPYC	X	–	–	–	–	–	–	X	–	–
	SAL AUS	–	–	–	–	–	X	–	X	X	–
DRT-218 Carmichael / Russell Tr - Charmlee	FOEVUL	–	–	–	–	–	–	–	X	X	X
DRT-219 Coastal Slope Trail, Malibu Cyn	CARPYC	–	–	–	–	–	–	–	–	–	X
	EUP TER	X	X	X	–	–	–	–	–	–	X
	FOEVUL	X	–	X	–	–	–	–	–	–	X
	SAL AUS	–	–	–	–	–	–	–	–	–	X
	SPA JUN	–	–	–	–	–	–	–	–	–	X
DRT-220 Inspiration Point / Will Rogers Loop Trail	DELODO	X	–	–	–	–	X	X	X	–	–
	NICGLA	–	–	–	–	–	X	X	X	X	X
	RICCOM	–	–	–	–	–	–	X	X	X	–
	SAL AUS	–	–	–	X	X	X	X	X	X	X
DRT-221 Canyon View Trail, Zuma	NONE	–	–	–	–	–	–	–	–	–	–

Table 22 (continued). Santa Monica Mountains National Recreation Area dirt roads and trails (DRT) monitoring sites with observed nonnative invasive plant species in 2018. "X" indicates presence and "-" indicates absence of the species within a specific subtransect. Species codes are in Table 1.

DRT # and Location	Species Code	Subtransects									
		1	2	3	4	5	6	7	8	9	10
DRT-222 Zuma Canyon Trail	CARPYC	X	X	-	X	X	-	X	X	-	-
	EUPTR	X	-	X	X	X	X	X	X	X	X
	FOEVUL	-	-	-	-	-	-	X	-	-	-
	SILMAR	-	-	-	-	X	-	-	-	-	-
	SPAJUN	X	-	-	-	-	-	-	-	-	-
DRT-223 Santa Maria Canyon / Summit Trail	CIRVUL	-	-	-	X	-	-	-	-	-	-
DRT-224 Farmer Ridge Fire Road, Sullivan Cyn	NONE	-	-	-	-	-	-	-	-	-	-
DRT-225 Overlook Fire Road - lower	SALOUS	-	X	-	X	X	X	X	X	X	X
DRT-226 Bulldog Motorway, MCSP	NONE	-	-	-	-	-	-	-	-	-	-
DRT-227 Hondo Canyon / Backbone Trail	CARPYC	X	-	-	-	X	-	X	X	-	X
	CIRVUL	-	X	-	-	-	-	-	-	X	X
DRT-228 Chesebro Equestrian Trail	CARPYC	-	-	-	-	-	-	-	-	X	X
	VINMAJ	-	-	-	-	-	-	-	-	X	X
DRT-230 Backbone Trail - Triunfo Pass	NONE	-	-	-	-	-	-	-	-	-	-
DRT-231 Forest Trail, MCSP	CARPYC	X	X	X	X	-	X	X	-	X	X
	CIRVUL	-	-	-	-	-	-	-	-	X	-
	CONMAC	X	-	X	X	-	X	X	-	X	-
	FOEVUL	-	-	X	-	-	-	-	-	-	-
	LEPLAT	-	-	X	-	-	X	-	-	-	-
	VINMAJ	-	-	-	X	X	X	X	X	X	X

Table 22 (continued). Santa Monica Mountains National Recreation Area dirt roads and trails (DRT) monitoring sites with observed nonnative invasive plant species in 2018. “X” indicates presence and “–” indicates absence of the species within a specific subtransect. Species codes are in Table 1.

DRT # and Location	Species Code	Subtransects									
		1	2	3	4	5	6	7	8	9	10
DRT-232 Palo Comado Canyon Road	CARPYC	–	–	–	–	–	–	X	–	–	–
DRT-233 Old Boney Trail near Fossil Trail	SALAU	–	X	–	–	–	–	–	–	–	–
DRT-234 Nicholas Flat Trail	NONE	–	–	–	–	–	–	–	–	–	–
DRT-235 Middle Corral Canyon Trail	NONE	–	–	–	–	–	–	–	–	–	–
DRT-236 Sullivan Ridge Trail	CIRVUL	X	X	–	–	–	–	–	–	–	–
	LEPLAT	–	–	–	–	–	–	–	–	X	–
	NICGLA	–	X	–	–	–	–	–	–	–	–
DRT-237 Ramera Motorway East	FOEVUL	–	–	X	X	–	–	X	–	X	X
	SALAU	X	–	–	–	–	–	–	–	–	–
	SPAJUN	X	–	–	–	–	–	–	–	–	–
DRT-238 East Topanga Fire Road	SALAU	X	X	X	–	X	X	X	X	X	X
DRT-239 Bell Canyon Fire Road	CARPYC	–	–	X	–	–	–	–	–	–	–
	CENSOL	–	–	–	–	–	–	X	X	X	X
	SALAU	–	X	X	X	X	X	X	X	X	X
DRT-240 Chernoff Trail, Franklin Cyn	CARPYC	–	–	X	X	–	–	–	X	–	–
	CORJUB	–	X	–	–	X	X	–	–	–	X
	CYPINV	–	–	–	–	–	X	–	–	–	–
DRT-242 Medea Creek Trail, Paramount Ranch	CARPYC	–	–	–	–	–	–	–	–	X	X
	LEPLAT	–	–	X	–	–	–	–	–	–	–
	SALAU	–	–	–	–	X	X	–	–	–	–

Table 22 (continued). Santa Monica Mountains National Recreation Area dirt roads and trails (DRT) monitoring sites with observed nonnative invasive plant species in 2018. “X” indicates presence and “–” indicates absence of the species within a specific subtransect. Species codes are in Table 1.

DRT # and Location	Species Code	Subtransects									
		1	2	3	4	5	6	7	8	9	10
DRT-244 Juan Bautista de Anza / Calabasas Connector Trail	SALOUS	X	X	X	X	X	X	X	X	X	X
DRT-245 Sycamore Canyon Road, PMSP	CARPYC	X	–	–	X	–	X	X	X	X	–
	LEPLAT	X	–	–	–	X	–	–	–	X	–
	SILMAR	–	–	–	X	X	–	–	–	–	–
DRT-246 Backbone Trail - Mulholland to Etz Meloy	NICGLA	–	–	–	X	–	–	–	–	–	–
	SALOUS	–	X	X	X	X	X	X	–	–	–
DRT-247 Topanga Ridge Motorway - lower	NONE	–	–	–	–	–	–	–	–	–	–
DRT-248 Dirt Mulholland	NONE	–	–	–	–	–	–	–	–	–	–

Table 23. Santa Monica Mountains National Recreation Area dirt roads and trails (DRT) monitoring sites with observed nonnative invasive plant species in 2019. “X” indicates presence and “–” indicates absence of the species within a specific subtransect. Species codes are in Table 1.

DRT # and Location	Species Code	Subtransects									
		1	2	3	4	5	6	7	8	9	10
DRT-001 Serrano Cyn Rd, W end	CARPYC	–	–	–	–	–	–	–	–	–	X
	FOEVUL	X	X	X	X	–	X	–	X	X	X
	SILMAR	–	–	–	X	–	–	–	–	–	–
DRT-004 Lower Cheeseboro past Morrison Ranch Rd	CARPYC	–	–	–	–	–	–	–	–	X	–
	SALOUS	X	X	X	X	X	X	X	X	–	–
DRT-005 Old Boney Trail	CARPYC	X	–	–	–	–	–	–	–	–	–
	FOEVUL	–	–	–	–	–	–	–	X	X	–

Table 23 (continued). Santa Monica Mountains National Recreation Area dirt roads and trails (DRT) monitoring sites with observed nonnative invasive plant species in 2019. “X” indicates presence and “–” indicates absence of the species within a specific subtransect. Species codes are in Table 1.

DRT # and Location	Species Code	Subtransects									
		1	2	3	4	5	6	7	8	9	10
DRT-005 Old Boney Trail (continued)	PHAAQU	X	–	–	–	–	–	–	–	–	–
	SALAU	–	–	–	X	–	–	–	–	–	–
DRT-006 MCSP Regan Ranch driveway	CARPYC	X	X	X	–	–	–	–	–	–	–
	FOEVUL	–	–	X	–	–	–	–	–	–	–
	LEPLAT	–	–	X	–	–	–	–	–	–	–
	PHAAQU	–	–	–	–	–	–	X	–	–	–
	SALAU	–	X	–	–	–	–	–	–	–	–
	SILMAR	X	X	–	X	–	–	–	–	–	–
DRT-008 Morrison Road from Las Virgenes	CARPYC	–	–	–	–	X	X	X	X	–	–
	SALAU	X	–	–	–	–	–	–	–	–	–
	SILMAR	–	X	X	X	X	X	–	–	X	X
DRT-009 Old Boney Trail at Blue Canyon	NONE	–	–	–	–	–	–	–	–	–	–
DRT-011 Red Rock - SE of junction Calabasas Motorway / Red Rock Fire Road	SALAU	–	X	–	–	–	–	–	–	–	–
DRT-012 Reseda - Caballero Canyon	NONE	–	–	–	–	–	–	–	–	–	–
DRT-013 Upper Sycamore	CARPYC	X	X	–	–	X	X	–	X	X	–
	SALAU	X	X	–	–	–	–	X	–	–	–
DRT-016 Westridge Fire Rd	SALAU	X	X	X	X	–	–	–	–	X	X
DRT-017 Leo Carrillo SP - S end Nicholas Flat Trail	NONE	–	–	–	–	–	–	–	–	–	–
DRT-020 Cheeseboro Ridge near Tower Access	SALAU	–	–	–	–	–	–	–	–	–	X

Table 23 (continued). Santa Monica Mountains National Recreation Area dirt roads and trails (DRT) monitoring sites with observed nonnative invasive plant species in 2019. “X” indicates presence and “–” indicates absence of the species within a specific subtransect. Species codes are in Table 1.

DRT # and Location	Species Code	Subtransects									
		1	2	3	4	5	6	7	8	9	10
DRT-021 Lower Sycamore Canyon Overlook Trail	PHAAQU	–	–	–	–	–	–	–	–	X	X
	SAL AUS	X	X	–	X	X	X	X	X	–	X
DRT-023 King Gillette Ranch	CARPYC	X	X	X	X	X	X	X	X	X	X
	CIRVUL	–	–	–	–	–	–	X	X	–	–
	SAL AUS	–	–	–	–	–	–	X	–	–	–
	SILMAR	–	–	X	–	–	–	–	–	–	–
DRT-024 Albertson Motorway	CARPYC	–	X	–	–	–	–	–	–	–	–
	SILMAR	X	X	–	–	–	–	–	–	–	–
DRT-025 Ranch Center Road off Big Sycamore Canyon	CIRVUL	X	X	–	–	–	–	–	–	–	–
DRT-027 BBT west of junction Stunt Rd / Schueren Rd	CARPYC	–	–	–	–	–	–	X	X	–	–
DRT-028 Tree People	CARPYC	X	–	–	–	–	–	–	–	–	X
	EUP TER	–	–	–	–	–	–	–	–	–	X
	SAL AUS	–	–	–	–	–	–	–	X	X	X
DRT-029 Zuma - Edison Road (Zuma Ridge)	FOEVUL	–	–	–	–	–	–	–	X	–	–
	NICGLA	–	–	–	–	–	–	–	X	X	X
DRT-030 Escondido Falls - lower	CARPYC	X	X	X	–	–	–	X	X	X	X
	CIRVUL	–	–	–	–	–	–	X	–	–	–
	EUP TER	X	X	X	X	X	X	–	X	X	X
	FOEVUL	X	X	X	X	X	X	X	X	X	X
	SILMAR	X	X	X	X	X	X	–	–	X	X
	VINMAJ	–	–	–	–	X	X	–	–	–	–

Table 23 (continued). Santa Monica Mountains National Recreation Area dirt roads and trails (DRT) monitoring sites with observed nonnative invasive plant species in 2019. “X” indicates presence and “–” indicates absence of the species within a specific subtransect. Species codes are in Table 1.

DRT # and Location	Species Code	Subtransects									
		1	2	3	4	5	6	7	8	9	10
DRT-031 Greenbriar/Dirt Mulholland (Upper Topanga SP)	SAL AUS	–	X	X	X	X	X	X	X	X	X
DRT-032 West Mandeville Fire Road	NICGLA	–	–	–	–	–	X	–	–	–	–
	SAL AUS	X	X	X	X	X	X	X	–	X	X
DRT-033 Yellow Hill	FOEVUL	X	X	X	–	–	–	–	–	–	–
DRT-034 Castro Peak Motorway	NONE	–	–	–	–	–	–	–	–	–	–
DRT-035 Topanga SP - Musch Camp	CARPYC	X	–	X	X	X	–	–	–	X	–
	SAL AUS	–	–	–	–	–	X	–	X	–	–
	SILMAR	–	–	–	–	–	–	–	–	X	–
DRT-036 Calabasas - De Anza Trail	CARPYC	X	X	X	–	–	–	–	X	–	–
	SAL AUS	–	–	X	–	–	–	–	–	–	–
	SILMAR	X	–	–	–	–	–	–	X	–	–
DRT-037 La Jolla Valley Loop Trail	CARPYC	–	–	–	–	X	–	X	–	–	–
	PHAAQU	X	X	X	X	X	–	–	–	–	–
DRT-040 Liberty Ridge Trail, Agoura	CARPYC	–	–	–	–	–	–	–	X	–	–
	SAL AUS	–	–	–	–	–	–	–	X	–	–
DRT-041 Sandstone Peak	NONE	–	–	–	–	–	–	–	–	–	–
DRT-043 BBT E of Malibu Canyon Road at Piuma	CARPYC	X	X	X	X	X	X	X	X	X	X
	VINMAJ	–	–	–	–	–	–	–	X	X	–
DRT-044 Temescal to Rivas Cyn (Will Rodgers) connector	DELODO	X	X	X	X	X	X	X	–	–	X
	FOEVUL	–	–	–	–	X	–	–	–	–	–

Table 23 (continued). Santa Monica Mountains National Recreation Area dirt roads and trails (DRT) monitoring sites with observed nonnative invasive plant species in 2019. “X” indicates presence and “–” indicates absence of the species within a specific subtransect. Species codes are in Table 1.

