

APPENDIX Q

Wetland Mitigation and Monitoring Proposal for Folsom Plan Area Specific
Plan

Wetland Mitigation and Monitoring Proposal

For

Folsom Plan Area Specific Plan

Sacramento County, California

3 January 2010

Prepared For:
Folsom South Area Group



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Folsom Plan Area Specific Plan

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1.0 SUMMARY

This Wetland Mitigation and Monitoring Proposal has been prepared for Folsom South Area Group to outline the mitigation and monitoring proposed for the Folsom Plan Area Specific Plan (Project). This proposal was prepared to provide additional information to the U.S. Army Corps of Engineers (Corps), the U.S. Fish and Wildlife Service (Service), and the Environmental Protection Agency (EPA) (collectively, 'Regulatory Agencies') on the mitigation intended to offset impacts anticipated during implementation of the Project. Once the appropriate permits for the Project are obtained from the Regulatory Agencies, final operations and management plans will be developed incorporating all permit requirements as needed.

The approximately 3,502-acre Folsom Plan Area Specific Plan (SPA) is located in the City of Folsom, Sacramento County, California. It is bound by Highway 50 to the north, Prairie City Road to the west, White Rock Road to the south, and the El Dorado County line to the east (Figure 1. *SPA Open Space Site and Vicinity*). The SPA corresponds to portions of Sections 15 through 22 of Township 9 North and Range 7 East of the "Buffalo Creek, Clarksville, Folsom, and Folsom SE, California" U.S.G.S. 7.5-minute quadrangles (USGS 1980a, b, c, and d, respectively).

The approximately 990-acre SPA Open Space will permanently protect oak woodlands, waters of the U.S., cultural resources, and other sensitive habitat or species. SPA Open Space consists of two components; Wetland Preserve (± 302 -acres) contains sensitive habitats and waters of the U.S. and will be protected by agency-approved Declaration of Restrictions. The Passive Open Space (± 688 -acres) will be established to protect oak woodland/savannah per City of Folsom (City) guidelines while allowing for limited recreational uses such as a trail system. The Passive Open Space will be zoned as Open Space, thus restricting future development. The *SPA Open Space Detail* map included as Attachment A shows the two components that make up the SPA Open Space.

Approximately 44.308 acres of waters of the U.S. fall within the Wetland Preserve including: vernal pools (1.723 acres), seasonal wetlands (0.894 acre), seasonal wetland swale (7.845 acres), seep (6.325 acres), marsh (0.142 acre), creek/channel (13.801 acres), ditch (0.554 acre), intermittent drainage (7.316 acres), and pond (5.708 acres). Additionally, 0.047 acre of waters of the State also occur within the Open Space Preserve, this includes vernal pool (0.019 acre), seasonal wetland (0.003 acre), and ditch/canal (0.026 acre). The vernal pools and seasonal wetlands are considered habitat for the special-status species including vernal pool fairy shrimp (*Branchinecta lynchi*) and vernal pool tadpole shrimp (*Lepidurus packardii*). Additionally, several elderberry shrubs occur within the Wetland Preserve. Elderberry shrubs represent potential habitat for the Valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*).

The Wetland Preserve also contains areas of historical/cultural significance. At the time of the preparation of this document the precise location of each feature has not been mapped, thus all the avoided areas may not be currently included within the Wetland Preserve. Once negotiations with the California State Historic Preservation Office (California SHPO) are concluded and the resources are mapped, the Wetland Preserve boundary may be adjusted to protect additional area.

In addition to on-site preservation, off-site mitigation for wetland impacts within the SPA is proposed to be accomplished at an agency approved mitigation bank. This bank will be authorized to sell credits to offset impacts in the SPA. In addition to or in conjunction with the purchase of credits, the SPA may satisfy compensatory and/or preservation mitigation needs at an agency-approved offsite mitigation site. If an offsite mitigation site is utilized, the Corps and USFWS will be consulted to ensure that the site is appropriate to provide the functions and values necessary to offset impacts at the SPA. Conceptual construction/preservation plans (including mitigation ratios, success criteria, long-term management plans and funding) would be submitted to and approved by the Corps and Service (if the offsite location includes mitigation habitat for federally-listed species).

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2.0 PROJECT REQUIRING MITIGATION

2.1 Location of Project

The approximately 3,502-acre Folsom Plan Area Specific Plan (SPA) is located in the City of Folsom, Sacramento County, California. It is bound by Highway 50 to the north, Prairie City Road to the west, White Rock Road to the south, and the El Dorado County line to the east (Figure 1. *SPA Open Space Site and Vicinity*). The SPA corresponds to portions of Sections 15 through 22 of Township 9 North and Range 7 East of the "Buffalo Creek, Clarksville, Folsom, and Folsom SE, California" U.S.G.S. 7.5-minute quadrangles (USGS 1978;1980).

2.2 Brief Summary of Overall Project

The SPA is a large-scale, mixed-use, master-planned community consisting of mixed-density residential uses, a regional shopping center, and other employment generating uses. The SPA will also provide associated infrastructure including on-site backbone infrastructure, a water treatment plant, schools, parks, an on-site trail system, off-site sewer improvements, off-site roadway improvements, off-site highway interchanges, and an off-site water supply pipeline from the Freeport Regional Water Authority diversion facility to the site. In addition to the development, the SPA calls for the permanent protection of approximately 30 percent of the site as on-site open space.

2.3 Jurisdictional and Non-Jurisdictional Aquatic Resources Affected by Project

A total of 40.590 acres of unavoidable impacts will occur onsite, of which 39.335 acres are waters of the U.S (Table 1). Most of the impacts are to small intermittent drainages, channels, ditches and swales (27.220 acres) that occur throughout the SPA. The broad distribution of these small ephemeral features make avoidance difficult.

