Charles A. Patterson
Plant Ecologist
1806 Ivanhoe, Lafayette, CA 94549
ph: (925) 938 - 5263 email: cpwetguy@sbcglobal.net

April 27, 2017

Mark Garay
Paladin Funding, Inc.
430 Ridge Road
Tiburon, CA 94920

Re: Biological baseline summary and impact evaluation for the site at 3150 Dutton Avenue, Santa Rosa
Sonoma County A.P.N. 043-133-013

Dear Mr. Garay:

BACKGROUND AND QUALIFICATIONS

I am writing to provide a baseline summary for the above-referenced property (Site) in the urban SW corner of the City of Santa Rosa.

By way of background, I received B.S. (1972) and M.S. (1974) degrees from the University of California at Davis, and have been a professional plant ecologist for 35+ years, 30 of which have been as an independent (self-employed) consultant. While formally trained as a botanist and plant ecologist, I have extensive work experience with endangered species (mostly plants, but some wildlife), wetland delineation and permitting, general CEQA, NEPA, and other state and federal regulatory processes, habitat assessments, EIRs/EIS's, habitat restoration plans, and mitigation planning, design, implementation, monitoring, and 'banking'. My full resume is included here as Attachment B.

I have observed the Site in 2005, 2012, 2013, 2014, and 2015, completing protocol botanical surveys and a detailed wetland investigation, resulting in an official "Preliminary Jurisdictional Determination" or PJD from the U. S. Army Corps of Engineers (Corps) in 2015. Botanical surveys have had negative findings in all years, and the PJD shows 0.037 acre of shallow, low quality (man-made, non-aquatic) seasonal wetland on the Site's eastern fenceline.

In addition to these baseline surveys, I have reviewed the applicant's Site development plan, including its approach of completely avoiding all onsite wetlands, and I have prepared this summary report to summarize my findings and conclusions regarding the Site's wetland, botanical, and related resources.

EXISTING SITE CONDITIONS

The Site is roughly square, 5.95 acres in size, and is essentially surrounded by light industrial, commercial, and residential development, with full paved streets, curbs and gutters, and buried storm drains throughout the vicinity (see Figure 1). The Site has been used variously over many decades for agricultural endeavors (although not recently), and has been historically partially graded and piled with imported debris and soil. It has lain vacant for many years most recently, with little activity aside from annual mowing/disking, and occasional trespassing.

Dutton Avenue (paved, with curb, gutter, and buried storm drain beneath) forms the western edge of the Site, while the eastern edge is next to a significant older railroad line (with man-made embankment and gravel bed, tracks, etc.). Immediately to the north and south of the Site are fully developed light industrial facilities, with complete pavement, buildings, and manicured landscape strips, with onsite runoff collection and conveyance to the buried areawide drain network. There is no offsite watershed that drains to this Site.

The vegetation throughout the Site is almost exclusively non-native upland weeds and grasses. The dominant species include (taxonomy according to Munz & Keck, 1968) mustards (*Brassica*), chickory (*Cichorium*), thistles (*Cirsium, Sonchus, Silybum, Carduus*), wild radish (*Raphanus*), several small non-native forbs and forage species (*Vicia, Geranium, Melilotus, Medicago, Erodium*), and numerous introduced grasses (*Avena, Lolium multiflorum, Bromus* [2]*, Phalaris aquatica, Hordeum* [2]*, Vulpia, Teniatherum, Cynodon, Festuca arundinacea*). There are no trees onsite, nor any other significant woody vegetation; there are a few scattered coyote brush (*Baccharis*) shrubs. The soil is regionally typical indigenous ('Wright') clay loam, with a dark matrix, but largely devoid of redox or mottling, and with historical additions of various fill materials (rocks, soil, gravel) in places. Soil across virtually the entire Site has been significantly altered (graded, disked, ditched), as have any/all pre-existing natural drainage features or routes.

The Site drains largely via broad sheet flow and eventual collection and exit along the eastern and southern edges. There is relatively little variation in terrain (most of the Site has a very gradual slope), and there is no significant evidence of any positive surface hydrology (i.e., no channel formation, minimal sediment deposition or algae growth, no significant prolonged surface ponding). The Corps' PJD is dated September 22, 2015, and claims 0.037 acre of wetland onsite, located in a small, shallow depression on the eastern fenceline (see figures 1 and 2).

