

Nesting Bird Surveys: Julia Pfeiffer Burns/McWay Canyon

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BACKGROUND

Invasive species are considered one of the primary threats to global biodiversity, second only to habitat loss (Cronin and Haynes 2004). Nonnative invasive plant species have significant deleterious impacts on native ecosystems via a wide variety of effects including direct competition with native vegetation (i.e. Stinson et al 2006, Calloway and Aschehoug 2000), reduction of biodiversity (i.e. Lonsdale 1999), alteration of foraging activity (Cronin and Haynes 2004), creation of sub-optimal habitat (i.e. Randall 2000), and alteration of habitat structure (i.e. Williams and Baruch 2000). One of the mandates of the California Department of Parks and Recreation (CDPR) is to manage native and nonnative vegetation on State Parks lands, encouraging the persistence and enhancement of native vegetation, and limiting or removing nonnative vegetation.

In 2006, CDPR devised a plan for removing nonnative tree and shrub species from Julia Pfeiffer Burns State Park in Big Sur, CA, as part of an effort to restore the native coastal scrub habitat of the area. Before removal, CDPR was charged by the California Coastal Commission with insuring that the existing, nonnative vegetation does not currently provide habitat value to nesting birds. To that end, CDPR contracted the Ventana Wildlife Society to conduct breeding season surveys in the Eucalyptus and Acacia trees currently proposed for removal from the McWay Canyon area in Julia Pfeiffer Burns State Park, to determine whether they were being used as nesting substrate for birds, particularly raptors. This report summarizes the results of the nesting bird surveys and provides recommendations regarding the removal of the Eucalyptus and Acacia based on those findings.

METHODS

An experienced avian biologist surveyed the 2-acre area of *Eucalyptus globulus*, *Eucalyptus* spp. and *Acacia* spp. demarcated as ACBI/ACSI and EUGL in Areas V, VII, and IX of Figures 1-4, and proposed for removal by California Department of Parks and Recreation at McWay Cove of Julia Pfeiffer Burns State Park. The biologist conducted five visits spaced at least two weeks apart during the survey period from March 1 through June 15, 2007. Each visit lasted for 2 hours and was conducted between dawn and 10:00 am.

The biologist walked through the proposed impact areas, using visual and audible cues to identify any nesting birds in the area, as well as scanning for nests in the trees proposed for removal, in order to detect nesting activity or evidence of repeated use by nesting

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birds. Evidence of repeated nesting was defined as direct observations of repeated use of a nest constructed in years prior to the survey or any historical evidence or observation of use of a nest structure or platform. All birds detected in the area were recorded in a standardized format including the substrate in which they were observed (*Eucalyptus* species, *Acacia* species, or native plant species). Breeding behaviors were specifically noted, and birds displaying nesting behaviors were closely observed to directly confirm the presence and location of nesting birds.

RESULTS

No nesting birds were observed using the Eucalyptus or Acacia trees within the proposed impact area. No signs of historical nests, nest cavities, or nest platforms were found in Eucalyptus or Acacia within the proposed impact area. 200 individuals of 28 species were detected during the surveys (Table 1). Sixty-four individuals were detected in Eucalyptus vegetation; 21 individuals were detected in Acacia vegetation; and 115 individuals were detected in native vegetation. Only one species was detected that was not a passerine or near-passerine: on one survey day several Turkey Vultures were observed to be making use of the Eucalyptus and Cypress trees as sunning roosts. Seventy-five percent of observed territorial and breeding behavior events ($n = 24$) occurred in native vegetation (Table 2). One Song Sparrow nest was discovered, in the native vegetation in Area VII.

Table 1. Avian species detected in McWay Canyon, Big Sur, CA, during nesting bird surveys, March 1 through June 15, 2007.

Species Common Name	Number Detected	Species Common Name	Number Detected
Acorn Woodpecker	1	Orange-crowned Warbler	2
Allen's Hummingbird	2	Purple Finch	4
American Robin	7	Ruby-crowned Kinglet	6
Anna's Hummingbird	19	Rufous Hummingbird	5
Brown Creeper	1	Song Sparrow	42
California Towhee	3	Spotted Towhee	4
California Quail	2	Steller's Jay	13
Chestnut-backed Chickadee	20	Turkey Vulture	2
Fox Sparrow	1	Western Flycatcher	9
House Finch	10	Western Scrub-jay	4
House Wren	2	Western Wood-pewee	1
Lesser Goldfinch	2	Wilson's Warbler	13
Mourning dove	4	Wrentit	17
Northern Flicker	3	Yellow Warbler	1

