

CALIFORNIA COASTAL COMMISSION

SOUTH CENTRAL COAST AREA
 89 SOUTH CALIFORNIA ST., SUITE 200
 VENTURA, CA 93001
 (805) 585-1800



Th17b

Filed: 4/27/12
 180th Day: 10/24/12
 Staff: A.G.
 Staff Report: 9/20/12
 Hearing Date: 10/11/12

STAFF REPORT: REGULAR CALENDAR

Application No.: 4-11-059

Applicant: California Department of Parks and Recreation and Mountains Restoration Trust

Project Location: Portions of an approximately 9 mile segment of Malibu Creek from Pacific Coast Highway in the City of Malibu to the Coastal Zone Boundary in Los Angeles County

Project Description: Implement a 5-year riparian habitat enhancement program. The program will involve eradication of *Arundo donax* and other invasive vegetation by hand using a formulation of the herbicide Imazapyr (Habitat™) and revegetation with native riparian vegetation.

SUMMARY OF STAFF RECOMMENDATION

Staff recommends **approval** of the proposed development with conditions.

The standard of review for the proposed project is the Chapter Three policies of the Coastal Act. In addition, the policies of the certified Malibu – Santa Monica Mountains Land Use Plan (LUP) and the City of Malibu Local Coastal Program (LCP) serve as guidance.

Staff recommends approval of the proposed project with four (4) special conditions regarding: submittal of a Riparian Habitat Enhancement and Revegetation Plan and Monitoring Program, Project Monitoring and Responsibilities, Timing of Riparian Habitat Enhancement Activities, and Assumption of Risk, Waiver of Liability, and Indemnity.

Malibu Creek and its surrounding riparian habitat is designated as an environmentally sensitive habitat area (ESHA) by the previously certified Los Angeles County Malibu/Santa Monica

Mountains Land Use Plan and by the City of Malibu Local Coastal Plan. The spread of the highly invasive *Arundo donax* (Giant Reed) plant in the Malibu Creek ESHA has resulted in the displacement of critical habitat for native vegetation and wildlife (including the endangered Steelhead Trout), as well as increasing the potential for hazards such as flooding and wildfire. The proposed project is for eradication of *Arundo donax* and other invasive vegetation and the enhancement of the riparian habitat at various points along an approximately 9 mile segment of Malibu Creek. Special Condition One (1) has been required to ensure that riparian habitat within the project area is adequately revegetated with appropriate native riparian species. Special Condition Two (2) requires project operations monitoring, including the requirement that a qualified environmental monitor be on site during all eradication activities to ensure that any potential impacts to existing native vegetation are minimized and restricts use of herbicide during predicted rain events. Special Condition Three (3) has been required to minimize potential adverse effects to sensitive wildlife species, including nesting and breeding birds. Special Condition (4) requires the applicant to assume liability from risks associated with project activities in an area subject to an extraordinary potential for damage or destruction from natural hazards, including wildfire and flooding.

PROCEDURAL NOTE: PROJECT JURISDICTION AND CONSOLIDATED REVIEW

The proposed project includes components that are located within the City of Malibu's Local Coastal Program (LCP) jurisdiction as well as components within the retained jurisdiction of the Coastal Commission. The City of Malibu would typically have jurisdiction over the upland portions of the project adjacent to Malibu Creek within its LCP jurisdiction. However, Section 30601.3 of the Coastal Act authorizes the Commission to process a consolidated coastal development permit application, when its criteria are satisfied, for both aspects of a proposed project that would otherwise require a coastal development permit from both a local government with a certified local coastal program and the Commission.

The standard of review for a consolidated coastal development permit application submitted pursuant to Section 30601.3(a) shall follow Chapter 3 of the Coastal Act (commencing with Section 30200), with the appropriate local coastal program used as guidance.

The proposed development is a 5-year riparian habitat enhancement program. The program will involve eradication of *Arundo donax* and other invasive vegetation using a formulation of the herbicide Imazapyr (Habitat) and revegetation with native riparian species. Although the portions of the project are located within the Commission's retained coastal development permit jurisdiction, the upland components of the habitat enhancement areas cross the boundary of the Commission's retained jurisdiction into areas where the City of Malibu's LCP is effective. Typically, development located within a certified area requires a coastal development permit from the certified local government. However, in this case, the project work that would occur within the Commission's original jurisdiction is physically integrated with the activities that would occur outside the area of retained jurisdiction (i.e. in the City's permit jurisdiction).

Pursuant to Section 30601.3(a)(2), the applicant, appropriate local government, and the Commission may agree to consolidate a permit action for a project that spans local and state jurisdictions. In this case, the City of Malibu, in a letter to Commission staff dated June 7, 2012, requested that the Commission assume jurisdiction over all activities associated with the proposed project. The applicant both consented to, and facilitated this consolidated jurisdictional

process. Further, public participation is not substantially impaired by the consolidated review in this case because the other portions of the project were reviewed by the City of Malibu in a public hearing process and the subject portion of the project was made known at the time. The subject application will be noticed and heard consistent with the Coastal Commission's public hearing process, which facilitates both written and oral comment.

TABLE OF CONTENTS

I. MOTION AND RESOLUTION	5
II. STANDARD CONDITIONS.....	5
III. SPECIAL CONDITIONS.....	6
1. Habitat Enhancement and Revegetation Plan and Monitoring Program	6
2. Project Operations Monitoring and Responsibilities	7
3. Timing of Riparian Habitat Enhancement Activities	8
4. Assumption of Risk, Waiver of Liability and Indemnity	8
IV. FINDINGS AND DECLARATIONS	8
A. PROJECT DESCRIPTION AND BACKGROUND	8
B. PAST COMMISSION ACTION	10
C. ENVIRONMENTALLY SENSITIVE HABITAT	10
D. WATER QUALITY	17
E. HAZARDS	20
F. LOCAL COASTAL PROGRAM PREPARATION.....	22
G. CALIFORNIA ENVIRONMENTAL QUALITY ACT	23

APPENDICES

Appendix 1 Substantive File Documents

EXHIBITS

- Exhibit 1. Vicinity Map
- Exhibit 2. Mapped Non-native Plant Colonies (4 pages)

LOCAL APPROVALS RECEIVED: Amendment No. 1 to “Right of Entry Permit” between California Department of Parks and Recreation and the Mountains Restoration Trust for restoration in Malibu Creek State Park, dated August 11, 2010; Notice of Exemption, California Department of Parks and Recreation, dated May 17, 2007; Streambed Alteration Agreement/Operation of Law Approval by the California Department of Fish and Game, dated September 27, 2012; City of Malibu Consolidation Agreement, June 7, 2012; California Department of Fish and Game Streambed Alteration Agreement, dated August 11, 2000.

I. MOTION AND RESOLUTION

The staff recommends that the Commission adopt the following resolution:

Motion:

*I move that the Commission **approve** Coastal Development Permit No 4-11-059 pursuant to the staff recommendation.*

Staff recommends a **YES** vote. Passage of this motion will result in approval of the permit as conditioned and adoption of the following resolution and findings. The motion passes only by affirmative vote of a majority of the Commissioners present.

Resolution:

The Commission hereby approves a coastal development permit for the proposed development and adopts the findings set forth below on grounds that the development as conditioned will be in conformity with the policies of Chapter 3 of the Coastal Act and will not prejudice the ability of the local government having jurisdiction over the area to prepare a Local Coastal Program conforming to the provisions of Chapter 3. Approval of the permit complies with the California Environmental Quality Act because either 1) feasible mitigation measures and/or alternatives have been incorporated to substantially lessen any significant adverse effects of the development on the environment, or 2) there are no further feasible mitigation measures or alternatives that would substantially lessen any significant adverse impacts of the development on the environment.

II. STANDARD CONDITIONS

1. **Notice of Receipt and Acknowledgment.** The permit is not valid and development shall not commence until a copy of the permit, signed by the permittee or authorized agent, acknowledging receipt of the permit and acceptance of the terms and conditions, is returned to the Commission office.
2. **Expiration.** If development has not commenced, the permit will expire two years from the date on which the Commission voted on the application. Development shall be pursued in a diligent manner and completed in a reasonable period of time. Application for extension of the permit must be made prior to the expiration date.
3. **Interpretation.** Any questions of intent or interpretation of any condition will be resolved by the Executive Director or the Commission.
4. **Assignment.** The permit may be assigned to any qualified person, provided assignee files with the Commission an affidavit accepting all terms and conditions of the permit.
5. **Terms and Conditions Run with the Land.** These terms and conditions shall be perpetual, and it is the intention of the Commission and the permittee to bind all future owners and possessors of the subject property to the terms and conditions.

III. SPECIAL CONDITIONS

1. **Habitat Enhancement and Revegetation Plan and Monitoring Program**

Prior to issuance of the coastal development permit, the applicant shall submit a riparian habitat enhancement and revegetation plan and monitoring program, prepared by a qualified resource specialist, for review and approval by the Executive Director. The plan shall incorporate the following criteria:

A. **Riparian Habitat Enhancement and Revegetation Plan**

- (1) Invasive and non-native plant species shall be removed from the stream channel/riparian vegetation corridor. Any native vegetation which is inadvertently impacted by herbicide or otherwise destroyed or damaged during implementation of the project shall be replaced in kind at a 3:1 or greater ratio. All disturbed areas on the subject site which do not naturally revegetate with native riparian plant species within one year after the existing vegetation has been removed or eradicated, shall be planted and maintained with native riparian vegetation (as listed by the California Native Plant Society - Santa Monica Mountains Chapter in their document entitled Recommended List of Plants for Landscaping in the Santa Monica Mountain, revised 2007). All native plant species shall be of local genetic stock. Invasive, non-indigenous plant species which tend to supplant native species shall not be used.
- (2) The plan shall specify methodology to be used for revegetation, preferable time of year to carry out the restoration, and describe the supplemental watering requirements, if any, that will be necessary. The plan shall also specify specific performance standards to judge the success of the revegetation and enhancement effort.