DRT # and Location	Species Code	Subtransects									
		1	2	3	4	5	6	7	8	9	10
DRT-044 Temescal to Rivas Cyn (Will Rodgers) connector (continued)	NICGLA	–	–	–	–	–	–	–	–	X	X
	SAL AUS	–	–	X	X	X	–	–	–	–	–
DRT-045 Murphy Way	CARPYC	–	–	–	–	X	–	–	–	–	–
	EUP TER	–	–	–	–	–	–	X	–	–	–
	FOEVUL	X	–	X	X	X	X	X	X	X	X
	RICCOM	–	X	–	X	–	X	–	–	–	–
	SAL AUS	X	–	–	–	–	–	–	–	X	X
DRT-047 Upper Topanga from Mulholland	CARPYC	–	X	X	–	X	–	X	X	X	X
	NICGLA	–	–	–	–	–	X	X	X	X	X
	SAL AUS	–	X	X	X	X	X	X	X	–	–
	SILMAR	–	–	–	–	–	–	–	–	–	X
DRT-048 Spencer Canyon W of Mandeville Fire Road	FOEVUL	–	X	–	X	–	X	–	–	–	–
	NICGLA	X	–	–	–	–	–	–	–	–	–
	SPA JUN	–	–	X	X	–	–	X	–	–	–
DRT-049 Overlook Trail, Lower Big Sycamore Canyon	SAL AUS	–	–	–	–	–	–	X	X	–	X
DRT-050 Lost Cabin Trail, Malibu Creek SP	CIRVUL	X	–	–	–	–	–	–	–	–	–
DRT-051 BBT W of Trippet Ranch, Topanga SP	NONE	–	–	–	–	–	–	–	–	–	–
DRT-052 Lower Cheeseboro	CARPYC	–	–	–	–	–	–	X	X	X	–
	CIRVUL	–	–	–	–	–	–	–	–	X	–
	SAL AUS	X	X	X	X	X	X	–	–	–	–
	SILMAR	–	–	–	–	–	–	–	X	–	–

Table 23 (continued). Santa Monica Mountains National Recreation Area dirt roads and trails (DRT) monitoring sites with observed nonnative invasive plant species in 2019. “X” indicates presence and “–” indicates absence of the species within a specific subtransect. Species codes are in Table 1.

DRT # and Location	Species Code	Subtransects									
		1	2	3	4	5	6	7	8	9	10
DRT-054 BBT S of Etz Meloy Fire Road	SAL AUS	–	–	–	–	–	–	–	X	–	–
DRT-055 Cold Canyon Trail	NONE	–	–	–	–	–	–	–	–	–	–
DRT-056 Palo Comado Main Trail, N of Ranch Center Connector	CARPYC	–	–	–	X	–	–	–	–	X	–
	SILMAR	X	–	–	–	–	–	–	–	–	–
DRT-057 Fossil Trail, Upper Big Sycamore Canyon	CARPYC	–	–	–	–	–	–	–	–	X	X
	SAL AUS	–	–	–	–	X	–	X	X	–	–
DRT-058 Nicolas Flat, trail to Malibu Springs, NE of pond	NONE	–	–	–	–	–	–	–	–	–	–
DRT-059 Malibu Bluffs	EUP TER	–	–	X	X	X	X	X	X	–	X
	FOEVUL	–	X	X	X	X	X	–	–	–	–
	NICGLA	–	–	–	–	–	–	–	–	–	X
	SAL AUS	–	–	–	–	–	–	–	X	–	X
DRT-060 Sullivan Fire Road - mid/lower	CARPYC	–	–	–	–	–	X	X	–	–	X
	FOEVUL	X	–	–	–	–	–	–	–	–	–
DRT-061 Off Kanan, S of BBT	CARPYC	–	–	–	–	X	–	–	–	–	–
	SPAJUN	–	–	–	–	–	–	X	–	–	X
DRT-064 Franklin Canyon	CARPYC	–	X	X	X	–	X	X	X	–	X
	CONMAC	–	–	–	–	–	–	–	–	X	X
	DELODO	–	–	–	–	X	X	–	–	–	–
	SAL AUS	–	–	–	–	–	–	–	X	–	–
DRT-065 Chamberlain trail (BBT SW of Tri Peaks)	NONE	–	–	–	–	–	–	–	–	–	–

Table 23 (continued). Santa Monica Mountains National Recreation Area dirt roads and trails (DRT) monitoring sites with observed nonnative invasive plant species in 2019. “X” indicates presence and “–” indicates absence of the species within a specific subtransect. Species codes are in Table 1.

DRT # and Location	Species Code	Subtransects									
		1	2	3	4	5	6	7	8	9	10
DRT-066 Solstice Canyon - Sostomo Trail	CARPYC	X	X	X	X	–	–	–	–	–	–
	EUPTER	–	X	X	X	X	–	–	X	X	X
	FOEVUL	X	–	–	–	–	–	–	–	–	–
	SAL AUS	–	–	–	–	–	X	X	–	–	–
DRT-067 Garapito Trail, Topanga SP	SAL AUS	–	–	–	–	–	X	–	–	–	–
DRT-068 Ridgeline between Las Virgenes and Cheeseboro	SAL AUS	X	X	X	X	X	X	X	X	X	X
DRT-069 North of Serrano Valley	FOEVUL	–	–	–	–	–	–	–	X	X	–
DRT-071 Gillette NE Quad Ridge Trail	NONE	–	–	–	–	–	–	–	–	–	–
DRT-072 Trail from top of China Flat Trail east on ridgeline	NONE	–	–	–	–	–	–	–	–	–	–
DRT-073 Big Sycamore Canyon, south of Danielson Ranch	CARPYC	X	X	X	X	X	X	X	X	–	–
	SILMAR	X	–	–	X	X	X	X	X	X	–
DRT-075 Red Rock	CARPYC	–	–	–	–	–	–	–	X	X	X
DRT-077 Upper Big Sycamore Canyon Trail from horse bridge toward water fall	CARPYC	–	–	–	X	X	X	X	X	X	X
	SAL AUS	–	–	X	X	X	–	–	–	–	–
DRT-079 Summit to Summit Motorway, Upper Topanga	CARPYC	–	–	X	X	–	–	–	–	–	–
	NICGLA	–	–	–	–	–	–	–	–	X	X
	SAL AUS	X	X	–	X	X	X	–	–	–	–
DRT-081 Yellow Hill Fire Road - lower	SAL AUS	–	X	–	X	–	X	X	–	–	X

Table 23 (continued). Santa Monica Mountains National Recreation Area dirt roads and trails (DRT) monitoring sites with observed nonnative invasive plant species in 2019. “X” indicates presence and “–” indicates absence of the species within a specific subtransect. Species codes are in Table 1.

DRT # and Location	Species Code	Subtransects									
		1	2	3	4	5	6	7	8	9	10
DRT-083 Temescal Ridge, Pacific Palisades	NONE	–	–	–	–	–	–	–	–	–	–
DRT-084 Cheeseboro Ridge Road	CARPYC	X	X	–	X	X	X	X	X	X	X
	CIRVUL	–	–	–	–	–	–	–	–	–	X
	LEPLAT	–	–	–	–	–	–	–	–	–	X
	SAL AUS	–	–	–	–	–	–	X	–	–	–
	SILMAR	–	–	X	–	X	X	X	X	X	X
DRT-085 La Jolla Valley/Loop Trail	NONE	–	–	–	–	–	–	–	–	–	–
DRT-086 BBT south of Newton Falls	CARPYC	–	–	–	–	X	–	–	X	X	–
	EUP TER	–	–	–	–	X	–	–	–	–	–
	FOEVUL	–	X	X	X	X	–	–	–	–	–
	NICGLA	–	–	X	–	–	–	–	–	–	–
	SPA JUN	–	–	–	X	X	X	X	X	–	–
DRT-087 E to W ridge at southern boundary of Gillette Ranch	NONE	–	–	–	–	–	–	–	–	–	–
DRT-088 Cheeseboro Canyon, Shepherds Flat	NONE	–	–	–	–	–	–	–	–	–	–
DRT-089 Big Sycamore Canyon, Wood Canyon Connector	CARPYC	X	X	X	X	X	X	X	X	X	X
	FOEVUL	X	–	X	–	–	–	–	–	–	–
	PHAAQU	–	X	X	–	–	–	–	–	–	–
	SAL AUS	–	–	–	–	–	–	–	–	X	–
	SILMAR	–	–	X	X	–	X	–	–	X	–

Table 23 (continued). Santa Monica Mountains National Recreation Area dirt roads and trails (DRT) monitoring sites with observed nonnative invasive plant species in 2019. “X” indicates presence and “–” indicates absence of the species within a specific subtransect. Species codes are in Table 1.

DRT # and Location	Species Code	Subtransects									
		1	2	3	4	5	6	7	8	9	10
DRT-091 West Saddle Peak Rd	CARPYC	–	–	–	–	–	–	X	X	X	–
	SAL AUS	X	–	–	–	–	X	–	–	–	–
DRT-092 Laurel Canyon/Fryman Road	CARPYC	X	X	X	X	X	X	X	X	X	X
	NICGLA	–	–	X	–	–	–	–	–	–	–
	SILMAR	–	–	–	–	X	–	–	–	–	–
	SPAJUN	–	–	–	–	–	–	–	X	–	–
DRT-093 Zuma Canyon Edison Road (close to 29)	CARPYC	–	–	–	–	–	–	–	X	X	X
	FOEVUL	–	–	–	X	X	–	–	X	X	X
	NICGLA	X	X	X	–	X	X	X	X	–	–
	SAL AUS	–	–	–	–	–	–	–	–	–	X
	SILMAR	–	–	–	–	–	–	X	X	X	X
DRT-094 Kanan Road to Ocean View Connector	CARPYC	X	X	X	–	–	–	–	–	–	X
	FOEVUL	X	X	X	X	X	X	X	–	X	X
	SILMAR	X	X	–	–	–	–	–	–	–	–
	SPAJUN	–	–	–	–	–	–	–	–	X	X
DRT-095 Winnetka Ave/Corbin Canyon Trail	NONE	–	–	–	–	–	–	–	–	–	–
DRT-096 Canyonback Fire Road, up at the top	NICGLA	–	X	–	–	–	–	–	–	X	–
	SAL AUS	X	X	X	X	X	X	X	X	–	X
DRT-100 Juan de Anza W from Las Virgenes Road	CARPYC	X	–	–	–	–	–	–	–	–	X
	SAL AUS	X	X	–	–	–	X	–	–	X	X
	SILMAR	X	–	–	–	–	–	–	–	–	–
DRT-101 BBT East of La Jolla Canyon	SAL AUS	–	X	X	X	X	X	X	–	X	–

Table 23 (continued). Santa Monica Mountains National Recreation Area dirt roads and trails (DRT) monitoring sites with observed nonnative invasive plant species in 2019. “X” indicates presence and “–” indicates absence of the species within a specific subtransect. Species codes are in Table 1.

DRT # and Location	Species Code	Subtransects									
		1	2	3	4	5	6	7	8	9	10
DRT-102 CXR Canyon View Trail	NONE	–	–	–	–	–	–	–	–	–	–
DRT-103 Mott Rd, MCSP	CARPYC	X	X	X	X	X	X	X	X	X	X
	CENSOL	X	X	–	–	–	–	–	–	X	–
	CONMAC	–	–	–	X	–	–	–	–	–	–
	NICGLA	–	–	–	–	–	–	–	X	–	–
	SILMAR	–	–	–	X	–	–	X	–	–	X
DRT-104 Coyote Cyn Overlook Trail	NONE	–	–	–	–	–	–	–	–	–	–
DRT-105 Danielson Cabin to Tri Peaks - East Trail	NONE	–	–	–	–	–	–	–	–	–	–
DRT-106 Chumash Indian Trail	NONE	–	–	–	–	–	–	–	–	–	–
DRT-107 BBT from Malibu Cyn Rd	CARPYC	X	–	–	–	–	–	X	–	X	X
DRT-117 Spur off Hiden Pond Trail, N toward Broome	SALAU	X	X	X	X	X	X	–	X	X	X
DRT-119 BBT connector W of Stunt Rd	SALAU	–	–	–	–	–	X	–	–	–	–
DRT-121 RSV/Satwiwa Cultural Center	CARPYC	X	X	–	–	–	–	X	X	–	–
	PHAAQU	X	–	–	–	–	–	X	X	–	–
DRT-123 Dirt Mulholland W	CARPYC	X	–	–	–	X	–	–	X	X	X
	NICGLA	–	–	–	–	–	–	–	–	X	X
	SALAU	X	–	–	–	X	X	X	–	–	X
DRT-124 Bienveneda Trail	NONE	–	–	–	–	–	–	–	–	–	–

Table 23 (continued). Santa Monica Mountains National Recreation Area dirt roads and trails (DRT) monitoring sites with observed nonnative invasive plant species in 2019. “X” indicates presence and “–” indicates absence of the species within a specific subtransect. Species codes are in Table 1.

