

Appendix A
Species and Natural Communities in the Plan Area

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Table A-1. Lake Casitas Resource Management Area List of Plant Species 2007

Scientific Name	Common Name	Family
<i>Acacia sp.*</i>	Acacia	Fabaceae
<i>Acourtia microcephala</i>	Sacapellote	Asteraceae
<i>Adenostoma fasciculatum</i>	Chamise	Rosaceae
<i>Adiantum jordanii</i>	California maidenhair fern	Pteridaceae
<i>Agrostis exarata</i>	Spike bentgrass	Poaceae
<i>Agrostis pallens</i>	Thin grass	Poaceae
<i>Agrostis viridis*</i>	Water bent	Poaceae
<i>Ailanthus altissima*</i>	Tree of Heaven	Simaroubaceae
<i>Alisma plantago-aquatica</i>	Water plantain	Alismaceae
<i>Alnus rhombifolia*</i>	White alder	Betulaceae
<i>Amaranthus sp.*</i>	Amaranth	Amaranthaceae
<i>Ambrosia psilostachya</i>	Western ragweed	Asteraceae
<i>Amsinckia menziesii</i>	Common fiddleneck	Boraginaceae
<i>Anagallis arvensis *</i>	Scarlet pimpernel	Primulaceae
<i>Antirrhinum kelloggii</i>	Climbing snapdragon	Scrophulariaceae
<i>Antirrhinum multiflorum</i>	Chaparral snapdragon	Scrophulariaceae
<i>Apiastrum angustifolium</i>	Wild celery	Apiaceae
<i>Arctostaphylos glandulosa ssp. mollis</i>	Eastwood's manzanita	Ericaceae
<i>Artemisia californica</i>	California sagebrush	Asteraceae
<i>Artemisia douglasiana</i>	Mugwort	Asteraceae
<i>Arundo donax*</i>	Giant reed	Poaceae
<i>Asclepias californica</i>	California milkweed	Ascepiadaceae
<i>Asclepias fascicularis</i>	Narrow-leaved milkweed	Ascepiadaceae
<i>Astragalus trichopodus var. phoxus</i>	Santa Barbara milk vetch	Fabaceae
<i>Avena barbata*</i>	Slender wild oat	Poaceae
<i>Avena fatua*</i>	Wild oat	Poaceae
<i>Baccharis pilularis ssp. consanguinea</i>	Coyote brush	Asteraceae
<i>Baccharis plummerae†</i>	Plummer's baccharis	Asteraceae
<i>Baccharis salicifolia</i>	Mule fat	Asteraceae
<i>Bassia hyssopifolia*</i>	Fivehook bassia	Chenopodiaceae
<i>Bloomeria crocea</i>	Common goldenstar	Liliaceae
<i>Brassica nigra*</i>	Black mustard	Brassicaceae
<i>Brickellia californica</i>	California brickellbush	Asteraceae
<i>Brodiaea jolonensis</i>	Dwarf brodiaea	Liliaceae
<i>Bromus carinatus</i>	California brome	Poaceae
<i>Bromus diandrus*</i>	Ripgut brome	Poaceae
<i>Bromus hordeaceus*</i>	Soft chess	Poaceae
<i>Bromus madritensis ssp. rubens*</i>	Red brome	Poaceae
<i>Bromus trinii*</i>	Chilean chess	Poaceae
<i>Calandrinia ciliata</i>	Red maids	Portulacaceae
<i>Calochortus albus</i>	White fairy lantern	Liliaceae
<i>Calochortus catalinae†</i>	Catalina mariposa lily	Liliaceae
<i>Calystegia macrostegia ssp. macrostegia</i>	Morning-glory	Convolvulaceae
<i>Camissonia bistorta</i>	Sun cup	Onagraceae
<i>Capsella bursa-patoris</i>	Shepherd's purse	Brassicaceae
<i>Cardamine californica</i>	Milkmaids	Brassicaceae
<i>Carduus pycnocephalus*</i>	Italian thistle	Asteraceae

Appendix A

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<i>Carex barbarae</i>		Cyperaceae
<i>Castilleja applegatei ssp. martinii</i>	Martin's paintbrush	Scrophulariaceae
<i>Castilleja exserta</i>	Purple owl's clover	Scrophulariaceae
<i>Castilleja foliolosa</i>	Woolly paintbrush	Scrophulariaceae
<i>Ceanothus cuneatus</i>	Buck brush	Rhamnaceae
<i>Ceanothus megacarpus</i>	Bigpod ceanothus	Rhamnaceae
<i>Ceanothus oliganthus</i>	Jim bush	Rhamnaceae
<i>Ceanothus spinosus</i>	Greenbark ceanothus	Rhamnaceae
<i>Cedrus deodara</i> *	Deodar cedar	Pinaceae
<i>Centaurea melitensis</i> *	Tocalote	Asteraceae
<i>Cerastium glomeratum</i>	Mouse-ear chickweed	Caryophyllaceae
<i>Cercocarpus betuloides</i>	Mountain mahogany	Rosaceae
<i>Chenopodium californicum</i>	Pigweed	Chenopodiaceae
<i>Chenopodium foliosum</i> *	Leafy goosefoot	Chenopodiaceae
<i>Chenopodium murale</i> *	Nettle-leaf goosefoot	Chenopodiaceae
<i>Chlorogalum pomeridianum</i>	Soap plant	Liliaceae
<i>Cirsium vulgare</i> *	Bull thistle	Asteraceae
<i>Cirsium occidentale</i>	Cobwebby thistle	Asteraceae
<i>Clarkia botata</i>	Punch-bowl godetia	Onagraceae
<i>Clarkia purpurea ssp. quadrivulnera</i>	Purple clarkia	Onagraceae
<i>Clarkia unguiculata</i>	Elegant clarkia	Onagraceae
<i>Claytonia perfoliata</i>	Green miner's lettuce	Portulacaceae
<i>Clematis lasiantha</i>	Chaparral clematis	Ranunculaceae
<i>Clematis ligusticifolia</i>	Virgin's bower	Ranunculaceae
<i>Collinsia heterophylla</i>	Chinese houses	Scrophulariaceae
<i>Conium maculatum</i> *	Poison hemlock	Apiaceae
<i>Convolvulus arvensis</i> *	Bindweed	Convolvulaceae
<i>Conyza canadensis</i>	Western horseweed	Asteraceae
<i>Conyza floribunda</i>	Asthmaweed	Asteraceae
<i>Cordylone australis</i> *	Cabbage tree	Liliaceae
<i>Cortaderia selloana</i> *	Pampas grass	Poaceae
<i>Crassula connata</i>	Pigmy-weed	Crassulaceae
<i>Crypsis schoenoides</i> *	Swamp grass	Poaceae
<i>Cryptantha micrantha</i>	Purple root cryptantha	Boraginaceae
<i>Cryptantha sp.</i>	Cryptantha	Boraginaceae
<i>Cupressus macrocarpa</i>	Monterey cypress	Cupressaceae
<i>Cuscuta sp.</i>	Dodder	Cuscutaceae
<i>Cynodon dactylon</i> *	Bermuda grass	Poaceae
<i>Cyperus eragrostis</i>	Tall cyperus	Cyperaceae
<i>Cyperus erythrorhizos</i>	Red-rooted cyperus	Cyperaceae
<i>Datisca glomerata</i>	Durango root	Datisceae
<i>Datura wrightii</i>	Jimson weed	Solanaceae
<i>Daucus pusillus</i>	Wild carrot	Apiaceae
<i>Delairea odorata</i> *	Cape ivy	Asteraceae
<i>Descurainia sp.</i>	Tansy mustard	Brassicaceae
<i>Dicentra chrysantha</i>	Golden ear-drops	Papaveraceae
<i>Dichelostemma capitatum</i>	Blue dicks	Liliaceae
<i>Distichlis spicata</i>	Salt grass	Poaceae
<i>Dryopteris arguta</i>	Coastal wood fern	Dryopteridaceae

Appendix A

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<i>Dudleya lanceolata</i>	Lanceleaf Live forever	Crassulaceae
<i>Echinochloa crus-gallii</i> *	Barnyard grass	Poaceae
<i>Echinodorus berteroi</i>	Bur head	Alismataceae
<i>Eleocharis macrostachya</i>	Spikerush	Cyperaceae
<i>Elymus glaucus</i>	Pacific blue rye-grass	Poaceae
<i>Emmenanthe penduliflora</i>	Whispering bells	Hydrophyllaceae
<i>Encelia californica</i>	Bush sunflower	Asteraceae
<i>Epilobium canum ssp. canum</i>	California fuchsia	Onagraceae
<i>Epilobium ciliatum</i>	Willow herb	Onagraceae
<i>Equisetum sp.</i>	Horsetail	Equisetaceae
<i>Eremocarpus setigerus</i>	Dove weed	Euphorbiaceae
<i>Eriodictyon erassifolium</i>	Yerba santa	Hydrophyllaceae
<i>Eriogonum cinereum</i>	Ashy-leaf buckwheat	Polygonaceae
<i>Eriogonum fasciculatum</i>	California buckwheat	Polygonaceae
<i>Eriophyllum confertiflorum</i>	Golden yarrow	Asteraceae
<i>Erodium botrys</i> *	Broad-leaf filaree	Geraniaceae
<i>Erodium cicutarium</i> *	Red-stemmed filaree	Geraniaceae
<i>Erodium moschatum</i> *	White-stemmed filaree	Geraniaceae
<i>Eschscholzia californica</i>	California poppy	Papaveraceae
<i>Eucalyptus sp.</i>	Eucalyptus	Myrtaceae
<i>Eucrypta chrysanthemifolia</i>	Common eucrypta	Hydrophyllaceae
<i>Euthamia occidentalis</i>	Western goldenrod	Asteraceae
<i>Festuca rubra</i>	Red fescue	Poaceae
<i>Filago californica</i>	California filago	Asteraceae
<i>Foeniculum vulgare</i> *	Sweet fennel	Apiaceae
<i>Fraxinus dipetela</i>	Foothill ash	Oleaceae
<i>Galium aparine</i>	Goose grass	Rubiaceae
<i>Galium nuttallii</i>	Climbing bedstraw	Rubiaceae
<i>Galium porrigens</i>	Climbing bedstraw	Rubiaceae
<i>Gaura coccinea</i>	Wild honeysuckle	Onagraceae
<i>Geranium carolinianum</i>	Carolina geranium	Geraniaceae
<i>Gilia capitata</i>	Blue field gilia	Polemoniaceae
<i>Gnaphalium californicum</i>	Green everlasting	Asteraceae
<i>Gnaphalium canescens ssp. beneolens</i>	Fragrant everlasting	Asteraceae
<i>Gnaphalium luteo-album</i> *	Cudweed everlasting	Asteraceae
<i>Hazardia squarrosa</i>	Saw-toothed goldenbush	Asteraceae
<i>Helianthemum scoparium</i>	Peak rush-rose	Cistaceae
<i>Heliotropium curassavicum</i>	Heliotrope	Boraginaceae
<i>Hemizonia fasciculata</i>	Slender tarweed	Asteraceae
<i>Hemizonia increscens ssp. increscens</i>	Coast tarplant	Asteraceae
<i>Heteromeles arbutifolia</i>	Toyon	Rosaceae
<i>Heterotheca grandiflora</i>	Telegraph weed	Asteraceae
<i>Hirschfeldia incana</i> *	Summer mustard	Brassicaceae
<i>Hordeum murinum ssp. gussoneanum</i> *	Mediterranean barley	Poaceae
<i>Hypochaeris glabra</i> *	Smooth cat's ear	Asteraceae
<i>Isocoma menziesii</i>	Coast goldenbush	Asteraceae

Appendix A

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<i>Juglans californica</i> ssp. <i>californica</i>	Southern California black walnut	Juglandaceae
<i>Juncus acutus</i> ssp. <i>leopoldii</i>	Leopold's rush	Juncaceae
<i>Juncus balticus</i>	Baltic rush	Juncaceae
<i>Juncus bufonius</i> var. <i>bufonius</i>	Toad rush	Juncaceae
<i>Juncus effuses</i>	Bog rush	Juncaceae
<i>Juncus mexicanus</i>		Juncaceae
<i>Juncus patens</i>	Common rush	Juncaceae
<i>Juncus phaeocephalis</i>	Brownhead rush	Juncaceae
<i>Juncus xiphioides</i>	Iris-leaved rush	Juncaceae
<i>Keckiella cordifolia</i>	Honeysuckle penstemon	Scrophulariaceae
<i>Lactuca serriola</i> *	Prickly lettuce	Asteraceae
<i>Lamarckia aurea</i> *	Goldentop grass	Poaceae
<i>Lamium amplexicaule</i> *	Henbit	Lamiaceae
<i>Lathyrus vestitus</i>	Pacific pea	Fabaceae
<i>Lavatera arborea</i> *	Tree mallow	Malvaceae
<i>Layia platyglossa</i>	Tidy Tips	Asteraceae
<i>Lepidium nitidum</i>	Peppergrass	Brassicaceae
<i>Leptodactylon californicum</i>	Prickly phlox	Polemoniaceae
<i>Leptosiphon liniflorus</i>	Flax-flowered linanthus	Polemoniaceae
<i>Lessingia filaginifolia</i>	Common California-aster	Asteraceae
<i>Leymus condensatus</i>	Giant wild rye	Poaceae
<i>Leymus triticoides</i>	Alkali rye	Poaceae
<i>Linaria canadensis</i> var. <i>texana</i>	Toadflax	Scrophulariaceae
<i>Lithophragma affine</i>	Common woodland star	Saxifragaceae
<i>Lobularia maritime</i> *	Sweet alyssum	Brassicaceae
<i>Lolium multiflorum</i> *	Italian ryegrass	Poaceae
<i>Lolium perenne</i> *	Perennial ryegrass	Poaceae
<i>Lonicera subspicata</i> ssp. <i>denudata</i>	Chaparral honeysuckle	Caprifoliaceae
<i>Lotus corniculatus</i> *	Birdfoot trefoil	Fabaceae
<i>Lotus grandiflorus</i>	Chaparral lotus	Fabaceae
<i>Lotus purshianus</i>	Spanish clover	Fabaceae
<i>Lotus salsuginosus</i> var. <i>salsuginosus</i>	Coastal lotus	Fabaceae
<i>Lotus scoparius</i>	Deer weed	Fabaceae
<i>Lotus strigosus</i>	Hairy lotus	Fabaceae
<i>Ludwigia peploides</i>	Yellow water-weed	Onagraceae
<i>Lupinus bicolor</i>	Miniature lupine	Fabaceae
<i>Lupinus hirsutissimus</i>	Stinging lupine	Fabaceae
<i>Lupinus longifolius</i>	Long leaf bush lupine	Fabaceae
<i>Lupinus nanus</i>	Sky lupine	Fabaceae
<i>Lupinus succulentus</i> .	Succulent lupine	Fabaceae
<i>Lupinus truncatus</i>	Blunt-leaved lupine	Fabaceae
<i>Lythrum hyssopifolium</i> *	Hyssop loosestrife	Lythraceae
<i>Madia exigua</i>	Threadstem madia	Asteraceae
<i>Malacothamnus fasciculatus</i>	Chaparral mallow	Malvaceae
<i>Malacothrix saxatilis</i> var. <i>tenuiflora</i>	Cliff-aster	Asteraceae
<i>Malosma laurina</i>	Laurel sumac	Anacardiaceae
<i>Malva parviflora</i> *	Cheeseweed	Malvaceae
<i>Marah fabaceus</i>	Man root	Cucurbitaceae
<i>Marah macrocarpus</i>	Wild cucumber	Cucurbitaceae

Appendix A

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Scientific Name	Common Name	Family
<i>Marrubium vulgare</i> *	Horehound	Laminaceae
<i>Matricaria matricioides</i> *	Pineapple weed	Asteraceae
<i>Medicago polymorpha</i> *	Bur-clover	Fabaceae
<i>Melica imperfecta</i>	Coast range melic	Poaceae
<i>Melilotus alba</i> *	White sweetclover	Fabaceae
<i>Melilotus indicus</i> *	Yellow sweetclover	Fabaceae
<i>Mentha arvensis</i>	Wild mint	Lamiaceae
<i>Mentzelia sp.</i>	Blazingstar	Loasaceae
<i>Mimulus aurantiacus</i>	Bush monkey flower	Scrophulariaceae
<i>Mimulus cardinalis</i>	Scarlet monkey flower	Scrophulariaceae
<i>Mimulus guttatus</i>	Common monkeyflower	Scrophulariaceae
<i>Mirabilis californica</i>	California four-o'clock	Nyctaginaceae
<i>Muhlenbergia rigens</i>	Deergrass	Poaceae
<i>Myriophyllum sp.</i> *	Milfoil	Haloragaceae
<i>Nassella cernua</i>	Nodding needlegrass	Poaceae
<i>Nassella lepida</i>	Foothill needlegrass	Poaceae
<i>Nassella pulchra</i>	Purple needlegrass	Poaceae
<i>Navarretia ojaiensis</i> †**	Ojai navarretia	Polemoniaceae
<i>Nemophila menziesii</i>	Baby-blue-eyes	Hydrophyllaceae
<i>Nicotiana glauca</i> *	Tree tobacco	Solanaceae
<i>Oenothera elata ssp. hirsutissima</i>	Hooker's evening primrose	Onagraceae
<i>Olea europea</i>	Olive	Oleaceae
<i>Opuntia sp.</i>	Prickly-pear cactus	Cactaceae
<i>Oxalis pes-caprae</i> *	Sour-grass	Oxalidaceae
<i>Paeonia californica</i>	California peony	Paeoniaceae
<i>Pellaea andromedifolia</i>	Coffee fern	Pteridaceae
<i>Pellaea mucronata</i>	Birdfoot fern	Pteridaceae
<i>Pennisetum clandestinum</i> *	Kikuyu grass	Poaceae
<i>Pennisetum setaceum</i> *	Fountain grass	Poaceae
<i>Penstemon centranthifolius</i>	Scarlet bugler	Scrophulariaceae
<i>Penstemon heterophyllus</i>	Foothill penstemon	Scrophulariaceae
<i>Pentagramma triangularis</i>	Goldenback fern	Pteridaceae
<i>Phacelia cicutaria</i>	Caterpillar phacelia	Hydrophyllaceae
<i>Phacelia viscida</i>	Sticky phacelia	Hydrophyllaceae
<i>Phalaris aquatica</i> *	Harding grass	Poaceae
<i>Phalaris canariensis</i> *	Canary grass	Poaceae
<i>Phoenix sp.</i>	Date palm	Arecaceae
<i>Pholistoma auritum</i>	Fiesta flower	Hydrophyllaceae
<i>Phoradendron sp.</i>	Mistletoe	Viscaceae
<i>Phyla nodiflora</i>	Common lippia	Verbenaceae
<i>Picris echioides</i> *	Bristly ox-tongue	Asteraceae
<i>Pinus radiata</i> *	Monterey pine	Pinaceae
<i>Pinus sp.</i> *	Variety of pines in campground	Pinaceae
<i>Piptatherum miliaceum</i> *	Rice-grass	Poaceae
<i>Plagiobotrys nothofulvus</i>	Rusty popcorn flower	Boraginaceae
<i>Plantago erecta spp. erecta</i>	California plantain	Plantaginaceae
<i>Plantago lanceolata</i> *	English plantain	Plantaginaceae
<i>Plantago major</i> *	Common plantain	Plantaginaceae
<i>Plantanus racemosa</i>	California sycamore	Plantaceae

