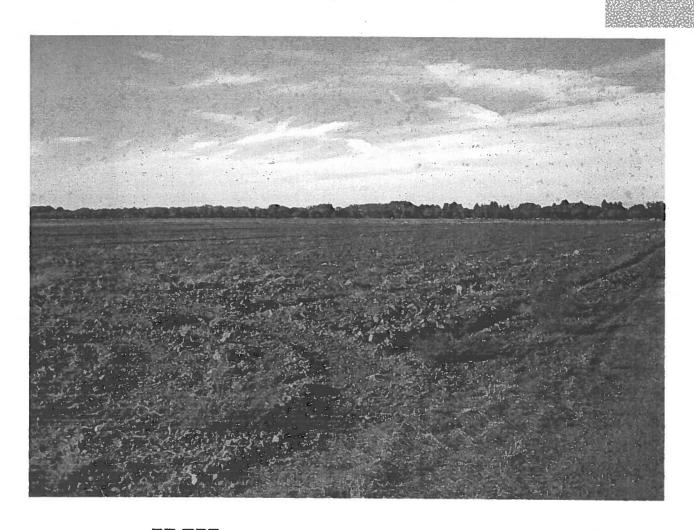
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Environmental Site Assessment

UCD WEST VILLAGE PROPERTY

Davis, California

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Environmental Site Assessment

UCD WEST VILLAGE PROPERTY

Vicinity of Hutchison Drive and Highway 113

Davis, California

WKA No. 6915.01

December 15, 2005

INTRODUCTION

Purpose and Scope

Wallace-Kuhl & Associates (WKA) has completed a Phase 1 Environmental Site Assessment for the UCD West Village Property as shown on Figures 1 through 3. The purpose of our work was to evaluate the property for evidence of recognized environmental conditions resulting from current and/or former site activities. This work was authorized November 11, 2005 by Mr. Robert DeWaters of West Village Community Partnership, LLC. This report has been prepared in accordance with the American Society of Testing and Materials (ASTM) Standard E 1527-00 for Environmental Assessments. The scope of work included the following:

- a field reconnaissance of the subject property to look for visual evidence of surface and potential subsurface sources of contamination
- a "windshield survey" performed in the immediate vicinity of the property to identify businesses that may use, produce or store hazardous materials and/or generate hazardous waste
- a review of Yolo County Assessor's office records to establish current and former property ownership
- personal and telephone interviews with representatives of various regulatory agencies and/or persons familiar with site history and current operations

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- examination of aerial photographs of the property dating back to 1957, as well as review of historic USGS topographic maps, archived building records and/or Sanborn Map coverage of the property (as available), in order to develop a reasonably continuous minimum 50-year site history as required by the ASTM standard
- review of the U.S. Department of Agriculture, Soil Conservation Service Soil Survey
 of Yolo County, California for soils information and historic crop cultivation trends
 for the subject property and vicinity, as well as inquiry with the Yolo County
 Agricultural Commissioner's Office
- an evaluation of local and regional geological groundwater conditions, including historical depths and flow direction (Figure 4)
- a discussion of potable water, wastewater and stormwater provisions for the property
- a review of federal, state and county regulatory agency lists indicating any known instances of hazardous materials contamination and registered underground and aboveground storage tanks (USTs/ASTs) on or near the property (Figure 5)
- color photography of the property (Figure 6).

Laboratory testing for hazardous materials in the soil and groundwater beneath the property as well as assessments for asbestos, and lead-based paint were was beyond the scope of this assessment.

FINDINGS

Site Description

The UCD West Village Property covers approximately 225 acres of agricultural land located west of Highway 113, south of Russell Boulevard and north of Hutchison Drive in Davis, California. The subject property consists of portions of Yolo County Assessor's Parcel Numbers (APNs) 036-170-04 and -05 (Figure 3). Figure 6 contains color photography of the subject property.



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The subject property was once part of a larger land area referred to as the "Campbell Farm" or "Campbell Ranch." The University of California, Davis (UC Davis) acquired the property in the early 1950's from the Campbell family. The majority of the UCD West Village Property currently used for agriculture by the University and is divided into numerous plots. The property currently is used to grow short term and long-term research crops. Carl Foreman, director of the UC Davis Environmental Health and Safety (EH&S), said the property is primarily used for research crops and that various departments utilize different plots for their research.

On December 8, 2005, a representative from Wallace-Kuhl & Associates, Mr. Randy Wheeler, conducted a site visit and interviews with representatives of UC Davis. On the day of the site visit, the subject property was observed to be used for agricultural purposes. Portions of the property were disked while other portions were fallow. Two electrically powered water supply wells were observed on the property along with a tall, white column adjacent to one of the wells. According to Ms. Aimee Pfohl, an environmental protection specialist with UC Davis, the tall white column is an abandoned aphid trap. Ms. Pfohl said that irrigation water for the property is supplied to the plots via a network of underground concrete irrigation pipes which draw water from an adjacent detention pond located southwest of the property. The two on-site water wells are used as a backup source of irrigation water. The plots are irrigated using a series of "bubblers" attached to the underground irrigation piping. Unimproved dirt roads provide vehicular access to the subject property.

Five abandoned metal silos are located in the southeast portion of the property along with an abandoned grain combine. Visual inspections of four of the five silos (one silo was locked and not accessible) revealed that the bottoms of the silos are constructed of concrete that had broken through and settled in some places. Several of these silos had soil material within the inside, most likely associated with burrowing animals displacing the soil. A noticeable odor was observed within the interior of the second silo from the south. South of the grain silos, on the south side of Old Hutchison Drive, numerous fill dirt or "end dumped" soil piles are present. Carl Foreman indicated these soil piles could be excess dirt from construction activities on campus. Visual observations around the grain combine revealed minor soil staining beneath the diesel fuel tank of the grain combine. A five-gallon bucket of an oily material, possibly used motor oil, grease or hydraulic fluid, was observed inside the front end of the combine.



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No farm operations hubs, stationary oil storage features, or performance of farm, contractor or earthwork equipment maintenance or steam cleaning equipment was observed on the property at the time of our field reconnaissance. No building foundations or building materials storage, chemical mixing or storage locations (with the exception of the silos), evidence of USTs, sumps, catch basins or oil/water separators were observed on the property at the time of the field reconnaissance.

No signs or other surface evidence of buried liquid petroleum or natural gas pipelines were observed on, or adjacent to the property. Neighborhood distribution lines are located along the northern property boundary, along Russell Boulevard and along Hutchison Drive.

Pacific Gas & Electric Company (PG&E) pole-mounted electrical transformers are located on and adjacent to the subject property. No staining or evidence of leakage was observed beneath the transformers during the field reconnaissance.

Windshield Survey

The subject property is located within and surrounded by a predominantly agricultural area with residential development located north of the property, beyond Russell Boulevard. The Highway 113 on-ramp/off-ramp forms the eastern property boundary. Russell Boulevard bounds the property to the north and Hutchison Drive bounds the property to the south. Agricultural lands bound the property to the west.

The Agronomy Headquarters and Foundation Seed Warehouse facility is located southwest of the property along Hutchison Drive. The UC Davis Western Center for Agriculture Equipment (WCAE) is located adjacent to the property. The WCAE facility is a classroom/training facility for the University. The facility utilizes tractors and other farm implements and these items are stored on the WCAE premises.



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Site History

Ownership

Readily available Yolo County Assessor's office records obtained from Parcel Quest reveal that the "UCD Accounting & Financial Department" is the listed subject property ownership entity for the two parcels in which the subject property is a portion of.

Interviews

On December 8, 2005, WKA interviewed Mr. Carl Foreman, Director of the Environmental Health and Safety office. According to Mr. Foreman, the subject property is used for growing research crops and for research projects into how certain plants react to the application of pesticides (i.e. the plants tolerance to certain pesticides). Mr. Foreman was not aware of any USTs on the property. He stated the maintenance covers noted along the north side of Hutchison Drive were covers for the wastewater force main that originates from the Primate facility and terminates at the University wastewater treatment plant located south of the subject property. Mr. Foreman was asked about the reported Diquat application in the western portion of the property, as referenced in the 2003 Environmental Health and Safety Phase 1A report, and indicated that the application of the Diquat was off-site of the subject property.

Agricultural History

The subject property has been used for agriculture since before the 1950s and continues to this day. Regarding pesticide usage on the property, information obtained from a September 24, 2003 *Phase 1A Preliminary Site Assessment* prepared by the UC Davis Office of Environmental Health and Safety, indicate that University departments operating the plots did keep [pesticide use] records prior to 1990, with the earliest use logs dating back to 1978. Use logs since 1978 indicated that a "wide range of materials were applied." According to University records, experimental pesticides were "very rarely used, if al all, on the subject site." Typical degradation half-lives of the substances applied ranged from 10 to 90 days. There was one record of a Diquat application adjacent to the western site boundary in 1990. More persistent type chemicals could have been used prior to 1978, with half-lives ranging form 350-2,000 days (12-66 years)." A copy of the 2003 report is included in Appendix A.



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According to the UC Davis report, the five grain silos located in the southeast portion of the property were constructed to store cereal grains, but were subsequently used to store fertilizers and pesticides for an "unknown disclosed amount of time." In July 1995, under an amnesty chemical cleanup program, materials within the silos were removed under a hazardous waste manifest dated July 13, 1995. Approximately 15,100 pounds of material was removed from the entire west campus area with about 40% (6,040 pounds) of this material from the silos. The waste manifest apparently did not list specific chemicals removed from the silos.

WKA contacted the Yolo County Agricultural Department (YCAD) regarding *Restricted Materials Permits* (often associated with registered chemical applications to agriculture) that are on file for the subject property. According to Ms. Leslie Churchill with the YCAD, pesticide use reports were on file the subject property area, but the use permits are not site specific with regards to certain parcels. The University is required to submit use reports, however they are not site specific because the crops are listed as "research commodities." A copy of the 2000 through 2005 Pesticide Use Report is provided in Appendix B.

Topographic Maps Review

We reviewed historic U.S. Geologic Survey (USGS) topographic maps of the subject property through our vender, EDR. Historical maps dated 1907, 1915, 1952, 1968, 1975, 1981, and 1992 were available for our review. The maps are each discussed below by date with the exception of the 1992 map, which has been adapted to serve as Figure 2 of this report. Figure 2 shows the subject property in its regional setting. In summary, the reviewed topographic maps reveal only minimal changes on the subject property during the past 98 years. Copies of the historical topographic maps are included in Appendix C.