DRT # and Location	Species Code	Subtransects									
		1	2	3	4	5	6	7	8	9	10
DRT-127 Cheeseboro Ridge	CIRVUL	–	–	–	–	X	–	–	–	–	–
	SAL AUS	–	–	–	–	X	–	–	–	–	–
DRT-129 Circle X Grotto Trail	CARPYC	–	X	X	X	X	X	–	–	–	–
	FOEVUL	–	–	–	X	–	–	–	–	–	–
	NICGLA	–	–	–	X	–	–	–	–	–	–
	SILMAR	–	–	X	–	X	X	–	–	–	–
DRT-134 Hennessey	CARPYC	–	–	X	–	–	X	–	–	–	X
	CENSOL	X	–	–	–	–	–	–	–	–	–
DRT-136 China Flat S of Albertson MTW/Palo Comado	CARPYC	X	X	X	–	X	X	X	X	–	–
DRT-137 La Jolla Valley/Un-named trail off Ranch Ctr Rd	SAL AUS	X	X	X	X	X	X	X	X	X	–
DRT-139 Calabasas Motorway	SILMAR	–	–	–	–	–	–	–	–	–	X
	SPAJUN	–	–	–	–	X	X	–	–	–	–
DRT-141 Spur off Guadaluasca Trail toward Broom	FOEVUL	X	X	X	X	X	–	–	–	–	–
	SAL AUS	–	X	X	–	–	X	X	X	X	X
DRT-144 Sullivan Fire Road - mid/upper	NICGLA	X	–	–	–	–	–	–	–	–	–
	SAL AUS	X	–	–	–	–	X	–	X	–	–
DRT-146 Lookout Road, MCSP	NONE	–	–	–	–	–	–	–	–	–	–
DRT-148 Upper Las Virgenes Canyon	CARPYC	X	X	X	–	–	–	–	–	–	–
	CENSOL	–	–	X	X	–	–	–	X	X	X
	SAL AUS	–	–	–	–	–	X	X	X	–	X

Table 23 (continued). Santa Monica Mountains National Recreation Area dirt roads and trails (DRT) monitoring sites with observed nonnative invasive plant species in 2019. “X” indicates presence and “–” indicates absence of the species within a specific subtransect. Species codes are in Table 1.

DRT # and Location	Species Code	Subtransects									
		1	2	3	4	5	6	7	8	9	10
DRT-150 Rocky Oaks	CARPYC	X	–	–	–	–	–	–	–	–	X
	CIRVUL	–	–	–	X	X	–	–	–	–	–
	PHAAQU	X	X	X	X	X	X	X	X	–	X
	SALAU	–	–	–	–	–	–	–	–	X	–
DRT-151 Las Virgenes Trail S of Lost Hills	CARPYC	X	–	–	–	–	X	X	X	X	–
	SALAU	–	–	X	–	–	–	–	–	–	X
	SILMAR	X	X	X	–	X	X	X	X	X	–
DRT-153 RSV - Hidden Valley Overlook Trail	CARPYC	X	–	–	–	X	–	–	–	–	–
	SALAU	–	X	–	X	–	–	X	X	–	X
DRT-154 Trancas Fire Road (from Encinal Cyn Rd)	CARPYC	–	–	–	–	X	X	X	–	–	–
DRT-155 Trail from Puerco Cyn Fire Road to Pepperdine	FOEVUL	X	–	–	X	–	–	–	–	–	–
DRT-156 Will Rodgers SHP	DELODO	–	–	X	–	X	–	–	–	–	–
	EUPTER	–	–	–	X	–	–	–	–	–	–
	SALAU	X	X	X	X	X	X	X	X	X	X
DRT-157 Zuma Ridge from Busch Drive	CARPYC	–	–	–	–	–	X	X	X	X	X
	EUPTER	–	–	–	–	X	X	–	–	–	–
	FOEVUL	–	X	X	X	–	–	–	–	–	–
DRT-158 Point Dume	CORJUB	–	–	–	–	X	–	–	–	–	–
	EUPTER	X	–	–	–	–	X	–	X	–	–
	SALAU	X	–	–	X	X	X	X	X	X	X
DRT-159 Serrania Trail (off Dirt Mulholland)	NONE	–	–	–	–	–	–	–	–	–	–

Table 23 (continued). Santa Monica Mountains National Recreation Area dirt roads and trails (DRT) monitoring sites with observed nonnative invasive plant species in 2019. “X” indicates presence and “–” indicates absence of the species within a specific subtransect. Species codes are in Table 1.

DRT # and Location	Species Code	Subtransects									
		1	2	3	4	5	6	7	8	9	10
DRT-160 Topanga SP, BBT E of Temescal Ridge	NONE	–	–	–	–	–	–	–	–	–	–
DRT-162 Coyote Canyon / Overlook Trail, Paramount Ranch	NONE	–	–	–	–	–	–	–	–	–	–
DRT-163 Topanga SP Trippet Ranch	CARPYC	X	X	X	X	X	X	X	–	–	X
	CYPINV	–	–	–	–	–	–	–	–	–	X
	PHAAQU	–	–	X	X	X	X	–	–	–	X
	VINMAJ	–	–	–	–	–	–	X	–	X	X
DRT-165 La Jolla Valley Loop, PMSP	CARPYC	–	–	–	–	–	–	X	X	–	X
	CONMAC	–	–	–	–	–	–	X	X	X	X
	PENSET	X	X	–	–	–	–	–	–	–	–
DRT-166 BBT S of Mishe Mokwa Trailhead	CARPYC	–	X	X	–	–	–	–	–	–	–
DRT-167 Grasslands Trail - MCSP	CARPYC	X	X	X	X	X	X	–	X	–	–
	CENSOL	–	–	–	–	–	–	X	–	–	–
	FOEVUL	–	–	–	–	–	–	–	–	–	X
	SAL AUS	–	–	–	–	–	–	X	–	–	–
DRT-169 Mishe Mokwa Trail	NONE	–	–	–	–	–	–	–	–	–	–
DRT-170 Nicholas Ridge Motorway	PHAAQU	–	–	–	–	–	–	–	–	–	X
DRT-171 Puerco Canyon Fire Road	CARPYC	–	–	–	X	X	–	X	X	–	–
	EUP TER	–	–	–	X	X	X	–	–	X	X

Table 23 (continued). Santa Monica Mountains National Recreation Area dirt roads and trails (DRT) monitoring sites with observed nonnative invasive plant species in 2019. "X" indicates presence and "–" indicates absence of the species within a specific subtransect. Species codes are in Table 1.

DRT # and Location	Species Code	Subtransects									
		1	2	3	4	5	6	7	8	9	10
DRT-172 Sullivan Fire Road - lower	FOEVUL	X	X	–	X	X	X	X	–	–	X
	NICGLA	X	X	X	–	–	X	X	–	–	–
	SALAU	X	X	X	X	X	X	X	X	X	X
DRT-173 Kanan Edison Road	CARPYC	–	–	X	–	–	–	–	–	–	–
	CENSOL	–	–	–	–	–	–	–	X	–	–
	FOEVUL	X	–	–	–	X	–	X	–	–	–
	SPAJUN	–	–	–	–	–	–	X	X	X	X
DRT-174 Temescal Ridge Trail - middle	SALAU	X	X	X	X	X	X	X	X	X	X
DRT-175 Mulholland Gateway Park	SILMAR	–	–	–	–	X	–	–	–	–	–
DRT-177 Wood Canyon Vista Trail, PMSP	CARPYC	–	–	X	X	X	X	X	–	–	–
	SALAU	–	–	–	X	X	–	X	X	–	–
DRT-179 Topanga Ridge Motorway - upper	NONE	–	–	–	–	–	–	–	–	–	–
DRT-180 Bark - New Millennium Loop Trail	CARPYC	–	–	–	–	–	–	X	–	–	–
	SILMAR	X	X	X	X	–	–	X	–	–	–
DRT-181 RSV West of Horse Parking	CARPYC	X	–	–	–	–	–	–	–	–	–
	SALAU	–	–	X	X	X	X	–	–	–	–
DRT-182 Trancas Cyn Fire Rd from Encinal Cyn Rd	NONE	–	–	–	–	–	–	–	–	–	–
DRT-183 Cold Creek Trail / Lower Stunt High Trail	CARPYC	X	X	–	X	X	–	–	–	–	–
DRT-184 Dirt Mulholland East of Sullivan Canyon	NICGLA	X	X	–	–	–	–	–	–	–	–
	SPAJUN	–	X	X	X	–	–	–	–	–	X

Table 23 (continued). Santa Monica Mountains National Recreation Area dirt roads and trails (DRT) monitoring sites with observed nonnative invasive plant species in 2019. “X” indicates presence and “–” indicates absence of the species within a specific subtransect. Species codes are in Table 1.

DRT # and Location	Species Code	Subtransects									
		1	2	3	4	5	6	7	8	9	10
DRT-185 Big Sycamore Canyon South of Horse Bridge	SAL AUS	–	–	X	–	–	–	X	X	X	–
DRT-186 Nicolas Ridge Fire Road S	EUP TER	X	–	–	–	–	–	–	–	–	–
	FOEVUL	–	–	–	–	–	X	–	–	–	–
	NICGLA	–	–	–	–	X	–	–	–	–	–
	PENSET	–	X	–	–	–	X	X	X	X	X
	SAL AUS	X	–	–	–	–	–	–	–	–	–
DRT-187 Summit to Summit	CARPYC	–	–	–	–	X	X	–	–	–	–
	SAL AUS	–	–	–	–	–	X	X	–	X	X
DRT-188 Rogers Road	CORJUB	–	–	–	–	–	–	–	X	–	–
	DELODO	–	–	–	–	–	–	X	–	–	–
	SAL AUS	–	–	–	–	–	–	–	–	X	–
DRT-189 Solstice - Sostomo upper	CARPYC	X	–	–	–	–	–	–	–	–	–
DRT-191 Upper Las Virgenes conector	CARPYC	–	X	–	–	–	–	–	–	–	–
DRT-192 Betty Dearing (Fryman)	CARPYC	X	–	X	–	–	X	X	X	X	X
	FOEVUL	X	–	–	–	–	–	–	X	–	X
	NICGLA	–	X	X	–	–	–	X	–	–	–
DRT-196 Las Virgenes West from LV Rd.	NICGLA	–	–	–	–	–	X	–	–	–	–
	SAL AUS	X	X	X	X	X	X	X	X	X	X
DRT-198 Latigo Canyon BBT	NONE	–	–	–	–	–	–	–	–	–	–

Table 23 (continued). Santa Monica Mountains National Recreation Area dirt roads and trails (DRT) monitoring sites with observed nonnative invasive plant species in 2019. “X” indicates presence and “–” indicates absence of the species within a specific subtransect. Species codes are in Table 1.

DRT # and Location	Species Code	Subtransects									
		1	2	3	4	5	6	7	8	9	10
DRT-199 Tapia Park	CARPYC	X	X	X	X	X	X	X	X	X	X
	DELODO	–	–	–	–	–	X	X	–	–	–
	SILMAR	–	–	–	–	X	–	–	–	–	–
	VINMAJ	–	–	–	–	–	X	–	–	X	X
DRT-200 Upper Cheese Ridge - South of upper LV connector	CIRVUL	–	–	X	–	X	–	–	–	–	–
DRT-201 Coyote trail from Two Foxes	SAL AUS	X	X	X	–	X	X	–	–	–	–
DRT-204 Dirt Mullholland West of Nike Site	SPAJUN	X	X	X	X	X	X	–	X	X	X
DRT-205 Zuma Bluff Killer Trail - upper	NICGLA	–	–	–	–	–	–	–	X	–	–
DRT-206 Solstice Main Trail	CARPYC	–	–	–	–	–	X	X	X	–	–
	EUP TER	X	X	X	X	X	–	X	X	X	X
	FOEVUL	X	–	–	–	–	–	–	–	–	–
DRT-208 West Mandeville Fire Rd Fuel Break	SAL AUS	–	–	X	–	–	–	–	–	–	–
DRT-209 Yellow Hill Fire Road - middle	CIRVUL	X	X	X	–	–	–	–	–	–	–
	FOEVUL	–	–	–	X	X	X	–	–	–	–
	PENSET	–	–	–	–	–	–	–	X	–	–
	SAL AUS	–	–	–	–	–	–	X	–	–	–
DRT-211 East Topanga Fire Road at Cheney Fire Road	SAL AUS	X	X	X	X	X	X	X	X	–	X
DRT-212 Calabasas to Cold Creek	CARPYC	X	–	X	X	X	–	–	–	–	–

Table 23 (continued). Santa Monica Mountains National Recreation Area dirt roads and trails (DRT) monitoring sites with observed nonnative invasive plant species in 2019. “X” indicates presence and “–” indicates absence of the species within a specific subtransect. Species codes are in Table 1.