Appendix A

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<i>Poa annua</i> *	Annual bluegrass	Poaceae
<i>Poa bulbosa</i> *	Bulbous bluegrass	Poaceae
<i>Poa secunda</i>	One-sided bluegrass	Poaceae
<i>Polygala cornuta</i> var. <i>fishiae</i>	Fish's milkwort	Polygalaceae
<i>Polygonum arenastrum</i> *	Dooryard knotweed	Polygonaceae
<i>Polygonum lapathifolium</i>	Willow weed	Polygonaceae
<i>Polypodium californicum</i>	California polypody	Polypodiaceae
<i>Polypogon interruptus</i> *	Ditch beard grass	Poaceae
<i>Polypogon monspeliensis</i> *	Rabbitsfoot grass	Poaceae
<i>Populus balsamifera</i> ssp. <i>trichocarpa</i>	Black Cottonwood	Salicaceae
<i>Populus fremontii</i>	Fremont Cottonwood	Salicaceae
<i>Potamogeton pusillus</i>	Small pondweed	Potamogetonaceae
<i>Prunus ilicifolia</i>	Hollyleaf cherry	Rosaceae
<i>Psilocarphus</i> sp.	Wooly heads	Asteraceae
<i>Pteridium aquilinum</i>	Bracken fern	Dennstaedtiaceae
<i>Pterostegia drymarioides</i>	Fairy mist	Polygonaceae
<i>Pyracantha</i> sp.*	Firethorn	Rosaceae
<i>Quercus agrifolia</i>	Coast live oak	Fagaceae
<i>Quercus berberidifolia</i>	Scrub oak	Fagaceae
<i>Quercus chrysolepis</i>	Canyon oak	Fagaceae
<i>Quercus douglassii</i>	Blue oak	Fagaceae
<i>Quercus dumosa</i> †	Coastal scrub oak	Fagaceae
<i>Quercus lobata</i>	Valley oak	Fagaceae
<i>Ramalina reticulata</i>	Lace lichen	--
<i>Ranunculus californicus</i>	California buttercup	Ranunculaceae
<i>Raphanus raphanistrum</i> *	Jointed charlock	Brassicaceae
<i>Raphanus sativa</i> *	Wild Radish	Brassicaceae
<i>Rhamnus californica</i>	Coffeeberry	Rhamnaceae
<i>Rhamnus crocea</i>	Redberry	Rhamnaceae
<i>Rhamnus ilicifolia</i>	Hollyleaf redberry	Rhamnaceae
<i>Rhus integrifolia</i>	Lemonade berry	Anacardiaceae
<i>Rhus trilobata</i>	Skunkbrush	Anacardiaceae
<i>Ribes aureum</i>	Golden current	Grossulariaceae
<i>Ribes californicum</i>	Canyon gooseberry	Grossulariaceae
<i>Ribes malvaceum</i>	Chaparral currant	Grossulariaceae
<i>Ribes sanguineum</i>	Redflower currant	Grossulariaceae
<i>Ribes speciosum</i>	Fuchsia-flowered gooseberry	Grossulariaceae
<i>Ricinus communis</i> *	Castor bean	Euphorbiaceae
<i>Romneya coulteri</i> †	Matilija poppy	Papaveraceae
<i>Rorippa nasturtium-aquaticum</i>	Water cress	Brassicaceae
<i>Rosa californica</i>	California rose	Rosaceae
<i>Rubus ursinus</i>	Pacific blackberry	Rosaceae
<i>Rumex crispus</i> *	Curly dock	Polygonaceae
<i>Rumex pulcher</i> *	Fiddle dock	Polygonaceae
<i>Rumex salicifolius</i>	Willow dock	Polygonaceae
<i>Salix exigua</i>	Narrow-leaved willow	Salicaceae
<i>Salix gooddingii</i>	Black willow	Salicaceae
<i>Salix laevigata</i>	Red willow	Salicaceae
<i>Salix lasiolepis</i>	Arroyo willow	Salicaceae

Appendix A

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<i>Salix lucida ssp. lasiandra</i>	Shining willow	Salicaceae
<i>Salsola tragus*</i>	Russian thistle	Chenopodiaceae
<i>Salvia apiana</i>	White sage	Lamiaceae
<i>Salvia columbariae</i>	Chia sage	Laminaceae
<i>Salvia leucophylla</i>	Purple sage	Laminaceae
<i>Salvia mellifera</i>	Black sage	Laminaceae
<i>Salvia spathacea</i>	Hummingbird sage	Laminaceae
<i>Sambucus mexicana</i>	Blue elderberry	Caprifoliaceae
<i>Sanicula crassicaulis</i>	Pacific sanicle	Apiaceae
<i>Satureja douglasii</i>	Yerba buena	Lamiaceae
<i>Saxifraga californica</i>	California saxifrage	Saxifragaceae
<i>Schinus molle*</i>	Peruvian pepper tree	Anacardiaceae
<i>Schinus terebinthifolius*</i>	Brazilian pepper tree	Anacardiaceae
<i>Schismus arabicus</i>	Arabian schismus	Poaceae
<i>Scirpus californicus</i>	California bulrush	Cyperaceae
<i>Scirpus maritimus</i>	Prairie bulrush	Cyperaceae
<i>Scirpus microcarpus</i>		Cyperaceae
<i>Scrophularia californica</i>	California figwort	Scrophulariaceae
<i>Scutellaria tuberosa</i>	Skullcap	Lamiaceae
<i>Selaginella sp.</i>	Spikemoss	Selaginellaceae
<i>Senecio vulgaris*</i>	Common groundsel	Asteraceae
<i>Sidalcea malviflora</i>	Common checker bloom	Malvaceae
<i>Silene gallica*</i>	Windmill pink	Caryophyllaceae
<i>Silene laciniata ssp. major</i>	Indian pink	Caryophyllaceae
<i>Silybum marianum*</i>	Milk thistle	Asteraceae
<i>Sisyrinchium bellum</i>	Blue-eyed grass	Iridaceae
<i>Solanum americanum</i>	Common nightshade	Solanaceae
<i>Solanum douglasii</i>	Douglas nightshade	Solanaceae
<i>Solanum xanti</i>	Chaparral nightshade	Solanaceae
<i>Solidago californica</i>	California goldenrod	Asteraceae
<i>Sonchus asper*</i>	Prickly sow-thistle	Asteraceae
<i>Sonchus oleraceus*</i>	Common sow-thistle	Asteraceae
<i>Spergula arvensis*</i>	Corn spurrey	Caryophyllaceae
<i>Spergularia rubra*</i>	Sand spurry	Caryophyllaceae
<i>Stachys bullata</i>	California hedge nettle	Lamiaceae
<i>Stellaria media</i>	Chickweed	Caryophyllaceae
<i>Stephanomeria sp.</i>	Stephanomeria	Asteraceae
<i>Stylomecon heterophylla</i>	Wind poppy	Papaveraceae
<i>Symphoricarpos albus var. laevigatus</i>	Common snowberry	Caprifoliaceae
<i>Symphoricarpos mollis</i>	Trailing snowberry	Caprifoliaceae
<i>Tamarix aphylla*</i>	Tamarisk	Tamaricaceae
<i>Taraxacum officinale*</i>	Common dandelion	Asteraceae
<i>Tauschia arguta</i>	Southern umbrellawort	Apiaceae
<i>Thalictrum fendleri</i>	Meadow rue	Ranunculaceae
<i>Toxicodendron diversilobum</i>	Poison oak	Anacardiaceae
<i>Trichostema lanatum</i>	Wooly bluecurls	Laminaceae
<i>Trichostema lanceolatum</i>	Vinegar weed	Laminaceae
<i>Trifolium hirtum*</i>	Rose clover	Fabaceae

Appendix A

Species and Natural Communities in the Plan Area

Table A-1. Lake Casitas Resource Management Area List of Plant Species 2007

Scientific Name	Common Name	Family
<i>Typha angustifolia</i>	Slender cattail	Typhaceae
<i>Typha domingensis</i>	Southern Cattail	Typhaceae
<i>Typha latifolia</i>	Common cattail	Typhaceae
<i>Umbellularia californica</i>	California bay	Lauraceae
<i>Uropappus lindleyi</i>	Silver puffs	Asteraceae
<i>Urtica dioica ssp. holosericea</i>	Hoary nettle	Urticaceae
<i>Venegasia carpesioides</i>	Canyon sunflower	Asteraceae
<i>Verbena lasiostachys</i>	Vervain	Verbenaceae
<i>Veronica anagallis-aquatica</i> *	Water speedwell	Scrophulariaceae
<i>Veronica catenata</i> *	Chain speedwell	Scrophulariaceae
<i>Vicia sativa</i> *	Spring vetch	Fabaceae
<i>Vinca major</i> *	Periwinkle	Apocynaceae
<i>Vitis californica</i>	California wild grape	Vitaceae
<i>Vulpia megalura</i> *	Rattail fescue	Poaceae
<i>Vulpia myuros</i>		Poaceae
<i>Vulpia octoflora</i> *	Six-weeks fescue	Poaceae
<i>Xanthium strumarium</i>	Cocklebur	Asteraceae
<i>Yucca whipplei</i>	Our Lord's candle	Liliaceae
<i>Zigadenus sp.</i>	Death Camas	Liliaceae

* nonnative, †sensitive/rare

Source: Anne Wells, Kathy Rindlaub, and Johanna Kisner

** Identified in the plan area during subsequent, unaffiliated surveys

Source: David Magney

Appendix A

Species and Natural Communities in the Plan Area

Table A-2. Lake Casitas Plan Area Bird List

Species	Wi	Sp	Su	Fa	Notes
<i>Geese and Ducks</i>					
Greater White-fronted Goose	U				
Snow Goose	R			R	
Ross's Goose	R				
Canada Goose	C	U		U	
Domestic Goose			R		
Wood Duck	U				
Gadwall	C	U		U	
American Wigeon	C	U		U	
Mallard	C	C	C	C	
Domestic Duck	C	C	C	C	
Blue-winged Teal	R	R		R	
Cinnamon Teal	U				
Northern Shoveler	C	U		U	
Northern Pintail	U				
Green-winged Teal	C	U		U	
Canvasback	U				
Redhead	R				
Ring-necked Duck	U				
Greater Scaup	U				
Lesser Scaup	C	U		U	
Surf Scoter				R	
Bufflehead	C	U		U	
Common Goldeneye	R				
Hooded Merganser	U				
Common Merganser	U				
Red-breasted Merganser	U				
Ruddy Duck	C	C	C	C	
<i>New World Quail</i>					
California Quail	C	C	C	C	
<i>Loons and Grebes</i>					
Common Loon	U				CSC (nesting); not known to nest in Plan Area
Pied-billed Grebe	C	U	U	U	
Horned Grebe	U				
Eared Grebe	U				Rare breeding species in region; not known to breed in Plan Area
Western Grebe	C	C	C	C	Rare breeding species in region; breeds in Plan Area
Clark's Grebe	C	C	C	C	Rare breeding species in region; breeds in Plan Area
<i>Pelicans and Cormorants</i>					
American White Pelican	R				CSC (nesting colony); no nesting in Plan Area
Double-crested Cormorant	C	C	U	C	CSC (rookery); rookery not known in Plan Area
<i>Bitterns and Herons</i>					
American Bittern	R				
Least Bittern	R	R		R	CSC (nesting); potentially nesting in Plan Area
Great Blue Heron	C	C	C	C	Rare breeding species in region; Breeds in Plan Area

Appendix A

Species and Natural Communities in the Plan Area

Table A-2. Lake Casitas Plan Area Bird List

Species	Wi	Sp	Su	Fa	Notes
Great Egret	C	U		U	
Snowy Egret	C	C	C	C	
Cattle Egret	U				
Green Heron	U	U	U	U	
Black-crowned Night-Heron	C	C	C	C	
White-faced Ibis	R				
<i>Vultures, Hawks and Eagles</i>					
Turkey Vulture	C	C	C	C	
Osprey	C	U		U	CSC (nesting); not known to nest in Plan Area
White-tailed Kite	U				FP (nesting)
Bald Eagle	R				SE/Federally delisted
Northern Harrier	C	U		U	CSC (nesting)
Sharp-shinned Hawk	C	U		U	CSC (nesting)
Cooper's Hawk	C	U	U	U	CSC (nesting)
Red-shouldered Hawk	C	C	C	C	
Zone-tailed Hawk	R				Accidental
Swainson's Hawk				R	ST; not known to nest in Plan Area
Red-tailed Hawk	C	C	C	C	
Ferruginous Hawk	U	R			CSC
Rough-legged Hawk	R				
Golden Eagle	U				CSC, FP
<i>Falcons</i>					
American Kestrel	C	C	C	C	
Merlin	U				CSC (wintering)
Peregrine Falcon	R	R	R	R	SE / FP; not known to nest in Plan Area
Prairie Falcon	U				CSC; not known to nest in Plan Area
<i>Rails and Coots</i>					
Virginia Rail	U				
Sora	U				
Common Moorhen	R				
American Coot	C	C	C	C	
<i>Plovers and Avocets</i>					
Semipalmated Plover				R	
Killdeer	C	C	C	C	
Black-necked Stilt					
American Avocet	U				
<i>Sandpipers</i>					
Greater Yellowlegs	C	U		U	
Spotted Sandpiper	C	U		U	
Marbled Godwit					
Western Sandpiper	R				
Least Sandpiper	C	U		U	
Dunlin	R				
Long-billed Dowitcher	C	U		U	
Wilson's Snipe/Common Snipe	U	U	U	U	

Appendix A

Species and Natural Communities in the Plan Area

Table A-2. Lake Casitas Plan Area Bird List

Species	Wi	Sp	Su	Fa	Notes
Wilson's Phalarope		R		R	
Red-necked Phalarope		R		R	
<i>Gulls and Terns</i>					
Pomarine Jaeger				R	
Bonaparte's Gull	U				
Mew Gull	C	U		U	
Ring-billed Gull	C	C	C	C	
California Gull	U				CSC (nesting colony); not known to nest in Plan Area
Herring Gull	U				
Western Gull	R			R	
Caspian Tern	U				
Common Tern				R	
Forster's Tern	U	U		U	
<i>Pigeons and Doves</i>					
Rock Pigeon	C	C	C	C	
Band-tailed Pigeon	U	U	U	U	
Eurasian Collared-Dove	R	R	R	R	
Mourning Dove	C	C	C	C	
<i>Cuckoos</i>					
Greater Roadrunner	R	R	R	R	
<i>Barn Owls and Typical Owls</i>					
Barn Owl	C	C	C	C	
Great Horned Owl	C	C	C	C	
Northern Pygmy Owl	R				observed in 2002
Burrowing Owl	R				CSC; last observed in 1988
Short-eared Owl	R				CSC (nesting); not known to nest in Plan Area
<i>Swifts</i>					
Vaux's Swift		U		U	CSC (nesting); not known to nest in Plan Area
White-throated Swift	U	U	U	U	
<i>Hummingbirds</i>					
Black-chinned Hummingbird		U	U	U	
Anna's Hummingbird	C	C	C	C	
Costa's Hummingbird		U			
Rufous Hummingbird	R	U		U	
Allen's Hummingbird		U	U	U	
<i>Kingfishers</i>					
Belted Kingfisher	C	U		U	
<i>Woodpeckers</i>					
Lewis's Woodpecker	U				
Acorn Woodpecker	C	C	C	C	
Red-naped Sapsucker	U				
Red-breasted Sapsucker	U				
Nuttall's Woodpecker	C	C	C	C	
Downy Woodpecker	C	C	C	C	
Hairy Woodpecker	U	U	U	U	

Appendix A

Species and Natural Communities in the Plan Area

Table A-2. Lake Casitas Plan Area Bird List

Species	Wi	Sp	Su	Fa	Notes
Northern Flicker/Red-shafted Flicker	C	C	C	C	
<i>Tyrant-Flycatchers</i>					
Western Wood-Pewee		U	U	R	
Hammond's Flycatcher		R			
Pacific-slope Flycatcher		U	U		
Black Phoebe	C	C	C	C	
Say's Phoebe	C	U		U	
Ash-throated Flycatcher		U	C	U	
Cassin's Kingbird	U	U	U	U	
Western Kingbird		U	C	U	
<i>Shrikes</i>					
Loggerhead Shrike	C	U		U	CSC (nesting)
<i>Vireos</i>					
Cassin's Vireo		U	R	R	
Solitary Vireo		U	U	U	
Hutton's Vireo	R	U	U	U	
<i>Jays and Crows</i>					
Western Scrub Jay	C	C	C	C	
American Crow	C	C	C	C	
Common Raven	C	C	C	C	
<i>Swallows</i>					
Tree Swallow	U	C	C	C	
Violet-green Swallow	U	C	C	C	
Northern Rough-winged Swallow		C	C	C	
Cliff Swallow		C	C	C	
Barn Swallow		C	C	C	
<i>Titmice and Bushtits</i>					
Oak Titmouse	C	C	C	C	
Bushtit	C	C	C	C	
<i>Nuthatches and Creepers</i>					
Red-breasted Nuthatch	R			R	
White-breasted Nuthatch	C	C	C	C	
Brown Creeper	U				
<i>Wrens</i>					
Rock Wren	U	U	U	U	
Canyon Wren	U	U	U	U	
Bewick's Wren	C	C	C	C	
House Wren	C	C	C	C	
Marsh Wren	C	U		U	
<i>Kinglets</i>					
Ruby-crowned Kinglet	C	U		U	
<i>Old World Warblers and Thrushes</i>					
Blue-gray Gnatcatcher	C	U		U	
Western Bluebird	C	C	C	C	
Mountain Bluebird	R			R	

Appendix A

Species and Natural Communities in the Plan Area

Table A-2. Lake Casitas Plan Area Bird List

Species	Wi	Sp	Su	Fa	Notes
Hermit Thrush	U				
American Robin	C	C	U	C	
Varied Thrush	R				
Wrentit	C	C	C	C	
<i>Mockingbirds and Thrashers</i>					
Northern Mockingbird	C	C	C	C	
California Thrasher	C	C	C	C	
<i>Starlings</i>					
European Starling	C	C	C	C	
<i>Pipits, Waxwings and Silky-Flycatchers</i>					
American Pipit	U				
Cedar Waxwing	C	U		U	
Phainopepla	C	C	C	C	
<i>Wood Warblers</i>					
Orange-crowned Warbler	C	C	C	C	
Yellow Warbler		C	C	C	CSC (nesting)
Yellow-rumped Warbler/Myrtle Warbler	U				
Yellow-rumped Warbler/Audubon's Warbler	C	U		C	
Townsend's Warbler	C	U		C	
Common Yellowthroat	C	C	C	C	
Wilson's Warbler		C		C	
<i>Tanagers</i>					
Western Tanager	R	U		U	
<i>New World Sparrows</i>					
Spotted Towhee	C	C	C	C	
California Towhee	C	C	C	C	
Rufous-crowned Sparrow	U	U	U	U	CSC
Chipping Sparrow	U				
Vesper Sparrow	R			R	
Lark Sparrow	C	C	C	C	
Savannah Sparrow	C	U		U	
Grasshopper Sparrow	U	R	R	R	Species of local concern; rare breeder in region
Fox Sparrow	U				
Song Sparrow	C	C	C	C	
Lincoln's Sparrow	C	U		U	
Swamp Sparrow	U				
White-crowned Sparrow	C	U		U	
Golden-crowned Sparrow	C	U		U	
Dark-eyed Junco/Slate-colored Junco	U				
Dark-eyed Junco/Oregon Junco	C	C	C	C	
Dark-eyed Junco/Gray-headed Junco	R				
<i>Grosbeaks and Buntings</i>					
Black-headed Grosbeak		U	C	U	

Appendix A

Species and Natural Communities in the Plan Area

Table A-2. Lake Casitas Plan Area Bird List

Species	Wi	Sp	Su	Fa	Notes
Lazuli Bunting			R		
Blackbirds and Orioles					
Red-winged Blackbird	C	C	C	C	
Tricolored Blackbird	U				CSC (nesting colony)
Western Meadowlark	C	C	C	C	
Yellow-headed Blackbird	R	U			
Brewer's Blackbird	C	C	C	C	
Great-tailed Grackle	C	C	C	C	
Brown-headed Cowbird	C	C	C	C	
Hooded Oriole		U	C	U	
Bullock's Oriole	R	U	C	U	
Finches					
Purple Finch	U	U	U	U	
House Finch	C	C	C	C	
Pine Siskin	C	U		U	
Lesser Goldfinch	C	C	C	C	
Lawrence's Goldfinch	R	U	U	U	
American Goldfinch	C	C	C	C	
Old World Sparrows					
House Sparrow	C	C	C	C	

Total Number of Species	146	124	91	127
Total Species and Races	149	124	91	127
Yellow-rumped Warbler	1	0	0	0
Dark-eyed Junco	2	0	0	0
Total Extra Races	3	0	0	0

Bird Data Sources: Christmas Bird Count 1987-2006; URS observations from 2004-2005; Lake Casitas Birdathon 4/29/98; Lake Casitas Birdathon 4/18/01; Lake Casitas Birdathon 4/9/03; Summer V. Wilson 1/1/90 to 12/9/03

Thanks to Jack Gillooly of Ventura Audubon Society for providing data sources.

SYMBOLS

Wi- Winter: Mid-October to Mid-March (5 months)
 SP- Spring Migration: Mid-March to Mid-May (2 months)
 SU- Summer: Mid-May to Mid-August (3 months)
 Fa- Fall Migration: Mid-August to Mid-October (2 months)

CSC- State Species of Special Concern
 FP- Fully Protected Species
 FT- Federally Threatened
 SE- State Endangered
 ST- State Threatened

R- 0–15 individuals per season
 C- Almost always found in proper habitat
 U- Regularly found in proper habitat but often missed

Note: Taxonomic order follows the American Ornithologists' Union's Checklist of North American Birds, 7th edition (1998), and its subsequent supplements.

Source: Original by Karl Krause; revised by URS Biologists Johanna Kisner, David Kisner, Brooke McDonald, and Crissy Slaughter, and David Compton, March 2007.

