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RANA CREEK
HABITAT RESTORATION

Paraiso Hot Springs Biological Assessment

(Final)

Created for

Thompson Holding, LLC.
Paraiso Hot Springs Resort

on

July 11th, 2005

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1. Summary

This biological assessment report was prepared to document and assess the existing biological resources within the extents of APNs 418-361-004, 418-381-022, and 418-381-021 at Paraiso Hot Springs, Monterey County, California. The property is comprised of developed areas that contain buildings, landscaping plants, eucalyptus, and palm trees, and areas of live oak woodland, Diablan sage scrub, Baccharis Scrub, riparian, and annual grasslands. The majority of proposed development will be done in areas that are already developed or disturbed. No rare plant species were found during the surveys. Monterey dusky-footed woodrat nests were found during the surveys in the lower willow riparian area. The Monterey dusky-footed woodrat is California Species of Concern. The areas in which they were found are not proposed for development. This biological assessment was utilized throughout the planning process in order to place development completely outside sensitive habitat areas.

2. Owner and Location of Project

2.1 Applicant: Paraiso Resorts L.L.C.
PO Box 1925
Horsham, PA 19044

2.2 Location: The project site is located at the existing Paraiso Hot Springs Resort, near Soledad, California. The site is in a valley at the base of the Sierra de Salinas, approximately 5 miles from the Salinas River.

Assessor's Parcel Numbers (APN): 418-361-004, 418-381-022, and 418-381-021

3.0 Methods

The *California Natural Diversity Database* (CDFG 2002) and the *California Native Plant Society's Inventory of Rare and Endangered Plants of California* (CNPS 2001) were used to identify known or potential populations of sensitive plant and animal species in the vicinity of the project site prior to surveys. In addition, the *National Wetlands Inventory* was used to locate aquatic habitat within 5 miles of the site.

Rana Creek Habitat Restoration conducted biological surveys over a period between December 12th and March 11, 2003, tree surveys in 2004 and 2005, and follow up biological surveys in the spring of 2005. The times of the surveys were adequate to assess the habitat types and presence of sensitive habitats. The entire property to be developed was inspected for sensitive species or communities and lists of plant and animal species observed were compiled. Plant identification was validated using *The Jepson Manual* (Hickman 1993) and *An Illustrated Guide to the Flowering Plants of Monterey County* (Matthews 1997). Field surveys were conducted using a global positioning system (GPS) survey unit was used in conjunction with 1995 aerial photographs to map vegetation.

4.0 Impacts Assessment

The project involves the renovation of the Paraiso Hot Springs Resort. The developed project area is approximately 50 acres of the 240-acre property. The footprint of all building and developed surfaces is approximately 23 acres. This footprint does not include landscaped areas such as those within the hotel guestroom area or the vineyard. The total area to remain in open space is 27 acres or 54% of the project area, and 79 % of the total property.

5.0 Regulatory Jurisdiction

County of Monterey
Planning and Building Department
2620 1st Avenue
Marina, CA 93933

6.0 Sensitive Species / Habitat

Appropriate habitat and conditions were analyzed throughout the property for rare species that may potentially occur in the area.

No rare plants were found.

Four Monterey dusky-footed woodrat nests were found during the surveys within willow riparian habitat. The Monterey dusky-footed woodrat is a California Species of Concern. The areas in which they were found are not proposed for development.

The property was also surveyed for suitable habitat for "at risk" amphibians including Californina Red-legged Frog (CRLF) (*Rana aurora draytonii*), the Yellow-legged Frog *(Rana boylei*), California Tiger Salamander (*Ambystoma californiense*), and California newt (*Taricha torosa*).

No rare species of amphibian were found during the surveys.

6.1 Vegetation/Habitat Descriptions

The California Native Plant Society Inventory of Rare Vascular Plants of California (2001) and The California Department of Fish and Game California Natural Diversity Database were utilized for identification of known populations of State and Federally listed rare, threatened and endangered plant species on or in the vicinity of the project site. Plant identification was validated utilizing The Jepson Manual (Hickman 1993). Cultivar species were identified utilizing the Sunset Western Garden Book.

Annual Grassland

Annual grassland west of the developed areas of the property.

