APPENDIX B

- Biological Resources Background Information
  --Observed Species List
  --Species Descriptions
  --Wetland Assessment

APPENDIX B
Laetitia Agricultural Cluster Project Observed Plant List

Scientific Name	Common Name	Native	Species Status
Vascular Plants nomenclature follows " The Jepson Manual" and http://ucjeps.berkeley.edu/interchange.html			
PTERIDOPHYTES			
Dennstaedtiaceae	Bracken Family		
Pteridium aquilinum	bracken fern	Yes	
Pteridaceae	Brake Family		
Adiantum jordanii	California maiden-hair	Yes	
Pellaea andromedifolia var. *andromedifolia*	coffee fern	Yes	
Pentagrama triangularis	goldback fern	Yes	
GYMNOSPERMS			
Cupressaceae			
Cupressus macrocarpa	Monterey cypress	Yes	
Pinaceae	PINE FAMILY		
Pinus sabiniana	foothill pine	Yes	
ANGIOSPERMS (DICOTS)			
Amaranthaceae	AMARANTH FAMILY		
Amaranthus blitoides	prostrate amaranth	Yes	
Anacardiaceae	SUMAC FAMILY		
Schinus molle	Peruvian pepper tree	No	
Toxicodendron diversilobum	poison oak	Yes	
Apiaceae	Carrot family		
Conium maculatum	poison hemlock	No	
Daucus pusillus	rattle snake weed	Yes	
Foeniculum vulgare	sweet fennel	No	
Oenanthe sarmentosa	water parsley	Yes	
Sanicula bipinnatifida	purple shoe buttons	Yes	
Sanicula crassicaulis		Yes	
Sanicula laciniata.	coast sanicle	Yes	
Torilis nodosa	none	No	
Torrilis arvensis	none	No	
Apocynaceae	Dogbane family		
Vinca major	greater periwinkle	No	
Araliaceae	Ginseng family		
Hedera helix	English ivy	No	
Asclepiadaceae	Milkweed famlLY		
Asclepias fascicularis	narrow-leaf milkweed	Yes	
Achillea millefolium	yarrow	Yes	
Acourtia microcephala	acourtia	Yes	
Ambrosia psilostachya	western ragweed	Yes	

Scientific Name	Common Name	Native	Species Status
Anaphalis margaritacea	pearly everlasting	Yes	
Anthemis arvensis	corn chamomile	No	
Anthemis cotula	mayweed	No	
Artemisia californica	California sagebrush	Yes	
Artemisia douglasiana	mugwort	Yes	
Baccharis douglasii	marsh baccharis	Yes	
Baccharis pilularis var. consanguinea	coyote brush	Yes	
Carduus pycnocephalus	Italian thistle	No	
Centaurea melitensis	tocolote	No	
Centauria solstitialis	yellow star-thistle	No	
Chamomilla sauveolens	pineapple weed	No	
Cichorium intybus	Chicory	No	
Cirsium arvense	Canada thistle	No	
Cirsium vulgare	bull thistle	No	
Conyza canadensis	horseweed	Yes	
Cynara cardunculus	artichoke thistle	No	
Eriodictyon sp.	yerba santa	Yes	
Eriophyllum confertifolium	golden yarrow	Yes	
Filago gallica	narrow-leafed filago	No	
Gnaphalium californica	California everlasting	Yes	
Gnaphalium canescens	white everlasting	Yes	
Gnaphalium luteo-album	cudweed	No	
Hazardia squarrosa	Saw-toothed goldenbush	Yes	
Helianthus annus	sunflower	No	
Heterotheca grandiflora	telegraph weed	Yes	
Hemizonia congesta	hayfield tarweed	Yes	
Hemizonia corymbosa	coast tarweed	Yes	
Hemizonia fasciculata	fascicled tarweed	Yes	
Hypochaeris glabra	smooth cat's ear	No	
Hypochaeris radicata	rough cat's ear	No	
Lactuca saligna	slender lettuce	No	
Lactuca serriola	prickly lettuce	No	
Lessingia filaginifolia	California aster	Yes	
Osteospermum ecklonis	African daisy	No	
Picris echioides	bristly ox-tongue	No	
Silybum marianum	milk thistle	No	
Sonchus asper	prickly sow thistle	No	
Sonchus oleraceus	sow thistle	No	
Stephanomeria virgata	wire-lettuce	Yes	
Taraxacum officinale	Dandelion	No	
Xanthium spinosum	spiny cocklebur	Yes	
Xanthium strumarium	Cocklebur	Yes	

Scientific Name	Common Name	Native	Species Status
Boraginaceae	Borage family		
Amsinckia menziesii var. intermedia	rancher's fireweed	Yes	
Heliotropium curassavicum	Salt heliotrope	Yes	
Brassicaceae	Mustard family		
Brassica nigra	black mustard	No	
Capsella bursa-pastoris	Shepherd's purse	No	
Descurainia pinnata	yellow tansy mustard	No	
Hirschfeldia incana	summer mustard	No	
Lepidium nitidum	pepper grass	Yes	
Raphanus sativus	wild radish	No	
Rorippa nasturtium-aquaticum	water cress	Yes	
Sisymbrium officinale	hedge mustard	No	
Thysanocarpus curvipes	Lacepod	Yes	
Cactaceae	Cactus family		
Opuntia littoralis	prickly-pear cactus	No	
Caprifoliaceae	Honeysuckle family		
Lonicera interrupta	honeysuckle	Yes	
Sambucus mexicana	blue elderberry	Yes	
Symphoricarpos mollis	creeping snowberry	Yes	
Caryophyllaceae	Pink family		
Silene californica	indian pink	Yes	
Silene gallica	catchfly	No	
Spergularia rubra	purple sand spurry		
Chenopodiaceae	Goosefoot family		
Atriplex lentiformis	quailbush	Yes	
Chenopodium album	Pigweed	No	
Chenopodium californicum	California pigweed	Yes	
Salsola tragus	Russian thistle	No	
Convolvulaceae	Morning glory family		
Calystegia macrostegia	coast morning glory	Yes	
Calystegia occidentalis	Western morning glory	Yes	
Convolvulus arvensis	bindweed	No	
Crassulaceae	Stonecrop family		
Crassula connata	pygmy weed	Yes	
Dudleya lanceolata	southern California dudleya	Yes	
Cucurbitaceae	Gourd Family		
Marah fabaceus	wild cucumber	Yes	
Cuscutaceae	Dodder Family		
Cuscuta californica var. californica	Dodder	Yes	
Euphorbiaceae	Spurge family		
Eremocarpus setigerus	doveweed/turkey mullein	Yes	
Ricinus communis	castor bean	No	

Scientific Name	Common Name	Native	Species Status
Euphorbia peplus	petty spurge	No	
Fabaceae	Pea family		
Lathyrus vistitius var vestitus		Yes	
Lotus corniculatus	bird's foot trefoil	No	
Lotus purshianus	Spanish clover	Yes	
Lotus sp.			
Lotus scoparius	deer weed	Yes	
Lupinus bicolor	miniature lupine	Yes	
Lupinus nanus	sky lupine	Yes	
Lupinus succulentis	succulent lupine	Yes	
Melilotus indica	sourclover	No	
Medicago polymorpha	bur clover	No	
Trifolium depauperatum	little sac clover	Yes	
Trifolium repens	White clover	No	
Vicia americana var. americana	American vetch	Yes	
Vicia sativa	spring vetch	No	
Fagaceae	Oak family		
Quercus agrifolia	coast live oak	Yes	
Geraniaceae	Geranium family		
Erodium cicutarium	Red-stemmed filaree	No	
Erodium botrys	Filaree	No	
Geranium dissectum		No	
Grossulariaceae	Gooseberry Family		
Ribes malvaceum	chaparral currant	Yes	
Ribes speciosum	fuschia-flowered gooseberry	Yes	
Hydrophylaceae	Waterleaf Family		
Phacelia imbricata	imbricate phacelia	Yes	
Pholistoma auritum var. auritum	fiesta flower	Yes	
Lamiaceae	Mint Family		
Lavandula sp.	lavender	No	
Marrubium vulgare	horehound	No	
Mentha spicata var. spicata	spearmint	NO	
Monardella villosa ssp. obispoensis	coyote mint	Yes	
Salvia leucophylla	purple sage	Yes	
Salvia mellifera	black sage	Yes	
Salvia spathacea	pitcher sage	Yes	
Stachys bullata	hedge nettle	Yes	
Trichostema lanceolatum	vinegar weed	Yes	
Malvaceae	Mallow family		
Malacothamnus jonesii	Jones's bush mallow	Yes	List 4.3
Malva nigra	cheese weed	No	
Malva neglecta	common mallow	No	

Scientific Name	Common Name	Native	Species Status
Malva nicaeensi	mallow	No	
Myrtaceae	Myrtle family		
Eucalyptus globules	blue gum		
NYCTAGINACEAE	FOUR O'CLOCK FAMILY		
Bougainvillea (ornamental)	bougainvillea		
Onagraceae	Evening primrose family		
Clarkia purpurea	farewell to spring	Yes	
Clarkia unguiculata		Yes	
Epilobium brachycarpum	fireweed	Yes	
Epilobium canum	California fuchsia	Yes	
Epilobium ciliatum	willow herb	Yes	
Oxalidaceae	Woodsorrel family		
Oxalis corniculata	creeping wood sorrel	No	
Papaveraceae	Poppy family		
Eschscholzia californica	California poppy	Yes	
Paeoniaceae	Peony Family		
Peony californica	California peony	Yes	
Plantaginaceae	Plantain family		
Plantago erecta	California plantain	Yes	
Plantago lanceolata	English plantain	No	
Plantago coronopus		No	
Plantago major	common plantain	No	
Plantanaceae	Sycamore Family		
Platanus racemosa	western sycamore	Yes	
Polygonaceae	Buckwheat family		
Eriogonum covilleanum	wild buckwheat	Yes	
Eriogonum elongatum	long stem buckwheat	Yes	
Eriogonum fasciculatum	California buckwheat	Yes	
Eriogonum parvifolium	dune buckwheat	Yes	
Polygonum amphibium	water smartweed	Yes	
Rumex acetosella.	sheep sorrel	No	
Rumex crispus	curly dock	No	
Rumex pulcher	fiddle dock	No	
Portulacaceae	Purslane family		
Claytonia perfoliata	miners lettuce	Yes	
Primulaceae	Primrose family		
Anagalis arvensis	scarlet pimpernel	No	
Ranunculaceae	Buttercup family		
Clematis lasiantha	Pipestems	Yes	
Rhamnaceae	Buckthorn family		
Ceanothus cuneatus var. cuneatus	wedgeleaf ceanothus	Yes	
Rhamnus californica	coffeeberry	Yes	

Scientific Name	Common Name	Native	Species Status
Rhamnus crocea	spiny redberry	Yes	
Rhamnus ilicifolia	holly-leaf red berry	Yes	
Rosaceae	Rose family		
Amelamchier utahensis	Utah service-berry	Yes	
Heteromeles arbutifolia	toyon	Yes	
Rosa californica	California wild rose	Yes	
Rosa spp.	roses (landscaping)		
Rubus ursinus	California blackberry	Yes	
Rubiaceae	Madder Family		
Galium andrewsii	phlox-leaved bedstraw	Yes	
Galium aparine	goose grass	Yes	
Galium californicum	California bedstraw	Yes	
Salicaceae	Willow family		
Populus balsamifera ssp. trichocarpa	black cottonwood	Yes	
Salix lasiolepis	arroyo willow	Yes	
Salix laevigata	red willow	Yes	
Scrophulariaceae	Figwort family		
Collinsia heterophylla	Chinese houses	Yes	
Keckiella cordifolia	keckiella	Yes	
Mimulus aurantiacus	sticky monkey flower	Yes	
Mimulus guttatus	monkeyflower	Yes	
Scrophularia californica	California figwort	Yes	
Veronica anagallis-aquatica	water speedwell	No	
Solanaceae	Nightshade family		
Solanum douglassi	Douglas' nightshade	Yes	
Solanum xanti	white nightshade	Yes	
Tropaeolaceae	Nasturtium family		
Tropaeolum majus	garden nasturtium	No	
Urticaceae	Family		
Urtica dioica ssp. holosericea	hoary nettle	Yes	
Urtica urens	dwarf nettle	No	
Verbenaceae	Verbena family		
Verbena lasiostachys	common vervain	No	
Violoaceae	Violet Family		
Viola pedunculata	Johnny jump-up	Yes	
Viscaceae	Mistletow family		
Phoradendron villosum	oak mistletoe	Yes	
ANGIOSPERMS (MONOCOTS)			
Cyperaceae	Sedge family		
Cyperus eragrostis	tall flat sedge	Yes	
Eleocharis macrostachya	common spikerush	Yes	
Scirpus acutus	tule	Yes	

Scientific Name	Common Name	Native	Species Status
Scirpus americanus	bulrush	Yes	
Scirpus cernuus	low club rush	Yes	
Iridae	Iris family		
Sisyrinchium bellum	blue-eyed-grass	Yes	
Juncaceae	Rush family		
Juncus occidentalis	slender juncus	Yes	
Juncus phaeocephalus	rush	Yes	
Juncus tenuis	poverty rush	Yes	
Juncaginaceae	Arrow-glass family		
Liliaceae	Lily family		
Asphodelus fistulosus	onion weed	No	
Bloomeria crocea	common goldenstar	Yes	
Calochortus clavatus ssp. clavatus	club-haired mariposa lily	Yes	List 4.3
Chlorogalum pomeridianum var. pomeridianum	soap plant	Yes	
Dichelostemma capitatum ssp. capitatum	blue dicks	Yes	
Poaceae	Grass family		
Avena barbata	slender wild oats	No	
Avena fatua	Wild oats	No	
Bromus diandrus	ripgut brome	No	
Bromus hordeaceus	soft chess brome	No	
Bromus madritensis ssp. madritensis	Spanish brome	No	
Bromus madritensis ssp. rubens	Red brome	No	
Cynodon dactylon	Bermuda grass	No	
Distichlis spicata	saltgrass	Yes	
Ehrharta calycina	veldt grass	no	
Elymus glaucus	blue wild rye	yes	
Gastridium ventricosum	nit grass	No	
Hordeum brachyantherum	meadow barley	Yes	
Hordeum leporinum	foxtail	No	
Hordeum marinum ssp. gussoneanum	meadow barley	No	
Hordeum vulgare.	barley (crop)	No	
Lamarkia aurea	goldentop	No	
Leymus condensatus	giant rye-grass	Yes	
Leymus triticoides	creeping wild-rye	Yes	
Lolium multiflorum	Italian ryegrass	No	
Melica imperfecta	melic grass	Yes	
Nassella pulchra	purple needle-grass	Yes	
Phalaris aquatica	harding grass	No	
Piptatherum miliaceum	smilo grass	No	
Poa secunda ssp. secunda	one-sided bluegrass	Yes	
Polypogon monspeliensis	annual beard grass	No	

Scientific Name	Common Name	Native	Species Status
Taeniatherum caput-medusae	medusahead	No	
Vulpia myuros	rattail fescue	No	
Typhaceae	Cattail family		
Typha latifolia	Cattail	Yes	
Compiled From: *Morro Group Inc. (January and April 2006; July, August, and September 2007; April, May, and June 2008)* *Rincon Consultants (December 2000, January 2001, and April 2001)*			

Laetitia Agricultural Cluster Project Observed Wildlife List

Scientific Name	Common Name
Birds	
Anus platyrhynchos	Mallard duck
Elanus leucurus	White-tailed kite
Accipiter cooperii	Cooper's hawk
Buteo jamaicensis	Red-tailed hawk
Falco sparverius	American kestrel
Callipela californica	California quail
Meleagris gallopavo	Wild turkey
Fulica americana	American coot
Zenaida macroura	Morning dove
Tyto alba	Barn owl
Calypte anna	Anna's hummingbird
Selasphorus sasin	Allen's humminbird
Colaptes auratus	northern red-shafted flicker
Melanerapes formicivorus	Acorn woodpecker
Sayornis saya	Say's phoebe
Sayornis nigricans	Black phoebe
Cyanocitta stelleri	Stellar's jay
Aphelocoma californica	Western scrub jay
Corvus brachyrhynchos	American crow
Corvus corax	common raven
Tachycineta thalassina	Violet green swallow
Hirundo rustica	barn swallow
Baeolophus inornatus	Oak titmouse
Psaltriparus minimus	Bush tit
Sitta carolinensis	white-breasted nuthatch
Chamaea fasciata	Wren tit
Sailia mexicana	Western bluebird
Mimus polyglottos	Northern mockingbird
Toxostoma redivivum	California thrasher
Sternus vulgaris	European starling
Dendroica coronata	yellow-rumped Warbler
Geothlypis trichas	Common yellowthroat
Passerina amoena	Luzuli bunting
Pipilo crissalis	California towhee
Pipilo maculates	Spotted towhee
Melospiza melodia	Song sparrow
Passer domesticus	House sparrow
Junco hymalis	Dark-eyed junco
Sturnella neglecta	western meadowlark

Scientific Name	Common Name
Agelaius phoeniceus	Red-winged blackbird
Euphagus cyanocephalus	Brewer's blackbird
Carpodacus purpureus	House finch
Carduelis psaltria	lesser goldfinch
Mammals	
Canis latrans	Coyote
Lepus californicus	Black-tailed jackrabbit
Sciurus griseus	Western gray squirrel
Spermophilus beecheyii	California ground squirrel
Sylvilagus bachmanii	Brush rabbit
Reptiles	
Aspidoscelis tigris	Western whiptail
Sceloporus occidentalis	Western fence lizard
Uta stansburiana	Side-blotched lizard
Crotalus viridis	Western rattlesnake
Amphibians	
Rana aurora draytonii	California red-legged frog
Psuedacris regilla	Pacific chorus frog
Unknown Emydidae family	Pond turtle
Bufo boreas	Western toad
Compiled From: *Morro Group, Inc. (January and April 2006; July, August, and September 2007; April, May, and June 2008)* *Rincon Consultants (December 2000, January 2001, and April 2001)*	

APPENDIX B
SENSITIVE SPECIES DESCRIPTIONS

A. SENSITIVE PLANTS

1. Santa Margarita Manzanita

The Santa Margarita manzanita (*Arctostaphylos pilosula*) is a California endemic, perennial shrub that can reach two meters in height. This species is found at elevations between 170-1100 meters in closed coniferous forest, chaparral, and cismontane woodland; and is closely associated with shale outcrops and sandstone derived soils. The blooming season for Santa Margarita manzanita typically starts in December and continues through March (CNPS, 2007). The CNPS has placed this species on List 1B.2 which means CNPS considers this species to be "fairly endangered in California and elsewhere."

