

Table 1
Plant Species Observed on the Artesa Project Site

Ferns and Allies

Blechnaceae

Woodwardia fimbriata Giant Chain Fern

Dennstaedtiaceae

Pteridium aquilinum pubescens Bracken fern

Dryopteridaceae

Athyrium filix-femina cyclosorum Western lady fern

Polystichum munitum Western sword fern

Equisetaceae

Equisetum telemateia braunii Giant horsetail

Polypodiaceae

Polypodium californicum California polypody

Pteridaceae

Pentagramma triangularis triangularis Goldback fern

Gymnosperms**Pinaceae**

Pinus lambertiana Sugar pine

Pseudotsuga menziesii menziesii Douglas-fir

Taxodiaceae

Sequoia sempervirens Redwood

Angiosperms - Dicots**Anacardiaceae**

Toxicodendron diversilobum Western poison-oak

Apiaceae

Daucus pusillus Rattlesnake weed

Eryngium aristulatum aristulatum California coyote-thistle

**Foeniculum vulgare* sweet fennel

Osmorhiza chilensis Sweet cicely

Sanicula bipinnatifida Purple sanicle

Sanicula crassicaulis Gamble weed

**Torilis arvensis* Torilis

Asteraceae

Achillea millefolium Yarrow

Anaphalis margaritacea Pearly everlasting

Aster radulinus Broad-leaf aster

Baccharis pilularis Coyote brush

**Bellis perennis* English daisy

**Carduus pycnocephalus* Italian thistle

**Chamomilla suaveolens* Pineapple-weed

**Chrysanthemum segetum* Corn chrysanthemum

**Cirsium vulgare* bull thistle

**Conyza bonariensis* Hairy fleabane

Eriophyllum lanatum achillaeoides Woolly sunflower

Euthamia occidentalis Western goldenrod

* Indicates a non-native species

Table 1
Plant Species Observed on the Artesa Project Site

* <i>Filago gallica</i>	Narrow-leaved filago
* <i>Gnaphalium luteo-album</i>	Weedy cudweed
<i>Gnaphalium palustre</i>	Western marsh cudweed
<i>Gnaphalium purpureum</i>	Purple cudweed
<i>Hieracium albiflorum</i>	White hawkweed
* <i>Hypochaeris radicata</i>	rough cat's-ear
* <i>Leucanthemum vulgare</i>	Ox-eye daisy
<i>Madia gracilis</i>	Slender tarweed
<i>Malacothrix floccifera</i>	Woolly-tuft malacothrix
<i>Microseris paludosa</i>	Microseris
<i>Psilocarphus brevissimus brevissimus</i>	Dwarf woolly-heads
<i>Psilocarphus tenellus globiferus</i>	Round woolly-marbles
<i>Senecio aronicoides</i>	Butterweed
* <i>Silybum marianum</i>	Milk thistle
* <i>Soliva sessilis</i>	Soliva
* <i>Sonchus asper asper</i>	Prickly sow-thistle
* <i>Sonchus oleraceus</i>	common sow-thistle
Betulaceae	
<i>Corylus cornuta californica</i>	California hazelnut
Boraginaceae	
* <i>Myosotis discolor</i>	Yellow and blue forget-me-not
<i>Plagiobothrys undulatus</i>	Coast popcornflower
Brassicaceae	
<i>Cardamine californica sinuata</i>	Milk maids
* <i>Raphanus sativus</i>	Wild radish
Callitrichaceae	
<i>Callitriche trochlearis</i>	Wastewater, water-starwort
Caprifoliaceae	
<i>Lonicera hispidula vacillans</i>	California honeysuckle
Caryophyllaceae	
* <i>Cerastium glomeratum</i>	Mouse-ear chickweed
* <i>Moenchia erecta erecta</i>	Moenchia
* <i>Silene gallica</i>	Windmill-pink
<i>Spergularia marina</i>	Saltmarsh sand-spurrey
Ericaceae	
<i>Allotropa virgata</i>	Sugar stick
<i>Arbutus menziesii</i>	Madrone
<i>Arctostaphylos columbiana</i>	Hairy manzanita
<i>Arctostaphylos manzanita x stanfordiana</i>	Annapolis manzanita
<i>Pyrola picta</i>	White-veined wintergreen
<i>Rhododendron occidentale</i>	Western azalea
<i>Vaccinium ovatum</i>	California huckleberry
Euphorbiaceae	
<i>Eremocarpus setigerus</i>	Turkey mullein
Fabaceae	
* <i>Genista monspessulana</i>	French broom
* <i>Lathyrus tingitanus</i>	Tangier pea