The grasslands of Paraiso Hot Springs consist mainly of annual non-native grasses with a few native grasses and forbs. The annual grasslands are typical of the hills and agricultural areas of the Salinas Valley. The plants in these areas include non-native soft chess (*Bromus hordeaceus*), foxtail chess (*Bromus madritensis* ssp. *rubens*), rattlesnake grass (*Briza maxima*), slender wild oats (*Avena fatua*), and English plantain (*Plantago lanceolata*). During the spring several annual native wildflowers are present include pink owl's clover (*Castelleja exserta*), blue dicks (*Dichelostemma capitatum*), popcorn flower (*Plagiobothrys nothofulvus*), and sky lupine (*Lupinus nanus*). The areas of annual grassland that have very few native species were most likely the areas that were farmed or historically had a high level of disturbance.

Landscaped and Disturbed

A majority of the area to be developed consists of areas of non-native landscaping and disturbance adapted non-native plants. A large area of lawn dominated by non-native Kikuyu grass (*Pennisetum clandestinum*) is located in the middle of the currently developed areas. There are a few areas within the lawn where common rush (*Juncus effusus*) is growing due to moisture from the leach fields. A major feature of the developed area is the stand of Mexican fan palms (*Washingtonia robusta*). The palms provide nesting habitat for a number of bird species, and are also used as granary trees by acorn woodpeckers. The majority of the palms will remain. Other common landscaping plants include: Peruvian pepper tree (*Schinus molle*), African daisy (*Osteospermum fruticosum*), pink cosmos (*Cosmos binnatus*), jade plant (*Crassula argentea*), Japanese honeysuckle (*Lonicera japonica*), regal geranium (*Pelargonium domesticum*), and many others.

Landscaped areas of Paraiso Hot Springs.

Diablan Sage Scrub: The majority of the north and western areas of the property outside of the development area consist of Diablan sage scrub. The dominant species include chamise (*Adenostoma fasiculatum*), California sagebrush (*Artemisia californica*), and black sage (*Salvia mellifera*).

Diablan Sage Scrub adjacent to the development areas.

Baccharis Scrub

This habitat type is sometimes called soft chaparral, as it does not contain *manzanita*, *ceanothus*, or other "hard" woody shrubs. The dominant plant of this community is coyote brush (*Baccharis piluaris*). The baccharis scrub areas are located near the riparian areas and slopes near the eastern edge of the property.

Baccharis scrub and riparian habitats with annual grassland in the foreground.

Seasonal Wet Seep

"The Army Corps of Engineers (Federal Register 1982) and the Environmental Protection Agency (Federal Register 1980) jointly define wetlands as: Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions." (Army Corps of Engineers, Wetland Delineation Manual 1987)

There is a small area (0.21 acres) in the middle of weedy annual grasslands that contains a wet seep. According to the Army Corp of Engineers' definition above, the area would be defined as a jurisdictional wetland. There was no standing water in this area, but the

soil showed evidence of seasonal saturation and supports creeping wild rye (*Leymus triticoides*), common rush (*Juncus effusus*), spreading rush (*Juncus patens*), as well as non-native aquatic adapted plants including curly dock (*Rumex crispus*). This area is outside the development zone.

Wet seep area in the southeastern portion of the property.

Willow Riparian

There are approximately 2 acres of riparian habitat along the intermittent stream course. The dominant tree species are California sycamore (*Platanus racemosa*), and arroyo willow (*Salix lasiolepis*) with some non-native Mexican fan palms (*Washingtonia robusta*) and Peruvian pepper trees (*Schinus molle*). The understory is a mixture of mostly non-native grasses and forbs. The riparian area also contains highly invasive species tree tobacco (*Nicotiana glauca*) and castor bean (*Ricinus communis*). These species are not limited to the riparian area, but seem to thrive in areas with more moisture.

Along this seasonal drainage, adjacent to the southeastern portion of the development window lies Willow Riparian habitat dominated by coyote brush and scattered willow trees. This area is flanked by stands of Eucalyptus trees, bare soil, and degraded ruderal vegetation. This area will not be impacted as a result of the development project.

Pond Area

There is an area of ponds and wetlands of approximately 0.45 acres near the eastern entrance of the property. The pond is fed by water from the hot spring baths. The edges of the pond contain cat-tails (*Typhacea angustifolia*), slough sedge (*Carex obnupta*), and non-native water loving weeds such as curly dock (*Rumex crispus*). The surface of the water was covered with duck weed (*Lemna sp.*). The area surrounding the pond consists of non-native annual grasses and forbs.