The nearest documented occurrence of Santa Margarita manzanita is approximately eight miles to the northeast of the project site near the intersection of Upper Lopez Canyon Road and Hi Mountain Road in Lopez County Park (CNDDB, 2007). The oak woodlands and coastal scrub in the dude ranch area could support Santa Margarita manzanita. Santa Margarita manzanita was not observed during the botanical surveys; and project activities are not expected to impact this species.

2. Wells' Manzanita

Wells' manzanita (*Arctostaphylos wellsii*) is included on CNPS List 1B.1, but does not currently have any state or federal status. The CNPS listing means that CNPS considers this species to be "*seriously endangered in California and elsewhere*." This shrub occurs in the San Luis Range from upper Coon Creek in Montana de Oro State Park to Arroyo Grande and Nipomo. The main populations of this species are found in the sandstone hills between the San Luis Valley and the ocean. The blooming season for Wells' typically starts in December and continues through April (CNPS, 2007).

The closest documented occurrence of this species is located immediately adjacent to the southeastern boundary of the property in the vicinity of Los Berros Canyon (CNDDB, 2007). Potential habitat for this species is located within the vicinity of the proposed Dude Ranch. Wells' manzanita was not observed during the botanical surveys; and project activities are not expected to impact this species.

3. Marsh Sandwort

Marsh sandwort (*Arenaria paludicola*) is a perennial herb in the Caryophyllaceae family that is found in freshwater bogs, fens, marshes, and swamps. The blooming period for this species typically begins in March and continues through August. The CNPS has placed this species on List 1B.1, which means CNPS considers this species to be "*seriously endangered in California and elsewh*ere." In addition, marsh sandwort is listed as Endangered under both the state and federal endangered species acts. To date, U.S. Fish and Wildlife Service (USFWS) has not designated critical habitat for marsh sandwort.

The closest documented occurrence of marsh sandwort is approximately 2.3 miles to the southeast from the project site. This occurrence is located within the vicinity of Black Lake Canyon in freshwater marsh habitat (CNDDB, 2007). On the project site, potential habitat for this species is located in the wet portions of the various drainages and within sandy openings of Los Berros Creek. As proposed, the project would require installation of road crossings in several drainages that could support marsh sandwort. Marsh sandwort was not observed during the botanical surveys, which were conducted towards the end of the species normal blooming period.

4. Miles's Milk-vetch

Miles's milk-vetch (*Astragalus didymocarpus var. milesianus*) is an annual herb in the Fabaceae family that is endemic to California and is found in San Luis Obispo, Santa Barbara, and Ventura Counties. It occurs in coastal scrub and grassland habitats on clay or sandy soils (CNPS, 2005; Hickman, 1993). This species blooms from March through June. CNPS has classified Miles's milk-vetch as "*fairly endangered in California and elsewhere*" (List 1B.2). This species is not listed under the federal or state endangered species acts.

The nearest documented occurrence of Miles' milk vetch is approximately 8.8 miles southeast of the property (CNDDB, 2007). On the project site, potential habitat for miles milk vetch is located on the various slopes that currently support grassland or coastal scrub communities. Several of these sloped areas are proposed for agricultural development, which could result in impacts to the species. Miles' milk-vetch was not observed during the botanical surveys; however, surveys were conducted outside of the appropriate blooming period and could not verify presence or absence of this species.

5. Cambria Morning-glory

Cambria morning-glory (*Calystegia subacaulis var. episcopalis*) is a perennial herb in the Convolvulaceae family that is endemic to California and found only in San Luis Obispo County. It occurs in chaparral and woodland habitats (CNPS, 2005; Hickman, 1993), but is also known to occur in grasslands on clay soils (Hoover, 1970) and in coastal scrub. This species blooms from April through May. The CNPS considers Cambria morning-glory to be as "*fairly endangered in California and elsewhere*" (List 1B.2).

The nearest CNDDB documented occurrence of Cambria morning-glory is approximately 11.4 miles to the north of the project site. Most documented occurrences of this species are located from the north coast down to the City of San Luis Obispo; however, a population was recently observed just east of the Village of Arroyo Grande (CNDDB, 2007). On the project site, potential habitat for Cambria morning-glory is located on the various slopes that currently support grassland or coastal scrub communities and in the oak woodlands located at the northeast and northwest portions of the site. Much of the remaining intact coastal scrub and grassland areas are proposed for agricultural development, which could result in impacts the species. Cambria morning-glory was not observed during botanical surveys conducted early in the blooming period in 2006.

6. Obispo Indian Paintbrush

Obispo indian paintbrush (*Castilleja densiflora* ssp. *obispoensis*) is an annual herb in the Scrophulariaceae family. It is found through the coastal areas of San Luis Obispo County from San Simeon south to the southern end of Morro Bay and east inland to San Luis Obispo. It generally grows in valley and foothill grasslands within an elevation of 30-1300 feet. It blooms during the month of April (CNPS, 2007). The CNPS considers this plant to be *"fairly endangered in California and elsewhere" (List 1B.2).*

The nearest CNDDB documented occurrence is approximately 3.4 miles to the northwest of the project site. This occurrence is located in Carpenter Canyon in non-native grasslands (CNDDB, 2007). On the project site, potential habitat for Obispo Indian paintbrush is located on the various slopes that currently support grassland or coastal scrub communities. Several of these sloped areas are proposed for agricultural development, which could result in impacts the species. Obispo indian paintbrush was not observed during botanical surveys conducted during the appropriate blooming period in 2006; however, the 2006 surveys did not cover all the coastal scrub and grassland on the project site. Surveys conducted in 2007 were outside of the appropriate blooming period.

7. Straight-awned Spineflower

Straight-awned spineflower (*Chorizanthe rectispina*) is an annual herb in the Polygonaceae family that is found in Monterey and San Luis Obispo Counties. Straight-awned spineflower occupies chaparral, coastal scrub, and oak woodland habitats on dry slopes with an elevation range of 85-1035 meters (CNPS, 2007). This species blooms from April through July and CNPS considers it to be *"not very endangered in California" (List 1B.3).*

The nearest documented occurrence of straight-awned spineflower is approximately four miles northwest of the project site. This occurrence is located in coastal scrub just west of Highway 227, 0.5 miles west of Printz Road in Arroyo Grande (CNDDB, 2007). On the project site, potential habitat for this species is located on the various slopes that currently support oak woodland and coastal scrub communities. Several of these sloped areas are proposed for development, which could result in impacts to the species. Straight-awned spineflower was not observed during botanical surveys conducted during the appropriate blooming period in 2006; however, the 2006 surveys did not cover the entire available habitat on the project site. Surveys conducted in 2007 were outside of the appropriate blooming period.

8. California Sawgrass

California sawgrass (*Cladium californicum)* is a perennial, rhizomatous herb in the Cyperaceae family. It occurs in meadows, seeps, marshes, and swamps with either brackish or fresh waters. California sawgrass occupies an elevation range of 60-600 meters; and its typical blooming season is from June through September (CNPS, 2007). The CNPS considers this plant to be *"fairly endangered in California but more common elsewhere"* (List 2.2).

One known population occurs in USGS quadrangle for Oceano (CNDDB, 2007). On the project site, suitable habitat is present in wet portions of the numerous drainages that traverse the site.

California sawgrass was not observed during surveys, which were conducted during the typical blooming period for the species.

9. Dune Larkspur

Dune larkspur (*Delphinium parryi* ssp. *blochmaniae*) is a perennial herbaceous plant in the buttercup (Ranunculaceae) family that typically blooms from April to May. This species occurs in chaparral and coastal dune communities with sandy or rocky soils (CNPS, 2007). The CNPS considers this plant to be *"fairly endangered in California and elsewhere"* (List 1B.2).

The nearest documented occurrence of Dune larkspur is located directly adjacent to the southern boundary of the project site. This occurrence was observed in 1969 in the proximity of the Los Berros Creek riparian corridor. The various rock outcrops within the coastal scrub and oak woodland communities on the project site could support this species. Dune larkspur was not observed during botanical surveys conducted during the appropriate blooming period in 2006; however, the 2006 surveys did not cover the entire available habitat on the project site. Surveys conducted in 2007 were outside of the appropriate blooming period.

10. Indian Knob Mountainbalm

Indian Knob mountainbalm (*Eriodictyon altissimum*) is a perennial shrub in the Hydrophyllaceae family. This species occurs in maritime chaparral, coastal scrub, and cismontane woodland communities on sandstone substrates. It occupies an elevation range from 80 meters to 270 meters on sandstone ridges. The typical flowering season for Indian Knob mountainbalm is March through June (CNPS, 2007). Indian Knob mountainbalm is protected under the Federal and State Endangered Species Acts. USFWS has not designated critical habitat for this species. The CNPS considers this species to be *"seriously endangered in California and elsewhere"* (List 1B.1).

The nearest documented occurrence of Indian Knob mountainbalm is approximately 10.4 miles northwest of the property on Indian Knob (CNDDB, 2007). The numerous slopes and ridges that contain sandstone outcrops on the property provide suitable soil conditions for Indian Knob mountainbalm; however, this species is usually associated with maritime chaparral and *Arctostaphylos* species. Indian Knob mountainbalm, associated *Arctostaphylos* species, and maritime chaparral were not observed during the botanical surveys; consequently, project activities are not expected to impact Indian Knob mountainbalm.

11. San Luis Obispo County Lupine

San Luis Obispo County lupine (*Lupinus ludovicianus*) is a perennial herb in the Fabaceae family. The San Luis Obispo County lupine blooms from April to July and can be found growing in sandy or sandstone derived soils in chaparral or cismontane woodlands. The plant is known from fewer than twenty occurrences (CNPS, 2007). The CNPS considers this plant to be *"fairly endangered in California and elsewhere" (*List 1B.2*).*

The nearest documented occurrence of San Luis Obispo County lupine is approximately 4.15 miles southeast of the property, adjacent to Huasna Road (CNDDB, 2007). The oak woodlands

and coastal scrub communities on the project site provide suitable habitat for this species. San Luis Obispo County lupine was not observed during botanical surveys conducted during the appropriate blooming period in 2006; however, the 2006 surveys did not cover the entire available habitat on the project site. Surveys conducted in 2007 were outside of the appropriate blooming period.

12. Carmel Valley bush mallow

Carmel Valley bush mallow (*Malacothamnus palmeri* var. *involucratus*) is a deciduous shrub in the Malvaceae family. This species is known to occur in chaparral, cismontane woodland, and coastal scrub communities that are associated with rock outcrops. Its known elevation range is from 30 meters to 1100 meters and it flowers from May through August (CNPS, 2007). The CNPS considers this plant to be *"fairly endangered in California and elsewhere"* (List 1B.2).

Populations of Carmel Valley bush mallow are known to occur in the San Luis Obispo USGS quadrangle (CNDDB, 2007). The coastal scrub and oak woodlands on the project site provide suitable habitat for this species. Carmel Valley bush mallow was not observed during surveys; however, several non-flowering individuals in the *Malacothamnus* genus were observed near proposed lots 11 through 15. Based on the vegetative characteristics, the observed individuals are most likely *Malacothamnus jonesii*, which is on the CNPS watch list (List 4.3). These individuals could be impacted by the proposed project, and the specific identity of these individuals should be verified during the appropriate flowering season.

13. Black-flowered Figwort

Black-flowered figwort (*Scrophularia atrata*) is a perennial herb in the Scrophulariaceae family. It is found throughout San Luis Obispo and Santa Barbara Counties in closed cone coniferous forest, coastal scrub, coastal dunes, riparian scrub, and chaparral. It blooms March through July, and is easily identified by a dark red to black flower that sits pendulant on a tall stalk (CNPS, 2007) The CNPS considers this species to be *"seriously endangered in California and elsewhere"* (List 1B.1).

The nearest documented occurrence of black-flowered figwort is approximately six miles northwest of the property, adjacent to James Way in Arroyo Grande (CNDDB, 2007). The coastal scrub and riparian corridors on the property provide suitable habitat for this species. Black-flowered figwort was not observed during the botanical surveys conducted during the appropriate blooming period in 2006; however, the 2006 surveys did not cover the entire available habitat on the project site. Surveys conducted in 2007 were outside of the appropriate blooming period.

14. San Bernardino Aster

San Bernardino aster (*Symphyotrichum defoliatum*) is a perennial herb in the Asteraceae family that occupies cismontane woodlands near ditches and streams. This species occurs at elevations that range from 2 meters to 2,040 meters. The typical blooming season for San Bernardino aster is July through November (CNPS, 2007). The CNPS considers this plant to be *"fairly endangered in California and elsewhere"* (List 1B.2).

The nearest occurrence of San Bernardino aster is approximately 2.65 miles west of the property at the base of Halcyon Grade. Several of the drainages that traverse the property provide suitable habitat for this species. San Bernardino aster was not observed during the botanical surveys conducted during the appropriate blooming period.

B. SENSITIVE WILDLIFE

1. Cooper's Hawk

Cooper's hawk (*Accipiter cooperii*) is a solitary species that is found in and around edges of deciduous woods. This species breed in deciduous, mixed, and coniferous forests; and is becoming more common in urban areas. The range of Cooper's hawk spans across southern Canada, southward through southern United States and into central Mexico. This species is known to hunt in the proximity of development and nest in tall trees. Cooper's hawk preys on small birds and mammals (Sibley, 2003). Cooper's hawk is considered a California Species of Concern (CSC) by the California Department of Fish and Game and is protected under the Migratory Bird Treaty Act.

CNDDB has not documented any Cooper's hawk occurrences within the search area; however, Morro Group biologist observed Copper's hawk during the 2007 surveys of the Laetitia property. The Los Berros Creek riparian corridor could provide suitable nesting habitat and the open woodlands could provide suitable foraging habitat for this species. Project activities could impact the nesting behavior of this species.

2. Sharp-shinned Hawk

Sharp-shinned hawk (*Accipiter striatus*) is a solitary species that winters throughout central and southern California and is an uncommon resident in northern coastal and eastern California. Its primary habitat is boreal forest. This hawk is often observed hunting around houses, hedgerows, and forest canopies (Sibley, 2003). Preferred nesting habitat includes young, dense, mixed, or coniferous woodlands; however, where conifers are scarce cottonwoods and poplars are often used. Sharp-shinned hawks usually nest in tree crotches or on branches that are close to the trunk and well hidden by thick foliage. Pairs may build new nests, reuse old nests, or modify existing bird or squirrel nests (Natureserve, 2007). Sharp-shinned hawk is considered a CSC by the California Department of Fish and Game and is protected under the Migratory Bird Treaty Act.

The nearest CNDDB documented occurrence is approximately 4.3 miles southwest of the project site in the Woodlands Development Area (CNDDB, 2007). Sharp-shinned hawk was not observed during the surveys of the Laetitia property. The Los Berros Creek riparian corridor could provide suitable nesting habitat and the open woodlands could provide suitable foraging habitat for this species. However, considering the properties available habitat, the nesting and migratory behavior of sharp-shinned hawks, it is highly unlikely that project activities would impact this species.

3. Western Yellow-billed Cuckoo

The western yellow-billed cuckoo (*Coccyzus americanus occidentalis*) is a slender brown bird with white underparts. Although the cuckoo nests in walnut and almond orchards in California, its natural nesting habitat is in cottonwood-willow riparian forest. It usually arrives from South American wintering areas in June, and departs by late August or early September. The twig nest is typically constructed on a horizontal branch of a tree willow in a location hidden from view from the ground or surrounding trees.

Although the project site supports suitable cottonwood and willow riparian habitat, no western yellow-billed cuckoo were observed or heard in or near the project site. The most recent nearby CNDDB occurrence record for the species is a 1932 egg set collection by Santa Barbara Natural History Museum from an unspecified location in San Luis Obispo County (CNDDB, 2007). A recent posting on the San Luis Obispo County Birding message board indicated that an individual yellow-billed cuckoo was heard in the vicinity of "western part of Atascadero" along Highway 41. However, biologists have reservations regarding the accuracy of this recent record (Edell, 2004). There are no known recent nesting records in San Luis Obispo County and there are no known breeding locations outside of the currently known breeding locations, none of which occur in San Luis Obispo County. No other yellow-billed cuckoo observations in or near the project site are known.

The project site contains riparian habitat that could support yellow-billed cuckoo; however, it is highly unlikely that the proposed project would impact this species because the current nesting range is restricted to areas outside of San Luis Obispo County.

4. Willow Flycatcher

Willow flycatcher (*Empidonax traillii*) is a small, migratory passerine that ranges across North America and is a rare spring transient and an uncommon spring/summer migrant to San Luis Obispo County. This species is a summer resident within mountainous wet meadow and montane riparian habitats of the Sierra Nevada and Cascade ranges after migrating from winter habitat in Central and South America. Dense willow thickets are required for nesting and roosting. Willow flycatcher is listed as California Endangered, primarily due to destruction of riparian scrub habitat and to cowbird brood parasitism. This species is afforded protection under the CESA, the Migratory Bird Treaty Act of 1918, and section 3503 of the California Fish and Game Code (nesting birds).

The project site contains riparian habitat that could support willow flycatcher; however, this species is not known to nest within San Luis Obispo County (UC Davis, 2007). Any occurrences of this species within the project site would most likely be during migration. Due to the lack of resident or breeding willow flycatchers in this county, it is unlikely that the proposed project would impact this species.

5. White-tailed Kite

White-tailed kites (*Elanus leucurus*) are yearlong residents ranging throughout valley and coastal lowlands in California, most commonly near agricultural areas. Nesting and roosting occurs in dense broad-leafed deciduous groves of trees. Breeding occurs from February to October, peaking in May to August. White-tailed kites prey on voles and other small diurnal mammals, and occasionally on birds, insects, amphibians, and reptiles. This species has Fully Protected status by CDFG, and the nesting life stage is considered sensitive.

Morro Group biologists observed two white-tailed kites during the 2007 biological surveys of the site. Suitable nesting habitat for white-tailed kite occurs within the tall riparian trees that are sporadically located through the properties drainages. The properties agricultural and open grassland areas provide suitable foraging habitat for white-tailed kite. Project activities could impact this species by disturbing its nesting behavior or minimizing available nesting habitat.