The area that qualifies as "wetland" here is so small and shallow as to be highly ephemeral, even within a single year/season; extended dry periods (two to three weeks) in winter can result in complete surface dryness. Hence, the vegetation in this feature is not at all aquatic in character, and is in fact, mostly the same as the surrounding annual grassland across most of the Site. This is a regionally typical assemblage of introduced grasses (*Hordeum, Lolium, Phalaris, Glyceria, Polypogon*) with only small amounts of common non-native wetland weeds (*Rumex, Lythrum, Ranunculus muricatus*) and two common native wetland species: California semaphore grass (*Pleuropogon californicus*) and toad rush (*Juncus bufonius*).

BOTANICAL SURVEYS

The Site was surveyed for possible rare plant occurrences in 2005 (February 22, April 5), 2012 (March 23, April 20, May 4), 2013 (March 27, April 11, May 9), 2014 (April 7, June 25), and 2015 (April 3, 20). Each site visit involved walking essentially the entire Site, noting plants observed, and carefully examining any low places. All plants encountered were identified, at least to the level necessary to determine potential commonness or rarity. A master list of species observed was compiled and is available on request. Almost no native species were recorded.

Each spring's surveys were also accompanied by numerous additional site visits to other known rare plant locations on the Santa Rosa Plain (SRP), i.e., Alton Lane, the 'Madera' parcel, several parcels on Francisco Avenue and Barnes Road, and the Desmond, Hale, and Horn mitigation banks. These visits were conducted to document and monitor the seasonal flowering progression of the three primary listed plant species on the SRP, specifically Burke's goldfields (*Lasthenia burkei*), Sebastopol meadowfoam

(*Limnanthes vinculans*), and Baker's blennosperma, or Sonoma sunshine (*Blennosperma bakeri*), all of which are both state and federally listed. Each year, known populations (such as at Alton Lane, where all three listed species grow) were visited starting in early March, and were re-visited several times through April and May in order to provide a continuous check on the three species' phenologies.

Several other uncommon species were also sought during the surveys, including species of seasonal wetlands and native grasslands and meadows. Attachment A is a list of sensitive plants known or expected from the SRP region, excluding those typically found in habitats not present here, such as chaparral, forest, woodland, serpentine, sandstone or other rock outcrops. Seasonally staggered surveys were conducted to cover the full blooming season. Because the lone wetland feature is so shallow and ephemeral, in most years it is very dry (and finished with its annual growth) at the same time as the surrounding grassland, typically mid-May. No late-flowering wetland species have been observed here.

No rare, endangered, or otherwise sensitive plant species were found on the Site during any of the field surveys, and no such species have been historically reported here by the California Native Plant Society (CNPS) or the California Natural Diversity Data Base (CNDDB). In fact, the Site is heavily dominated by an assortment of common non-native annual grasses and weeds, with almost no remaining native vegetation.

There are no natural habitats or plant communities that remain on the Site, and whatever natural drainage patterns may have existed in the past are long gone. The entire Site supports a dense carpet of non-native grasses and weeds, and even the small wetland on the eastern fence is not particularly 'aquatic', supporting the same ruderal grass and weed species, plus a very few additional common species more typical of seasonal wetlands (*Lythrum, Rumex, Pleuropogon, Juncus*). Most of the region's known species of seasonal pools (e.g., *Plagiobothrys, Limnanthes, Lasthenia, Gratiola, Eryngium,* etc.) are lacking here. In dry years, the small wetland feature is exclusively dominated by Italian ryegrass (*Lolium*). With such extensive disturbance and no particularly suitable habitats, the Site currently has extremely low potential to support any of the listed species.

WETLANDS

The Site was surveyed for possible wetland conditions during the same field examinations cited above. Based on these accumulated observations, a map showing minimal wetlands was submitted to and subsequently approved by the Corps, resulting in 0.037 acre of seasonally wet swale habitat being claimed as "jurisdictional" by the Corps. This habitat is not aquatic per se and is dominated by common non-native grasses and weeds, with minimal native vegetation, this being a small amount of common semaphore grass and toad rush. The rest of the Site exhibits essentially no hydrophytic vegetation, thoroughly altered and mixed soils, and only small occurrences of fleeting hydrology. As such, the Site is almost completely without wetlands.