DRT # and Location	Species Code	Subtransects									
		1	2	3	4	5	6	7	8	9	10
DRT-213 PCH East of Mugu State Beach	PENSET	X	–	–	–	–	–	–	–	–	–
DRT-214 Etz Meloy West End	NONE	–	–	–	–	–	–	–	–	–	–
DRT-215 Cistern Trail, MCSP	CARPYC	X	X	X	–	X	–	–	–	X	X
	SILMAR	X	–	–	–	–	–	–	–	–	–
DRT-216 Paramount Backdrop Trail	CENSOL	X	–	X	X	X	X	X	X	X	–
DRT-217 Old Cabin Trail, PMSP	CARPYC	X	X	X	–	–	–	X	X	X	X
	SAL AUS	–	–	X	–	–	X	–	–	X	–
DRT-218 Carmichael / Russell Tr - Charmlee	FOEVUL	–	–	–	–	–	–	–	–	X	X
DRT-219 Coastal Slope Trail, Malibu Cyn	CARPYC	–	–	–	–	–	–	–	–	–	X
	EUP TER	X	X	X	–	–	–	–	–	–	X
	FOEVUL	X	–	X	–	–	–	–	–	–	X
	NICGLA	–	X	–	–	–	–	–	–	–	–
	PENSET	–	–	–	–	–	X	–	–	–	–
	SAL AUS	–	–	–	–	–	–	–	–	–	X
	SPA JUN	–	–	–	–	–	–	–	–	–	X
DRT-220 Inspiration Point / Will Rogers Loop Trail	DELODO	–	–	X	–	–	X	X	X	X	X
	NICGLA	–	–	–	–	–	X	X	X	X	X
	RICCOM	–	–	–	–	–	X	X	X	X	–
	SAL AUS	X	X	X	X	X	X	–	X	X	X
DRT-221 Canyon View Trail, Zuma	FOEVUL	–	–	X	–	–	–	–	–	–	–

Table 23 (continued). Santa Monica Mountains National Recreation Area dirt roads and trails (DRT) monitoring sites with observed nonnative invasive plant species in 2019. “X” indicates presence and “–” indicates absence of the species within a specific subtransect. Species codes are in Table 1.

DRT # and Location	Species Code	Subtransects									
		1	2	3	4	5	6	7	8	9	10
DRT-222 Zuma Canyon Trail	CARPYC	–	–	–	–	X	X	X	–	X	X
	CONMAC	–	–	X	–	–	–	–	–	–	X
	CYPINV	–	–	X	–	–	–	–	–	–	X
	EUPTER	X	X	X	X	X	X	X	X	X	X
	FOEVUL	–	–	–	X	–	–	–	–	–	X
	NICGLA	X	X	X	X	–	–	–	–	–	X
	RICCOM	–	–	X	–	–	–	–	–	–	X
	SILMAR	–	–	–	–	X	X	–	–	X	X
	SPAJUN	–	–	–	–	–	–	–	–	–	X
DRT-223 Santa Maria Canyon / Summit Trail	CARPYC	–	X	–	–	–	–	–	–	–	–
DRT-224 Farmer Ridge Fire Road, Sullivan Cyn	NONE	–	–	–	–	–	–	–	–	–	–
DRT-225 Overlook Fire Road - lower	SAL AUS	–	–	–	–	–	X	X	X	–	–
DRT-226 Bulldog Motorway, MCSP	NONE	–	–	–	–	–	–	–	–	–	–
DRT-227 Hondo Canyon / Backbone Trail	CARPYC	X	–	–	X	X	X	X	X	–	X
	SILMAR	X	–	–	–	–	–	–	–	–	–
DRT-228 Chesebro Equestrian Trail	CARPYC	–	–	X	X	X	X	X	X	X	X
	CIRVUL	–	–	–	–	–	–	–	X	X	X
	NICGLA	–	–	–	–	–	–	–	–	X	X
	VINMAJ	–	–	–	–	–	–	–	–	X	X
DRT-230 Backbone Trail - Triunfo Pass	NONE	–	–	–	–	–	–	–	–	–	–

Table 23 (continued). Santa Monica Mountains National Recreation Area dirt roads and trails (DRT) monitoring sites with observed nonnative invasive plant species in 2019. “X” indicates presence and “–” indicates absence of the species within a specific subtransect. Species codes are in Table 1.

DRT # and Location	Species Code	Subtransects									
		1	2	3	4	5	6	7	8	9	10
DRT-231 Forest Trail, MCSP	CARPYC	X	X	X	X	X	X	X	X	X	X
	CONMAC	X	X	X	X	X	X	X	X	X	X
	FOEVUL	X	X	–	–	–	–	–	X	–	–
	RICCOM	–	–	–	–	–	–	X	–	–	–
	SILMAR	X	X	–	–	–	–	–	–	–	–
	VINMAJ	X	X	X	X	X	X	–	–	–	–
DRT-232 Palo Comado Canyon Road	CARPYC	X	X	X	X	X	–	–	–	X	X
	SILMAR	X	–	–	–	–	–	–	–	X	–
DRT-233 Old Boney Trail near Fossil Trail	SAL AUS	–	X	–	–	–	–	–	–	–	–
DRT-234 Nicholas Flat Trail	NONE	–	–	–	–	–	–	–	–	–	–
DRT-235 Middle Corral Canyon Trail	NONE	–	–	–	–	–	–	–	–	–	–
DRT-236 Sullivan Ridge Trail	NONE	–	–	–	–	–	–	–	–	–	–
DRT-237 Ramera Motorway East	CARPYC	–	–	–	–	–	–	X	–	–	–
	FOEVUL	X	X	X	X	–	–	X	X	–	–
	SPAJUN	–	–	–	–	–	–	–	–	–	X
DRT-238 East Topanga Fire Road	SAL AUS	X	X	X	X	X	X	X	X	X	X
DRT-239 Bell Canyon Fire Road	CARPYC	–	–	X	–	–	–	–	X	–	–
	CENSOL	X	–	X	–	–	–	–	–	–	–
	SAL AUS	–	–	X	X	X	X	X	X	X	X

Table 23 (continued). Santa Monica Mountains National Recreation Area dirt roads and trails (DRT) monitoring sites with observed nonnative invasive plant species in 2019. “X” indicates presence and “–” indicates absence of the species within a specific subtransect. Species codes are in Table 1.

DRT # and Location	Species Code	Subtransects									
		1	2	3	4	5	6	7	8	9	10
DRT-240 Chernoff Trail, Franklin Cyn	CARPYC	X	–	–	–	–	–	–	X	–	–
	CORJUB	–	–	–	–	X	–	–	–	–	–
	CYPINV	–	–	–	–	–	X	–	–	–	–
DRT-242 Medea Creek Trail, Paramount Ranch	CARPYC	–	–	–	–	–	–	–	X	X	X
	CIRVUL	X	–	–	–	–	–	–	–	–	–
	CONMAC	X	–	–	–	–	–	–	–	–	–
	LEPLAT	–	–	–	–	–	–	–	–	X	X
	SILMAR	X	–	–	–	–	–	–	–	–	–
DRT-244 Juan Bautista de Anza / Calabasas Connector Trail	CARPYC	–	X	X	–	–	–	–	–	–	–
	SAL AUS	X	–	–	–	–	–	–	–	X	–
	SILMAR	–	–	–	–	–	–	–	–	–	X
DRT-245 Sycamore Canyon Road, PMSP	CARPYC	X	X	X	X	X	X	X	X	X	X
	SILMAR	–	–	–	X	X	–	–	–	–	–
DRT-246 Backbone Trail - Mulholland to Etz Meloy	SAL AUS	X	X	–	–	–	–	–	–	–	–
DRT-247 Topanga Ridge Motorway - lower	EUP TER	–	–	–	–	–	X	–	–	–	–
DRT-248 Dirt Mulholland	NONE	–	–	–	–	–	–	–	–	–	–
DRT-249 Ranch Overlook Trail	CARPYC	X	X	X	–	–	X	X	X	–	–
	SILMAR	X	–	–	–	–	–	–	–	–	–
DRT-250 Potrero Trail-Charmlee	FOEVUL	–	–	–	–	–	–	–	–	X	–
	SAL AUS	–	–	–	–	–	–	–	–	–	X

Table 23 (continued). Santa Monica Mountains National Recreation Area dirt roads and trails (DRT) monitoring sites with observed nonnative invasive plant species in 2019. “X” indicates presence and “–” indicates absence of the species within a specific subtransect. Species codes are in Table 1.

DRT # and Location	Species Code	Subtransects									
		1	2	3	4	5	6	7	8	9	10
DRT-251 Summit Trail, Viewridge Trailhead	SAL AUS	–	–	–	–	–	–	–	–	–	X
DRT-252 Entrance to West Mandeville Fire Road	SAL AUS	X	X	X	X	X	X	X	X	X	X
DRT-254 Budwood Motorway	NONE	–	–	–	–	–	–	–	–	–	–
DRT-255 Cheeseboro Trail	CARPYC	X	X	X	X	X	X	X	X	X	–
	SILMAR	X	X	X	–	X	X	X	X	X	–
DRT-256 Runyon Canyon Trail	NICGLA	X	–	–	–	–	X	–	X	X	X
	PENSET	–	–	–	–	–	–	X	–	–	–
	RICCOM	X	–	X	X	–	–	–	–	–	–
	SAL AUS	–	X	X	X	X	X	X	X	X	X
	SPAJUN	–	–	–	–	–	–	–	–	X	–
DRT-257 Chamberlain Trail, PMSP	CARPYC	–	–	X	–	–	–	X	–	–	–
DRT-258 Solstice Canyon - Rising Sun Trail	CARPYC	–	–	X	–	X	X	–	–	–	–
	EUP TER	–	–	–	–	–	X	X	X	X	–
	SAL AUS	–	–	–	–	–	X	X	–	X	X
DRT-260 Mont Calabasas	NICGLA	–	–	–	–	–	–	–	X	X	–
	SAL AUS	X	X	X	X	X	X	X	X	X	X
	SILMAR	–	–	–	–	–	–	X	–	–	–
DRT-261 Old Boney Trail, PMSP	CARPYC	X	X	X	X	X	–	X	–	–	–
	SAL AUS	–	–	–	–	–	–	–	X	–	–
	SILMAR	X	X	X	X	–	–	–	–	–	–

Table 23 (continued). Santa Monica Mountains National Recreation Area dirt roads and trails (DRT) monitoring sites with observed nonnative invasive plant species in 2019. “X” indicates presence and “–” indicates absence of the species within a specific subtransect. Species codes are in Table 1.

DRT # and Location	Species Code	Subtransects									
		1	2	3	4	5	6	7	8	9	10
DRT-262 Crags Rd, MCSP	CARPYC	–	–	X	–	–	–	–	–	X	X
	CENSOL	–	X	X	–	X	–	X	X	–	–
	CONMAC	X	X	X	X	X	X	X	X	X	X
	FOEVUL	–	–	–	–	–	–	–	X	–	–
	LEPLAT	X	–	X	X	X	X	X	X	X	–
	NICGLA	–	–	–	–	–	X	X	X	X	–
	SAL AUS	–	–	–	–	–	–	X	–	–	–
	SILMAR	X	–	–	–	–	–	–	–	–	X
DRT-263 Malibu Creek/Las Virgenes View Park	VINMAJ	–	–	–	–	–	–	X	–	–	–
	CARPYC	X	X	–	–	–	–	X	X	X	X
	CIRVUL	–	–	–	–	–	–	–	X	–	–
DRT-264 Morrison Road	SILMAR	–	–	–	–	–	–	X	X	X	X
	CARPYC	X	X	X	X	X	X	X	–	–	X
	SAL AUS	–	–	–	–	X	–	–	–	–	X
DRT-265 Blue Canyon Trail, PMSP	SILMAR	X	X	–	–	–	–	–	–	–	–
	CARPYC	–	–	–	X	X	X	X	X	X	–
	FOEVUL	–	–	–	X	–	–	–	–	–	–
DRT-266 Camp 13 Trail South, Trancas Cyn	PHAAQU	–	X	–	–	–	–	–	–	–	–
	NONE	–	–	–	–	–	–	–	–	–	–
DRT-267 Stunt Road, Backbone Trail	CARPYC	–	–	X	–	–	–	–	–	X	–
	SAL AUS	–	–	–	–	–	–	–	X	X	–

Table 23 (continued). Santa Monica Mountains National Recreation Area dirt roads and trails (DRT) monitoring sites with observed nonnative invasive plant species in 2019. “X” indicates presence and “–” indicates absence of the species within a specific subtransect. Species codes are in Table 1.

DRT # and Location	Species Code	Subtransects									
		1	2	3	4	5	6	7	8	9	10
DRT-269 Satwiwa Looptrail	CARPYC	X	X	–	X	X	–	X	X	X	X
	SAL AUS	X	X	X	–	–	X	X	X	X	–
	SILMAR	–	–	X	–	–	–	–	–	–	–
DRT-272 W. Mandeville Fire Road	SAL AUS	X	X	X	X	X	X	X	X	X	X
DRT-273 Camp 13 Trail- Leo Carrillo	NICGLA	–	–	–	X	–	–	–	–	–	–
DRT-275 Trailer Cyn Fire Rd	SAL AUS	–	–	–	X	X	–	X	X	–	X

Table 24. Santa Monica Mountains National Recreation Area dirt roads and trails (DRT) monitoring sites with observed nonnative invasive plant species in 2020. “X” indicates presence and “–” indicates absence of the species within a specific subtransect. Species codes are in Table 1.

DRT # and Location	Species Code	Subtransects									
		1	2	3	4	5	6	7	8	9	10
DRT-001 Serrano Cyn Rd, W end	CARPYC	–	–	–	–	–	–	X	X	X	X
	FOEVUL	X	X	X	X	X	X	–	X	X	X
	SILMAR	–	–	–	X	–	–	–	–	–	–
DRT-004 Lower Cheeseboro past Morrison Ranch Rd	CARPYC	–	–	–	–	–	–	–	–	X	X
DRT-005 Old Boney Trail	CARPYC	X	–	–	–	–	–	–	–	–	–
	CIRVUL	–	–	–	–	–	–	X	–	–	–
	FOEVUL	–	–	–	–	–	–	–	X	X	–
	PHAAQU	–	X	–	–	–	–	–	–	–	–
	SAL AUS	–	–	–	X	–	–	X	–	–	–

Table 24 (continued). Santa Monica Mountains National Recreation Area dirt roads and trails (DRT) monitoring sites with observed nonnative invasive plant species in 2020. “X” indicates presence and “–” indicates absence of the species within a specific subtransect. Species codes are in Table 1.