1907

The subject property is mapped as primarily undeveloped land with one structure located in the southeast corner of the property. An unlabelled road, most likely the present day Russell Boulevard, borders the property to the north.



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1915

No changes are note on the 1915 map relative to 1907.

1952

By 1952, notable changes include the construction of Russell Boulevard to the north as a "secondary highway," Hutchison Drive has been mapped a "light duty" road along the southern property boundary, and Highway 113 is also mapped as a "light duty" road along the eastern boundary. Three structures are depicted in the southeast corner of the property. No other structures, wells or distinctive features are mapped on the subject property.

1968

No significant changes are noted on the subject property on the 1968 map. Highway 113 to the east is depicted as a "dual highway" with a median strip. Russell Boulevard to the north is depicted as a "dual highway" road. Orchards are mapped approximately 1500 feet west of the subject property. The University Airport is mapped approximately 3500 feet southwest of the subject property. The University of California is mapped east of the property beyond Highway 113.

1975

Highway 113 and its associated on-ramps/off-ramps and interchanges at Russell Boulevard and Hutchison Drive are mapped as "under construction" on the 1975 map. The barn-type structure and silos in the southeast corner of the property, as described in the aerial photograph section below, are shown on the 1975 map.

1981

By the 1981 mapping, Highway 113 and its associated on-ramps/off-ramps and interchanges at Russell Boulevard and Hutchison Drive have been constructed. The structures and silos in the southeast corner of the property are shown on the 1981 mapping. No other significant site features are noted.



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In summary, each of the reviewed topographic maps reveals that the subject property is located in a relatively flat area of Yolo County. No evidence was observed on the topographic maps to suggest that the subject property was disturbed by human activities typically mapped by the USGS, such as the following: quarrying; installation or removal of pits, ponds or lagoons; occurrences of dredging or subsurface or surface mining; construction of historical buildings; or, deposition of historically placed, *USGS topographically mappable* quantities of imported fill materials. The maps also reveal that the subject property has a surface elevation of approximately +55 feet mean sea level (MSL).

Aerial Photographic Review

We obtained historic aerial photographs of the subject property and general vicinity from EDR. Photographs covering the years 1957, 1965, 1974, 1984, 1993, and 1998 were available for review; the results of our photographic review are discussed below by year. Copies of the historical aerial photographs are included in Appendix D.

1957 Photograph Scale: 1"=555'

The subject property is primarily agricultural land as shown on the 1957 photograph. The property is divided into separate "plots" apparently used for different crop types. Two structures are visible in the southeast corner of the property. One structure, on the north side of Hutchison Drive resembles a barn and the other, smaller structure located on the south side of Hutchison Drive, resembles a small shed or similar barn. Highway 113 is visible to the east of the property. Across the northern property boundary, an east-west trending line of trees is visible along what is now referred to as Russell Boulevard. Hutchison Drive is visible along the southern side of the property.

1965 Photograph Scale: 1"=333'

The subject property is shown as agricultural land, similar to 1957. Within the separate plots are "subplots" of differing crop types. Many of the plots appear to be flood irrigated. On the west side of the barn structure five silos are visible. The number and location of these silos is



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consistent with their present day configuration. Unimproved roads provide access between the various different plots across the property.

1974 Photograph Scale: 1"=541'

By 1974, the subject property has changed little with respect to previous years. The agricultural plots are still visible and actively farmed. A residential neighborhood is visible to the north of the subject property beyond Russell Boulevard. The barn-type structure located in the southeast corner of the property is still visible along with five apparent silos immediately west of the barn-structure. Highway 113 has been constructed into a "dual highway" that parallels the eastern portion of the property. South of the barn area, construction is visible on what appears to be a highway interchange or "cloverleaf" related to Highway 113. Grading for an on-ramp/off-ramp between Russell Boulevard to the north and Hutchinson Drive to the south is visible along the eastern property boundary.

1984 Photograph Scale: 1"=690'

The subject property remains agricultural in 1984. The previously discussed plots are clearly visible in the 1984 photograph. The crops within each plot have changed relative to previous photographs. Construction of the Hutchison Drive interchange has been completed by 1984. Hutchison Drive has been routed south from its original location such that it was incorporated into the interchange. Surrounding residential development is evident north and northwest of the subject property.

1993 Photograph Scale: 1"=666'

No significant changes are noted on the 1993 aerial photograph relative to 1984. The subject property is being utilized for agricultural purposes with the distinct plots readily visible in the photograph. A copy of the 1993 aerial photograph is included in Figure 4.



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> 1998 Photograph Scale: 1"=666'

No significant changes are noted on the 1998 aerial photograph relative to 1984 with the exception that the structure located in the southeast corner adjacent to the five silos is no longer visible. The five silos are still visible. The subject property is being utilized for agricultural purposes with the distinct plots readily visible in the photograph.

Hydrogeologic and Soils Settings

Regional Groundwater

The subject property is located within the Sacramento River Hydrologic Basin, as defined by the California Department of Water Resources (DWR). Groundwater elevations in the vicinity of the property are estimated using depth-to-groundwater measurements taken at one DWR-monitored well (#8N/2E-17M1), located adjacent to the subject property.

Groundwater elevations measured in the well have fluctuated from a low of -16.9 feet MSL during the fall of 1977 to a high of +44 feet MSL during the spring of 1983. The ground surface of the subject property is approximately +55 feet MSL, as indicated on the USGS 7-1/2 Minute Series topographic map. The ground surface elevation at the monitored well is reported by DWR as +59 feet MSL. Therefore, groundwater in the property vicinity is estimated to have varied from approximately 15 feet to greater than 15 feet below the ground surface (for our calculations, we used the ground surface elevation at the DWR well location, since that is the source location of the groundwater elevations data).

Regional Geology

The subject property is located in the central portion of the Great Valley geomorphic province of California. The Great Valley lies between the mountains and foothills of the Sierra Nevada Range to the east and the California Coast Ranges to the west. The geologic formations of the Great Valley are typified by thick sequences of alluvial (river) sediments deposited during the filling of a large ancient basin. The 1981 CDMG Geologic Map of the Sacramento Quadrangles, California, shows the subject property to be partially underlain by quaternary levee and channel deposits and by basin deposits.



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Soil Survey

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Review of the U.S. Department of Agriculture, Soil Conservation Service (SCS) August 1990 Soil Survey of Yolo County, California indicate the near-surface soils on the subject property can include soil types from the Brentwood, Reiff, Yolo and Zamora series, as discussed below:

Brentwood Series

Brentwood silty clay loam (BrA): The Brentwood series consists of well-drained silty clay loams on alluvial fans. These soils formed in alluvium derived from sedimentary rocks. Brentwood soils are associated principally with Yolo and Zamora soils. In a typical profile, the surface layer is grayish-brown silty clay loam about 10 inches thick. The subsoil is grayish-brown heavy silty clay loam and silt loam about 25 inches thick. This is underlain by pale-brown silty clay loam that extends to a depth of more than 60 inches. Brentwood soils are used for irrigated orchards, row crops, forage crops, dry farmed small grain, wildlife habitat and recreation.

Reiff Series

Reiff very fine sandy loam (Ra): The Reiff series consists of well-drained very fine sandy loams ion alluvial fans. The soils formed in material weathered from sedimentary rocks. Reiff soils are associated principally with Yolo and Zamora soils. In a typical profile, the surface layer is grayish-brown very fine sandy loam and loam about 6 inches thick. It is underlain by grayish-brown and brown find sandy loam that extends to a depth of more than 60 inches. In some areas the profile is gravelly throughout. Reiff soils are used for orchards, irrigated row crops, and dry farmed grain.

Yolo Series

Yolo silt loam (Ya): The Yolo series consists of well-drained silt loams and silty clay loams on alluvial fans. Yolo soils are associated principally with Brentwood and Reiff soils. In atypical profile, the soil is grayish-brown to pale-brown silt loam and silty clay loam that extends to a depth of more than 60 inches. In some areas, the soil is silty clay loam throughout the profile.

Zamora Series

Zamora loam (Za): The Zamora series consists of well-drained loams on alluvial fans. These soils have a subsoil of clay loam. The soils formed in alluvium derived from



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sedimentary rocks. Zamora soils are associated principally with Brentwood and Rincon soils. In a typical profile, the surface layer is grayish-brown loam about 10 inches thick. The subsoil is brown clay loam about 30 inches thick. This is underlain by yellowish-brown loam and gravelly loam that extend to a depth of more than 60 inches.

Municipal Infrastructure

Provisions for a municipal water supply and sanitary sewer system do not currently exist on the subject property

Agency Database Review

We have reviewed databases obtained by Environmental Data Resources, Inc. (EDR) regarding hazardous materials handling or contamination on or near the subject property that are prepared by the following agencies:

- United States Environmental Protection Agency (EPA)
- California Environmental Protection Agency (Cal-EPA)
- Cal-EPA Department of Toxic Substances Control (DTSC)
- Cal-EPA Office of Environmental Health Hazard Assessment (OEHHA)
- Cal-EPA Regional Water Quality Control Board (RWQCB)
- Cal-EPA Integrated Waste Management Board (CIWMB)
- California State Water Resources Control Board (SWRCB)
- California Department of Health Services (DHS)
- Cal-DHS Office of Drinking Water (ODW)
- California Division of Oil and Gas (DOG)
- Yolo County Department of Agriculture.

EDR used the ASTM-designated search radii during review of the regulatory agency databases shown on Figure 5. In summary, WKA identified no confirmed state or federal "Superfund" sites on or within one mile of the subject property during review of the former DHS's Bond Expenditure Plan, the U.S. EPA's National Priorities List (NPL) and the Cal-EPA's Active Annual Workplan Sites list. No potential federal Superfund sites appeared on or within one-half



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December 15, 2005

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mile of the property during review of U.S. EPA's Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS).

Additionally, the subject property and adjacent land areas are not listed as Resource Conservation and Recovery Act (RCRA) Generators, nor does the property appear in U.S. EPA's Emergency Response Notification System (ERNS) database. No RCRA Treatment, Storage or Disposal (TSD) facilities are located on or within one-half mile of the property. The subject property itself is not listed on the reviewed databases.

State and County Databases

Review of various state and county databases using the ASTM search radii revealed no known contaminated municipal groundwater wells, active or inactive landfills located on, adjacent to, or within one-half mile of the subject property. The RWQCB Tank Tracking System and the Sutter County DOA UST Unauthorized Release List reveal no facilities located on or within one-half mile of the subject property that are known to have experienced unauthorized hazardous materials release(s), including leaky USTs.

