

Melodee Ann Hickman

Cartographer/GIS Analyst

mhickman@watershedenvironmental.com

Watershed Environmental

1130 E. Clark Avenue, 150-179

Orcutt, CA 93455

Phone: 805 876-5003 (office)

www.Watershedenvironmental.com

EDUCATION

2009 MA: Geography, GIS/Cartography Techniques Emphasis
University of California at Santa Barbara (UCSB)

1997 BA: Geography, Honors
University of California at Santa Barbara (UCSB)

RECENT PROJECT EXPERIENCE

Biological Surveys and Impact Assessment

Biological Assessment, Elings Park Phase III Improvement Plan, Santa Barbara, CA (2009).

Report submitted to City of Santa Barbara Planning Department.

CAD project plans and air-photo integration into geographic information system (GIS) for impact analysis. Field vegetation mapping and delineation of wetlands with associated integration into GIS. GIS constraints analysis for biological report, figure generation, photo processing and layout of biological site work for attachments.

Biological Assessment, Capone Residence, Santa Ynez Valley, CA (2009)

Report submitted to County of Santa Barbara Planning and Development.

CAD project plans and air-photo integration into geographic information system (GIS) for impact analysis and field maps. On-site vegetation mapping and assistance with native grassland vegetation sampling. GIS constraints analysis, figure generation, and photo processing for biological assessment report.

Biological Assessment, Foothill Centre, Santa Barbara CA (2009)

Report submitted to City of Santa Barbara Planning Department.

CAD project plans and air-photo integration into geographic information system for impact analysis and field maps. On-site vegetation mapping. GIS constraints analysis, figure generation and photo processing for biological assessment report.

Biological Assessment, Inn at Mattei's Tavern, Los Olivos, CA (2009)

Report submitted to County of Santa Barbara Planning and Development.

CAD project plans and air-photo integration into geographic information system (GIS) for impact analysis and field maps. Assistance with performance of on-site flora and fauna surveys. Site vegetation mapping and GIS integration with CAD plans for constraints analysis and report figure generation.

Biological Assessment, Parma Park Improvements, Santa Barbara, CA (2008)

Report submitted to City of Santa Barbara Parks and Planning Departments.

CAD project plans and air-photo integration into geographic information system (GIS) for impact analysis and field maps. On-site vegetation mapping and GIS integration. GIS constraints analysis, report figure generation and assistance with assessment of potential biological impacts from the proposed park improvements to increase equestrian and handicap access and recommendations of mitigation of biological impacts.

Wetland Surveys, Delineation and Permitting

Wetland Delineation, Creekside Village Apartments, Los Alamos CA (2009)

Report submitted to County of Santa Barbara Planning and Development and ACOE, CDFG, and RWQCB for wetland permits.

CAD site plan and air-photo integration to geographic information system (GIS) for constraints analysis and field maps. Assistance with performance of vegetation, soil, and hydrology field surveys to identify the location and extent of state and federally regulated wetlands on a 5-acre parcel where construction of new apartments is proposed. GIS constraints analysis, report figure generation and assistance with the preparation of a report identifying temporary and permanent project impacts to wetlands.

Wetland Delineation, Dahlia Court Expansion, Carpinteria, CA (2009)

Report submitted to City of Carpinteria Planning Department.

CAD site plan and air-photo integration to geographic information system (GIS) for constraints analysis and field maps. Assistance with on-site performance of vegetation, soil, and hydrology field surveys to identify the location and extent of state and federally regulated wetlands on a 2-acre area, where construction of new apartments is proposed. GIS constraints analysis, report figure generation and assistance with the preparation of a report identifying temporary and permanent project impacts to wetlands.

Biological Assessment & Wetland Delineation, Village at Los Carneros, Project Phase II, Goleta, CA (2008)

Report submitted to City of Goleta Planning Department and ACOE, CDFG, and RWQCB for wetland permits.

CAD site plan and air-photo integration to geographic information system (GIS) for constraints analysis and field maps. Assistance with on-site performance of vegetation, soil, and hydrology field surveys to identify the location and extent of state and federally regulated wetlands on a 27-acre area, where construction of new condominiums and single-family homes is proposed. GIS constraints analysis, report figure generation and assistance with the preparation of a report identifying temporary and permanent project impacts to wetlands.

Wetland Delineation, Alisal Golf Course, Solvang, CA (2007)

Report submitted to City of Solvang Planning Department and ACOE, CDFG, and RWQCB for wetland permits.

CAD site plans and air-photo integration to geographic information system (GIS) for constraints analysis and field maps. Assistance with on-site performance of vegetation, soil, and hydrology field surveys to identify the location and extent of state and federally regulated wetlands along portions of Alisal Creek, where creek bank stabilization was proposed. Assistance with the preparation of a report identifying temporary and permanent project impacts to wetlands utilizing GIS constraints analysis. Report figure generation, and site photo attachments.

Habitat Restoration and Re-Vegetation

Riparian Enhancement Plan, Westmont College, Santa Barbara, CA (2008)

Report submitted to County of Santa Barbara Planning and Development and to ACOE, CDFG, and RWQCB for wetland permits.