6. South-central California Coast Steelhead

Steelhead (*Oncorhynchus mykiss irideus*) is the anadromous form of rainbow trout. Steelhead historically ranged from Alaska southward to the California-Mexico border, though current data suggest that the Ventura River is presently the southernmost drainage supporting substantial steelhead runs. Optimal habitat for steelhead is characterized by clear, cool water with abundant in-stream cover (i.e., submerged branches, rocks, and logs), well-vegetated stream margins, relatively stable water flow, and a 1:1 pool-to-riffle ratio (Raleigh et al., 1984). Steelhead can be found in stream reaches that contain less than optimal habitat. All populations of steelhead occurring within the south-central California coast ESU region were listed as federally threatened in 1997 (USFWS, 1998), and are also considered a CSC by CDFG

The nearest documented occurrence of steelhead is approximately 2.0 miles northwest of the property in Arroyo Grande Creek (CNDDB, 2007). Los Berros Creek supports suitable habitat and the primary constituent elements for steelhead. According to the *Final Critical Habitat Designations in Washington, Oregon, Idaho, and California for Endangered and Threatened Pacific Salmon and Steelhead*, NOAA has designated portions of Los Berros Creek as steelhead Critical Habitat. Steelhead was not observed during the biological surveys within Los Berros Creek. The drainages that traverse the property do not support suitable habitat for this species. As proposed, the project may result in impacts to water quality of Los Berros Creek, resulting from increased run off and deposition of petroleum products from added impervious surfaces.

7. Southwestern Pond Turtle

The southwestern pond turtle (*Actinemys marmorata pallida*) is considered a CSC by CDFG. This turtle occupies quiet waters of ponds, lakes, streams, and marshes and is typically found in pools that range from 3.0 to 5.2 feet in depth (Stebbins, 1972). They require large amounts of basking sites that may include fallen trees, boulders, docks, irrigation lines, algal mats, or buoys. Southwestern pond turtles can occasionally be found crawling across creek riffles or traversing open fields during transient movements (Zeiner et al., 1990). Upland nesting sites are required near the aquatic site, and nests are typically located in open, clay or silt slopes to ensure proper

incubation temperature. Nesting sites may be more than 400 meters from the aquatic site, but most nests are within 200 meters (Jennings and Hayes, 1994).

The nearest documented occurrence is located approximately 3.6 miles northwest of the property (CNDDB, 2007). An individual pond turtle from the *Emydidae* family was observed basking on an irrigation line in an existing agricultural pond that is located between proposed Lots 1 through 3 and proposed Main Road 1. This individual took cover before the biologist could determine its specific epithet; however, it is likely that the individual was a southwestern pond turtle. As proposed, the pond would be removed to accommodate for the development of Main Road 1. These activities would directly impact pond turtle habitat and potentially result in take of the observed individual.

8. Two-striped Garter Snake

The two-striped garter snake (*Thamnophis hammondii*) is a highly aquatic species and is associated with semi-permanent to permanent freshwater habitats containing substantial emergent vegetation. It is also typically found in perennial pools containing frogs and fish, which are their primary prey (Zeiner et al., 1990). The two-striped garter snake occurs mainly along Coast Range streams from Monterey Bay south to Baja California (Stebbins, 2003; Stewart, 2003). Its elevation range extends from sea level to approximately 2,500 meters. Its habitat includes perennial and intermittent streams with rocky substrate bordered by dense vegetation (Jennings and Hayes, 1994). The species is infrequently found in streams or stock ponds lacking dense riparian vegetation along the banks. It is generally found near streams or stock ponds in the summer and occupies upland coastal sage scrub and grassy locations near its summer range in the winter (Jennings and Hayes, 1994). These snakes may also overwinter in small mammal burrows (Rathbun et al., 1993). During the day, this garter snake often basks on streamside rocks or on densely vegetated stream banks. This species is considered a CSC and is protected by the CDFG.

The CNDDB does not indicate the occurrence of this species at or near the property. This species was not observed on or near the property during any of the site visits, however, Los Berros Creek and the stock ponds on the property can be considered suitable habitat for two-striped garter snake. It is therefore possible that this species is present within the proposed project site.

9. California Red-legged Frog

The California red-legged frog (*Rana aurora draytonii*) was listed as federally threatened by the USFWS in 1996 and is considered a California Special Concern species by the CDFG. The species occurs in various habitats during its life cycle, and breeding areas include lagoons, streams, and ponds. California red-legged frogs prefer aquatic habitats with little or no flow, the presence of surface water to at least early June, and surface water depths to at least 0.7 meters (2.3 feet) (Jennings and Hayes, 1994). The largest densities of California red-legged frogs are typically associated with dense stands of overhanging willows and an intermixed fringe of sturdy emergent vegetation. Although the species can inhabit ephemeral streams or ponds, populations typically cannot be maintained in ephemeral streams in which all surface water disappears.

California red-legged frogs typically breed from January to July, with peak breeding occurring in February.

CNDDB documents numerous occurrences of California red-legged frog within the vicinity of the project site and one occurrence within the project site. Rincon Consultants, Inc. conducted protocol level surveys for California red-legged frog in October and November of 2000. The Rincon surveys identified nine California red-legged frogs centrally located in the property. These individuals were observed in the freshwater marsh and in-stream stock pond that are associated with Drainage G. Currently an agricultural road crosses Drainage G and has impounded the flows and created the stock pond. The proposed project would install force main utilities within the bed of the road. These activities could result in adverse impacts to the California red-legged frog habitat and potentially take of California red-legged frog individuals. The project site is not located within any of the eight San Luis Obispo County California red-legged frog Critical Habitat Units.

10. Coast Range Newt

Coast Range newt (*Taricha torosa torosa*) has a discontinuous range along the coast of California from Mendocino County to San Diego County. Optimum habitats reportedly consist of valley-foothill hardwood forest in association with rivers, creeks, ponds, and lakes. This species is seasonally abundant within the upper watersheds of several San Luis Obispo County creeks, including San Luis Obispo Creek near Cuesta Grade, Morro Creek near Cerro Alto campground, and the uppermost reaches of Toro Creek. Coast Range newts have both terrestrial and aquatic phases to their life cycle. Adults are largely inactive, aestivating within subterranean refuges during most of the year. Following the first rains of fall, adults migrate to water, with mating occurring from September to May. Adhesive egg masses are deposited on submergent vegetation and rocks from May to June, with larvae hatching 5 to 7 weeks thereafter. Larvae transform to adults during the summer or fall of their first year. The CDFG considers Coast Range newt distributed from San Luis Obispo County southward as a Species of Concern. Riparian degradation related to urban development has likely contributed to population declines.

The nearest CNDDB documented occurrence of coast range newt is approximately seven 6.9 miles northeast of the property. The Los Berros Creek riparian corridor and adjacent oak woodlands on the property provide suitable habitat for this species. Coast range newt was not observed during the biological surveys; however, the species could be present within the project site.

Laetitia Agricultural Cluster Project
San Luis Obispo County, California

WETLAND ASSESSMENT

Prepared for:

County of San Luis Obispo
Planning and Building Department
County Government Center Room 200
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Prepared by:

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Environmental Services

December 2007

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ATTACHMENTS

Attachment A: Field Data Sheets
Attachment B: Photo Documentation

I. INTRODUCTION

A. SCOPE

This Wetland Assessment summarizes existing hydrology, soil and vegetative conditions associated with the Laetitia Agricultural Cluster property (project site) within the County of San Luis Obispo, California (refer to Figures 1, 2, and 4). Morro Group, Inc. has prepared this report at the request of the County of San Luis Obispo Planning and Building Department, and it is intended for use by the County and regulatory agencies. This report identifies potential waters of the United States, as defined by the U.S. Army Corps of Engineers (ACOE); and potential waters of California, as defined by the California Department of Fish and Game (CDFG) that are located at the project site. Findings reported herein are based on information gathered in the field at the time of investigation, and on Morro Group's understanding of the ACOE 1987 Wetlands Delineation Manual (Environmental Laboratory, 1987), the Arid West Regional Supplement (ACOE, 2006), and federal, state, and local guidelines for identification of wetland areas. This report is subject to review by the ACOE, and should be submitted to the ACOE for confirmation.

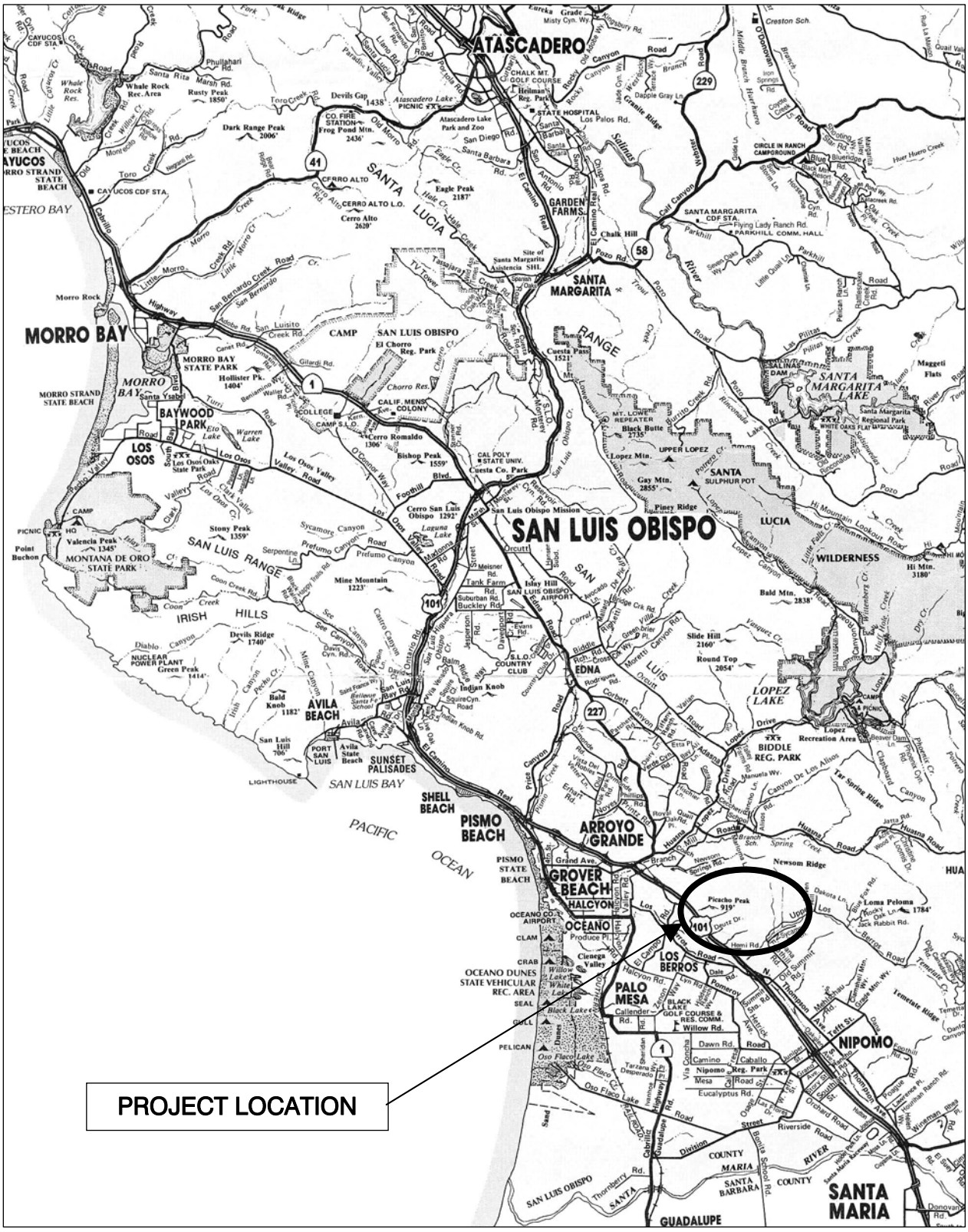
B. PROJECT BACKGROUND

The proposed project consists of subdividing 21 parcels (1,910 acres) into 106 lots, including 102 residential lots and four open space lots. The proposed residential lots would be approximately 1.0 acre each and located throughout the project site (refer to Figure 4). Approximately 104 acres of existing vineyard would be removed to accommodate the proposed development. Approximately 128 acres of vineyard and orchards would be replanted onsite. Residential development, including residential-use only access roads, would consist of approximately 118 acres, or six percent of the project site. Open space lots would consist of approximately 1,792 acres, or 94 percent of the project site. Development proposed within the open space lots includes a homeowner's association facility, recreation center, community center ("Ranch Headquarters"), and an equestrian facility. Approximately 657 acres of the project site would remain in agricultural production, including vineyards and orchards.

C. SITE DESCRIPTION

The 1,910-acre project site is located approximately two miles south of the city of Arroyo Grande, adjacent to Highway 101 (refer to Figures 1 and 2). A Soil Conservation Service (SCS) soil survey map of the site is included as Figure 3; soil pit locations and the resulting delineation of jurisdictional areas are shown on Figure 4.

Approximately 1,834 acres are located on the east side of Highway 101, with an additional 76 acres located on the west side. No development is proposed on the west side of Highway 101. Upper Los Berros Road and Los Berros Creek is located along the southern property boundary of the project site. The project site occurs on rolling foothills that are dominated by vineyards and has areas of fallow agriculture land. Fallow agricultural areas currently sustain non-native annual grassland with remnant grapevines and other weedy species.



NORTH
Not to Scale

Vicinity Map
FIGURE 1

Several areas that are directly adjacent to and located between the agricultural areas sustain remnant patches of coast live oak woodland and coastal scrub communities. Most of these remnant patches are discontinuous and are subject to heavy grazing by managed goat herds. A total of thirteen drainages are located within the property, ten of which are mapped as blue-line features (refer to Figure 2). The drainages support annual grassland, freshwater marsh, willow riparian scrub, or Central Coast cottonwood-sycamore riparian forest habitats.

II. METHODOLOGY

The primary literature reviewed and referenced as part of this wetland determination included SCS (1983, 1992), USGS (1994), Cowardin et al. (1979), Hickman (1993), Hoover (1970), Holland (1986), and Reed, Jr. (1988, 1996). Specific references not listed above are cited in text.

A. DELINEATION PROCEDURE

Determination and delineation of wetland areas associated with the project site were based on review of pertinent literature and a thorough on-site investigation conducted during the month of July and August of 2007, by Travis Belt of Morro Group, Inc. The routine wetland determination methodology, as described in the 1987 ACOE Wetlands Delineation Manual (Environmental Laboratory, 1987) and Arid West Supplement (Environmental Laboratory, 2006), was utilized throughout the delineation. Representative plots were evaluated to investigate the presence of hydric soils, hydrophytic vegetation, and wetland hydrology within the project area. Jurisdictional features, including Ordinary High Water Mark (OHWM), tops of banks, and outer edge of riparian canopy lines were mapped using a Trimble Pathfinder GPS Data Collector capable of sub-meter accuracy.

Delineation of jurisdictional areas within defined creek channels relied primarily on identification and mapping of the OHWM and the top-of-bank along reaches that may be directly affected by the project. More detailed examinations including soil test pits were performed in areas that appeared to maintain wetland characteristics and are proposed for disturbance. Jurisdictional areas that are located within the property but not proposed for disturbance were mapped using, aerial photographs and mapping programs including AutoCAD and ArcView. Quantification of impacts to jurisdictional areas was determined to the extent feasible using the conceptual plans that the applicant provided. Estimated impact calculations provided in this report should be verified when the applicant has finalized the engineering plans.

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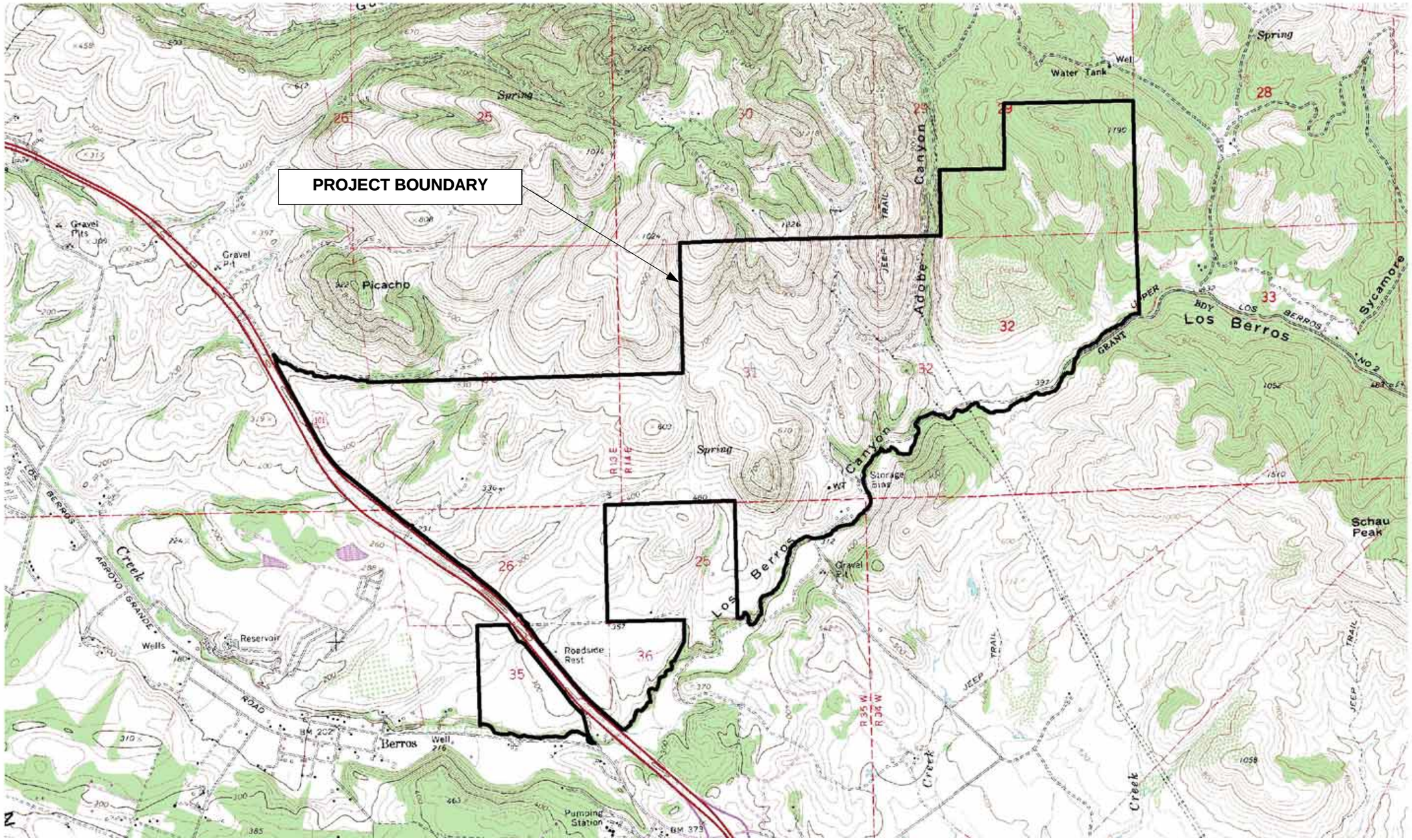