Appendix A

Species and Natural Communities in the Plan Area

Table A-3. Lake Casitas Resource Management Area List of Wildlife Species

Common Name	Latin Name
Arthropods	
Crayfish	unidentified
Tarantula	<i>Aphonopelma eutylum</i>
Mammals	
Virginia Opossum	<i>Didelphis virginiana</i>
Brush Rabbit	<i>Sylvilagus bachmani</i>
California Ground Squirrel	<i>Spermophilus beecheyi</i>
Pocket Gopher	<i>Thomomys bottae</i>
Desert Woodrat	<i>Neotoma lepida</i>
Coyote	<i>Canis latrans</i>
Gray Fox	<i>Urocyon cinereoargenteus</i>
Raccoon	<i>Procyon lotor</i>
Badger	<i>Taxidea taxus</i>
Striped Skunk	<i>Mephitis mephitis</i>
Mountain Lion	<i>Felis concolor</i>
Bobcat	<i>Felis rufus</i>
Black bear	<i>Ursus americanus</i>
Mule Deer	<i>Odocoileus hemionus</i>
Amphibians	
Coast Range Newt	<i>Taricha torosa torosa</i>
Arboreal salamander	<i>Aneides lugubris</i>
Western Toad	<i>Bufo boreas</i>
California Tree Frog	<i>Hyla cadaverina</i>
Pacific Tree Frog	<i>Pseudacris regilla</i>
California Red-legged Frog	<i>Rana aurora draytoni</i>
Bullfrog	<i>Rana catesbeiana</i>
Reptiles	
Western Pond Turtle	<i>Clemmys marmorata</i>
Western Fence Lizard	<i>Sceloporus occidentalis</i>
Side-blotched Lizard	<i>Uta stansburiana</i>
Western Whiptail	<i>Cnemidophorus tigris</i>
Southern Alligator Lizard	<i>Gerrhonotus multicarinatus</i>
Gopher Snake	<i>Pituophis melanoleucus</i>
California King Snake	<i>Lampropeltis getulus</i>
Western Rattlesnake	<i>Crotalus viridis helleri</i>

Appendix A

Species and Natural Communities in the Plan Area

Table A-4. Lake Casitas Resource Management Area List of Special-Status Species

Scientific Name/Common Name	Status Federal/State/Other	Habitat	Occurrence in Plan Area	Flowering/Active Period
Plants				
<i>Aphanisma biltoides</i> Aphanisma	--/--/1B	Coastal scrub, dunes.	Unlikely. Nearest record from Taylor Ranch near Ventura in 1963.	March – June
<i>Astragalus didymocarpus</i> var. <i>milesianus</i> Miles' milk vetch	--/--/1B	Coastal scrub.	Low potential to occur. Nearest record is undated occurrence in Ojai area.	March – June
<i>Astragalus pycnostachyus</i> var. <i>lanosissimus</i> Ventura marsh milk-vetch	E/E/1B	Coastal salt marsh.	Not expected due to lack of suitable habitat or recent records. Nearest record near City of Ventura in 1911.	June – October
<i>Atriplex pacifica</i> South coast saltscale	--/--/1B	Coastal dunes, playas.	Not expected due to lack of suitable habitat.	March – October
<i>Atriplex serenana</i> var. <i>davidsonii</i> Davidson's saltscale	--/--/1B	Coastal bluff scrub on alkaline soil.	Unlikely due to lack of suitable habitat. Nearest record in Ojai in 1971.	April – October
<i>Baccharis plummerae</i> ssp. <i>plummerae</i> Plummer's baccharis	--/--/4.3	Coastal sage scrub, oak/riparian woodlands, chaparral.	Present in the mountains at the southern edge of Plan Area.	May – October
<i>Calochortus palmeri</i> var. <i>palmeri</i> Palmer's mariposa lily	--/--/1B	Vernally moist places in yellow pine forest.	Not expected due to lack of suitable habitat. Nearest record along upper Sespe Creek.	May – July
<i>Calochortus weedii</i> var. <i>vestus</i> Late-flowered mariposa lily	--/--/1B	Chaparral, woodland; often on serpentine soils between 900 – 3,000 ft. msl.	Potential to occur in Plan Area, but not observed during surveys.	June – August
<i>Centromadia parryi</i> ssp. <i>australis</i> Southern tarplant	--/--/1B	Marshes and vernal pools, alkaline soils.	Not expected due to lack of appropriate habitat. Nearest record near mouth of Padre Juan Canyon near coast in 1974.	May – November
<i>Chaenactis glabriuscula</i> var. <i>orcuttiana</i> Orcutt's pincushion	--/--/1B	Coastal bluff scrub, coastal dunes.	Not expected due to lack of appropriate habitat. Nearest record from Pierpont Bay in 1961.	January – August
<i>Cordylanthus maritimus</i> ssp. <i>maritimus</i> Salt marsh bird's-beak	--/--/1B	Coastal dunes, coastal salt marsh.	Not expected due to lack of appropriate habitat.	May – October
<i>Delphinium umbraculorum</i> Umbrella larkspur	--/--/1B	Mesic woodland slopes from 1300 to 5200 ft. msl.	Not expected due to lack of appropriate habitat. Nearest record from Murrieta Canyon in 1964.	April – June
<i>Fritillaria ojaiensis</i> Ojai fritillary	--/--/1B	Forests; chaparral; often on rocky soils between 900 – 2,000 ft. msl.	Low potential to occur. Known to occur in the region but not in the Plan Area. Records from Stewart Canyon, north of Ojai; east end of Santa Ynez Mtns, and west of Ojai.	March – May
<i>Horkelia cuneata</i> ssp. <i>puberula</i> Mesa horkelia	--/--/1B	Sandy or gravelly sites within chaparral, woodland slopes, or coastal scrub.	Unlikely due to lack of recent records. Nearest record from Ojai Valley in 1895.	March – May

Appendix A

Species and Natural Communities in the Plan Area

Table A-4. Lake Casitas Resource Management Area List of Special-Status Species

Scientific Name/Common Name	Status Federal/ State/ Other	Habitat	Occurrence in Plan Area	Flowering/Active Period
<i>Lasthenia glabrata</i> ssp. <i>coulteri</i> Coulter's goldfields	--/--/1B	Coastal salt marshes.	Not expected due to lack of appropriate habitat. Nearest record from mouth of Ventura River in 1895.	Feb – May
<i>Layia heterotricha</i> Pale-yellow layia	--/--/1B	Woodland slopes on alkaline or clay soils.	Unlikely due to lack of recent observations. Nearest record from along Hwy 33 north of Ojai.	March – June
<i>Navarretia ojaiensis</i> Ojai navarretia	--/--/1B.1	Clayey soils, usually in grasslands on north-facing slopes at the base of the slope	Present in the Plan Area on a hill just northeast of Casitas Dam.	May-July
<i>Nolina cismontana</i> Chaparral nolina	--/--/1B	Sandstone and shale within chaparral and coastal scrub.	Moderate potential to occur. Recorded from Coyote Creek near Lake Casitas, unknown year.	May – July
<i>Oxytheca parishii</i> var. <i>abramsii</i> Abram's oxytheca	--/--/1B	Shale to sandy places within chaparral above 3,500 ft. msl.	Not expected due to lack of recent observations, and Plan Area is outside the elevational range of this species. Nearest record is from Reyes Peak, unknown year.	June – August
<i>Sagittaria sanfordii</i> Sanford's arrowhead	--/--/1B	Freshwater marsh below 2,000 ft. msl.	Unlikely due to lack of recent observations. Nearest record from Ojai Valley was extirpated in 1983.	May – October
<i>Sidalcea neomexicana</i> Salt spring checkerbloom	--/--/2	Chaparral; coastal/desert scrub, coniferous forest, playas on alkaline soils below 1,000 ft. msl.	Unlikely due to lack of recent observations. Nearest record between Santa Ana Blvd. and San Antonio Creek Bridge (Oak View).	March – June
<i>Streptanthus campestris</i> Southern jewel flower	--/--/1B	Open, rocky areas in chaparral and lower montane coniferous forest above 2000 ft. msl.	Not expected because the Plan Area is outside the elevational range of this species. Nearest record from Divide Peak in 1994.	May – July
Insects				
<i>Coelus globosus</i> Globose dune beetle	--/--/--	Coastal sand dunes.	Not expected due to lack of appropriate habitat. Nearest record from Ventura Beach in 1954.	Information not available.
<i>Danaus plexippus</i> Monarch butterfly	--/--/--	Winter roost sites along the Pacific Coast in wind-protected tree groves.	Low potential for winter roost sites. Roost sites not known in Plan Area, but known to roost nearby on Ventura River floodplain.	November – January
Amphibians				
<i>Anaxyrus</i> (=Bufo) <i>californicus</i> Arroyo toad	E/SC/--	Washes and intermittent streams.	Low potential to occur due to presence of marginal habitat and presence of bullfrogs. Not found during red-legged frog surveys in 2003-2004. Nearest record along Lion Creek in 2006.	Spring and Summer

Appendix A

Species and Natural Communities in the Plan Area

Table A-4. Lake Casitas Resource Management Area List of Special-Status Species

Scientific Name/Common Name	Status Federal/ State/ Other	Habitat	Occurrence in Plan Area	Flowering/Active Period
<i>Rana draytoni</i> California red-legged Frog	T/SC/--	Lowlands and foothills with permanent deep water and dense riparian vegetation.	Low potential to occur due to presence of marginal habitat and presence of bullfrogs. Not observed in 2003-2004 protocol surveys. Nearest recent record from San Antonio Creek.	January – April
<i>Scaphiopus (=Spea) hammondi</i> Western Spadefoot	--/SC/--	Ponded water habitats with adjacent oak savannah habitat.	Low potential to occur due to presence of marginal habitat and presence of bullfrogs. Not found during red-legged frog surveys in 2003-2004. Known to occur in Ventura County.	February – May
Reptiles				
<i>Anniella pulchra pulchra</i> Silvery legless lizard	--/SC/--	Sandy soil under sparse vegetation.	Moderate potential to occur due to presence of suitable habitat. Nearest record in the City of Ventura in 2001.	Active in Spring and Summer
<i>Phrynosoma coronatum (blainvillii population)</i> Coast (San Diego) horned lizard	--/SC/--	Rocky, sandy soil in coastal sage scrub and chaparral.	Moderate potential to occur due to presence of suitable habitat. Nearest record north of Los Robles Diversion Canal outside Plan Area in 2002.	
<i>Thamnophis hammondi</i> Two-striped garter snake	--/SC/--	Along streams with rocky beds and riparian growth.	Low potential to occur due to presence of suitable habitat, but recent observations are lacking. Nearest records from Sespe Creek and near Rose Valley Falls in 1985.	Active year-round
<i>Clemmys marmorata pallida</i> Southwestern pond turtle	--/SC/--	Permanent or nearly permanent bodies of water.	Occurs in Plan Area. Observed in Santa Ana Creek and East Santa Ana Creek during field surveys and CRLF protocol surveys.	Active in Spring and Summer
Birds				
<i>Ixobrychus exilis hesperis</i> Least Bittern (nesting)	--/SC/--	Roosts, nests, and hides in dense, emergent vegetation	Known to occur in Plan Area in marsh at the north side of the lake near Coyote Creek. Breeding unknown.	Nesting in Spring
<i>Gymnogyps californianus</i> California Condor	E/E/--	Vast expanses of open savannah, grasslands, and foothill chaparral at moderate altitude.	Not expected. Not observed in Plan Area. Nearest recent records from Sespe-Piru and Matilija Condor areas.	March – June
<i>Haliaeetus leucocephalus</i> Bald Eagle	Delisted/E/- -	Large bodies of open water such as lakes, marshes, seacoasts and rivers, where there are plenty of fish to eat and tall trees for nesting and roosting.	Known to occur in the Plan Area as a rare winter visitor. Breeding unlikely.	Winter mid-October-March
<i>Elanus leucurus</i> White-tailed Kite	--/FP (nesting)/--	Coastal and valley lowlands, nests in tree tops with dense foliage including orchards.	Known to breed in Plan Area. Breeding observed during 2003-2005 surveys.	Nesting activity in Spring

Appendix A

Species and Natural Communities in the Plan Area

Table A-4. Lake Casitas Resource Management Area List of Special-Status Species

Scientific Name/Common Name	Status Federal/ State/ Other	Habitat	Occurrence in Plan Area	Flowering/Active Period
<i>Accipiter cooperi</i> Cooper's Hawk (nesting)	--/SC/--	Open woodland and riparian habitats.	Breeds in Plan Area.	January – July
<i>Accipiter striatus</i> Sharp-shinned Hawk (nesting)	--/SC/--	Forage in open woodland and oak savannah; nest in montane habitats.	Forages in Plan Area in winter, but unlikely to breed there.	April – September
<i>Aquila chrysaetos</i> Golden Eagle	--/SC,FP/--	Open woodland, chaparral, and grassland.	Casual visitor to Plan Area, but unlikely to breed there.	January – July
<i>Buteo regalis</i> Ferruginous Hawk (wintering)	--/SC/--	Open habitats.	Occasional winter visitor to Plan Area.	September – April
<i>Buteo swainsoni</i> Swainson's Hawk (nesting)	--/T/--	Riparian forest and open grassland or savannah.	Occasional visitor to Plan Area, but unlikely to breed.	April – September
<i>Charadrius alexandrinus nivosus</i> Western snowy plover	T/SC/--	Sandy beaches.	Not expected due to lack of appropriate habitat. Nearest record from Ventura Beach in 1948.	
<i>Circus cyaneus</i> Northern Harrier (nesting)	--/SC/--	Scrublands, grasslands, and fields	Forages in Plan Area in winter, but unlikely to breed there.	April – September
<i>Speotyto cunicularia hypugia</i> Burrowing Owl (burrow site)	--/SC/--	Grasslands.	Occasional winter visitor to Plan Area. Breeding unlikely. Last observed in 1988.	March – August
<i>Falco columbarius</i> Merlin (wintering)	--/SC/--	Open grassland and marsh.	Forages in Plan Area in winter, but unlikely to breed there.	September – May
<i>Falco mexicanus</i> Prairie Falcon (nesting)	--/SC/--	Arid regions with cliffs or high banks.	Occasional winter visitor to Plan Area, but unlikely to breed.	April – September
<i>Falco peregrinus anatum</i> Peregrine Falcon	--/E,FP/--	Low mountains and coastal areas.	Occasional visitor to Plan Area, but unlikely to breed.	March – July
<i>Eremophila alpestris actia</i> California Horned Lark	--/SC/--	Open grassland.	Unlikely. Not observed in the Plan Area.	April – September
<i>Lanius ludovicianus</i> Loggerhead Shrike (nesting)	--/SC/--	Trees and shrubs in open areas.	Present year-round.	January – July
<i>Vireo bellii pusillus</i> Least Bell's Vireo	E/E/--	Riparian scrub, especially willows.	Unlikely due to lack of suitable habitat and not observed in Plan Area. Riparian scrub in the Plan Area is not of sufficient quantity and structure for this species. Historic record at Foster Park along the Ventura River from 1916.	Spring
<i>Dendroica petechia</i> Yellow Warbler (nesting)	--/SC/--	Riparian woodland including willows, cottonwoods, and other small trees	Present in Plan Area. Breeding is likely.	Nesting in Spring
<i>Aimophila ruficeps canescens</i> Rufous-crowned Sparrow	--/SC/--	steep, rocky exposed slopes with open Coastal Sage scrub and Chaparral with grassy areas	Present in Plan Area.	Nesting in Spring

Appendix A

Species and Natural Communities in the Plan Area

Table A-4. Lake Casitas Resource Management Area List of Special-Status Species

Scientific Name/Common Name	Status Federal/State/Other	Habitat	Occurrence in Plan Area	Flowering/Active Period
<i>Ammodramus savannarum</i> Grasshopper sparrow	--/--/-- (declining throughout range)	Grassland.	Present in Plan Area.	April – September
<i>Agelaius tricolor</i> Tricolored Blackbird	--/SC/--	Riparian.	Occurs in Plan Area as an occasional visitor. Not known to breed in Plan Area.	Nesting activity in Spring
Mammals				
<i>Antrozous pallidus</i> Pallid bat	--/SC/--	Open, dry rocky habitats.	Not expected. Nearest record is Ventura County in 1906.	
<i>Chaetodipus californicus femoralis</i> Dulzura pocket mouse	--/SC/--	Coastal scrub, chaparral, and grassland.	Not expected. Nearest record below Matilija Dam, unknown year.	
<i>Choeronycteris mexicana</i> Mexican long-tongued bat	--/SC/--	Well-lit caves.	Not expected. Outside normal range. Nearest record from Ventura County in 1994.	
<i>Eumops perotis californicus</i> Western mastiff bat	--/SC/--	Crevices in cliff faces in open arid habitat.	Not expected due to lack of recent records. Nearest record is from Weldon in 1907.	
<i>Neotoma lepida intermedia</i> San Diego desert woodrat	--/SC/--	Coastal scrub with dense canopy.	Not expected. Nearest record from near railroad tracks west of Ventura in 1992.	
Fish				
<i>Eucyclogobius newberryi</i> Tidewater goby	E/SC/--	Brackish water streams and lagoons.	Not expected due to lack of appropriate habitat. Nearest record from mouth of the Ventura River is 1995.	
<i>Gila orcuttii</i> Arroyo chub	--/SC/--	Slow water streams with mud or sand bottoms.	Likely to occur in Plan Area, but no status outside of native range in Los Angeles basin. Nearest record from Sespe Creek in 2000.	
<i>Oncorhynchus mykiss irideus</i> Southern Steelhead	T/SC/--	Coastal rivers and streams; spawn in cool, clear, well-oxygenated streams usually in higher-elevation headwaters	High potential to occur in lower Coyote Creek downstream of Casitas Dam. Present in Ventura River and tributaries, but unable to migrate through Lake Casitas Dam.	

Sources:

California Department of Fish and Game (CDFG). 2010. California Natural Diversity Database (CNDDB). Version 3.1.0.
 California Native Plant Society (CNPS). 2007. Inventory of Rare and Endangered Vascular Plants of California.
 United States Fish and Wildlife Service (USFWS). 2010. Ventura Office, California. Informal consultation and Technical Assistance for the Lake Casitas Resource Management Plan, January 2010.

Key – Listing Status

T – Federally/State threatened
 E – Federally/State endangered
 SC – State species of special concern
 FP – State Fully Protected Species
 IB – CNPS listed plants (rare, threatened, or endangered Plants Rare, Threatened, or Endangered in California and Elsewhere
 2 -- Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere.
 4 -- Plants of Limited Distribution

Appendix A

Species and Natural Communities in the Plan Area

Site Photographs



Photograph 1. View of vegetation at Cooper Canyon including grassland in foreground and chaparral in background



Photograph 2. View of coastal sage scrub at Cooper Canyon



Photograph 3. Pools at upper end of Cooper Canyon tributary



Photograph 4. Oak woodland restoration site near Casitas Dam



Photograph 5. Oak woodland restoration site near Casitas Dam



Photograph 6. View of the Borrow Site B Restoration Site

Appendix A
Species and Natural Communities in the Plan Area



Photograph 7. View of wetland at the Casitas Wetland/Grassland Restoration Project Site (taken 3-23-07)



Photograph 8. View of grassland area and edge of wetland at the Casitas Wetland/Grassland Restoration Site (taken 3-23-07)

Appendix A
Species and Natural Communities in the Plan Area



Photograph 9. View of the lake from Laguna Ridge



Photograph 10. View of a cove at Lake Casitas with willow and mule fat vegetation in the water

Appendix A Species and Natural Communities in the Plan Area



Photograph 11. Important grebe breeding area at Wadleigh Arm, Lake Casitas.