Table 1 – Folsom Specific Plan Area Mitigation Table							
<u>Waters</u>	Existing Total*	Total Impact*	Total Avoided*	Compensatory 1:1	Compensatory Acres Needed	Preservation Acres Needed**	
Vernal Pool	4.642	2.919	1.723	2.919	24.316	2.754	
Seasonal Wetland	4.657	3.763	0.894	3.763			
Seasonal Wetland Swale	25.479	17.634	7.845	17.634			
Seep	10.803	4.478	6.325	4.478			
Marsh	0.211	0.069	0.142	0.069			
Creek/Channel	17.187	3.386	13.801	3.386			
Intermittent Drainage	11.716	4.401	7.316	4.401			
Ditch	1.959	1.405	0.554	1.405			
Pond	6.875	1.167	5.708	1.167			
Willow Scrub	0.114	0.114	0	0.114			15.020
Total	83.643	39.335	44.308	39.335			39.335
<u>Isolated/Non-Jurisdictional</u>							
Isolated Vernal Pool	0.031	0.013	0.019	0.013	0.015	0.009	
Isolated Seasonal Wetland	0.004	0.002	0.003	0.002			
Ditch/Canal (NJ)	0.42	0.394	0.026	0.394			
Pond (NJ)	0.846	0.846	0	0.846	1.24		
Total	1.301	1.254	0.047	1.254	1.254	0.009	
Grand Total	84.944	40.590	44.355	40.590	40.590	2.763	
*Wetland Acreages includes off-site and backbone infrastructure (interchanges, waterline, and backbone).							
**Vernal Pool Habitat Preservation is calculated for Javanifard & Zarghami, Sacramento Country Day School, and portions of Prairie City Road Business Park only, as these properties either have no or incomplete surveys							

2.4 Environmental Conditions within the Wetland Preserve and Open Space

2.4.1 Aquatic Features within the Wetland Preserve and Open Space Areas

2.4.1.1 Vernal Pools

Vernal pools are poorly drained, isolated depressions that occur within the annual grassland landscape. Vernal pools are fed by direct rainfall or surface run-off. Water ponds for several weeks at a time during the rainy season and may dry completely between storm events.

In the Mediterranean climate of California's Central Valley, Fall rains initiate the "wetting" stage, during which seeds germinate and dormant perennials re-sprout. As soils saturate and standing water accumulates, the pool enters the "aquatic" phase. Inundation may be periodic or continuous, and this variability supports a diverse plant and animal community. As water levels recede, primarily through evaporation, the "drying" phase begins during which pool basins begin drying and plant flowering reaches its peak, followed by the setting

of seeds. The final phase is the "drought" phase, which is characterized by dry soils and dead or dormant vegetation. Since vernal pools hold ponded water and have emergent vegetation, they are responsible for some nutrient uptake/transformation. However, because of the brief period of inundation of the vernal pools on the site, it is unlikely that the pool provides any significant contribution to overall regional water quality (i.e., minimal effects on groundwater recharge, flood flows, or sediment stabilization).

There are approximately 1.742 acres (1.723 acres waters of the U.S. and 0.019 acre waters of the State) of vernal pools throughout the annual grassland habitat within the Wetland Preserve. The preserved vernal pools vary in maximum water depth from a couple of inches to 18 inches deep, and they range from 0.002 to 1.3 acres in size. Plant species observed within vernal pools include Carter's buttercup (*Ranunculus bonariensis*), Vasey's coyote-thistle (*Eryngium vaseyi*), creeping spikerush (*Eleocharis macrostachya*), and slender popcorn-flower (*Plagiobothrys stipitatus*). Typical wildlife associated with vernal pools includes various aquatic invertebrates and amphibians such as the pacific chorus frog.

The vernal pool fairy shrimp (*Branchinecta lynchi*) and vernal pool tadpole shrimp (*Lepidurus packardii*), listed as threatened and endangered (respectively), pursuant to the federal ESA, are known to occur within 5-miles of the SPA. Two years of wet season surveys have been performed for the entire SPA, and vernal pool fairy shrimp were detected in two vernal pools within the Prairie City Road Business Park property (ECORP 2009).

2.4.1.2 Seasonal Wetland/Seasonal Wetland Swale

Within the Wetland Preserve, 0.897 acre of seasonal wetlands (0.894 acre waters of the U.S. and 0.003 acre waters of the State) and 7.845 acres of seasonal wetland swales occur within the annual grassland and occasionally in the oak woodlands. Seasonal wetland depressions follow a similar hydrological cycle to that of vernal pools, but may be shallower, less well-defined, and/or dominated by non-native generalist plant species. Some of these depressions/swales may support saturated soil only during the wet season.

A variety of plants and wildlife can be found within seasonal wetlands and drainage swale communities. The "drier" seasonal wetlands/drainage swales may be dominated by grasses and annual herbs including Italian ryegrass, Mediterranean barley, and hyssop loosestrife (*Lythrum hyssopifolium*). The "wetter" seasonal wetlands/drainage swales are potentially dominated by species such as altic rush (*Juncus balticus*), annual rabbit-foot grass (*Polypogon monspeliensis*), Bermuda grass (*Cynodon dactylon*), and creeping spikerush (*Eleocharis macrostachya*). When inundated, these seasonal wetlands and drainage swales provide habitat for aquatic invertebrates and amphibians. For most of the remainder of the year, wildlife usage is similar to that of typical Central Valley non-native annual grassland habitat.