Table 1
Plant Species Observed on the Artesa Project Site

<i>*Lotus angustissimus</i>	Lotus
<i>Lotus formosissimus</i>	Slender trefoil
<i>Lotus purshianus purshianus</i>	Spanish-clover
<i>Lotus wrangelianus</i>	Common trefoil
<i>Lupinus bicolor</i>	Miniature lupine
<i>*Medicago polymorpha</i>	California burclover
<i>Thermopsis macrophylla</i>	Santa Ynez false lupine
<i>Trifolium barbigerum andrewsii</i>	Gray's clover
<i>Trifolium depauperatum</i>	Dwarf sack clover
<i>*Trifolium dubium</i>	Little hop clover
<i>*Trifolium hirtum</i>	Rose clover
<i>Trifolium oliganthum</i>	Clover
<i>*Trifolium repens</i>	White clover
<i>*Trifolium subterraneum</i>	Subterranean clover
<i>Trifolium willdenovii</i>	Tomcat clover
<i>*Vicia sativa nigra</i>	Narrow-leaved vetch
Fagaceae	
<i>Lithocarpus densiflorus densiflorus</i>	Tanbark oak
<i>Quercus berberidifolia</i>	Scrub oak
<i>Quercus garryana garryana</i>	Garry oak
<i>Quercus wislizeni wislizeni</i>	Interior live oak
Gentianaceae	
<i>Centaurium davyi</i>	Conchalagua
<i>Cicendia quadrangularis</i>	Timwort
Geraniaceae	
<i>*Erodium botrys</i>	broad-leaf filaree
<i>*Geranium dissectum</i>	cut-leaf geranium
Hydrophyllaceae	
<i>Nemophila parviflora parviflora</i>	Nemophila
Hypericaceae	
<i>*Hypericum perforatum</i>	Klamathweed
Lamiaceae	
<i>Mentha arvensis</i>	Field mint
<i>*Mentha pulegium</i>	Pennyroyal
<i>Prunella vulgaris lanceolata</i>	Self-heal
<i>Satureja douglasii</i>	Yerba buena
<i>Stachys ajugoides rigida</i>	Rigid hedge-nettle
Lauraceae	
<i>Umbellularia californica</i>	California bay
Linaceae	
<i>*Linum bienne</i>	Flax
Lythraceae	
<i>*Lythrum hyssopifolium</i>	Hyssop loosestrife
Myricaceae	
<i>Myrica californica</i>	Pacific bayberry
Onagraceae	
<i>Camissonia ovata</i>	Sun cup

* Indicates a non-native species

Table 1
Plant Species Observed on the Artesa Project Site

<i>Clarkia purpurea quadrivulnera</i>	Four spot
Oxalidaceae	
<i>Oxalis oregana</i>	Redwood sorrel
Philadelphaceae	
<i>Whipplea modesta</i>	Yerba de selva
Plantaginaceae	
* <i>Plantago lanceolata</i>	English plantain
Polemoniaceae	
<i>Navarretia intertexta intertexta</i>	Needle-leaved navarretia
<i>Navarretia squarrosa</i>	Skunkweed
<i>Navarretia viscidula</i>	Navarretia
Polygalaceae	
<i>Polygala californica</i>	California milkwort
Polygonaceae	
* <i>Polygonum arenastrum</i>	common knotweed
* <i>Rumex acetosella</i>	Sheep sorrel
* <i>Rumex crispus</i>	curly dock
Portulacaceae	
<i>Calandrinia ciliata</i>	Red maids
<i>Claytonia perfoliata</i>	Miner's lettuce
<i>Montia fontana</i>	Blinks
Primulaceae	
* <i>Anagallis arvensis</i>	Scarlet pimpernel
<i>Dodecatheon hendersonii</i>	Mosquito bills
<i>Trientalis latifolia</i>	Starflower
Ranunculaceae	
<i>Ranunculus californicus</i>	California buttercup
Rhamnaceae	
<i>Ceanothus foliosus foliosus</i>	California lilac
<i>Ceanothus incanus</i>	Coast whitethorn
<i>Ceanothus oliganthus sorediatus</i>	Jim brush
<i>Rhamnus californica californica</i>	California coffeeberry
Rosaceae	
* <i>Cotoneaster pannosa</i>	Cotoneaster
<i>Fragaria vesca</i>	Wood strawberry
<i>Heteromeles arbutifolia</i>	Toyon
<i>Holodiscus discolor</i>	Oceanspray
<i>Horkelia tenuiloba</i>	Thin-lobed horkelia
<i>Malus sp.</i>	Apple tree
<i>Rosa gymnocarpa</i>	Wood rose
<i>Rosa nutkana nutkana</i>	Nootka rose
<i>Rosa spithamea</i>	Wood rose
* <i>Rubus discolor</i>	Himalayan blackberry
<i>Rubus leucodermis</i>	Blackcap raspberry
<i>Rubus parviflorus</i>	Thimbleberry
<i>Rubus spectabilis</i>	Salmonberry
<i>Rubus ursinus</i>	California blackberry

* Indicates a non-native species

Table 1
Plant Species Observed on the Artesa Project Site

Rubiaceae

* <i>Galium aparine</i>	Goose grass
<i>Galium californicum californicum</i>	California bedstraw
* <i>Galium parisiense</i>	Wall bedstraw
* <i>Sherardia arvensis</i>	Field madder

Salicaceae

* <i>Salix babylonica</i>	Weeping willow
<i>Salix lasiolepis bigelovii</i>	Arroyo willow

Saxifragaceae

<i>Heuchera micrantha</i>	Alumroot
---------------------------	----------

Scrophulariaceae

<i>Mimulus guttatus</i>	Common monkeyflower
<i>Mimulus moschatus</i>	Musk monkeyflower
<i>Pedicularis densiflora</i>	Indian warrior
<i>Scrophularia californica</i>	California figwort
<i>Triphysaria eriantha rosea</i>	Butter-and-eggs
<i>Triphysaria pusilla</i>	Owl's-clover
<i>Triphysaria versicolor faucibarbata</i>	Triphysaria
* <i>Verbascum thapsus</i>	Woolly mullein
* <i>Verbascum virgatum</i>	Wand mullein

Valerianaceae

<i>Plectritis macrocera</i>	Short-spurred plectritis
-----------------------------	--------------------------

Violaceae

<i>Viola ocellata</i>	Western heart's ease
<i>Viola sempervirens</i>	Evergreen violet

Angiosperms -Monocots**Cyperaceae**

<i>Carex echinata phyllomanica</i>	Stellate coastal sedge
<i>Carex obnupta</i>	Slough sedge
<i>Carex praegracilis</i>	Clustered field-sedge
<i>Cyperus eragrostis</i>	Tall flatsedge
<i>Eleocharis macrostachya</i>	creeping spikerush
<i>Schoenoplectus microcarpus</i>	Small-fruit bulrush