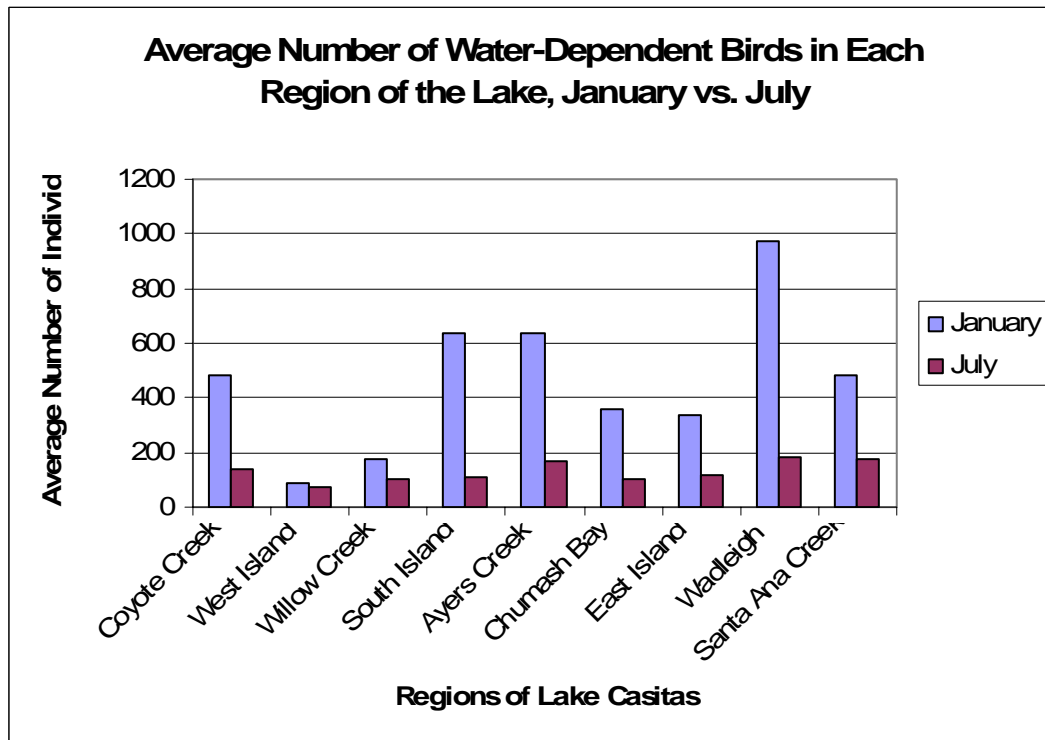


Photograph 12. Important grebe breeding area at Station Canyon, Lake Casitas

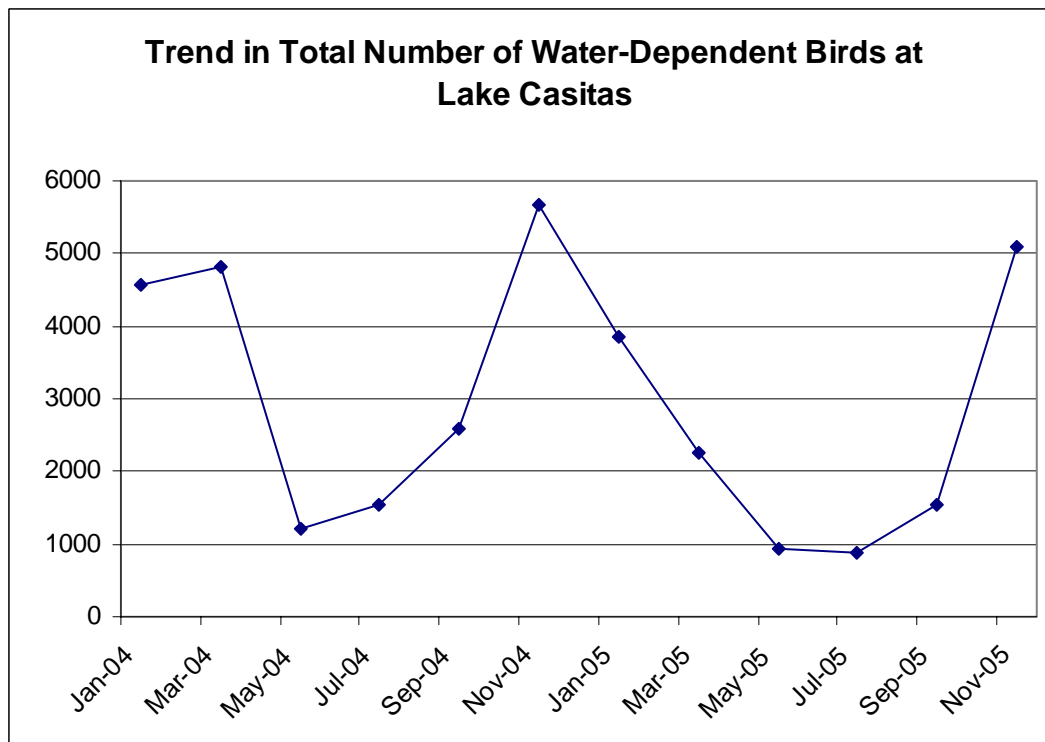
Appendix B
Summary of 2004-2006 Bird Survey Results

Summary of Bird Surveys from 2004 through 2006 at Lake Casitas Recreation Area

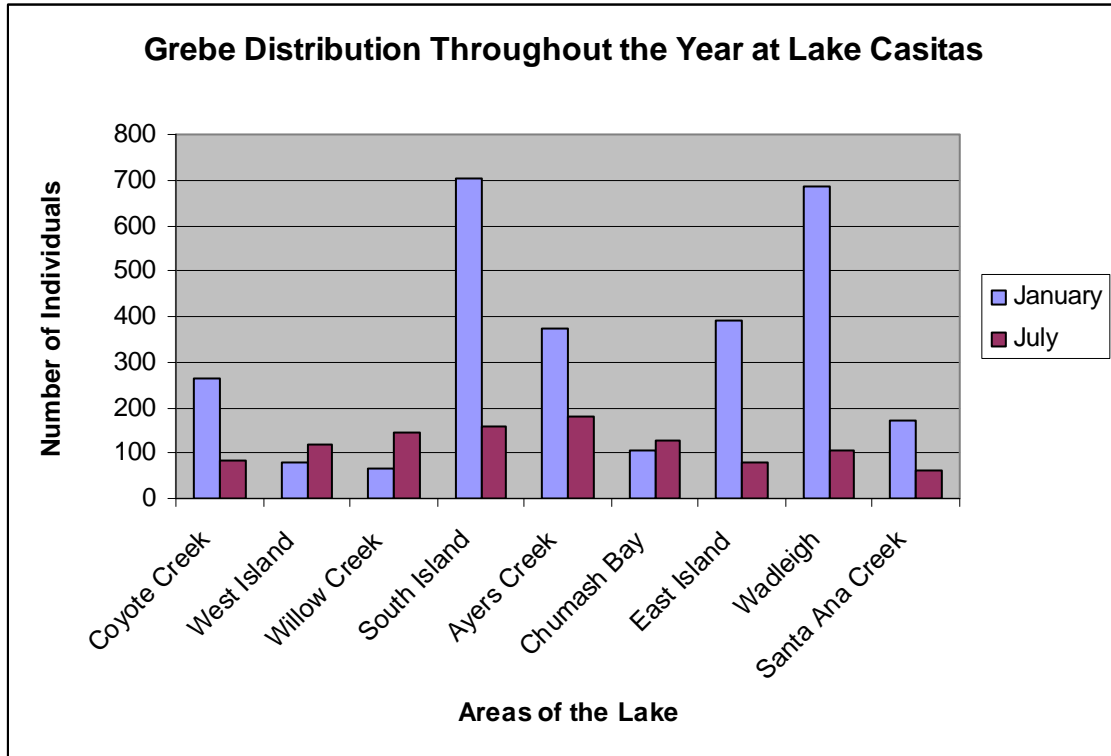
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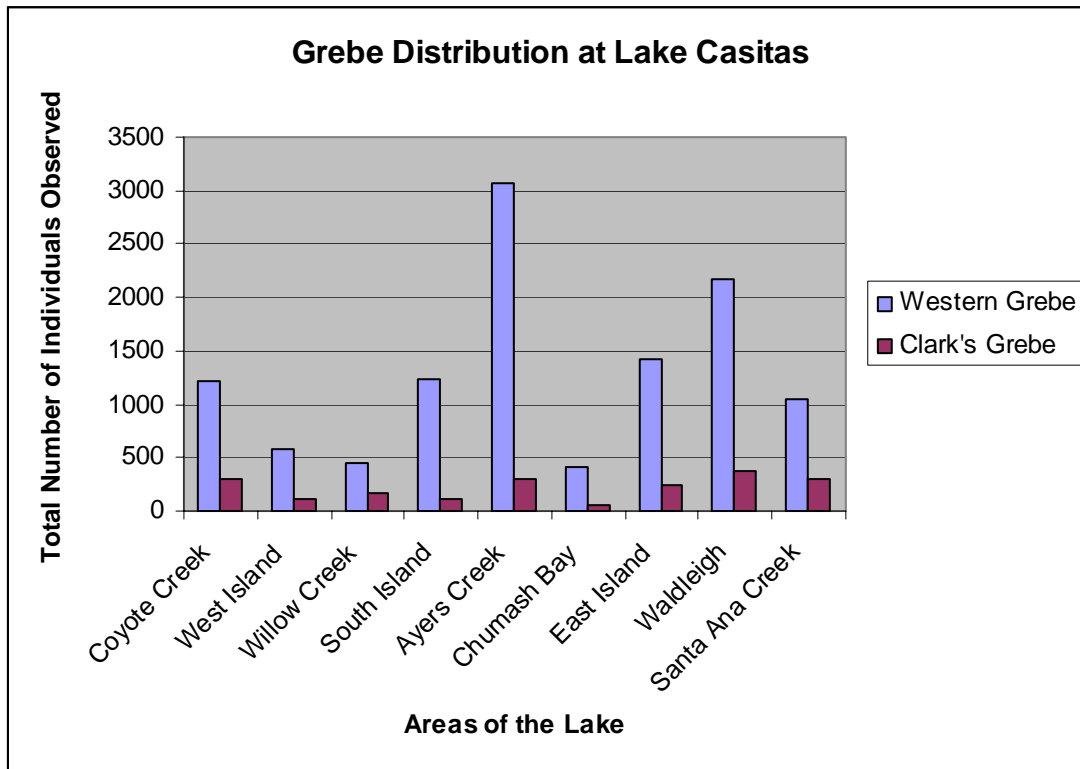
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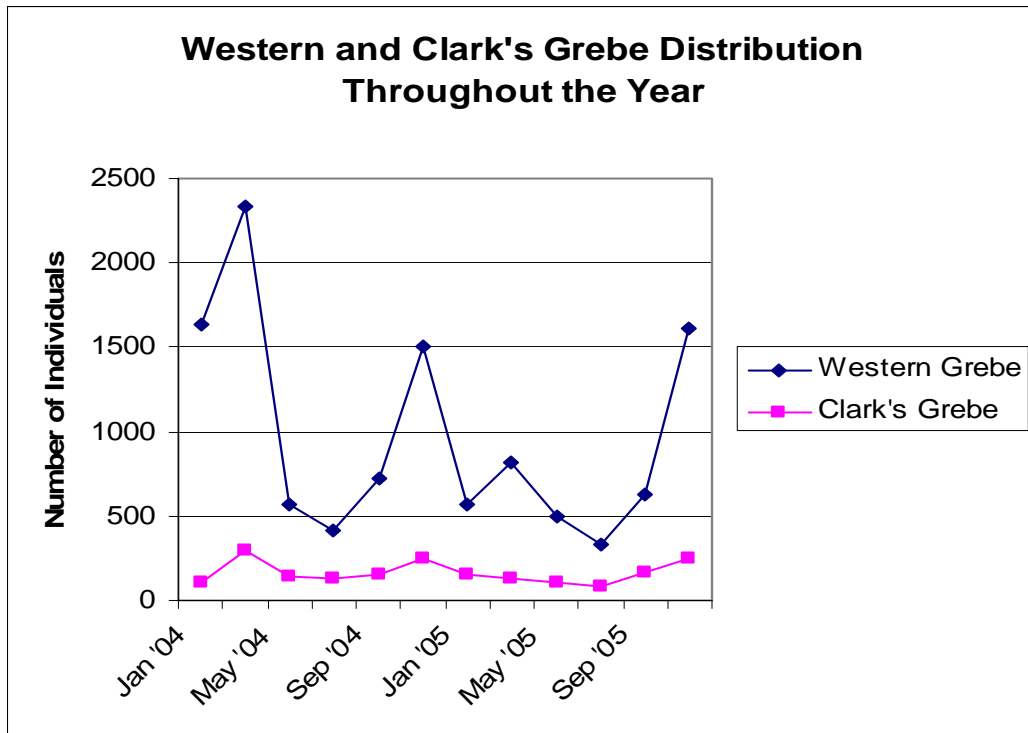
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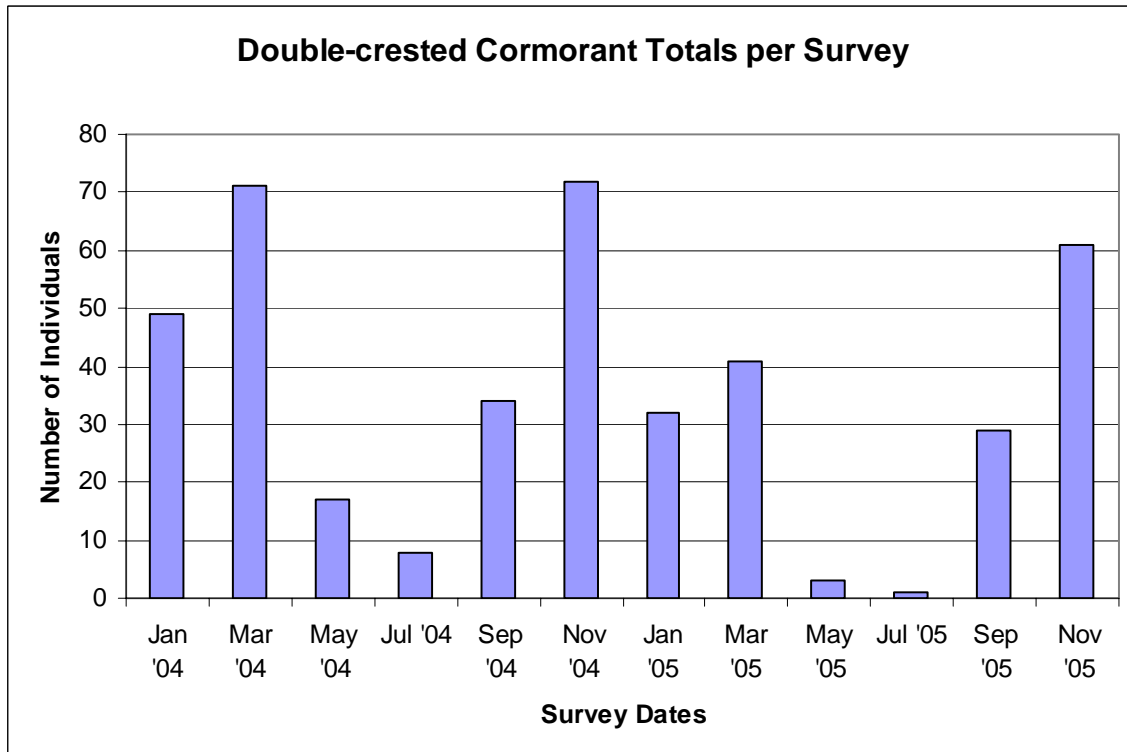
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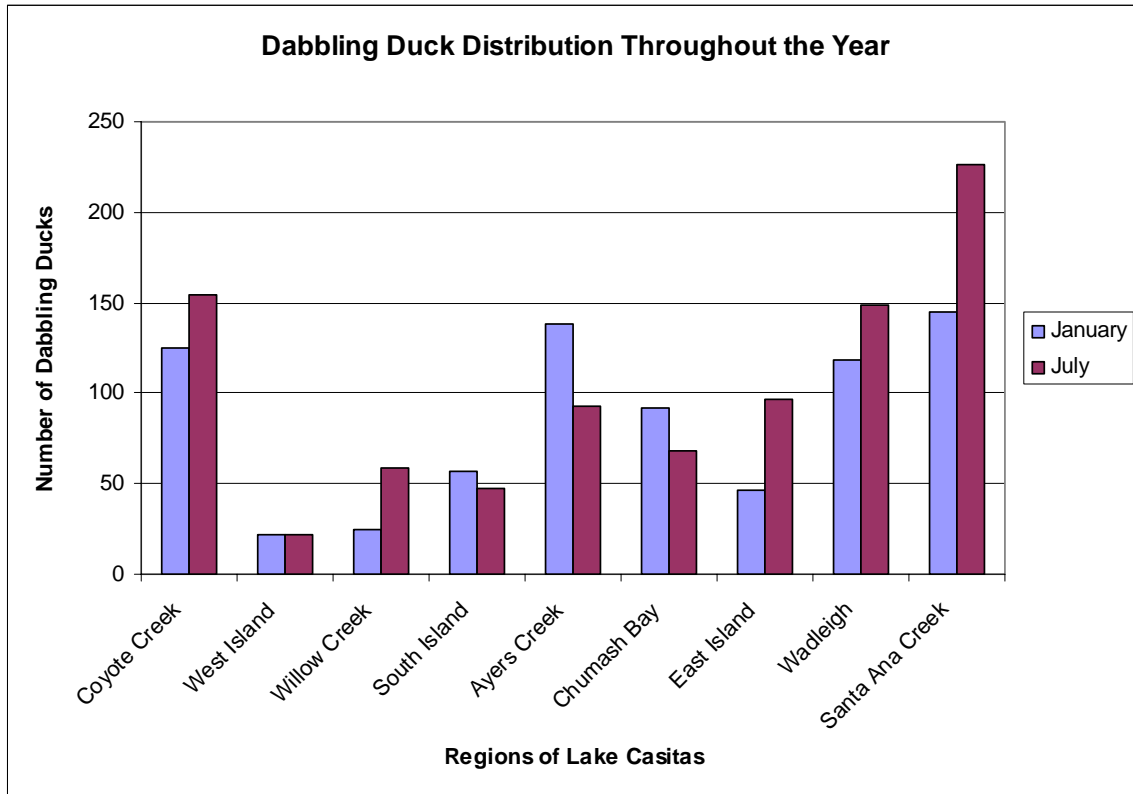
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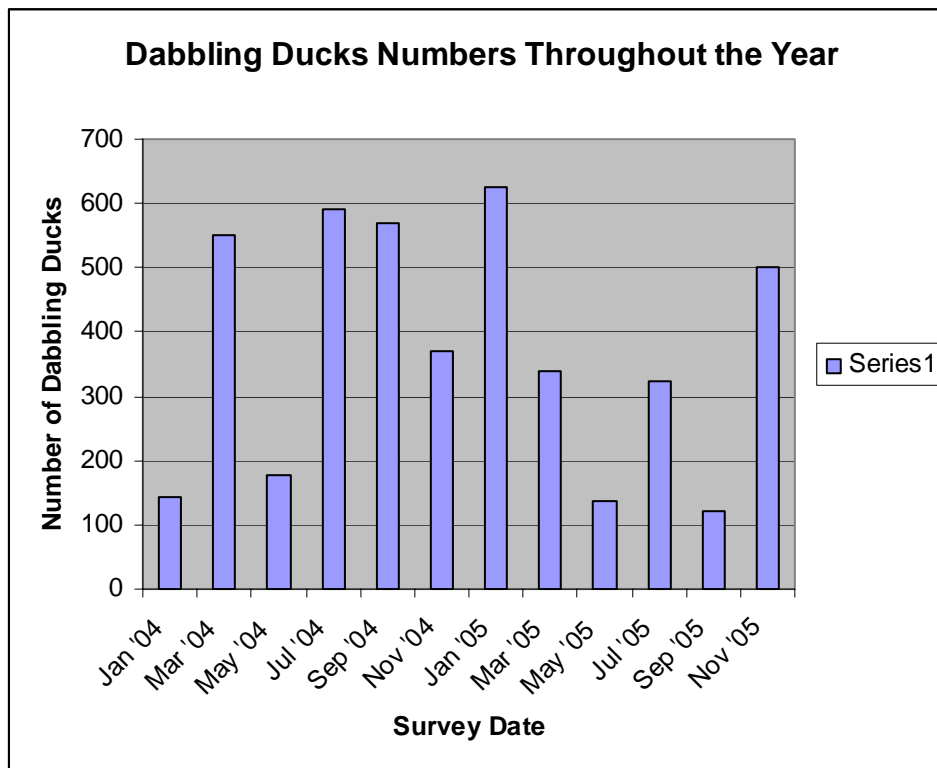
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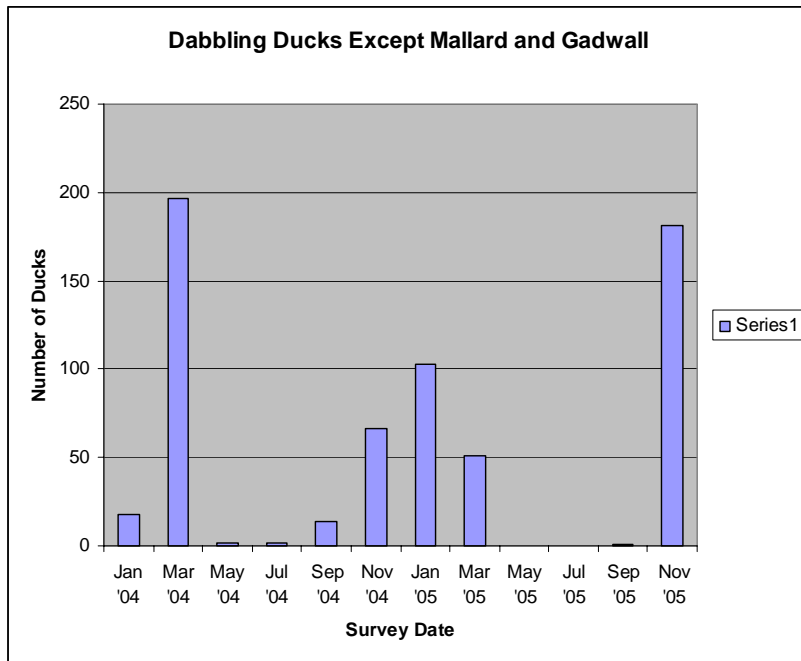
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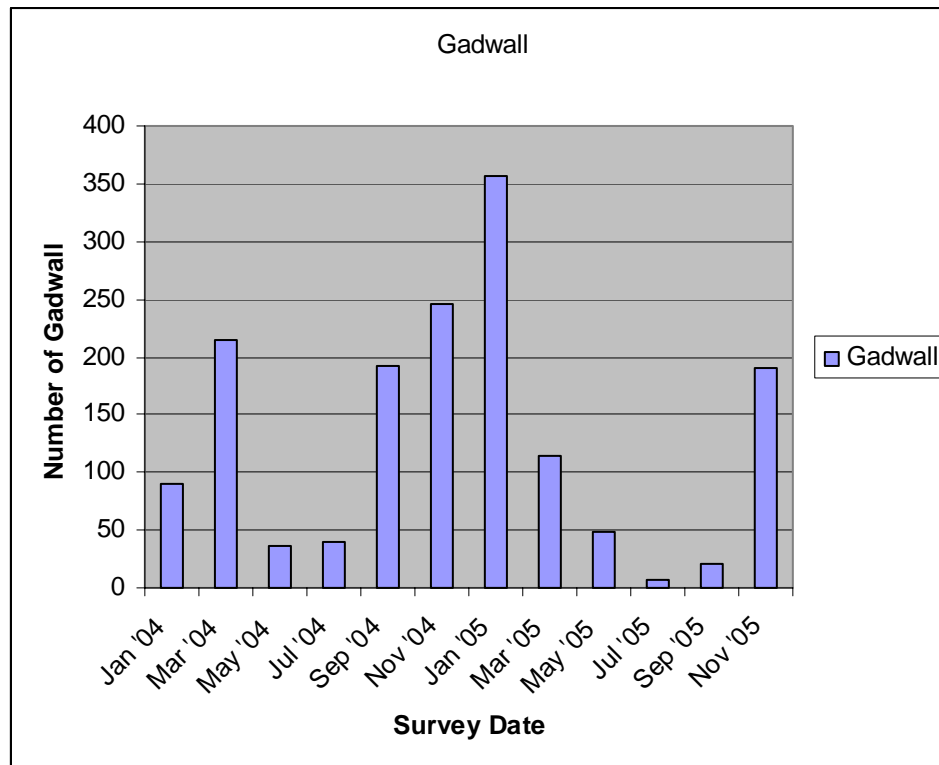
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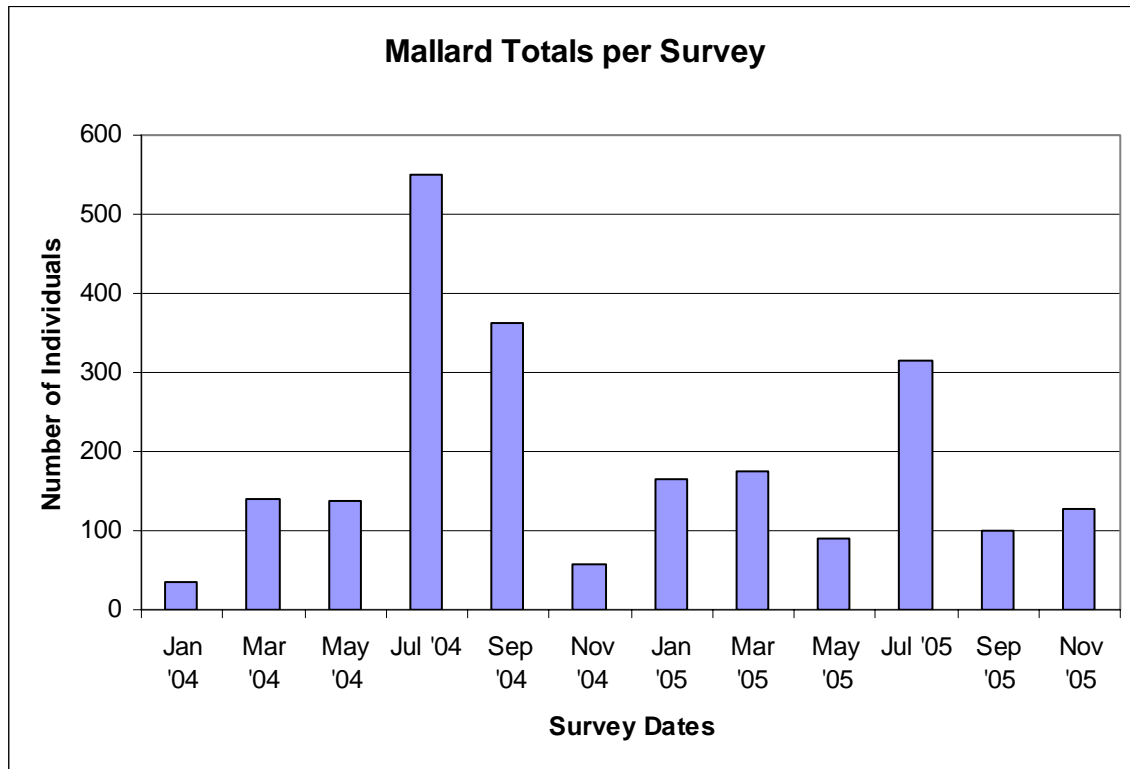
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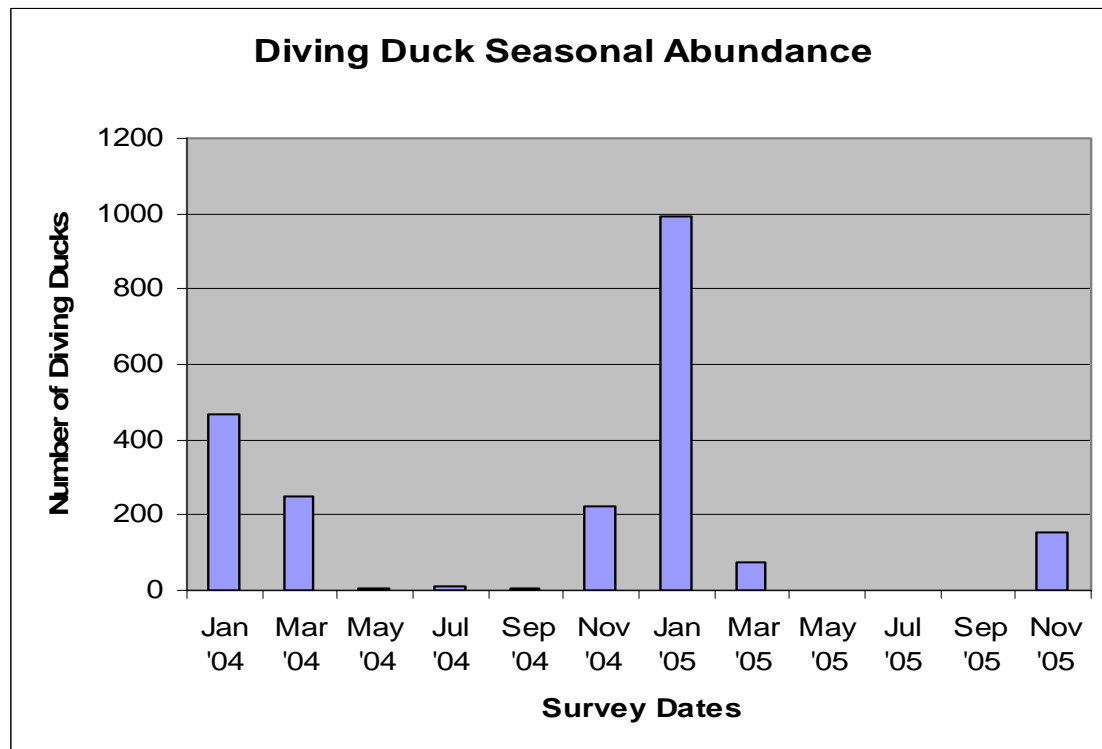
Graph 10