2.4.1.3 Seep

Seeps are seasonally or perennially wet areas resulting from discharge of groundwater to the surface. Approximately 6.325 acres of seep occur within the Wetland Preserve. Dominant plants within the seeps include spikerush, hyssop loosestrife, pennyroyal (*Mentha pulegium*),

and cut-leaved geranium. Other plant species within the seep include curly dock, willow (*Salix* species), and Himalayan blackberry (*Rubus armeniacus*).

2.4.1.4 Marsh

Approximately 0.142-acre of marsh occurs within the Wetland Preserve. Marshes within the Wetland Preserve are perennial wetland features that appear to be fed by sub-surface seepage. Plant species observed within the marsh include mannagrass, hyssop loosestrife (*Lythrum hyssopifolia*), spiny-fruited buttercup, water cress, and peppermint.

2.4.1.5 Creek/Channel and Intermittent Drainages (Alder Creek)

Approximately 13.801 acres of creek/channel (Alder Creek) and 7.316 acres of intermittent drainages occur within the Wetland Preserve. Intermittent drainages and creeks are characterized by the presence of an ordinary high water mark that can have a defined bed and bank. These drainage features convey flows during storm events and through the wet season, but standing water generally does not persist except in areas where deeper pools form. These types of drainages are largely unvegetated due to the scouring effects of fast flowing water, but hydrophytic vegetation may be prevalent at the upper edges of the drainage.

2.4.1.6 Ditch

Approximately 0.580-acre (0.554-acre waters of the U.S. and 0.026-acre waters of the State) of constructed ditches occur within the Wetland Preserve that pond water for a sufficient period of time during the growing season to support hydrophytic vegetation. These features were constructed on contour; however, they appear to no longer convey flow. Dominant plant species within the mapped constructed ditches included Vasey's coyote-thistle, Carter's buttercup, creeping spikerush, and annual hairgrass. Other species commonly observed within these features included hyssop loosestrife, smooth cat's-ear (*Hypochaeris glabra*), Mediterranean barley, and sticky tarweed.

2.4.1.7 Pond

Stock ponds represent ponded areas that were either created or enhanced through the placement of an earthen dam in the course of a drainage and/or through excavation. Stock ponds exhibit an ordinary high water mark. Two stock ponds (5.708 acres) were mapped in the northeastern portion of the site. Vegetation within these features generally occurs within the shallower areas along the margins. Plant species observed within and adjacent to the stock ponds included Goodding's black willow (*Salix gooddingii*), Fremont cottonwood (*Populus fremontii*), cattail, hyssop loosestrife, pennyroyal, dock, spikerush, and Vasey's coyote-thistle.

2.4.2 Topography and Soils

The site is situated at elevations between 240 to 810 feet above sea level. There are thirteen different soils types mapped for the SPA Open Space area. Soil series mapped by the Natural Resource Conservation Service for the site include (107) Argonaut-Auburn

Complex, 3-8% slopes; (110) Auburn-Argonaut Rock Outcrop Complex, 8-30% slopes; (145) Fiddymont Fine Sandy Loam, 1-8% slopes; (160) Hicksville Sandy Clay Loam, 0-2% slopes; (183) Orangevale Coarse Sandy Loam, 2-5% slopes; (190) Pits; (192) Red Bluff loam, 2-5% slopes; (196) Red Bluff-Xerorthents, dredge tailing complex, 2-5% slopes; (235) Vleck Gravelly Loam, 2-15% slopes; (237) Whiterock Loam, 3-30% slopes; (AkC) Argonaut Gravelly Loam, 2-15% slopes; (AwD) Auburn Silt Loam, 2-30% slopes; and (AxD) Auburn Very Rocky Silt Loam, 2-30% slopes (Figure 2. *Natural Resources Conservation Service Soil Types*).

2.4.3 Biological Resources

Several plant communities occur within the SPA Open Space. These communities support a variety of wildlife species, some of them special-status.

2.4.3.1 Annual Grassland Community

The annual grasslands within the SPA Open Space are dominated by a variety of non-native naturalized Mediterranean grasses, including soft chess (*Bromus hordeaceus*), rigput brome (*Bromus diandrus*), medusahead grass (*Taeniatherum caput-medusae*), slender wild oat (*Avena barbata*), and little quaking grass (*Briza minor*). Other native and non-native herbaceous species include sticky tarweed (*Holocarpha virgata*), yellow-star thistle (*Centaurea solstitialis*), rose clover (*Trifolium hirtum*), shamrock clover (*Trifolium dubium*), Fremont's tidy-tips (*Layia fremontii*), Valley tassels (*Castilleja attenuata*), and hyacinth brodiaea (*Triteleia hyacinthina*).

The annual grassland supports a modest diversity of wildlife species. Small mammals present may include California vole (*Microtus californicus*), black-tailed jackrabbit (*Lepus californicus*), deer mouse (*Peromyscus maniculatus*), and pocket gopher (*Thomomys* spp.). These mammals represent potential foraging items for predators such as northern harrier (*Circus cyaneus*), red-tailed hawk (*Buteo jamaicensis*), white-tailed kite (*Elanus leucurus*), gopher snake (*Pituophis catenifer*), western rattlesnake (*Crotalus viridus*), and coyote (*Canis latrans*). Birds that may find the grasslands suitable for nesting include the horned lark (*Eremophila alpestris*) and western meadowlark (*Sturnella neglecta*). Other birds, which do not necessarily nest within the grasslands, but may forage in this habitat, include Brewer's blackbirds (*Euphagus cyanocephalus*) and tricolored blackbird (*Agelaius tricolor*).

2.4.3.2 Blue Oak Woodland/Blue Oak Savannah

Blue oak woodland and blue oak savannah occur in the northwestern and western portions of the SPA Open Space. Blue oaks (*Quercus douglasii*) represent the dominant tree species in both of these communities. The species observed in the understory are generally similar to those found in annual grasslands. The blue oak woodland community within the SPA Open Space is characterized by relatively dense canopy cover, while oak distribution in oak savannah habitat is sparse.

