

First-Year Progress Report for CNLM-Funded Weed Control Project

Los Angeles & San Gabriel Rivers Watershed Council
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In September 2002 the Los Angeles and San Gabriel Rivers Watershed Council was awarded a \$15,000 grant from the Center of Natural Lands Management and Long Beach/Los Angeles Co. Natural Resources Trustee Committee to fund control of invasive non-native vegetation, specifically castor bean, eucalyptus and Mexican fan palms, along riparian areas of the Los Angeles River and tributaries.

This first-year progress report summarizes herbicide application treatments performed through September 10, 2003, by Riparian Repairs. To this date, expenses totaling \$7996 have been charged to the project: \$1454 for permits and insurance endorsements; \$5535 for labor (136 hours) and travel; and \$1007 for herbicide purchases.

Photographs of treatment areas are posted at the Watershed Council's website: <http://www.lasgrwc.org/exotics.html>. Several photos were taken before herbicide treatment, in April 2002, and the majority in September 2003, from 2 to 8 months after initial treatment.

WORK PLAN ADJUSTMENTS

At the outset, several changes to the original proposed objectives should be disclosed:

- The original grant application requested an additional \$65,000 for about 2.5 acres of Arundo removal which was not funded. Nonetheless, during the past year, several small Arundo infestations were treated relatively cheaply by selective foliar spraying using a backpack sprayer, in Brown's Canyon, Aliso Canyon, Hansen Dam Basin, and Eaton Canyon; the larger Arundo stands and those requiring cutting were not targeted.
- The Arroyo Seco upstream of Devil's Gate Dam was deleted as a project area because the City of Pasadena did not grant entry permission for weed control work, despite initial promises to do so. Instead, considerable effort was devoted toward treating castor bean plants in the Whittier Narrows flood control basin -- along the San Gabriel River, subsequent to about 30 net acres of Arundo clearance by the Army Corps of Engineers in Fall 2001; and along the Rio Hondo and its Mission Creek tributary, as a continuation or expansion of other previously funded invasive weed control projects.
- Natural areas in several City of Los Angeles parks were added at the suggestion of park managers: Runyon Canyon, Hazard Park, and Fern Canyon in Griffith Park.
- Although not a plan revision, during the first year the primary objective was castor bean, rather than small eucalyptus and Mexican fan palms which will be targeted more during the second year. Reasons for this preference are: (1) Castor bean plants of all sizes are easy to kill without cutting or drilling, either by basal-bark or foliar herbicide applications (unlike eucalyptus and palm trees); yet castor bean seed banks are persistent, yielding abundant new seedlings for 2-3 years after initial treatment; (2) Compared to eucalyptus and fan palms, castor bean is more widespread and more abundant in most project areas, and is more objectionable because ingested plant material is highly toxic to humans and horses.

PERMITS AND ENDORSEMENTS

During the fall months of 2002, project activity was limited to obtaining permits and landowner permission:

- As a complimentary service to the Los Angeles County Weed Management Area, Jim Hartman with the Agricultural Commissioner's office visited all proposed project areas and provided the required herbicide use recommendations.
- California Dept. Fish and Game issued a Streambed Alteration Agreement listing the proposed project areas, at a cost of \$231; and biological consultant Frank Havore provided biological assessments which specified seasonal restrictions on treatment methods for avoiding impact to sensitive wildlife species, at a cost of \$420.
- Riparian Repairs obtained liability insurance endorsements for City of Los Angeles Dept. Recreation & Parks, City of Pasadena, Los Angeles County Dept. Public Works, and the LA&SGR Watershed Council. The L.A. County Dept. Parks & Recreation was already covered for prior project work by Riparian Repairs, and the Army Corps of Engineers was covered via the other endorsements. In July 2003 three endorsements were renewed and those for City of Pasadena and L.A. County Dept. Public Works were not renewed. Total cost for insurance endorsements and renewals was \$826, excluding those for L.A. County Dept. Parks & Recreation.