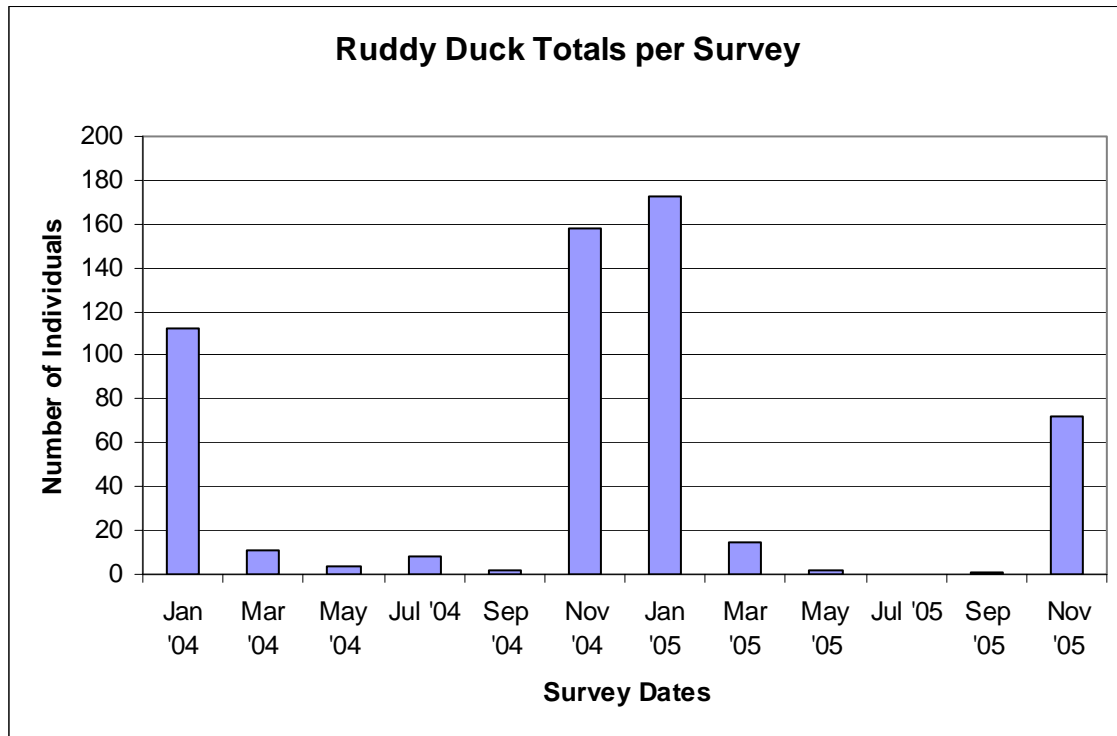
Graph 11



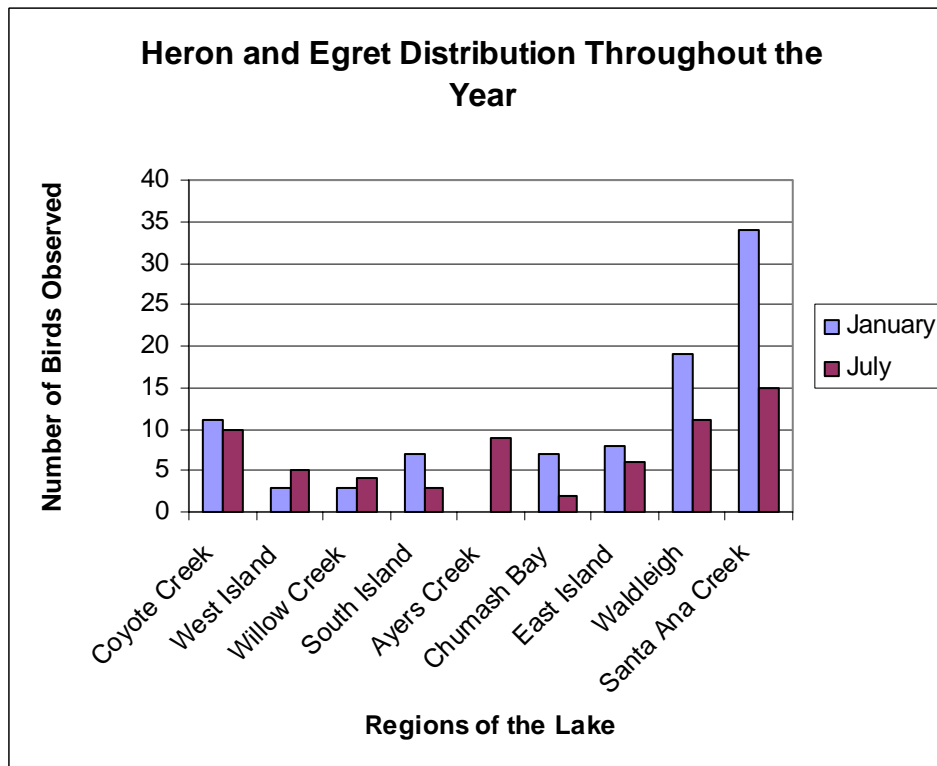
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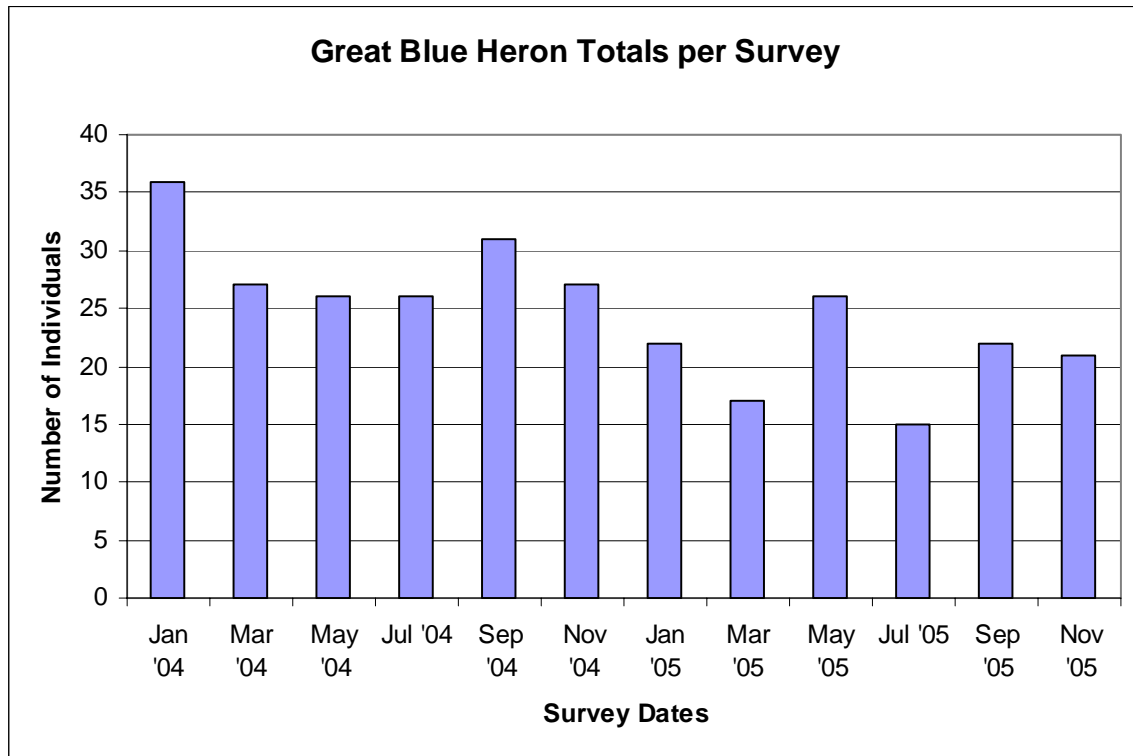
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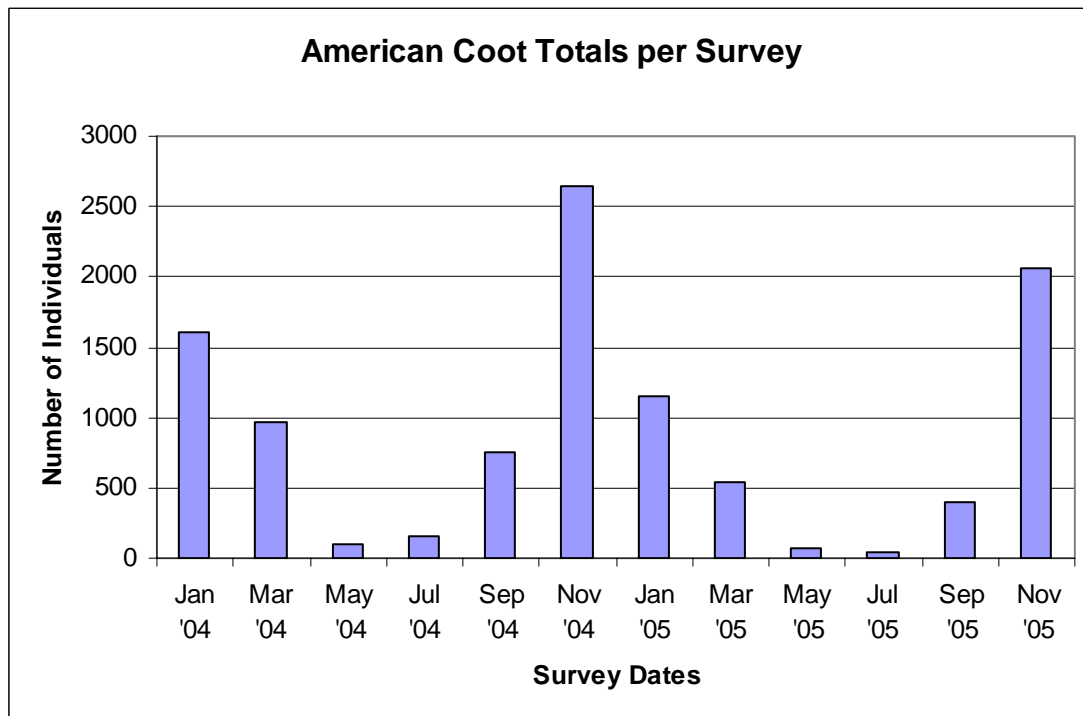
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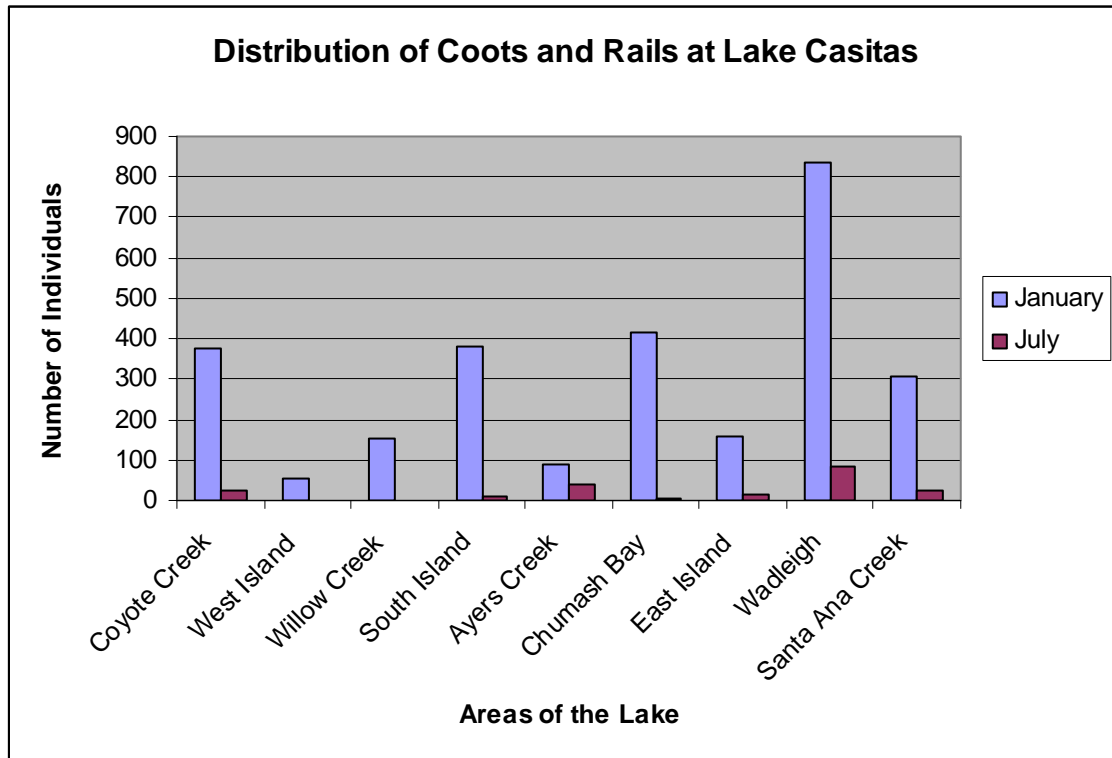
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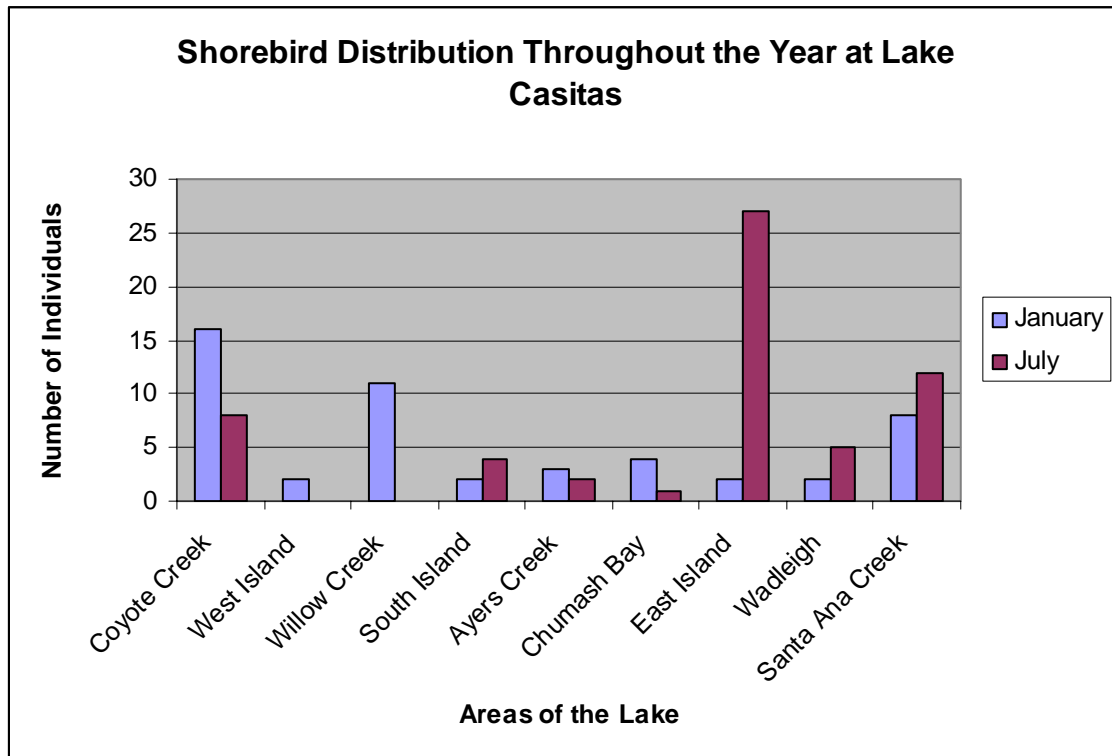
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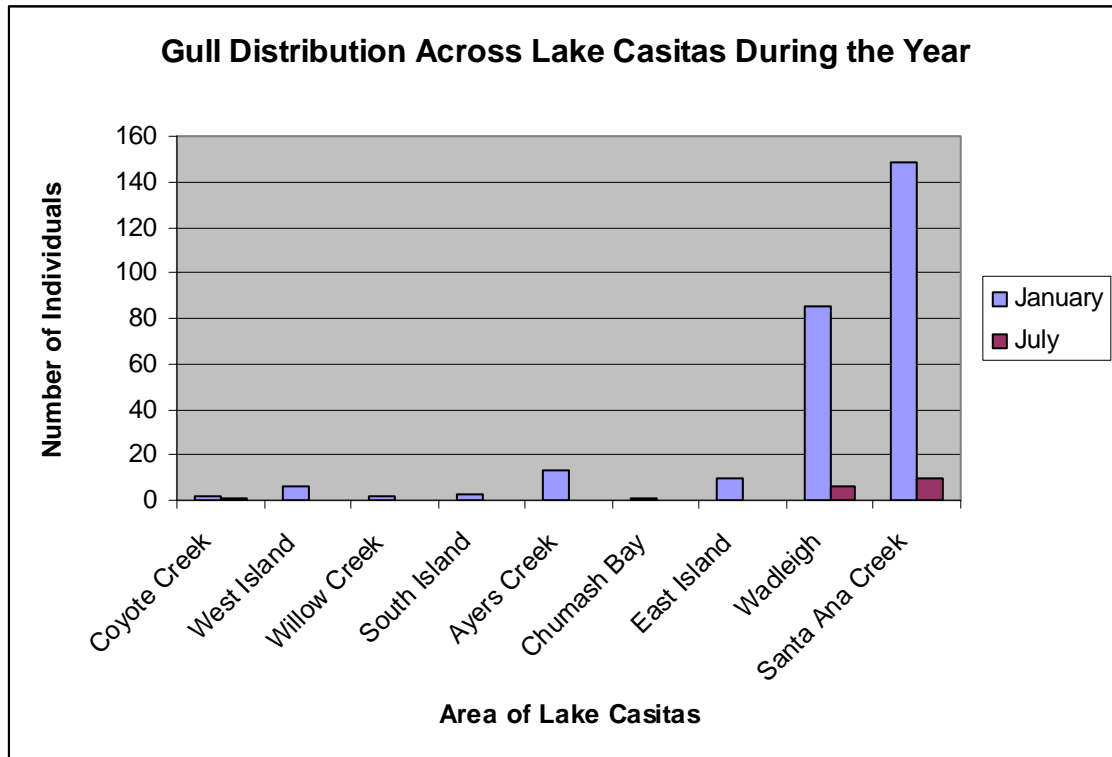
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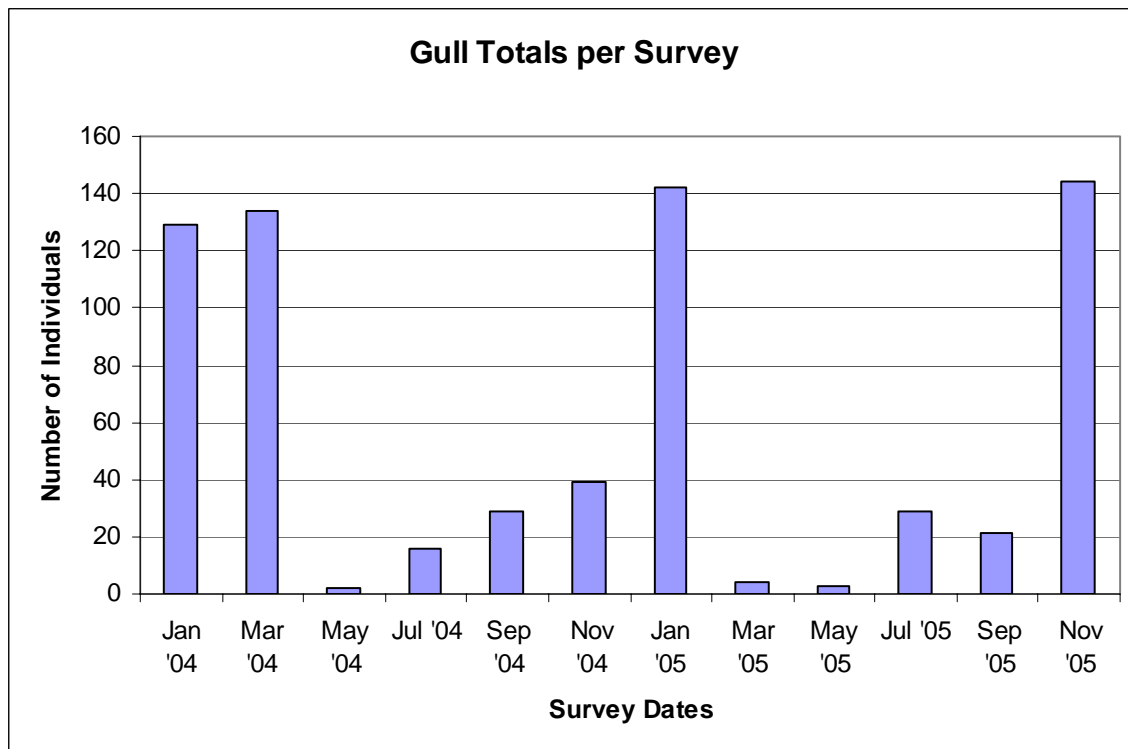
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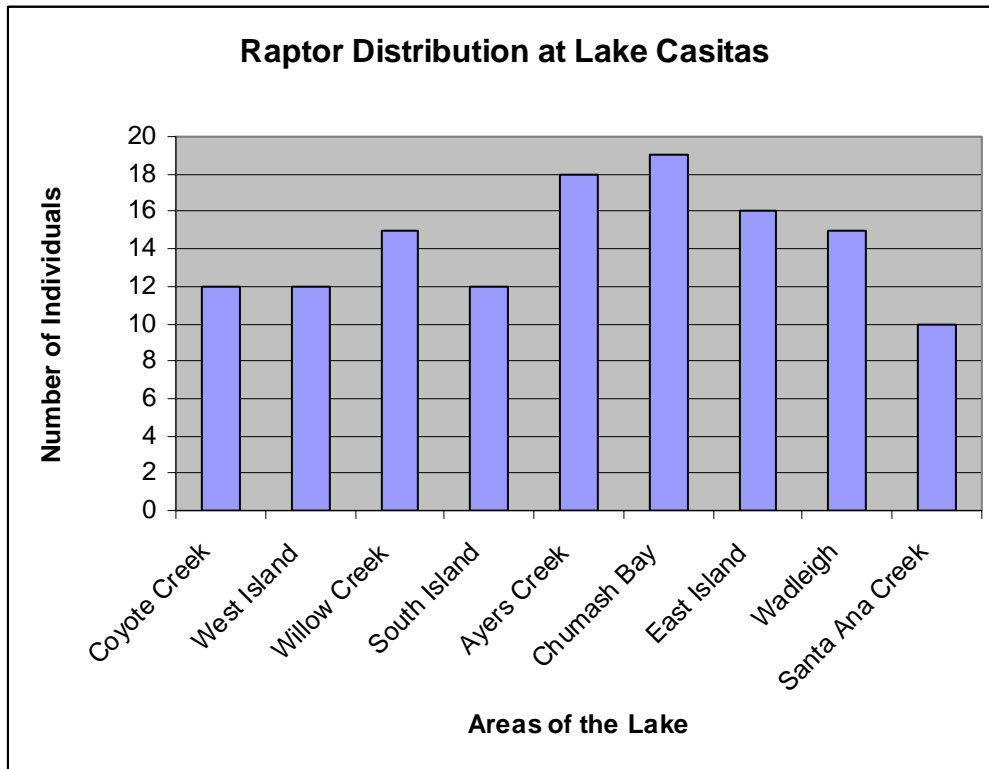
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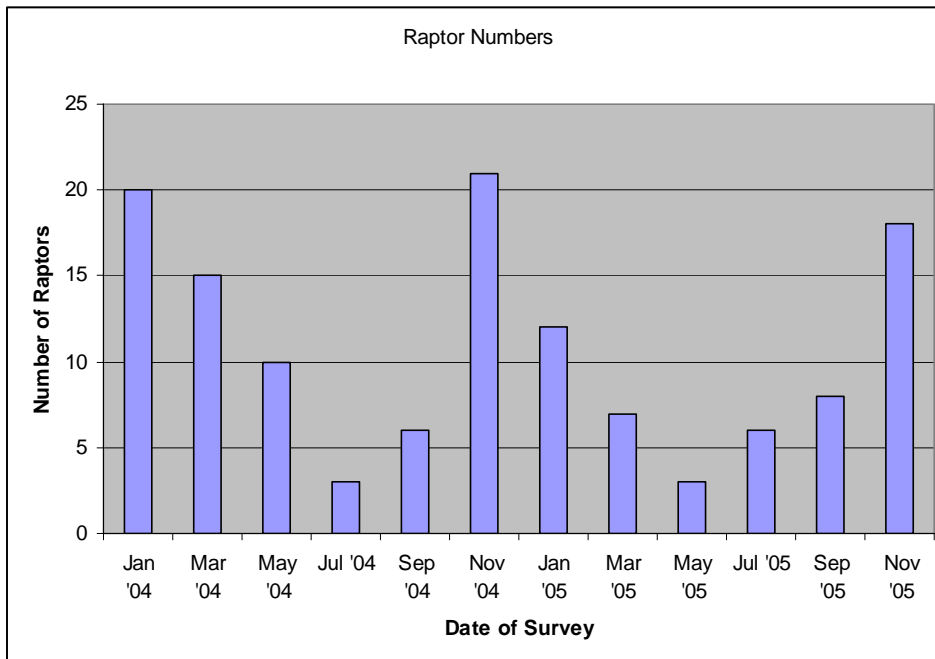
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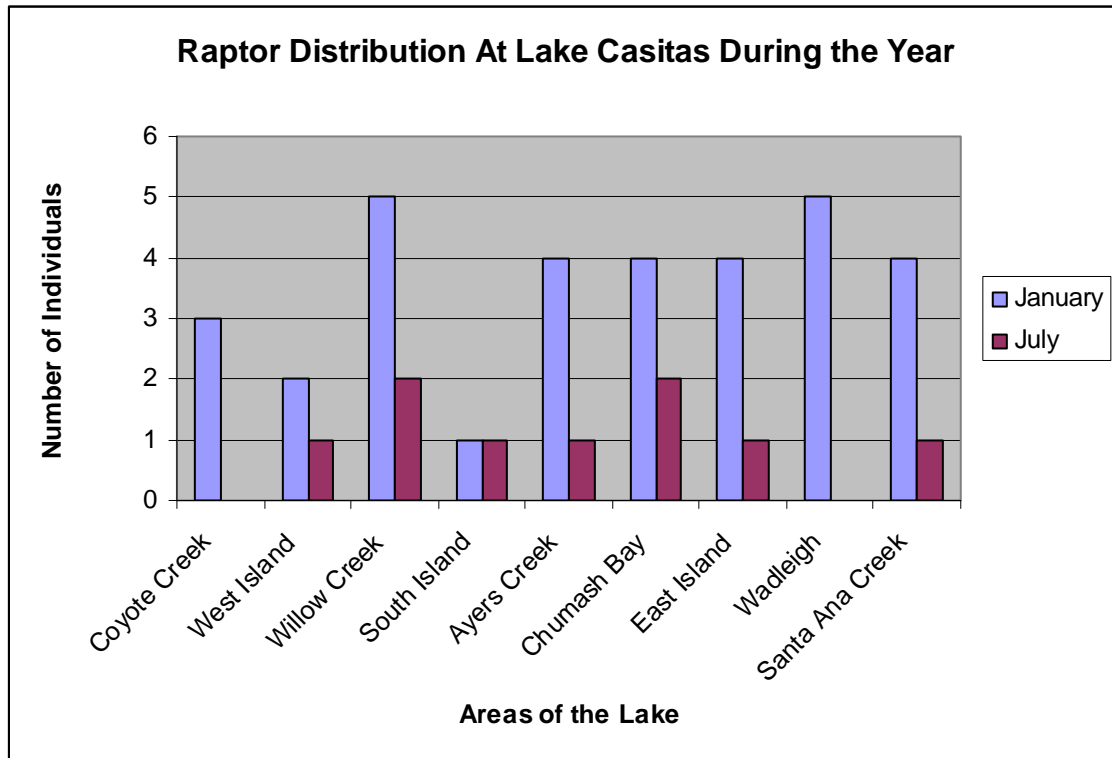
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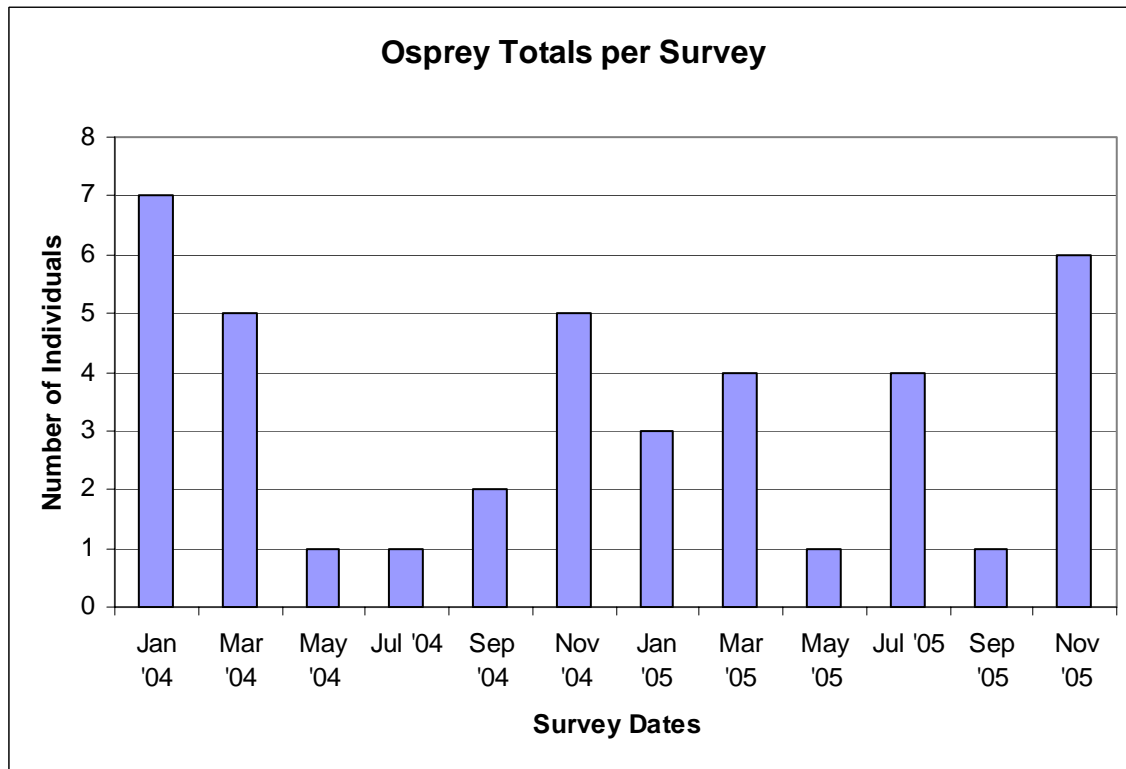
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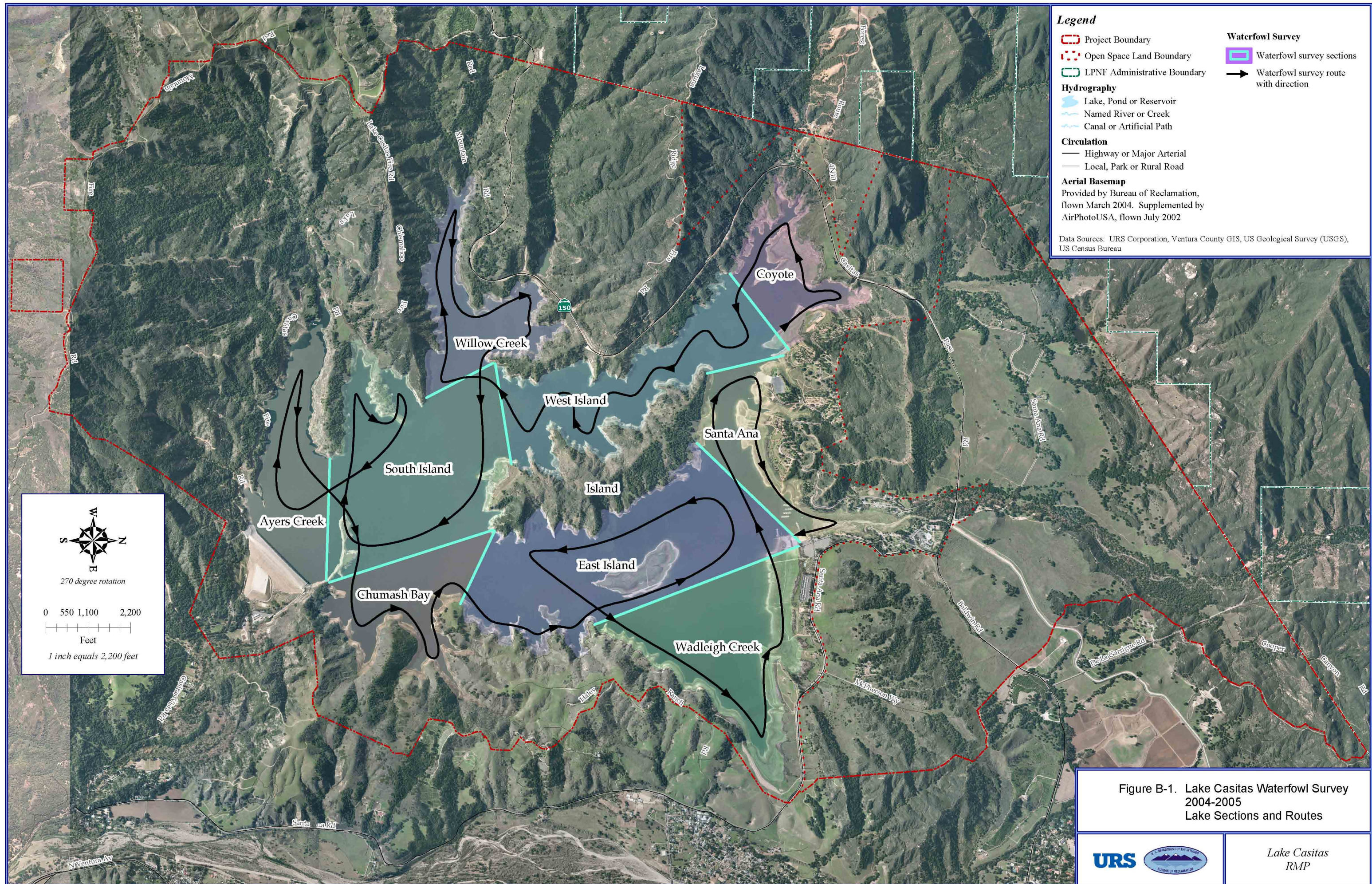


Graph 23



Graph 24





Appendix C
Fisheries Management Plan

Fisheries Management Plan

***Fisheries Management Plan
For
Casitas Municipal Water District
Lake Casitas Recreation Area***

**Prepared by:
Michael Gibson – Fisheries Biologist
Amy Carroll – Fisheries Biologist
Rob Weinerth – Park Services Officer I
Brian Roney – Park Services Manager**

January 01, 2006

FISH MANAGEMENT PLAN

Lake Casitas Recreation Area
11311 Santa Ana Road
Ventura, CA 93001

GOALS:

Casitas Municipal Water District (CMWD) operates and maintains the Lake Casitas Recreation Area. The primary goal of this fisheries management plan is to maintain the world-class largemouth bass fishing at Lake Casitas while providing the public with enhanced, recreational multi-species sport fishing. CMWD plans to achieve the primary goal by increasing the fish population, conducting various scientific population surveys, and enhancing fish habitat in the lake. Public use and its associated revenue will also be increased by a number of programs for anglers of various ages and interests. This documentation of our goals is designed to be a “*Living Document*” which is subject to frequent alteration and revision based on updated information received from the Department of Fish & Game (DFG). The topics of this document will reference aspects specific to Lake Casitas Recreation Area and formulation of a Fish Management Plan. This plan was developed, written and edited in a collaborative effort by CMWD staff. The specific information on species was provided by the Department of Fish & Game.