2.4.3.3 Valley Foothill Riparian

A relatively narrow Valley foothill riparian community occurs along portions of Alder Creek within the SPA Open Space. Dominant plant species within and adjacent to Alder Creek include narrow-leaf cattail (*Typha angustifolia*), mosquito fern (*Azolla filiculoides*), black willow (*Salix gooddingii*), arroyo willow (*S. lasiolepis*), sandbar willow (*S. exigua*), Fremont's cottonwood (*Populus fremontii*), white alder (*Alnus rhombifolia*), Valley oak (*Quercus lobata*), South American vervain (*Verbena bonariensis*), soft rush (*Juncus effusus*), creeping spikerush (*Eleocharis macrostachya*), dallis grass (*Paspalum dilatatum*), Himalayan blackberry (*Rubus armeniacus*), water primrose (*Ludwigia peploides* ssp. *peploides*), water speedwell (*Veronica anagallis-aquatica*), and water cress (*Rorippa nasturtium-aquatica*).

The Valley foothill riparian communities in this region typically support a wide variety of wildlife species, including Bewick's wren (*Thryomanes bewickii*), downy woodpecker (*Picoides pubescens*), golden-crowned sparrow (*Zonotrichia atricapilla*), wood duck (*Aix sponsa*), red-shouldered hawk (*Buteo lineatus*), great horned owl (*Bubo virginianus*), and tree swallow (*Tachycineta bicolor*).

The understory scrub community will eventually provide nesting habitat for species such as wrenit (*Chamaea fasciata*), song sparrow (*Melospiza melodia*), and California towhee (*Pipilo crissalis*). Resident and migratory songbirds such as hermit thrush (*Catharus guttatus*), Bewick's wren, fox sparrow (*Passerella iliaca*), and spotted towhee (*Pipilo maculatus*) also utilize willow scrub community for foraging and nesting cover.

Other wildlife species expected to occur within the riparian habitat include Pacific chorus frog (*Pseudacris regilla*), western gray squirrel (*Sciurus griseus*), striped skunk (*Mephitis mephitis*), beaver (*Castor canadensis*), common garter snake (*Thamnophis sirtalis*), and raccoon (*Procyon lotor*).

2.4.3.4 Urban/Disturbed

Several small areas within the SPA Open Space are part of the current road alignments. These areas are considered to be urban/disturbed and are typically devoid of any vegetation.

2.4.4 Federally-Listed Species

The open space and wetland preserve areas provides suitable habitat for federally listed species including vernal pool fairy shrimp (*Branchinecta lynchi*), vernal pool tadpole shrimp (*Lepidurus packardii*), and Valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*). In addition to these species, suitable habitat for several other state-listed species and species of concern also occur within the open space and wetland preserve areas within the SPA.

3.0 PROPOSED MITIGATION

3.1 On-Site Wetland Preserve and Open Space

The Wetland Preserve encompasses a total of ±302 acres and supports numerous plant communities, including wetland, oak woodland, annual grassland, and Valley foothill riparian. Approximately 44.308 acres of waters of the U.S. fall within the Wetland Preserve including: vernal pools (1.723 acres), seasonal wetlands (0.894 acre), seasonal wetland swale (7.845 acres), seep (6.325 acres), marsh (0.142 acre), creek/channel (13.801 acres), ditch (0.554 acre), intermittent drainage (7.316 acres), and pond (5.708 acres). Additionally, 0.047 acre of waters of the State also occur within the Open Space Preserve, this includes vernal pool (0.019 acre), seasonal wetland (0.003 acre), and ditch/canal (0.026 acre). The vernal pools and seasonal wetlands are considered habitat for the special-status species including vernal pool fairy shrimp (*Branchinecta lynchi*) and vernal pool tadpole shrimp (*Lepidurus packardii*). Additionally, several elderberry shrubs occur within the Wetland Preserve. Elderberry shrubs represent potential habitat for the Valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*).

The Wetland Preserve also contains areas of historical/cultural significance. At the time of the preparation of this document the precise location of each feature has not been mapped, thus all the avoided areas may not be currently included within the Wetland Preserve. Once negotiations with the California State Historic Preservation Office (California SHPO) are concluded and the resources are mapped, the Wetland Preserve boundary may be adjusted to protect additional area.

3.2 Off-Site Mitigation

3.2.1 Mitigation Banks

Off-site mitigation for the Project is proposed to occur at an agency-approved mitigation bank authorized to sell credits to offset impacts in the FSPA. The table below lists wetland and ESA banks that have service areas that appear to include the FSPA. Based on mitigation ratios of 1:1 at approved banks, there are currently sufficient available compensatory (or creation) credits to satisfy the needs of the FSPA. Only a small fraction of the FSPA wetlands may be considered habitat for listed crustaceans and require preservation habitat (Table 2).

Table 2 – Mitigation Bank Summary			
	Creation		Preservation
	Vernal Pool (1:1)	Seasonal Wetland (1:1)	Fairy Shrimp Habitat (VP, SW, SWS)¹
Bryte Ranch			47
Clay Station	10		
Deer Creek	9		1.81
Elsie Gridley	WND	WND	WND
Fitzgerald Ranch			6.5
Gill Ranch Conservation Bank			60
Laguna Terrace East			31.57
Toad Hill	48	55	
Cosumnes Floodplain Mitigation Bank ²		300	
Mariner			
North Suisun	12.6		
SMUD Mitigation Preserve ³	25		56
Twin City	2.19	2.8	12.04
Van Vleck Ranch	14.19		8.13
Total¹	120.98	357.8	223.05
Folsom SPA needs⁴	2.919	21.397	2.754
WND Would Not Disclose			
¹ Availability not confirmed and subject to change			
² Service Area is adjacent to FSPA - Potentially available on case by case basis			
³ Pending Approval from Agencies			
⁴ Total does not include 15.02 acres of seep, marsh, creek/channel, intermittent drainage, ditch, pond, and willow scrub that will be mitigated under the 1:1 seasonal wetland category.			