Iridaceae

<i>Iris douglasiana</i>	Douglas' iris
<i>Sisyrinchium bellum</i>	Blue-eyed grass

Juncaceae

<i>Juncus balticus</i>	Baltic rush
<i>Juncus bolanderi</i>	Bolander's rush
<i>Juncus bufonius</i>	toad rush
* <i>Juncus capitatus</i>	Capped rush
<i>Juncus covillei obtusatus</i>	Rush
<i>Juncus dubius</i>	Mariposa rush
<i>Juncus effusus brunneus</i>	Soft rush
<i>Juncus occidentalis</i>	Slender rush
<i>Luzula comosa</i>	Common wood-rush

Table 1
Plant Species Observed on the Artesa Project Site

Liliaceae

<i>Brodiaea terrestris terrestris</i>	Brodiaea
<i>Calochortus tolmiei</i>	Pussy ears
<i>Chlorogalum pomeridianum pomeridianum</i>	Soap plant
<i>Dichelostemma capitatum capitatum</i>	Blue dicks
<i>Disporum hookeri</i>	Fairy bells
* <i>Narcissus sp.</i>	Daffodil
<i>Scoliopus bigelovii</i>	Scoliopus
<i>Smilacina stellata</i>	False Solomon's seal
<i>Trillium chloropetalum</i>	Giant trillium
<i>Triteleia hyacinthina</i>	White brodiaea
<i>Triteleia laxa</i>	Ithurie's spear

Orchidaceae

<i>Calypso bulbosa</i>	Fairy slipper
<i>Cephalanthera austiniiae</i>	Phantom orchid
<i>Piperia elongata</i>	Piperia

Poaceae

* <i>Agrostis capillaris</i>	Colonial bent
<i>Agrostis pallens</i>	Leafy bent
* <i>Aira caryophyllea</i>	Silver European hairgrass
* <i>Avena barbata</i>	slender wild oat
* <i>Briza maxima</i>	Quaking grass
* <i>Briza minor</i>	Small quaking grass
* <i>Bromus diandrus</i>	ripgut grass
* <i>Bromus hordeaceus</i>	soft chess
* <i>Bromus tectorum</i>	Cheat grass
<i>Calamagrostis nutkaensis</i>	Pacific small-reedgrass
* <i>Cortaderia jubata</i>	Pampas grass
* <i>Cynosurus echinatus</i>	Hedgehog dogtail
* <i>Dactylis glomerata</i>	Orchard grass
<i>Danthonia californica americana</i>	California oatgrass
<i>Deschampsia danthonioides</i>	Annual hairgrass
<i>Elymus glaucus glaucus</i>	Blue wildrye
<i>Festuca californica</i>	California fescue
* <i>Gastridium ventricosum</i>	Nit grass
* <i>Holcus lanatus</i>	Common velvet grass
* <i>Hordeum marinum gussoneanum</i>	Mediterranean barley
<i>Leymus triticoides</i>	Creeping wildrye
<i>Panicum acuminatum acuminatum</i>	Western panicgrass
<i>Pleuropogon californicus</i>	Annual semaphore grass
* <i>Poa annua</i>	annual bluegrass
* <i>Poa pratensis pratensis</i>	Kentucky bluegrass
* <i>Taeniatherum caput-medusae</i>	Medusa-head
* <i>Vulpia myuros hirsuta</i>	Rat-tail fescue

Table 2
Wildlife Species Observed at the Artesa Project Site

Amphibians

California giant salamander	<i>Dicamptodon ensatus</i>
Arboreal salamander	<i>Aneides lugubris</i>
California slender salamander	<i>Batrachoseps attenuatus</i>
Foothill yellow-legged frog	<i>Rana boylei</i>
Pacific tree frog	<i>Hyla regilla</i>

Reptiles

Western fence lizard	<i>Sceloporus occidentalis</i>
Sagebrush lizard	<i>Sceloporus graciosus</i>
Western skink	<i>Eumeces skiltonianus</i>
Northern alligator lizard	<i>Elgaria coerulea</i>
Racer	<i>Coluber constrictor</i>
Gopher snake	<i>Pituophis melanoleucus</i>
California red-sided garter snake	<i>Thamnophis sirtalis infernalis</i>
Western aquatic garter snake	<i>Thamnophis couchii</i>

Birds

Turkey vulture	<i>Cathartes aura</i>
Red-tailed hawk	<i>Buteo jamaicensis</i>
American kestrel	<i>Falco sparverius</i>
Merlin	<i>Falco columbarius</i>
Wild turkey	<i>Meleagris gallopavo</i>
California quail	<i>Callipepla californica</i>
Band-tailed pigeon	<i>Columba fasciata</i>
Barn owl	<i>Tyto alba</i>
Western screech-owl	<i>Otus kennicottii</i>
Anna's hummingbird	<i>Calypte anna</i>
Acorn woodpecker	<i>Melanerpes formicivorus</i>
Hairy woodpecker	<i>Picoides villosus</i>
Northern flicker	<i>Colaptes auratus</i>
Western Wood-pewee	<i>Contopus sordidulus</i>
Pacific-slope flycatcher	<i>Empidonax difficilis</i>
Ash-throated flycatcher	<i>Myiarchus cinerascens</i>
Hutton's vireo	<i>Vireo huttoni</i>
Steller's jay	<i>Cyanocitta stelleri</i>
Western scrub jay	<i>Aphelocoma californica</i>
American crow	<i>Corvus brachyrhynchos</i>
Common raven	<i>Corvus corax</i>
Northern rough-winged swallow	<i>Stelgidopteryx serripennis</i>
Chestnut-backed chickadee	<i>Poecile rufescens</i>
Oak titmouse	<i>Baeolophus inornatus</i>
Bushtit	<i>Psaltriparus minimus</i>
White-breasted nuthatch	<i>Sitta carolinensis</i>
Brown creeper	<i>Certhia americana</i>
Winter wren	<i>Troglodytes troglodytes</i>
Western bluebird	<i>Sialia mexicana</i>
Swainson's thrush	<i>Catharus ustulatus</i>