Section 1: Increase Fish Populations

Stocking: Most stocking strategies require predator fish to keep reproduction in balance, especially if the stocking objective is to grow large fish. The largemouth bass, known as a sport fish without rival, has the ability to adapt to a wide range of water conditions. However, largemouth bass must be provided adequate food items of the right size in order to reach a desired size potential. Bluegill, commonly referred to as forage fish, are regularly stocked at the same time as largemouth bass. Aquatic insects and zooplankton provide food for bass fry and for all sizes of bluegill. The bluegill reproduction will provide a food chain for larger bass. If the bass aren’t over-harvested, they will control the numbers of bluegill and prevent overpopulation.

In turn, the bluegills that survive the bass predation will grow large enough to provide excellent bluegill fishing. This stocking combination is basic and has been proven to work.

In June 2005 Lake Casitas stocked approximately 4800 Florida Largemouth Bass and 7000 Western Bluegill to provide the future public with the ideal fishing conditions of a well-stocked lake. Additionally, 5000 pounds of Channel Catfish were also recently stocked. In October 2005 4500 juvenile black crappie were stocked. The remaining \$7,000 allocated funds for the 2005/2006 fiscal budget will be used to purchase red swamp crayfish and Western Florida Bluegill. In the future Red Ear Sunfish and Crappie will be added to the lake, enhancing their present numbers. Furthermore, other species of black bass, such as small mouth, will be researched as a new species to be established at Lake Casitas. Small mouth bass have been successfully introduced to other local lakes such as Cachuma Lake and Lake Pyramid.

The 2006 FMP update also recommends that funds for this program be increase from \$12,000 to \$22,000. These funds will be used for the stocking of large mouth bass, western bluegill, red ear, crappie, catfish and crayfish. The funds will also be used to develop aspects of the FMP that include closed areas, fishing pens and creel studies. These funds are necessary to create self-sustaining breeding populations of fish.

By managing the predator-prey relationship, and increasing genetic diversity, the lake will evolve into a self-sustaining fishable population for anglers of all types. Currently CMWD practices and will continue to support the put-and-take rainbow trout fishery.

Cove Closures: A few problems arise when bass fishing occurs during their spawning season. Firstly, a caught female bass may be ripe with eggs that she has not yet released onto a nest. Secondly, a caught male bass may be guarding and aerating his clutch of eggs. Either scenario poses a serious threat to the bass population. There is

no guarantee that the bass will survive after being caught, handled, put into a live well, and then released at the weigh-in station. Currently only the protective zone surrounding the dam is closed to all fishing. Therefore, CMWD proposes to annually select and close various coves to all boating and fishing activity during the spring spawning season (Feb. 15th-May 15th) for largemouth bass. The area of closer for spring of 2006 will probably be the area of Dead Horse. This preventative measure would reduce the mortality level of pregnant females, lessen the number of abandoned nests and ultimately increase the largemouth bass population at Lake Casitas. To ensure public education on the matter, CMWD would erect signs and distribute flyers providing the location and reason for closures.

Catch Limits: Currently all fishing regulations at Lake Casitas are those enforced by DFG. In order to protect the lake's fishery even further, CMWD has formatted ordinances that will reduce the bag limits of catfish, crappie, and sunfish while imposing a slot limit (12"-18") on Largemouth Bass. Slot limits have worked at other lakes and are supported by DFG biologists. To better understand the fish populations in Lake Casitas, all previous lake surveys and data will be thoroughly researched to understand the effects of bag and slot limits.

Current Catch Limits for Lake Casitas

Species	Current DFG Catch Limits		Current Casitas Limits*	
	Size Limit	Bag Limit	Size Limit	Bag Limit
Largemouth bass	12-inch minimum, with no more than one over 22-inches	5	Between 12 and 18 inches**	5
Catfish	None	10	None	3
Crappie (black and white)	None	25	None	5
Sunfish (bluegill, red ear, green)	None	None	None	5
Trout (rainbow)	None	5	None	5
Threadfin Shad	None	None	None	None
Crawfish	None	None	None	None
<p>* New catch limits are implemented through Casitas Ordinances. ** Bass greater than 18-inches in length may be brought to marina to be measured, weighed and have pictures taken. Bass over 18 inches must be then released. Casitas Sanctioned Tournaments are exempt.</p>				

Section 2: Surveys

Casitas staff is taking an active roll in data collection by ongoing creel survey training and data collection. This includes, but is not limited to creel surveys, electro-fishing surveys, bass tournament surveys, and the review of literature on lake fishery management practices. DFG currently has data that has yet to be entered into a computer database for analysis and tracking of trends as indicators. At present, Casitas is in the process of acquiring copies of all fisheries related data concerning Lake Casitas from DFG. As of December 2005, Casitas staff has not received statistical data from DFG. DFG and Casitas staff were set on two occasions in 2005 for creel survey training and electro-fishing, but both were cancelled due to DFG equipment failures and limited staffing.

Creel Surveys: Creel Surveys are accurate and reliable techniques used to obtain information on a fishery. It involves interviewing anglers in order to collect data about their catch (species, length, weight), hours fished, type of fishing (boat or shore), fishing effort (number of hours). Currently, Lake Casitas park staff and DFG have been working together to develop ways to increase data collection at the lake. DFG biologist Eloise Tavares has trained eight park staff on the methodologies of conducting a creel survey. With the proper training and equipment available, CMWD proposes to arrange for park staff to help with the surveys, as well as the entry and analysis of all data collected.

Electro-fishing: Electro-fishing is a technique used in fishery management that enables one to collect real time data on the quantity and quality of fish populations in lakes. Electro-fishing involves sending a field of electricity through the water causing a muscle response reaction from the fish, rendering it paralyzed for a short period of time. This allows the fish to be netted and quickly measured for weight and fork length, and then released unharmed. Currently, DFG conducts several electro-fishing surveys in the fall and spring months. CMWD proposes to have Lake Casitas employees assist DFG with the electro-fishing surveys at the lake on a more frequent basis.

Bass Tournament Survey: Bass tournament surveys are another valuable tool used to collect data on the bass population. After anglers

have “weighed in” for the tournament, fish are brought to the surveyor. Each fish is weighed and measured and then immediately released back into the lake.

Currently, DFG samples bass tournaments in the summer and winter months. DFG has trained several Lake Casitas park staff on the methodologies and techniques of bass tournament surveys. CMWD proposes to have park staff conduct bass tournament surveys on a more regular basis. Copies of the surveys will be given to DFG to assist with their own efforts in restoring and conserving California’s lake fishery resources.

Section 3: Habitat Enhancement

Structures: There is an on-going need for the installation of habitat structures throughout the lake. Artificial habitats are an effective way to concentrate fish and increase angling success. They provide juvenile fish protection from over-predation. They also give the large fish secure locations to rest and ambush prey. A quarterly planting of fish structures is being considered and research is currently underway to identify outside companies willing to provide funding through grant money and/or help with the planting. Listed below are updates on habitat enhancement projects at Lake Casitas.

The FMP states that additional structure will be placed in the lake on a quarterly basis. On 10/20/05 20 pieces of cement pipe were distributed as fish habitat. While this structure is deeper than preferred breeding purposes, but will not become a hazard to navigation. Several wooden docks have also been placed in about 70 feet of water outside of the marina. On 11/15/2005 three fish habitat structures from Aquatic Eco Systems were also placed in the same area as P-02.

Name	Depth in Feet	Longitude	Latitude	10/20/05
P-01	70	3424.269	119.20.261	pieces 3
P-02	60	3424.278	119.20.247	3
P-03	50	3424.285	119.20.203	3
P-04	51	3424.203	119.20.121	3
P-05	62	3424.277	119.20.259	3
P-06	62	3424.268	119.20.235	3
P-07	54	3424.194	119.20.116	2
				Total 20

- DFG biologists have recently approved the placement of oak and citrus trees (also called “brush piles”) for use as structure in Lake Casitas. Brush piles are frequently placed in shallower water (12-21 feet) to attract the forage fish species. While bluegill and crappie benefit the most from a brush pile placed in shallower water, the male largemouth bass will also utilize the structure by digging nests underneath.
- In the last two years, Lake Casitas staff along with a representative of the Ventura County Department of Fish and Game Commission and members of the Ventura County Bass Club deployed twenty Aqua Crib artificial fish structures in Lake Casitas in water depths varying from 35-40 feet. These structures have been widely used in northern Wisconsin lakes and are proven to attract more fish by providing shelter, protection, and a substrate for beneficial plant and algae growth. Made of post-consumer recyclables, the Aqua Crib is affordable and effective. CMWD employees are currently researching outside sources of funding for these ideal structures.

Section 4: Increased Public Use

Public Outreach Program: A Public Outreach Program is being developed to address and develop goals of the FMP. Items that are being researched and developed include:

- Develop lake Casitas as a non DFG fishing license lake

- Develop and propose fishing related fees
- Develop a fishing pond
- Develop a fishery advisory committee composed of customers
- Press releases with current size and catch limits
- Public presentations at local clubs and community meetings
- Meeting with DFG enforcement and biologist representatives
- Receive grant funds for stocking, habitat and FMP enhancement

Kids Fishing Day: The Lake Casitas Annual Kids Fishing Day, held in late April, has proven to be a success. Although the activities associated with the event are in fact free and CMWD makes no additional money other than the entrance fee, the local community has shown overwhelming gratitude to those in charge of the event. It is unsure as to the number of anglers in the community who return to the lake at other times of the year to fish. Regardless, CMWD proposes to continue the annual event with high hopes of increased angler return in the future. A side benefit of this event is that it introduces the facility to potential new users who may return for other activities such as camping.

Fish Pens: Following a future water quality consultation with the Department of Health Services (DHS), Casitas proposes to place four fish pens near the Santa Ana launch ramp. Each pen will contain a species already found in the lake, such as catfish, largemouth bass, bluegill, and red ear sunfish. For a very nominal fee (\$ 0.25) children and parents alike will be allowed to obtain the proper fish food and “feed the fish”. The idea behind the pens is to spark the interest of fishing to families visiting the lake. For example, if the families do not have a boat on site, they may rent one. If they are missing tackle, they may purchase some. If someone needs a fishing license, one can be obtained at the lake. Although the revenue received from these

purchases may be small, the interest in fishing will have a larger impact in the future.

Free Fishing Days: Currently there are two federally mandated free-fishing days. These dates usually fall on the first Saturday in June and

the last Saturday in September. On these dates only, one can fish without a license. All other rules and regulations apply. These days need to be heavily advertised to introduce the sport of fishing to CMWD customers.

Section 5: Proposed Fee Increases

Tournament Fee: Fishing tournaments, primarily bass, are held year-round at Lake Casitas. Currently, Casitas does not charge any additional fees for fishing tournaments held during daylight hours. Casitas does however; charge a minimum of \$250, to the event promoter, for night fishing tournaments. A convenience fee of \$50 will be also implemented for those tournaments that wish to enter the gate at A-7. This activity allows for less traffic at the Recreation entrance and tournaments to start when the lake opens. In the future CMWD may propose to charge event promoters a small fee for tournaments held during daylight hours. The newly proposed fees would be used to assist the park in fish stocking expenses.

Angler Fee: Currently, there is no additional cost for one to fish at Lake Casitas. In the future CMWD may propose to charge an angler fee, which would be charged to each angler who chooses to fish at the lake. Income generated from this fee would be used for the enhancement of the Lake Casitas fishery. An example of a lake that charges an angler fee is Diamond Valley Lake, which currently charges \$3/angler. No lakes in the area (Cachuma Lake, Lake Piru, Lake Pyramid, Castaic Lake) currently charge an angler fee.

No License Lake: CMWD staff is exploring the possibility of converting Lake Casitas from a public lake requiring a DFG license to a public lake that does not require a DFG license. The current cost of an annual freshwater sport fishing license is \$33.35 and a one-day license is \$10.75. The cost of this license fee combined with the entrance fee, bait & tackle, boat rental and a meal can be out of reach for most customers. One lake near San Diego has successfully converted to a no license lake. Lake Hesperia does not require a fishing license and charges \$12.00 per person to fish. These fees are then earmarked to improve the fishery by stocking fish of increased size and quantities. DFG has clearly indicated that they are opposed

to this action and would no longer offer any support or trout stocking if the lake were to convert to a no license lake.

Section 5: Other Issues

DFG Concerns: DFG has experienced budget cuts over the years and is considering further cutbacks to the hatchery program. Region 5, which includes Lake Casitas, has only one reservoir biologist assigned to manage more than ten lakes in the southern California area. The level of support is not expected to increase.

Whirling Disease: The rainbow trout in Lake Casitas are unable to maintain a self-sustaining population. Therefore, they need to be continually stocked to maintain population numbers. In the fall of 2004, Casitas received a shipment of rainbow trout from the Lost River Stocking Facility, a private hatchery. At the same time another lake received trout from the same Lost River shipment, which later tested positive for whirling disease. Casitas immediately discussed this incident with DFG. The outcome resulted in a plan for DFG to disperse several cages containing rainbow trout around the lake during the spring of 2006. Tests will be conducted to determine the presence and/or extent of Whirling disease. However, senior DFG staff stated that there is limited faith in the complete accuracy of such a test. Currently there is no cure for whirling disease and little can be done to prevent its spread. However, research has found that whirling disease is only transferable to salmonid species. The disease does not affect humans, birds or other fish species. Any private laboratory testing conducted by CMWD to determine the presence of whirling disease is expected to be extremely expensive.

Steps taken in view of this situation are:

- Casitas has erected signs and distributed brochures at both fish cleaning stations, the park store, the marina, and the café. These request the public to report to park staff any trout showing visible signs of whirling disease. To date, there have been no reports or signs of the disease, but CMWD will continue to educate the visiting public and ask for their help.
- The rainbow trout stocking agreement with Lost River has been put on hold. The hold will remain until Lost River acquires the proper stocking permit from DFG, enabling disease free fish to be planted in Lake Casitas.
- Casitas will continue to receive rainbow trout plantings from the DFG Hatchery.
- The potential still exists to develop a mitigation program funded by Lost River such as funding the stocking of trout from another approved hatchery.

Currently, only one private hatchery meets the current DFG standards required for trout stockings. Unfortunately there is a long waiting list for the purchase of these trout. When more private hatcheries meet DFG standards and in turn more hatchery trout become available, Casitas will resume the purchasing and stocking of rainbow trout. Until then, Casitas staff will continue to stay updated on the latest research, reports, and publications available concerning whirling disease.

Fishing Industry Trends: The number of recreation anglers at Lake Casitas appears to be on a downward trend. The number of boat rentals and the number of daily and annual boat permits sold continue to decline. The fishing industry has done a poor job of recruiting a new generation of anglers. An example of another industry doing an excellent recruiting effort is the RV industry. Their “Go RVing” media campaign has spawned a new generation of campers by showing how important it is to spend quality time outdoors with your family and loved ones. The perception they have managed to create is that camping is fun and you should do it often. As often reported to the Board, our full hook-up sites are the first to be sold out and we are experiencing a higher level of weekday occupancy than ever before.

The high cost of a license, the diminished presence of DFG wardens for enforcement and the competition for the recreation and leisure dollar is expected to continue this downward trend. CMWD efforts alone will not reverse this trend and it is unlikely that DFG will get involved in this issue. DFG does offer a limited promotional program targeting inner city youth fishing titled “Urban Fishing Program”. We have been able to partner with DFG utilizing some loaner fishing poles for our Kid’s Fishing Day program. This issue has overriding concerns in that no amount of CMWD funding or programming is expected to reverse this trend.

Action Plan: While our primary goal will not be achieved at once, there are several actions that may be taken immediately to improve the fishery. A summary of actions to be taken by CMWD staff is as follows:

1. Analyze the existing data and continue the data collection process. With the population species, size, and numbers identified, improved management steps may then be taken. This will be done in house by recreation and other CMWD staff. The host staff has already received training and can perform this task at no cost.
2. CMWD needs to raise interest in the lake as a prime location for recreational fishing. Staff already has plans to attend RV type shows and promote the lake. This activity is currently funded in the operating budget. We will also continue to operate Kid’s Fishing Day and promote the two license free fishing days.
3. The process of writing grants and applying for outside sources of funding will help many of the proposed ideas become a reality. The district recently obtained E-Civis grant software, which will assist in locating, applying for and obtaining grant funding. Staff will also apply with the Ventura County Fish & Game Commission for grant funding.

4. Increase the fish population through continued stocking. This activity will continue to be funded through the operating budget. Future enhancements may be possible through earmarking various fee increases to help support this program.
5. Implement annual cove closures to protect the bass spawn. This has happened in the past by partnering with the Ventura Bass Clubs and utilizing surplus lines, cables and buoys to close various coves.
6. Implement proposed catch and size limits. No costs associated with this activity other than information signs and brochures.
7. Schedule and install habitat projects on a quarterly basis. These will either be grant funded or donated brush material
8. Propose fee increases to support this management plan and seek approval from the Board of Directors. This will be included in our annual report to the Board in the fall.
9. Continue to seek out and investigate information from other agencies to support this management plan.
10. Annually update this plan and present to the Board of Directors for approval no later than January 1st of each year.

Conclusions: As shown, our primary goal is to maintain world-class largemouth bass fishing while providing the public with enhanced, recreational multi-species fishing. While our goal will not be achieved at once, several actions may be taken immediately to improve the existing fishery.

The first step, and of utmost importance, will be to analyze the existing data and continue the data collection process through DFG trained park staff. With the improved knowledge of the lake's fish population, further management steps may then be taken such as the implementation of slot and or/bag limits and the introduction of new species.

Secondly, the District needs to raise interest in the lake as a prime location for recreational fishing. Existing events such as "Kids Fishing Day" and "Free Fishing Days" need to be heavily advertised to ensure the local community, CMWD customers, and tourists alike are aware of the fishing opportunities available at Lake Casitas.

Thirdly, the process of writing grants and applying for outside sources of funding will help many of the proposed ideas become a reality. For example, additional money may be obtained from local bass clubs to be used for increased fish stocking. Outside funding will also be sought to be used for the quarterly installation of artificial structures throughout the lake. Lastly, the proposed fee increases to support this management plan and any potential effects will be researched thoroughly before implementation and further approval will be sought from CMWD Board of Directors. This fisheries management plan will be updated on no less than an annual basis with a summary of findings presented to the Board of Directors.

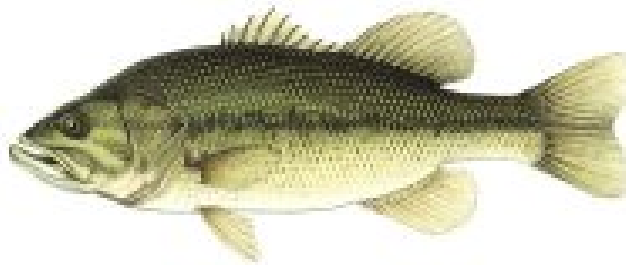
Appendix 1:

SPECIES FOUND IN LAKE CASITAS:

Warm Water Fisheries:

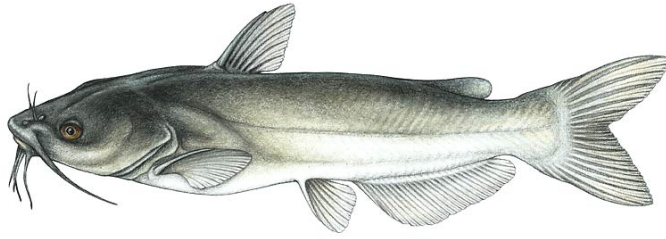
The warm water fisheries at Casitas Lake consist of two species of sunfish, two species of crappie, one species of catfish and one black bass species. Presently, all fisheries are in good status. The following are the recorded Lake Casitas records:

<u>Species</u>	<u>Weight (lbs)</u>	<u>Year</u>
Largemouth bass	21.2	1980
Channel catfish	42.0	1991
Redear sunfish	3.4	1976
Crappie	3.6	1984



Largemouth bass (*Micropterus salmoides*, Lacepede)

The first northern strain largemouth was introduced to California from Illinois in 1891. The first Florida largemouth was introduced to California in 1959. Growth of largemouth bass is variable depending upon genetic background, food availability, competition, temperature regimes, and other variables. The majority of fish at the reservoir are four to five year olds measuring approximately 35-45 cm in total length. Adult bass eat larger fish and invertebrates. They will change foraging behavior in accordance with prey availability, type of habitat and body size. Smaller sized bass need areas that will protect them from their predators. Nesting bass likewise need structure. Largemouth bass generally build their nest next to submerged objects such as logs and boulders. The black bass regulation at Lake Casitas is a 12-inch minimum size limit with a daily bag limit of five-fish with no more than one fish over 22 inches.