Pond area with duckweed (*Lemna sp.*) on the surface with cat-tails (*Typhacea angustifolia*) on the edges. This area will be protected during development.

Wetland

The small drainage area at the outlet of the pond contains wetland. The dominant species are cat-tails (*Typhacea angustifolia*). This area will be protected during development.

Oak Woodland

There are approximately 22.6 acres of oak woodland within the property. The oak woodland areas are in good health and have relatively few invasive weeds. Three species of oak occur on the property: coast live oak (*Quercus agrifolia*), blue oak (*Quercus douglasii*), and scrub oak (*Quercus berberidifolia*). The most dominant and common one is the coast live oak. The understory of the oaks outside of the current camping area contain typical herbaceous species of oak woodlands including wood mint (*Stachys bullata*), humming bird sage (*Salvia spathacea*), mugwart (*Artemisia douglasiana*), bracken fern (*Pteridium aquilinum*), coffee fern (*Pellaea andromedaefolia*), and miner's lettuce (*Claytonia perfoliata*). The understory of the oak woodlands contain several native grass and grass-like species including blue wild-rye (*Elymus glaucus*), Coast-Range melica (*Melica imperfecta*), leafy bent-grass (*Agrostis pallens*), Foothill sedge (*Carex tumulicola*), and common rush (*Juncus effusus*). Shrubs in the understory include ocean spray (*Holodiscus discolor*), California coffeeberry (*Rhamnus californica*), spiny redberry (*Rhamnus crocea*), poison oak (*Toxicodendron diversilobum*), and Northern sticky monkey flower (*Mimulus aurantiacus*). An oak tree survey was performed (see attached tree survey).

There are some oak woodland areas where the campgrounds are currently located. These areas also contain coast live oak (*Quercus agrifolia*) but the understory consists of bare ground and annual non-native grasses and forbs.

Oak woodland within the camping area west of the existing developed areas.

Mixed Hardwood Forest

The north-facing slope on the south side of the property is dominated by mixed hardwood forest. The dominant trees in this area are: coast live oak (*Quercus agrifolia*), blue oak (*Quercus douglasii*), California buckeye (*Aesculus californica*), and California bay (*Umbellularia californica*). This area is not proposed for development.

Mixed Hardwood Forest and Diablan Sage Scrub

6.3 Wildlife

The variety of habitat types provide local wildlife with habitat and food sources. During the site visits, several bird species were observed on the property. The trees and shrubs on the property provide habitat and nesting sites for birds. All nesting birds, excluding Rock Doves (common pigeon), English Sparrows, and European Starlings are protected by the California Department of Fish and Game Code (sections 3503 and 3801) as well as by the Federal Migratory Bird Treaty Act. It is the applicant's responsibility to assure that nesting birds will not be disturbed during construction. A survey for nesting birds should be made prior to disturbance to assure that no nesting birds on or near the property will be disturbed, particularly if tree removal and grading are scheduled to begin prior to August 1st. If nesting birds are discovered on or near the building site, the California Department of Fish and Game should be consulted regarding measures to avoid impact.

The following birds were observed 2002/2003:

Scientific Name	Common Name
Aphelocoma californica	Western scrub jay
Bubo virginianus	great horned owl
Buteo jamaicensis	red-tailed hawk
Buteo lineatus	red-shouldered hawk
Callipepla californica	California quail
Calypte anna	Anna's hummingbird
Cathartes aura	turkey vulture
Catharus ustulatu	Swainson's Thrush
Chamaea fasciata	wrentit
Colaptes auratus	red-shafted Northern flicker
Corvus brachyrhynchos	American crow
Cyanocitta stelleri	Steller's jay
Dendroica coronata	yellow-rumped warbler
Euphagus cyanocephalus	Brewer's blackbird
Junco hyemalis ssp. thurberi	dark-eyed junco
Melanerpes formicivorus	acorn woodpecker
Pipilo crissalis	California towhee
Pipilo maculatus	spotted towhee
Poecile rufenscens ssp. barlowi	chestnut-backed chickadee
Sitta carolinensis	white-breasted nuthatch
Toxostoma redivivum	California thrasher
Zenaida macroura	mourning dove
Zonotrichia atricapilla	golden-crowned sparrow

A search of the *California Natural Diversity Database* (CDFG 2002) was done for CRLF and CTS within five miles of the project sight, and an inventory of all aquatic habitat data

contained within the National Wetlands Inventory, and the U.S Department of Forestry FRAP data was also inquired.