DRT # and Location	Species Code	Subtransects									
		1	2	3	4	5	6	7	8	9	10
DRT-006 MCSP Regan Ranch driveway	CARPYC	X	X	X	X	–	–	–	–	–	–
	CENSOL	–	–	–	–	X	–	–	–	–	–
	FOEVUL	–	–	X	–	–	–	–	–	–	–
	LEPLAT	–	–	X	–	–	–	–	–	–	–
	SILMAR	X	X	–	X	–	–	–	–	–	–
DRT-008 Morrison Road from Las Virgenes	CARPYC	–	–	–	–	–	X	X	–	–	–
	SILMAR	–	X	X	X	X	X	–	–	X	–
DRT-009 Old Boney Trail at Blue Canyon	CARPYC	X	–	–	–	–	X	–	–	–	–
	SALAUUS	–	–	–	–	–	–	–	X	X	–
DRT-011 Red Rock - SE of junction Calabasas Motorway / Red Rock Fire Road	SALAUUS	–	–	X	–	–	–	–	–	–	–
DRT-012 Reseda - Caballero Canyon	NONE	–	–	–	–	–	–	–	–	–	–
DRT-013 Upper Sycamore	CARPYC	–	X	X	–	–	X	X	–	X	X
	SALAUUS	–	–	–	X	–	–	–	–	X	X
DRT-016 Westridge Fire Rd	SALAUUS	X	X	X	–	X	X	X	X	X	X
DRT-017 Leo Carrillo SP - S end Nicholas Flat Trail	NONE	–	–	–	–	–	–	–	–	–	–
DRT-020 Cheeseboro Ridge near Tower Access	NONE	–	–	–	–	–	–	–	–	–	–
DRT-021 Lower Sycamore Canyon Overlook Trail	SALAUUS	X	–	X	X	X	X	X	X	–	X

Table 24 (continued). Santa Monica Mountains National Recreation Area dirt roads and trails (DRT) monitoring sites with observed nonnative invasive plant species in 2020. “X” indicates presence and “–” indicates absence of the species within a specific subtransect. Species codes are in Table 1.

DRT # and Location	Species Code	Subtransects									
		1	2	3	4	5	6	7	8	9	10
DRT-023 King Gillette Ranch	CARPYC	X	X	X	X	X	X	X	X	X	X
	CENSOL	X	X	X	–	–	–	–	–	–	–
	SALAU	–	–	–	–	–	–	X	–	–	–
DRT-024 Albertson Motorway	CARPYC	X	–	X	–	–	–	–	X	X	X
	SALAU	–	–	–	–	X	–	–	X	–	–
	SILMAR	X	X	X	–	–	–	–	–	–	–
DRT-025 Ranch Center Road off Big Sycamore Canyon	CIRVUL	–	–	–	–	–	–	–	X	–	X
DRT-027 BBT west of junction Stunt Rd / Schueren Rd	CARPYC	–	–	–	–	–	–	X	X	–	–
DRT-028 Tree People	CARPYC	–	X	X	X	X	–	–	–	–	X
	SALAU	X	X	X	X	–	–	–	–	–	–
DRT-029 Zuma - Edison Road (Zuma Ridge)	FOEVUL	–	–	X	–	–	–	–	–	–	–
	NICGLA	X	X	X	–	–	–	–	–	–	–
DRT-030 Escondido Falls - lower	CARPYC	X	–	X	–	–	X	X	–	X	X
	CIRVUL	–	–	–	–	–	–	X	X	–	–
	CONMAC	–	X	–	–	X	–	–	–	–	X
	CYPINV	X	–	–	–	X	X	–	X	–	–
	EUPTR	X	–	X	X	X	X	X	X	X	X
	FOEVUL	X	X	X	X	X	X	X	X	X	X
	SILMAR	–	X	–	X	–	–	–	–	X	X
DRT-031 Greenbriar/Dirt Mulholland (Upper Topanga SP)	NICGLA	–	–	–	–	–	–	X	–	–	–
	SALAU	–	–	–	–	–	–	X	X	X	X

Table 24 (continued). Santa Monica Mountains National Recreation Area dirt roads and trails (DRT) monitoring sites with observed nonnative invasive plant species in 2020. “X” indicates presence and “–” indicates absence of the species within a specific subtransect. Species codes are in Table 1.

DRT # and Location	Species Code	Subtransects									
		1	2	3	4	5	6	7	8	9	10
DRT-032 West Mandeville Fire Road	NICGLA	–	–	–	–	–	X	–	–	–	–
	SAL AUS	X	X	X	X	X	X	X	X	X	X
	SPA JUN	–	–	–	–	–	–	–	–	X	–
DRT-033 Yellow Hill	FOEVUL	X	X	X	–	–	–	–	–	–	–
DRT-034 Castro Peak Motorway	NONE	–	–	–	–	–	–	–	–	–	–
DRT-035 Topanga SP - Musch Camp	CARPYC	–	–	–	–	–	X	X	–	–	X
	SAL AUS	–	–	X	–	–	–	–	–	–	–
DRT-036 Calabasas - De Anza Trail	CARPYC	X	X	X	–	–	–	–	X	–	–
	CIRVUL	–	X	–	–	–	–	–	–	–	–
	SILMAR	X	–	–	–	–	–	–	X	–	–
DRT-037 La Jolla Valley Loop Trail	FOEVUL	X	–	–	–	–	–	–	–	–	–
	PHAAQU	X	X	X	X	X	X	X	–	–	X
DRT-040 Liberty Ridge Trail, Agoura	SAL AUS	–	–	–	–	–	–	–	X	–	–
DRT-041 Sandstone Peak	NONE	–	–	–	–	–	–	–	–	–	–
DRT-043 BBT E of Malibu Canyon Road at Piuma	CARPYC	X	X	X	X	X	X	X	X	–	–
	VINMAJ	–	X	X	–	–	–	–	–	–	–
DRT-044 Temescal to Rivas Cyn (Will Rodgers) connector	CIRVUL	–	–	–	–	–	–	–	–	X	–
	DELODO	X	X	X	X	X	X	X	–	–	X

Table 24 (continued). Santa Monica Mountains National Recreation Area dirt roads and trails (DRT) monitoring sites with observed nonnative invasive plant species in 2020. “X” indicates presence and “–” indicates absence of the species within a specific subtransect. Species codes are in Table 1.

DRT # and Location	Species Code	Subtransects									
		1	2	3	4	5	6	7	8	9	10
DRT-044 Temescal to Rivas Cyn (Will Rodgers) connector (continued)	FOEVUL	–	–	–	X	X	–	–	–	–	–
	NICGLA	–	–	X	–	–	X	–	–	–	X
	SALAU	–	–	–	X	–	–	–	–	–	–
DRT-045 Murphy Way	EUPTR	–	X	X	X	X	–	–	X	–	–
	FOEVUL	–	–	X	X	X	X	X	X	X	X
	RICCOM	–	–	–	–	X	–	–	X	–	–
	SALAU	X	X	X	X	–	–	–	–	–	–
DRT-047 Upper Topanga from Mulholland	NICGLA	–	–	–	–	–	–	X	X	X	–
	SALAU	–	X	X	–	X	X	X	X	–	–
DRT-048 Spencer Canyon W of Mandeville Fire Road	CARPYC	–	–	–	X	–	–	–	X	–	–
	FOEVUL	–	–	X	X	X	–	–	–	–	–
	SALAU	–	–	–	–	–	–	–	X	–	–
	SPAJUN	–	–	–	–	–	–	X	–	–	–
DRT-049 Overlook Trail, Lower Big Sycamore Canyon	SALAU	–	–	–	–	–	–	–	X	–	–
DRT-050 Lost Cabin Trail, Malibu Creek SP	CIRVUL	X	–	–	–	–	–	–	–	–	–
DRT-051 BBT W of Trippet Ranch, Topanga SP	CIRVUL	–	X	–	–	–	–	–	–	–	–
DRT-052 Lower Cheeseboro	CARPYC	X	X	X	X	–	–	–	–	–	–
	CIRVUL	–	X	–	–	–	–	–	–	–	–
	SALAU	–	–	–	–	–	–	–	X	–	–
DRT-054 BBT S of Etz Meloy Fire Road	SALAU	–	–	–	–	X	–	–	–	X	–

Table 24 (continued). Santa Monica Mountains National Recreation Area dirt roads and trails (DRT) monitoring sites with observed nonnative invasive plant species in 2020. “X” indicates presence and “–” indicates absence of the species within a specific subtransect. Species codes are in Table 1.

DRT # and Location	Species Code	Subtransects									
		1	2	3	4	5	6	7	8	9	10
DRT-055 Cold Canyon Trail	CARPYC	–	–	–	–	–	X	–	–	–	–
DRT-056 Palo Comado Main Trail, N of Ranch Center Connector	CARPYC	–	–	–	X	–	–	X	–	X	X
	SILMAR	–	–	–	–	–	–	–	–	–	X
DRT-057 Fossil Trail, Upper Big Sycamore Canyon	CARPYC	–	–	–	–	–	–	–	–	–	X
	SAL AUS	–	–	–	–	X	–	X	–	X	–
DRT-058 Nicolas Flat, trail to Malibu Springs, NE of pond	NONE	–	–	–	–	–	–	–	–	–	–
DRT-059 Malibu Bluffs	EUP TER	X	X	X	X	X	X	X	X	X	–
	FOEVUL	–	X	X	X	X	X	–	X	X	–
	NICGLA	–	–	–	–	–	–	–	–	–	X
	RICCOM	–	–	–	–	–	–	–	–	–	X
DRT-060 Sullivan Fire Road - mid/lower	CARPYC	–	–	–	–	X	X	X	–	–	X
	DELODO	–	–	–	–	–	X	–	–	–	–
	FOEVUL	X	–	–	–	–	–	–	–	–	–
	SILMAR	–	–	–	–	–	–	–	–	X	–
DRT-061 Off Kanan, S of BBT	CARPYC	–	–	–	–	–	X	–	–	–	X
	SPA JUN	–	–	–	–	X	X	X	–	X	X
DRT-064 Franklin Canyon	CARPYC	–	–	X	–	X	X	X	X	–	X
	CIRVUL	–	–	–	–	–	–	–	–	X	–
	CONMAC	–	–	–	–	–	X	–	–	X	X
	CORJUB	X	–	–	–	–	–	–	–	–	–

Table 24 (continued). Santa Monica Mountains National Recreation Area dirt roads and trails (DRT) monitoring sites with observed nonnative invasive plant species in 2020. “X” indicates presence and “–” indicates absence of the species within a specific subtransect. Species codes are in Table 1.

DRT # and Location	Species Code	Subtransects									
		1	2	3	4	5	6	7	8	9	10
DRT-064 Franklin Canyon (continued)	DELODO	–	–	–	–	–	X	–	–	–	–
	EUPTER	–	–	–	–	–	–	X	–	–	–
DRT-065 Chamberlain trail (BBT SW of Tri Peaks)	NONE	–	–	–	–	–	–	–	–	–	–
DRT-066 Solstice Canyon - Sostomo Trail	CARPYC	–	–	–	–	X	–	–	–	X	X
	EUPTER	–	–	X	–	–	–	X	X	X	–
	SALAU	–	–	–	X	X	–	–	–	–	–
DRT-067 Garapito Trail, Topanga SP	NONE	–	–	–	–	–	–	–	–	–	–
DRT-068 Ridgeline between Las Virgenes and Cheeseboro	SALAU	X	X	X	X	–	X	X	X	–	–
DRT-069 North of Serrano Valley	CARPYC	–	–	–	–	–	–	–	–	–	X
	FOEVUL	–	–	–	–	–	–	–	X	X	–
	PHAAQU	X	–	–	–	–	–	–	–	–	–
DRT-071 Gillette NE Quad Ridge Trail	CARPYC	X	X	–	–	–	–	–	–	–	–
	SILMAR	–	–	–	–	–	–	–	X	–	–
DRT-072 Trail from top of China Flat Trail east on ridgeline	NONE	–	–	–	–	–	–	–	–	–	–
DRT-073 Big Sycamore Canyon, south of Danielson Ranch	CARPYC	X	X	X	X	X	X	X	X	X	X
	CIRVUL	–	–	X	–	X	–	–	–	–	–
	FOEVUL	–	–	–	X	–	–	–	–	–	–
	SALAU	–	–	–	–	–	X	–	–	–	–
	SILMAR	X	X	X	X	X	–	X	X	X	X

Table 24 (continued). Santa Monica Mountains National Recreation Area dirt roads and trails (DRT) monitoring sites with observed nonnative invasive plant species in 2020. “X” indicates presence and “–” indicates absence of the species within a specific subtransect. Species codes are in Table 1.