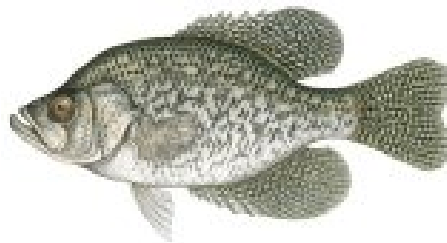


Channel catfish (*Ictalurus punctatus*, Rafinesque)

Another fish species that does quite well in Lake Casitas is the channel catfish. There is a good population of channel catfish in the reservoir. Generally, catfish are fast growers. The largest one caught in California weighed 23.9 kg (52.6 pounds). Catfish are not fussy eaters. They will eat an animal of appropriate size including small mammals. One of the biggest impacts to populations of catfish is lack of spawning structure. They require cave like structures that protect the nest from the sun. There is a daily bag limit of 10-fish with no size limit. Fishing is year round.

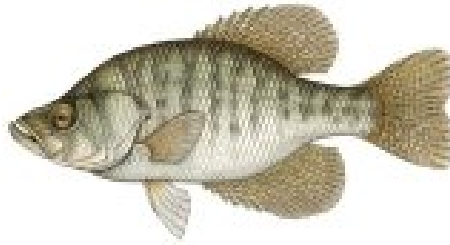
Crappie

Two types of crappie reside in the reservoir, the black crappie (*Pomoxis nigromaculatus*, Lesueur) and the white crappie (*Pomoxis annularis*, Rafinesque). Lake Casitas gives anglers the opportunity to catch crappies that weigh over three pounds. Both species are popular with area anglers.



Black crappie (*Pomoxis nigromaculatus*, Lesueur)

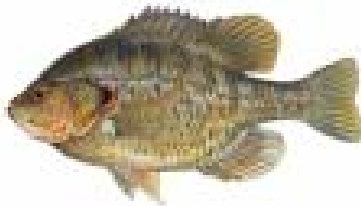
Black crappie move into open waters during the evening (around midnight), early morning hours and noontime to feed. If prey is abundant near shore, they will move inshore instead. They feed on both zooplankton and on other fish. During the day, black crappies congregate around large submerged objects.



White crappie (*Pomoxis annularis*, Rafinesque)

White crappie move into open waters during the evening and early morning hours to feed. They feed on both zooplankton and on other fish. They are opportunistic and eat small aquatic insects when they are available. Large invertebrates and fish, especially threadfin shad are the main diet of the larger sized white crappie. White crappie congregate around submerged logs or boulders. They have a greater tolerance for a lack of vegetation and cover than the black crappie. Crappies are regulated by a 25 total (i.e. combined white and/or black) daily bag limit with fishing year round.

Sunfish



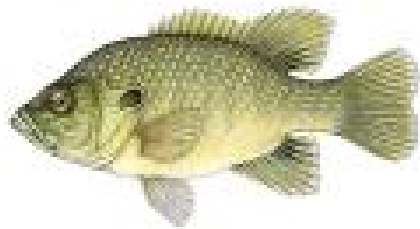
Redear sunfish (*Lepomis microlophus*, Gunther)

Redear can be caught off the shore and near creek inlets. They seem to be more difficult to catch than bluegill because they prefer deeper waters and they feed on or close to the bottom. Although they mostly eat snails, they prefer bottom dwelling insect larvae such as dragonfly, midge and mayfly larvae and amphipods. Adult redear prefer warm water deeper than 2 meters in reservoirs with substantial beds of aquatic vegetation. No bag or size limit, open year round to fishing.



Bluegill (*Lepomis macrochirus*, Rafinesque)

Bluegills are opportunistic feeders. They will feed on whatever animal is most abundant. They prefer larvae of aquatic insects such as midges, mayflies, and dragonflies. When these are not available, they turn to whatever is abundant such as crustaceans (plankton occurring and crayfish), flying insects, snails, threadfin shad, and other fish species. Bluegills tend to prefer warmer waters of a depth to five meters. They are often associated with rooted aquatic plants, in which they hide and feed. No bag or size limit, open year round to fishing.



Green sunfish (*Lepomis cyanellus*, Rafinesque)

Green sunfish are opportunistic predators on invertebrates and other fish including their own young. In reservoirs, green sunfish prefer shallow weedy waters. They hide in crevices and or under overhangs. They are capable of surviving in areas where other species cannot such as in high temperatures or low dissolved oxygen levels. No bag or size limit, open year round to fishing.



Threadfin Shad (*Dorosoma petenense*, G \ddot{o} nther)

Threadfin shad may be taken for baitfish. Threadfin shad are plankton feeders. They can filter plankton. Threadfin shad are pelagic which means they can survive in salt water but they mainly live in fresh water. Threadfin shad form schools segregated by size. They concentrate in surface waters with the young-of-the-year inhabiting deeper waters than the adults inhabit. Both the rainbow trout and largemouth bass will feed on threadfin shad. Live threadfin shad collected at Casitas Lake may be used only in Casitas Lake. Dead threadfin shad may be used as bait. For capture methods refer to Section 4.05 in the California Freshwater Sport Fishing Regulations. No bag or size limit, open year round to fishing.

Cold Water Fisheries:

The following is the record reported for Lake Casitas:

<u>Species</u>	<u>Weight (lbs)</u>	<u>Year</u>
Trout	9.25	1985

The cold-water fishery at the lake consists of rainbow trout. There is a put-and-take trout program at the lake. The Department stocks over 50,000 catchable trout in Lake Casitas. CMWD up to last year was stocking approximately 30,000 pounds of trout per year.



Rainbow trout (*Oncorhynchus mykiss* Walbaum)

Rainbow trout are the most abundant native salmonid in western North America. They are highly adaptable fish and are breed readily at fish hatcheries. There is a put-and-take trout fishery at Lake Casitas. From September through June fish are stocked in the reservoir twice a month by the DFG fish hatchery located in Fillmore. Trout caught at the reservoir range from 0.5 pounds to 9 pounds. Holdover trout occur in the reservoir (trout that survive the summer months). They do well as a put-and-take fishery. Most fish are caught the day of a fish plant and the following few days after the fish are stocked in the reservoir. They have several predators ranging from other fish such as largemouth bass to avian predators such as herons and kingfishers. Trout including hatchery-raised trout seek structure and deeper, cooler water. They need cover to hide from both predatory birds and fish. Within a few days after a plant, these fish can be caught in water deeper than 100 feet. The rainbow trout fishery is mostly a put-and-take fishery. There is a daily bag limit of five-fish per day and ten in possession with no size limit.

Appendix D
California Red-Legged Frog Survey Report



January 25, 2005

CALIFORNIA RED-LEGGED FROG

SURVEY REPORT

Casitas Lake Watershed Casitas Lake Resource Management Plan

For: John Gray, URS

By: Vince Semonsen, Wildlife Biologist

Introduction

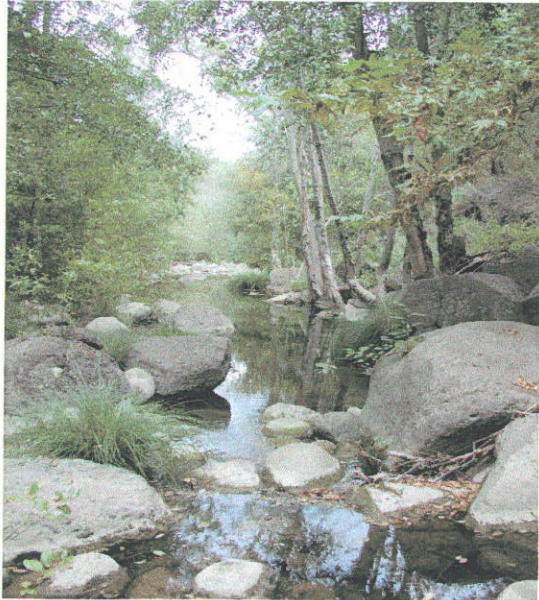
Portions of the Casitas Lake watershed in Ventura CA were surveyed for CA red-legged frogs (*Rana aurora draytonii*) in the fall of 2003 and the spring of 2004. U.S. Fish and Wildlife Service Protocol Level Surveys were conducted to verify the presence or absence of the federally threatened CA red-legged frog. The survey information will be incorporated into the Casitas Lake Resource Management Plan with an emphasis on protecting and enhancing the natural resources, while providing for public use and understanding of the open space lands. Streams and ponds surveyed include Coyote Creek, Poplin Creek, Santa Ana Creek, Cooper Canyon and two man-made ponds the Selby pond and what is called the north pond (see attached map). This report documents the results of the field surveys focusing on amphibians and any other sensitive species noted during the surveys. Included in this report will be a brief description of the habitats and the survey methods.

The CA red-legged frog (CRLF) was listed as threatened by the U.S. Fish and Wildlife Service in June of 1996. Within the state of California the species has been eliminated from 75% of its former range with the loss of habitat, pesticides and other pollutants, and the introduction of bullfrogs and non-native fish considered to be the major reasons for its decline. The CRLF is chiefly a pond frog that frequents marshes, streams, lakes, reservoirs, ponds, and other usually permanent sources of water where cattails, bulrushes, or other plants provide dense riparian cover (Stebbins, 2003). They have also been documented breeding in vernal pools and ephemeral drainages, eventually dispersing into damp habitats as the water dries up. CA red-legged frogs can migrate considerable distances, with documented travel of up to 1.8 miles, as recorded from the Guadalupe dunes area (personnel experience).

Survey Areas

The four creeks and two ponds surveyed for CRLF are all within the Casitas Lake watershed. Coyote creek and Santa Ana creek are the two larger creeks draining extensive areas of the Santa Ynez Mountains. Poplin Creek is much smaller and is a tributary of Coyote creek while Cooper Canyon is smaller still and is a tributary of Santa Ana Creek. Historically CRLF probably occupied these drainages but they have not been recorded from this area in the recent past.

Coyote Creek is a fairly good-sized perennial creek with good stream flows noted both in the fall of 2003 and the spring of 2004. Most of the Coyote Creek drainage is within national forest land originating high in the Santa Ynez mountain range.



Coyote Creek (photo taken in Oct. 2003)

There appears to have been very little past or present human development or water use within the drainage, which may be why stream flows persist year round. The riparian corridor is thickly vegetated with a wide variety of native vegetation and very few non-native species. The stream channel was well shaded supporting clear, cool water and a rock, sand and cobble streambed. Numerous large, deep pools were noted along the surveyed portions of the creek. The perennial stream flow and the pristine riparian corridor suggest that Coyote Creek is little changed from prehistoric time. Species observed included, trout, crayfish, one arboreal salamander, six Coast range newts, Pacific treefrogs, CA treefrogs, Western toads and numerous bullfrogs. Approximately 3/4 of a mile of Coyote creek was surveyed for CRLF's.

Santa Ana Creek is also a large creek with its headwaters high up in the Santa Ynez mountain range. It does not appear to be a perennial stream as large portions of the creek bed were dry during both the fall and spring surveys. Within the surveyed portion of the creek underground flows



Santa Ana Creek (photo taken in Oct. 2003)

surfaced in two separate locations, creating active channels each approximately .25 miles long. The riparian corridor was well vegetated with a wide variety of native trees and shrubs. The native tree canopy created a shady stream corridor with plenty of hiding places for CRLF (i.e. root balls, large boulders). The stream flows were small but clear and cool, flowing around large boulders and over a rock/cobble bottom. Amphibians observed included Pacific treefrogs, CA treefrogs, Western toads, and

bullfrogs. Only one bullfrog was observed within Santa Ana creek and it was caught and disposed of. Over a mile of the creek was surveyed between the Santa Ana Road crossing and the forest service property boundary.

Poplin Creek is a much smaller ephemeral drainage located between Coyote and Santa Ana Creeks. Outside of the rainy season water persists only in a number of scattered rocky pools where the creek flows over bedrock. Much more rural development exists along Poplin Creek hence a more degraded riparian corridor with numerous invasive weeds. The stream channel is small, much sandier with very few deep pools. Within the Poplin drainage is the Selby Pond, a 2-acre man-made pond located just downstream of the forest service boundary. The pond was spring fed and appeared to have been in existence for a number of years. A number of large riparian trees ringed the pond along with a thick border of tules. Five adult bullfrogs were identified in the pond.

Cooper Canyon is a small tributary to Santa Ana Creek entering from the east approximately .75 miles upstream from the Santa Ana Road crossing. The stream channel was similar to Poplin



Creek, a small ephemeral drainage with a sandy bottom and very few deep pools. The riparian corridor was well vegetated with native trees and shrubs, providing a shaded stream channel and the numerous hiding places preferred by CRLF's. Surveys did reveal a section of the creek where the stream had scoured some deep pools in the bedrock. An old concrete dam had been built within this location (visible in the photo) but it appeared long abandoned. Three juvenile Southwestern pond turtles were observed in one of the larger pools in this area. Other species observed included, Pacific treefrogs, California treefrogs, Western toads and one bullfrog seen in the pool shown in the photo. A little over 1/2 mile of the creek was surveyed.

Cooper Canyon (photo taken in May 2004)

The North Pond is a man-made pond located within the Santa Ana Creek watershed near the National Forest Boundary. It is probably spring fed and looks to have been in existence for quite a number of years. It is approximately one acre in size and supports a healthy ring of tule vegetation. The pond appears to have a healthy fish population and 11 adult bullfrogs were counted during the night surveys.

Methods

The field surveys for CA red-legged frogs were conducted in the fall of 2003 and the spring of 2004. Protocol level surveys were completed to comply with U. S. Fish and Wildlife requirements needed to confirm the presence or absence of CA red-legged frogs. Two day surveys and two night surveys are required to comply with U.S. Fish and Wildlife protocol. As per USFWS protocol; the surveys were conducted between May 1 and November 1, a waiting period of at least 24 hours was adhered to before repeating a survey, the day surveys were conducted on clear, sunny days, and the night surveys on warm, still nights. Completion of all four surveys is only necessary when trying to

establish the absence of CA red-legged frogs. Day and night surveys were conducted in the fall of 2003 with additional day and night surveys done in the spring of 2004 to cover areas missed in 2003.

The day surveys were conducted by walking up the stream channel utilizing binoculars to search for CRLF's. The frogs can be extremely difficult to find during the day but tadpoles and egg masses can be identified. Day surveys focused on the evaluation of the habitat, taking photographs, looking for sensitive wildlife, and identifying the best access points for the night survey work. Night surveys were conducted using a headlamp primarily to identify red-legged frogs by their eye shine, however a number of wildlife species are also more readily observed at night (i.e. raccoons, skunks, bats). Frogs are more active at night and their eye shine can be easily seen from over 50 yards away. Tadpoles are also easier to observe and identify at night. A kayak was used to negotiate the two ponds. All survey work was done moving upstream through the areas to be evaluated. Whenever possible care was taken not to walk in the flowing water. Weather conditions were optimal with clear, sunny days and warm, calm nights.

The following table lists the survey dates, times, the surveyors and general weather conditions.

<u>Date</u>	<u>Times (start & end)</u>	<u>Surveyors</u>	<u>Weather Conditions</u>
Oct. 2, 2003	8 hr day survey	VJS & AM	Clear & sunny, warm, slight breeze
Oct. 16, 2003	8 pm – 10 pm	VJS & AM	Partly cloudy, calm, mild temps
Oct. 24, 2003	8 pm – 10:30 pm	VJS & JL	Partly cloudy, calm, mild temps
Oct. 30, 2003	7:45 pm – 10:30 pm	VJS & AM	Partly cloudy, calm, mild temps
May 25, 2004	10:30 am – 2:30 pm	VJS & JL	Clear & sunny, warm, slight breeze
June 8, 2004	8:30 pm – 11:30 pm	VJS & JL	Clear, calm w/ mild temperatures.
June 15, 2004	8:30 pm – 11:30 pm	VJS & JL	Clear, mild temps & slight breeze

VJS = Vince Semonsen

JL = Johanna LaClaire

AM = Autumn McKee

Survey Results

No CA red-legged frogs were seen during any of the survey work. Even though no snakes were seen the herpetological health of the watershed appears good with six native species observed,



Arboreal salamander at Coyote Creek

including two listed as "species of special concern", the Southwestern pond turtle and the Coast range newt. Unfortunately, bullfrogs were found in Coyote Creek, Santa Ana Creek and Cooper Canyon, and in both the Selby pond and the north pond. Crayfish, another serious predator of native wildlife, were seen in Coyote Creek. Raccoons, woodrats and bats were also observed during the night surveys.

Santa Ana and Coyote Creeks looked to be the most promising areas with respect to supporting CRLF's. The riparian corridor was healthy supporting a wide range of native vegetation that provided a shaded stream channel. A number of large deep pools were noted within the surveyed areas and the large boulders and root balls provided excellent hiding places. The aquatic insect fauna also appeared healthy with a diverse variety of bugs seen in the water. My sense is that CRLF may still inhabit the upper reaches of both creeks. During the surveys of Coyote Creek fewer and fewer bullfrogs were observed as we progressed upstream. None were seen above the confluence of the east fork of Coyote Creek. At the same time native species diversity increased with both the arboreal salamander and the coast range newts observed above the east fork.

An interesting wildlife observation occurred along Coyote Creek. A dead turkey vulture was found along the stream banks with wing tags. I collected the tags and contacted a number of biologists



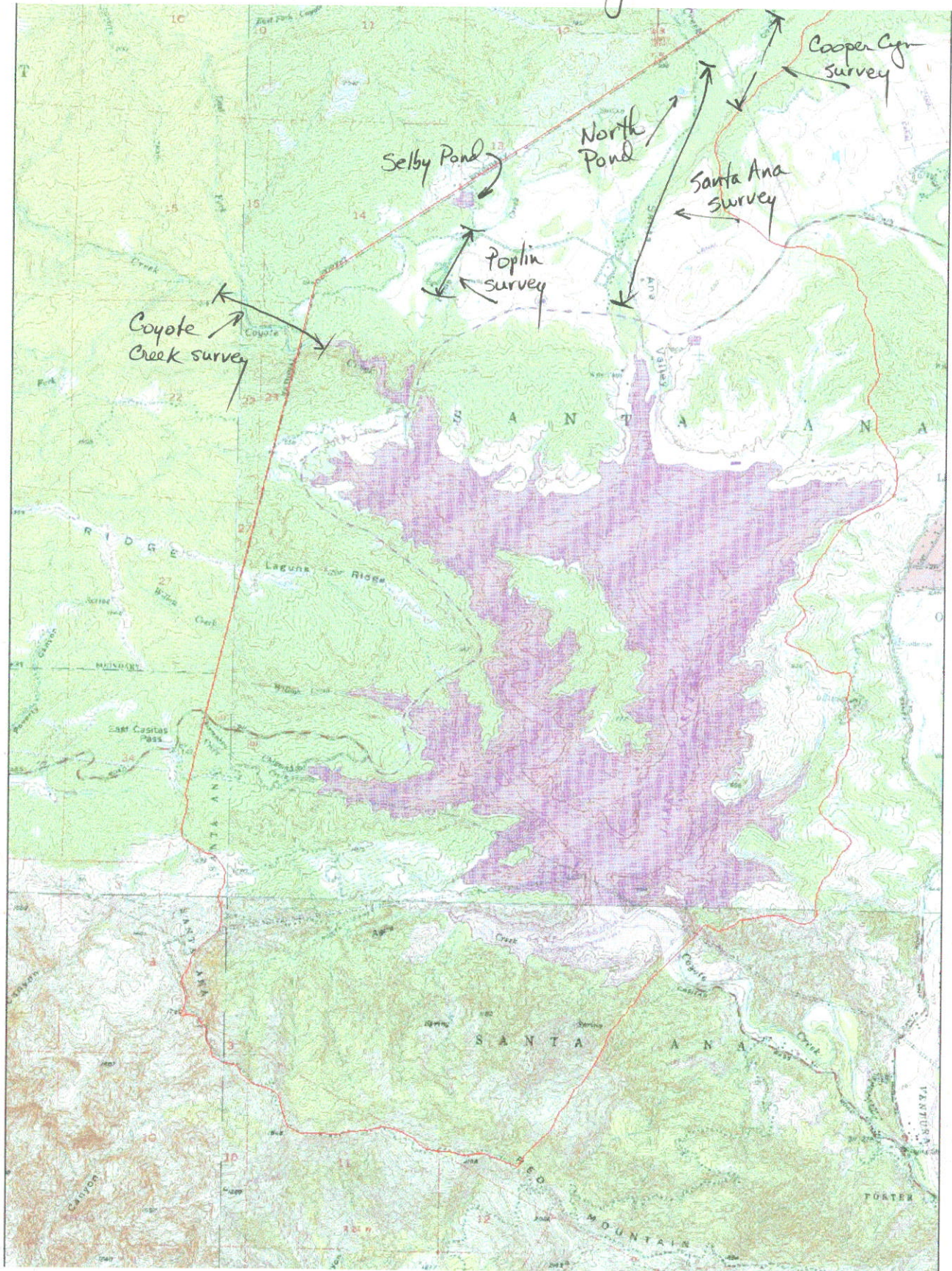
about the bird. Turns out biologists were catching and tagging turkey vultures at Pt. Mugu to be released away from the airbase. This bird was released in good health off of West Camino Cielo (San Marcos Pass) in August 2003.

Dead turkey vulture, Coyote Creek October 2003

References:

Stebbins R. C. 2003 A Field Guide to Western Reptiles and Amphibians. Third Edition. Boston: Houghton Mifflin.

Lake Casitas Study Area



1" = 4,000'