California Division of Oil and Gas (DOG)

Review of the DOG maps revealed no DOG wells mapped within one-half mile of the subject property; no wells are mapped on or adjacent to the subject property.



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CONCLUSIONS

Our historic land use research, which included reviews of topographic maps, aerial photography and other historical archives, reveals that the subject property and vicinity have been used for agriculture for at least the past 50-plus years. The crop history is documented to the early 1950s, through aerial photography, and most likely occurred for a number of years prior to that time. Since the early 1950s, the subject property has been utilized for agriculture research by the University of California, Davis (UC Davis).

Concerning the agricultural history of the subject property, irrigated rowcrop-cultivated surficial soils can become contaminated with hazardous materials as a result of the application of agricultural chemicals. Certain organochlorine pesticides, DDT for example, are extremely persistent in the environment and residual pesticide concentrations in surface soils are consequently a possible contaminant on former or existing agricultural sites. The California Department of Toxic Substances Control has concluded that DDT and its degradation compounds are ubiquitous in agricultural soils of California. According to information presented in the UC Davis Phase 1A prepared in September 2003, a wide variety of pesticides may have been applied to the subject property as part of the University's crop research program on the subject property.

In addition, five-grain silos are presently located on the property that reportedly may at one time have stored pesticides and/or fertilizers. In July 1995, approximately 6,000 pounds of "material" were removed from the silos by the UC Davis EH&S under an amnesty chemical cleanup program.

Given the historical agricultural use of the property and the reported application of pesticides and/or fertilizers to the property, WKA recommends a Phase 2 soil sampling investigation of the agricultural plots on the property in addition to the areas around the five-grain silos. Recommendations presented in the UC Davis Phase 1A report detailed collection of composite samples from the property for a "broad-spectrum chemical analysis" in order to target any possible category of pesticide present. To this end WKA recommends the following:

- Collection of one 4-point composite sample per each 25-acres (collect 32 discrete samples and composite into 9 for analysis)
- Collection of four background samples to five fee below ground surface



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- Collect discrete samples in the vicinity of the grain silos (estimate 5-7 samples)
- Analyze soil samples for Organochlorine Pesticides, Organophosphate Pesticides, and CAM 17 metals

If the sample results reveal elevated levels of chemicals, a more defined sampling program would be implemented.

The subject property has no known history of having contained underground fuel tanks, sumps, oil/water separators, farm equipment maintenance areas, agricultural chemical mixing facilities or any other features of an obvious hazardous materials nature. WKA identified no known regional hazardous material impairments to groundwater quality beneath or within one-half mile of the subject property. Based on these findings, WKA does not believe that additional assessment of the subject property with respect to groundwater quality is necessary.

As stated in the body of this report, the subject property contains at least two water supply wells and associated underground irrigation piping. If the wells will cease to be utilized in the future, then they will need to be properly abandoned under permit issued by Yolo County.

In summary, WKA has performed a Phase 1 Environmental Site Assessment in conformance with the scope and limitations of ASTM Standard Practice E 1527-00 for the UCD West Village Property located in Davis, California. This Assessment has revealed no evidence of Recognized Environmental Conditions in connection with the subject property with the exception of the apparent historical spillage of pesticides and/or fertilizers in and around the five metal grain silos. Further testing and investigation of this area, along with a Phase 2 soil-sampling program is recommended for the agricultural plots of the subject property.



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LIMITATIONS

The statements and conclusions in this report are based upon the scope of work described above and on observations made only on the dates of our field reconnaissance and field sampling. Work was performed using a degree of skill consistent with that of competent environmental consulting firms performing similar work in the area. Information regarding the property that is *publicly available* and *practically reviewable*, as described in the ASTM standard was obtained. Additional research or receipt of information regarding the property that was not disclosed or available to us during our assessment may result in revision of our conclusions.

The conclusions in this report should be reevaluated if site conditions change. No recommendation is made as to the suitability of the property for any purpose. The results of our assessment do not preclude the possibility that materials currently or in the future defined as hazardous are present on the property, nor do the results of our work guarantee the potability of groundwater beneath the property. This report is applicable only to the investigated property and should not be used for any other property. No warranty is expressed or implied.

Wallace • Kuhl & Associates, Inc.

Randy L. Wheeler

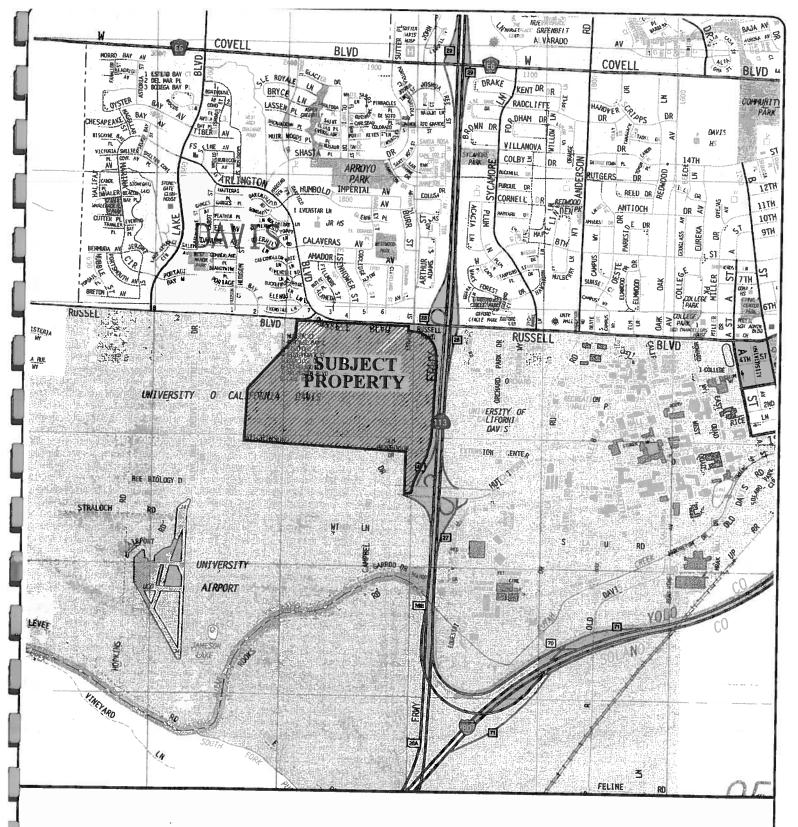
Senior Environmental Specialist

REA I No. 07916

RLW

N:/Dept7/6915.01 UCD West Village ESA





Adapted from the Thomas Guide Sacramento and Solano Counties Street Guide and Directory, 2005 edition.



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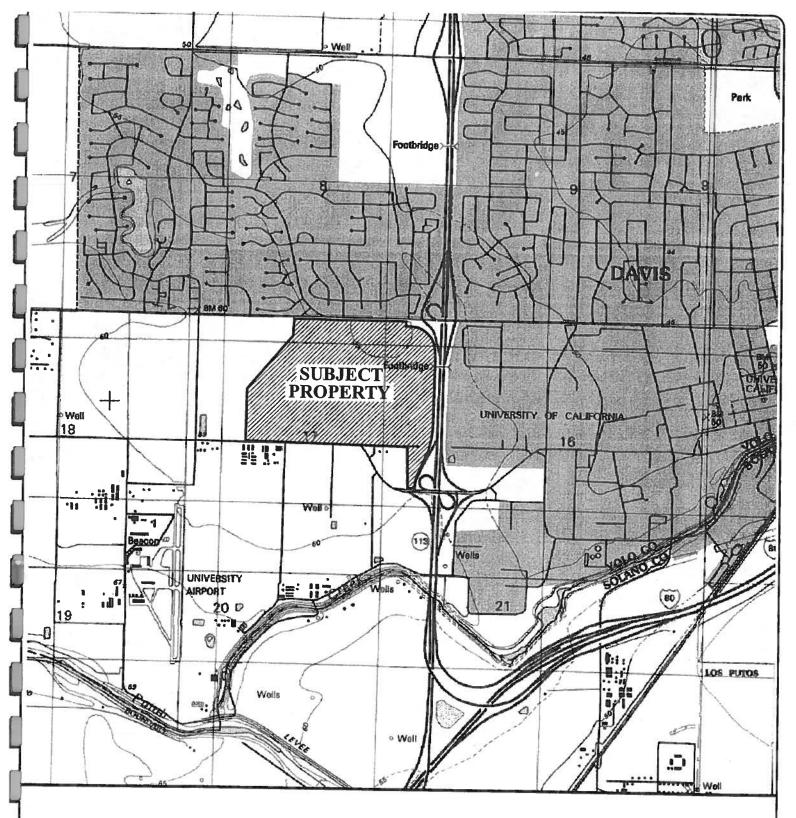
VICINITY MAP

UCD WEST VILLAGE

HUTCHISON DRIVE & HWY 113

Davis, California

FIGUE	RE 1
DRAWN BY	TLH
CHECKED BY	RLW
PROJECT MGR	RLW
DATE	12/05
WK A NO	6015.01



Adapted from the U.S. Geological Survey 7.5 minute topographic map of the Merritt quadrangle, California, 1992.