- (3) Plantings will be maintained in good growing condition throughout the life of the project and, whenever necessary, shall be replaced with new plant materials to ensure continued compliance with applicable revegetation requirements.

B. Monitoring Program

- (1) A monitoring program shall be implemented to monitor the project for compliance with the specified guidelines and performance standards outlined in the approved Riparian Habitat Enhancement and Revegetation Plan required by Part A of this condition. The applicant shall submit, on an annual basis for a period of ten years, beginning after the initial eradication effort of *Arundo donax* and other non-native and invasive vegetation is completed (after the first year, the yearly reports shall be submitted no later than later than December 31st), a written report prepared by a qualified resource specialist, for the review and approval of the Executive Director, evaluating the extent of the success/failure and results of the restoration project. This report shall include further recommendations and requirements for additional revegetation activities in order for the project to meet the specified criteria and performance standards. These reports shall also include photographs taken from pre-designated sites (annotated to a copy of the site plans) indicating the progress of recovery at each of the sites.
- (2) At the end of a ten year period, a final detailed report shall be submitted for the review and approval of the Executive Director. If this report indicates that the revegetation program has in part, or in whole, been unsuccessful, based on the approved performance standards, the applicant shall be required to submit a revised or supplemental program to compensate for those portions of the original program which were not successful. The revised or supplemental revegetation program shall be processed as a coastal development permit.

2. Project Operations Monitoring and Responsibilities

*Prior to the issuance of the coastal development permit, the applicant shall retain the services of a qualified biologist or environmental resource specialist with appropriate qualifications acceptable to the Executive Director. The qualified biologist or resource specialist shall be present on site during all vegetation removal and eradication activity. Non-native or invasive vegetation shall be removed using hand tools and *Arundo donax* shall be cut to a height of 12 inches or less, and the stumps painted with Habitat, a formulation of the herbicide Imazapyr. No spray-application of herbicide shall occur. In no instance shall herbicide application occur if wind speeds on site are greater than 5 mph or 48 hours prior to predicted rain. In the event that rain does occur, herbicide application shall not resume again until 72 hours after rain. All cut *Arundo donax* material shall be removed from the stream bank and deposited on site above the highest high water mark and allowed to disintegrate naturally. Alternative methods of disposal may be allowed, if consistent with the intent of this condition, pursuant to review and approval of the Executive Director.*

The qualified biologist or resource specialist shall immediately notify the Executive Director if unpermitted activities occur or if any native vegetation is removed or impacted. This monitor shall have the authority to require the applicant to cease work should any breach in permit

compliance occur, or if any unforeseen sensitive habitat issues arise. If significant impacts or damage occur to any native riparian flora/fauna on site, the applicant shall be required to submit a revised, or supplemental, restoration program to adequately mitigate such impacts. Any native vegetation which is subject to inadvertent contact with herbicide or otherwise destroyed or damaged during implementation of the project shall be replaced in kind at a 3:1 or greater ratio consistent with Special Condition One (1).

3. Timing of Riparian Habitat Enhancement Activities

All project activities shall occur only during the period of September 15 through February 15th (outside of potential breeding, nesting and fledging season for most bird species), unless additional time is granted by the Executive Director for good cause.

In the event that any federally or state listed threatened or endangered species, or sensitive wildlife species (including but not limited to Least Bell's Vireo, willow flycatcher) exhibit reproductive or nesting behavior in the project area, all project activities in the area shall cease until nesting activities are no longer detected. In the event that any sensitive wildlife species are impacted by project activities or any unforeseen sensitive habitat issues arise, the onsite qualified biologist or environmental specialist (required pursuant to Special Condition Two (2)) shall require the applicant to cease work, and shall immediately notify the Executive Director and local resource agencies. Project activities shall resume only upon written approval of the Executive Director.

4. Assumption of Risk, Waiver of Liability and Indemnity

By acceptance of this permit, the applicant acknowledges and agrees (i) that the site may be subject to hazards from wildfire, flooding, and erosion; (ii) to assume the risks to the applicant and the property that is the subject of this permit of injury and damage from such hazards in connection with this permitted development; (iii) to unconditionally waive any claim of damage or liability against the Commission, its officers, agents, and employees for injury or damage from such hazards; and (iv) to indemnify and hold harmless the Commission, its officers, agents, and employees with respect to the Commission's approval of the project against any and all liability, claims, demands, damages, costs (including costs and fees incurred in defense of such claims), expenses, and amounts paid in settlement arising from any injury or damage due to such hazards.

Prior to issuance of the Coastal Development Permit, the applicant shall submit a written agreement, in a form and content acceptable to the Executive Director, incorporating all of the above terms of this condition.

IV. FINDINGS AND DECLARATIONS

The Commission hereby finds and declares:

A. PROJECT DESCRIPTION AND BACKGROUND

The proposed project is a 5-year riparian habitat enhancement program. The program will involve the eradication of *Arundo donax* (*Giant Reed*) and other invasive vegetation using an

Imazapyr herbicide formulation (Habitat™) and revegetation with native riparian species along an approximately 9 mile segment of Malibu Creek from just north of Pacific Coast Highway to the Coastal Zone Boundary (**Exhibits 1 and 2**). Project activities are proposed at various targeted locations within 50 ft. of each side of Malibu Creek along the approximately 9 mile project area. The project area lies within the boundaries of land owned by the California Department of Parks and Recreation.

Arundo donax is a highly invasive, bamboo-like, plant species which thrives in riparian habitat areas creating dense stands of vegetation up to 25 ft. in height. Displacement of native vegetation and loss of riparian habitat by *Arundo donax* has been identified as a primary concern for Malibu Creek by the California Department of Parks and Recreation. This project is proposed by the California Department of Parks and Recreation and Mountains Restoration Trust, funded in part by the Coastal Conservancy, in order to control *Arundo donax*, remove other invasive species, and restore degraded riparian habitat along Malibu Creek. In addition to *Arundo donax*, the targeted invasive non-native plant species include: castor bean (*Ricinus communis*), Spanish broom (*Spartium junceum*), tree tobacco (*Nicotiana glauca*), Sydney golden wattle (*Acacia longifolia*), tree of heaven (*Ailanthus altissima*), Canary Island palm saplings (*Phoenix canariensis*), Mexican fan palm trees and saplings (*Washingtonia mexicana*) and blue gum eucalyptus trees and saplings (*Eucalyptus globulus*). Herbaceous species to be targeted may include sweet-fennel (*Foeniculum vulgare*), poison hemlock (*Conium maculatum*), pampas grass (*Cortaderia selloana*), umbrella plant (*Cyperus involucratus*), terracina spurge (*Euphorbia terracina*), yellow star thistle (*Centaurea solstitialis*), African asparagus fern (*Asparagus asparagoides*), Hottentot fig (*Carpobrotus edulis*), crocosmia (*Crocasmia hyd.*) and common plantain (*Plantago major*).

The riparian habitat enhancement program is proposed to be implemented over a period of five years from September 15th through February 15th each year, which is outside of potential breeding, nesting and fledging season for most bird species. The applicant proposes to use a combination of hand tools including loppers, tree saws, and shovels to remove the non-native invasive vegetation. After cutting the plants down to the root area, the remaining stumps will be painted with the herbicide Habitat™. Habitat™, approved for use in aquatic and riparian areas. In order to avoid or minimize potential impacts to water quality from herbicide application, the applicant proposes to stop all work at least 48 hours before and 72 hours after any rain event and at any time if wind speeds are greater than 5 mph. The applicant does not propose any herbicide spraying as part of this vegetation enhancement program. The applicant proposes to remove the cut *Arundo donax* vegetation from the stream banks and place it on site above the highest high water mark to allow it to disintegrate naturally.

Revegetation with local native riparian plant species will be implemented during the 2nd – 5th years of the project as the herbicide-treated *Arundo donax* and other invasive vegetation are eliminated. Native riparian species to be planted from pole cuttings from Malibu Creek include arroyo willow (*Salix lasiolepis*), red willow (*Salix laevigata*), black cottonwood (*Populus balsamifera* ssp. *trichocarpa*), Fremont cottonwood (*Populus fremontii*), blue elderberry (*Sambucus mexicana*) and mulefat (*Baccharis salicifolia*). Any native vegetation which is inadvertently impacted by herbicide or otherwise destroyed or damaged during implementation of the project is proposed to be replaced in kind at a 3:1 or greater ratio.

B. PAST COMMISSION ACTION

The project site has been subject to a previous Arundo eradication and riparian habitat enhancement project. In 2000, the Commission approved Coastal Development Permit (CDP) No. 4-00-127 (California Department of Parks and Recreation) for implementation of a 5-year riparian habitat enhancement program involving the eradication of Arundo donax and other invasive vegetation using a non-surfactant Glyphosate herbicide (Rodeo™) and revegetation with native riparian vegetation along a 4.6 mile segment of Malibu Creek north of Pacific Coast Highway, Malibu, Los Angeles County. The approved program included two methods of herbicide treatment, foliar spraying and the cut and paint stump treatment method. Conditions of approval included a riparian habitat enhancement and revegetation plan and monitoring program, project monitoring responsibilities, and timing of riparian habitat enhancement activities. The permit was issued in October 2000 and the permit term ended in October 2005.