While the Site's small wetland feature is claimed as jurisdictional (potentially subject to regulation) by the Corps, it is biologically almost devoid of any actual wetland functions, resources, and/or other related values. It is merely an infinitesimally small and extremely fragmented remnant of the historic landscape, or possibly (likely) even man-made. It is highly isolated, and has been largely dewatered by surrounding uses and development, resulting in minimal seasonal hydrology and complete conversion of vegetation to non-native grasses and weeds. It has virtually no habitat value for wetland-dependent plants or wildlife known from the region, common or sensitive. Still, this small feature is avoided completely by the project.

POTENTIAL IMPACTS AND RECOMMENDATIONS

Aside from the minor seasonal wetland on the eastern fenceline discussed above, the Site is completely lacking any other wetlands or significant biotic resources, hence, the proposed project would have very minimal impacts to biological resources. No wetland would be directly filled by the project (the lone onsite wetland feature is to be wholly avoided), and no significant nearby wetland resources would be compromised or otherwise adversely affected. Indirect impacts to the lone onsite wetland feature would be minimal.

Impacts of development on the bulk of the Site would be botanically insignificant, and the project's impacts to wildlife would be limited to minor, degraded habitat removal, potentially displacing or chasing away small numbers of common species of birds, small mammals, snakes and lizards. While a regionally insignificant amount of weedy grassland habitat would be lost, no highly significant wildlife resources would be lost or otherwise compromised. Common species would be minimally affected. No aquatic habitat would be lost, so no habitat for amphibians would be lost or affected. The Site has been reviewed by the US Fish and Wildlife Service, with issuance of an email clearing the Site of CTS concerns or requirements.

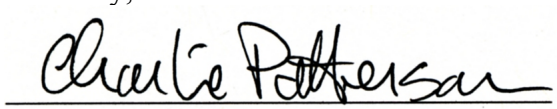
Since there would be only very minimal impacts to common grassland, and the small onsite wetland is to be avoided, no biological (and specifically no wetland) permitting or mitigation is necessary, and only standard BMPs and runoff treatment issues need be addressed. Standard measures to protect water quality during and after construction should be implemented, and the small wetland feature should be fenced so as to preclude vehicular disturbance or material dumping.

Given that there are no significant biological resources present onsite, there is no need for any related mitigation measures or formal wetland or sensitive species permitting. Avoidance of the wetland feature eliminates the need for any further involvement by the Corps. This plus the lack of any sensitive species should eliminate any need for additional review or clearances with regard to these generic resources.

In summary, the Site contains relatively minimal biological resources of any kind or value, with the lone feature being a very small (0.037 acre), shallow, grassy, relatively insignificant localized depression that exhibits intermittent seasonal wetland conditions, but which provides no suitable habitat for any regionally known listed species, plants or wildlife. The wetland feature is to be completely avoided and afforded adequate protection, and the overall impacts of Site development as proposed would be biologically insignificant.

Please feel free to contact me if you have any questions or need additional information.