1000 2000 SCALE IN FEET

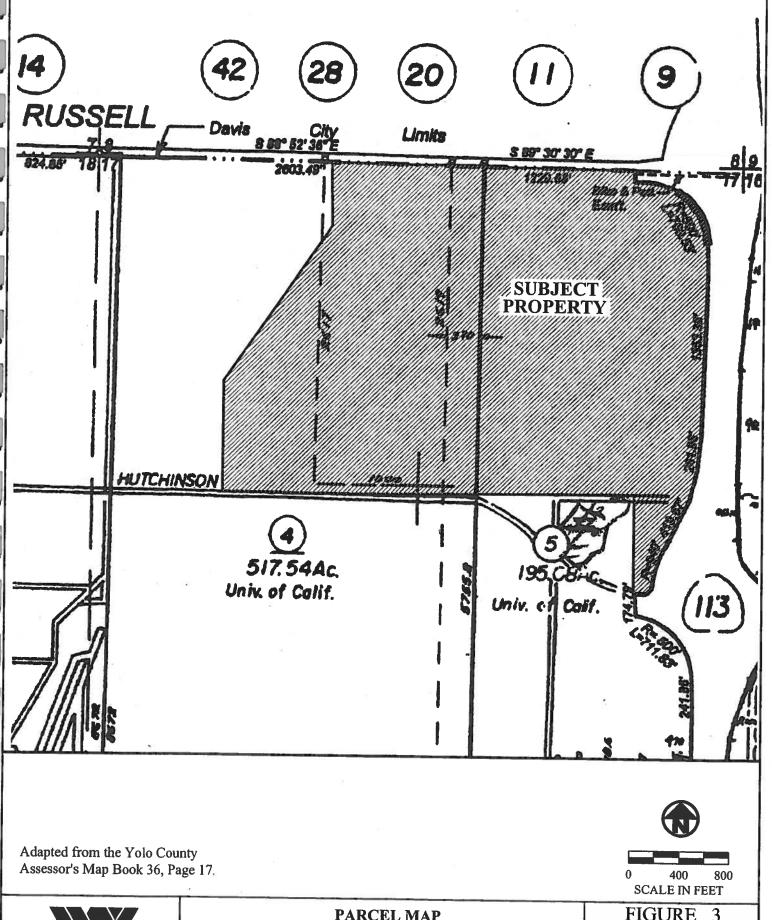


TOPOGRAPHICAL MAP

UCD WEST VILLAGE HUTCHISON DRIVE & HWY 113 Davis, California

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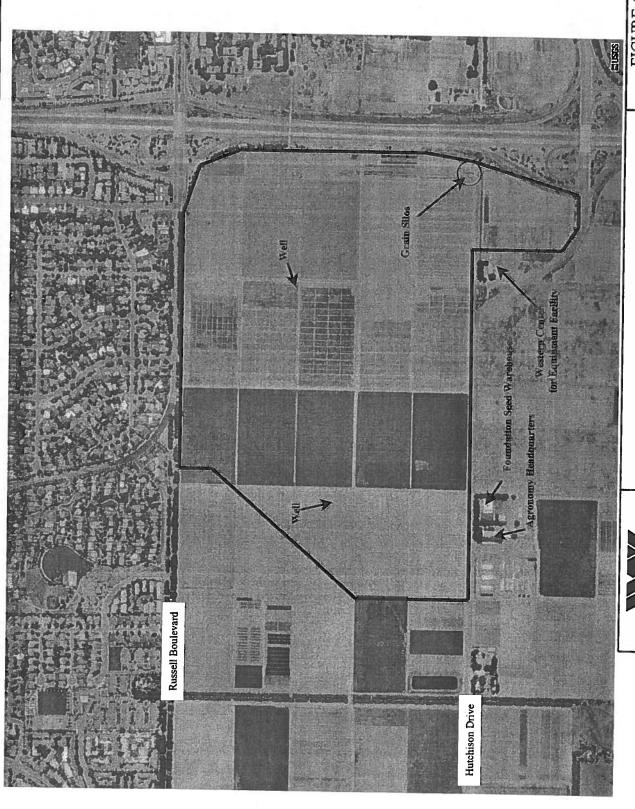
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CHECKED BY	RLW
PROJECT MGR	RLW
DATE	12/05
WKA NO.	6915.01



WALLACE-KUHL & ASSOCIATES, INC.

PARCEL MAP
UCD WEST VILLAGE
HUTCHISON DRIVE & HWY 113
Davis, California

FIGU	RE 3
DRAWN BY	TLH
CHECKED BY	RLW
PROJECT MGR	RLW
DATE -	12/05
WKA NO.	6915.01



1993 AERIAL PHOTOGRAPH UCD WEST VILLAGE PROPERT Davis, California

WALLACE-KUHL & ASSOCIATES, INC.

Source: USGS terraserver photograph.

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3338

WKA NO. 6915.01

RANKED SOLID WASTE DISPOSAL LIST (SWRCB) Solid Waste Assessment Test (SWAT) Program

None Listed

GEOTRACKER'S LEAKING UNDERGROUND FUEL TANK REPORT (LUST) (SWRCB)

None Listed

CA BOND EXPENDITURE PLAN (DHS)

None Listed

ACTIVE UST FACILITIES (SWRCB)

None Listed

SPILLS, LEAKS, INVESTIGATIONS & CLEANUPS LIST (SLIC -RWQCB)

None Listed

HAZARDOUS WASTE INFORMATION SYSTEM - HAZNET (CAL-EPA)

[Manifest-derived Information]

None Listed

CALIFORNIA DIVISION OF OIL AND GAS (DOG)

(Map Published August 8, 2001)

No wells listed

YOLO COUNTY TOXISITE UNDERGROUND STORAGE TANK COMPREHENSIVE FACILITY REPORT**

None Listed

NOTES: The ASTM-required search radius for NPL, Bond Expenditure, and Active Annual Workplan sites is one mile from the subject property; it is one-half mile for CERCLIS, TSD and for most other facilities; and, the search radius for RCRA Large and Small Generators and HAZNET is the subject and adjacent properties.

Facilities listed include sites where unauthorized hazardous materials release(s) are known to have occurred. The ASTM-required search radius for these sites is one-half mile.

Facilities listed include sites where underground storage tanks are registered as present or registered as removed. The ASTM-required search radius for these sites is one-quarter mile.



AGENCY LISTS
UCD WEST VILLAGE PROPERTY
Davis, California

FIGURE	5
DRAWN BY	RLW
CHECKED BY	RLW
PROJECT MGR	RLW
DATE	12/05
WKA NO. 691	5.01

FEDERAL ASTM STANDARD RECORDS

NATIONAL PRIORITIES LIST (EPA)

None Listed

CERCLIS LIST (EPA)

None Listed

FEDERAL RESOURCE CONSERVATION AND RECOVERY ACT INFO (RCRA) [TSD Facilities and RCRA Generators]

None Listed

EMERGENCY RESPONSE NOTIFICATION SYSTEM (ERNS-EPA)

None Listed

STATE OF CALIFORNIA ASTM STANDARD RECORDS

ACTIVE ANNUAL WORKPLAN SITES, FY 2002-2003 (DTSC)

None Listed

CALSITES DATABASE (DTSC)

None Listed

"CORTESE" HAZARDOUS WASTE AND SUBSTANCES SITES LIST

None Listed
TOXIC PITS CLEANUP ACT (SWRCB)

None Listed

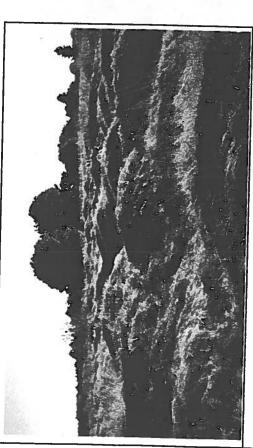
SOLID WASTE INFORMATION SYSTEM (SWIS) (CIWMB) Closed and Inactive Sites

None Listed

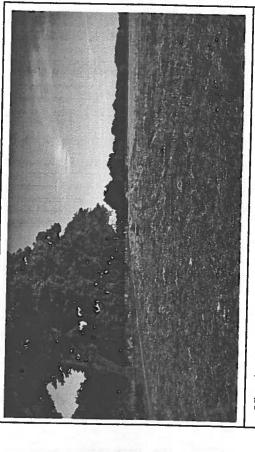


AGENCY LISTS
UCD WEST VILLAGE PROPERTY
Davis, California

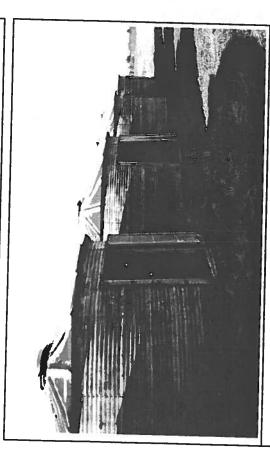
FIGUR	E 5
DRAWN BY	RLW
CHECKED BY	RLW
PROJECT MGR	RLW
DATE	12/05
WKA NO. 69	915.01



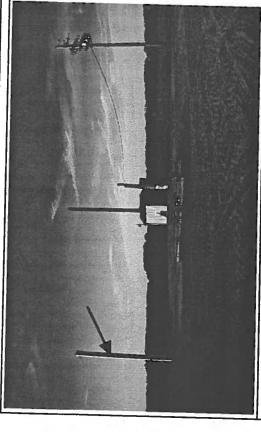
View of the "end dump" piles in the southeast corner of the property northeast of the Western Center for Equipment.



View looking east along the northern property boundary. View is along Russell Boulevard.



Photograph of the abandoned grain silos in the southeast comer of the property.



View of one of two on-site irrigation water supply wells. The white column feature on the left is an abandoned aphid trap (arrow).

WALLACE-KUHL & ASSOCIATES, INC.

FI	FIGURE 6	
DRAWN BY	_	RLW
CHECKED BY	Y	RLW
PROJECT MGR	3R	RLW
DATE		12/05
WKA NO	NO 6915 01	10

APPENDIX A

September 24, 2003 UC Davis Office of Environmental Health and Safety Phase 1A Report, Neighborhood Development Plan Project (~225 acres)

September 24, 2003

Sarah Mattern, Associate Environmental Planner Resource Management and Planning

RE: Neighborhood Development Plan Project (~225 acres)

As requested by your office, an investigation was conducted on the proposed Neighborhood Development Project. The project area investigated is shown on the attached map. The purpose our investigation was to complete a Phase1A Preliminary Site Assessment as part of the due diligence process and identify any environmental issues that might impact the project. The proposed project covers approximately 225 acres of agricultural land located west of Highway 113, north of Hutchison, and south of Russell Boulevard, UC Davis west campus area.

Site Description and Use

The subject site has been used for agriculture since at least the early 1900's. Prior to this, the land could have been in its native condition as a floodplain area adjacent to the Putah Creek riparian corridor. The land was formally known as the Campbell Tract and was acquired by the University in approximately 1951. From aerial photos, it is apparent that prior to the University's acquisition, the land was strictly used for agricultural purposes. The entire site is considered to possess Class I agricultural soils by the USDA and can include soil types from the Brentwood, Reiff, Yolo, and Zamora series.

The site is currently used for agriculture by the University and is divided into 7 main plots designated as, "E3B, E3C, E3D, E3E, E3F, E3G and E7". Plots B, C and D are divided into five 10-acres subplots while Plot E is divided into three 10-acre subplots. Plots F, G and E7 are not divided into subplots.

The Department of Agronomy operates plots B through E. Foundation Plant Materials operates Plot F and the Department of Agricultural Engineering operates plots G and E7. Over the years, departmental assignments have varied slightly. For example, the Vegetable Crops Department has in the past operated Plots G and E7, while Agronomy has operated all of the plots except E7. The Agricultural Engineering Department acquired Plots G and E7 about 5 years ago.