There were no records of rare amphibians within 5 miles of the project site. No amphibians were found on the property.

The following reptiles were observed 2002/2003:

Scientific Name	Common Name
Sceloporus graciosus	sagebrush lizard
Sceloporus occidentalis	Western fence lizard

The coast horned lizard (*Phrynosoma coronatum*), a CDFG Species of Concern, was searched for and not found.

The following mammals were observed 2002/2003:

Scientific Name	Common Name
Lynx rufus californicus	bobcat
Odocoileus hemionus californica	black-tailed deer
Thomomys bottae	Botta's pocket gopher

Mammals that were not observed but were found to be present from scat, nests, tracks, or scratch marks:

Scientific Name	Common Name
Canis latrans ochropus	coyote
Neotoma fuscipes luciana (CSC)	Monterey dusky-footed woodrat
*Sus scrofa**	European wild boar

(CSC) - California Species of Concern. * - Non-native species

Woodrat nest in the riparian area, outside of the proposed development.

7.0 Mitigation Recommendations

a. All areas where water drains off new roads and culverts shall have energy dissipaters to help prevent potential erosion. All erosion control measures shall be implemented in accordance with the Erosion Control Plan for the project.

b. Any Monterey Dusky-footed woodrat (California Species of Concern) nests found within a building envelope should be dismantled by hand before any heavy equipment is used to clear the site. This will allow the woodrats to escape and find new homes outside of the building area.

c. The highly invasive weeds tree tobacco (*Nicotiana glauca*) and castor bean (*Ricinus communis*) should be controlled. These species have the potential to escape into adjacent native habitats and displace native plants. Additionally, both of these plants contain toxins that can be fatal to humans if eaten or smoked.

d. The project proponent has analyzed the vegetation and located development within areas of historic land use and disturbance. Some development will occur adjacent to Willow Riparian habitat. Those sites should be demarcated and protected from disturbance during development.

8.0 Conclusion

The area of Paraiso Hot Springs Resort planned for development is approximately 50 acres of the 240 acre property. The total area to remain in open space is 27 acres or 54% of the project area, and 79 % of the total property. The development will not change the wildlife patterns in a dramatic way. There were no rare plant species found. Monterey Dusky-footed woodrat (California Species of Concern) nests were found outside of the area to be developed.

9.0 References

California Department of Fish and Game. *Natural Diversity Database, Special Animals.* January 2001.

California Department of Fish and Game. *Natural Diversity Database, Special Vascular Plants and Bryophytes, and Lichens List.* January 2001.

California Department of Fish and Game. *California Endangered Species Act.* 1984.

California Department of Fish and Game. Jeff Cann, *Personal Communication.* 2002

The California Native Plant Society Inventory of Rare Vascular Plants of California. 2000.

Hickman, James C. ed. 1996. The Jepson Manual, Higher Plants of California. University of California Press, Berkeley.

U.S. Fish & Wildlife Service. *Federal Endangered Species Act.* 1973.

10.0 Vascular Plant List

The following vascular plants were observed 2002/2003:

Scientific Name	Common Name
Achillea millefolium	common yarrow
Adenostoma fasiculatum	chamise
Aesculus californica	California Buckeye
*Agave americana var. marginata**	variegated giant agave
*Agave americana**	giant agave
Amsinckia menziesii var. intermedia	common fiddleneck
*Anagallis arvensis**	scarlet pimpernel
Anaphalis margaritacea	pearly everlasting
Artemisia californica	California sagebrush
Artemisia douglasuana	mugwart
*Arundo donax**	giant reed
Baccharis piluaris	Coyote brush
Baccharis salicifolia	mule fat
*Brassica rapa**	Field mustard
Brickelia californica	California brickellbush
*Bromus diandrus**	ripgut brome
*Bromus hordeaceus**	Soft chess
*Bromus madritensis ssp. rubens**	foxtail chess
Callistemon sp.	bottlebrush
Carex obnupta	slough sedge
Castelleja exserta	pink owl's clover
*Chenopodium murale**	nettle-leaved goosefoot
Claytonia perfoliata	miner's lettuce
*Conyza bonariensis**	S. American conyza
*Conyza canadensis**	horseweed
*Cortaderia jubata**	Jubata grass (pampas grass)
*Cosmos binnatus**	pink cosmos
*Crassula argentea**	Jade plant
*Cupressus macrocarpa***	Monterey cypress
*Cynodon dactylon**	Bermuda grass
*Cynosurus echinatus**	dog-tail grass
Cyperus squarrosus	awned cyperus
*Daucus carota**	Queen Ann's lace
Dichelostemma capitatum	blue dicks
*Dimorphotheca aurantiaca**	African daisy