Sincerely,



Charles A. Patterson

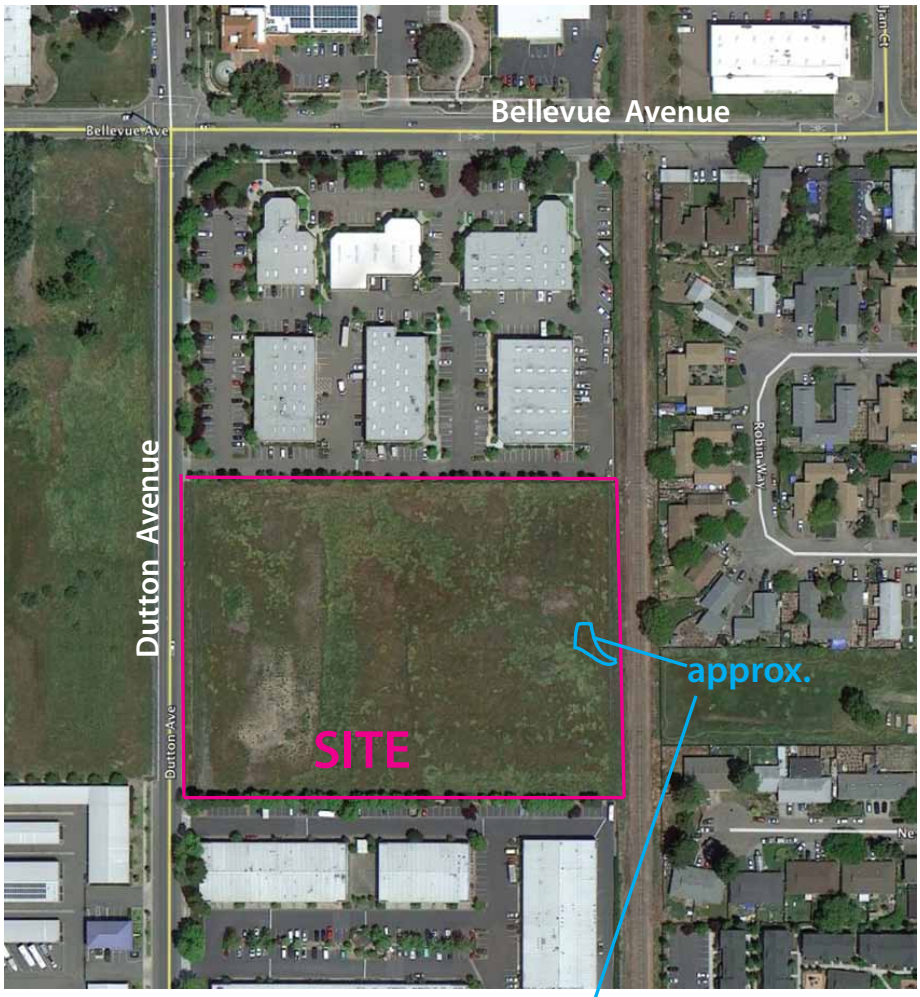
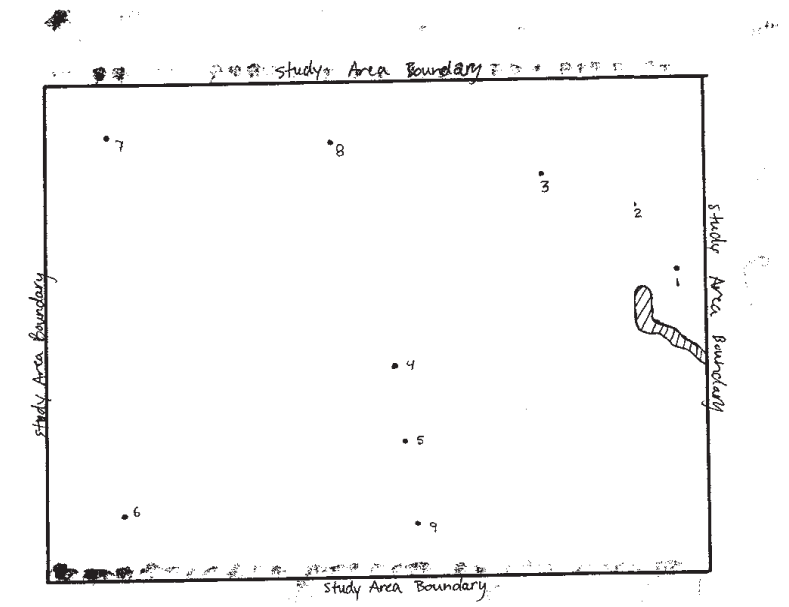


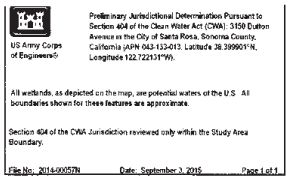
Figure 1. Site On 2013 Air Photo

3150 Dutton Avenue, Santa Rosa, Calif.

NORTH	**Source/Prepared by:** C. Patterson; March, 2017	**Applicant:** Mark Garay Tiburon, CA 94920	**Sonoma County A. P. Number** 043-133-013
	Basemap: 2013 Google Earth air imagery **No Scale**		Approx. 5.95 ac

Biological Baseline and Assessment




US Army Corps of Engineers®

Preliminary Jurisdictional Determination Pursuant to Section 404 of the Clean Water Act (CWA): 3150 Dutton Avenue in the City of Santa Rosa, Sonoma County, California (APN 043-133-013. Latitude 38.399901°N, Longitude 122.722131°W).

All wetlands, as depicted on the map, are potential waters of the U.S. All boundaries shown for these features are approximate.

Section 404 of the CWA Jurisdiction reviewed only within the Study Area Boundary.