The project site is minimally developed. Irrigation well E3B (constructed prior to 1952) is located in the west half of the site and irrigation well E3D (1972) is located in the east half. Both well pumps are powered via electricity. A tall white column adjacent to E3B represents an abandoned "aphid trap" for collecting insects. An underground concrete-pipe irrigation system is connected to the wells and to a detention pond located southwest of the site. The detention pond is fed with Lake Berryessa water, which serves as the primary irrigation water source, while the wells serve as a backup source. A portable linear-move irrigation system is located just north of the Western Center for Equipment facility. The irrigator is powered by a diesel-fueled motor, a 200-gallon fuel tank (which sits on the motorized frame), and hydraulic lines that power the unit's

wheels. Five abandoned grain-silos are located in the southeast corner of the site along with an abandoned grain combine. From the aerial photos, it appears that a barn was located just east of the silos, but was then removed in the mid-80's. A second but smaller barn was located just south of the first barn (and south of Hutchison Drive) but appears to have been removed when Highway 113 was improved.

Findings

During the course of this assessment and from discussions with several University departments, two items of concern were identified.

1) The subject site has been used intensively for general agricultural purposes since at least the early 1900's. Although 100% pesticide use reporting was not required until 1990, University departments operating the plots did keep records prior to 1990, with the earliest use logs that could be found were dated 1978. Apparently there are no University records previous to 1978 and there is no information prior to University ownership. Use logs since 1978 indicated that a wide range of materials was applied. According to the University departments, experimental pesticides were very rarely used, if at all, on the subject site. Only crop experiments were conducted, with registered chemicals used for crop maintenance purposes (if registration was required at the time of use). Typically, work with experimental pesticides occurs in a more controlled laboratory setting or greenhouse. There was one instance of an unregistered pesticide that was applied to seeds, which were then planted in the field by the department of Agronomy. In this case, the amount of material used was very minimal.

Typical degradation half-lives of the substances applied ranged from 10 to 90 days. There was one record of a Diquat application adjacent to the western site boundary in 1990. Diquat has a half-live of 1,000 days. Using a standard of 12 half-lives to approximate zero, this would equate to approximately 33 years for the material to completely dissipate. By comparison, DDT has a half-life of 2,000 days (66 years). More persistent type chemicals could have been used prior to 1978, with half-lives ranging from 350-2,000 days (12-66 years).

Information on historical fertilizer use by the University also dates back to no earlier than 1978 with records even less detailed than for the pesticides. Again, there is no information regarding fertilizer use prior to University ownership. Some fertilizers may have contained heavy metals as a by-product of their manufacturing process. Unlike most pesticides, any metals would have undergone little biodegradation and instead would have accumulated in the soil.

2) The five grain-silos located in the southeast corner of the site were constructed to store cereal grains, however more recently they were also used to store fertilizers and pesticides for an unknown disclosed amount of time. Many of the chemicals were not being used and storage conditions were not being maintained. Exact ownership of the chemicals was also unknown. In July 1995, EH&S organized an amnesty chemical cleanup program for the entire west campus area. During this event, materials within the silos were removed under a hazardous waste manifest dated 7/13/95. Approximately

15,100 pounds of material was removed from the west campus, with about 40% of this from the five silos. It is not known exactly what materials were stored in each silo as the manifest only listed chemicals removed from the entire west campus and was not silo specific. During the site visit, it was noted that the silos do have a concrete floor though it was only 1-2" thick and broken through in some places. The second silo from the south end had a strong sulfur/nitrate odor inside. The inside of the two most northern silos could not be observed. No signs of plant growth distress were observed outside the silos, however, a reddish-brown powder (resembling bone meal fertilizer) was observed on the ground between the 2nd and 3rd silo from the south end.

Conclusion

1) Field Plots Area: This office recommends soil sampling all plots within the subject site for pesticides and heavy metals. A broad-spectrum chemical analysis will be selected in order to target any possible category of pesticide present. One, 4-point composite sample per 20-40 acres is recommended in the general field area, while one, 4point composite sample per 2-5 acres is recommended adjacent to where documented Diquat applications have occurred. If the initial sample results reveal elevated levels of chemicals, a more defined sampling program could be implemented.

2) Grain-Silo Area: Recommend two or three, 4-point composite samples within the silos and two, 4-point composite samples outside the silos for pesticides, heavy metals and arsenic. Again, a broad-spectrum chemical analysis will be selected in order to target any possible category of pesticide present. Also recommend one soil sample for

lead to be taken directly underneath the grain combine.

With your approval, this office can carry out these actions. Prior to sampling, additional discussion with the appropriate University departments would be needed to coordinate a detailed sampling plan. Sampling results would then be evaluated and compared, if needed, to regulatory levels consistent with the future intended use of the property. Enclosed is the Preliminary Site Assessment, Phase 1A Checklist and site map that was completed for the subject site. If you have any questions regarding the above, please contact me at 754-5267.

> Daniel Kermoyan, CPSS, REA Safety Advisor, EH&S

Enclosure: Phase 1A checklist, Site map Cc.: Carl Foreman, EH&S Director

PRELIMINARY SITE ASSESSMENT

PHASE 1A

I. GENERAL INFORMATION

1. SITE OWNER

A. NAME:

Regents, University of California

B. ADDRESS:

300 Lakeside Drive

Oakland, CA 94612

C. PHONE:

(510) 987-0700

D. DATE OF OWNERSHIP: ~1951

2. SITE LOCATION

A. SITE NAME: Neighborhood Development Plan Project (~225 acres)

B. ADDRESS: West of 113, north of Hutchison and south of Russell Boulevard, UC Davis West Campus

C. COUNTY: Yolo County

D. ASSESSOR'S PARCEL NUMBER: 036-170-04 and 036-170-05

3. SITE DESCRIPTION SUMMARY

A. NATURAL FEATURES

a. Topography

The natural topography of the subject property is relatively flat. The landform could have once been a flood plain and/or stream terrace. The site is located north of Putah Creek and has been influenced in the past with the deposition of alluvial materials.

b. Hydrogeological Conditions (soil type; probable gradient)

The surface soil consists of a very fine sandy loam to silt loam. The subsurface profile probably consists of silty clay loam textures with coarser grained alluvial materials in certain locations. The entire subject site is considered to possess Class I agricultural soils by the USDA and can include soil types from the Brentwood, Reiff, Yolo, and Zamora series. Groundwater is expected to be within 30 to 35 feet below surface grade, with a probable gradient direction to the east - northeast.

B. EXTENT OF EXISTING DEVELOPMENT

The subject site consists of class I agricultural soils that are currently used by Agronomy, Foundation Plant Materials, and the Agricultural Engineering departments. Row crops occupy over 98% of the area, with some limited plantings of trees and vines to the east. Two agricultural wells (E3B & E3D) serve as a backup irrigation water source to Lake Berryessa water that is stored in a detention pond to the west. An abandoned "aphid trap" stands adjacent to well E3B. Subsurface irrigation pipes and some field fencing traverse the property. There is also a linear move irrigation unit and 5 abandoned grain silos located north of the Western Center for Equipment facility. The site is divided into seven main plots designated from west to east as, "E3B, E3C, E3D, E3E, E3F, E3G and E7", with E7 being located south of E3G. The plots (with the exception of 3F, 3G and E7) are divided into 10-acre subplots, numbered from north to south as "1 - 5". Gravel and dirt access drives separate each of the seven main plots.

C. HISTORICAL USE OF PROPERTY

- BARE OR UNIMPROVED LAND	YES XXX	NO
- AGRICULTURAL	YES XXX	
- INDUSTRIAL - RESIDENTIAL	YES	NO \overline{XXX}
- RESIDENTIAL	YES	NO XXX

D. AERIAL PHOTO INTERPRETATION

1937: Agricultural land and Russell Boulevard lined with trees (aka. Campbell Tract)

1952: Same as 1937 but with two small structures (probably barns) located in the southeast corner

1957: Same as 1952

1964: Agricultural land; Five grain silos in southeast corner now present, the 2 barns in southeast corner still present; Agronomy Field Lab to the south now present.

1971: Same as 1964 except construction now beginning just west of the Agronomy Field Lab.

1984: Same as 71' except well E3D present and area around Agronomy Field Lab is developed.

1987: Same as 1984 except small barns in the southeast corner are no longer seen.

1991: As present today except the Western Center for Equipment and fill dirt piles not present. 2001: As present today with fill dirt piles present east of Western Center for Equipment facility.

E. ADJACENT LAND USE

North: Russell Boulevard and residential/commercial development

South: Hutchison Drive and campus agricultural research fields

East: State Highway 113 and the Core Campus area

West: Olive Tree Lane and Dept. of Agronomy agricultural research fields

4. REVIEW HIGH RISK LAND USE LIST {SEE APPENDIX I}

A. IDENTIFIED ALL LAND USES, INDICATED BY LIST NUMBERS None identified

5. SITE VISIT

A. REVIEW RED FLAG ITEMS LIST {SEE APPENDIX 2}

#3: Suspect spillage of a probable fertilizer between the 2nd & 3rd grain-silos from the south end.

#6: Strong nitrate/sulfur fertilizer odor in 2nd grain-silo from the south end.

6. REGULATORY AGENCIES CONTACTED -- Not Deemed Appropriate

7. SITE LAYOUT INFORMATION (see attached Plot Map of Site)

- A. Approximate Property Boundaries: See attached site map of the subject site. The site is divided into 7 main parcels (E3B, E3C, E3D, E3E, E3F, E3G, and E7). The site is bounded by Highway 113, Russell Blvd., and Hutchison Drive.
- B. Building and Parking Area Locations: N/A
- C. Site Utilities: The site will be served by campus utilities, which includes domestic, utility, and industrial water, sanitary sewer, telephone, electrical, etc.
- D. Easements: None apparent
- E. Fencing: Exists along the north, east, and southern boundaries with some interior fencing
- F. High Voltage Power Lines: Overhead lines present along the southern edge and along the boundary between plots E-3D and E-3E
- G. Ponds and Flood plains: N/A
- H. Streams: N/A
- I. Marshes or Wetlands including any evidence of fill material: N/A
- J. Wells: Agricultural irrigation wells E3B (constructed prior to 1952) and E3D (constructed in 1972)

8. ADDITIONAL DOCUMENTS REVIEWED

A. AERIAL PHOTOS:

YES XXX

NO _

B. TITLE REPORT:

YES ___

NO XXX

C. HOLDSTOCK STUDY:

YES XXX

NO

9. IDENTIFICATION OF INDIVIDUAL CONDUCTING SITE INVESTIGATION:

Name: Daniel Kermoyan, CPSS, REA

Title: Environmental Health and Safety Advisor

Address/Affiliation: UC Davis, Environmental Health & Safety

Davis, CA 95616

(530) 754-5267

II. RESIDENTIAL PROPERTY

SECTION NOT USED

III. AGRICULTURAL PROPERTY

SEE ATTACHED

IV. COMMERCIAL PROPERTY

SECTION NOT USED

V. CAMPUS PROPERTY

SECTION NOT USED

LIMITATIONS: The contents of this Phase I report are based on review of University and publicly available records and limited site reconnaissance. The University makes no warranty that the records reviewed were accurate or complete, or that all records pertaining to the subject property were reviewed. Conclusions and recommendations expressed in this report are based on the University's understanding of current practices and interpretation of current regulatory standards and should not be construed as legal opinions. Conclusions are based on information that was reasonably ascertainable and conditions that were readily observable at the time of this report. There may be hidden subsurface conditions or other environmental or physical conditions not readily obvious through visual inspection that may impact the subject property. No sampling of any building materials, soils, air, or water was performed as part of this investigation.

