

The San Diego River Conservancy's Project to Control Invasive Non-native Plants and Restore the River

Background:

In 2006, the SDRC approved a five year [Strategic and Infrastructure Plan](#) to restore the health of the San Diego River. The plan included an important component memorialized in Program 3, concerning natural resources preservation and restoration. Here, beginning on page 30, the Strategic Plan describes Project 1, a recommendation to remove invasive non-native plants and restore the land in the river to reduce risk of flooding and fire as well as enhance the natural resources of the river. This project implements that strategic plan recommendation.

What are Invasive Non-Native Plants and why are they of concern for the San Diego River?

Invasive non-native plants are a concern because they are destroying the ability of the San Diego River and watershed to properly function. For example, many invasive non-native plants contribute to flood damage, are a fire risk, and degrade native habitats.

A biological invasion of non-native plants is spreading into our nations' fields, pastures, forests, wetlands and waterways, natural areas, and right-of-ways. Unfortunately, the San Diego River is also infected by these pests. Non-native invasive plants are sometimes called "introduced;" these terms refer to plants that have been brought to an area by humans and becomes established but are native to other regions. Also referred to as exotic, nonnative, alien, noxious, or non-indigenous weeds, invasive plants impact native plant and animal communities by displacing native vegetation and disrupting habitats as they become established and spread over time.

[Arundo](#), also known as Giant Cane, in particular does extensive damage to private property and our natural resources. *Arundo* spreads aggressively, potentially onto neighboring properties. Unfortunately much of the San Diego River, especially within the City of San Diego and up to the El Capitan Reservoir,

has been infested with invasive non-native plants. If we are to restore the river as a natural asset for the region, we must permanently control these plants.

Arundo and *Pampas Grass*, another invasive non-native plant, were introduced to California for use as horticultural, building or erosion control solutions. They are now found primarily in stream areas where their vigorous growth and ability to propagate in a wide range of conditions, makes them very difficult to eliminate. They are additionally destructive because the plants build-up of dense growth increases fire and flood risk, harms wildlife, decreases water quality and displaces natural habitats. Castor *Bean* is another invasive plant in the river that we are targeting.

What is the San Diego River Conservancy's Project to Control Invasive Non-native Plants and Restore the River?

The San Diego River Conservancy, working with its private, non-profit and governmental partners along the river, has begun a project to implement the recommendation laid out in its strategic plan (project 1, page 32) to remove invasive non-natives in the river and restore the land. This project includes [mapping all invasive non-native cover in the river](#) with a specific focus on target areas where infestations are the worst. The project also includes securing all the necessary permits to allow for the removal and undertaking control and replanting projects throughout the San Diego River watershed. Funding to complete this work will come from a variety of sources including voter approved bond measures and private donations.

The first control project will be undertaken near the Stadium in Mission Valley east of Ward Road and North of Highway 8. Beginning in 2009, the focus of that project will include the control of *Arundo* and other invasive non-native plants in the target area. SDRC is working with the Department of Fish and Game, which owns the largest property in this area and is funding this project, to secure the necessary permits to complete the bulk of this work over two years with maintenance to follow for at least ten years. Nearby private property owners are also participating in this important work.

On a parallel track, SDRC is working with the owners of other larger properties in the river to secure their approval to control invasive non-native plants on an

additional 329 acres of land scattered throughout the river. It is critically important that property owners with affected parcels participate in this program as invasive plants, by their very nature, spread aggressively from one property to the next- thus success and property owner participation are closely linked. In addition to invasive non-native plant control, the project restores native vegetation in these areas as an essential step in reestablishing the hydrologic and ecological functions of the river's riparian and coastal wetland habitats.

This project is expected to significantly improve the conditions, functions and values of the riparian/wetland habitats by reducing the detrimental processes and increasing the ability of these habitats to promote better water quality. This translates to fewer pollutants in the river and the ocean.

Another expected outcome is reduction of backwater flooding, the potential for debris jams on bridges and trestles, and the substantial accumulated fire fuel load in the river. Plant biomass buildup is typical of Arundo and Pampas grass infestations and is a known cause to backwater flooding, river diversion, and the accumulation of fire fuel load. Removal of Arundo stands also discourages the use of riparian areas by humans as shelter. These areas are not safe for inhabitation as they flood and are prone to fire, putting everyone at risk- including rescue and fire crews. Most fires that start in riparian areas are started by humans within stands of Arundo.

What Activities could take Place on your Property?

Biomass reduction of target plants uses tractors with fixed tooth and flail mowing attachments, with hand crews cutting areas left by the mowers. Biomass reduction creates a mulch layer that is left in place that reduces weedy plant cover (for example mustards and hemlock) and it benefits native plantings by conserving water and reducing competition. All areas that are mowed are re-vegetated with native plants including most of the riparian plant pallet: trees (cottonwood, sycamore, oaks, and three willow tree species), shrubs (toyon, sandbar willow, mulefat, and elderberry), and ground covers (blackberry, grape, mugwort, rose, and nettle). Plants are grown in a range of sizes from 1 gallon to rose pots (dependent on species) from cuttings and seed collected from the watershed or adjacent watersheds. Plantings are in densities of 250 to 350

plants per acre depending on cover of preexisting natives. SDRC contractors and staff will oversee work crews and provide on site monitoring of activities as specified under permits.

How can you help?

The project though systematic and ambitious will not rid our watersheds of these invasives. Total elimination and control of invasive plants can only be done with your help. Everyone needs to participate or it will not work.

If you live anywhere in the [San Diego River Watershed](#), the invasive non-native plants in your home or property can undo all the investment and work in invasive removal by this project.

Removal must be systematic so that upslope and upstream properties do not reinfest or downslope or downstream areas. We need your help so that invasive non-native plants on your property do not propagate to other parts of the watershed.

You can help by:

- Removing these invasive non-native plants from your property. See [Invasive Brochure](#) to learn more about these plants and find alternatives.
- Encouraging your friends, family and neighbors to destroy and remove invasive non-native plants from their property.
- Encourage your local plant nursery to not sell invasive non-native plants.
- Permit SDRC to remove invasive non-native plants from your property, if asked, by signing the right of entry permit.
- Participate on removal projects with your local conservation group. Many of SDRC's partners including the [San Diego River Park Foundation](#) and [Lakeside's River Park Conservancy](#) organize volunteer projects to remove invasive non-native plants from the river. Joining these efforts will help make a difference; visit their websites to learn more about how to get involved to support the restoration of the river.

For more information about this project, please contact Mike Nelson, San Diego River Conservancy Executive Officer, at (619) 645-3183 or at mnelson@sdrc.ca.gov