File No.: 2014-00057N Date: September 3, 2015 Page 1 of 1

Figure 4-F. Final Wetland Map			
3150 Dutton Avenue, Santa Rosa, Calif. 95407			
NORTH	Source/Prepared by: C. Patterson; Jan. 2015 Based on field inspection 6-25-14 CP & BM (Corps)	Applicant: Mark Garay 430 Ridge Road, Tiburon, CA 94920	Sonoma County A. P. Number 043-133-013
	Basemap: air photo from Google Earth Scale: 1 inch = approx. 70 feet		Approx. 5.95 ac
Jurisdictional Determination			

Figure 2. Wetland Map (Corps approved PJD, 2015)			
3150 Dutton Avenue, Santa Rosa, Calif.			
NORTH	**Source/Prepared by:** C. Patterson; March, 2017	**Applicant:** Mark Garay Tiburon, CA 94920	**Sonoma County A. P. Number** 043-133-013
	Basemap: 2013 Google Earth air imagery **No Scale**		Approx. 5.95 ac
Biological Baseline and Assessment			

Appendix A. Sensitive Plants Potentially in the Santa Rosa Area.

Plant Taxon (Jepson 2012)	COMMON NAME	CNPS LIST	HABITAT	Likely In Study Area ?
SPECIES OF PRIMARY CONCERN:				
Campanula californica	swamp harebell	1	freshwater marshes, bogs, closed cone pine, wet	No; no suitable habitat; none seen
Fritillaria liliacea	fragrant fritillary	1	heavy adobe soils, coastal grassland and scrub	No; poor habitat quality; none seen
Legenere limosa	legenere	1	vernal pools; valley grassland	No; no suitable habitat; none seen
Trifolium amoenum	showy Indian clover	1	low rich fields, swales; serpentine	No; poor habitat quality; none seen
Castilleja uliginosa	Pitkin Marsh paintbrush	1	marshes, wet meadow; Pitkin Marsh	No; no suitable habitat; presumed extinct; none seen
Alopecurus aequalis var. sonomensis	Sonoma alopecurus	1	low wet places, marsh, riparian scrub	No; no suitable habitat; none seen
Astragalus clarianus	Clara Hunt's milkvetch	1	grassy hillsides, cismontane woodland	No; no good habitat; out of range; none seen
Blennosperma bakeri	Baker's blennosperma or	1	low wet places; valley grassland, vernal pools	No; poor habitat quality; none seen
Carex albida	white sedge	1	open marshy places; Pitkin Marsh	No; no suitable habitat; none seen
Delphinium bakeri	Baker's larkspur	1	low brush and fencerows; coast'l prairie	No; no suitable habitat; out of range; none seen
Delphinium luteum	yellow larkspur	1	sea bluffs, coastal scrub	No; no suitable habitat; out of range; none seen
Gratiola heterosepala	Bogg's Lake hedge-hyssop	1	vernal pools, shallow marshy ground	No; no suitable habitat; none seen
Lasthenia burkei	Burke's goldfields	1	vernal pools, wet swales	No; poor habitat quality; none seen
Lilium pardalinum ssp. pitkinense	Pitkin Marsh lily	1	wet marshy ground, Pitkin Marsh	No; no suitable habitat; none seen; out of range?
Limnanthes vinculans	Cunningham Marsh or	1	vernal pools, wet meadows	No; poor habitat quality; none seen
Navarretia leucocephala ssp. bakeri	Baker's navarretia	1	vernal pools, wet swales, mesic grassland?	No; no suitable habitat; none seen
Navarretia leucocephala ssp. pauciflora	few-flowered navarretia	1	vernal pools; volcanic ash-flow	No; no suitable habitat; none seen

Appendix A. Sensitive Plants Potentially in the Santa Rosa Area.