PH1Neighboorhood Plan.doc

III. AGRICULTURAL PROPERTY

I. GENERAL INFORMATION			
A. CURRENTLY IN USE:	YES <u>XXX</u> No	10g	
B. OWNER OPERATED:		or LEASED/RENTE	250
C. INACTIVE PROPERTY:	YES NO		:D
D. RESIDENTIAL STRUCTO			
a. FAMILY HOMES - NUMBER	OF UNITS ON PRO	PERTY <u>NONE</u>	
 ACM Siding/C Asbestos Shing Lead Paint? Any Remodelin UFFI (Foamed in the company) 	gles/Flooring?	YESNO YESNO YESNO YESNO	
b. FARM LABOR HC - NUMBER C	DUSING DF UNITS ON PRO	PERTY NONE	-
a. ACM Siding/Ceb. Asbestos Shinglec. Lead Paint?	les/Flooring?	YESNO YESNO	_
d. Any RemodelinUFFI (Foamed in	g? 1-place '70s)	YES NO NO NO	-
c. WATER SUPPLY			-
(2) SURFACE spring	diich creek	IRRIGATION XXX D UNTREATED XX other XXX (Lake Berrye ic utility city county _	<u>X</u>
d. WASTE DISPOSAL		,	_
- SEPTIC TAN	K <u>NONE</u> SANITA	RY SEWER <u>NONE</u>	
PERATIONS			
A. PESTICIDE STORAGE SITE	(S): YES PREVI	OUSLY NO NOT CURRE	Th frank was

2.

EVIOUSLY NO NOT CURRENTLY LOCATION(S) ON PROPERTY: Previously storage occurred near the southeast corner, north of Hutchison Drive, in abandoned grain-silos.

B. FUELING STATIONS YESNO XXX	
a: UNDERGROUND STORAGE TANK SIZE {GALLONS} INSTALLATION DATE	
INSTALLATION DATE	
SINGLE WALL DOUBLE WALL	
DOOBLE WALL	
 ABOVE GROUND STORAGE TANK 	
SIZE {GALLONS}INSTALLATION DATE	
INSTALLATION DATE	
SINGLE WALL DOUBLE WALL EVIDENCE SPILLAGE: YES NO	
EVIDENCE SPILLAGE: VES NO	
EXTENT OF SPILLAGE { FT. YARDS, ETC. }	
The of Stillerge (FI. TARDS, ETC.)	
	_
C. MAINTENANCE SHOP	_
a. LUBE RACK YES NO XXX	
above ground pit type	
b. WASTE OIL STORAGE AREA YES NO XXX	
Location	
	_
	-
c. PARTS CLEANING SET-UP YES NO XXX	
vendor serviced self-service	
D. IRRIGATION SYSTEM	
- TOTAL TOTAL EN	
a. NUMBER OF WELLS ON PROPERTY TWO	
1. Year drilled (completion data) F3D (1962)	
1. year drilled {completion date} E3B (<1952) AND E3D (1972) 2. gravel packed yes no	<u>?)</u>
3. sanitary seal yesno	
4. depth <u>250' AND 455'</u>	
5. diameter	
6. pump type	
- horse power	
- operational yes XX no	
about the last way 110	

PHASE 1 PRELIMINARY SITE ASSESSMENT

HIGH RISK LAND USES

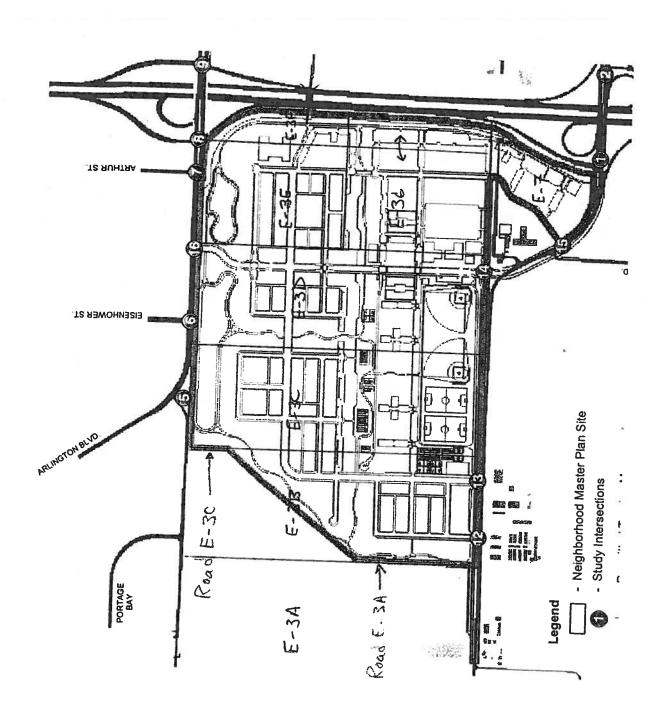
- 1. Landfills dumps demolition or dredge spoils disposal sites
- 2. Oil refineries well fields tank farms
- 3. Metal plating/coatings
- 4. Metalworking: foundries welding machining fabrication (esp. aluminum)
- 5. Auto truck tractor railroad motor maintenance and repair shops
- 6. Transportation depots: bus truck railroad terminals or yards
- 7. Chemical or pharmaceutical manufactures
- 8. High tech firms: electronics electrical computer semiconductor
- 9. Gasoline stations heating oil businesses
- Dry cleaners laundries
- 11. Salvage scrap or waste dealers/lots junkyards recyclers
- 12. Laboratories: photo chemical research medical etc.
- 13. Equipment construction corporation staging yards (public or private)
- 14. Utility company facilities (gas electric power plants, storage yards, etc.)
- 15. Lumber yards sawmills wood preserving/processing paper companies
- 16. Paint manufactures distributors contractors warehouses
- 17. Military facilities or gov't. surplus property (any type current or prior)
- 18. Airports airfields crop dusting operations
- 19. Battery manufacturers/recyclers
- 20. Concrete products fabricators cement processing operations
- 21. Nurseries or agricultural operations (esp. feedlots and spraying services)
- 22. Pesticide/herbicide fertilizer formulators or applicators or exterminators (pest control or lawn care)
- 23. Food processing packing cold storage facilities
- 24. Rendering/tallow operations tanneries
- 25. Drum or barrel manufacturers or distributors
- 26. Printing shops
- 27. Asphalt plants
- 28. Fiberglass or glass product manufacturers bottling companies
- 29. Plastic products manufacturers
- 30. Rubber or tire products manufacturers
- 31. Mines or sand and gravel quarries or pits
- 32. Sewage treatment or handling facilities (public or private)
- 33. Fence companies
- 34. Hospitals
- 35. Incinerator sites
- 36. Industrial parks
- 37. Labor camps (any type of state or federal also private agricultural)
- 38. Explosives ordnance operations
- 39. Penitentiaries

Note: This list of industries was compiled from regulatory agency lists of known toxic sites. The list generally is in the order of more common industries with the highest incidence of contamination to the more specialized industries, which frequently have toxics problems

PHASE 1 PRELIMINARY SITE ASSESSMENT

"RED FLAG" ITEMS

- 1. Dead, dying or unhealthy vegetation (possible soil/water contamination)
- 2. Soil or pavement stains/discoloration (from spills or dumping)
- 3. Any obvious signs of spillage or residues on property or in buildings
- 4. Piles of waste or trash or unidentified mounds (what's buried?)
- 5. Insulation (thermal acoustical electrical may contain asbestos <a>(< 1980))
- 6. Odors (especially solvents)
- 7. Unidentified truck tracks on open lots (possible illegal dumping?)
- 8. Is property adjacent to a dump/landfill, known hazardous waste site or high-risk industries? (Agency lists of waste sites are available)
- 9. Wells (any caps or covers? may be permitted)
- 10. Wastewater systems (septic tanks, gray water systems, leaching fields, sumps, dry wells; i.e. any systems not connected to city sewer, especially if industrial site)
- 11. Drums or any other chemical storage or handling areas
- 12. Maintenance areas (shops or auto/truck repair operations)
- 13. Ponds, lagoons, or unidentified pits and depressions
- 14. Underground tanks (any caps or fill connections or vent pipes?)
- 15. Transformers (or other electrical equipment ≤ 1978 may have PCBs)



APPENDIX B

Yolo County Department of Agriculture Pesticide Use Reports 2001 through 2005 Mortanol