The subject application is for invasive vegetation removal and riparian habitat enhancement activities similar to the program approved by the Commission in CDP 4-00-127. However, the currently proposed project expands the area for the habitat enhancement program from a 4.6 mile stretch of Malibu Creek to an approximately 9 mile stretch. Additionally, the subject application does not include a proposal for foliar spraying of herbicide, nor use of All-Terrain Vehicles, as authorized in the previous permit. The currently proposed project includes only the cut and paint herbicide treatment method. Further, the previously approved CDP authorized use of a glyphosate herbicide (Rodeo™) for foliar and stump treatment of Arundo. Since then, the new herbicide, Habitat, has become available and is proposed for use by the applicant instead of Rodeo™. Habitat is an Imazapyr formulation of herbicide approved for aquatic use and has been shown to be more effective at one-tenth the application rate for glyphosate sprays, and for at least half the cost per acre.

C. ENVIRONMENTALLY SENSITIVE HABITAT

Section 30240 of the Coastal Act protects environmentally sensitive habitat areas (ESHA) by restricting development in and adjacent to ESHA. Section 30240 states:

- (a) *Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on such resources shall be allowed within such areas.*
- (b) *Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade such areas, and shall be compatible with the continuance of such habitat areas.*

Section 30107.5 of the Coastal Act, defines an environmentally sensitive area as:

"Environmentally sensitive area" means any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments.

Further, Section 30236 of the Coastal Act states:

Channelizations, dams, or other substantial alterations of rivers and streams shall incorporate the best mitigation measures feasible, and be limited to (1) necessary water supply projects, (2) flood control projects where no other method for protecting existing structures in the floodplain is feasible and where such protection is necessary for public safety or to protect existing development, or (3) developments where the primary function is the improvement of fish and wildlife habitat.

In addition, the City of Malibu certified LUP contains policies that protect the environmentally sensitive habitat areas of the City. LUP Policy 3.8 states that Environmentally Sensitive Habitat Areas (ESHAs) shall be protected against significant disruption of habitat values, and only uses dependent on such resources shall be allowed within such areas. The LUP policies also establish the protection of areas adjacent to ESHA through the provision of buffers. Natural vegetation buffer areas must be provided around ESHA that are of sufficient size to prevent impacts that would significantly degrade these areas.

LUP Policy 3.23 states the following:

Development adjacent to ESHAs shall minimize impacts to habitat values or sensitive species to the maximum extent feasible. Native vegetation buffer areas shall be provided around ESHAs to serve as transitional habitat and provide distance and physical barriers to human intrusion. Buffers shall be of a sufficient size to ensure the biological integrity and preservation of the ESHA they are designed to protect. All buffers shall be a minimum of 100 feet in width, except for the case addressed in Policy 3.27.

In addition, the Malibu/Santa Monica Mountains LUP provides policy guidance regarding the protection of environmentally sensitive habitats. The Coastal Commission has applied the following relevant policies as guidance in the review of development proposals in the Santa Monica Mountains.

- P57 Designate the following areas as Environmentally Sensitive Habitat Areas (ESHAs): (a) those shown on the Sensitive Environmental Resources Map (Figure 6), and (b) any undesignated areas which meet the criteria and which are identified through the biotic review process or other means, including those oak woodlands and other areas identified by the Department of Fish and Game as being appropriate for ESHA designation.*
- P63 Uses shall be permitted in ESHAs, DSRs, Significant Watersheds, and Significant Oak Woodlands, and Wildlife Corridors in accordance with Table 1 and all other policies of this LCP.*
- P68 Environmentally sensitive habitat areas (ESHAs) shall be protected against significant disruption of habitat values, and only uses dependent*

on such resources shall be allowed within such areas. Residential use shall not be considered a resource dependent use.

P69 Development in areas adjacent to environmentally sensitive habitat areas (ESHAs) shall be subject to the review of the Environmental Review Board, shall be sited and designed to prevent impacts which would significantly degrade such areas, and shall be compatible with the continuance of such habitat areas.

P84 In disturbed areas, landscape plans shall balance long-term stability and minimization of fuel load. For instance, a combination of taller, deep-rooted plants and low-growing ground covers to reduce heat output may be used. Within ESHAs and Significant Watersheds, native plant species shall be used, consistent with fire safety requirements.

Section 30236 of the Coastal Act allows for alterations to streams for development projects where the primary function is the improvement of fish and wildlife habitat. In addition, Section 30240 of the Coastal Act states that environmentally sensitive habitat areas shall be protected against disruption of habitat values and that development within or adjacent to such areas must be designed to prevent impacts which could degrade those resources. Further, Section 30240 of the Coastal Act restricts development within ESHA to only those uses that are dependent on the resource.

The proposed project is a 5-year riparian habitat enhancement program. The program will involve the eradication of *Arundo donax* (Giant Reed) and other invasive vegetation using a formulation of Imazapyr (*Habitat*) and revegetation with native riparian species along an approximately 9 mile segment of Malibu Creek north of Pacific Coast Highway (**Exhibits 1 and 2**). Malibu Creek and its surrounding riparian habitat is designated as an environmentally sensitive habitat area (ESHA) by the Los Angeles County Malibu/Santa Monica Mountains Land Use Plan (LUP) and by the certified City of Malibu LCP. The California Department of Parks and Recreation has indicated that the proposed project area was chosen due to the severity of impact from *Arundo* infestation and the significant ecological benefits that will be derived from *Arundo* removal.

Arundo donax is a highly invasive plant species which thrives in riparian habitat areas. This invasive species can grow at a rate of 3 inches/day and can reach a maximum height of more than 25 ft. *Arundo donax* spreads laterally to form dense, continuous stands of monotypic exotic vegetation which, over time, can potentially displace all native vegetation with a riparian system. As a colonizing invader, this plant is well adapted to the high disturbance dynamics of a riparian system. Flood events which result in breaking up root clumps or individual stems of the plant spread the pieces downstream where fragments of the original plant then root and establish new plant clones. Once established, the new plant clone will continue to spread forming large, continuous root masses and stands of dense vegetation.

In addition to displacing native vegetation, the dense stands of invasive reed also displace native animal species (including birds, mammals, and fish) through the loss of available habitat. The Commission notes that Malibu Creek provides important habitat for Steelhead Trout, federally listed as an endangered species, and that the majority of the project area is designated as critical

Steelhead Trout habitat. The dense stands of *Arundo donax* can clog waterways, isolating upstream portions of the creek from downstream areas, effectively eliminating available habitat for Steelhead Trout and other native aquatic species. Further, the invasive plant provides extremely poor food and cover for terrestrial and avian wildlife and has high water consumption relative to native vegetation. The Final Report for the Riparian Habitat Enhancement and Revegetation Project in Malibu Creek, dated May 2006, states:

Giant Reed aggressively crowds out native vegetation, forming large patches of clonal root masses. It reduces habitat and food supply, particularly for insect populations, which affects several special status bird species. Research suggests that giant reed provides neither food nor habitat for native species of wildlife. It reduces in-stream shading, resulting in warmer water, lower oxygen concentrations and lower diversity of aquatic animals...The removal of giant reed from these systems provides numerous downstream benefits in terms of native species habitat, wildfire protection, and water quality and quantity.

As such, the areas of the project site where the proposed vegetation eradication activities will occur are expected to contain few, if any, native wildlife (birds, mammals, and fish) and; therefore, adverse effects to fauna from the project are not expected. Beneficial effects to faunal species will include the restoration of native habitat previously occupied by *Arundo donax* and other invasive vegetation.

The applicant proposes to use a combination of hand tools including loppers, tree saws, and shovels to remove the non-native invasive vegetation. After cutting the plants down to the root area, the remaining stumps will be painted with the herbicide Habitat, approved for use in aquatic and riparian areas. The applicant proposes to not conduct work 48 hours before or 72 hours after any rain event or in the event wind speeds are greater than 5 mph. The applicant does not propose any herbicide spraying as part of this vegetation enhancement program. The applicant proposes to remove the cut *Arundo donax* vegetation from the stream banks and place it on site above the highest high water mark to allow it to disintegrate naturally.

The California Department of Parks and Recreation has submitted an analysis regarding alternatives to the proposed use of herbicide to eradicate the *Arundo donax* infestation in Malibu Creek which indicates that the proposed method of cutting and painting the stump with an Imazapyr formulation of herbicide, Habitat. The submitted Alternatives Analysis identifies three potential alternatives to the proposed project: (1) mechanical removal (no herbicide), (2) hand removal (no herbicide), and (3) foliar spraying.

The mechanical removal of *Arundo donax* would involve the use of tractor equipment to rip the *Arundo* out of the ground. This method would result in significant adverse effects to the riparian habitat area due to increased erosion and sedimentation of the creek resulting from removal of the large *Arundo* root clumps (often 6 ft. or more in depth). Disturbance to native flora and fauna would also be expected to occur if heavy machinery is allowed in the riparian habitat area. In addition, *Arundo* stem and root fragments that are not successfully collected by the machinery may be spread to downstream areas where fragments of the original plant could then root and establish new invasive plant colonies. As such, the Commission notes that the use of heavy machinery to remove the invasive vegetation would result in greater adverse effects to the riparian habitat on site than the proposed project.