3.2.2 Off-Site Mitigation Site

In addition to or in conjunction with purchase of credits at a mitigation bank, the FSPA may satisfy compensatory and/or preservation mitigation needs at an agency-approved offsite mitigation site. If an offsite mitigation site is utilized, the Corps and USFWS will be consulted to ensure that the site is appropriate to provide the functions and values necessary to offset impacts at the FSPA. Conceptual construction/preservation plans (including mitigation ratios, success criteria, long-term management plans and funding) would be submitted to and approved by the Corps and Service (if the offsite location includes mitigation habitat for federally-listed species).

4.0 RESPONSIBLE PARTIES

4.1 Applicants

PROJECT

Folsom Heights

APPLICANTS

Hospitality Consultants
8525 Oak Arbor Court
Fair Oaks, California 95628
Contact: Bob Robinson

Folsom South

MJM Properties
1037 Suncast Lane, Suite 111
El Dorado Hills, California 95762
Contact: Mike McDougal

Folsom 138

Folsom White Rock Investors, LLC
111 Woodmere Drive, Suite 190
Folsom, California 95630
Contact: Brian Cutting

Carpenter Ranch

FPA Land Development
4665 MacArthur Court, Suite 200
Newport Beach, California 92660
Contact: Tim Kihm

Folsom 560 (Hillsborough)

Easton Development Company, LLC
One Easton Place
P.O. Box 1209
Folsom, California 95763
Contact: David Hatch

Prairie City Road Business Park

Easton Development Company, LLC
One Easton Place
P.O. Box 1209
Folsom, California 95763
Contact: David Hatch

Backbone Infrastructure
Off-Site Water Line

City of Folsom
Community Development Department
50 Natoma Street, Folsom, California 95630
Contact: David Miller

Interchange Projects

No 404 application to date.
City of Folsom
Contact: Gail Furness de Pardo

Javanifard and Zarghami

No 404 application to date.

4.2 Parties Having Financial Responsibility

A list of parties with financial responsibility is located in Section 4.1

4.3 Owner(s) of the Mitigation Sites

Present Owners:

A list of the present owners is located in Section 4.1

Expected long-term owner: City of Folsom

Parties responsible for long-term maintenance: City of Folsom

4.3 Preparer of the Mitigation Proposal

ECORP Consulting, Inc.
Attn: Bjorn Gregersen
2525 Warren Drive
Rocklin, California 95677
Phone: (916) 782-9100
Fax: (916) 782-9134

5.0 ON-SITE PRESERVE MONITORING AND MAINTENANCE

An Operations and Maintenance Plan (O&M Plan) will be developed to address the long term maintenance of the on-site wetland preserve and open space areas. This plan will detail the general activities associated with preserve monitoring and maintenance in perpetuity.

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12.0 REFERENCES

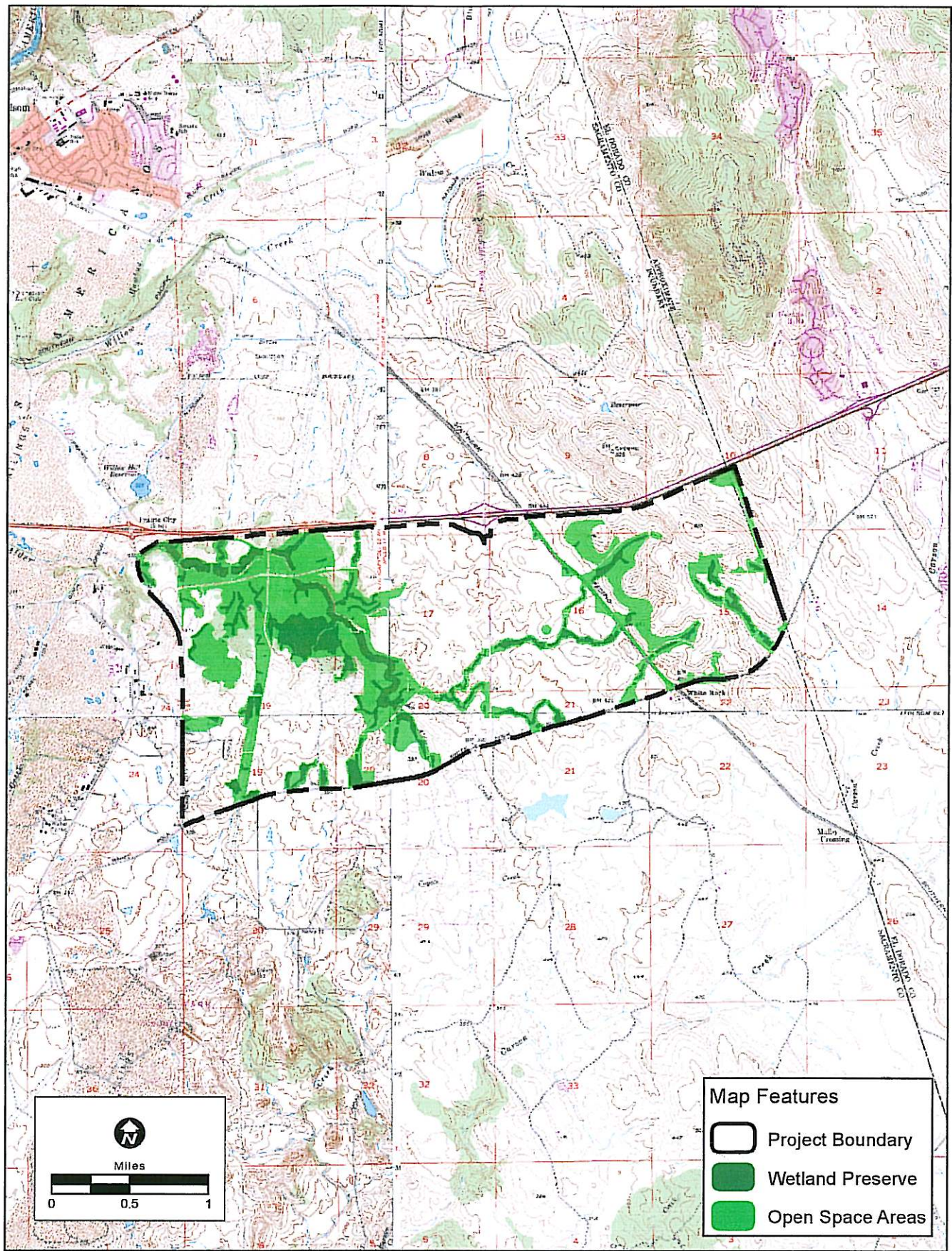
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- U.S. Department of the Interior, Geological Survey. 1978. Hydrologic Unit Map, State of California. Geological Survey. Reston, Virginia.
- U.S. Department of the Interior, Geological Survey. 1980a (photo revised). "Buffalo Creek, CA" 7.5-minute Quadrangle. Geological Survey. Denver, Colorado.
- U.S. Department of the Interior, Geological Survey. 1980b (photo revised). "Clarksville, CA" 7.5-minute Quadrangle. Geological Survey. Denver, Colorado.
- U.S. Department of the Interior, Geological Survey. 1980c (photo revised). "Folsom, CA" 7.5-minute Quadrangle. Geological Survey. Denver, Colorado.
- U.S. Department of the Interior, Geological Survey. 1980d (photo revised). "Folsom SE, CA" 7.5-minute Quadrangle. Geological Survey. Denver, Colorado.