Navarretia leucocephala ssp. plieantha	many- flowered navarretia	1	edges of vernal pools, meadows	No; no suitable habitat; none seen
Pleuropogon hooverianus	Hoover's semaphore grass	1	meadows, coastal decid. forest, wet places	No; no good habitat onsite; none seen; out of range?
Rhynchospora californica	California beaked rush	1	bogs, swamps, freshwater marsh	No; no suitable habitat; none seen
Sidalcea oregana ssp. hydrophila	marsh checkerbloom	1	meadows, mesic riparian	No; no suitable habitat; none seen
Sidalcea oregana ssp. valida	Kenwood Marsh checkerbloom	1	freshwater marsh	No; no suitable habitat; none seen; out of range?
Tracyina rostrata	beaked tracyina	1	woodland, grassland	No; no good habitat; none seen
SPECIES OF SECONDARY				
Downingia pusilla	dwarf downingia	2	vernal pools; valley grassland	No; poor habitat quality; none seen
Hemizonia congesta ssp. leucocephala	hayfield tarplant	3	coastal scrub, prairie, grassland	Possible, but poor habitat quality; none seen
Pogogyne douglasii ssp. parviflora	Douglas' pogogyne	3	vernal pools, low seas. wet places	No; poor habitat quality; none seen
Amsinckia lunaris	bent- flowered fiddleneck	4	valley and foothill grassland	No; poor habitat quality; none seen
Leptosiphon acicularis	bristly linanthus	4	chaparral, woodland, prairie	No; no good habitat; none seen
Perideridia gairdneri ssp. gairdneri	Gairdner's yampah	4	moist places, marshes, woodland	No; poor habitat quality; none seen
Ranunculus lobbii	Lobb's aquatic buttercup	4	shallow vernal ponds & pools	No; poor habitat quality; none seen
Astragalus breweri	Brewer's milkvetch	4	chaparral, woodland, grassland	No; no good habitat; none seen
Rhynchospora alba	white beaked rush	4	bogs, freshwater marsh	No; no suitable habitat; none seen
Rhynchospora globularis var. globularis	round headed beaked rush	4	bogs, freshwater marsh	No; no suitable habitat; none seen
OTHER SPECIES OF POSSIBLE CONCERN:				
Cuscuta howelliana	Bogg's Lake		vernal pools	No longer listed; none seen
Hemizonia multicaulis ssp. m.	seaside tarplant		coastal bluffs, scrub	No longer listed; none seen
Hemizonia multicaulis ssp. vernalis	Tiburon tarplant		coastal scrub prairie; serpentine	No longer listed; none seen

ATTACHMENT B

Charles A. Patterson
1806 Ivanhoe Avenue, Lafayette, CA 94549
Plant Ecologist, Wetland Specialist, Resource Manager, Naturalist
Ph: (925) 938 - 5263 ('wetland') cell: (510) 414 – 7976 email: cpwetguy@sbcglobal.net

EDUCATION

Master of Science, Range Management and Wildland Ecology, 1974, University of California at Davis
Bachelor of Science, Renewable Natural Resources, 1972, U.C. Davis
Undergraduate coursework (2 years) in Mechanical Engineering, 1968-1970, U.C. Santa Barbara
American Graduate University, trained in Proposal Preparation and Source Selection, 1980
Wetland Identification and Delineation, Unified Federal Method, 1989, Wetland Training Institute

WORK HISTORY

1984-2016: Self-employed Consulting Ecologist. Conducted or participated in over 600 environmental projects and studies, including biological and environmental assessments and EIRs, wetland delineations, sensitive species surveys, mitigation design, implementation and monitoring, revegetation planning and implementation, and habitat restoration plans. Specialized botanical and wetland related studies; seven ongoing wetland mitigation bank monitoring and compliance programs. Congressional appointee to the Sonoma County Vernal Pool Task Force, 1989-1994. Currently involved with numerous sites on the Santa Rosa Plain (Sonoma County) where wetland restoration is being completed. Various power transmission line and reservoir proposals in Kern, Merced, Ventura, and Riverside counties.

1977-1982: Western Ecological Services Company (WESCO), Marin County. Associate and Senior Plant Ecologist. Directed vegetation and wetland studies for over 100 projects; prepared technical and cost proposals for both botanical and interdisciplinary studies; hired and supervised botanical subcontractors; project management; technical writing and editing.

1974-1976: The Nature Conservancy, Western Regional Office, San Francisco. Research Ecologist. Prepared vegetation inventories for 10 nature preserves in California and Washington; hired and supervised interdisciplinary study teams for preparation of inventories and master plans for 15 preserves; completed natural resources reference study of Santa Cruz Island; evaluated potential site acquisitions.

1973-1974: U.S. Forest Service, Riverside Fire Lab. Graduate Research Assistant. Conducted study of the effectiveness of Angora goats in utilizing resprouting chaparral shrubs for possible use in fuel break establishment and maintenance.