PROJECT ACCOMPLISHMENTS

BELL CANYON -- for City of Los Angeles Dept. Recreation & Parks

Between Bell Canyon Road and the stream channel shaded by native trees, just west of Valley Circle Blvd. at west margin of San Fernando Valley, about one-third acre of large, old castor bean trees were treated by basal-bark applications of Garlon 4 herbicide, without cutting, on visits in January and March. Subsequently most large trees died and toppled. New castor bean seedlings were foliar sprayed in August and September. Total time for herbicide applications was 5 hours. Work during second project year will target small number of surviving castor bean trees made inaccessible by thick tangles of fallen dead branches, plus several young palm trees.

BROWN'S CANYON -- for City of Los Angeles Dept. Recreation & Parks

In Brown's Canyon at the northwestern corner of San Fernando Valley, about 10 Arundo clumps of small-to-medium size (less than 50 ft across) were foliar sprayed with Stalker herbicide on two visits in April and August. About 3.5 hours of selective, low-volume backpack spraying treated approximately one-quarter acre of Arundo. Treatment of drought-stressed clumps located within 100 ft of Brown's Canyon Road was initiated in April because Arundo stalks appeared to be almost entirely dormant (with yellow or dead leaves) in September 2002. Less accessible clumps at lower end of canyon, above confluence with Devil Canyon, were not treated and will be targeted during second project year.

ALISO CANYON -- for City of Los Angeles Dept. Recreation & Parks

During one visit in January and two in April, adding up to 4.5 hours, about one-tenth acre of large, old castor bean trees concentrated near Rinaldi Ave. were basal sprayed with Garlon 4 and two Arundo patches of similar combined area were foliar sprayed with Stalker herbicide.

BULL CANYON-- for Los Angeles County Dept. Public Works

Extending southeastward from Balboa Blvd. north of Rinaldi, this small ravine is managed for flood control but supports numerous willow trees. A small castor bean infestation on one sparsely vegetated slope was treated during 2 visits totaling 1.5 hour. Plans of targeting numerous young fan palms in channel were scrapped upon learning that Dept. Public Works may excavate and revegetate channel floor to repair an underlying pipe.

HANSEN DAM BASIN/RECREATION AREA -- for City of Los Angeles Dept. Recreation & Parks and U.S. Army Corps of Engineers

Following a bird nesting survey by Kris Ohlenkamp with the Audubon Society, in early July dispersed *Arundo* clumps totaling approximately one-third acre were foliar sprayed with Stalker herbicide near the eastern boundary of the flood control basin. This area of Tujunga Wash was assigned a high priority because it is located immediately downstream of the Tujunga Wash mitigation area, where Los Angeles County Dept. Public Works cleared about 30 net acres in 2000-2001, and upstream of a large riparian woodland that is not significantly infested. Also treated were drought-stressed *Arundo* clumps and large, old castor bean trees in upland habitat along the basin's north margin, eastward from Little Tujunga Creek. Labor charged to CNLM-funded project was 7 hours. Dispersed *arundo* clumps in the basin's central portion are a separate population derived from large thick stands in Little Tujunga Canyon to the north and were not treated.

GRIFFITH PARK-- for City of Los Angeles Dept. Recreation & Parks

Herbicide applications were restricted to castor bean at two locations in Griffith Park: Fern Canyon, west of the carousel, and along the Los Angeles River's northern levee adjacent to the Bette Davis picnic area. Labor charged was 7.2 hours for visits in February, May and July.

The Bette Davis area of Griffith Park is at the head of lengthy soft-bottom section of the Los Angeles River known as Glendale Narrows, managed by the Army Corps of Engineers, which will be targeted for control of castor bean, eucalyptus and fan palms during the second project year.

RUNYON CANYON PARK-- for City of Los Angeles Dept. Recreation & Parks

Runyon Canyon Park is located in the Hollywood Hills west of Cahuenga Pass, where streams are ephemeral and "riparian" vegetation is represented by oak and sycamore trees. Castor bean trees and seedlings were treating during one visit in February and two in July totaling 5 hours.