Source: USGS quadrangle maps – Nipomo, Oceano

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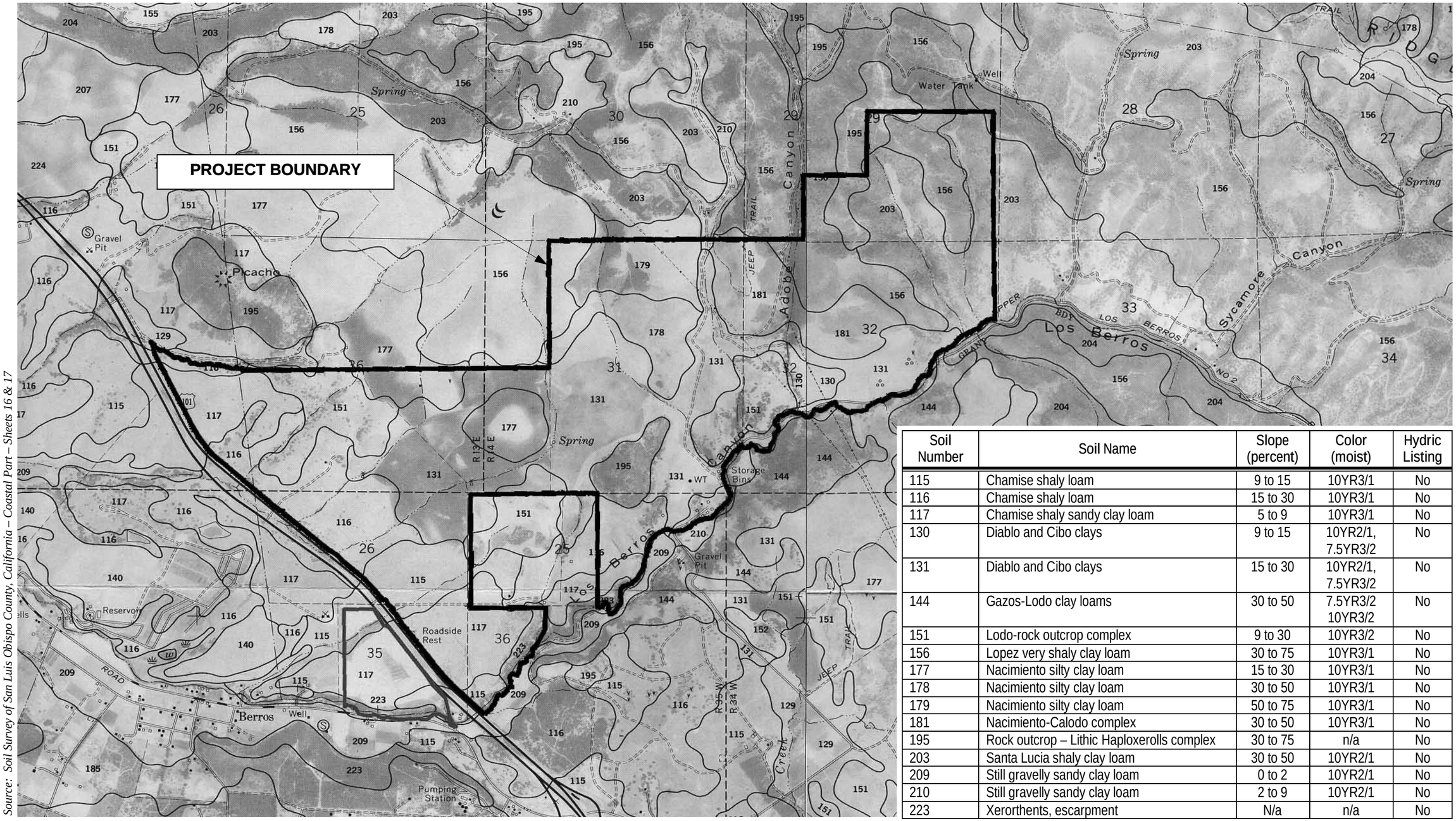
USGS Location Map
FIGURE 2

Back of Figure 2



Soil Number	Soil Name	Slope (percent)	Color (moist)	Hydric Listing
115	Chamise shaly loam	9 to 15	10YR3/1	No
116	Chamise shaly loam	15 to 30	10YR3/1	No
117	Chamise shaly sandy clay loam	5 to 9	10YR3/1	No
130	Diablo and Cibo clays	9 to 15	10YR2/1, 7.5YR3/2	No
131	Diablo and Cibo clays	15 to 30	10YR2/1, 7.5YR3/2	No
144	Gazos-Lodo clay loams	30 to 50	7.5YR3/2 10YR3/2	No
151	Lodo-rock outcrop complex	9 to 30	10YR3/2	No
156	Lopez very shaly clay loam	30 to 75	10YR3/1	No
177	Nacimiento silty clay loam	15 to 30	10YR3/1	No
178	Nacimiento silty clay loam	30 to 50	10YR3/1	No
179	Nacimiento silty clay loam	50 to 75	10YR3/1	No
181	Nacimiento-Calodo complex	30 to 50	10YR3/1	No
195	Rock outcrop – Lithic Haploxerolls complex	30 to 75	n/a	No
203	Santa Lucia shaly clay loam	30 to 50	10YR2/1	No
209	Still gravelly sandy clay loam	0 to 2	10YR2/1	No
210	Still gravelly sandy clay loam	2 to 9	10YR2/1	No
223	Xerorthents, escarpment	N/a	n/a	No

Source: Soil Survey of San Luis Obispo County, California – Coastal Part – Sheets 16 & 17

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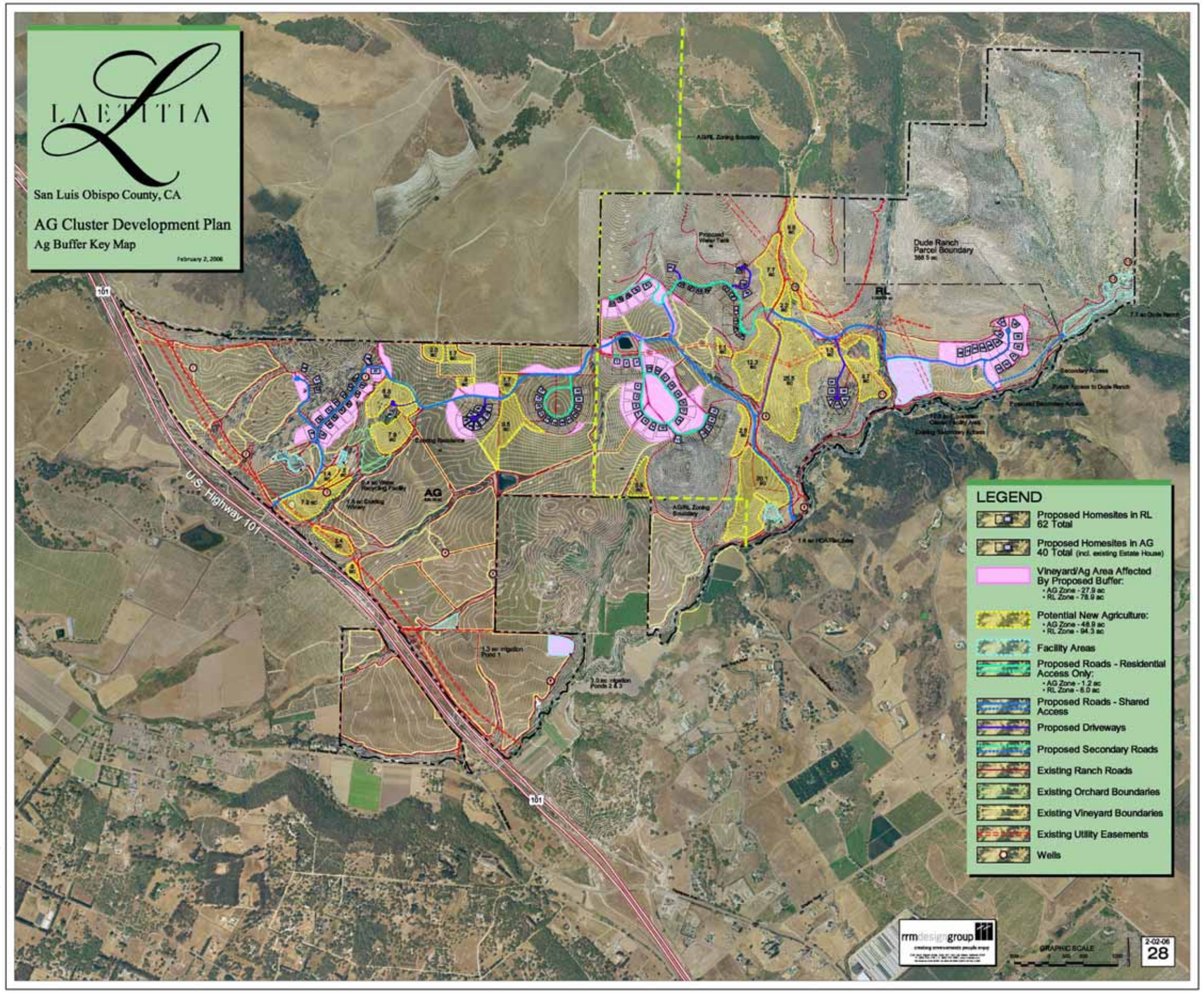
1:24,000

Soils Map
FIGURE 3

Back of Figure 3



Source: RRM Design Group; February 2, 2006

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Not to Scale

Site Plan
FIGURE 4

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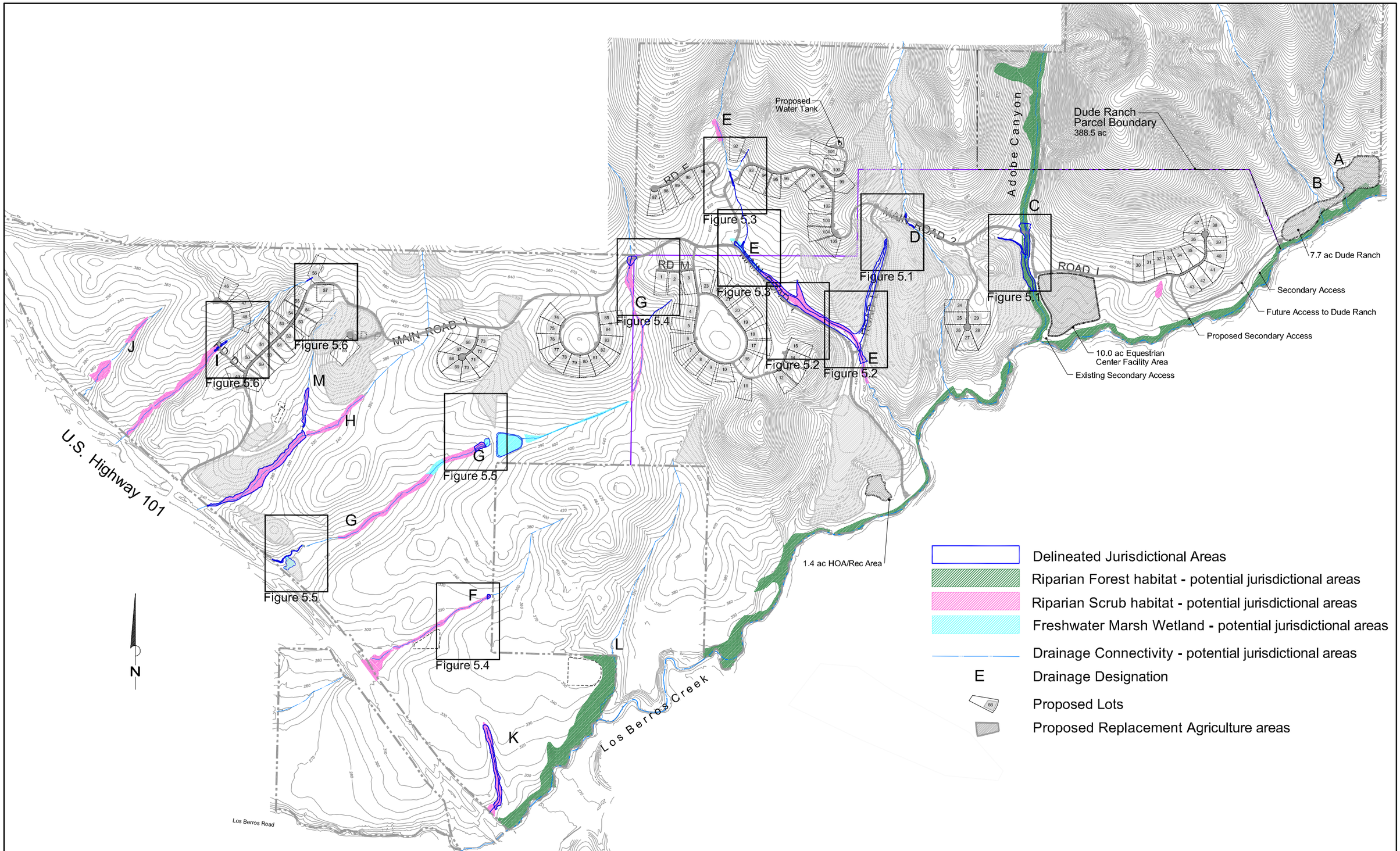

SHEET: 1 OF SCALE: 1" = 1100'	MORRO GROUP, INC. Environmental Services	WETLAND ASSESSMENT Laetitia Agricultural Cluster Project	Jurisdictional Waters of the U.S. KEY MAP
CADD FILE: 05-513 Laetitia EIR\bio-wetdel.dwg			FIGURE 5.0
DATE: 10.19.07 BY: dh REV.			

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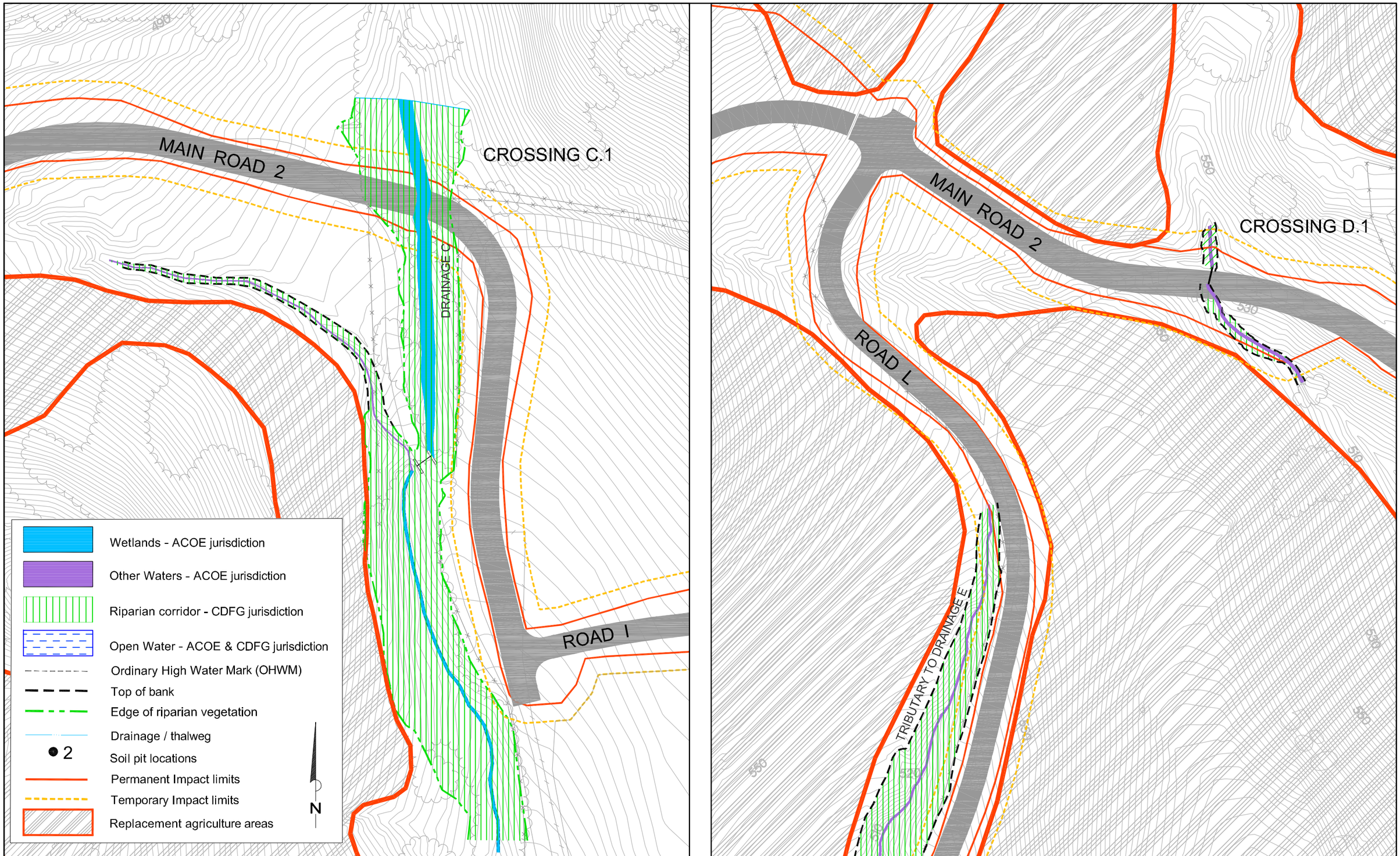

SHEET: 7 OF 2 SCALE: 1" = 100' CADD FILE: 05-513 Laetitia EIR\Bio-wetdel.dwg DATE: 10.19.07 BY: dh REV.	MORRO GROUP, INC. Environmental Services	WETLAND ASSESSMENT Laetitia Agricultural Cluster Project	Drainages C & D Jursidictional Waters of the U.S.	FIGURE 5.1