Elymus glaucus	blue wild rye
Epilobium ciliatum ssp. watsonii	willow-herb
Eremocarpus setigerus	turkey mullein
*Erodium botrys**	long-beaked filaree
*Erodium cicutarium**	red stemmed filaree
Eschscholzia californica	California poppy
*Eucalyptus camalsulensis**	red gum
*Eucalyptus globulous**	blue gum
*Euphorbia lathyris**	Gopher Plant
*Euryops pectinatus**	Euryops
Galium aparine	goose-grass
Galium porrigens	Climbing bedstraw
*Geranium molle**	dove's foot geranium
*Gnapthalium luteo-album**	weedy cudweed
*Hedera helix**	English ivy
Heteromeles arbutifolia	toyon
Heterotheca grandiflora	telegraph weed
*Hirschfeldia incana**	summer mustard
*Hordeum murinum ssp. leporinum**	barnyard foxtail
*Hypochaeris radicata**	hairy cat's ears
*Hypocharis glabra**	smooth cat's ear
*Iris germanica**	Bearded iris
Juncus effusus	Common Rush
Juncus patens	Spreading rush
*Juniperus sp.**	Juniper
*Lactuca serriola**	prickly lettuce
Lathyrus vestitus	Pacific pea
Lemna sp.	duckweed
Leymus triticoides	Creeping wild rye
*Limonium bonduellii**	statice
*Lolium perenne**	perennial ryegrass
Lonicera interupta	chaparral honeysuckle
*Lonicera japonica**	Japanese Honeysuckle
Lotus scoparius	deerweed
Lupinus hirsutissimus	stinging lupine
*Lycianthus ranronnei**	potato vine
*Malva parviflora**	common mallow
Marah fabaceus	man-root (wild cucumber)
*Marrubium vulgare**	horehound
*Medicago polymorpha**	bur clover