Hand removal of the *Arundo donax* and other invasive vegetation without use of an herbicide would eliminate any potential adverse effects to riparian habitat from herbicide application; however, such a method would be extremely time and labor intensive. This method would involve hand-cutting of the *Arundo* stems and hand-excavation of the root clumps. As such, the applicant has indicated that given the large size of the proposed restoration area (approximately 9 miles in length) in relation to the time and labor intensive nature of this method, hand removal of invasive vegetation without the use of herbicide is not feasible. In addition, the Commission notes that removal of the root clumps would result in increased erosion and sedimentation of the stream similar to removal by mechanical means. Because the cut stems and excavated roots would potentially resprout if left on site, all vegetative material would need to be removed from the riparian corridor to a suitable disposal location. The Commission notes that the above method would not feasibly allow for enhancement of the entire proposed project area due to its time and labor intensive nature and need for continuous work.

Foliar spraying of the *Arundo donax* and other invasive vegetation was previously approved but was determined to be less effective than the cut and paint method. The Final Report for the habitat enhancement project approved pursuant to CDP 4-00-127, dated May 17, 2006, prepared by Sapphos Environmental Inc., indicated that the method of cutting and painting the stump was more effective than the foliar treatment method. In addition, although all best management practices were implemented pursuant to the required conditions of CDP 4-00-127, spray-application of herbicide may still result in some unavoidable potential impacts to water quality from unintentional overspray. Thus, the proposed method of limiting herbicide application to stump-painting by hand will serve to further minimize any potential impacts to water quality. Further, the Final May 2006 report indicates that 84.7 percent of all *Arundo* patches were eradicated using the cut and paint method, whereas only 54.5 percent of all patches of *Arundo* were eradicated using the foliar spray method. Thus, due to the large amount of herbicide needed for the foliar spraying method and the results that it is less effective, no spray treatment is currently proposed.

In the previously approved Coastal Development Permit 4-00-127, the surfactant Glyphosate herbicide (Rodeo™) was approved for both foliar and cut and paint treatment of *Arundo* and was the only herbicide approved by the EPA for use in aquatic environments. In this permit application, the applicant proposes use of an Imazapyr formulation of herbicide approved for aquatic use (Habitat™) to eradicate *Arundo donax* and other invasive vegetation in the project area. The California Department of Parks and Recreation has indicated that the proposed use of the herbicide Habitat™ using the method of cutting and stump painting is the least environmentally damaging herbicide that will be effective against *Arundo donax*. Habitat™ was approved by the Environmental Protection Agency (EPA) in September 2003 to be used near water and wetlands and is shown to be a slow-acting, but effective treatment.

Current studies indicate that low volume treatments using Habitat™, an Imazapyr formulation approved for aquatic use, are more effective at one-tenth the application rate for glyphosate sprays, and for at least half the cost per acre. Imazapyr also translocates to the root system better than glyphosate, with less re-sprouting of *arundo* canes. Imazapyr works by inhibiting the enzyme that synthesizes branched-chain amino acids, a process only occurring in plants. Imazapyr is slowly degraded by microbial metabolism and can be relatively persistent in soils. It has an average half-life in soils that range from one to five months. In water, it can be rapidly

degraded by photolysis with a half-life averaging two days. According to the Nature Conservancy's Weed Control Methods Handbook (updated June 2004), there have been few reports from the field of unintended damage to desirable, native plants when Imazapyr has either exuded out of the roots of treated plants in to the surrounding soil or when intertwined roots transfer the herbicide to non-target plants. Additionally, Imazapyr is considered of very low toxicity to birds, mammals, fish, honeybees, aquatic invertebrates and non-vascular aquatic plants. Imazapyr has not been found to cause mutations or birth defects in animals, and is classified by the EPA as a Group E compound, indicating that imazapyr shows no evidence of carcinogenicity. Therefore, the Commission finds that the proposed method of cut and paint treatment using the herbicide Habitat™ is the only feasible alternative given large treatment area, the efficacy of treatment, and low potential for toxicity.

The Commission notes that the proposed project may result in some potential adverse effects to environmentally sensitive habitat area and water quality due to unintentional herbicide application or runoff. Herbicide application is proposed during the rainy season, generally November 1st through March 31st. Although the proposed project will incorporate all best management practices to minimize misapplication of herbicide, the application of herbicide prior to heavy rain may result in greater potential for contaminated runoff than application during dry season conditions. However, the applicant has eliminated potential adverse effects to riparian habitat from herbicide overspray and resulting runoff by not proposing the foliar spraying method and has proposed to use only the more precise cut and paint application method. The applicant has indicated that if project activities are restricted during both the rainy season and the bird nesting season, allowing project activities only during the months of September and October, the project could not feasibly be conducted given to the limited number of Mountains Restoration Trust "in-house" workers, the large size of the restoration area (approximately 9 miles), and the fact that the cut and paint herbicide treatment method is time and labor intensive. Therefore, in order to allow the proposed habitat enhancement project to proceed and to ensure that the potential adverse effects to habitat and water quality are minimized, **Special Condition Two (2)** requires that in no instance shall herbicide application occur if wind speeds on site are greater than 5 mph or 48 hours prior to predicted rain. In the event that rain does occur, herbicide application shall not resume again until 72 hours after rain.

The Commission notes that the proposed project may result in some potential adverse effects to the environmentally sensitive riparian habitat area on site during the invasive vegetation removal and eradication phase of the program (resulting from unintentional misapplication of herbicide, unexpected disturbance to native wildlife or vegetation, etc.). In order to ensure that any potential adverse effects to riparian habitat are minimized, **Special Condition Two (2)** requires the applicant to retain the services of an environmental resource specialist to be present on site during all vegetation removal and eradication activity. All *Arundo donax* material that is removed by hand, rather than sprayed with herbicide and left in place, shall be removed from the creek bank and deposited on site above the highest high water mark and allowed to disintegrate naturally. *Arundo donax* material placed outside the riparian corridor is not expected to resprout. Alternative methods of disposal may be allowed pursuant to review and approval by the Executive Director if consistent with the intent of Special Condition Two (2).

To ensure successful implementation, **Special Condition Two (2)** specifies that the monitor shall have the authority to require the applicant to cease work should any breach in permit compliance occur, or if any unforeseen sensitive habitat issues arise. If significant adverse

effects or damage to the habitat value of the site occur as a result of the proposed activities, beyond that allowed by this permit, the applicant shall be required to submit a revised, or supplemental, restoration program to adequately mitigate such adverse effects. The revised, or supplemental, restoration program shall be processed as an amendment to this coastal development permit. Any native vegetation inadvertently impacted by herbicide or otherwise destroyed or damaged during implementation of the project shall be replaced in kind at a 3:1 or greater ratio consistent with Special Condition One (1).

In addition, the Commission notes that the proposed project provides for revegetation of those areas where significant stands of invasive vegetation have been removed with native riparian vegetation on an "as-needed" basis (in the event that the area does not naturally revegetate). Areas where active revegetation is necessary will be determined in the field by the environmental consultant. Revegetation efforts will begin during the second year of the project, after the invasive vegetation treated in the first year has been eliminated. However, the Commission notes that the proposed project would result in potential adverse effects to the riparian habitat in the project area, in addition to increased erosion and sedimentation of the stream, if revegetation of those areas where all existing vegetation has been eradicated is not successful. Therefore, to ensure that the proposed riparian enhancement program is successful and that the subject area is adequately revegetated, **Special Condition One (1)** specifically requires the submittal of a revegetation plan which requires that all invasive and non-native plant species shall be removed from the stream channel/riparian vegetation corridor. Any native vegetation which is subject to inadvertent contact with herbicide or otherwise destroyed or damaged during implementation of the project shall be replaced in kind at a 3:1 or greater ratio. All disturbed areas on the subject site which do not naturally revegetate with native riparian plant species within one year after the existing vegetation has been removed or eradicated, shall be planted and maintained with native riparian vegetation. Invasive or non-indigenous plant species which tend to supplant native species shall not be used.

To ensure that the above revegetation plan is successful, **Special Condition One (1)** also requires that the applicant submit, on an annual basis for a period of ten years, beginning after the initial eradication effort of *Arundo donax* and other non-native and invasive vegetation is completed (after the first year, the yearly reports shall be submitted no later than later than December 31st), a written report prepared by a qualified resource specialist, for the review and approval of the Executive Director, indicating the success or failure of the restoration project. This report shall include further recommendations and requirements for additional revegetation activities in order for the project to meet the specified criteria and performance standards. At the end of the ten-year period, a final detailed report shall be submitted for the review and approval of the Executive Director. If the final report indicates that the revegetation program has in part, or in whole, been unsuccessful, based on the approved performance standards, the applicant shall be required to submit a revised or supplemental program to compensate for those portions of the original program which were not successful. The revised, or supplemental revegetation program shall be processed as a coastal development permit.