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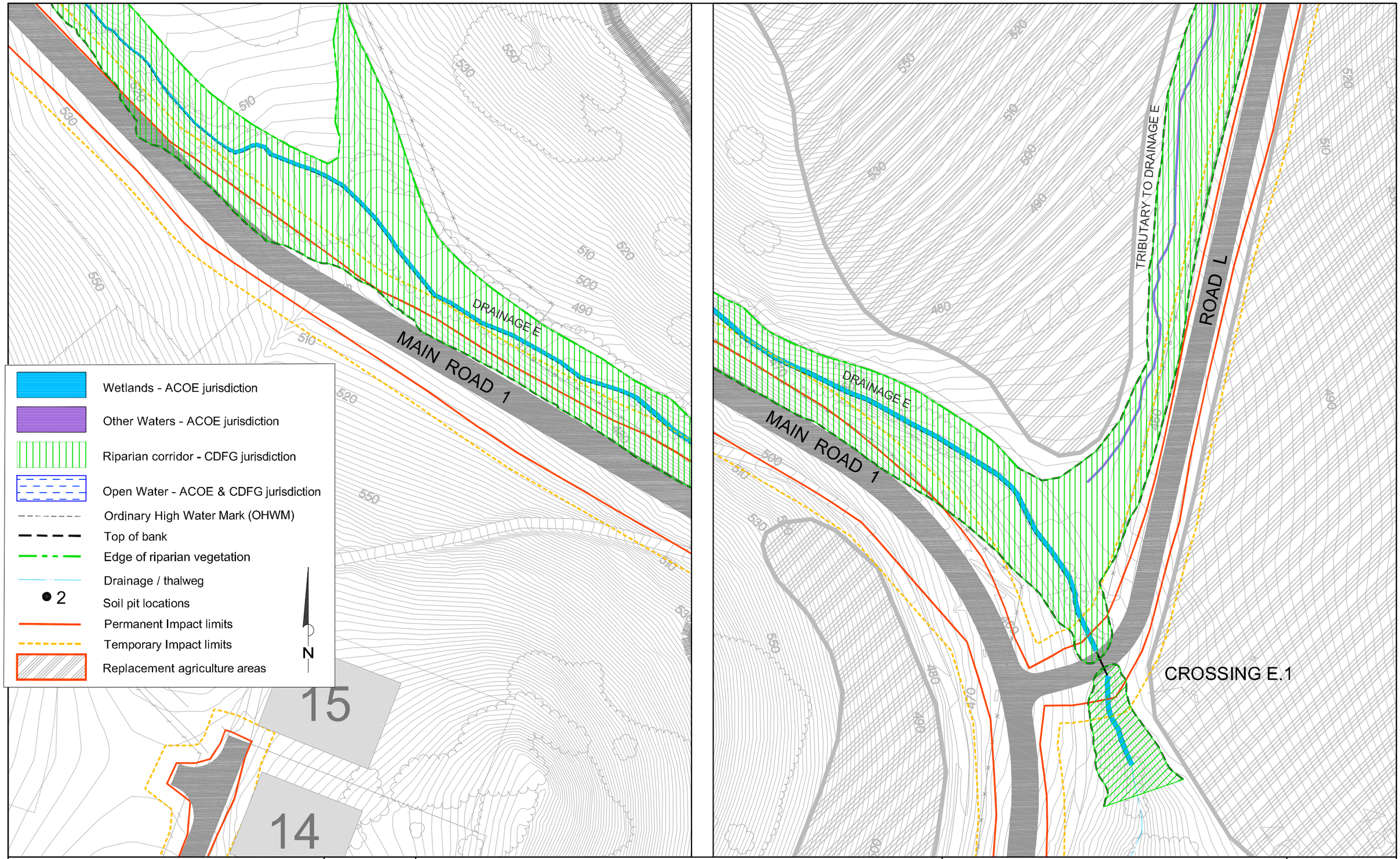
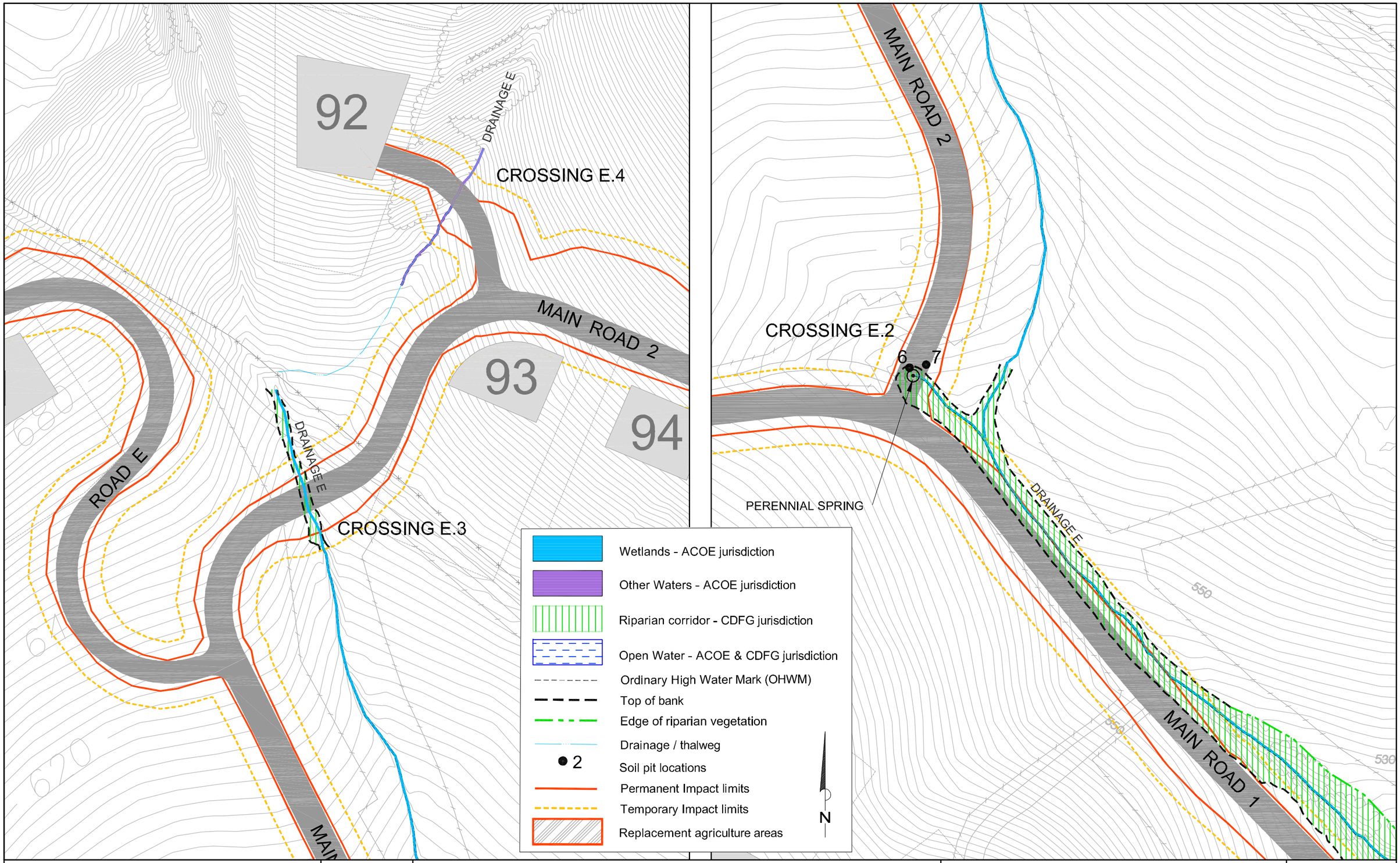


SHEET: 7 OF 3 SCALE: 1" = 100' CADD FILE: 05-513 Laetitia EIR\Bio-wetdel.dwg DATE: 10.19.07 BY: dh REV.	MORRO GROUP, INC. Environmental Services	WETLAND ASSESSMENT Laetitia Agricultural Cluster Project	Drainage E Jursidictional Waters of the U.S.	FIGURE 5.2

Back of Figure 5.2



SHEET: 7 OF 4 SCALE: 1" = 100'	MORRO GROUP, INC. Environmental Services	WETLAND ASSESSMENT Laetitia Agricultural Cluster Project	Drainage E Jursidictional Waters of the U.S.
CADD FILE: 05-513 Laetitia EIR\Bio-wetdel.dwg			FIGURE 5.3
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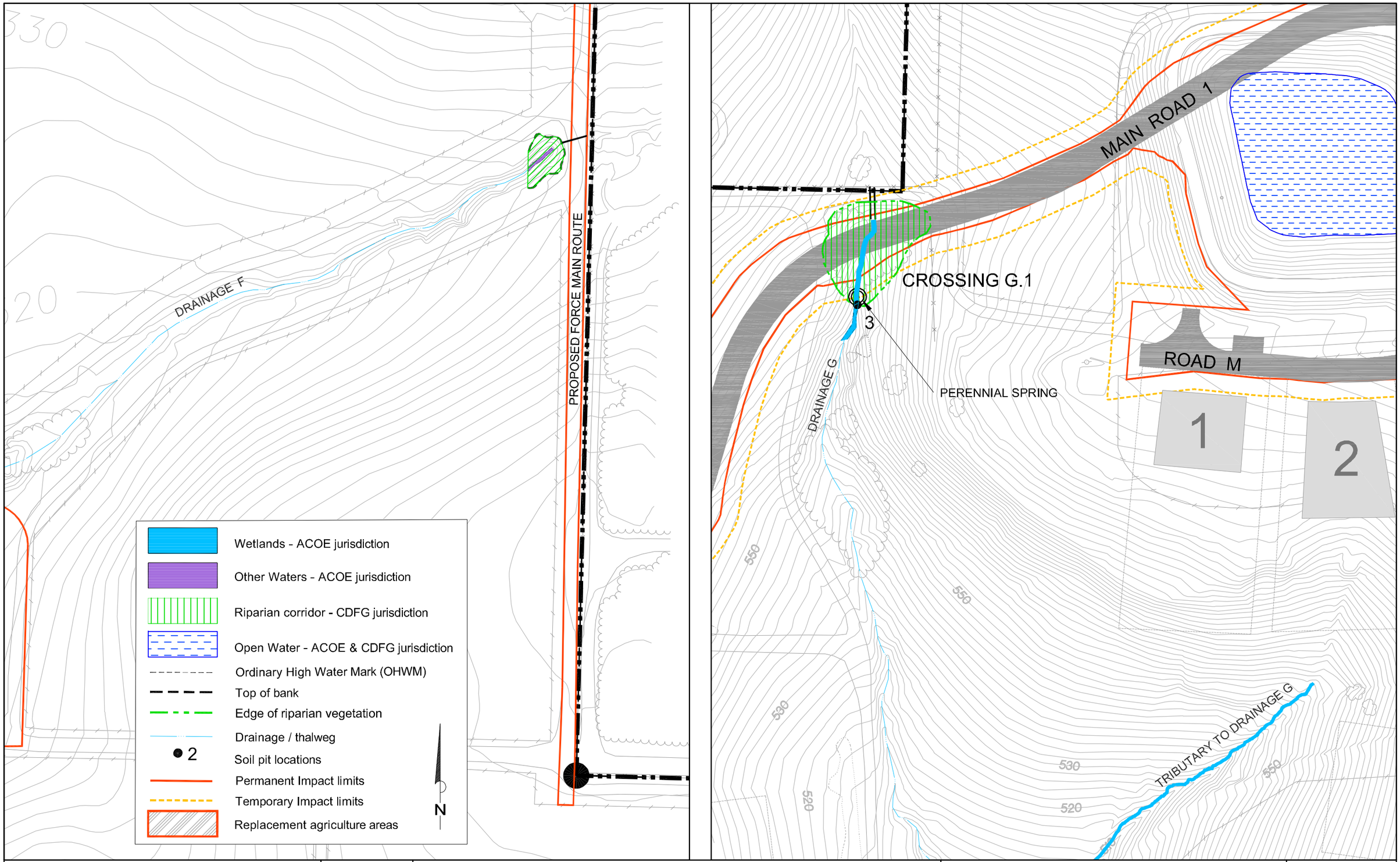

SHEET: 7 OF 5 SCALE: 1" = 100'
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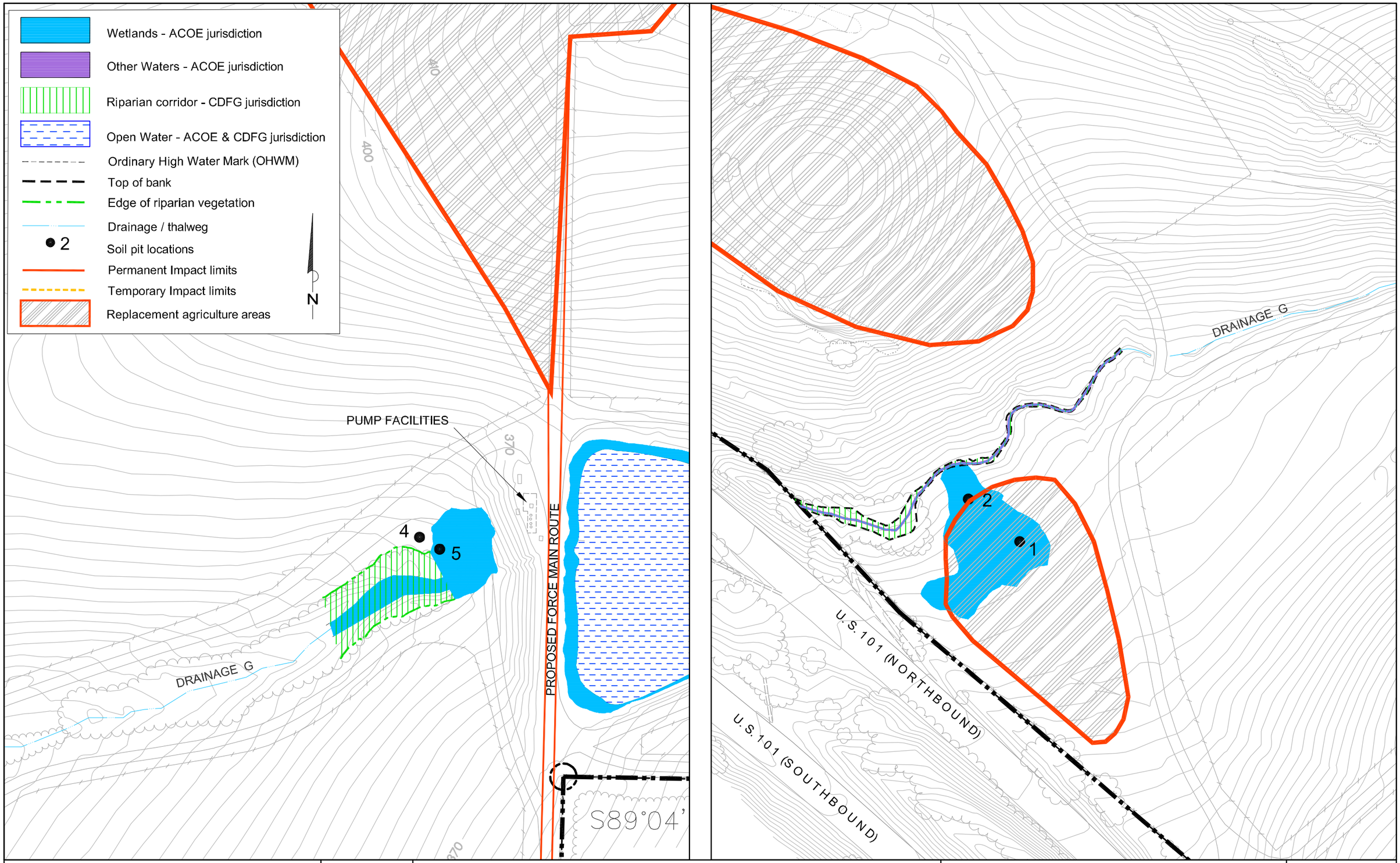
Environmental Services

WETLAND ASSESSMENT
Laetitia Agricultural Cluster Project

Drainages F & G
Jursidictional Waters of the U.S.

FIGURE 5.4

Back of Figure 5.4



SHEET: 7 OF 6 SCALE: 1" = 100'	MORRO GROUP, INC. Environmental Services	WETLAND ASSESSMENT Laetitia Agricultural Cluster Project	Drainage G Jursidictional Waters of the U.S.
CADD FILE: 05-513 Laetitia EIR\Bio-wetdel.dwg			FIGURE 5.5
DATE: 10.19.07 BY: dh REV.			

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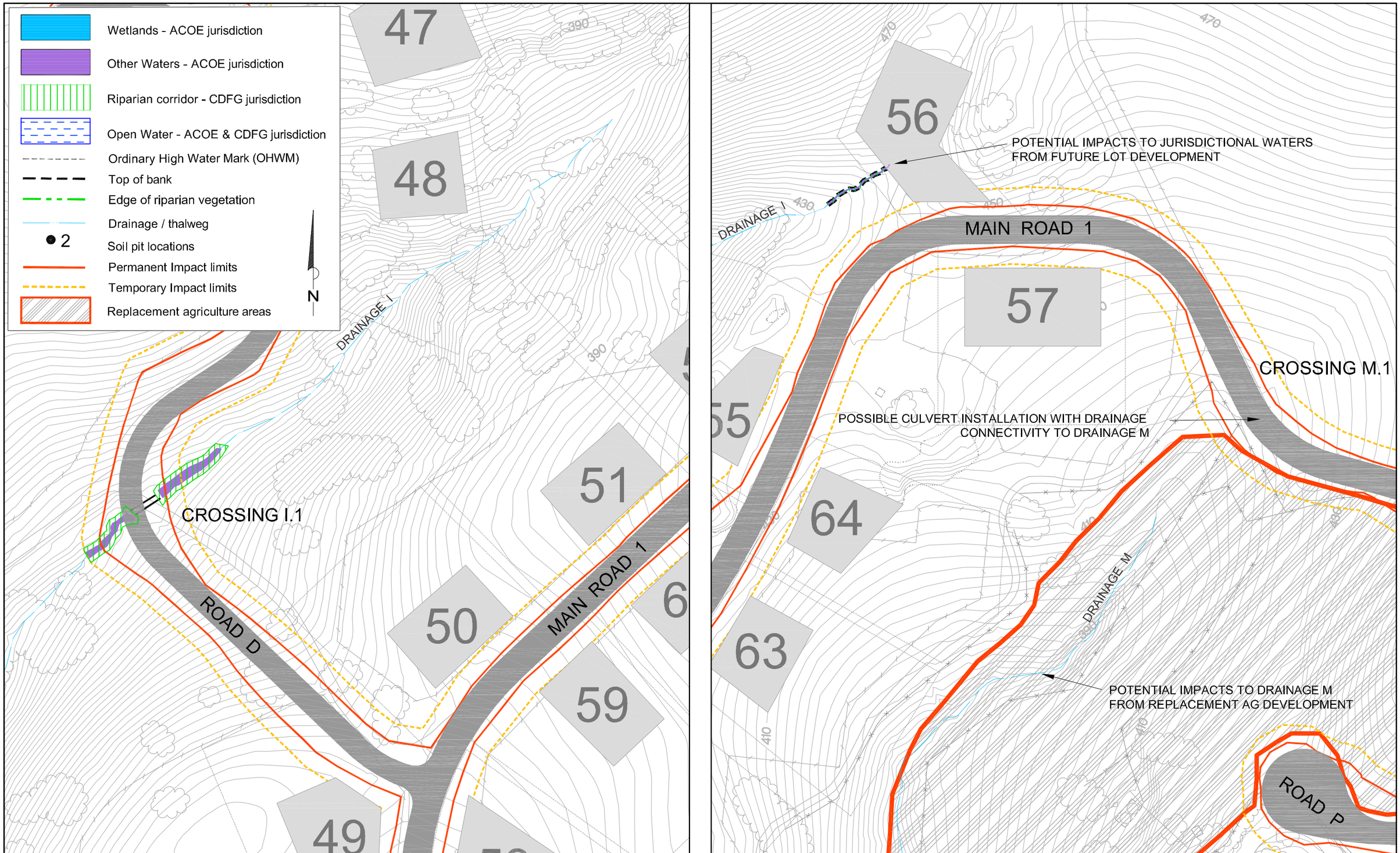

SHEET: 7 OF 7 SCALE: 1" = 100'	MORRO GROUP, INC. Environmental Services	WETLAND ASSESSMENT Laetitia Agricultural Cluster Project	Drainages I & M Jursidictional Waters of the U.S.
CADD FILE: 05-513 Laetitia EIR\Bio-wetdel.dwg			FIGURE 5.6
DATE: 10.19.07 BY: dh REV.			