LIST OF FIGURES

Figure 1. SPA Open Space Site and Vicinity

Figure 2. Natural Resources Conservation Service Soil Types

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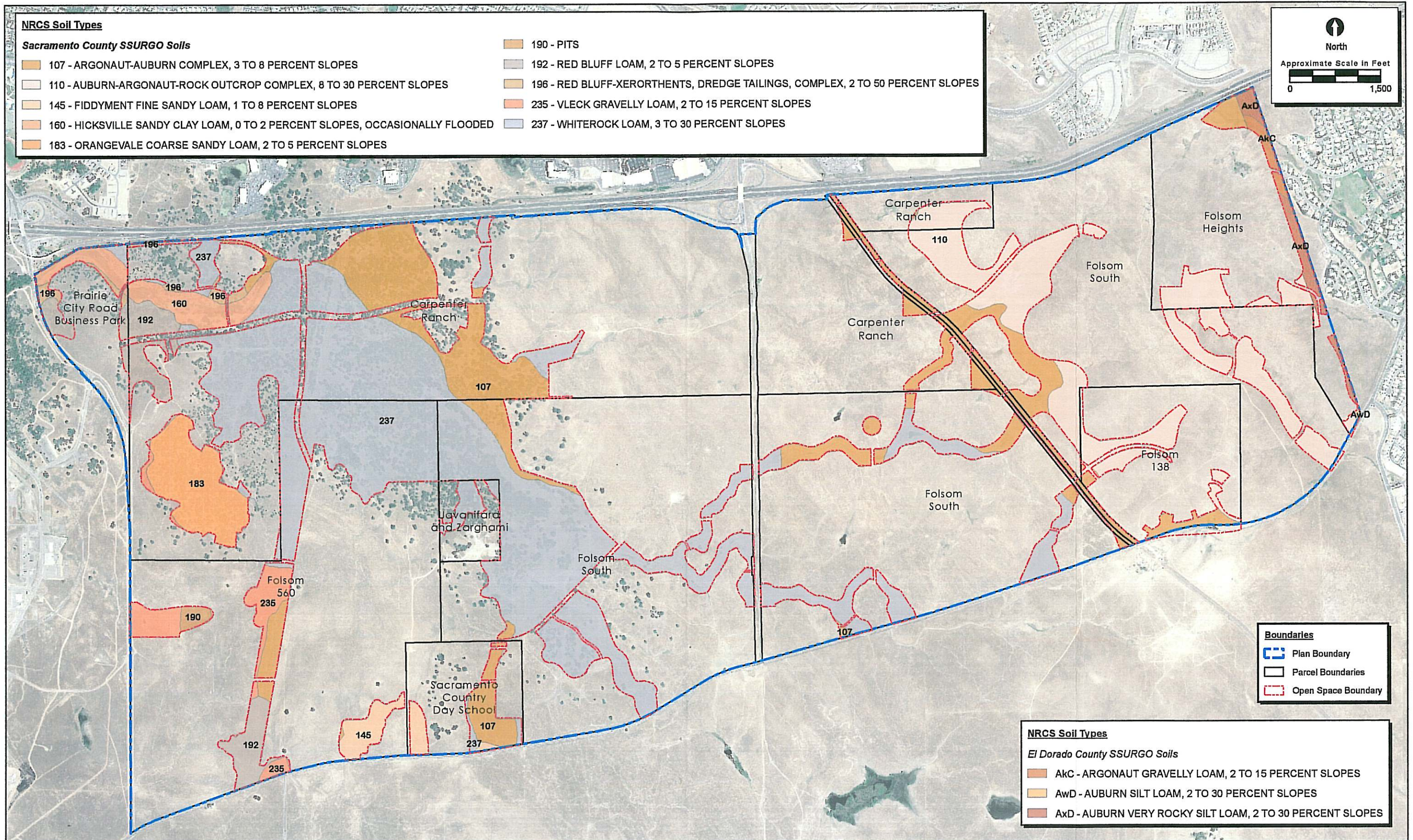