Table 2
Wildlife Species Observed at the Artesa Project Site

American robin	<i>Turdus migratorius</i>
Wrentit	<i>Chamaea fasciata</i>
European starling	<i>Sturnus vulgaris</i>
Orange-crowned warbler	<i>Vermivora celata</i>
Yellow warbler	<i>Dendroica petechia</i>
Wilson's warbler	<i>Wilsonia pusilla</i>
Western tanager	<i>Piranga ludoviciana</i>
Spotted towhee	<i>Pipilo maculatus</i>
California towhee	<i>Pipilo crissalis</i>
Savannah sparrow	<i>Passerculus sandwichensis</i>
Dark-eyed junco	<i>Junco hyemalis</i>
Red-winged blackbird	<i>Agelaius phoeniceus</i>
Brown-headed cowbird	<i>Molothrus ater</i>
Purple finch	<i>Carpodacus purpureus</i>
Lesser goldfinch	<i>Carduelis psaltria</i>

Mammals

Virginia opossum	<i>Didelphis virginiana</i>
Western gray squirrel	<i>Sciurus griseus</i>
Trobridge's shrew	<i>Sorex trowbridgii</i>
Broad-footed mole	<i>Scapanus latimanus</i>
Black-tailed hare	<i>Lepus californicus</i>
Yellow-cheeked chipmunk	<i>Tamias ochrogenys</i>
Botta's pocket gopher	<i>Thomomys bottae</i>
Columbian black-tailed deer	<i>Odocoileus hemionus columbianus</i>
Deer mouse	<i>Peromyscus maniculatus</i>
Dusky-footed woodrat	<i>Neotoma fuscipes</i>
California meadow vole	<i>Microtus californicus</i>
Coyote	<i>Canis latrans</i>
Red fox	<i>Vulpes vulpes</i>
Gray fox	<i>Urocyon cinereoargenteus</i>
Raccoon	<i>Procyon lotor</i>
Striped skunk	<i>Mephitis mephitis</i>
Wild pig	<i>Sus scrofa</i>

Table 3

Special-Status Wildlife Species Potentially Occurring on the Project Site

Species	*Status	Habitat	Closest Locations	Probability on Project Site
Insects				
Behren's silverspot butterfly <i>Speyeria zerebe behrensii</i>	Fed: FE State: - Other: -	Restricted to the Pacific side of the coast ranges, from Point Arena to Cape Mendocino, Mendocino County. Inhabits coastal terrace prairie habitat. Foodplant is <i>viola</i> sp.	Record for this species located 4.6 miles southwest of the project site (Occurrence No. 4)	None. No suitable habitat present on project site.
Fish				
Coho salmon - Central California ESU <i>Oncorhynchus kisutch</i>	Fed: FE State: CE Other:	Federal listing = pops between Punta Gorda & San Lorenzo River. State listing = pops south of San Francisco Bay only. Requires beds of loose, silt-free, coarse gravel for spawning. Also needs cover, cool water and sufficient dissolved oxygen.	No records within 10 miles of the project site.	None. Downstream diversions and blockages stop anadromous fish from reaching the project site.
Steelhead -Northern California ESU <i>Oncorhynchus mykiss</i>	Fed: FT State: - Other:	Coastal basins from Redwood Creek south to the Gualala River, inclusive. Does not include summer-run steelhead.	No records within 10 miles of the project site.	None. No suitable habitat present on project site. Water is intermittent and too warm in summer months to support fry. Downstream diversions and blockages stop anadromous fish from reaching the project site.
Chinook salmon - California coastal ESU <i>Oncorhynchus tshawytscha</i>	Fed: FT State: - Other:	Fed listing refers to wild spawned, coastal, spring and fall runs between Redwood Creek, Humboldt County and Russian River, Sonoma County.	No records within 10 miles of the project site.	None. No suitable habitat present on project site. Water is intermittent and too warm in summer months to support fry. Downstream diversions and blockages stop anadromous fish from reaching the project site.
Gualala roach <i>Lavinia symmetricus parvipinnis</i>	Fed: -- State: CSC Other: -	Found only in Gualala River.	Record for this species located 3.3 miles west of the project site (Occurrence No. 1)	None. No suitable habitat for this species is present in Patchett Creek. This species was not detected during appropriately-timed surveys. (No fish have ever been detected on project site).