Back of Figure 5.6

III. RESULTS

A. HYDROLOGIC CONDITIONS

Los Berros Creek is located along the southern property boundary of the project site and is the main hydrologic conduit for water that flows from the site. Thirteen unnamed ephemeral drainages that are tributaries to Los Berros Creek originate within or pass through the project site (refer to Figure 2). To facilitate discussion in this report, these unnamed channels have been designated alphabetically as Drainages A through M. Drainages A through G, K, and L are direct tributaries to Los Berros Creek; whereas, Drainages H, I, J, and M are tributaries to Drainage G. In addition, several of these drainages have smaller tributaries that appear as swales with minimal bed or bank characteristics, or significant vegetative differences from surrounding areas. These swales convey water during rain events; however, generally do not maintain characteristics of jurisdictional waters and are only discussed in this report if the proposed project may impact the feature.

1. Drainages A and B

These drainages are located in the eastern portion of the site, and traverse the proposed dude ranch area before crossing Los Berros Road and entering Los Berros Creek (refer to Figure 4). Drainages A and B are very similar in size and depth, and exhibit similar vegetative and hydrologic conditions. These drainages are surrounded by annual grassland, coastal scrub, and oak woodland habitats on steeply sloping hillsides. Bed and bank conditions are defined throughout the length of the channels. OHWM's are approximately three feet wide and are approximately two feet deep at the thalweg.

2. Drainages C, D, and E

These drainages cross the central portion of the site before crossing Upper Los Berros Road and entering Los Berros Creek. They originate in moderately to steeply sloping annual grassland and coastal scrub areas near the northern property boundary, and travel through active or proposed agricultural areas. Culverts and bridges for agricultural road crossings are present in the lower portions of these drainages. Bed and bank conditions are defined throughout the length of the drainages; however, these drainages maintain different hydrologic and vegetative conditions.

Drainage C is within Adobe Canyon, maintains perennial flows, and supports a dense Central Coast cottonwood-sycamore riparian forest throughout the property. The bed between the OHWM's varies from three to fifteen feet wide and the thalweg is approximately two feet deep.

Drainage D is ephemeral and supports annual grassland, coast live oak woodland, and sporadic sycamores and willows. The bed between the OHWM's varies from one to four feet wide and the thalweg is approximately one foot deep.

Drainage E is ephemeral in the upper reach; however, midway through the property this drainage becomes perennial. Water is supplied to the perennial portion of Drainage E by a seep that is centrally located within the property. Currently the seep is partially filled by an agricultural road. Upstream of the seep Drainage E supports disturbed annual grassland, vineyard, and OHWM's

that are approximately one foot apart; the thalweg is approximately six inches deep. Downstream of the seep, Drainage E supports freshwater marsh and willow riparian scrub; and, maintains an approximately five foot wide bed between OHWM's.

3. Drainages F, G, H, and I

These drainages are located in the western portion of the site, and are surrounded by agricultural development consisting of vineyards, citrus orchards, pasture land, and a winery facility. Topography is gently to moderately sloped, and several culverts and bridges for agricultural road crossings are present in the lower portions of these drainages. Drainage F crosses under Highway 101 and connects directly with Los Berros Creek, while G, H, and I join within the Highway 101 right-of-way before continuing west to Los Berros Creek. These drainages maintain clearly defined bed, bank, and OHWM features; and are generally characterized by incised channels, steep banks, and sporadic willow canopies.

Drainage G is notable because it traverses the entire width of the central portion of the property and maintains wetland and other waters features. A perennial spring is located at the upper reach of this drainage. The spring supplies enough water to maintain surface flows through the northern half of the drainage; however, the bed of the southern half of the drainage was dry at the time of the field inspection. Drainage G has been dammed near the central portion of the property (refer to Figures 5.0 and 5.5 and Appendix B, Photos 9 and 10). The impoundment has created an agricultural retention pond that supplies irrigation water to the vineyards. In addition, a small slope wetland feature is located directly adjacent to Drainage G near the confluence with the Highway 101 right-of-way (refer to Figures 5.0 and 5.5). This area contains a shallow restrictive layer and collects surface and subsurface run off from the adjacent vineyards. The slope wetland supports the three parameters of an ACOE jurisdictional wetland and direct connectivity to Drainage G.

4. Drainages J, K, L, and M

These drainages are located in various parts of the property and with the exception of Drainage L are not mapped as blue line features. Drainages K and L are direct tributaries to Los Berros Creek. Drainage J conveys flows to Drainage G; and, Drainage M is connected to Drainage H.

Drainage J is located in the northwestern portion of the property and is a tributary to Drainage G. The upper reach of Drainage J is ephemeral; however, wetland characteristics are evident approximately 200 feet downstream of the headwaters. An agricultural water line is located in this vicinity and seems to be contributing to the hydrology of the drainage.

Drainage K is located at the southern boundary of the property and is a tributary to Los Berros Creek. This drainage is ephemeral and maintains top-of-bank and OHWM features. Drainage K supports riparian scrub and appears to convey surface and subsurface flows from the surrounding vineyards.

Drainage L is a blue line feature with the headwaters centrally located in the property, but quickly flows outside of the property boundaries before its confluence with Los Berros Creek. Drainage L conveys flows from a small watershed that consists of vineyard and disturbed annual

grassland. The upper reach of Drainage L does not maintain an OHWM; however the lower reach maintains evidence of ACOE jurisdictional wetlands.

Drainage M is a small ephemeral drainage that is located in the northwestern portion of the property and conveys overland flows from surrounding vineyards to Drainage H. Drainage M maintains characteristics of ACOE jurisdictional other waters in the lower reach of the drainage. However, the upper reach of the drainage does not maintain evidence of a defined bed, bank or OHWM.

B. SOIL CONDITIONS

1. Soil Types in the Project Area

The *Soil Survey of San Luis Obispo County, California Coastal Part* maps seventeen soil units as present within the project site (United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS); September 1984). The soil series present on the site range from clays to shaly loams, and are listed in Table 1 below. None of the soil types mapped as present on the site are listed by the NRCS as hydric soils. Soil colors are described according to Munsell Color standards (Munsell Color, 2000). In general, the steeper soils (Gazos-Lodo, Lopez, Nacimiento, Rock outcrop, and Santa Lucia) are found in the northeastern portions of the site, while the southern and western areas contain the less steeply sloping soil types (Chamise, Diablo/Cibo, Lodo rock outcrop, and Still). Still gravelly sandy clay loam, 2 to 9 percent slopes, although not listed as hydric, is mapped along the southern portion of Los Berros Creek. The thirteen drainages traversing the site occur in a wide variety of soil types, and are evidently too small to significantly affect soil conditions on a scale visible on SCS maps. Sample soil pits within the OHWM of a few drainages on the site found hydric soil conditions or riverwash deposits.

2. Soil Test Pits

Seven soil test pits were investigated in various locations throughout the property. Test pits were investigated in areas that are proposed for improvements and appeared to have wetland characteristics. Soil test pits were not investigated in areas that obviously lacked wetland hydrology or vegetation. Field data sheets are provided in Appendix A; and, Table 2 provides a summary of the test pit results.

Test Pits 1 and 2 were located at the lower reach of Drainage G and just upstream of the Drainage G and Highway 101 right-of-way intersection (refer to Figure 5.5). This is a sloped area that is surrounded by annual grasslands and active vineyards. As proposed this area would be converted to vineyard. The vegetation within the investigated plots is routinely mowed and grazed. Test Pit 1 is located within a patch of dense brown headed rush and revealed a dark redox surface (F6) (10YR/2/1) with prominent concentrations in the pore lining and root channels (2.5YR/4/8). The surface layer is on top of a restrictive layer that is approximately four inches below the surface. The restrictive layer consisted of dry clayey soil with a matrix color of 10YR/3/3 and no redox features. The area investigated around Test Pit 1 lacked primary indicators of wetland hydrology; however, presence of the aquitard (D3) and dominance by a FACW species (D5) satisfied the two required secondary indicators. Test Pit 2 indicated the same soil characteristics as Pit 1; however, the vegetation and hydrology differed. The

vegetation was dominated by weedy annuals including *Hordeum histrex* (FAC); and, the aquitard was the only hydrologic indicator observed. Even though this area lacked primary wetland hydrology indicators, it has been classified as a wetland based on the presence of wetland soils and vegetation as described on pages 93-95 of the Arid West Supplement.

Test Pit 3 was located in the upper reach of Drainage G and directly adjacent to the OHWM (refer to Figure 5.4). As proposed, a 32-foot wide road crossing would be installed in this location. A perennial seep is located approximately ten feet upstream of the pit. Despite the dry year, the seep maintained surface flows within the thalweg of the drainage. Soils in the plot maintained typical color (10YR/3/1) for the mapped soil type; however, prominent (10YR/5/8) soft masses were evident in the matrix and root channels. Soil Pit 3 was determined to be in a wetland.

Soil Pits 4 and 5 were located directly adjacent to Drainage G and just downstream of an agricultural pond (refer to Figure 5.5). An agricultural road has impounded flows within Drainage G and created the pond. The proposed project would install force main utilities within the road bed. Investigation of Pit 4 revealed mixed soils, presumably altered by the adjacent roads and agricultural practices. The soils contained lots of rock and road base with some moisture starting at eight inches from the surface. No evidence of redoximorphic features or wetland hydrology were observed in Soil Pit 4. Soil Pit 4 was determined to be in uplands. Soil Pit 5 was located approximately 20 feet from the road, approximately five vertical feet above the Drainage G OHWM, and within a dense stand of cattails. Soils in this area were dark (10YR/3/2) and saturated at the surface. At approximately ten inches, gley soils (Gley1/3/N) were evident. The soils in this pit emitted a strong hydrogen sulfide odor. Soil Pit 5 was determined to be in a wetland.

Soil Pits 6 and 7 were located directly adjacent to the channel of Drainage E (refer to Figure 5.3). This area has been altered by the installation of several agricultural roads that travel over a perennial seep. An intersection of two 32 foot wide roads is proposed in this location. Soil Pit 6 was located at the top of the defined channel and just off the side of the agricultural road. The vegetation in the plot is routinely mowed and consisted of ruderal and freshwater marsh species. Surface water was present and soils within the pit were saturated. The black matrix (10YR/2/1) is typical of the Diablo Cibo clays; however, lighter colored (10YR/4/2) patches were scattered throughout the matrix starting at approximately three inches. In addition, dark reddish brown (5YR/3/4) concentrations were also evident within the matrix. The soil in this plot emitted a strong hydrogen sulfide odor. Soil Pit 6 was determined to be in a wetland. Soil Pit 7 was located approximately five feet from Pit 6 and within the road shoulder. Vegetation in the area consisted of ruderal roadside species. This plot revealed the same black soils as pit 6; however, lacked any evidence of the redox depressions and concentrations. Soil Pit 7 was determined to be in uplands.

C. VEGETATIVE CONDITIONS

The project site consists of a mixture of agricultural development, annual grassland, coastal scrub, and oak woodland habitats. The drainage channels and Los Berros Creek contain a variety of riparian vegetation, ranging from sycamore and willow canopy to exotic annual grasses and broad-leafed herbs. In general, the Los Berros Creek riparian corridor supports

multi-level riparian woodland and riparian scrub communities. The riparian woodlands are dominated by coast live oak (*Quercus agrifolia*), sycamore (*Platanus racemosa*), and cotton woods (*Populus balsamifera*). The riparian scrub layer in the Los Berros Creek consists of a patchy mosaic of California blackberry (*Rubus ursinus*), California rose (*Rosa californica*), and poison oak (*Toxidendron diversilobum*).

The thirteen tributary drainage channels support discontinuous willow thickets that are intermixed with ruderal and freshwater marsh species. Dryer portions of the drainages are covered with ruderal species that include: Italian ryegrass (*Lolium multiflorum*), perennial mustard (*Hirschfeldia incana*), purple star thistle (*Centaurea calcitrapa*), ripgut brome (*Bromus diandrus*), fennel (*Foeniculum vulgare*), hemlock (*Conium maculatum*), and bull thistle (*Cirsium vulgare*). Freshwater marsh communities are sporadically intermixed within the willow thickets and ruderal species. The freshwater marsh communities include: cattail (*Typha* sp.), fireweed (*Epilobium ciliatum*), small-fruit bulrush (*Scirpus microcarpus*), rabbits foot grass (*Polypogon monspeliensis*), tall flat-sedge (*Cyperus eragrostis*), brown-headed rush (*Juncus phaeocephalus*), spikerush (*Eleocharis macrostachya*), and watercress (*Rorippa nasturtium-aquaticum*).

D. JURISDICTIONAL DETERMINATION

Jurisdictional wetlands and other waters areas per ACOE criteria were found to be associated with Drainages A through M and the section of Los Berros Creek adjacent to the site (refer to Figures 5.0 through 5.6). The OHWM within these drainages was identified and defined by the evidence of scour and vegetation lines. In several of the investigated drainages evidence of an OHWM was sporadic or discontinuous. In these instances, jurisdictional determinations were based on the evidence of jurisdictional features at the impact area. In areas where wetland characteristics were evident, soil test pits were investigated. Table 2 provides a summary of the test pit results. Please refer to section IV for a detailed discussion of the jurisdictional determinations for each proposed impact site.

TABLE 1
Sample Plot Jurisdictional Wetland Determination Summary

Sample Plot	Hydrophytic Vegetation	Hydric Soils	Wetland Hydrology	Wetlands Present
1	Yes	Yes	Yes	Yes
2	Yes	Yes	Yes	Yes
3	Yes	Yes	Yes	Yes
4	Yes	No	No	No
5	Yes	Yes	Yes	Yes
6	Yes	Yes	Yes	Yes
7	Yes	No	No	No

E. FUNCTIONS AND VALUES OF IDENTIFIED JURISDICTIONAL AREAS

General functions and values of identified jurisdictional areas and surrounding habitat were evaluated, based on observed vegetative cover and diversity, hydrologic connectivity, and surrounding land uses. A brief discussion of these attributes follows. Drainage C and Los Berros Creek consist of a riverine, lower perennial system with an unconsolidated bottom (Cowardin et al. 1979) supporting Central Coast cottonwood-sycamore riparian forest. These areas maintain surface flows throughout the year and provide habitat for numerous aquatic, terrestrial, and avian species. Their functions and values are not only to convey runoff but also to serve as conduits for water quality improvement (e.g., filtering), storm and floodwater storage, groundwater discharge and recharge, and relatively high biological diversity and habitat value.

The areas associated with the ephemeral drainages are vegetated with annual grasses, weedy species, sporadic freshwater marsh, and willow riparian scrub. These channels have a variety of substrates and convey water for short durations of time. The ephemeral nature and current condition of the drainages greatly minimizes their functionality.

1. Vegetative Cover and Diversity

The ephemeral drainages on the property support a relatively low diversity of vegetation. Typically the drainages support willow thickets with ruderal species in the under story or annual grassland with weedy herbs. Freshwater marsh species are sporadically dispersed within the wetter portions of the drainages. The willow thickets provide valuable nesting and foraging habitat for avian species, while protecting the channel from rapid erosion. Areas that are dominated by annual grass and ruderal forbs appear to do nothing more than convey flows during rain events. These areas provide minimal habitat for wildlife and are ineffective at protecting the channel from erosion. The freshwater marsh areas provide habitat for aquatic species including California red-legged frog and may assist in ground water recharge within the immediate vicinity.

Drainage C and Los Berros Creek support a diverse Central Coast cottonwood-sycamore riparian forest. This community provides valuable habitat for terrestrial, avian, and aquatic species that utilize the corridors for foraging, dispersal, cover, and breeding habitat. In addition, the riparian vegetation assists in water quality improvement, filtering, and channel stabilization.

2. Hydrologic Connectivity

All thirteen drainages on the property maintain connectivity to Los Berros Creek, which is a tributary to Arroyo Grande Creek. Drainages A, through G, K, and L are direct tributaries to Los Berros Creek; whereas, Drainages H, I, J, and M are tributaries to Drainage G. Los Berros Creek, Drainage C, Drainage E, and Drainage G are perennial features. Perennial flows in Drainages E and G are spring fed and localized in specific areas within the channels. The perennial features rank moderate to high in functions and values. They provide storm water storage, groundwater discharge, and groundwater recharge, subsequently improving water quality within Los Berros Creek, which supports numerous aquatic species. In addition, the water resources within the site are vital to the adjacent agricultural industry.