Location: J:\GIS_Maps\2005-429_Folsom_Area_South_Group\O_and_MW1\FPASP_OM_SiteVicinity.mxd (ekeethe 12/7/2010)

Date: 12/7/2010

Figure 1. SPA Open Space Site and Vicinity

2005-429 FPASP



J:\GIS_Maps\2005-429_Folsom_Area_South_Group\Soils\F5AG_OpenSpace_Soils.mxd

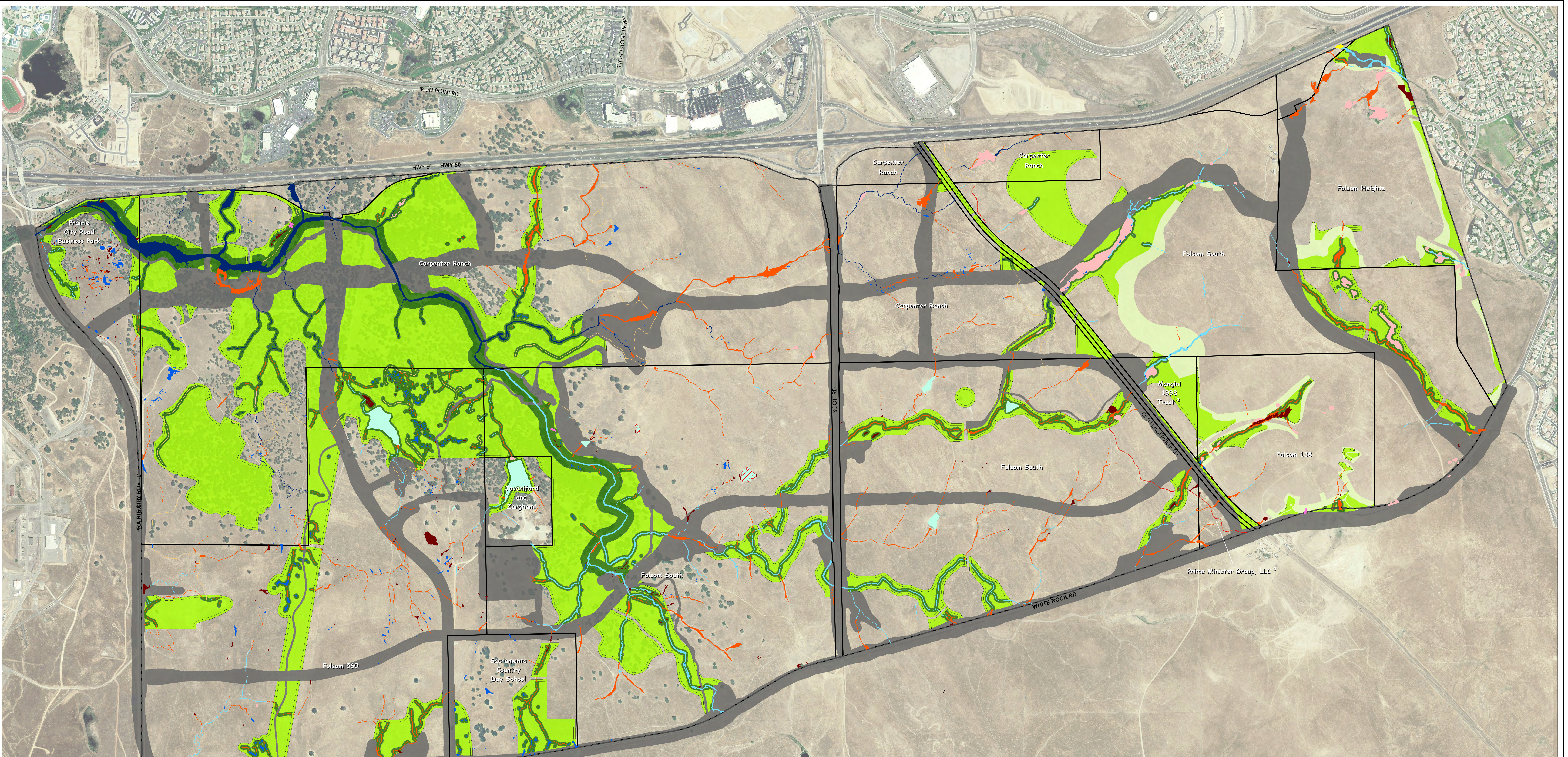
Map Date: 11/30/2010

Figure 2. Natural Resources Conservation Service Soil Types
2005-429 Folsom South Area Group

ATTACHMENT A

SPA Open Space Detail

DRAFT



IMPACT CALCULATIONS ARE APPROXIMATE AND ARE BASED ON THE BEST AVAILABLE INFORMATION TO DATE. 1

Avoidance & Impact	Carpenter Ranch				Folsom 138				Folsom 560				Folsom Heights				Javanifard & Zarghami				Prairie City Road Business Park				Sacramento County Day School			
	Project	Backbone	Interchange	Total	Project	Backbone	Interchange	Total	Project	Backbone	Interchange	Total	Project	Backbone	Interchange	Total	Project	Backbone	Interchange	Total	Project	Backbone	Interchange	Total	Project	Backbone	Interchange	Total
Waters	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Wetland Preserve	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Open Space	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
30ft Inward Open Space	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Open Space (Graded)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Backbone	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Total	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