DRT # and Location	Species Code	Subtransects									
		1	2	3	4	5	6	7	8	9	10
DRT-075 Red Rock	CARPYC	–	–	–	–	–	–	–	–	–	X
	LEPLAT	X	–	–	–	–	–	–	–	–	–
DRT-077 Upper Big Sycamore Canyon Trail from horse bridge toward water fall	CARPYC	X	X	X	X	X	X	X	X	X	–
	PHAAQU	–	–	–	–	–	–	–	–	X	–
DRT-079 Summit to Summit Motorway, Upper Topanga	NICGLA	X	X	–	–	–	X	–	–	–	–
	SAL AUS	X	–	X	–	X	X	–	–	–	X
DRT-081 Yellow Hill Fire Road - lower	SAL AUS	–	X	–	–	X	–	–	–	–	–
DRT-083 Temescal Ridge, Pacific Palisades	NICGLA	–	–	–	–	–	–	X	–	X	X
	SAL AUS	X	–	–	–	–	–	–	–	–	X
DRT-084 Cheeseboro Ridge Road	CARPYC	X	–	X	X	X	X	X	X	X	X
	CIRVUL	–	–	–	–	X	–	–	–	–	–
DRT-085 La Jolla Valley/Loop Trail	PHAAQU	X	X	X	X	X	–	–	–	–	X
DRT-086 BBT south of Newton Falls	CARPYC	X	–	–	–	X	–	–	X	X	–
	FOEVUL	–	X	X	X	–	–	–	–	–	–
	NICGLA	–	–	X	–	–	–	–	–	–	–
	SPAJUN	–	–	–	X	X	X	X	–	–	–
DRT-087 E to W ridge at southern boundary of Gillette Ranch	NONE	–	–	–	–	–	–	–	–	–	–
DRT-088 Cheeseboro Canyon, Shepherds Flat	NONE	–	–	–	–	–	–	–	–	–	–

Table 24 (continued). Santa Monica Mountains National Recreation Area dirt roads and trails (DRT) monitoring sites with observed nonnative invasive plant species in 2020. “X” indicates presence and “–” indicates absence of the species within a specific subtransect. Species codes are in Table 1.

DRT # and Location	Species Code	Subtransects									
		1	2	3	4	5	6	7	8	9	10
DRT-089 Big Sycamore Canyon, Wood Canyon Connector	CARPYC	X	X	X	X	X	X	X	X	X	X
	CIRVUL	X	X	X	–	–	–	–	–	–	–
	PHAAQU	–	X	X	–	–	–	–	–	–	–
	SAL AUS	–	–	–	–	–	–	–	–	X	–
	SILMAR	–	–	–	–	–	–	X	–	–	–
DRT-091 West Saddle Peak Rd	CARPYC	–	–	–	–	–	X	X	–	X	–
DRT-092 Laurel Canyon/Fryman Road	CARPYC	X	X	X	X	X	X	X	X	X	X
	NICGLA	–	–	X	–	–	–	–	–	–	–
	SPAJUN	X	–	–	–	–	–	X	–	–	–
DRT-093 Zuma Canyon Edison Road (close to 29)	CARPYC	X	X	X	X	–	–	–	–	–	–
	CYPINV	X	–	–	–	–	–	–	–	–	–
	FOEVUL	X	X	X	–	–	–	X	–	–	–
	NICGLA	–	–	X	X	X	X	X	X	X	X
	SAL AUS	X	–	X	–	–	–	–	–	–	–
	SILMAR	X	X	X	X	–	–	–	–	–	–
DRT-094 Kanan Road to Ocean View Connector	CIRVUL	X	–	X	–	–	–	–	–	–	–
	FOEVUL	–	X	X	X	X	X	X	X	X	X
	SILMAR	X	X	–	–	–	–	–	–	–	–
	SPAJUN	–	–	–	–	–	–	–	–	X	–
DRT-095 Winnetka Ave/Corbin Canyon Trail	NONE	–	–	–	–	–	–	–	–	–	–

Table 24 (continued). Santa Monica Mountains National Recreation Area dirt roads and trails (DRT) monitoring sites with observed nonnative invasive plant species in 2020. “X” indicates presence and “–” indicates absence of the species within a specific subtransect. Species codes are in Table 1.

DRT # and Location	Species Code	Subtransects									
		1	2	3	4	5	6	7	8	9	10
DRT-096 Canyonback Fire Road, up at the top	NICGLA	–	X	–	X	X	X	–	–	X	–
	SAL AUS	X	X	X	X	–	X	X	X	X	X
	SPAJUN	–	–	–	–	–	–	–	–	X	–
DRT-100 Juan de Anza W from Las Virgenes Road	CARPYC	X	X	–	–	–	–	–	–	–	–
	SAL AUS	X	X	–	X	–	–	–	–	–	–
	SILMAR	X	–	–	–	–	X	–	–	X	X
DRT-101 BBT East of La Jolla Canyon	SAL AUS	–	X	X	X	X	X	–	–	X	–
DRT-102 CXR Canyon View Trail	NONE	–	–	–	–	–	–	–	–	–	–
DRT-103 Mott Rd, MCSP	CARPYC	X	X	X	X	X	X	X	X	–	X
	CENSOL	–	–	–	–	–	–	–	–	X	X
	CONMAC	–	–	–	–	X	–	–	–	–	–
	SILMAR	X	–	–	–	–	X	X	–	–	–
DRT-104 Coyote Cyn Overlook Trail	NONE	–	–	–	–	–	–	–	–	–	–
DRT-105 Danielson Cabin to Tri Peaks - East Trail	NONE	–	–	–	–	–	–	–	–	–	–
DRT-106 Chumash Indian Trail	NONE	–	–	–	–	–	–	–	–	–	–
DRT-107 BBT from Malibu Cyn Rd	CARPYC	X	–	–	X	–	–	–	–	–	X
	CIRVUL	–	–	–	–	–	–	–	X	–	–
	SILMAR	–	–	–	X	–	–	–	–	–	–
DRT-119 BBT connector W of Stunt Rd	SAL AUS	–	–	–	–	–	–	–	X	–	–

Table 24 (continued). Santa Monica Mountains National Recreation Area dirt roads and trails (DRT) monitoring sites with observed nonnative invasive plant species in 2020. “X” indicates presence and “–” indicates absence of the species within a specific subtransect. Species codes are in Table 1.

DRT # and Location	Species Code	Subtransects									
		1	2	3	4	5	6	7	8	9	10
DRT-121 RSV/Satwiwa Cultural Center	CARPYC	X	X	–	–	–	–	X	X	–	–
	PHAAQU	X	–	–	–	–	–	X	X	–	–
	SAL AUS	–	–	–	–	–	X	–	X	–	–
DRT-123 Dirt Mulholland W	NICGLA	X	–	–	X	–	–	–	–	–	–
	SAL AUS	X	X	X	X	X	–	–	–	–	X
DRT-124 Bienveneda Trail	NONE	–	–	–	–	–	–	–	–	–	–
DRT-127 Cheeseboro Ridge	NONE	–	–	–	–	–	–	–	–	–	–
DRT-129 Circle X Grotto Trail	CARPYC	X	X	X	X	X	–	–	–	–	–
	SILMAR	–	–	X	–	–	X	–	–	–	–
DRT-134 Hennessey	CARPYC	–	X	X	–	–	–	–	–	–	X
DRT-136 China Flat S of Albertson MTW/Palo Comado	CARPYC	–	–	X	–	X	X	X	X	X	X
DRT-137 La Jolla Valley/Un-named trail off Ranch Ctr Rd	SAL AUS	X	X	X	X	X	X	X	X	X	X
DRT-139 Calabasas Motorway	SILMAR	–	–	–	–	–	–	–	–	–	X
	SPAJUN	–	–	–	–	X	X	–	–	–	–
DRT-141 Spur off Guadalupe Trail toward Broom	CARPYC	–	–	X	X	–	–	–	–	–	–
	FOEVUL	X	X	X	–	X	–	–	–	–	–
	SAL AUS	–	X	–	–	–	–	–	X	X	X
DRT-144 Sullivan Fire Road - mid/upper	CIRVUL	–	–	–	–	–	–	–	–	X	–
	SAL AUS	X	–	–	–	–	–	–	–	–	–

Table 24 (continued). Santa Monica Mountains National Recreation Area dirt roads and trails (DRT) monitoring sites with observed nonnative invasive plant species in 2020. “X” indicates presence and “–” indicates absence of the species within a specific subtransect. Species codes are in Table 1.

DRT # and Location	Species Code	Subtransects									
		1	2	3	4	5	6	7	8	9	10
DRT-146 Lookout Road, MCSP	NONE	–	–	–	–	–	–	–	–	–	–
DRT-148 Upper Las Virgenes Canyon	CARPYC	X	X	X	X	–	–	–	X	–	–
	CENSOL	–	–	X	X	–	–	–	X	X	X
	SILMAR	–	–	–	–	–	–	–	X	–	–
DRT-150 Rocky Oaks	CARPYC	X	X	–	–	–	X	–	–	–	X
	CIRVUL	X	X	–	X	X	X	X	–	–	–
	CONMAC	–	–	–	–	–	X	–	–	–	–
	PHAAQU	X	X	–	X	–	X	X	–	–	X
	SALAU	–	–	–	–	–	–	–	X	X	X
	SPAJUN	X	X	–	–	–	–	–	–	–	–
DRT-151 Las Virgenes Trail S of Lost Hills	CARPYC	X	X	X	X	X	–	–	–	–	X
	SILMAR	X	X	X	X	X	X	X	X	X	X
DRT-153 RSV - Hidden Valley Overlook Trail	CARPYC	X	–	–	–	–	–	–	–	–	–
	SALAU	–	X	–	–	–	–	–	–	–	–
DRT-154 Trancas Fire Road (from Encinal Cyn Rd)	CARPYC	–	–	X	X	X	X	–	–	–	–
DRT-155 Trail from Puerco Cyn Fire Road to Pepperdine	FOEVUL	X	–	–	X	–	–	–	–	–	–
DRT-156 Will Rodgers SHP	DELODO	–	–	X	–	–	X	–	X	–	–
	SALAU	X	–	X	X	X	X	X	X	X	X
DRT-157 Zuma Ridge from Busch Drive	CARPYC	–	–	–	–	–	–	–	–	–	X
	EUPTER	–	–	–	–	X	X	X	X	–	–
	FOEVUL	–	X	X	X	X	–	–	–	–	–

Table 24 (continued). Santa Monica Mountains National Recreation Area dirt roads and trails (DRT) monitoring sites with observed nonnative invasive plant species in 2020. “X” indicates presence and “–” indicates absence of the species within a specific subtransect. Species codes are in Table 1.

DRT # and Location	Species Code	Subtransects									
		1	2	3	4	5	6	7	8	9	10
DRT-158 Point Dume	EUPTER	X	X	–	–	–	X	X	–	–	–
	SAL AUS	X	–	–	–	–	–	–	–	–	–
DRT-159 Serrania Trail (off Dirt Mulholland)	CARPYC	–	–	–	–	X	–	–	–	–	–
DRT-160 Topanga SP, BBT E of Temescal Ridge	NONE	–	–	–	–	–	–	–	–	–	–
DRT-162 Coyote Canyon / Overlook Trail, Paramount Ranch	NONE	–	–	–	–	–	–	–	–	–	–
DRT-163 Topanga SP Trippet Ranch	CARPYC	X	X	X	X	X	–	–	–	–	–
	PHAAQU	–	–	–	–	X	X	–	–	–	–
	VINMAJ	–	–	–	–	–	–	X	–	X	X
DRT-165 La Jolla Valley Loop, PMSP	CARPYC	–	–	–	–	–	–	X	X	X	X
	PENSET	X	–	–	–	–	–	–	–	–	–
	PHAAQU	–	–	–	–	–	–	X	X	–	–
	SAL AUS	–	–	–	–	–	X	–	–	–	–
	SILMAR	–	–	–	–	–	–	–	–	–	X
DRT-166 BBT S of Mishe Mokwa Trailhead	CARPYC	–	–	–	–	–	–	–	–	X	–
DRT-167 Grasslands Trail - MCSP	CARPYC	–	–	X	X	X	X	X	X	X	X
	CENSOL	–	–	X	–	–	–	–	–	–	X
	FOEVUL	X	X	–	–	–	–	–	–	–	–
DRT-169 Mishe Mokwa Trail	NONE	–	–	–	–	–	–	–	–	–	–
DRT-170 Nicholas Ridge Motorway	NONE	–	–	–	–	–	–	–	–	–	–

Table 24 (continued). Santa Monica Mountains National Recreation Area dirt roads and trails (DRT) monitoring sites with observed nonnative invasive plant species in 2020. “X” indicates presence and “–” indicates absence of the species within a specific subtransect. Species codes are in Table 1.

DRT # and Location	Species Code	Subtransects									
		1	2	3	4	5	6	7	8	9	10
DRT-171 Puerco Canyon Fire Road	CARPYC	–	–	–	X	X	–	X	X	X	–
	CIRVUL	–	–	–	–	–	–	X	–	–	–
	EUPTER	–	–	–	X	X	X	X	–	X	X
DRT-172 Sullivan Fire Road - lower	FOEVUL	X	X	X	X	X	X	X	X	–	X
	NICGLA	X	X	X	–	–	–	–	–	–	–
	SAL AUS	–	X	X	X	X	X	X	X	X	X
DRT-173 Kanan Edison Road	FOEVUL	X	–	–	–	X	X	X	–	–	–
	SPAJUN	–	–	–	–	–	–	X	X	X	X
DRT-174 Temescal Ridge Trail - middle	SAL AUS	X	X	X	X	X	X	X	X	X	–
	SPAJUN	–	–	–	–	–	X	–	–	–	–
DRT-175 Mulholland Gateway Park	SILMAR	–	–	–	–	X	–	–	–	–	–
DRT-177 Wood Canyon Vista Trail, PMSP	CARPYC	–	X	X	X	X	X	X	–	–	–
	CIRVUL	X	–	–	–	–	X	–	–	–	–
	FOEVUL	–	–	–	–	–	–	–	X	–	–
	SAL AUS	–	–	–	–	X	–	X	X	X	X
DRT-179 Topanga Ridge Motorway - upper	NONE	–	–	–	–	–	–	–	–	–	–
DRT-180 Bark - New Millennium Loop Trail	CARPYC	–	–	–	–	–	–	X	–	–	–
	CIRVUL	–	–	–	–	–	–	X	–	–	–
DRT-181 RSV West of Horse Parking	SAL AUS	X	–	–	X	X	X	–	–	–	–
DRT-182 Trancas Cyn Fire Rd from Encinal Cyn Rd	CARPYC	–	–	–	–	–	X	X	X	X	–

Table 24 (continued). Santa Monica Mountains National Recreation Area dirt roads and trails (DRT) monitoring sites with observed nonnative invasive plant species in 2020. "X" indicates presence and "–" indicates absence of the species within a specific subtransect. Species codes are in Table 1.