Drainages A, B, D, F, G, K, and L are ephemeral and rank low to moderate in functions and values. This is indicative of their primary function to convey runoff and their minimal availability for floodwater storage capacity. In addition, their minimal vegetative diversity provides marginal habitat for wildlife species

3. Surrounding Uses

Identified jurisdictional areas are surrounded by active vineyard, orchard, agricultural roads, annual grasslands, coastal scrub, and oak woodland. The surrounding agricultural uses reduce habitat quality, but do not preclude wildlife presence within and adjacent to the stream corridors. The Los Berros Creek and Drainage C corridors are likely a significant water source, refuge, and migration corridor for numerous wildlife species. The history of agricultural uses directly adjacent to and within the drainages has resulted in incised channels that are subject to rapid erosion.

IV. IMPACT ASSESSMENT

The following discussion is specific to project-related impacts to Waters of the U.S., including wetlands, as defined by the ACOE. The proposed project has the potential to cause permanent, temporary, direct, and indirect impacts to ACOE jurisdictional areas associated with Los Berros Creek and its tributaries. Permanent and direct impacts could result from proposed road crossings and utility installation in wetland and other waters areas (refer to Figures 5.0 through 5.6). Temporary impacts could result from equipment access to the project site. Indirect impacts could result from various project activities being implemented directly adjacent to jurisdictional areas. The following discussion focuses on areas that are proposed for direct impacts resulting from project activities. In instances where the proposed project could impact a portion of a drainage that does not maintain evidence of an OHWM or relatively permanent waters, the impact area was considered non-jurisdictional; even if, the drainage maintained evidence of an OHWM downstream of the impact area. This determination is based on the lack of jurisdictional characteristics within the impact area. Estimated impacts to waters of the U.S. are summarized in Table 3 and are based on conceptual design drawings provided by RRM (2006) (refer to Figure 4). Estimated impacts to California Department of Fish and Game (CDFG) jurisdictional areas are also summarized in Table 3.

TABLE 2
Impact Areas within ACOE and CDFG Jurisdiction

Habitat	Total Area in sq. ft. (acres)	Permanent Impact Areas in sq. ft. (acres)	Temporary Impact Areas in sq. ft. (acres)
ACOE Jurisdictional Areas			
Wetlands	16,738 sq. ft (0.38 ac)	14,952 sq. ft (0.34 ac)	1,786 sq. ft (0.04 ac)
Other Waters	2,004 sq. ft (0.05 ac)	1,126 sq. ft (0.03 ac)	878 sq. ft (0.02 ac)
TOTAL ACOE IMPACT AREAS		16,078 sq. ft (0.37 ac)	2,664 sq. ft (0.06 ac)
CDFG Jurisdictional Areas	106,225 sq. ft (2.44 ac)	44,353 sq. ft (1.02 ac)	61,872 sq. ft (1.42 ac)

A. DRAINAGES A AND B

Drainages A and B maintain characteristics of ACOE jurisdictional other waters. Future development associated with the proposed project includes construction of a dude ranch within the watershed of Drainages A and B. Construction of the dude ranch would require installation of road crossings within the drainages (refer to Figure 5.0 and Photos 1 and 2), which would result in permanent and temporary impacts to the jurisdictional features. Currently, the applicant has not provided conceptual plans for the road crossings; consequently, impacts to Drainages A and B can not be estimated at this time. Table 3 does not include potential impacts resulting from this future development.

B. DRAINAGES C, D, AND E

Drainage C maintains characteristics of ACOE jurisdictional wetlands and the proposed project would result in permanent and temporary impacts to the drainage in one location. The proposed project includes installing a road crossing in a portion of the drainage that maintains OHWM's that are approximately fifteen feet apart (refer to Figure 5.1 Crossing C.1 and Photo 3). The proposed road crossing would be approximately thirty-two feet wide and provide primary access to the residential development. The proposed road construction could result in 0.023 acres of permanent and 0.015 acres of temporary impacts to ACOE Jurisdictional Wetlands. Proposed activities could also result in 0.140 acres of permanent and 0.090 acres of temporary impacts to CDFG jurisdictional areas in Drainage C.

Drainage D maintains characteristics of ACOE jurisdictional other waters and the proposed project would result in permanent and temporary impacts in one location. The proposed alignment for Main Road 2 would require the installation of a road crossing within the drainage refer to Figure 5.1 Crossing D.1 and Photo 4). The crossing would be approximately thirty-two feet wide and provide access to the residential development. An agricultural road exists in the location of the proposed crossing and the area supports a small willow thicket. Installation of the road crossing could result in 0.011 acres of permanent and 0.003 acres of temporary impacts to ACOE jurisdictional other waters. Proposed activities could also result in 0.044 acres of permanent and 0.016 acres of temporary impacts to CDFG jurisdictional areas in Drainage D.

Drainage E maintains characteristics of ACOE jurisdictional other waters and wetlands. The proposed project would impact Drainage E in four locations.

The proposed alignment of Access Road L at Main Road 1 would require installation of a road crossing within the lower reach of Drainage E (refer to Figure 5.2, Crossing E.1 and Photo 5). Crossing E.1 would be located in an area that maintains characteristics of ACOE jurisdictional wetlands. At the time of the field investigation, the proposed location of Crossing E.1 maintained perennial flows and a dense willow thicket with watercress within the thalweg. Installation of Crossing E.1 could result in 0.005 acres of permanent and 0.005 acres of temporary impacts to ACOE jurisdictional wetland. Proposed activities could also result in 0.056 acres of permanent and 0.050 acres of temporary impacts to CDFG jurisdictional areas associated with Crossing E.1.

The proposed alignment of Main Road 1 would require installing a culvert (refer to Figure 5.3 Crossing E.2 and Photo 6) through a perennial seep that supplies flows to the lower portion of the drainage. The proposed crossing is at the intersection of Main Roads 1 and 2, and would include filling a wetland and potentially a portion of the drainage channel. Installation of the road crossing and intersection could result in 0.001 acres of permanent and 0.001 acres of temporary impacts to ACOE jurisdictional wetlands. Proposed activities could also result in 0.035 acres of permanent and 0.036 acres of temporary impacts to CDFG jurisdictional areas associated with Crossing E.2.

The alignment of Main Road 2 would require installation of a road crossing within the upper reach of Drainage E (refer to Figure 5.3, Crossing E.3). Crossing E.3 would impact ACOE jurisdictional other waters in a location that supports disturbed annual grasslands. Installation of Crossing E.3 could result in 0.003 acres of permanent and 0.002 acres of temporary impacts to ACOE jurisdictional other waters, and in 0.020 acres of permanent and 0.010 acres of temporary impacts to CDFG jurisdictional areas.

In addition, Access Road L would parallel the channel of a tributary to Drainage E between Crossing D.1 and E.3 (refer to Figures 5.1, 5.2 and Photo 7). The tributary maintains characteristics of ACOE jurisdictional other waters; and, construction of Access Road L could result in 0.004 acres of temporary impacts to ACOE other waters in the tributary. Construction of Access Road L could also result in 0.009 acres of permanent and 0.413 acres of temporary impacts to CDFG jurisdictional areas in addition to impacts at Crossing E.1.

Lot 92 would be situated between Drainage E and a tributary to Drainage E. The driveway for Lot 92 would require installation of a culvert and road fill within the tributary channel (refer to Figure 5.3, Crossing E.4). Installation of the driveway could result in 0.002 acres of permanent and 0.002 acres of temporary impacts to ACOE jurisdictional other waters, and in 0.002 acres of permanent and 0.002 acres of temporary impacts to CDFG jurisdictional areas.

C. DRAINAGES F, G, H, AND I

Drainage F maintains characteristics of ACOE jurisdictional other waters and the proposed project may impact the drainage in one location (refer to Figure 5.4). An existing agricultural road crosses Drainage F approximately 1,500-feet upstream of the drainage intersection with Highway 101. The applicant proposes to install a force main utility system within the road bed,

which may result in widening the road and replacing or extending an existing culvert. These activities could result in permanent and temporary impacts to ACOE jurisdictional other waters, which cannot be quantified at this time due to the conceptual nature of the project plans.

Drainage G maintains characteristics of both ACOE jurisdictional other waters and wetlands. The proposed project could impact Drainage G in three locations. As proposed, the project would construct Main Road 1 over an existing road crossing at the upper reach of the drainage (refer to Figure 5.4, Crossing G.1). The road improvements would require widening the road and replacing the existing culverts. These activities could result in 0.008 acres of permanent and 0.003 acres of temporary impacts to ACOE jurisdictional wetlands. Proposed activities could also result in 0.148 acres of permanent and 0.065 acres of temporary impacts to CDFG jurisdictional areas associated with Crossing G.1.

The flows within Drainage G are impounded by an existing agricultural road approximately 4,000-feet downstream of the proposed Crossing G.1. The impoundment has created an in-stream agricultural pond that is controlled by a pumping station (refer to Photo 9). Drainage G maintains wetland characteristics immediately downstream from the pumping station (refer to Photo 10). As proposed, the project would require installing force main utilities within the existing agricultural road (refer to Figure 5.5, Crossing G.2). These activities may require widening the road to allow for equipment access or rerouting the controlled flows to and from the pumping station. These improvements could result in permanent and temporary impacts to ACOE jurisdictional wetlands, which cannot be quantified at this time due to the conceptual nature of the project plans.

Located approximately 200 feet upstream of the Highway 101 and Drainage G intersection is an adjacent slope wetland (refer to Figure 5.5, Pits 1 and 2). The slope wetland is located in an area proposed for agricultural development, which would require tilling the soil past the depth of the restrictive layer. This land use change would alter the geologic features that are supporting the existing slope wetland, resulting in 0.302 acres of permanent impacts caused by the loss of the entire ACOE jurisdictional wetland.

Drainage H traverses the western portion of the property and maintains characteristics of ACOE jurisdictional other waters in the lower reach of the drainage. The upper reach of the drainage has been significantly altered by agricultural practices and does not maintain evidence of a defined bed, bank or OHWM. The proposed project includes the construction of a new 32-foot wide road (Main Road 1), which would require a culvert where the road crosses the upper reach of Drainage H (refer to Figure 5.0). At the location of the new culvert, Drainage H does not maintain evidence of jurisdictional features (e.g. OHWM or Relatively Permanent Waters); therefore, the road and culvert would not impact waters of the U.S.

Drainage I is located in the northwestern corner of the property and maintains characteristics of ACOE jurisdictional other waters. The proposed project would result in impacts to Drainage I in two locations. The proposed project includes constructing a 26-foot secondary access road (Road D) that would cross Drainage I (refer to Figure 5.6 Crossing I.1, and Photo 11). Construction of Road D would require installation of a culvert in the drainage, which would result in 0.009 acres of permanent and 0.008 acres of temporary impacts to ACOE jurisdictional

other waters. Proposed activities could also result in 0.026 acres of permanent and 0.018 acres of temporary impacts to CDFG jurisdictional areas associated with Crossing I.1.

In addition, the proposed home site of Lot 56 is located in the headwaters of Drainage I. Access and development of Lot 56 could result in permanent and temporary impacts to ACOE other waters and CDFG jurisdictional areas, which cannot be quantified at this time due to the conceptual nature of the project plans.

D. DRAINAGES J, K, L, AND M

No road crossings or other structures are proposed on Drainages J, K, or L; however, the project would result in land use conversions adjacent to Drainages K and L. Approximately 20.8 acres of existing vineyard adjacent to Drainage K would be converted to a waste water effluent spray site. In addition, approximately 3.0 acres of non-native annual grassland located near the headwaters of Drainage L would be converted to active agricultural land. As proposed, these land use conversions would not result in dredge or fill of jurisdictional waters; however, could result in increased sediment loading of adjacent jurisdictional areas.

The lower reach of Drainage M maintains characteristics of ACOE jurisdictional other waters; however, the upper reach of the drainage does not maintain evidence of a defined bed, bank or OHWM. The proposed project includes a road crossing and culvert at the headwaters of the drainage (refer to Figure 5.6 Crossing M.1, and Photo 12). Due to the lack of jurisdictional features at the impact location, Crossing M.1 is not anticipated to result in impacts to jurisdictional areas. In addition, the proposed project would convert the sloped areas adjacent to Drainage M to vineyards. This land conversion would not result in fill of the drainage; consequently, impacts to jurisdictional areas are not anticipated.

V. REGULATORY IMPLICATIONS

A. U.S. ARMY CORPS OF ENGINEERS

Section 404 of the Clean Water Act (CWA) regulates activities that result in the discharge of dredge or fill materials into Waters of the United States, including wetlands. The ACOE is charged with administering and regulating various sections of the CWA. Placement of access road crossings or any other material below the OHWM of Los Berros Creek or its tributaries would require submittal of a permit application to the ACOE for determination of permitting/mitigation requirements.

B. CALIFORNIA DEPARTMENT OF FISH AND GAME

Sections 1600 through 1607 of the CDFG Code regulate activities that would alter the flow, bed, channel, or bank of streams and lakes. CDFG jurisdiction typically extends to the top of the creek bank or the outside edge of riparian vegetation. Placement of access road crossings or any other material between the creek banks of Los Berros Creek or its tributaries will likely require coordination with and permit approval from the CDFG.

C. REGIONAL WATER QUALITY CONTROL BOARD

Section 401 of the Clean Water Act regulates activities that have the potential to cause water quality impacts to Waters of the United States, including wetlands, as defined by the ACOE. This certification typically precedes ACOE permit issuance. Any work in or adjacent to areas considered jurisdictional by the ACOE will require a Section 401 Water Quality Certification from the Regional Water Quality Control Board (RWQCB).

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ATTACHMENT A

- Field Data Sheets

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Laetitia Ag Cluster City/County: Arroyo Grande/SLO Sampling Date: 7/25/07

Applicant/Owner: Tower Grove Vinters, Inc. State: CA Sampling Point: 1

Investigator(s): Travis Belt, Barrett Holland Section, Township, Range: 26, Township, 35 W

Landform (hillslope, terrace, etc.): Hillslope/Toeslope Local relief (concave, convex, none): Convex Slope (%): 10

Subregion (LRR): C Lat: 35 05' 12.93" Long: 120 31' 57.13" Datum: WGS 1984

Soil Map Unit Name: 116 Chamise Shaly Loam NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No X (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** Yes X No ____
Hydric Soil Present?	Yes X	No ____	
Wetland Hydrology Present?	Yes X	No ____	

Remarks: Annual rainfall for this season has been very low. This area is located adjacent to the lower reach of Drainage G and at the toe of a slope. Sub surface flows from the nearby vineyard appear to be collecting on top of a restrictive layer as they flow down from the hillside and into the drainage.

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover: 0			
Herb Stratum			
1. Juncus phaeocephalus	95	Yes	FACW
2. Lactucea serriola	2	No	FAC
3.			
4.			
5.			
6.			
7.			
8.			
Total Cover: 97			
Woody Vine Stratum			
1.			
2.			
Total Cover: 0			

% Bare Ground in Herb Stratum 3 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ____	x 1 = ____
FACW species ____	x 2 = ____
FAC species ____	x 3 = ____
FACU species ____	x 4 = ____
UPL species ____	x 5 = ____
Column Totals: ____ (A)	____ (B)

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes X No ____

Remarks:

This area is covered with J. phaeocephalus and has a few scattered L. serriola. Areas surrounding the Juncus "patch" are dominated by annual grasses including Bromus sp. and Avena sp.

SOIL

Sampling Point: _____

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-1"								Dry, organic material
1-4"	10yr/2/1	90	2.5yr/4/8	10	C	RC/PL	silt/loam	Very dry with lots of roots
> 4"	10yr/3/3	100						Clayey Restrictive layer

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: hard pan

Depth (inches): 4"

Hydric Soil Present? Yes X No ___

Remarks:

Soil is extremely dry due to low seasonal rain. This soil layer is on top of a restrictive layer. The root channels and poor linings have prominent redox concentrations. The observed matrix color is only slightly darker than the USGS mapped 10YR/3/1; however, evidence of prominent redox concentrations in the root channels and pore linings indicate a redox dark surface.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Thin Muck Surface (C7)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- X Shallow Aquitard (D3)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): _____

Water Table Present? Yes ___ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): _____

Wetland Hydrology Present? Yes X No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

The observed hydrologic indicators are secondary and include the impermeable layer (D3) and the vegetation passing the Fac-neutral test. In addition, according to page 93-95, "wetlands that periodically lack wetland hydrology" are considered a wetland if hydric vegetation and soils are present. This area has wetland hydrology due to the presence of secondary indicators, hydric soils, and vegetation.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Laetitia Ag Cluster City/County: Arroyo Grande/SLO Sampling Date: 7/25/07

Applicant/Owner: Tower Grove Vinters, Inc. State: CA Sampling Point: 2

Investigator(s): Barrett Holland Section, Township, Range: 26, Township, 35 W

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): 10

Subregion (LRR): C Lat: 35 05' 13.40"N Long: 120 31" 57.85"W Datum: WGS 1984

Soil Map Unit Name: 116 Chamise Shaly Loam NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No _____	**Is the Sampled Area within a Wetland?** **Yes** X **No** _____
Hydric Soil Present?	Yes X	No _____	
Wetland Hydrology Present?	Yes _____	No X	

Remarks: Very dry year. This area is located adjacent to the lower reach of Drainage G and at the toe of a slope. Sub surface flows from the nearby vineyard appears to be collecting on top of a restrictive layer as they flow down from the hillside and into the drainage. The only hydrologic indicator is the impermeable layer (D3) which is secondary. However, according to page 93-95, "wetlands that periodically lack indicators of wetland hydrology" this area is wetland due to the presence of hydric soils and vegetation.

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover: 0			
Herb Stratum			
1. Hordeum histrex	70	Yes	FAC
2. Bromus hordeaceus	10	No	FACU
3. Bromus diandrus	10	No	UPL
4.			
5.			
6.			
7.			
8.			
Total Cover: 90			
Woody Vine Stratum			
1.			
2.			
Total Cover: _____			

% Bare Ground in Herb Stratum 10 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	_____	x 1 = _____
FACW species	_____	x 2 = _____
FAC species	_____	x 3 = _____
FACU species	_____	x 4 = _____
UPL species	_____	x 5 = _____
Column Totals:	_____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? **Yes** X **No** _____

Remarks:

Vegetation is heavily browsed by managed goat herds and is significantly different than that of test pit 1.