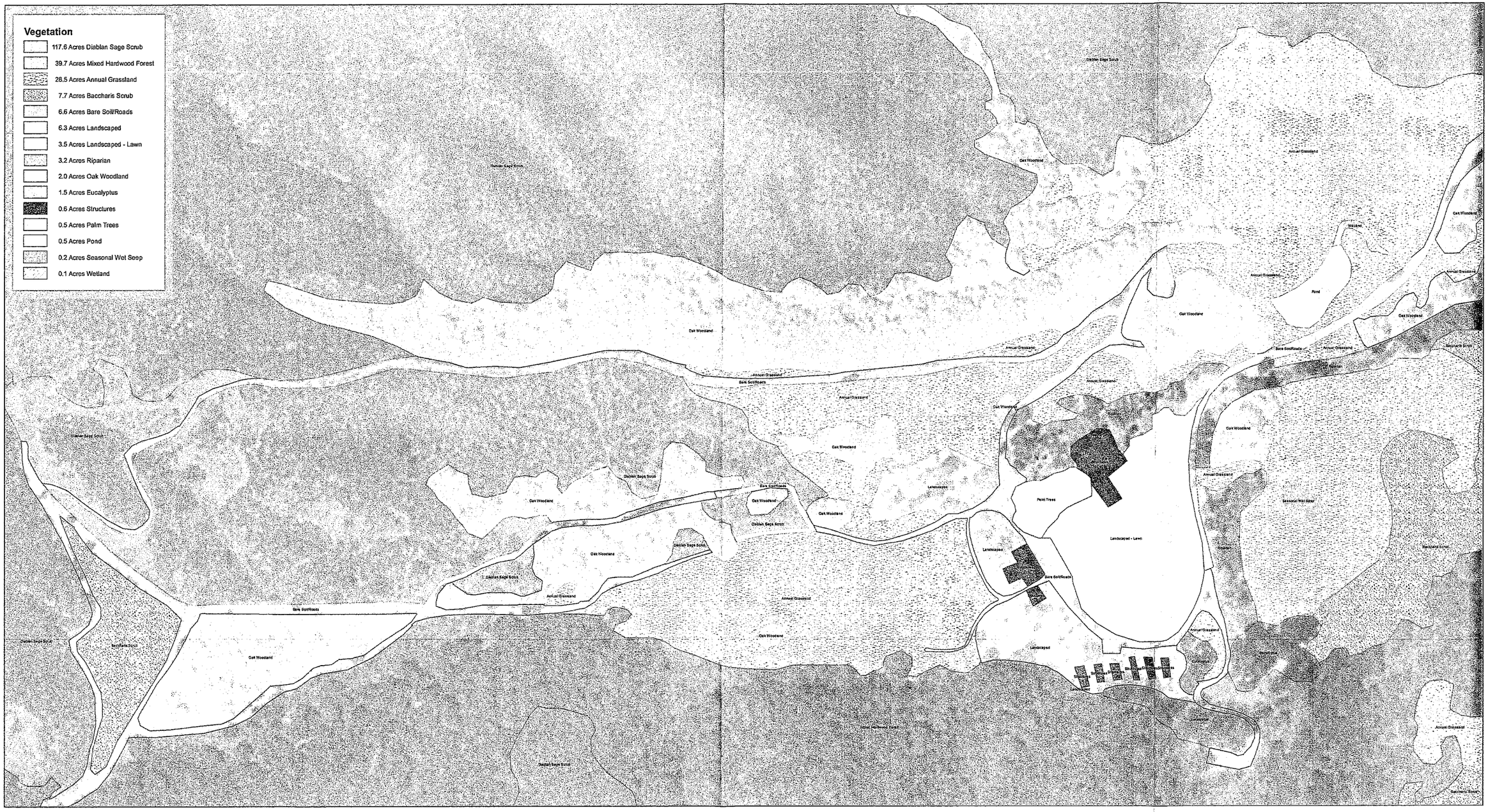
Melica imperfecta	Coast-Range melica
*Melilotus officinalis**	yellow sweet clover
Mimulus aurantiacus	Sticky monkey flower
Nassella pulchra	Purple needlegrass
*Nerium oleander**	oleander
*Nicotiana glauca**	tree tobacco
*Olea sp.**	olive tree
*Opuntia ficus-indica**	Missuion cactus
*Osteospermum fruticosum**	African daisy
*Oxalis pes-carpe**	Bermuda buttercup
*Pelargonium domesticum**	regal geranium
Pellaea andromedifolia	Coffee fern
Pellaea macromata	Birdsfoot Fern
*Pennisetum clandestinum**	Kikuyu grass
Pentagramma triangularis	California Goldback Fern
*Pinus radiata***	Monterey pine
Plagiobothrys nothofulvus	popcorn flower
*Plantago coronopus**	cut-leaved plantain
*Plantago lanceolata**	ribwort (English plantain)
*Polygonum arenastrum**	common knotweed
*Prunus cerasifera**	Purple Cherry Plum
Pteridium aquilinum	Western bracken fern
Quercus agrifolia	coast live oak
Quercus berberidifolia	California scrub oak
Quercus douglasii	blue oak
Rhamnus crocea	spiny redberry
Ribes californicum	hillside gooseberry
*Ricinus communis**	Castor Bean
Robinia pseudoacaci	Black locust tree
*Rumex acetosella**	sheep sorrel
*Rumex crispus**	curly dock
Salix lasiolepis	Arroyo willow
*Salvia leucantha**	Mexican bush sage
Salvia mellifera	black sage
Salvia spathacea	hummingbird sage
Sanicula crassicaulis	Pacific Sanicle
*Schinus molle**	Pepepr tree
*Sequoia sempervirens***	Coast redwood
*Sonchus asper**	prickly sow thistle
*Spergula arvensis**	spurry

Stachys bullata	Wood mint
Symphoricarpos mollis	creeping snowberry
*Torilis nodosa**	knotted hedge parsley
Toxicodendron diversilobum	Poison oak
Typhacea angustifolia	cat-tail
Umbellularia californica	California bay
Urtica dioica ssp. holosericea	Stinging nettle
*Vicia sativa**	spring vetch
*Vulpia bromoides**	sixweek fescue
*Vulpia myuros**	rattail fescue (*Festuca myuros*)
*Washingtonia robusta**	Mexican fan palm
*Zantedeschia aethiopica**	calla lily