1982-1985: ECHO - The Wilderness Company, Oakland. Professional Whitewater River Guide. Part time whitewater guide and naturalist in California, Oregon, Idaho.

1971-1991: Northern California Volleyball Officials Association (NCVOA). Part time professional volleyball referee; covered collegiate and professional leagues throughout northern California.

PARTIAL LIST OF CLIENTS

The Nature Conservancy, San Francisco
California Coastal Conservancy
Calif. Dept. of Fish and Wildlife, Yountville
U.S. Forest Service (Inyo, Toyabe, Stanislaus)
U.S. National Park Service
U.S. Army Corps of Engineers
Calif. Div. of Mines and Geology
Sonoma County Dept. of Public Works
Sonoma County Water Agency
Sonoma Co. Ag. Preservation and Open Space Dist.
ATandT
Pacific Gas and Electric Company
Jackson Family Wines
East Bay Municipal Utility District
Marin Municipal Water District
Sacramento Municipal Utility District
Wetland Research Associates, San Rafael
LSA Associates, Point Richmond
Chalk Hill Winery, Healdburg
QUESTA Engineers, Point Richmond

CAPABILITIES AND WORK EXPERIENCE **C. Patterson, pg. 2**

Plant Taxonomy: Firsthand experience with the flora of most western states, including California, Nevada, Oregon, Washington, Arizona, New Mexico, Utah, Colorado, and Idaho.
Vegetation Mapping: Plant community and habitat mapping utilizing topographic maps and air photos; stereoscope interpretation; soil-veg correlations and range site descriptions; delineation of 'wetlands and other waters'; wildlife habitat assessments; community descriptions; and physically demanding ground surveys. Have mapped the vegetation of the Desolation and Mokelumne Wilderness areas, Marin Municipal Water District (20,000 acres), riparian vegetation of the Sacramento and San Joaquin riverbanks (Redding to Verona, Friant to Stockton), numerous private ranches, and vernal pool/wetland mosaics in Merced County, City of Roseville, and Sonoma County.
Quantitative Sampling: Documentation and descriptions of plant communities and vegetation success using transect, quadrat, and/or permanent plot methods. Range condition and forage production estimates; technical wetland data (soil, vegetation, hydrology) collection; vegetation and sensitive species monitoring.
Rare and Endangered Species: Literature and herbaria searches, record and historic mapping research, detailed field surveys, expert and agency coordination, management and recovery plans, habitat suitability determinations, rare plant mitigation plans, sensitive species revegetation, and preserve design. Firsthand experience with over 300 of California's rare and endangered plant taxa, familiarity with many of the state's centers of endemism. Frequent contributor to the California Native Plant Society, Natural Diversity Data Base, and CalPhotos files; expert reviewer of proposed state and federal plant listings and status reports.
Wetlands: Wetland delineation and mapping, including full coordination with the U.S. Army Corps of Engineers; habitat evaluations; wetland management and restoration. Experience with salt and freshwater wetlands, coastal and estuarine, riparian and floodplains, wet meadows, alpine meadows, bogs and hot springs, vernal pools and other seasonal wetlands, ephemeral and perennial stream systems. Have completed over 400 wetland delineations and surveys throughout the state. Have worked closely with the U.S. Army Corps of Engineers, San Francisco and Sacramento districts. Preparation of wetland fill (Section 404) permit applications (including Pre-Discharge Notifications, Nationwide Permits, Individual Permits, Alternatives Analyses), State 401 Certification; wetland mitigation plans, implementation, and monitoring.
Revegetation and Restoration: Basic revegetation planning and implementation; site evaluations and revegetation design; planting specifications; range improvement, restoration, and conversion; specialty consignment growing (e.g., native grasses, rare species); wildlife habitat enhancement; riparian restoration.
Fire Ecology: Basic wildfire hazard assessment; botanical input for fire management plans; conceptual burning plans for habitat enhancement and fuel reduction.
Environmental Regulations: Interpretation and coordination with state and federal environmental regulations, CEQA, NEPA, Clean Water Act, state and federal Endangered Species Acts, Wild and Scenic Rivers Act, EIR and EIS requirements, FERC (small and large hydro) projects, and Corps of Engineers (404) permits; coordination with city and county general plans and policies. Participated as a Congressional appointee on the Sonoma County Vernal Pool Task Force (interagency wetlands group) for six years.
Other: Considerable experience with energy/utility facility siting and development (power plants, access roads, steam lines, penstocks, pipelines, reservoirs, transmission lines), 30+ small hydroelectric projects. Rare plant photography and propagation; urban landscaping with native plants.