SOIL

Sampling Point: _____

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-1"								Dry, organic material
1-4"	10yr/2/1	90	2.5yr/4/8	10	C	RC/PL	silt/loam	
> 4"	10yr/3/3	100						Clayey Restrictive layer

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: hard pan

Depth (inches): 4"

Hydric Soil Present? Yes X No _____

Remarks:

Soil is extremely dry due to low seasonal rain. This soil layer is on top of a restrictive layer. The root channels and poor linings have prominent redox concentrations. The observed matrix color is only slightly darker than the USGS mapped 10YR/3/1; however, evidence of prominent redox concentrations in the root channels and poor linings indicate a redox dark surface.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Thin Muck Surface (C7)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- X Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____

Water Table Present? Yes _____ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No X Depth (inches): _____

Wetland Hydrology Present? Yes _____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

The only hydrologic indicator is the impermeable layer (D3) which is secondary. However, according to page 93-95, "wetlands that periodically lack indicators of wetland hydrology" this area has wetland hydrology due to the presence of hydric soils and vegetation.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Laetitia Ag Cluster City/County: Arroyo Grande/SLO Sampling Date: 7/25/07

Applicant/Owner: Tower Grove Vinters, Inc. State: CA Sampling Point: 3

Investigator(s): Travis Belt, Barrett Holland Section, Township, Range: _____

Landform (hillslope, terrace, etc.): Drainage channel Local relief (concave, convex, none): Concave Slope (%): 30

Subregion (LRR): C Lat: 35 05' 50.74"N Long: 120 31' 07.60"W Datum: WGS 1984

Soil Map Unit Name: 156 Lopez very shaley clay loam NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No X (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** Yes X No ____
Hydric Soil Present?	Yes X	No ____	
Wetland Hydrology Present?	Yes X	No ____	

Remarks:

Dry year. This pit is located directly adjacent to the OHWM of Drainage G. A perennial spring is located just upstream of the pit and maintains surface flows in a thelweg that is approximately 1' deep. No evidence of wetland indicators are present outside of the OHWM.

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix lasiolepis	80	Yes	FACW
2.			
3.			
4.			
Total Cover:	80		
Sapling/Shrub Stratum			
1. Baccharis pilularis (coyote bush)	20	Yes	UPL
2.			
3.			
4.			
5.			
Total Cover:	20		
Herb Stratum			
1. Urtica dioica (stinging nettle)	40	Yes	FACW
2. Polypogon monspeliensis (beard grass)	20	Yes	FACW
3. Picris echoides (bristly ox-tongue)	20	Yes	FAC
4. Veronica anagallis-aquatica(water speedwell)	5	No	OBL
5. Conium maculatum (poison hemlock)	10	No	FACW
6.			
7.			
8.			
Total Cover:	95		
Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 5 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 80 % (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ____	x 1 = ____
FACW species ____	x 2 = ____
FAC species ____	x 3 = ____
FACU species ____	x 4 = ____
UPL species ____	x 5 = ____
Column Totals: ____ (A)	____ (B)

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes X No ____

Remarks:

The wetland tree stratum, upland shrub stratum, and multilayered wetland species in the herb stratum are characteristic of a disturbed drainage.

SOIL

Sampling Point: _____

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-22"	10yr/3/1	95	10yr/5/8	5	C	RC/M	clay	prominent soft masses, rocky

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- X Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: none

Depth (inches): none

Hydric Soil Present? Yes X No _____

Remarks:

This a deep clay soil that has prominent redox concentrations in the matrix and in the root channels. The matrix color is typical of the USGS mapped soil type.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- X Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Thin Muck Surface (C7)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes X No _____ Depth (inches): 0

Water Table Present? Yes X No _____ Depth (inches): 0

Saturation Present? (includes capillary fringe) Yes X No _____ Depth (inches): 0

Wetland Hydrology Present? Yes X No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Surface water is directly adjacent to the pit and is supplied by the nearby spring. Spring water flows to an agricultural retention pond. No standing water in the pit.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Laetitia Ag Cluster City/County: Arroyo Grande/SLO Sampling Date: 7/25/07

Applicant/Owner: Tower Grove Vinters, Inc. State: CA Sampling Point: 4

Investigator(s): Travis Belt Section, Township, Range: 36, Township, 13 E

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave Slope (%): 8

Subregion (LRR): C Lat: 35 05' 28.56"N Long: 120 31' 28.98" Datum: WGS 1984

Soil Map Unit Name: 131 diablo and cibo clays NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No _____	**Is the Sampled Area within a Wetland?** Yes _____ No X
Hydric Soil Present?	Yes _____	No X	
Wetland Hydrology Present?	Yes _____	No X	

Remarks:

Very dry season. This pit is located directly downstream from an in-stream agricultural impoundment in Drainage G. This area is directly adjacent to agriculture roads and the soils have been disturbed by routine road maintenance.

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover: 0			
Herb Stratum			
1. Lolium perenne	50	Yes	FAC
2. Picris echioides	30	Yes	FAC
3. Typha latifolia	15	No	OBL
4.			
5.			
6.			
7.			
8.			
Total Cover: 85 %			
Woody Vine Stratum			
1.			
2.			
Total Cover: _____			

% Bare Ground in Herb Stratum 15 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species		x 1 =
FACW species		x 2 =
FAC species		x 3 =
FACU species		x 4 =
UPL species		x 5 =
Column Totals:	(A)	(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes X No _____

Remarks:

Vegetation is routinely mowed and is typical of a roadside plant community.

SOIL

Sampling Point: _____

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-8"	7.5yr/2.5/1	100					loamy/clay	Lots of roots & small rocks. Dry.
8-16"	7.5yr/2.5/1	80					clay	Remaining 20%=gravel, moist
16-21"	7.5yr/2.5/1	90					clay	Remaining 10%=gravel,moist

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5) (**LRR C**)
___ 1 cm Muck (A9) (**LRR D**)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Loamy Mucky Mineral (F1)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

___ 1 cm Muck (A9) (**LRR C**)
___ 2 cm Muck (A10) (**LRR B**)
___ Reduced Vertic (F18)
___ Red Parent Material (TF2)
___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: N.A.

Depth (inches): N.A.

Hydric Soil Present? **Yes** _____ **No** X

Remarks:

What at first glance appeared to be concretions are just decomposing sandstone rocks mixed with road base and other rocky debris. No redox features observed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1) (**Nonriverine**)
___ Sediment Deposits (B2) (**Nonriverine**)
___ Drift Deposits (B3) (**Nonriverine**)
___ Surface Soil Cracks (B6)
___ Inundation Visible on Aerial Imagery (B7)
___ Water-Stained Leaves (B9)
___ Salt Crust (B11)
___ Biotic Crust (B12)
___ Aquatic Invertebrates (B13)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres along Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Plowed Soils (C6)
___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

___ Water Marks (B1) (**Riverine**)
___ Sediment Deposits (B2) (**Riverine**)
___ Drift Deposits (B3) (**Riverine**)
___ Drainage Patterns (B10)
___ Dry-Season Water Table (C2)
___ Thin Muck Surface (C7)
___ Crayfish Burrows (C8)
___ Saturation Visible on Aerial Imagery (C9)
___ Shallow Aquitard (D3)
___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____

Water Table Present? Yes _____ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No X Depth (inches): _____

Wetland Hydrology Present? **Yes** _____ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: During rain fall events, this area may receive sheet flows. However, routine maintenance may be masking any evidence of wetland hydrology.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Laetitia Ag Cluster City/County: Arroyo Grande/SLO Sampling Date: 7/25/07

Applicant/Owner: Tower Grove Vinters, Inc. State: CA Sampling Point: 5

Investigator(s): Travis Belt Section, Township, Range: 36, Township, 13 E

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave Slope (%): 8

Subregion (LRR): C Lat: 35 05' 28.44"N Long: 120 31' 28.71"W Datum: WGS 1984

Soil Map Unit Name: 131 diablo and cibo clays NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No _____	**Is the Sampled Area within a Wetland?** **Yes** X **No** _____
Hydric Soil Present?	Yes X	No _____	
Wetland Hydrology Present?	Yes X	No _____	

Remarks: Dry year. This pit is located directly downstream from an in-stream agricultural impoundment and adjacent to agriculture roads. Saturated soils and dense fresh water marsh vegetation are present. This area is directly adjacent to Drainage G and approximately five vertical feet above the OHWM. It appears that water from the upstream agricultural pond seeps under the road and saturates the vicinity. These flows then re-enter Drainage G and remain on or near the surface for an approximately 1000 foot stream reach.

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:	0		
Sapling/Shrub Stratum			
1. Salix lasiolepis	10	No	FACW
2.			
3.			
4.			
5.			
Total Cover:	10		
Herb Stratum			
1. Typha latifolia	80	Yes	OBL
2. Picris echioides	15	No	FAC
3. Melilotus indica	5	No	FAC
4.			
5.			
6.			
7.			
8.			
Total Cover:	100		
Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? **Yes** X **No** _____

Remarks:

The vegetation surrounding the pit is primarily cattails with a few weedy species intermixed. The willow canopy is over hanging from the adjacent stream channel.

SOIL

Sampling Point: _____

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-10"	10yr/3/2	100						Saturated, Mucky, Stinky
10-14"	Gley1/3/N							Mucky with rocks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- X Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: N.A.

Depth (inches): N.A.

Hydric Soil Present? Yes X No _____

Remarks:

This area is saturated with mucky mineral soils and strong hydrogen sulfide odors. Gley soils were observed in the lower 4" of the pit.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- X Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- X Aquatic Invertebrates (B13)
- X Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Thin Muck Surface (C7)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____

Water Table Present? Yes _____ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes X No _____ Depth (inches): 0

Wetland Hydrology Present? Yes X No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Hydrology in this location is subject to control by the agricultural impoundment and associated pumps that are directly upstream.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Laetitia Ag Cluster City/County: Arroyo Grande/SLO Sampling Date: 7/25/07

Applicant/Owner: Tower Grove Vinters, Inc. State: CA Sampling Point: 6

Investigator(s): Travis Belt Section, Township, Range: _____

Landform (hillslope, terrace, etc.): Hillslope Drainage Local relief (concave, convex, none): Concave Slope (%): 8

Subregion (LRR): C Lat: 35 05' 53.98"N Long: 120 31' 51.87"W Datum: WGS 1984

Soil Map Unit Name: 131 Diablo and Cibo clays NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ____ No X (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	**Is the Sampled Area within a Wetland?** Yes X No ____
Hydric Soil Present?	Yes X	No ____	
Wetland Hydrology Present?	Yes X	No ____	

Remarks: Very dry year. This location has several agricultural roads intersecting over a perennial seep. The drainage channel is unrecognizable upstream of the plot, most likely due to the ongoing agricultural practices. The perennial spring supplies surface flows to this portion of Drainage E.

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:	0		
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:	0		
Herb Stratum			
1. Urtica dioica	40	Yes	FACW
2. Conium maculatum	20	Yes	FACW
3. Cyperus eragstis	20	Yes	FACW
4. Xanthium strumarium	5	No	FAC
5. Picris echioides	5	No	FAC
6. Lolium perenne	5	No	FAC
7.			
8.			
Total Cover:	95		
Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 5 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species ____	x 1 = ____
FACW species ____	x 2 = ____
FAC species ____	x 3 = ____
FACU species ____	x 4 = ____
UPL species ____	x 5 = ____
Column Totals: ____ (A)	____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes X No ____

Remarks:

The vegetation in this plot is disturbed by the road and mowing. Vegetation within the channel is characteristic of fresh water marsh and riparian scrub.

SOIL

Sampling Point: _____

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-3"	10yr/2/1	100					clay	Saturated with surface water
3-20"	10yr/2/1	70	10yr/4/2	25	D	M	clay	dark grayish brown patches
3-20"	10yr/2/1		5yr/3/4	5	C	M		dark reddish brown concent.

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- X Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: N.A.

Depth (inches): N.A.

Hydric Soil Present? Yes X No _____

Remarks:

The black clay soil is saturated from flows that are coming from a subsurface seep that is located under an existing agricultural road. the dark matrix is typical of this soil type; however, patches of dark grayish brown areas appear to be depletions and the dark reddish brown appears to be concentrations within the matrix. This soil is emitting a strong hydrogen sulfide odor.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- X Surface Water (A1)
- ___ High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- X Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Plowed Soils (C6)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Thin Muck Surface (C7)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes X No _____ Depth (inches): 0

Water Table Present? Yes _____ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes X No _____ Depth (inches): 0

Wetland Hydrology Present? Yes X No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Wetland hydrology is supplied by a seep that is located under an agricultural road.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Laetitia Ag Cluster City/County: Arroyo Grande/SLO Sampling Date: 7/25/07

Applicant/Owner: Tower Grove Vinters, Inc. State: CA Sampling Point: 7

Investigator(s): Travis Belt Section, Township, Range: 32, Township, 14E

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): None Slope (%): 5

Subregion (LRR): C Lat: 35 05' 53.99"N Long: 120 31' 51.64" Datum: WGS 1984

Soil Map Unit Name: 131 diablo and cibo clays NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No X	**Is the Sampled Area within a Wetland?** Yes _____ No X
Hydric Soil Present?	Yes _____	No X	
Wetland Hydrology Present?	Yes _____	No X	

Remarks: Dry year. This pit is located approximately 8' above the OHWM of the drainage and adjacent to the agriculture road.

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover: 0			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover: 0			
Herb Stratum			
1. Lolium perenne	80	Yes	FAC
2. Picris echioides	10	No	FAC
3. Hirshfeildia incana	10	No	UPL
4.			
5.			
6.			
7.			
8.			
Total Cover: 100			
Woody Vine Stratum			
1.			
2.			
Total Cover: _____			

% Bare Ground in Herb Stratum 0 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes X No _____

Remarks:

The vegetation in this location is typical of roadside weeds that are mowed on a regular basis.

SOIL

Sampling Point: _____

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-3"	10yr/2/1	100					Clay	Dry, blocky, rocks, and roots
3-20"	10yr/2/1	100					Clay	Dry with rocks

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

___ Histosol (A1)
___ Histic Epipedon (A2)
___ Black Histic (A3)
___ Hydrogen Sulfide (A4)
___ Stratified Layers (A5) (**LRR C**)
___ 1 cm Muck (A9) (**LRR D**)
___ Depleted Below Dark Surface (A11)
___ Thick Dark Surface (A12)
___ Sandy Mucky Mineral (S1)
___ Sandy Gleyed Matrix (S4)
___ Sandy Redox (S5)
___ Stripped Matrix (S6)
___ Loamy Mucky Mineral (F1)
___ Loamy Gleyed Matrix (F2)
___ Depleted Matrix (F3)
___ Redox Dark Surface (F6)
___ Depleted Dark Surface (F7)
___ Redox Depressions (F8)
___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

___ 1 cm Muck (A9) (**LRR C**)
___ 2 cm Muck (A10) (**LRR B**)
___ Reduced Vertic (F18)
___ Red Parent Material (TF2)
___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: N.A.

Depth (inches): N.A.

Hydric Soil Present? Yes _____ No X

Remarks:

This black clay soil is dry and blocky with no evidence of redox features.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

___ Surface Water (A1)
___ High Water Table (A2)
___ Saturation (A3)
___ Water Marks (B1) (**Nonriverine**)
___ Sediment Deposits (B2) (**Nonriverine**)
___ Drift Deposits (B3) (**Nonriverine**)
___ Surface Soil Cracks (B6)
___ Inundation Visible on Aerial Imagery (B7)
___ Water-Stained Leaves (B9)
___ Salt Crust (B11)
___ Biotic Crust (B12)
___ Aquatic Invertebrates (B13)
___ Hydrogen Sulfide Odor (C1)
___ Oxidized Rhizospheres along Living Roots (C3)
___ Presence of Reduced Iron (C4)
___ Recent Iron Reduction in Plowed Soils (C6)
___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

___ Water Marks (B1) (**Riverine**)
___ Sediment Deposits (B2) (**Riverine**)
___ Drift Deposits (B3) (**Riverine**)
___ Drainage Patterns (B10)
___ Dry-Season Water Table (C2)
___ Thin Muck Surface (C7)
___ Crayfish Burrows (C8)
___ Saturation Visible on Aerial Imagery (C9)
___ Shallow Aquitard (D3)
___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No X Depth (inches): _____

Water Table Present? Yes _____ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No X Depth (inches): _____

Wetland Hydrology Present? Yes _____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

This area may be subject to seasonal surface flows. However, routine maintenance would mask any evidence of wetland hydrology.

ATTACHMENT B

- Photo Documentation

PHOTO 1:

View of the upstream portion of Drainage A. The photo was taken from an existing road crossing in the approximate location of the future dude ranch access road.

Photo taken January 24, 2006.

PHOTO 2:

View looking upstream of Drainage B. The photo was taken from an existing road crossing in the approximate location of the future dude ranch access road.

Photo taken April 21, 2006.

PHOTO 3:

View of the approximate location of the proposed Main Road 2 crossing at Drainage C. Note the mature Central Coast cottonwood-sycamore riparian forest.

Photo taken September 5, 2007.

PHOTO DOCUMENTATION

PHOTO 4:

View looking upstream of Drainage D in the approximate location of proposed Crossing D.1. The photo was taken from the culvert of an existing agricultural road.

Photo taken January 24, 2006.

PHOTO 5:

View looking across Drainage E in the approximate location of proposed Crossing E.1. This area is downstream of the perennial seep and maintains perennial flows.

Photo taken April 19, 2006.

PHOTO 6:

View of the perennial seep that is located near the upper reach of Drainage E. This is the approximate location of the proposed intersection of Main Roads 1 and 2; and, the location of Soil Pit 6.

Photo taken August 27, 2007.

PHOTO DOCUMENTATION

PHOTO 7:

View of the approximate location where proposed Road L would cross the ephemeral tributary to Drainage E.

Photo taken January 24, 2006.

PHOTO 8:

View of the existing agricultural road and proposed location of Crossing G.1. The perennial spring is located within the willows seen on the right of the photo.

Photo taken July 26, 2007.

PHOTO 9:

View of the agricultural pond that is located within the channel of Drainage G. As proposed, force main utilities would be installed within the agricultural road seen in the foreground.

Photo taken August 23, 2007.

PHOTO DOCUMENTATION

PHOTO 10:

View of the freshwater marsh area located directly downstream of the agricultural pond seen in Photo 9. The shovel marks the location of Soil Pit 4. Soil Pit 5 was located within the cattails.

Photo taken August 23, 2007.

PHOTO 11:

View looking up Drainage I in the approximate location of proposed Road D. The photo was taken from the existing culvert outlet.

Photo taken April 19, 2006.

PHOTO 12:

View of the upper portion of Drainage M. Proposed Crossing M.1 would be located in the vineyard seen in the background.

Photo taken January 24, 2006.

PHOTO DOCUMENTATION