* - Non-native species
** - California native, non native to the Paraiso Springs Area

Paraiso Hot Springs Resort

Vegetation Classification



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Map Created for the Paraiso Hot Springs Resort June 12, 2005

0 120 240 480 720 960 1,200 1,440 1,680 1,920 Feet

0 30 60 120 180 240 300 360 420 480 Meters

0 0.02 0.04 0.08 0.12 0.16 0.2 Miles

Scale 1 : 1,400 **NAD83 UTM Zone 10N Feet**

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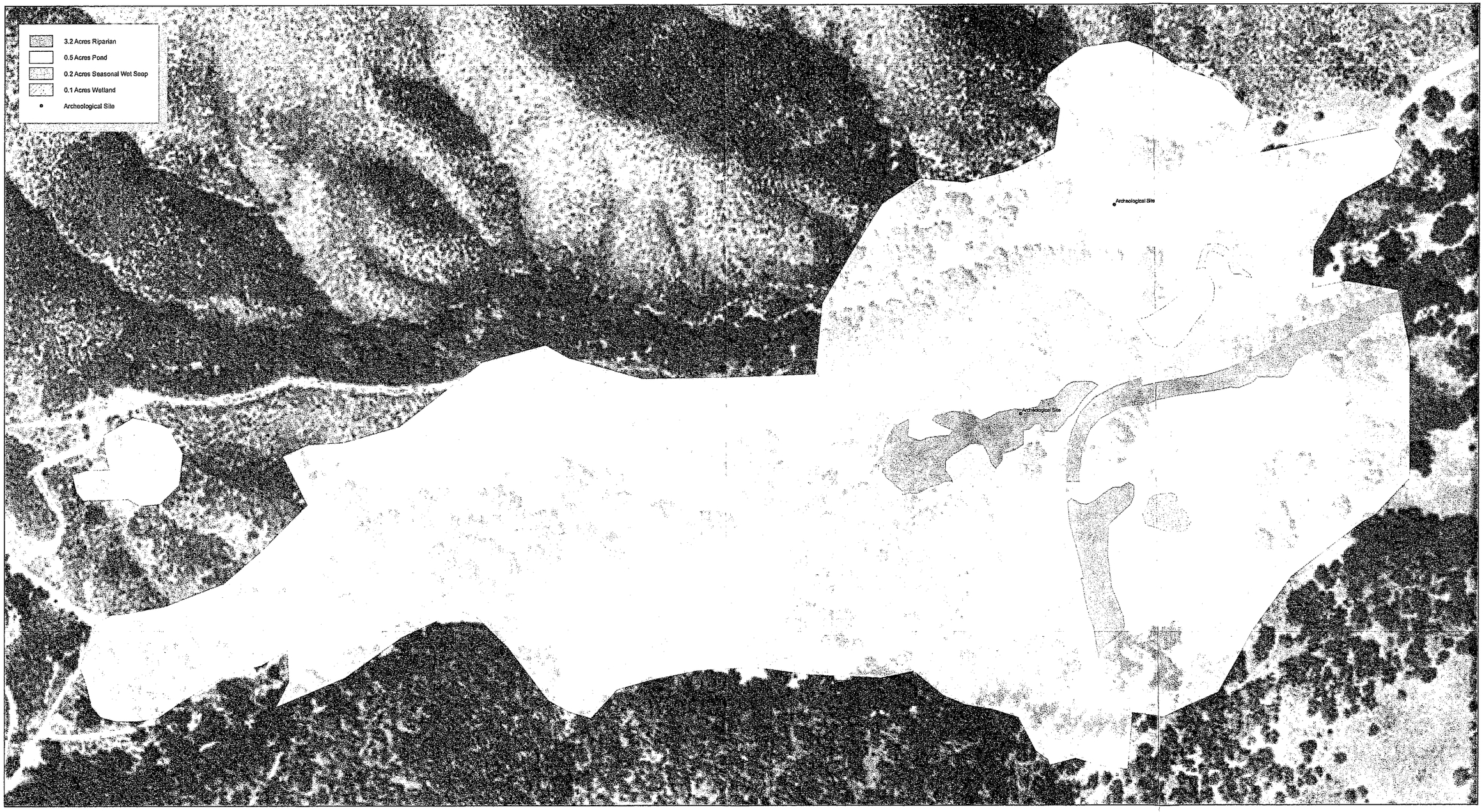
Paraiso Hot Springs Resort