CAD site plan and air-photo integration into geographic information system (GIS). In-field vegetation mapping and GIS development of riparian enhancement areas for GIS database assessment/area calculations and report figures. GIS area calculation to Excel spreadsheet for development of planting plan. Native plant nursery contract growing coordination.

Plan describes the actions to be taken within a 7.5-acre area to remove non-native vegetation, and re-vegetate riparian oak woodland habitat with native riparian vegetation. Plan also describes monitoring and reporting methods and interim goals and success criteria. Enhancement work is in progress. Site preparation and installation of new plant materials is scheduled to be completed in 2013, and monitoring and reporting is scheduled to be completed in 2017.

Oak Woodland Mitigation/Enhancement Plan, Llano Avenue, Hope Ranch, CA (2008)

Report submitted to County of Santa Barbara Planning and Development.

CAD site plan and air-photo integration into geographic information system (GIS).

In-field vegetation mapping and GIS development of riparian enhancement areas for GIS database assessment/area calculations and report figures. GIS area calculation to Excel spreadsheet for development of planting plan. Native plant nursery contract growing coordination. Plan describes the actions to be taken within a 10,000 sq. ft. area to remove non-native vegetation, and re-vegetate riparian oak woodland habitat with native riparian vegetation. Plan also describes monitoring and reporting methods and interim goals and success criteria. Mitigation/Enhancement work is in progress. Site preparation and installation of new plant materials was performed in 2009, and monitoring and reporting is scheduled to be completed in 2013.

Habitat Restoration Plan, Gaviota Holding, Santa Barbara, CA (2008)

Report submitted to County of Santa Barbara Planning and Development.

CAD site plan and air-photo integration into geographic information system (GIS).

In-field vegetation mapping and GIS development of various enhancement areas for GIS database assessment/area calculations and report figures. GIS area calculation to Excel spreadsheet for development of planting plan. Native plant nursery contract growing coordination.

Plan describes the methods that will be used to restore 4.13 acres of coastal sage scrub, 4.62 acres of native grassland, 0.79 acre of Eucalyptus Woodland, and 4.82 acres of non-native annual grassland habitat. Plan also describes monitoring and reporting methods and interim goals and success criteria. Restoration work is scheduled to begin in the spring of 2010, and monitoring and reporting is scheduled to be completed in 2015.

Wetland Mitigation Plan, Preserve at San Marcos Project, Santa Barbara CA (2006)

Report submitted to County of Santa Barbara Planning and Development and to ACOE, CDFG, and RWQCB for wetland permits.

CAD site plan and air-photo integration into geographic information system (GIS). In-field vegetation mapping and GIS development of riparian enhancement areas for GIS database assessment/area calculations and report figures. GIS area calculation to Excel spreadsheet for development of planting plan. Native plant nursery contract growing coordination. Plan describes the actions to be taken within a 0.6-acre area to create vernal freshwater marsh habitat, and actions to be taken to enhance 1.32 acres of riparian woodland habitat. Plan also describes monitoring and reporting methods and interim goals and success criteria. Wetland mitigation and enhancement work is in progress. Site preparation and installation of new plant materials was performed in 2008, and monitoring and reporting is ongoing and scheduled to be completed in 2013.

Native Grassland Restoration Plan, Preserve at San Marcos Santa Barbara, CA (2006)

Report submitted to County of Santa Barbara Planning and Development.

CAD site plan and air-photo integration into geographic information system (GIS). In-field vegetation mapping and GIS development of native grassland enhancement areas for GIS database assessment/area calculations and figure generation. GIS area calculation to Excel spreadsheet for development of planting plan. Native plant nursery contract growing coordination. Plan describes the methods to be used to create 18.34 acres of native perennial native grassland habitat. Plan also describes monitoring and reporting methods and interim goals and success criteria. Native grassland work is in progress. Site preparation and installation of new plant materials began in 2008 and is ongoing. Mitigation monitoring and reporting is also ongoing. The anticipated completion date for this project is 2015.

Coastal Sage Scrub Mitigation Plan, Preserve at San Marcos, Santa Barbara, CA (2006)

Report submitted to County of Santa Barbara Planning and Development.

CAD site plan and air-photo integration into geographic information system (GIS). In-field vegetation mapping and GIS development of coastal sage scrub enhancement areas for GIS database assessment/area calculations and report figures. GIS area calculation to Excel spreadsheet for development of planting plan. Native plant nursery contract growing coordination. Assistance with on-site planting layout and design. Plan describes the methods to be used to create 6.04 acres of coastal sage scrub habitat. Plan also describes monitoring and reporting methods and interim goals and success criteria. Coastal sage scrub mitigation, site preparation and installation of new plant materials was performed in 2007 and 2008. Mitigation monitoring and reporting is ongoing and is scheduled to be completed in 2013.