	AMT USED		2.5 LB	3 LB	107	7 07	707	1 02	1 0 4	107	1 02	1 0Z			2 QT		0 6 7 0	12 PT	7 PT	10 PT	10 PT	10 PT	10 PT	10 PT	10 PT	5 PT	o 6	0 A	10 0	40 OZ	2.43 FI	2.23 P.I	2 FB	2 LB	2 LB	11.67 PT	2.8 GA
ACRES PESTICIDE		-						0.25 A MALLY 40W AGRICULTURAL FUNGICIDE IN WATE		0.25 A ORRIT	₹	< <	(1 A ROUNDUP ULTRA HERBICIDE	•		3 A RIVERDALE MCPA-4 AMINE	7 A TRIAP 4HF	10 A TRIAD ALIC	•	•	•	ά	<	4	ď	⋖・	∢ ∢	∢ •			0.5 A ZIPALL OLTRAMAX HERBICIDE	0.23 A ZIRAM /6 WDG	. ∢		7 A DUAL MAGNUM HERBICIDE 10.5 A DEVRING 2-E SEI ECTIVIT ILLES	TO SELECTIVE HERBICIDE
SITE DATE APPL CROP			G 2/14/2005 NECTABINE		3/21/200		4/13/200	4/23/200	5/18/200			o 0/24/2005 NECTARINE 7/6/2005 NECTARINE	4/12/2004 CBABE		2/11/2003 OAT	2/11/2003	3/31/2003	-					4/7/2003 SAFFLOWER	4/7/2003 SAFFLOWER	4/3/2003 SAFFLOWER			2/11/2003 WHEAT				2/11/2003 PEACH	2/11/2003 PEACH	2/11/2003 PEACH	5/24/2002 COBN EOD (CO.)	5/23/2002 TOMATO PROCESS	
SIT 2005	2007	990	090 Dec	D90	99C	DeG	DeG	DeG	D90	1900 1900 1900 1900 1900 1900 1900 190	200 C		ZUU4 CES A6	2003	_		_	_	_	2 2			_	0.2	870_		B2	B2	B2	B 2	ES A6			2002 2002	75 A1	A1	
PERMITTEE	UCD-POMOLOGY	UCD-POMOLOGY	UCD-POMOLOGY	UCD-POMOLOGY	UCD-POMOLOGY	UCD-POMOI ORY	UCD-POMOI OGY	UCD-POMOLOGY	UCD-POMOLOGY	UCD-POMOLOGY	UCD-POMOLOGY	UCD-POMOLOGY	2007 UCD-FOUNDATION PLANT SERVICES		LICE AGBON & RANGE SCI (FIELD)	UCD-AGBON & RANGE SCI (FIELD)	UCD-AGRON & BANGE SCI (FIELD)	UCD-AGRON & RANGE SCI (FIELD	UCD-AGRON & RANGE SCI (FIELD)	JCD ACBON & RANGE SCI (FIELD)	CCD-AGROIN & RANGE SCI (I.A.C.T	UCD FOLIVIDATION & RANGE SCI (I.A.C.T	11CD FOLINGATION PLANT SERVICES	UCD-FOUNDATION PLANT SERVICES	UCD-FOUNDATION PLANT SERVICES	SCHOOL SERVICE	UCD-AGRON & RANGE SCI (I.A.C.T	UCD-AGRON & RANGE SCI (I.A.C.T									

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AMT USED 6.3 OZ 6.3 OZ 2 GA 300 LB 0.1 GA 0.4 GA 0.5 FT 0.7 GA 0.7 GA 0.8 GA 0.8 GA 0.9 GA 0.	10 PT 10 PT 10 PT 10 PT 2 QT 1 QT 1 QT 2 LB 2 QT 2 QT 2 QT
ACRES PESTICIDE 10.5 A DU PONT MATRIX HERBICIDE 5 A WILBUR-ELLIS DIMETHOATE 267 5 A BRAVO 500 7.5 A WILBUR-ELLIS BEN-SUL 85 1 A ROUNDUP ULTRAMAX HERBICIDE 5 A GOAL 2XL HERBICIDE 5 A GOAL 2XL HERBICIDE 6 A WILBUR-ELLIS DIMETHOATE 267 6 A DU PONT ASANA XL INSECTICIDE 8.5 A WILBUR-ELLIS BEN-SUL 85 5 A WILBUR-ELLIS BEN-SUL 85 6 A SUPREME OIL 6.25 A KOCIDE DF 6.25 A KOCIDE DF 6.25 A CLEAN CROP DIAZINON 50 WP 6.25 A SUPREME OIL 6.25 A ROUNDUP ULTRA HERBICIDE 6.25 A SUPREME OIL 6.25 A SUPREME OIL 6.25 A SUPREME OIL 6.25 A SUPREME OIL	10 A TRIAP 4HF 11 A ROUNDUP ULTRA HERBICIDE 12 A ROUNDUP ULTRA HERBICIDE 13 A LORSBAN 4E-HF 14 A DU PONT LANNATE METHOMYL INSECTICIDE 15 A CAPTURE 2 EC-CAL 16 A DIQUAT HERBICIDE 16 A DIQUAT HERBICIDE 17 A DIQUAT HERBICIDE 18 A DIQUAT HERBICIDE
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APPENDIX C

Historical Topographic Maps





EDR Historical Topographic Map Report

UCD WEST VILLAGE Russell Boulevard Davis, CA 95616

Inquiry Number: 1555141.3

November 15, 2005

The Standard in **Environmental Risk Management Information**

440 Wheelers Farms Road Milford, Connecticut 06461

Nationwide Customer Service

Telephone: 1-800-352-0050

Fax:

1-800-231-6802

Internet:

www.edrnet.com

EDB. Haidheal Togodhaphic Wad Aspon

Environmental Data Resources, Inc.'s (EDR) Historical Topographic Map Report is designed to assist professionals in evaluating potential liability on a target property, and its surrounding area, resulting from past activities. ASTM E 1527-00, Section 7.3 on Historical Use Information, identifies the prior use requirements for a Phase I environmental site assessment. The ASTM standard requires a review of reasonably ascertainable standard historical sources. Reasonably ascertainable is defined as information that is publicly available, obtainable from a source with reasonable time and cost constraints, and practically reviewable. To meet the prior use requirements of ASTM E 1527-00, Section 7.3.4, the following standard historical sources may be used: aerial photographs, city directories, fire insurance maps, topographic maps, property tax files, land title records (although these cannot be the sole historical source consulted), building department records, or zoning/and use records. ASTM E 1527-00 requires "All obvious uses of the property shall be identified from task requires reviewing only as many of the standard historical sources as are necessary, and that are reasonably ascertainable and likely to be useful." (ASTM E 1527-00, Section 7.3.2 page 12.)

EDR's Historical Topographic Map Report includes a search of available public and private color historical topographic map collections.

Topographic Maps

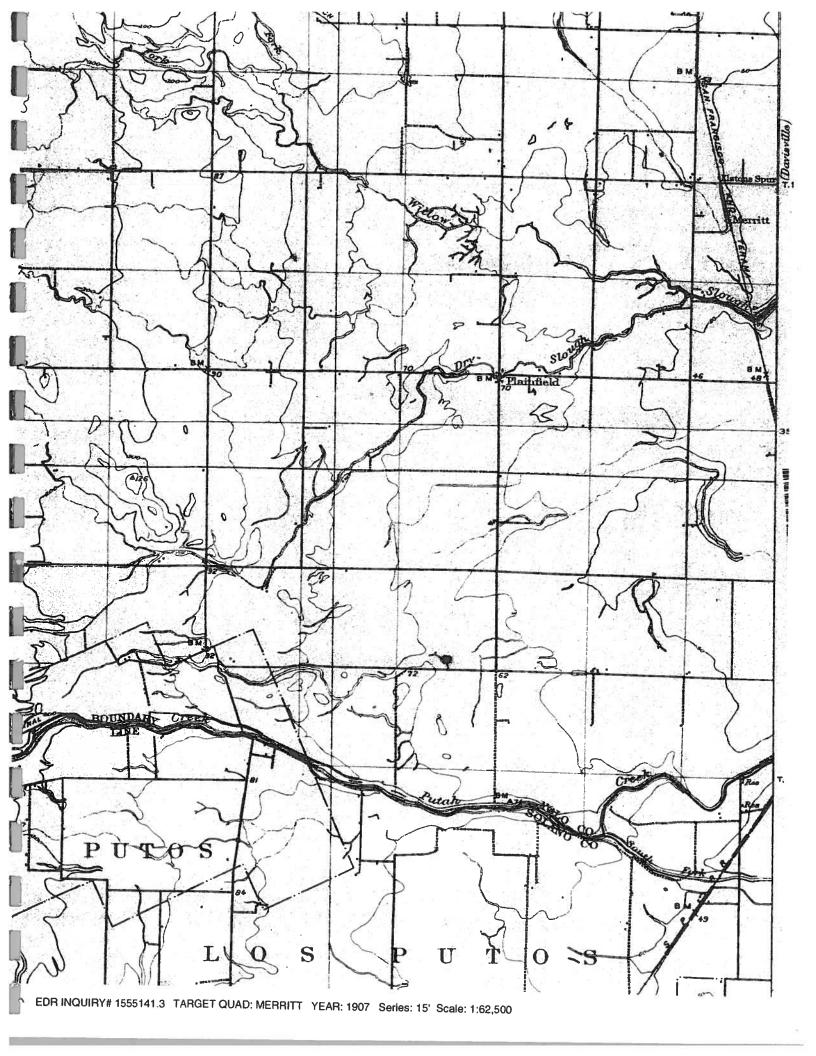
A topographic map (topo) is a color coded line-and-symbol representation of natural and selected artificial features plotted to a scale. Topos show the shape, elevation, and development of the terrain in precise detail by using contour lines and color coded symbols. Many features are shown by lines that may be straight, curved, solid, dashed, dotted, or in any combination. The colors of the lines usually indicate similar classes of grids and important roads (red); secondary roads and trails, railroads, boundaries, etc. (blue); land that have been updated using aerial photography, but not field verified, such as disturbed land areas (e.g., gravel pits) and newly developed water bodies (purple).