Additionally, the applicant proposes to conduct all project activities during the period of September 15 through February 15th, which is outside of potential breeding, nesting and fledging season for most bird species. To ensure project activities only occur within this time frame and to ensure that any impacts to sensitive species are minimized, **Special Condition Three (3)** requires all project activities to occur only during the period of September 15 through February

15th unless additional time is granted by the Executive Director for good cause. Further, **Special Condition (3)** requires that, in the event that any federally or state listed threatened or endangered species, or sensitive wildlife species (including but not limited to Least Bell's Vireo and willow flycatcher) exhibit reproductive or nesting behavior in the project area, all project activities in the area shall cease until nesting activities are no longer detected. In the event that any sensitive wildlife species are impacted by project activities or any unforeseen sensitive habitat issues arise, the onsite qualified biologist or environmental specialist (required pursuant to Special Condition Two (2)) shall require the applicant to cease work, and shall immediately notify the Executive Director and local resource agencies. Project activities shall resume only upon written approval of the Executive Director.

Therefore, the Commission finds that the proposed amendment, as conditioned, is consistent with Sections 30236 and 30240 of the Coastal Act, as well as the applicable policies of the certified City of Malibu LCP.

D. WATER QUALITY

The Malibu LCP incorporates Section 30230 of the Coastal Act, which states:

Marine resources shall be maintained, enhanced, and where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance. Uses of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes.

Additionally, the Malibu LCP incorporates Section 30231 of the Coastal Act, which states:

The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface water flow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, minimizing alteration of natural streams.

Sections 30230 and 30231 of the Coastal Act require that the biological productivity and the quality of coastal waters and streams be maintained and, where feasible, restored through among other means, minimizing adverse effects of waste water discharge and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface water flows, maintaining natural buffer areas that protect riparian habitats, and minimizing alteration of natural streams.

The Commission recognizes that new development in the Santa Monica Mountains has the potential to adversely impact coastal water quality and aquatic resources because changes such as the removal of native vegetation, can cause increases in runoff, erosion, and sedimentation, and introduction of pollutants or herbicides and pesticides. In this case, the purpose of the

program is to enhance Malibu Creek riparian habitat by eradicating *Arundo donax* (*Giant Reed*) and other invasive vegetation using an Imazapyr herbicide formulation (*Habitat*) and revegetating the area with native riparian species.

The applicant proposes to use a combination of hand tools including loppers, tree saws, and shovels to remove the non-native invasive vegetation. After cutting the plants down to the root area, the remaining stumps will be painted with the herbicide *Habitat*[™], approved for use in aquatic and riparian areas. The applicant proposes to not conduct work 48 hours before or 72 hours after any rain event or in the event wind speeds are greater than 5 mph. The applicant does not propose any herbicide spraying as part of this vegetation enhancement program. The applicant proposes to remove the cut *Arundo donax* vegetation from the stream banks and place it on site above the highest high water mark to allow it to disintegrate naturally.

The Final Report for the habitat enhancement project approved pursuant to CDP 4-00-127, dated May 17, 2006, prepared by Sapphos Environmental Inc., indicated that the method of cutting and painting the stump was more effective than the foliar treatment method. The Final May 2006 report for the previous project indicates that 84.7 percent of all *Arundo* patches were eradicated using the cut and paint method, whereas only 54.5 percent of all patches of *Arundo* were eradicated using the foliar spray method. Thus, no spray treatment is currently proposed.

In the previously approved Coastal Development Permit 4-00-127, the surfactant Glyphosate herbicide (*Rodeo*[™]) was approved for foliar and stump treatment of *Arundo* and was the only herbicide approved by the EPA for use in aquatic environments. In this permit, the applicant proposes use of an Imazapyr formulation of herbicide approved for aquatic use (*Habitat*[™]) to eradicate *Arundo donax* and other invasive vegetation in the project area. The California Department of Parks and Recreation has indicated that the proposed use of the herbicide *Habitat* using the method of cutting and stump painting is the least environmentally damaging herbicide that will be effective against *Arundo donax*. *Habitat*[™] was approved by the EPA in September 2003 to be used near water and wetlands and is shown to be a slow-acting, but effective treatment. Current studies indicate that low volume foliar and stump treatments using *Habitat*[™], an Imazapyr formulation approved for aquatic use, are more effective at one-tenth the application rate for glyphosate sprays, and for at least half the cost per acre. Imazapyr also translocates to the root system better than glyphosate, with less re-sprouting of arundo canes. Imazapyr works by inhibiting the enzyme that synthesizes branched-chain amino acids, a process only occurring in plants. Imazapyr is slowly degraded by microbial metabolism and can be relatively persistent in soils. It has an average half-life in soils that range from one to five months. In water, it can be rapidly degraded by photolysis with a half-life averaging two days. According to the Nature Conservancy's Weed Control Methods Handbook (updated June 2004), there have been few reports from the field of unintended damage to desirable, native plants when Imazapyr has either exuded out of the roots of treated plants in to the surrounding soil or when intertwined roots transfer the herbicide to non-target plants. Additionally, Imazapyr is considered of very low toxicity to birds, mammals, fish, honeybees, aquatic invertebrates and non-vascular aquatic plants. Imazapyr has not been found to cause mutations or birth defects in animals, and is classified by the U.S. EPA as a Group E compound, indicating that imazapyr shows no evidence of carcinogenicity. Therefore, the Commission finds that the proposed method of cut and paint treatment using the herbicide *Habitat* is the only feasible alternative given large treatment area, the efficacy of treatment, and low potential for toxicity.

The Commission notes that the proposed project may result in some potential adverse effects to water quality due to unintentional herbicide application or runoff. Herbicide application is proposed during the rainy season, generally November 1 through March 31st. Although the proposed project will incorporate all best management practices to minimize misapplication of herbicide, the application of herbicide prior to heavy rain may result in greater potential for contaminated runoff than application during dry season conditions. However, the applicant has eliminated potential adverse effects to riparian habitat and water quality from herbicide overspray and resulting runoff by not proposing the foliar spraying method and has proposed to use only the more precise cut and paint application method. The applicant has indicated that if project activities are restricted during both the rainy season and the bird nesting season, allowing project activities only during the months of September and October, the project could not feasibly be conducted given to the limited number of Mountains Restoration Trust “in-house” workers, the large size of the restoration area (approximately 9 miles), and the fact that the cut and paint herbicide treatment method is time and labor intensive. Therefore, in order to allow the proposed habitat enhancement project to proceed and to ensure that the potential adverse effects to water quality and habitat are minimized, **Special Condition Two (2)** requires that in no instance shall herbicide application occur if wind speeds on site are greater than 5 mph or 48 hours prior to predicted rain. In the event that rain does occur, herbicide application shall not resume again until 72 hours after rain.

The Commission also notes that the proposed project may result in some potential adverse effects to water quality due to the invasive vegetation removal and eradication phase of the program (unexpected erosion, etc.). In order to ensure that any potential adverse effects to riparian habitat and water quality are minimized, **Special Condition Two (2)** requires the applicant to retain the services of an environmental resource specialist to be present on site during all vegetation removal and eradication activity. In addition, **Special Condition Two (2)** further requires that all *Arundo donax* material that is removed by hand, rather than sprayed with herbicide and left in place, shall be removed from the creek bank and deposited on site above the highest high water mark and allowed to disintegrate naturally. *Arundo donax* material placed outside the riparian corridor is not expected to resprout. Alternative methods of disposal may be allowed pursuant to review and approval by the Executive Director if consistent with the intent of Special Condition Two (2).

To ensure successful implementation, **Special Condition Two (2)** specifies that the monitor shall have the authority to require the applicant to cease work should any breach in permit compliance occur, or if any unforeseen sensitive habitat issues arise. If significant adverse effects or damage to the habitat value of the site occur as a result of the proposed activities, beyond that allowed by this permit, the applicant shall be required to submit a revised, or supplemental, restoration program to adequately mitigate such adverse effects. The revised, or supplemental, restoration program shall be processed as an amendment to this coastal development permit. Any native vegetation inadvertently impacted by herbicide or otherwise destroyed or damaged during implementation of the project shall be replaced in kind at a 3:1 or greater ratio consistent with Special Condition One (1).

In addition, the Commission notes that the proposed project provides for revegetation of those areas where significant stands of invasive vegetation have been removed with native riparian vegetation on an “as-needed” basis (in the event that the area does not naturally revegetate). Areas where active revegetation is necessary will be determined in the field by the environmental

consultant. Revegetation efforts will begin during the second year of the project, after the invasive vegetation treated in the first year has been eliminated. However, the Commission notes that the proposed project would result in potential adverse effects to the riparian habitat and water quality in the project area, in addition to increased erosion and sedimentation of the stream, if revegetation of those areas where all existing vegetation has been eradicated is not successful. Therefore, to ensure that the proposed riparian enhancement program is successful and that the subject area is adequately revegetated, **Special Condition One (1)** specifically requires the submittal of a revegetation plan which requires that all invasive and non-native plant species shall be removed from the stream channel/riparian vegetation corridor. Any native vegetation which is inadvertently sprayed with herbicide or otherwise destroyed or damaged during implementation of the project shall be replaced in kind at a 3:1 or greater ratio. All disturbed areas on the subject site which do not naturally revegetate with native riparian plant species within one year after the existing vegetation has been removed or eradicated, shall be planted and maintained with native riparian vegetation. Invasive or non-indigenous plant species which tend to supplant native species shall not be used.