Table 2. Avian territorial and breeding behavior events observed in Eucalyptus, Acacia, and native coastal scrub vegetation, McWay Canyon, Big Sur, CA, March 1 through June 15, 2007

NATIVE			ACACIA			EUCALYPTUS		
Display	Nest Building	Provisioning	Display	Nest Building	Provisioning	Display	Nest Building	Provisioning
16	0	2	1	0	0	5	0	0

IMPLICATIONS AND RECOMMENDATIONS

The Eucalyptus and Acacia habitats at McWay Canyon do not appear to provide any habitat value for breeding birds of any sort. By contrast, the only active nest detected was located in native coastal scrub, and the majority of birds engaging in territorial defense were located in the native coastal scrub habitat as well. We recommend that CDPR move ahead with the removal of the exotic trees and shrubs, and expedite the re-establishment of native coastal scrub vegetation, which supports a diverse bird community during the breeding season.

LITERATURE CITED

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Figure 1. Waterfall House Landscape Maintenance Project, Existing Vegetation- Enlargement of Areas VII, VIII, and IX, Julia Pfeiffer Burns State Park, Big Sur, CA.

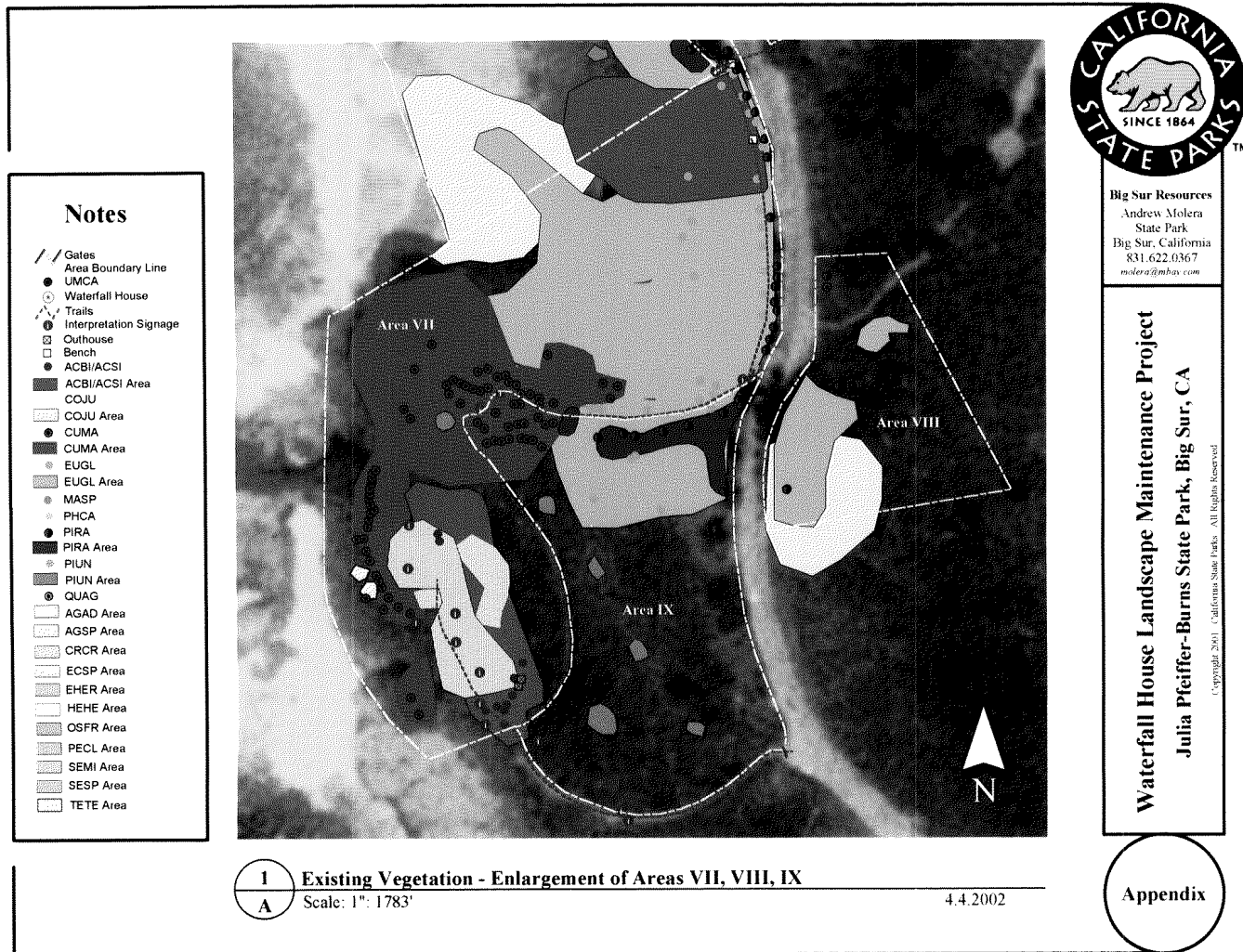


Figure 2. Waterfall House Landscape Maintenance Project, Post-treatment Vegetation- Enlargement of Areas VII, VIII, and IX, Julia Pfeiffer Burns State Park, Big Sur, CA.

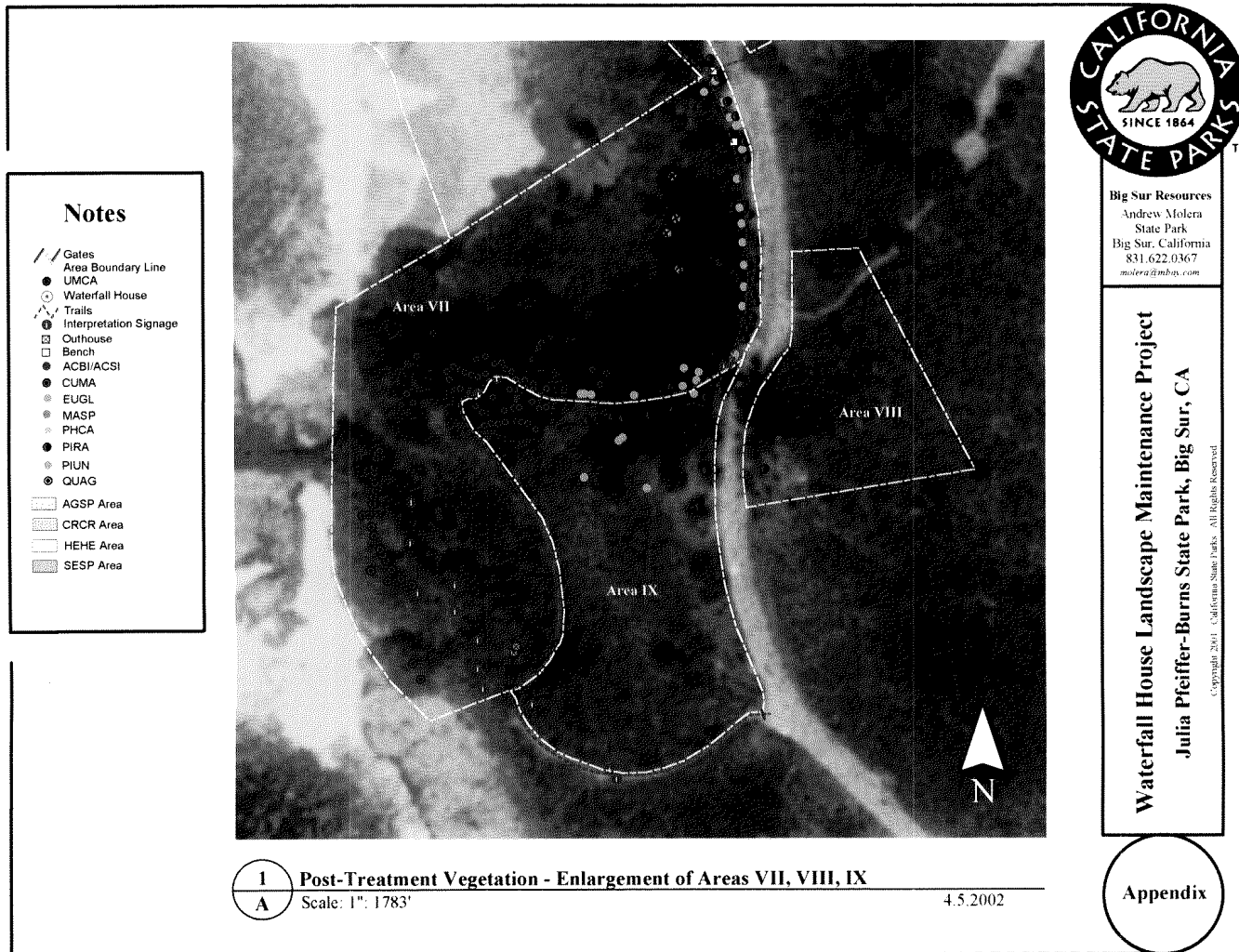


Figure 3. Waterfall House Landscape Maintenance Project, Existing Vegetation- Enlargement of Areas I, II, III, IV, V, and VI, Julia Pfeiffer Burns State Park, Big Sur, CA.