Mitigation Monitoring/ Open Space Management Plans*Casa Dorinda Open Space Management Plan, Montecito CA (2009)*

Report submitted to County of Santa Barbara Planning and Development. CAD site plan and air-photo integration into geographic information system (GIS). In-field vegetation mapping and GIS development of open-space areas for GIS database assessment/area calculations and report figures. GIS area calculation to Excel spreadsheet for development of management plan. Native plant nursery contract growing coordination. Management plan provides an annual monitoring schedule and treatment plan for the management of invasive exotic vegetation within the 18.5-acre Casa Dorinda open-space area. It also provides a description of current (as of September 2008) vegetation conditions with vegetation maps, and prioritizes the management of invasive exotic vegetation based on the feasibility and ultimate benefit to the riparian and oak woodland habitat present in the open-space area.

Open Space Management Plan, Preserve at San Marcos, Santa Barbara CA (2006)

Report submitted to County of Santa Barbara Planning and Development. CAD site plans and air-photo integration into geographic information system (GIS). In-field vegetation mapping and GIS development of open-space areas for GIS database assessment/area calculations and report figures. Plan describes environmental resource protection measures, land use activities, and management actions to be taken in a 126.36-acre open-space conservation area. Plan includes a description of biological resources within the open-space area, management actions to control non-native species and reduce erosion, integrated pest management, landscape screening, cultural resource protection, fuel management activities, and allowable public and private uses.

Open Space and Habitat Management Plan, Santa Barbara Ranch, CA (2006)

Report submitted to County of Santa Barbara Planning and Development. CAD site plans and air-photo integration into geographic information system (GIS). In-field vegetation mapping and GIS development of open-space and management areas for GIS database assessment/area calculations and report figures. Plan describes environmental resource protection measures, land use activities, and management actions to be taken in an 800-acre open-space area. Plan includes a description of biological resources within the open space area, management actions to preserve native plant communities and wildlife habitat, and control non-native species, and reduce erosion, cultural resource protection, fuel management activities, and allowable public and private uses.

Constraints Analysis and Geospatial Modeling

Environmental Constraints Analysis Preserve at San Marcos Project, Santa Barbara, CA (2005)

Report submitted to Bermant Development Company, Santa Barbara, CA, and presented to Santa Barbara County Planning Commission at a public hearing. CAD site plans and air-photo integration into geographic information system (GIS). In-field vegetation and biological features mapping, integration of existing soils, geology and cultural resources into GIS for development of constrained areas and assessment/area calculations and associated report figures. Environmental constraints analyzed within a 377-acre area zoned for residential development. Constraints analyzed included plant community types, slopes, wetlands, soils, cultural resources, geological faults, and sensitive biological resources and habitats. Purpose was to site proposed new residential development in appropriate areas and identify sites which should be preserved in perpetuity as open space.

Rural Resource Protection Project Sensitive Biological Resources Inventory (2003)

Report submitted to County of Santa Barbara Comprehensive Planning Department. Compilation of multiple county hardcopies, air-photos, historic maps and global information system (GIS) layers into single GIS database. GIS development of multiple field maps for vegetation mapping. 1,200+ sq. mile site vegetation mapping and subsequent GIS vegetation maps of study area for report figures and output GIS vegetation layer. GIS modeling of complex wildlife-habitat relationships and output of suitable habitat maps for various species of interest. Sensitive species habitat mapping and modeling over a 1,200+ square-mile study area. Specific tasks included: (1) Modeling the potential distribution of 56 species of plants and animals by combining wildlife-habitat relationships and local expert opinion; (2) Modeling land suitability for agricultural expansion; (3) Predicting land-use threats to species; and (4) Selecting areas for incorporation in a permit-based environmental protection program using heuristic reserve location techniques. The selection strategies utilized the SITE heuristic model, balancing species representation and spatial configuration.

Santa Ynez Valley Community Plan Biological Resources Mapping Phase 1, Vegetative Resources (2003)

Report submitted to County of Santa Barbara Comprehensive Planning. Global information system (GIS) registration of air-photos and historic vegetation maps for field mapping of vegetation in study area. Site vegetation field mapping and/or verification of existing maps for digital database and associated output report figures. Creation and development of digital vegetation database. Field survey and mapping of vegetation communities and land cover types within a 29-square-mile study area and preparation of a technical report and a digital database describing and depicting the vegetation communities and land cover types. The primary focus of this mapping was to identify and map vegetation communities and environmentally sensitive habitat within the Santa Ynez Valley Community Plan planning area.

PUBLICATIONS

Mertes, Leal K., Hickman M., Waltenberger B., Bortman A., Inlander E., McKenzie C., Dvorsky J. 1998. Synoptic View of Sediment Plumes and Coastal Geography of the Santa Barbara Basin, California. *Hydrological Processes* 12: 35-50

Mertes, Leal K., Waltenberger B., Hickman M., Bortman, A., 1997. GIS Tools for Management at the Land-Marine Interface: Channel Islands, California. Conference Presentation: *California and the World Ocean '97*. March 24-27, 1997 Town & Country Hotel, San Diego, CA.

PROFESSIONAL CERTIFICATIONS/AFFILIATIONS

- § Association of American Geographers, 2000
- § Gamma Theta Upsilon International Geographic Honor Society, 1999
- § Golden Key National Honor Society, 1997
- § Non-traditional and Reentry Student Union, 1993