Table 3

Special-Status Wildlife Species Potentially Occurring on the Project Site

Species	*Status	Habitat	Closest Locations	Probability on Project Site
Amphibians				
Tailed frog <i>Ascaphus truei</i>	Fed: -- State: CSC Other:	Occurs in Montane hardwood-conifer, redwood, Douglas fir, and ponderosa pine habitats. Restricted to perennial montane streams. Tadpoles require water below 15 C.	Closest records for this frog are 24 miles northwest of the project site.	None. Frog surveys did not detect this species on the project site. Egg and larval development require water temperatures that remain below 15 degrees C. Shallow stream on project site is exposed to sunlight and likely is much warmer in spring/summer.
Northern red-legged frog <i>Rana aurora aurora</i>	Fed: -- State: CSC Other:	Occur in ponds and deep pools along streams.	Record for this species located 9.7 miles northwest of the project site (Occurrence No. 967)	None. No suitable habitat on the project site. Frog surveys did not detect this species on the project site.
California red-legged frog <i>Rana aurora draytonii</i>	Fed: FT State: CSC Other:	Occurs in lowlands and foothills in deeper pools and streams, usually with emergent wetland vegetation. Requires 11-20 weeks of permanent water for larval development.	Record for this species located 19 miles southeast of the project site (Occurrence No. 585)	None. No CRLF were observed during surveys conducted in 2006 and 2007. See text.
Foothill yellow-legged frog <i>Rana boylei</i>	Fed: -- State: CSC Other:	Found in partially shaded, shallow streams with rocky substrates. Needs some cobble-sized rocks as a substrate for egg laying. Requires water for 15 weeks for larval transformation.	Record for this species located 3.1 miles west of the project site (Occurrence No. 367)	Species is present on the project site. See text for additional information.
Reptiles				
Pacific pond turtle (=western pond turtle) <i>Actinemys marmorata (=Clemmys m.)</i>	Fed: -- State: CSC Other:	Inhabits ponds, marshes, rivers, streams, and irrigation ditches with aquatic vegetation. Needs suitable basking sites and upland habitat for egg laying. Occurs in the Central Valley and Contra Costa County.	Record for this species located 2.9 miles northwest of the project site (Occurrence No. 61)	None. No suitable habitat is present in Patchett Creek. This species was not detected during appropriately-timed surveys.

Table 3

Special-Status Wildlife Species Potentially Occurring on the Project Site

Species	*Status	Habitat	Closest Locations	Probability on Project Site
Birds				
Osprey <i>Pandion haliaetus</i>	Fed: State: Other: CSC * *	Ocean Shore, bays, fresh-water lakes, and larger streams. Large nests built in tree-tops within 15 miles good fish producing body of water.	Nearest nesting record is 12 miles south (CNDDDB 51) from the project site.	None. Multiple nesting surveys did not detect this species on or near the project site.
Bald eagle <i>Haliaeetus leucocephalus</i>	Fed: State: Other: FT CE *	Ocean shorelines, lake margins, and river courses for both nesting and wintering. Most nests within one mile of water.	Nearest nesting record is greater than 30 miles from the project site.	None. Multiple nesting surveys did not detect this species on or near the project site. Preconstruction surveys shall be conducted to determine the presence or absence of this species on site at the time the project is implemented.
Northern harrier <i>Circus cyaneus</i>	Fed: State: Other: - CSC *	Found in or near freshwater and salt marshes. Nests on the ground or in shrubby vegetation.	No nest sites known from the vicinity of the project site.	None. Project site only provides small areas of marginal hunting habitat. Not expected to nest on the project site. Multiple nesting surveys did not detect this species on or near the project site.
Sharp-shinned hawk <i>Accipiter striatus</i>	Fed: State: Other: - CSC *	Inhabits a variety of habitats, including mixed conifer woodlands and riparian habitats. Usually nests within 300 feet of water.	No records within 10 miles of the project site.	Moderate. Suitable nesting habitat for this species is present on the project site. Nest sites not found during nesting surveys. Preconstruction surveys shall be conducted to determine the presence or absence of this species on site.
Cooper's hawk <i>Accipiter cooperii</i>	Fed: State: Other: - CSC *	Nests in heavily wooded areas along streams, rivers, or near springs/seeps. Prefers to nest in tall canopies with an open understory usually near openings. Oak and riparian woodlands are preferred habitats.	No records within 10 miles of the project site.	Moderate. Suitable nesting habitat for this species is present on the project site. Not found during nesting surveys. Preconstruction surveys shall be conducted to determine the presence or absence of this species on site.
Northern goshawk <i>Accipiter gentilis</i>	Fed: State: Other: -- CSC	In summer, within and in vicinity of coniferous forest. Uses old nests and maintains alternate sites. Usually nests on north slopes, near water, red fir, lodgepole pine, Jeffery pine, and aspens are typical nest trees.	Closest record is 13 miles north of the project site (CNDDDB record 286).	None. Multiple nesting surveys did not detect this species on or near the project site. Preconstruction surveys shall be conducted to determine the presence or absence of this species on site at the time the project is implemented.

Table 3

Special-Status Wildlife Species Potentially Occurring on the Project Site

Species	*Status	Habitat	Closest Locations	Probability on Project Site
Red shouldered hawk <i>Buteo lineatus</i>	Fed: - State: - Other: *	Found in a wide variety of habitats. Nest in oaks, eucalyptus, cypress trees, riparian woodland. Forages over grasslands, agricultural fields, woodlands.	No recorded nest sites in the vicinity of the project site.	Moderate. Suitable nesting habitat for this species is present on the project site. Not found nesting during surveys. Preconstruction surveys shall be conducted to determine the presence or absence of this species on site.
Red-tailed hawk <i>Buteo jamaicensis</i>	Fed: - State: - Other: *	Found in a wide variety of habitats. Nests in oaks, eucalyptus, cypress trees, among others. Forages over grasslands, agricultural fields, woodlands, marshes.	No recorded nest sites in the vicinity of the project site.	Moderate. Species has been observed on the project site. Suitable nesting habitat present on the project site. Not found during nest surveys. Preconstruction surveys shall be conducted to determine the presence or absence of this species on site.
Golden eagle <i>Aquila chrysaetos</i>	Fed: - State: CSC Other: *	Found in rolling foothill grassland with scattered trees. Nests on cliffs and in large trees in open areas.	No nests known from within 30 miles of the project site.	None. Multiple nesting surveys did not detect this species on or near the project site. Preconstruction surveys shall be conducted to determine the presence or absence of this species on site at the time the project is implemented.
Merlin <i>Falco columbarius</i>	Fed: State: CSC Other:	Seacoast, tidal estuaries, open woodlands, savannahs, edges of grasslands and deserts, farms and ranches. Clumps of trees or windbreaks are required for roosting in open country.	Not known to nest in California.	None. While this species could migrate through the area of the project site, migration habitat is not considered sensitive. Would not nest on the project site.
Peregrine falcon <i>Falco peregrinus</i>	Fed: State: CT Other:	Nests on high cliffs near wetlands, lakes, rivers, or other water; also nests on human-made structures. Nest consists of a scrape on a depression or ledge in an open site.	Nearest nest site for this species is greater than 10 miles east of the project site.	None. No suitable nesting habitat on or near project site.
Marbled murrelet <i>Brachyramphus marmoratus</i>	Fed: FT State: CE Other:	Inhabits coniferous forest along the coast from Santa Cruz to Oregon. Nests in old-growth redwood forest, often in large Douglas firs.	Nearest nesting record is greater than 30 miles from the project site.	None. No old growth habitat on or near the project site and thus this species would not be expected to nest on or near the project site. See text.