HAZARD PARK-- for City of Los Angeles Dept. Recreation & Parks

Located east of L.A. County/USC Medical Center, Hazard Park is a landscaped urban city park containing a stream channel with sparse native willow trees. During 2002 City maintenance crews reduced non-native biomass in the channel for public safety reasons. On two CNLM-project visits in February and May, 4 hours of herbicide applications targeted one clump of resprouting *Arundo*, castor bean mature plants and seedlings, fan palm seedlings, passion vine, and resprouting trunks of eucalyptus and Brazilian peppertree.

EATON CANYON-- For Los Angeles County Dept. Parks & Recreation

In the late 1990's, abundant *Arundo* stands were cleared from the main canyon as off-site mitigation for housing construction, and park volunteers reduced castor bean populations by hand-pulling seedlings and cutting off seed pods of mature plants. Upon hearing of the labor-

intensive volunteer program, in 2001 Riparian Repairs basal-sprayed large numbers of dispersed castor bean trees as a volunteer contribution. The CNLM-funded project of 2003 continued or expanded the earlier control efforts, by targeting small *Arundo* clumps in tributary canyons, the surviving and young castor bean plants, plus several small eucalyptus trees (girdled and sprayed), Spanish broom (basal-sprayed without cutting), milk thistle (foliar sprayed), and one 12 ft. tall fan palm (foliar). A park volunteer named Matt Reese assisted castor bean control by hand-pulling young seedlings. A total of 16 hours was charged to the CNLM-funded project for 5 visits between March and June.

WHITTIER NARROWS -- For Los Angeles County Dept. Parks & Recreation and U.S. Army Corps of Engineers

Although not mentioned in the grant proposal to Center for Natural Lands Management, treatment of castor bean at Whittier Narrows flood control basin became an additional project objective partly as a replacement of the upper Arroyo Seco in Pasadena, where unexpectedly a letter of entry was not forthcoming. Project work on castor bean at Whittier Narrows was inspired by three earlier invasive weed control projects along different channels of the basin:

- Along the Rio Hondo, starting in Fall 2000 a CNLM grant to the San Gabriel Mountains Regional Conservancy funded treatment of castor bean, *Ailanthus* and 2.2 acres of *Arundo*, north of the Pomona Freeway. Work on castor bean in 2003 extended the Rio Hondo treatment area southward from the freeway to San Gabriel Blvd., along the river's east bank which is easily accessible from a bike trail, and on the west side near the freeway.
- Along Mission Creek, a minor tributary of the Rio Hondo within the flood control basin, starting in January 2002 a grant to the Los Angeles Conservation Corps and Riparian Repairs, from the U.S. Environmental Protection Agency via CH2M Hill, funded removal of *Arundo*, castor bean and *Ailanthus* within an 80-foot-wide strip centered on the channel axis, as mitigation for construction of groundwater purification facilities. CNLM's grant to the Watershed Council funded castor bean treatment outside the 80-foot-wide strip.
- Along a 1.3-mile reach of the San Gabriel River, from San Jose Creek to the Zone 1 Ditch/Lario Creek intake, during Fall 2001 the Army Corps of Engineers funded removal by bulldozer of about 30 net acres of *Arundo*, followed by herbicide treatments of *Arundo* resprouts. Castor bean was not targeted by the ACOE project, and by the following year alarming numbers of new plants had proliferated in recently cleared areas. During 2003 CNLM-funded control work by Riparian Repairs has killed nearly all sizeable castor bean plants and halted seed production for now, in the 40+ acres of river channel occupied by *Arundo* previously and by other vegetation.

During the 8 months of project activity in 2003, 68 hours were charged to the CNLM-funded project for castor bean treatments at Whittier Narrows, affecting a total area of perhaps 50 acres.

SANTA FE DAM BASIN and FISH CANYON -- For Los Angeles County Dept. Parks & Recreation, U.S. Army Corps of Engineers, and City of Duarte

Several areas with castor bean and *Ailanthus* near the San Gabriel River above Santa Fe Dam were treated during 10 hours of herbicide application in January, April and August as follow-up to previous work in 2000-2001 funded by CNLM grant to San Gabriel Mountains Regional Conservancy.