REFERENCES

Jeffrey Peters, Soil Scientist, QUESTA Engineers, Pt. Richmond (510) 236 - 6114
Charlie Traboulsi, TDG Engineers, Santa Rosa (707) 494-0425
Leonard Charles, Principal, Leonard Charles & Associates, San Anselmo (415) 454-4575
Larry Wasem, Patrick Imbimbo, Airport Business Center, Santa Rosa, (707) 578-5344
Christopher Desmond, Mitigation Bank Owner, Sebastopol (415) 308-1000
Jean Kapolchok, Planner/Principal, J. Kapolchok & Associates, Santa Rosa (707) 526-8939

RELEVANT PROJECT EXPERIENCE **C. Patterson, pg. 3**

Wetlands Work: Mr. Patterson is a professional free-lance ecologist with specialties in botany of the western states, wetland ecology and permitting, endangered plant searches/surveys, revegetation planning and implementation, natural habitat restoration, EIR/EIS preparation, and general environmental consulting. He has worked for 40+ years as a consulting ecologist, 7 years with Western Ecological Services Company of Marin County California, and over 30 years self-employed. Mr. Patterson's work covers a wide range of environmental topics, including baseline inventories, impact assessments, mitigation planning and design, and agency coordination and permitting. His work has covered most of the western U.S. and has involved all manner of habitat types, from coastal and inland marshes, dunes, and springs, to seasonal and perennial wetlands, mountain meadows, chaparral, desert shrub, grasslands, temperate forests, and woodlands. With a strong background in native grasses and range management, he has also participated in range site/soil assessments, restoration of grassland communities, and wildlife habitat enhancement. Mr. Patterson has conducted over 400 wetlands related projects statewide, many on and around the Santa Rosa Plain (Sonoma County). These have ranged from significant natural wetland systems (several hundred acres to several thousand) to numerous small urban projects involving vernal pools and swales, endangered plants and wildlife. In particular, Mr. Patterson has considerable experience in coordinating projects with the various state and federal agencies that address wetlands and sensitive species. He was instrumental in procuring major wetland fill permits for Sears Point (now 'Infineon') Raceway (expansion and renovation, with 11 acres of wetland fill, red-legged frogs), numerous Sonoma County housing developments, road improvement projects, and several vineyards and resort hotels. Mr. Patterson has designed and supervised the construction of nine wetland mitigation banks, including all aspects related to short and long term monitoring and reporting, remediation, demonstration of success, and coordination with often different agency objectives. He has worked extensively directly with grading contractors on the creation of wetland landscapes, including considerable onsite adjustments due to unforeseen problems. Mr. Patterson has conducted site monitoring for more than one dozen wetland and/or riparian mitigation/restoration projects in Sonoma County.

Rare and Endangered Species: Mr. Patterson's experience with sensitive species in northern California is extensive, ranging from 30 years of annual surveys across Sonoma County, to special rare plant projects in Marin, Merced, and Kern counties. He has studied the regional wetland systems of northern California and their unique species since 1984, conducting wetlands and rare plant surveys on sites ranging from small private landowners who need septic, driveway, or agricultural permits, to the largest developers and numerous public works projects. He has logged over 2000 person-days in conducting field studies in the Sonoma County region, and has firsthand experience with almost all of the sensitive species found there. He has worked closely with state, federal, and local agencies and institutions in addressing the many species and habitat concerns involved in this region. He has personally discovered numerous new locations for Burke's goldfields, Sebastopol meadowfoam, Baker's Blennosperma, many-flowered Navarretia, white sedge, and other regional endemics. He has been licensed by CDFW to survey for California linderiella and the California tiger salamander, and has conducted dipnet surveys for these species in past years.

Mr. Patterson has designed and built nine wetland mitigation bank projects (400+ acres) in Sonoma County, and has completed more than a dozen smaller independent wetland creation efforts. Through these and other regional projects, he has become quite familiar and adept at dealing with the many regulations and permit requirements involved with wetlands, permits, and the associated mitigation requirements. In particular, has worked and coordinated extensively with the California Department of Fish and Wildlife, U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, U.S. Environmental Protection Agency, and the California Regional Water Quality Control Board.