To ensure that the above revegetation plan is successful, **Special Condition One (1)** also requires that the applicant submit, on an annual basis for a period of ten years, beginning after the initial eradication effort of *Arundo donax* and other non-native and invasive vegetation is completed (after the first year, the yearly reports shall be submitted no later than later than December 31st), a written report prepared by a qualified resource specialist, for the review and approval of the Executive Director, indicating the success or failure of the restoration project. This report shall include further recommendations and requirements for additional revegetation activities in order for the project to meet the specified criteria and performance standards. At the end of the ten year period, a final detailed report shall be submitted for the review and approval of the Executive Director. If the final report indicates that the revegetation program has in part, or in whole, been unsuccessful, based on the approved performance standards, the applicant shall be required to submit a revised or supplemental program to compensate for those portions of the original program which were not successful. The revised, or supplemental revegetation program shall be processed as a coastal development permit.

Therefore, the Commission finds that the proposed project, as conditioned, is consistent with Section 30230 and 30231 of the Coastal Act and applicable provisions of the certified City of Malibu LCP.

E. HAZARDS

Section 30253 of the Coastal Act states, in pertinent part, that new development shall:

- (1) *Minimize risks to life and property in areas of high geologic, flood, and fire hazard.*
- (2) *Assure stability and structural integrity, and neither create nor contribute significantly to erosion, instability, or destruction of the site or surrounding area or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs.*

In addition, the following LCP policies are applicable in this case:

- 4.2 *All new development shall be sized, designed and sited to minimize risks to life and property from geologic, flood, and fire hazard.*
- 4.10 *New development shall provide adequate drainage and erosion control facilities that convey site drainage in a non-erosive manner in order to minimize hazards resulting from increased runoff, erosion and other hydrologic impacts to streams.*

Section 30253 of the Coastal Act mandates that new development shall minimize risks to life and property in areas of high geologic, flood, and fire hazard. The purpose of the project is to restore Malibu Creek by removing non-native invasive vegetation and planting native riparian vegetation. Malibu Creek is located in the Santa Monica Mountains, an area which is generally considered to be subject to an unusually high amount of natural hazards. Geologic hazards common to the Santa Monica Mountains include landslides, erosion, and flooding. In addition, fire is an inherent threat to the indigenous chaparral community of the coastal mountains. Wild fires often denude hillsides in the Santa Monica Mountains of all existing vegetation, thereby contributing to an increased potential for erosion and landslides.

Arundo donax (*Giant Reed*) is a highly invasive plant species which thrives in riparian habitat areas. This invasive species can grow at a rate of 3 inches/day and can reach a maximum height of more than 25 ft. *Arundo donax* spreads laterally to form dense stands of bamboo-like vegetation which, over time, can completely displace all native vegetation in riparian areas. Unlike native riparian vegetation, however, this invasive reed is highly flammable, causing formerly fire-resistant riparian communities to become fire-prone. The Riparian Habitat Enhancement and Revegetation Project Final Report, dated May 2006, indicates that *Arundo* is highly flammable and increases the probability of and the intensity of wildfire. The report states that “[b]ecause giant reed is adapted to fire, it can change riparian forests from a flood-defined to a fire-defined community. It dramatically alters the ecological processes and structure in riparian systems and ultimately converts most riparian habitats into pure stands of this non-native pest species.”

In addition to increased hazards from wildfire, the uncontrolled spread of *Arundo donax* can also result in increased potential for flooding. The dense stands of giant reed formed by *Arundo donax* colonies are significantly denser in mass than native vegetation. As the dense, invasive stands spread, stream flow becomes substantially impeded. Increased water volumes during the winter storm season in conjunction with the reduced stream flow capacity result in greater potential for flood event occurrence.

The Commission finds that the proposed project to eradicate the *Arundo donax* and other invasive vegetation in the subject area and to revegetate the riparian corridor with native riparian species will serve to enhance soil stabilization and reduce erosion, thereby reducing hazards from flooding, and may reduce fire hazards.

Due to the fact that the proposed project activities are located in an area subject to an extraordinary potential for damage or destruction from natural hazards, including wildfire and

flooding, those risks remain substantial here. If the applicant nevertheless chooses to proceed with the project, the Commission requires the applicant to assume the liability from these associated risks. Through the assumption of risk condition, the applicant acknowledges the nature of the fire and/or flooding hazard that may affect the safety of the proposed project.

The following special conditions are required, as determined in the findings above, to assure the project's consistency with Section 30253 of the Coastal Act and as a response to the risks associated with the project:

Special Condition 1: Riparian Habitat Enhancement and Revegetation Plan and Monitoring Program

Special Condition 2: Project Operations Monitoring and Responsibilities

Special Condition 4: Assumption of Risk, Waiver of Liability, and Indemnity

For the reasons set forth above, the Commission finds that, as conditioned, the proposed project is consistent with Section 30253 of the Coastal Act and applicable provisions of the certified City of Malibu LCP.

F. LOCAL COASTAL PROGRAM PREPARATION

Section 30604(a) of the Coastal Act states:

Prior to certification of the local coastal program, a coastal development permit shall be issued if the issuing agency, or the commission on appeal, finds that the proposed development is in conformity with the provisions of Chapter 3 (commencing with Section 30200) of this division and that the permitted development will not prejudice the ability of the local government to prepare a local coastal program that is in conformity with the provisions of Chapter 3 (commencing with Section 30200).

Section 30604(a) of the Coastal Act provides that the Commission shall issue a Coastal Development Permit only if the project will not prejudice the ability of the local government having jurisdiction to prepare a Local Coastal Program, which conforms to Chapter 3 policies of the Coastal Act. The preceding sections provide findings that the proposed projects will be in conformity with the provisions of Chapter 3 if certain conditions are incorporated into the projects and are accepted by the applicant. As conditioned, the proposed development will avoid or minimize adverse impacts and is found to be consistent with the applicable policies contained in Chapter 3. The following special conditions are required to assure the project's consistency with Section 30604 of the Coastal Act:

Special Conditions 1 through 4

Therefore, the Commission finds that approval of the proposed development, as conditioned, will not prejudice the County of Los Angeles' ability to prepare a Local Coastal Program for this area which is also consistent with the policies of Chapter 3 of the Coastal Act, as required by Section 30604(a).

G. CALIFORNIA ENVIRONMENTAL QUALITY ACT

Sections 13096(a) and 13057(c) of the Commission's administrative regulations require Commission approval of a Coastal Development Permit application to include findings supporting the conclusion that the approval of the application, as conditioned by any conditions of approval, is consistent with any applicable requirements of the California Environmental Quality Act (CEQA), Cal. Pub. Res. Code ("PRC") §§ 21000 *et seq.*, including specific findings evaluating the conformity of the development with the requirements of PRC section 21080.5(d)(2)(A). Section 21080.5(d)(2)(A) prohibits a proposed development from being approved if there are feasible alternatives or feasible mitigation measures available which would substantially lessen any significant adverse effect which the activity may have on the environment.

The Commission incorporates its findings regarding the project's consistency with the Coastal Act and the City of Malibu LCP at this point as if set forth here in full. These findings identify the following potentially substantial adverse impacts that the proposed project could have on the environment: impacts to sensitive aquatic and terrestrial species, including avian species, riparian vegetation, water quality, flooding hazards, and erosion. As discussed in detail above, for each such impact, project alternatives and mitigation measures have been considered and incorporated into the project to substantially lessen any significant adverse effect.

Five types of mitigation measures include those that are intended to avoid, minimize, rectify, reduce, or compensate for significant impacts of development. Mitigation measures and/or alternatives required as part of this coastal development permit include the avoidance of impacts to ESHA and sensitive biological resources, water quality, and hazards through the requirement of riparian habitat enhancement and revegetation plan and monitoring program (Special Condition 1), project operation monitoring and reporting responsibilities (Special Condition 2), timing of riparian habitat enhancement activities (Special Condition 3), and Assumption of Risk, Waiver of Liability, and Indemnity (Special Condition 4).

As conditioned, there are no feasible alternatives or feasible mitigation measures available, beyond those required, which would substantially lessen any significant adverse impact that the activity may have on the environment. Therefore, the Commission finds that the proposed project, as conditioned to mitigate the identified impacts, is consistent with the requirements of the Coastal Act to conform to CEQA.

APPENDIX 1

Substantive File Documents

Certified Malibu/Santa Monica Mountains Land Use Plan; Certified City of Malibu Local Coastal Plan; The March 25, 2003 Memorandum Regarding the Designation of ESHA in the Santa Monica Mountains, prepared by John Dixon, Ph. D; Malibu Creek Invasive species Revisit/Removal Project Report, prepared by Tarja Sagar, dated August 31, 2005; Riparian Enhancement and Revegetation Project in Malibu Creek Final Report, prepared by Sapphos Environmental, Inc., dated May 17, 2006; Nature Conservancy's Weed Control Methods Handbook (updated June 2004); "Imazapyr - Human Health and Ecological Risk Assessment - Final Report," prepared by Syracuse Environmental Research Associates, Inc., dated December 18, 2004; Coastal Development Permit 4-00-127 (California Department of Parks and Recreation).