JOB NAME: FRASP - AVOIDANCE/IMPACT
 PROJECT NO: 2005-429
 MAP SCALE: 1" = 500'
 DATE: 12/10/2009
 REVISION: 1
 FILE NAME: FRASP - AVOIDANCE/IMPACT.dwg

MAP FEATURES

Project Components

- Wetland Preserve (No Disturbance) - Wetlands Calculated as Avoided
- Open Space (Possible Temporary Disturbance) - Wetlands Calculated as Avoided
- 30ft Inward Open Space (Possible Temporary Disturbance) - Wetlands Calculated as Impact
- Open Space (Graded) - Wetlands Calculated as Impact
- Project - Wetlands Calculated as Impact
- Backbone - Wetlands Calculated as Impact

Boundaries

- Parcel Boundaries
- Overall Boundary

ON-SITE TOTAL AVOIDANCE & IMPACT

Category	Project	Backbone	Interchange	Total
Waters	2,999	1,222	4,442	4,442
Wetland Preserve	3,763	0,894	4,657	4,657
Open Space	11,534	7,945	25,479	25,479
30ft Inward Open Space	4,478	6,325	10,803	10,803
Open Space (Graded)	9,069	5,142	14,211	14,211
Project	2,386	13,801	11,187	11,187
Backbone	4,401	7,316	11,716	11,716
Interchange	1,452	0,554	1,956	1,956
Total	1,147	5,708	6,875	6,875
Wetland Preserve	9,114	0,000	9,114	9,114
Open Space	99,335	44,308	143,643	143,643
30ft Inward Open Space	0,000	0,000	0,000	0,000
Open Space (Graded)	0,000	0,000	0,000	0,000
Project	0,000	0,000	0,000	0,000
Backbone	0,000	0,000	0,000	0,000
Interchange	0,000	0,000	0,000	0,000
Total	40,590	44,308	84,898	84,898

NOTES

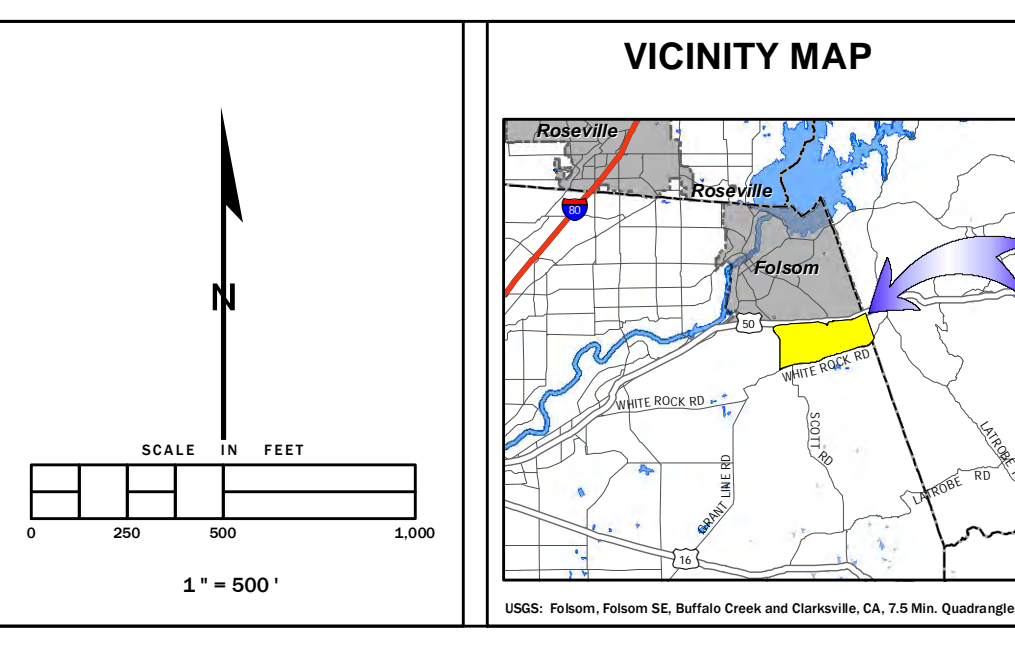
Gross project acreage: +/- 3559 ac.
 Photo: Lucid-Aerials/Google 2007

Base data source: Mackey and Samps

This exhibit depicts wetland/water information and data from several sources. Wetland boundaries have not been legally surveyed and may be subject to adjustments if exact locations are required in most instances, acreages are subject to verification by the U.S. Army Corps of Engineers. Some wetland features may appear outside of depicted boundaries and are not to be used for Army Corps of Engineers verification.

The project boundary extents depicted on this graphic have been provided by Mackey and Samps (MS&S). The boundary coordinates have been surveyed using the NAD83 base datum and were printed in the California State Plane projection, Grid Units. This boundary is expected to be spatially precise to California requirements, but ECRP holds no liability to the accuracy of the boundary.

Wetland acreage included with Folsom South



FOLSOM PLAN AREA SPECIFIC PLAN

Date: 12/10/2009
 GCS SPECIALIST: JMS
 MAP LOCATION: F:\2005-429-FRASP-Avoidance\Map\Map_Specialist.dwg
 WETLAND VERIFICATION DATE: 12/10/2009

DRIFT

REVISION DATE: 12/10/2009
 PROJECT NAME: 2005-429
 MAP NAME: FRASP - AVOIDANCE/IMPACT
 DRAWN BY: JMS
 CHECKED BY: GREGG

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