Table 3

Special-Status Wildlife Species Potentially Occurring on the Project Site

Species	*Status	Habitat	Closest Locations	Probability on Project Site
Western screech-owl <i>Otus kennicottii</i>	Fed: - State: - Other: *	Found in open woods at forest edges. Common in riparian, oak woodland and mixed oak and Douglas fir forests. Nest in hollow stumps and tree cavities.	A probable nesting location for this species was identified along Annapolis Road by the Sonoma County Breeding Bird Atlas.	High. Western screech-owls have been heard calling during spotted owl surveys in 2006/2007. Nest sites not found during nest surveys. Preconstruction surveys shall be conducted to determine the presence or absence of this species on site.
Northern spotted owl <i>Strix occidentalis caurina</i>	Fed: FT State: Other:	Old-growth forests or mixed stands of old-growth and mature trees. Occasionally in younger forests with patches of big trees. High, multistory canopy dominated by big trees, many trees with cavities or broken tops, woody debris and space under canopy.	Records for this species located 0.7 mile south of the project site (NSO Data Base Records SONO43 & SONO58).	None. No spotted owls were detected on or adjacent site during protocol surveys conducted in 2006 and 2007. See text.
Yellow warbler <i>Dendroica petechia</i>	Fed: - State: CSC Other:	Found in riparian habitats with willows, cottonwoods, sycamores, and alders for nesting and foraging.	No records within 10 miles of the project site. There are no confirmed breeding records for this species in Sonoma County.	Moderate. Species was detected foraging on the project site. Not found nesting during avian nesting surveys. Preconstruction surveys shall be conducted to determine the presence of nesting birds on site.

Mammals

Red tree vole <i>Arborimus pomo</i>	Fed: -- State: CSC Other:	Inhabits the north coast fog belt from Oregon to Sonoma County. Feeds almost exclusively on Douglas-fir needles.	Record for this species located 4.0 miles southeast of the project site (Occurrence No. 172)	None. No suitable habitat is present on project site. This species was not detected during NCRM and M&A red-tree vole surveys. See text.
Humboldt marten <i>Martes americana humboldtensis</i>	Fed: State: CSC Other:	Requires old growth Douglas fir forest.	CNDDDB Record No. 8 is the closest known record. This record is 43 miles northeast of the project site.	None. Species requires old growth habitat. No old growth on project site. At least three residences border site with large dogs. Large dogs often seen roaming the project site and would discourage use of site by martens.
Pacific fisher <i>Martes pennanti pacifica</i>	Fed: -- State: CSC Other:	Intermediate to large-tree stages of coniferous forests and deciduous-riparian areas with high percent canopy closure. Use cavities, snags, logs, and rocky areas for cover and denning. Need large areas of mature, dense forest.	CNDDDB Record No. 47 is the closest known record. This record is 43 miles northeast of the project site.	None. Sparse shrub cover is a second-growth characteristic that facilitates fisher hunting. Undergrowth is dense thickets under second growth. Residences on borders of project site support large dogs that roam freely on the site. Habitat is not suitable.

Table 3

Special-Status Wildlife Species Potentially Occurring on the Project Site

Species	*Status	Habitat	Closest Locations	Probability on Project Site
---------	---------	---------	-------------------	-----------------------------

***Status**

Federal:

- FE - Federal Endangered
- FT - Federal Threatened
- FPE - Federal Proposed Endangered
- FPT - Federal Proposed Threatened
- FC - Federal Candidate
- FPD - Federally Proposed for delisting

State:

- CE - California Endangered
- CT - California Threatened
- CR - California Rare
- CC - California Candidate
- CSC - California Species of Special Concern

*Other:

Most birds have protection under the Migratory Bird Treaty Act. Raptors and their nests are protected by provisions of the California Fish and Game Code. A few species, such as the monarch butterfly and "California Fully Protected Animals," may be protected by policies of the California Department of Fish and Game.