MALIBU CREEK ENHANCEMENT
PROJECT AND TARGET LOCATION MAP
MOUNTAINS RESTORATION TRUST

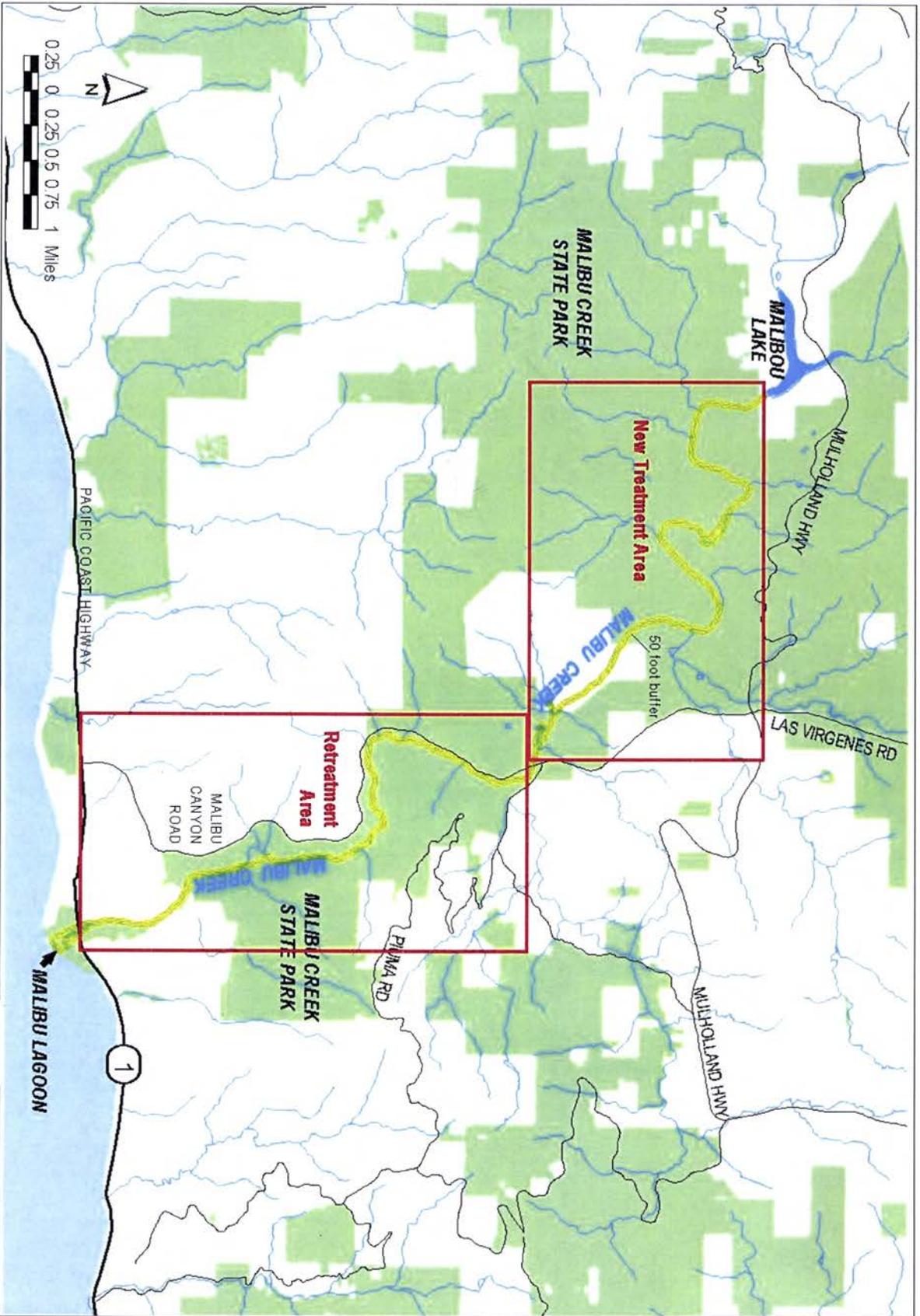
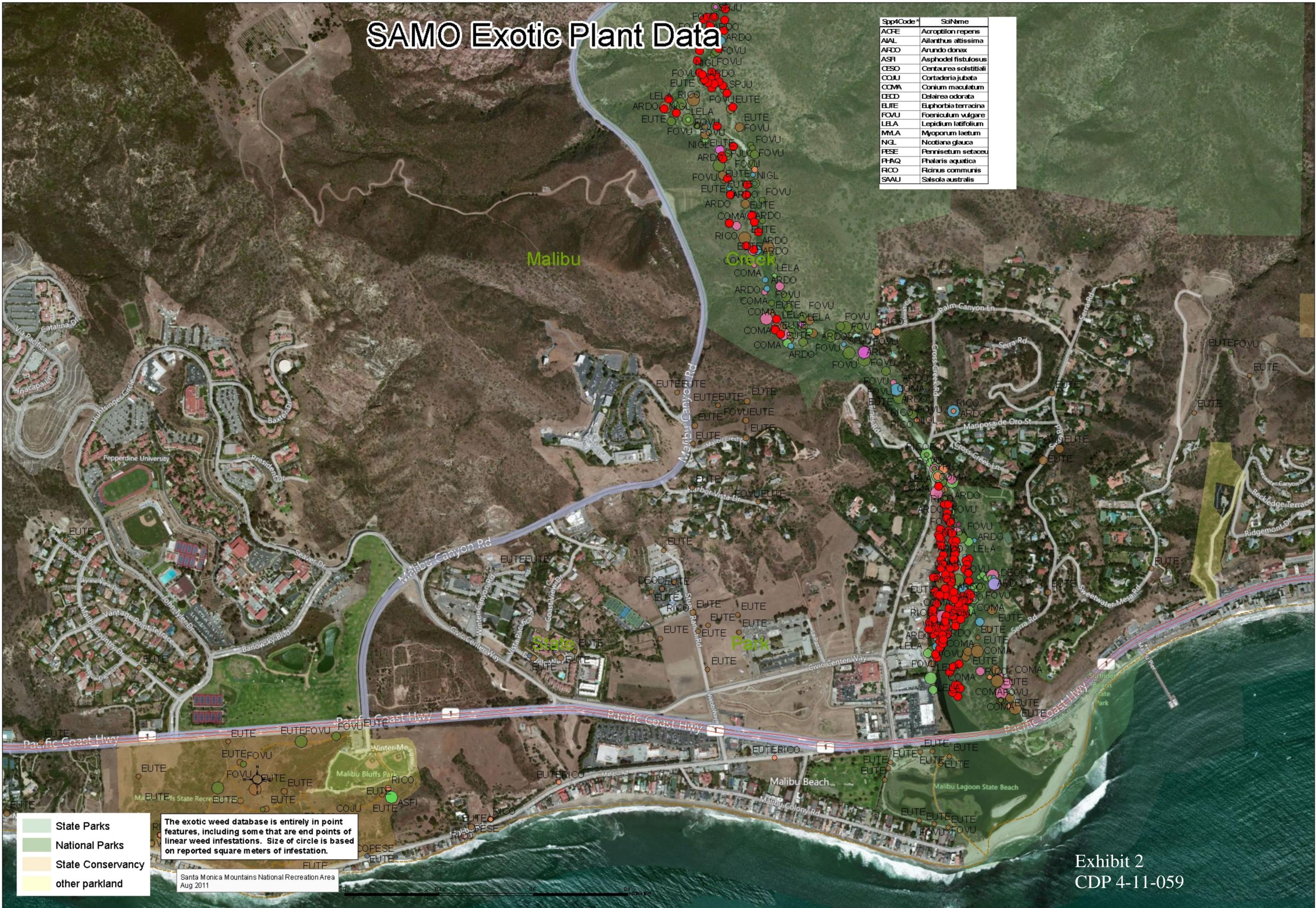


EXHIBIT 1
CDP 4-11-059
Vicinity Map

SAMO Exotic Plant Data

Spp4Code*	SciName
ACRE	Acroptilon repens
AIAL	Ailanthus altissima
ARDO	Arundo donax
ASFI	Asphodel fistulosus
CESO	Centaurea solstitialis
COJU	Cortaderia jubata
COMA	Conium maculatum
DEOD	Delairea odorata
EUTE	Euphorbia terracina
FOVU	Foeniculum vulgare
LELA	Lepidium latifolium
MYLA	Myoporum laetum
NIGL	Nicotiana glauca
PESE	Pennisetum setaceum
PHAQ	Phalaris aquatica
RICO	Ricinus communis
SAAU	Salsola australis