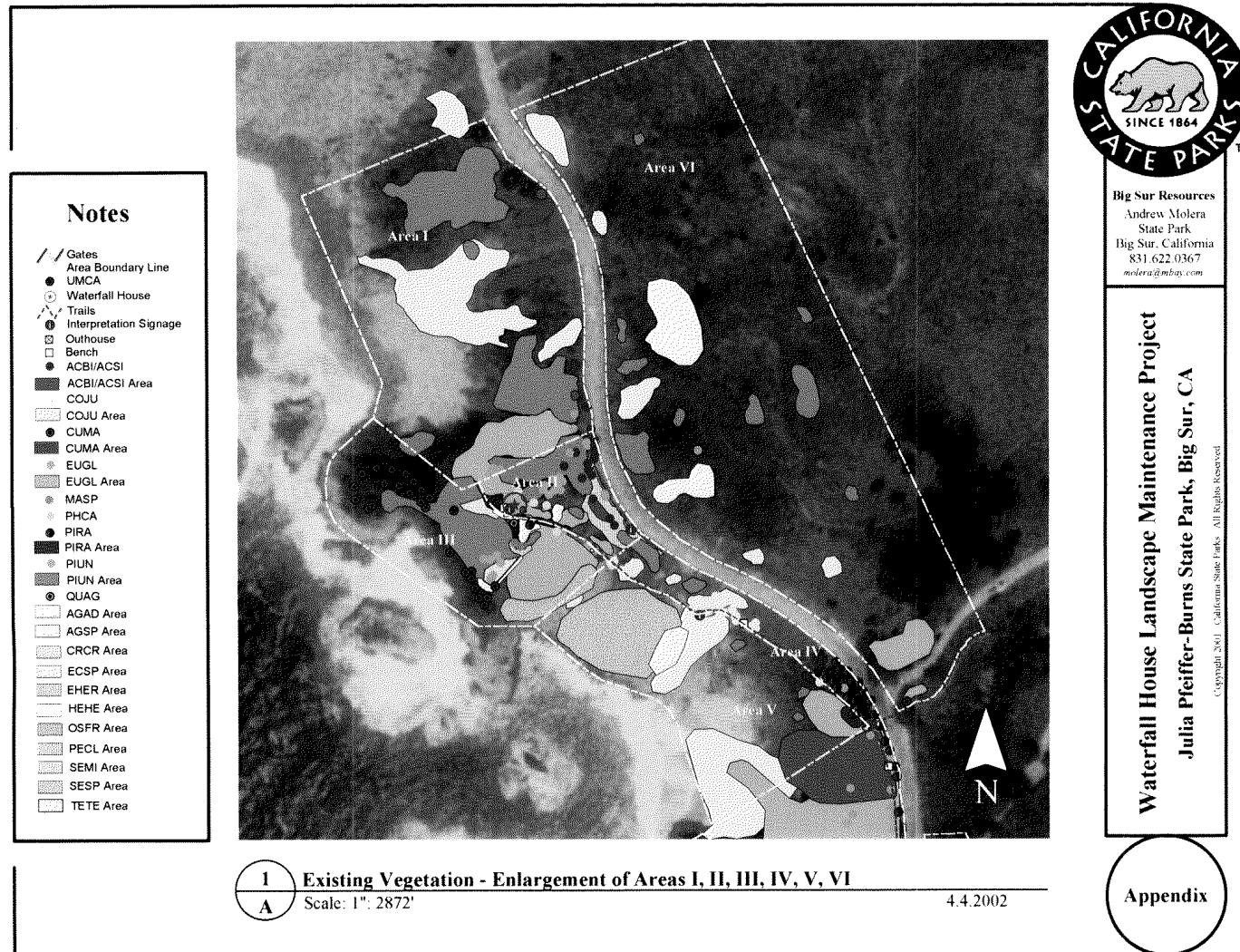


Figure 4. Waterfall House Landscape Maintenance Project, Post-treatment Vegetation-, Julia Pfeiffer Burns State Park, Big Sur, CA.