Table 4

Special-Status Wildlife Species Known from the Region of the Artesa Project Site

Species	*Status	Habitat	Closest Locations	Probability on Project Site
Insects				
Behren's silverspot butterfly <i>Speyeria zerene behrensii</i>	Fed: FE State: - Other: -	Restricted to the Pacific side of the coast ranges, from Point Arena to Cape Mendocino, Mendocino County. Inhabits coastal terrace prairie habitat. Foodplant is viola sp.	Record for this species located 4.6 miles southwest of the project site (Occurrence No. 4)	None. No suitable habitat present on project site.
Fish				
Coho salmon - Central California ESU <i>Oncorhynchus kisutch</i>	Fed: FE State: CE Other:	Federal listing = pops between Punta Gorda & San Lorenzo River. State listing = pops south of San Francisco Bay only. Requires beds of loose, silt-free, coarse gravel for spawning. Also needs cover, cool water and sufficient dissolved oxygen.	No records within 10 miles of the project site.	None. Downstream diversions and blockages stop anadromous fish from reaching the project site.
Steelhead -Northern California ESU <i>Oncorhynchus mykiss</i>	Fed: FT State: - Other:	Coastal basins from Redwood Creek south to the Gualala River, inclusive. Does not include summer-run steelhead.	No records within 10 miles of the project site.	None. No suitable habitat present on project site. Water is intermittent and too warm in summer months to support fry. Downstream diversions and blockages stop anadromous fish from reaching the project site.
Chinook salmon - California coastal ESU <i>Oncorhynchus tshawytscha</i>	Fed: FT State: - Other:	Fed listing refers to wild spawned, coastal, spring and fall runs between Redwood Creek, Humboldt County and Russian River, Sonoma County.	No records within 10 miles of the project site.	None. No suitable habitat present on project site. Water is intermittent and too warm in summer months to support fry. Downstream diversions and blockages stop anadromous fish from reaching the project site.
Gualala roach <i>Lavinia symmetricus parvipinnis</i>	Fed: -- State: CSC Other: -	Found only in Gualala River.	Record for this species located 3.3 miles west of the project site (Occurrence No. 1)	None. No suitable habitat for this species is present in Patchett Creek. This species was not detected during appropriately-timed surveys. (No fish have ever been detected on project site).

Table 4

Special-Status Wildlife Species Known from the Region of the Artesa Project Site

Species	*Status	Habitat	Closest Locations	Probability on Project Site
Amphibians				
Tailed frog <i>Ascaphus truei</i>	Fed: -- State: CSC Other:	Occurs in Montane hardwood-conifer, redwood, Douglas fir, and ponderosa pine habitats. Restricted to perennial montane streams. Tadpoles require water below 15 C.	Closest records for this frog are 24 miles northwest of the project site.	None. Frog surveys did not detect this species on the project site. Egg and larval development require water temperatures that remain below 15 degrees C. Shallow stream on project site is exposed to sunlight and likely is much warmer in spring/summer.
Northern red-legged frog <i>Rana aurora aurora</i>	Fed: -- State: CSC Other:	Occur in ponds and deep pools along streams.	Record for this species located 9.7 miles northwest of the project site (Occurrence No. 967)	None. No suitable habitat on the project site. Frog surveys did not detect this species on the project site.
Foothill yellow-legged frog <i>Rana boylei</i>	Fed: -- State: CSC Other:	Found in partially shaded, shallow streams with rocky substrates. Needs some cobble-sized rocks as a substrate for egg laying. Requires water for 15 weeks for larval transformation.	Record for this species located 3.1 miles west of the project site (Occurrence No. 367)	Species is present on the project site. See text for additional information.
Reptiles				
Pacific pond turtle (=western pond turtle) <i>Actinemys marmorata</i> (=Clemmys m.)	Fed: -- State: CSC Other:	Inhabits ponds, marshes, rivers, streams, and irrigation ditches with aquatic vegetation. Needs suitable basking sites and upland habitat for egg laying. Occurs in the Central Valley and Contra Costa County.	Record for this species located 2.9 miles northwest of the project site (Occurrence No. 61)	None. No suitable habitat is present in Patchett Creek. This species was not detected during appropriately-timed surveys.
Birds				
Osprey <i>Pandion haliaetus</i>	Fed: State: CSC Other: *	Ocean Shore, bays, fresh-water lakes, and larger streams. Large nests built in tree-tops within 15 miles good fish producing body of water.	Nearest nesting record is 12 miles south (CNDDDB 51) from the project site.	None. Multiple nesting surveys did not detect this species on or near the project site.

Table 4

Special-Status Wildlife Species Known from the Region of the Artesa Project Site

Species	*Status	Habitat	Closest Locations	Probability on Project Site
Bald eagle <i>Haliaeetus leucocephalus</i>	Fed: FT State: CE Other: *	Ocean shorelines, lake margins, and river courses for both nesting and wintering. Most nests within one mile of water.	Nearest nesting record is greater than 30 miles from the project site.	None. Multiple nesting surveys did not detect this species on or near the project site. Preconstruction surveys shall be conducted to determine the presence or absence of this species on site at the time the project is implemented.
Northern harrier <i>Circus cyaneus</i>	Fed: - State: CSC Other: *	Found in or near freshwater and salt marshes. Nests on the ground or in shrubby vegetation.	No nest sites known from the vicinity of the project site.	None. Project site only provides small areas of marginal hunting habitat. Not expected to nest on the project site. Multiple nesting surveys did not detect this species on or near the project site.
Sharp-shinned hawk <i>Accipiter striatus</i>	Fed: - State: CSC Other: *	Inhabits a variety of habitats, including mixed conifer woodlands and riparian habitats. Usually nests within 300 feet of water.	No records within 10 miles of the project site.	Moderate. Suitable nesting habitat for this species is present on the project site. Nest sites not found during nesting surveys. Preconstruction surveys shall be conducted to determine the presence or absence of this species on site.
Cooper's hawk <i>Accipiter cooperii</i>	Fed: - State: CSC Other: *	Nests in heavily wooded areas along streams, rivers, or near springs/seeps. Prefers to nest in tall canopies with an open understory usually near openings. Oak and riparian woodlands are preferred habitats.	No records within 10 miles of the project site.	Moderate. Suitable nesting habitat for this species is present on the project site. Not found during nesting surveys. Preconstruction surveys shall be conducted to determine the presence or absence of this species on site.
Northern goshawk <i>Accipiter gentilis</i>	Fed: -- State: CSC Other:	In summer, within and in vicinity of coniferous forest. Uses old nests and maintains alternate sites. Usually nests on north slopes, near water, red fir, lodgepole pine, Jeffery pine, and aspens are typical nest trees.	Closest record is 13 miles north of the project site (CNDDDB record 286).	None. Multiple nesting surveys did not detect this species on or near the project site. Preconstruction surveys shall be conducted to determine the presence or absence of this species on site at the time the project is implemented.
Red shouldered hawk <i>Buteo lineatus</i>	Fed: - State: - Other: *	Found in a wide variety of habitats. Nest in oaks, eucalyptus, cypress trees, riparian woodland. Forages over grasslands, agricultural fields, woodlands.	No recorded nest sites in the vicinity of the project site.	Moderate. Suitable nesting habitat for this species is present on the project site. Not found nesting during surveys. Preconstruction surveys shall be conducted to determine the presence or absence of this species on site.