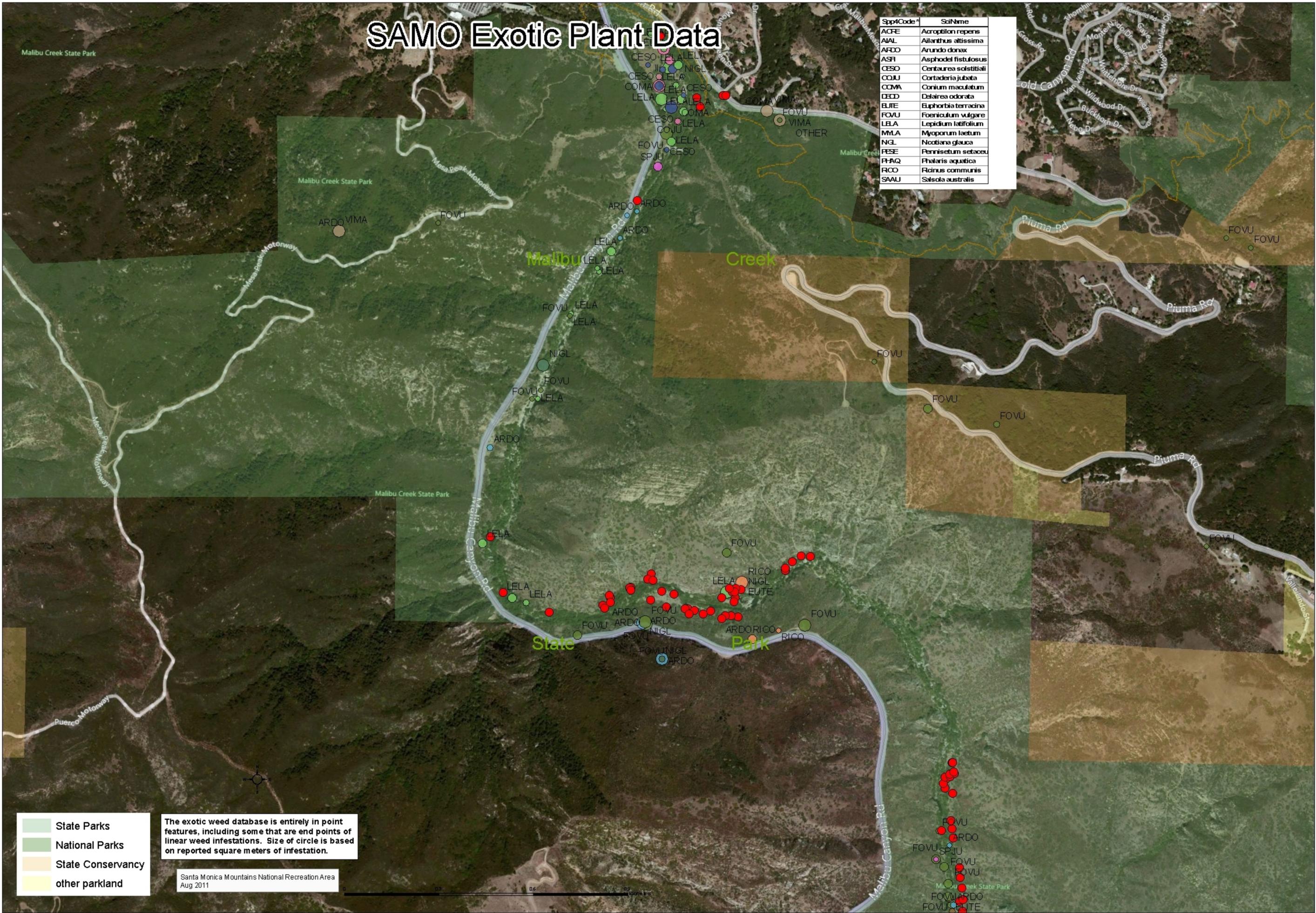
- State Parks
- National Parks
- State Conservancy
- other parkland

The exotic weed database is entirely in point features, including some that are end points of linear weed infestations. Size of circle is based on reported square meters of infestation.

Santa Monica Mountains National Recreation Area
Aug 2011

SAMO Exotic Plant Data

Spp4Code*	SciName
ACRE	Acroptilon repens
AIAL	Ailanthus altissima
ARDO	Arundo donax
ASFI	Asphodel fistulosus
CESO	Centaurea solstitialis
COJU	Cortaderia jubata
COMA	Conium maculatum
DEED	Delairea odorata
EUJE	Euphorbia terracina
FOVU	Foeniculum vulgare
LELA	Lepidium latifolium
MYLA	Myoporum laetum
NIGL	Nicotiana glauca
PESE	Pennisetum setaceum
PHAQ	Phalaris aquatica
RICO	Ricinus communis
SAAU	Salsola australis



The exotic weed database is entirely in point features, including some that are end points of linear weed infestations. Size of circle is based on reported square meters of infestation.

Santa Monica Mountains National Recreation Area
Aug 2011

- State Parks
- National Parks
- State Conservancy
- other parkland

SAMO Exotic Plant Data

Spp4Code*	SciName
ACRE	Acroptilon repens
AIAL	Ailanthus altissima
ARDO	Arundo donax
ASFI	Asphodel fistulosus
CESO	Centaurea solstitialis
COJU	Cortaderia jubata
COMA	Conium maculatum
DEOD	Delairea odorata
EUJE	Euphorbia terracina
FOVU	Foeniculum vulgare
LELA	Lepidium latifolium
MYLA	Myoporum laetum
NGL	Nicotiana glauca
PESE	Pennisetum setaceum
PHAQ	Phalaris aquatica
RCO	Ricinus communis
SAAU	Salsola australis



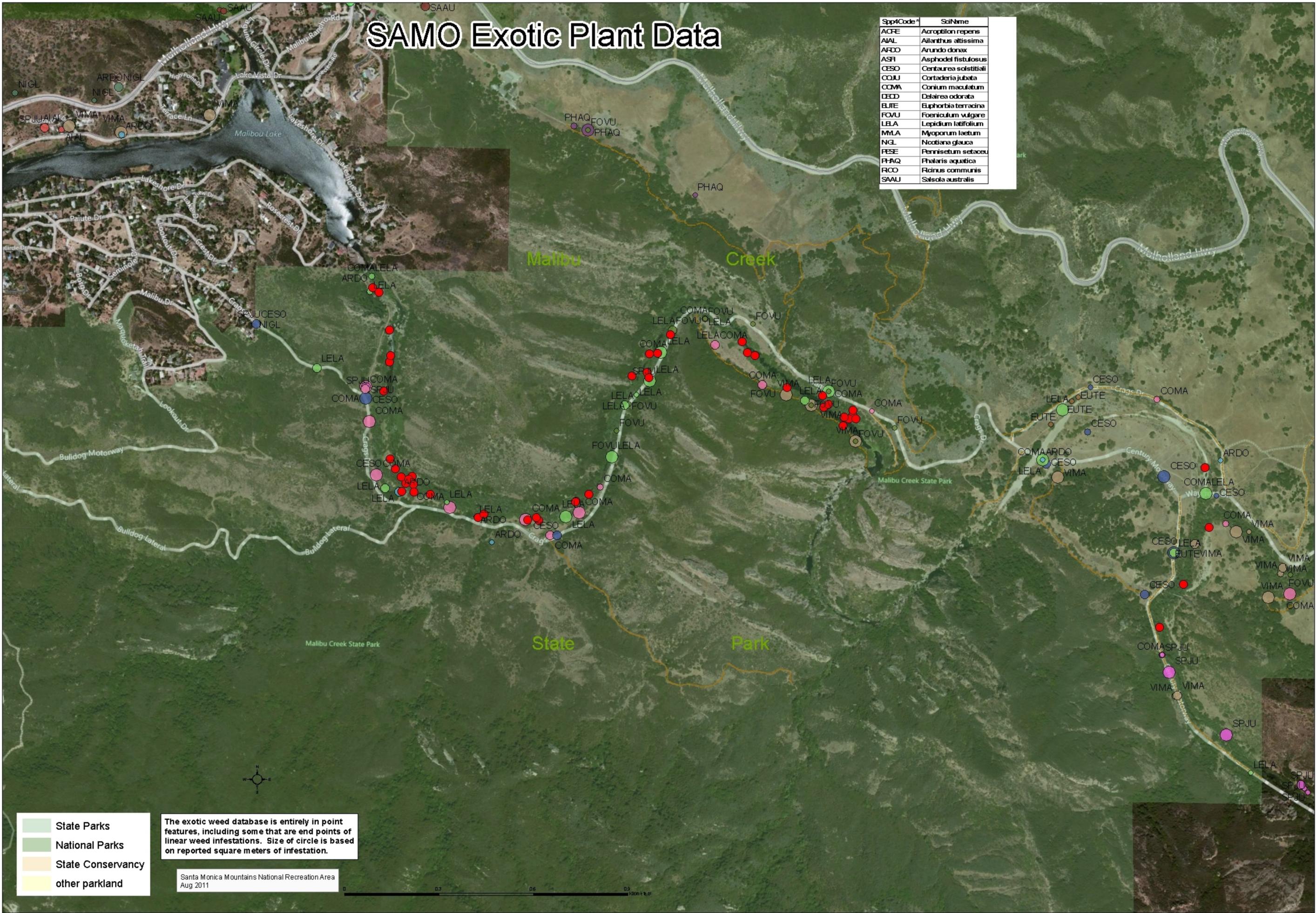
The exotic weed database is entirely in point features, including some that are end points of linear weed infestations. Size of circle is based on reported square meters of infestation.

Santa Monica Mountains National Recreation Area
Aug 2011

- State Parks
- National Parks
- State Conservancy
- other parkland

SAMO Exotic Plant Data

Spp4Code*	SciName
ACRE	<i>Acroptilon repens</i>
AIAL	<i>Ailanthus altissima</i>
ARDO	<i>Arundo donax</i>
ASFI	<i>Asphodel fistulosus</i>
CESO	<i>Centaurea solstitialis</i>
COJU	<i>Cortaderia jubata</i>
COMA	<i>Conium maculatum</i>
DEOD	<i>Delaisrea odorata</i>
EUTE	<i>Euphorbia terracina</i>
FOVU	<i>Foeniculum vulgare</i>
LELA	<i>Lepidium latifolium</i>
MYLA	<i>Myoporum laetum</i>
NIGL	<i>Nicotiana glauca</i>
PESE	<i>Pennisetum setaceu</i>
PHAQ	<i>Phalaris aquatica</i>
RCOO	<i>Ricinus communis</i>
SAAU	<i>Salsola australis</i>



- State Parks
- National Parks
- State Conservancy
- other parkland

The exotic weed database is entirely in point features, including some that are end points of linear weed infestations. Size of circle is based on reported square meters of infestation.

Santa Monica Mountains National Recreation Area
Aug 2011