Sensitive Habitat



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0 125 250 500 750 1,000 1,250 1,500 1,750 2,000 Feet

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0 0.02 0.04 0.08 0.12 0.16 0.2 Miles

Scale 1 : 1,400 **NAD83 UTM Zone 10N Feet**

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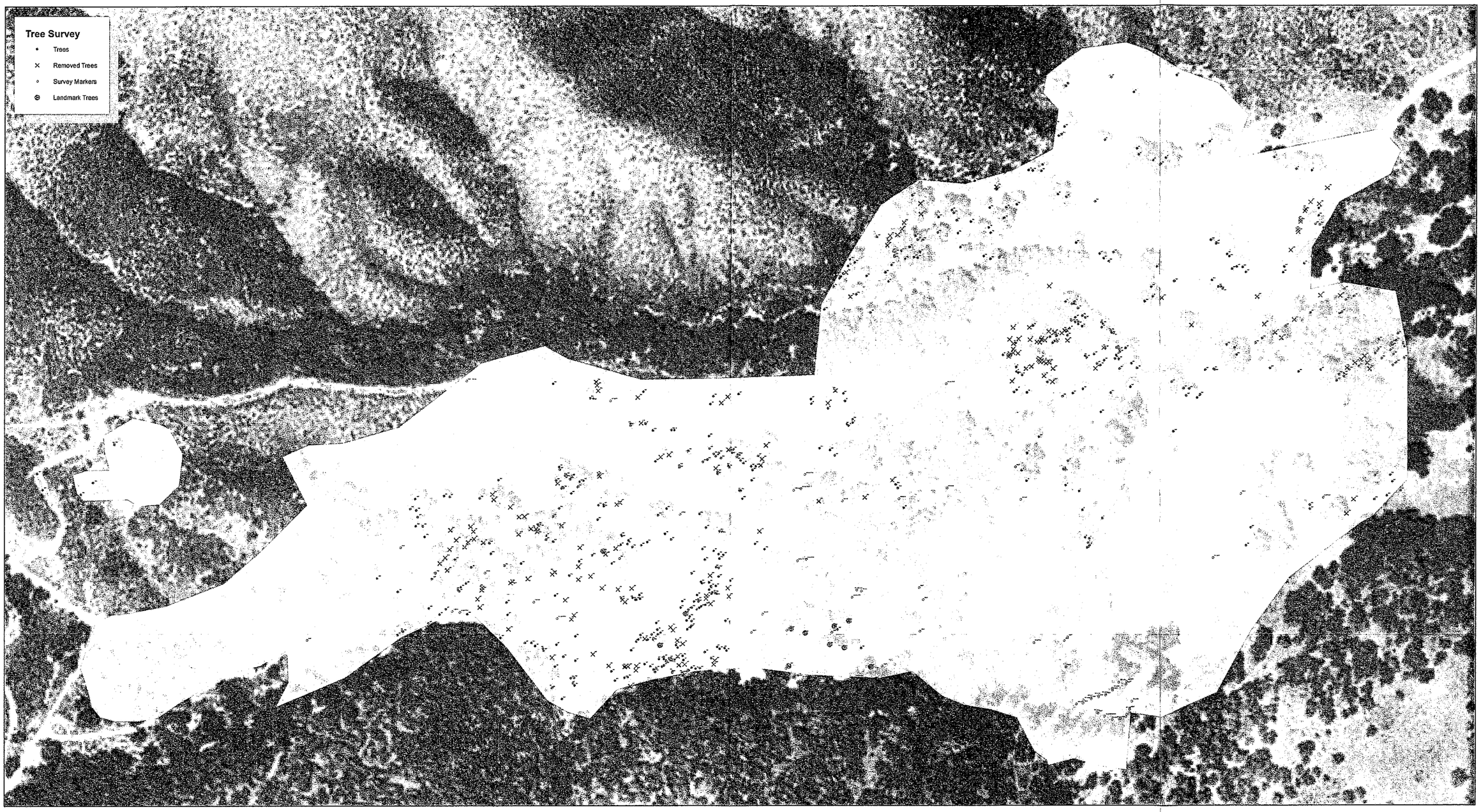
Paraiso Hot Springs Resort

Tree Survey



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