DRT # and Location	Species Code	Subtransects									
		1	2	3	4	5	6	7	8	9	10
DRT-183 Cold Creek Trail / Lower Stunt High Trail	CARPYC	X	X	X	–	–	–	X	X	X	X
DRT-184 Dirt Mulholland East of Sullivan Canyon	NICGLA	X	–	–	–	–	–	–	–	–	X
	SAL AUS	–	–	X	–	–	–	–	–	–	–
	SPAJUN	X	–	X	–	–	–	–	–	–	X
DRT-185 Big Sycamore Canyon South of Horse Bridge	SAL AUS	–	–	–	–	–	X	–	–	X	–
DRT-186 Nicolas Ridge Fire Road S	EUP TER	X	–	–	–	–	–	–	–	–	–
	FOEVUL	–	–	–	–	–	X	–	–	–	–
	NICGLA	X	–	–	–	–	–	–	–	–	–
	PEN SET	–	X	–	–	–	X	X	X	X	X
	RIC COM	X	–	–	–	–	–	–	–	–	–
	SAL AUS	–	X	–	–	–	–	–	–	–	–
DRT-187 Summit to Summit	CARPYC	–	–	–	–	X	X	–	–	X	X
	NICGLA	–	–	X	–	–	–	–	–	–	–
	SAL AUS	–	–	–	–	–	–	X	–	X	X
	SILMAR	–	–	–	–	–	X	–	–	–	–
DRT-188 Rogers Road	CORJUB	–	–	X	–	–	–	–	–	–	–
	DELODO	–	–	–	X	–	–	–	–	–	–
DRT-189 Solstice - Sostomo upper	CARPYC	X	–	–	–	–	–	–	–	–	–
DRT-191 Upper Las Virgenes conector	CARPYC	–	–	–	–	–	–	–	–	X	–
	CIRVUL	–	–	–	–	–	–	–	–	X	–

Table 24 (continued). Santa Monica Mountains National Recreation Area dirt roads and trails (DRT) monitoring sites with observed nonnative invasive plant species in 2020. “X” indicates presence and “–” indicates absence of the species within a specific subtransect. Species codes are in Table 1.

DRT # and Location	Species Code	Subtransects									
		1	2	3	4	5	6	7	8	9	10
DRT-191 Upper Las Virgenes conector (continued)	PHAAQU	–	–	–	–	–	–	–	–	X	–
	SILMAR	–	–	–	–	–	–	–	–	X	–
DRT-192 Betty Dearing (Fryman)	CARPYC	X	X	X	X	–	X	X	X	X	X
	CIRVUL	–	–	–	X	–	–	–	–	X	–
	FOEVUL	X	–	–	–	–	–	–	–	X	X
	NICGLA	–	X	X	–	–	–	–	–	–	–
	SILMAR	–	–	–	–	–	–	–	–	–	X
DRT-196 Las Virgenes West from LV Rd.	SAL AUS	–	–	X	X	–	X	X	–	–	X
DRT-198 Latigo Canyon BBT	NONE	–	–	–	–	–	–	–	–	–	–
DRT-199 Tapia Park	CARPYC	X	X	X	X	X	X	X	X	X	X
	DELODO	–	–	–	X	X	–	–	–	–	–
	VINMAJ	X	X	–	–	X	–	–	–	–	–
DRT-200 Upper Cheese Ridge - South of upper LV connector	CIRVUL	–	–	X	–	–	X	–	–	–	–
	SPAJUN	–	–	X	X	–	–	–	–	–	–
DRT-201 Coyote trail from Two Foxes	SAL AUS	X	X	X	–	–	–	–	–	–	–
DRT-204 Dirt Mullholland West of Nike Site	SAL AUS	–	–	–	X	X	X	X	X	X	X
	SPAJUN	X	X	X	X	X	X	X	X	X	X
DRT-205 Zuma Bluff Killer Trail - upper	NONE	–	–	–	–	–	–	–	–	–	–

Table 24 (continued). Santa Monica Mountains National Recreation Area dirt roads and trails (DRT) monitoring sites with observed nonnative invasive plant species in 2020. “X” indicates presence and “–” indicates absence of the species within a specific subtransect. Species codes are in Table 1.

DRT # and Location	Species Code	Subtransects									
		1	2	3	4	5	6	7	8	9	10
DRT-206 Solstice Main Trail	CARPYC	X	–	X	–	X	–	–	–	X	–
	CIRVUL	–	–	–	–	X	–	–	–	–	–
	EUPTER	X	X	X	X	X	X	X	X	X	X
DRT-208 West Mandeville Fire Rd Fuel Break	SAL AUS	–	–	–	–	–	–	–	X	X	–
DRT-209 Yellow Hill Fire Road - middle	CARPYC	–	–	–	–	–	–	–	–	X	–
	CIRVUL	–	–	–	–	–	–	–	–	X	X
	FOEVUL	–	–	–	–	X	X	X	–	–	–
	PENSET	–	–	X	–	–	–	–	–	–	–
DRT-211 East Topanga Fire Road at Cheney Fire Road	SAL AUS	X	–	X	X	X	X	X	X	X	X
DRT-212 Calabasas to Cold Creek	CARPYC	X	–	X	X	X	X	–	–	–	–
DRT-213 PCH East of Mugu State Beach	PENSET	–	–	–	–	–	–	–	–	X	X
	SAL AUS	X	–	–	X	–	–	X	–	–	–
DRT-214 Etz Meloy West End	RICCOM	X	X	–	–	–	–	–	–	–	–
DRT-215 Cistern Trail, MCSP	CARPYC	X	X	X	X	X	X	–	–	X	X
	PHAAQU	X	–	–	–	–	–	–	–	–	–
DRT-216 Paramount Backdrop Trail	CARPYC	–	–	–	–	X	–	–	–	–	–
	CENSOL	–	X	X	X	X	X	X	X	X	X
DRT-217 Old Cabin Trail, PMSP	CARPYC	X	X	X	–	–	–	X	X	X	X
DRT-218 Carmichael / Russell Tr - Charmlee	FOEVUL	–	–	–	–	–	–	–	X	X	–

Table 24 (continued). Santa Monica Mountains National Recreation Area dirt roads and trails (DRT) monitoring sites with observed nonnative invasive plant species in 2020. “X” indicates presence and “–” indicates absence of the species within a specific subtransect. Species codes are in Table 1.

DRT # and Location	Species Code	Subtransects									
		1	2	3	4	5	6	7	8	9	10
DRT-219 Coastal Slope Trail, Malibu Cyn	CARPYC	X	–	–	–	–	–	–	–	X	X
	EUPTR	X	X	X	–	–	–	–	–	X	X
	FOEVUL	X	–	X	–	–	–	–	–	–	X
	NICGLA	–	X	–	–	–	–	–	–	–	–
	SALOUS	–	–	–	–	–	–	–	–	–	X
	SILMAR	X	–	–	–	–	–	–	–	–	–
	SPAJUN	–	–	–	–	–	–	–	–	–	X
DRT-220 Inspiration Point / Will Rogers Loop Trail	CIRVUL	–	–	–	–	–	–	–	X	–	–
	DELODO	X	–	X	–	–	X	X	X	X	X
	NICGLA	–	–	–	–	–	X	X	–	X	X
	RICCOM	–	–	–	–	–	–	X	X	X	–
	SALOUS	–	X	X	X	X	X	–	X	X	X
DRT-221 Canyon View Trail, Zuma	FOEVUL	–	–	X	–	–	–	–	–	–	–
DRT-222 Zuma Canyon Trail	CARPYC	–	–	–	–	X	X	X	X	–	X
	EUPTR	X	X	–	X	X	X	X	X	–	X
	FOEVUL	–	–	–	–	–	–	–	–	–	X
	NICGLA	–	–	X	X	–	–	–	–	–	X
	RICCOM	–	–	–	–	–	–	–	–	–	X
	SALOUS	X	–	–	–	–	–	–	–	–	–
	SILMAR	–	–	–	–	–	–	X	–	–	–
	SPAJUN	–	–	–	–	–	–	–	–	–	X

Table 24 (continued). Santa Monica Mountains National Recreation Area dirt roads and trails (DRT) monitoring sites with observed nonnative invasive plant species in 2020. “X” indicates presence and “–” indicates absence of the species within a specific subtransect. Species codes are in Table 1.

DRT # and Location	Species Code	Subtransects									
		1	2	3	4	5	6	7	8	9	10
DRT-223 Santa Maria Canyon / Summit Trail	CARPYC	–	–	X	X	X	–	–	–	–	–
DRT-224 Farmer Ridge Fire Road, Sullivan Cyn	NONE	–	–	–	–	–	–	–	–	–	–
DRT-225 Overlook Fire Road - lower	SAL AUS	–	–	–	–	–	X	X	–	–	–
DRT-226 Bulldog Motorway, MCSP	NONE	–	–	–	–	–	–	–	–	–	–
DRT-227 Hondo Canyon / Backbone Trail	CARPYC	X	–	–	–	X	–	X	X	–	X
	SILMAR	X	X	X	–	–	–	–	–	–	–
DRT-228 Chesebro Equestrian Trail	CARPYC	–	–	–	X	X	X	X	X	–	–
	CIRVUL	–	–	–	–	–	–	–	X	X	–
	VINMAJ	–	–	–	–	–	–	–	–	X	X
DRT-230 Backbone Trail - Triunfo Pass	NONE	–	–	–	–	–	–	–	–	–	–
DRT-231 Forest Trail, MCSP	CARPYC	X	X	X	X	X	X	X	X	X	X
	CONMAC	X	X	X	X	X	X	X	X	X	X
	FOEVUL	–	–	–	X	X	–	–	–	–	–
	LEPLAT	–	–	–	X	X	–	–	X	–	–
	NICGLA	X	–	–	–	–	–	–	–	–	–
	SILMAR	X	X	–	–	–	–	–	–	–	–
	VINMAJ	X	X	X	X	–	X	X	–	–	–
DRT-232 Palo Comado Canyon Road	CARPYC	X	X	X	X	X	X	X	X	–	X
	CIRVUL	X	–	X	–	–	–	–	–	–	–

Table 24 (continued). Santa Monica Mountains National Recreation Area dirt roads and trails (DRT) monitoring sites with observed nonnative invasive plant species in 2020. “X” indicates presence and “–” indicates absence of the species within a specific subtransect. Species codes are in Table 1.

DRT # and Location	Species Code	Subtransects									
		1	2	3	4	5	6	7	8	9	10
DRT-233 Old Boney Trail near Fossil Trail	SAL AUS	–	X	–	–	–	–	–	–	–	–
DRT-234 Nicholas Flat Trail	NONE	–	–	–	–	–	–	–	–	–	–
DRT-235 Middle Corral Canyon Trail	NONE	–	–	–	–	–	–	–	–	–	–
DRT-236 Sullivan Ridge Trail	CIRVUL	–	X	–	–	–	–	–	–	–	–
	PENSET	–	–	–	X	–	–	–	–	–	–
DRT-237 Ramera Motorway East	FOEVUL	–	–	–	–	–	–	X	–	X	X
	SPAJUN	X	–	–	–	–	–	–	–	–	–
DRT-238 East Topanga Fire Road	SAL AUS	X	X	X	X	X	X	X	X	X	X
DRT-239 Bell Canyon Fire Road	CARPYC	–	–	X	–	–	–	–	–	X	–
	CENSOL	X	X	X	–	–	–	–	–	–	–
	SAL AUS	–	X	–	X	–	X	X	X	–	–
DRT-240 Chernoff Trail, Franklin Cyn	CORJUB	–	X	X	X	X	–	–	X	–	X
	CYPINV	–	–	–	–	–	X	–	–	–	–
DRT-242 Medea Creek Trail, Paramount Ranch	CARPYC	–	–	–	–	–	–	–	X	X	–
	CIRVUL	–	–	–	–	–	–	–	–	X	–
	LEPLAT	–	–	–	–	–	–	–	X	X	X
DRT-244 Juan Bautista de Anza / Calabasas Connector Trail	SAL AUS	X	–	–	X	X	X	–	X	X	X
	SILMAR	–	–	–	X	X	–	–	–	–	–
DRT-245 Sycamore Canyon Road, PMSP	CARPYC	X	X	X	X	X	X	X	X	X	X
	CIRVUL	–	–	X	–	X	–	–	–	–	–

Table 24 (continued). Santa Monica Mountains National Recreation Area dirt roads and trails (DRT) monitoring sites with observed nonnative invasive plant species in 2020. “X” indicates presence and “–” indicates absence of the species within a specific subtransect. Species codes are in Table 1.