Table 4

Special-Status Wildlife Species Known from the Region of the Artesa Project Site

Species	*Status	Habitat	Closest Locations	Probability on Project Site
Red-tailed hawk <i>Buteo jamaicensis</i>	Fed: - State: - Other: *	Found in a wide variety of habitats. Nests in oaks, eucalyptus, cypress trees, among others. Forages over grasslands, agricultural fields, woodlands, marshes.	No recorded nest sites in the vicinity of the project site.	Moderate. Species has been observed on the project site. Suitable nesting habitat present on the project site. Not found during nest surveys. Preconstruction surveys shall be conducted to determine the presence or absence of this species on site.
Golden eagle <i>Aquila chrysaetos</i>	Fed: - State: CSC Other: *	Found in rolling foothill grassland with scattered trees. Nests on cliffs and in large trees in open areas.	No nests known from within 30 miles of the project site.	None. Multiple nesting surveys did not detect this species on or near the project site. Preconstruction surveys shall be conducted to determine the presence or absence of this species on site at the time the project is implemented.
Merlin <i>Falco columbarius</i>	Fed: State: CSC Other:	Seacoast, tidal estuaries, open woodlands, savannahs, edges of grasslands and deserts, farms and ranches. Clumps of trees or windbreaks are required for roosting in open country.	Not known to nest in California.	None. While this species could migrate through the area of the project site, migration habitat is not considered sensitive. Would not nest on the project site.
Peregrine falcon <i>Falco peregrinus</i>	Fed: State: CT Other:	Nests on high cliffs near wetlands, lakes, rivers, or other water; also nests on human-made structures. Nest consists of a scrape on a depression or ledge in an open site.	Nearest nest site for this species is greater than 10 miles east of the project site.	None. No suitable nesting habitat on or near project site.
Marbled murrelet <i>Brachyramphus marmoratus</i>	Fed: FT State: CE Other:	Inhabits coniferous forest along the coast from Santa Cruz to Oregon. Nests in old-growth redwood forest, often in large Douglas firs.	Nearest nesting record is greater than 30 miles from the project site.	None. No old growth habitat on the project site and thus this species would not be expected to nest on the project site.
Western screech-owl <i>Otus kennicottii</i>	Fed: - State: - Other: *	Found in open woods at forest edges. Common in riparian, oak woodland and mixed oak and Douglas fir forests. Nest in hollow stumps and tree cavities.	A probable nesting location for this species was identified along Annapolis Road by the Sonoma County Breeding Bird Atlas.	High. Western screech-owls have been heard calling during spotted owl surveys in 2006/2007. Nest sites not found during nest surveys. Preconstruction surveys shall be conducted to determine the presence or absence of this species on site.

Table 4

Special-Status Wildlife Species Known from the Region of the Artesa Project Site

Species	*Status	Habitat	Closest Locations	Probability on Project Site
Northern spotted owl <i>Strix occidentalis caurina</i>	Fed: FT State: Other:	Old-growth forests or mixed stands of old-growth and mature trees. Occasionally in younger forests with patches of big trees. High, multistory canopy dominated by big trees, many trees with cavities or broken tops, woody debris and space under canopy.	Record for this species located 0.7 mile south of the project site (NSO Data Base Record SONO43).	None. No spotted owls were detected during protocol surveys conducted in 2006 and 2007.
Yellow warbler <i>Dendroica petechia</i>	Fed: - State: CSC Other:	Found in riparian habitats with willows, cottonwoods, sycamores, and alders for nesting and foraging.	No records within 10 miles of the project site. There are no confirmed breeding records for this species in Sonoma County.	Moderate. Species was detected foraging on the project site. Not found nesting during avian nesting surveys. Preconstruction surveys shall be conducted to determine the presence of nesting birds on site.

Mammals

Red tree vole <i>Arborimus pomo</i>	Fed: -- State: CSC Other:	Inhabits the north coast fog belt from Oregon to Sonoma County. Feeds almost exclusively on Douglas-fir needles.	Record for this species located 4.0 miles southeast of the project site (Occurrence No. 172)	None. No suitable habitat is present on project site. This species was not detected during NCRM and M&A red-tree vole surveys.
--	---------------------------------	--	--	--

***Status**

Federal:
 FE - Federal Endangered
 FT - Federal Threatened
 FPE - Federal Proposed Endangered
 FPT - Federal Proposed Threatened
 FC - Federal Candidate
 FPD - Federally Proposed for delisting

State:
 CE - California Endangered
 CT - California Threatened
 CR - California Rare
 CC - California Candidate
 CSC - California Species of Special Concern

*Other:
 Most birds have protection under the Migratory Bird Treaty Act. Raptors and their nests are protected by provisions of the California Fish and Game Code. A few species, such as the monarch butterfly and "California Fully Protected Animals," may be protected by policies of the California Department of Fish and Game.