DRT # and Location	Species Code	Subtransects									
		1	2	3	4	5	6	7	8	9	10
DRT-245 Sycamore Canyon Road, PMSP (continued)	PHAAQU	–	–	X	X	–	–	–	–	–	X
	SALAU	–	–	–	–	X	–	–	–	–	–
DRT-246 Backbone Trail - Mulholland to Etz Meloy	NONE	–	–	–	–	–	–	–	–	–	–
DRT-247 Topanga Ridge Motorway - lower	CARPYC	–	–	–	–	–	–	–	–	–	X
	CIRVUL	–	–	–	–	–	–	–	–	–	X
DRT-248 Dirt Mulholland	NICGLA	–	–	–	–	–	X	–	–	–	–
	SALAU	–	–	–	–	–	–	–	X	–	–
DRT-249 Ranch Overlook Trail	CARPYC	X	X	X	X	X	X	X	X	X	–
	SILMAR	–	X	–	–	–	–	–	–	–	–
DRT-250 Potrero Trail-Charmlee	FOEVUL	–	–	–	–	–	–	–	X	X	–
	SALAU	–	–	–	X	–	–	X	X	–	X
DRT-251 Summit Trail, Viewridge Trailhead	CARPYC	–	–	–	–	–	–	–	X	–	–
DRT-252 Entrance to West Mandeville Fire Road	NICGLA	–	–	–	–	–	X	–	–	–	–
	SALAU	X	X	X	X	X	X	X	X	X	X
DRT-254 Budwood Motorway	FOEVUL	–	–	–	–	X	–	–	–	–	–
DRT-255 Cheeseboro Trail	CARPYC	X	X	–	X	–	X	X	X	X	–
	CENSOL	–	X	–	–	–	–	–	–	–	–
	CIRVUL	X	–	X	X	–	–	X	X	–	–
	SALAU	–	–	–	–	–	–	–	–	X	–
DRT-256 Runyon Canyon Trail	NICGLA	–	–	–	X	–	X	X	–	X	X
	RICCOM	–	–	–	X	–	–	–	–	X	X

Table 24 (continued). Santa Monica Mountains National Recreation Area dirt roads and trails (DRT) monitoring sites with observed nonnative invasive plant species in 2020. “X” indicates presence and “–” indicates absence of the species within a specific subtransect. Species codes are in Table 1.

DRT # and Location	Species Code	Subtransects									
		1	2	3	4	5	6	7	8	9	10
DRT-256 Runyon Canyon Trail (continued)	SAL AUS	–	X	X	X	X	X	–	–	–	–
	SIL MAR	–	–	–	–	–	X	X	–	–	–
DRT-257 Chamberlain Trail, PMSP	CARPYC	–	–	–	–	–	X	–	–	–	–
DRT-258 Solstice Canyon - Rising Sun Trail	CARPYC	–	–	–	–	X	X	–	–	–	–
	EUP TER	–	–	–	–	–	X	X	X	–	–
DRT-260 Mont Calabasas	NICGLA	–	–	–	X	–	–	–	–	–	–
	SAL AUS	X	X	X	X	X	–	X	–	X	–
DRT-261 Old Boney Trail, PMSP	CARPYC	X	X	–	–	–	–	X	X	–	X
	CIRVUL	–	–	–	–	–	–	–	–	X	X
	PHAAQU	X	X	X	X	X	X	X	X	X	X
	SIL MAR	X	X	–	–	X	X	X	X	–	X
DRT-262 Crags Rd, MCSP	CARPYC	–	–	X	X	–	–	–	–	X	X
	CENSOL	–	–	X	–	–	–	–	–	–	–
	CIRVUL	–	–	–	–	–	–	–	X	–	–
	CONMAC	X	–	–	–	–	–	X	X	X	–
	LEPLAT	X	–	X	X	X	X	X	X	X	–
	NICGLA	–	–	–	–	–	–	X	–	–	–
	SIL MAR	X	–	–	–	–	X	–	–	–	–
DRT-263 Malibu Creek/Las Virgenes View Park	CARPYC	X	–	–	–	–	–	–	X	X	X
	SAL AUS	–	–	X	–	–	–	–	–	–	–
	SIL MAR	–	–	–	–	–	–	–	–	X	X
DRT-264 Morrison Road	CARPYC	X	X	–	X	X	X	X	–	–	–
	SIL MAR	X	X	–	–	–	–	–	–	–	–

Table 24 (continued). Santa Monica Mountains National Recreation Area dirt roads and trails (DRT) monitoring sites with observed nonnative invasive plant species in 2020. “X” indicates presence and “–” indicates absence of the species within a specific subtransect. Species codes are in Table 1.

DRT # and Location	Species Code	Subtransects									
		1	2	3	4	5	6	7	8	9	10
DRT-265 Blue Canyon Trail, PMSP	CARPYC	–	X	X	X	X	X	X	–	–	–
	FOEVUL	–	–	–	–	–	–	X	–	–	–
	SILMAR	–	X	–	–	–	–	–	–	–	–
DRT-266 Camp 13 Trail South, Trancas Cyn	FOEVUL	X	–	–	–	–	–	–	–	–	–
DRT-267 Stunt Road, Backbone Trail	CARPYC	–	–	X	–	–	–	–	–	–	–
	SALAU	–	–	–	–	–	–	–	–	X	X
DRT-269 Satwiwa Looptrail	CARPYC	X	X	X	X	X	–	–	X	X	X
	SALAU	X	–	X	–	–	–	X	–	–	–
	SILMAR	–	X	X	–	–	–	–	–	–	–
DRT-272 W. Mandeville Fire Road	SALAU	X	X	X	X	X	X	X	X	X	X
DRT-273 Camp 13 Trail- Leo Carrillo	NONE	–	–	–	–	–	–	–	–	–	–
DRT-275 Trailer Cyn Fire Rd	SALAU	–	–	–	X	–	–	X	X	–	X
DRT-276 Cheseboro - Fossil Lookout Point	CARPYC	–	–	–	–	X	X	–	–	–	–
DRT-277 Overlook Fire Road – upper	LEPLAT	–	X	X	–	–	–	–	–	–	–
	PHAAQU	X	X	X	X	X	–	–	–	–	–
	SALAU	–	–	–	X	–	–	–	X	–	–
DRT-278 Pond Trail	CARPYC	–	–	–	–	–	–	–	–	X	–
	CIRVUL	–	–	–	–	–	–	X	X	X	–
DRT-279 Gillette Ranch Loop	CARPYC	–	–	X	X	X	X	X	X	X	X
	SALAU	–	X	–	–	–	–	–	–	–	–

Table 24 (continued). Santa Monica Mountains National Recreation Area dirt roads and trails (DRT) monitoring sites with observed nonnative invasive plant species in 2020. “X” indicates presence and “–” indicates absence of the species within a specific subtransect. Species codes are in Table 1.

DRT # and Location	Species Code	Subtransects									
		1	2	3	4	5	6	7	8	9	10
DRT-280 Dead Cow Trail	NONE	–	–	–	–	–	–	–	–	–	–
DRT-281 Wood Canyon Fire Road	CARPYC	X	X	X	–	–	X	–	–	X	–
	FOEVUL	–	–	–	–	–	–	X	X	X	–
	PHAAQU	X	–	X	–	–	–	X	X	X	X
	SALAU	–	–	–	–	X	X	X	X	–	–
	SILMAR	–	–	–	X	–	–	–	X	–	–
DRT-283 Backbone Trail at Stunt Rd	CARPYC	X	–	–	–	X	–	–	–	–	–
	CIRVUL	X	–	–	–	–	–	–	–	–	–
	EUPTE	–	–	X	X	–	–	–	–	–	–
	FOEVUL	–	–	X	X	–	–	–	–	–	–
	PENSET	–	–	X	X	–	X	–	–	–	–
	SALAU	–	–	X	–	–	–	–	–	–	–
	SPAJUN	–	X	X	–	–	–	–	–	–	–
DRT-285 Zuma Bluff Killer Trail - lower	NICGLA	–	–	–	–	–	–	–	–	–	X
	SALAU	–	–	–	–	–	–	–	–	X	–
DRT-286 Escondido Falls - upper	CARPYC	–	–	–	–	–	–	–	X	X	X
	CIRVUL	X	–	–	–	–	–	–	–	–	–
	CONMAC	X	–	X	–	X	–	–	–	X	–
	EUPTE	X	–	X	–	–	–	–	X	X	X
	FOEVUL	X	X	X	X	X	–	X	X	X	X
	RICCOM	X	X	X	X	–	–	–	–	–	–
	SILMAR	X	–	X	–	–	–	–	X	X	X

Table 24 (continued). Santa Monica Mountains National Recreation Area dirt roads and trails (DRT) monitoring sites with observed nonnative invasive plant species in 2020. “X” indicates presence and “–” indicates absence of the species within a specific subtransect. Species codes are in Table 1.

DRT # and Location	Species Code	Subtransects									
		1	2	3	4	5	6	7	8	9	10
DRT-287 Caballero Canyon Trail	SAL AUS	–	–	–	–	–	–	–	X	–	–
DRT-288 Water and Power Pole Road	NICGLA	–	–	X	–	–	–	X	X	–	X
	SAL AUS	X	X	X	X	X	X	X	X	X	X
DRT-289 Serrano Canyon Trail	CARPYC	–	–	–	X	X	–	X	–	–	–
	FOEVUL	–	–	X	–	–	–	X	–	–	–
	SAL AUS	–	–	–	–	X	–	–	–	–	–
DRT-290 Solstice Edison Tower Spur at BBT	NONE	–	–	–	–	–	–	–	–	–	–
DRT-291 Santa Ynez Trail	NONE	–	–	–	–	–	–	–	–	–	–
DRT-292 New Millennium Loop Trail	CARPYC	–	X	–	–	X	–	–	–	–	X
	SILMAR	–	–	–	–	–	X	–	–	X	X
DRT-293 Coastal La Jolla Beach Trail	NONE	–	–	–	–	–	–	–	–	–	–
DRT-295 Tapia Spur Space Trail	CARPYC	–	–	–	–	X	–	–	–	X	X
DRT-296 Liberty Ridge Trail	NONE	–	–	–	–	–	–	–	–	–	–
DRT-297 Mishe Mokwa Trail near Echo Cliffs	NONE	–	–	–	–	–	–	–	–	–	–
DRT-298 Trancas Vineyard/ Schwind Road	EUP TER	–	–	–	–	–	–	–	–	–	X
	FOEVUL	–	–	–	X	X	–	–	X	X	–
	NICGLA	–	–	–	–	–	X	–	–	X	–

Table 24 (continued). Santa Monica Mountains National Recreation Area dirt roads and trails (DRT) monitoring sites with observed nonnative invasive plant species in 2020. “X” indicates presence and “–” indicates absence of the species within a specific subtransect. Species codes are in Table 1.

DRT # and Location	Species Code	Subtransects									
		1	2	3	4	5	6	7	8	9	10
DRT-298 Trancas Vineyard/ Schwind Road (continued)	RICCOM	–	–	–	–	–	–	–	–	X	–
	SAL AUS	–	–	–	–	X	X	–	–	–	X
DRT-299 Backbone Trail at Piuma Canyon	CARPYC	X	–	X	X	X	X	X	X	X	–
DRT-300 Temescal Ridge Trail - lower	CARPYC	–	–	–	–	–	–	–	–	X	–
	DELODO	–	–	X	–	X	X	X	X	X	X
	NICGLA	–	–	–	–	–	–	–	–	X	–
	SAL AUS	–	–	–	–	–	–	–	–	–	X
DRT-301 Murphy Motorway	CARPYC	X	–	–	–	–	–	–	–	–	–
	FOEVUL	–	–	X	X	X	X	–	–	–	X
DRT-302 Parker Mesa Overlook Trail	NICGLA	X	–	–	–	–	–	–	–	–	–
	RICCOM	–	X	–	–	–	–	–	–	–	–
DRT-303 E E Ranch Road	SAL AUS	–	–	–	X	–	–	–	–	–	–
DRT-304 Sullivan Fire Road - upper	SAL AUS	–	–	–	X	–	–	–	–	–	–
DRT-305 Overlook Fire Road - middle	PENSET	X	X	X	X	X	–	–	–	–	–
	PHAAQU	–	–	–	–	–	–	–	X	X	X
	SAL AUS	X	–	–	–	–	–	X	X	X	X
DRT-306 BBT/Mesa Peak Motorway	NONE	–	–	–	–	–	–	–	–	–	–
DRT-307 Backbone Trail at Trippet Ranch	CARPYC	–	–	–	X	X	X	–	X	–	–
DRT-308 Liberty Canyon Fire Road	CARPYC	X	–	–	–	X	X	–	X	X	–
	CIRVUL	–	–	–	–	–	X	–	–	X	–

Table 24 (continued). Santa Monica Mountains National Recreation Area dirt roads and trails (DRT) monitoring sites with observed nonnative invasive plant species in 2020. “X” indicates presence and “–” indicates absence of the species within a specific subtransect. Species codes are in Table 1.

DRT # and Location	Species Code	Subtransects									
		1	2	3	4	5	6	7	8	9	10
DRT-308 Liberty Canyon Fire Road (continued)	EUPTER	–	–	–	–	–	–	–	–	X	X
	SAL AUS	–	–	–	–	–	X	X	X	X	X
	SILMAR	X	–	–	–	–	X	–	–	–	–
	VINMAJ	–	–	–	–	–	–	–	–	–	X

National Park Service
U.S. Department of the Interior



Science Report NPS/SR—2024/191
<https://doi.org/10.36967/2305515>

Natural Resource Stewardship and Science

1201 Oakridge Drive, Suite 150
Fort Collins, CO 80525