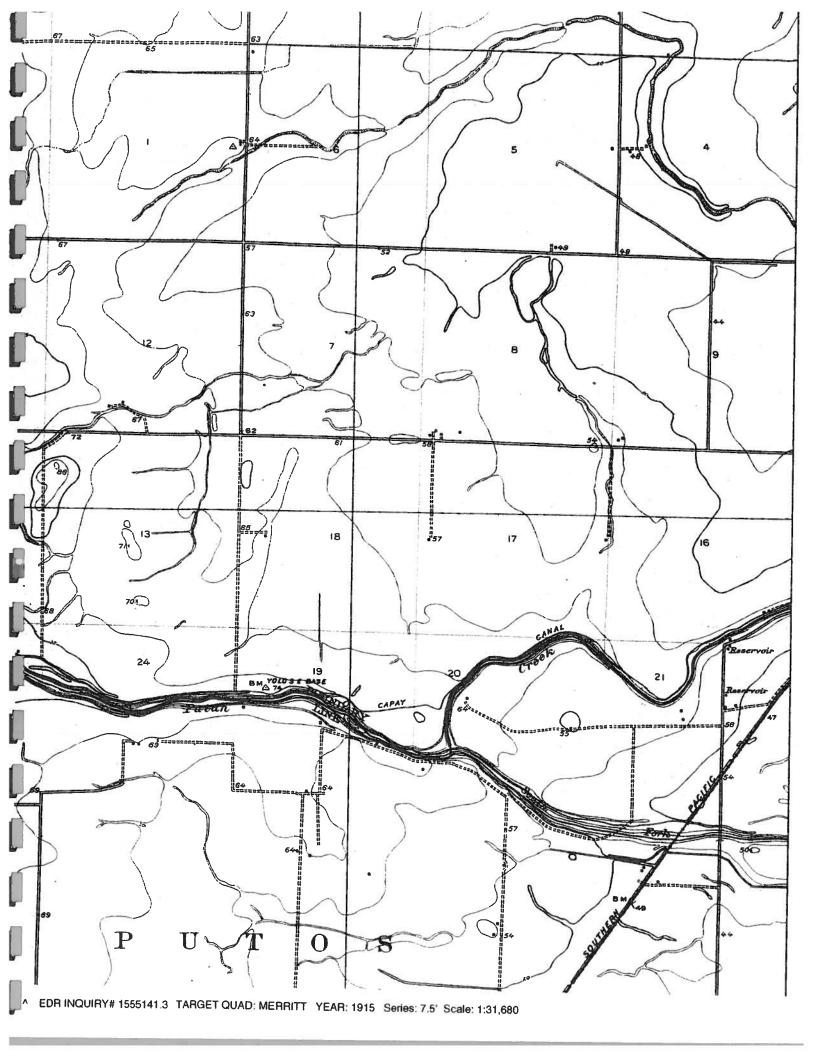
For more than a century, the USGS has been creating and revising topographic maps for the entire country at a variety of scales. There are about 60,000 U.S. Geological Survey (USGS) produced topo maps covering the United States. Each map covers a specific quadrangle (quad) defined as a four-sided area bounded by latitude and longitude. Historical topographic maps are a valuable historical resource for documenting the prior use of a property and its surrounding area, and due to their frequent availability can be particularly helpful when other standard historical sources (such as city directories, fire insurance maps, or aerial photographs) are not reasonably ascertainable.

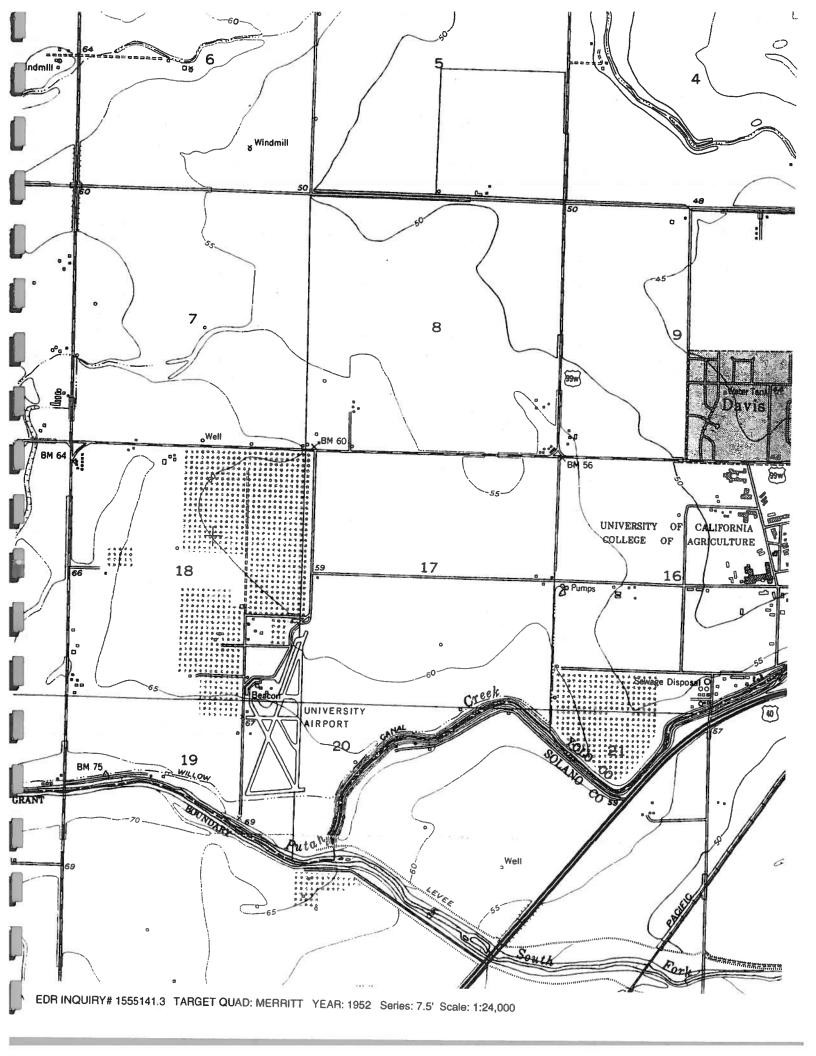
Disclaimer - Copyright and Trademark Notice

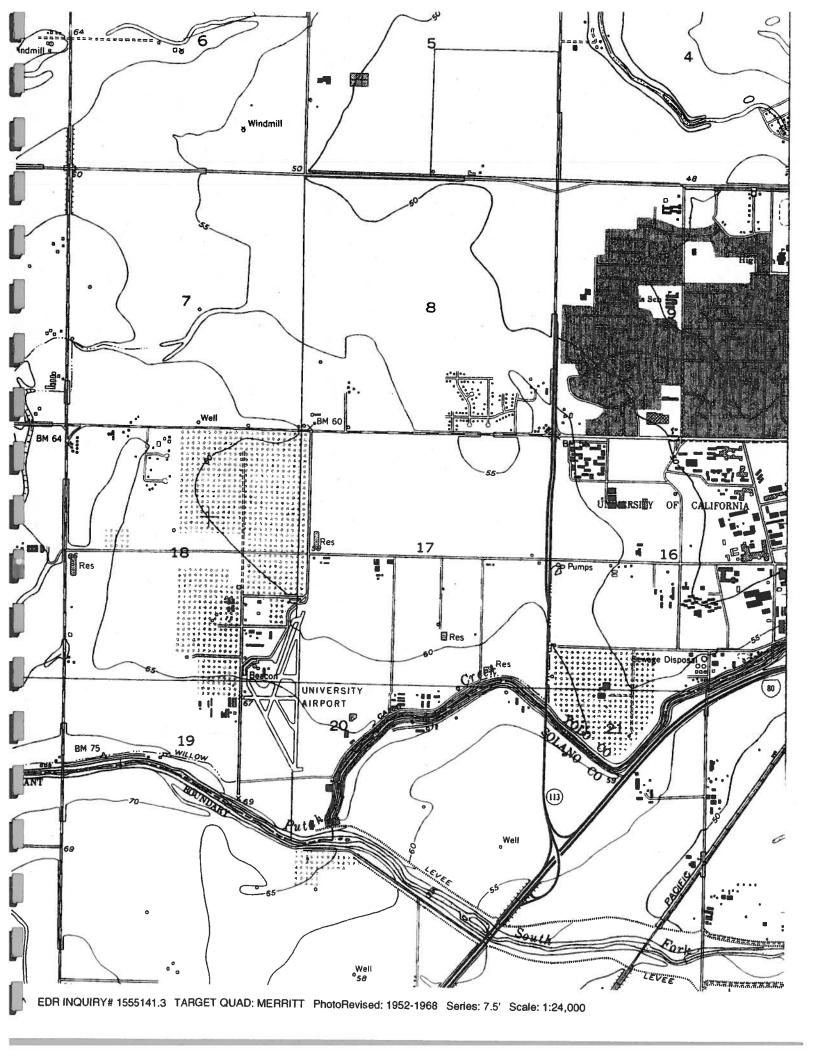
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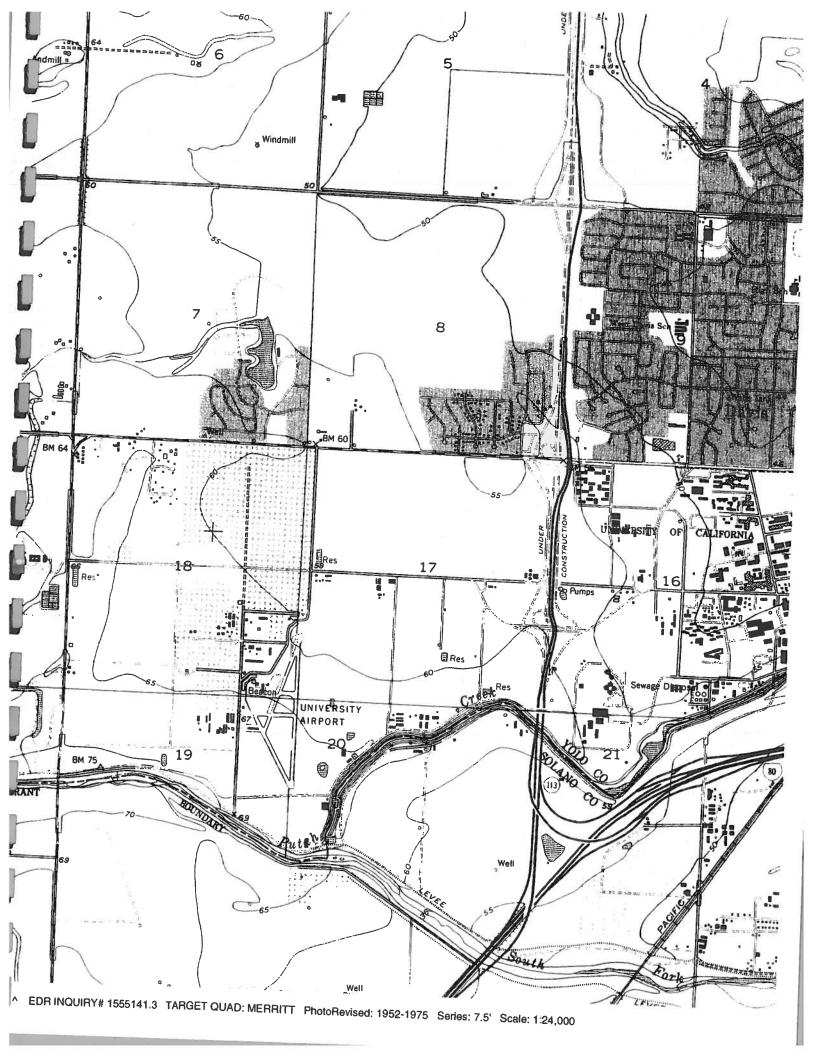
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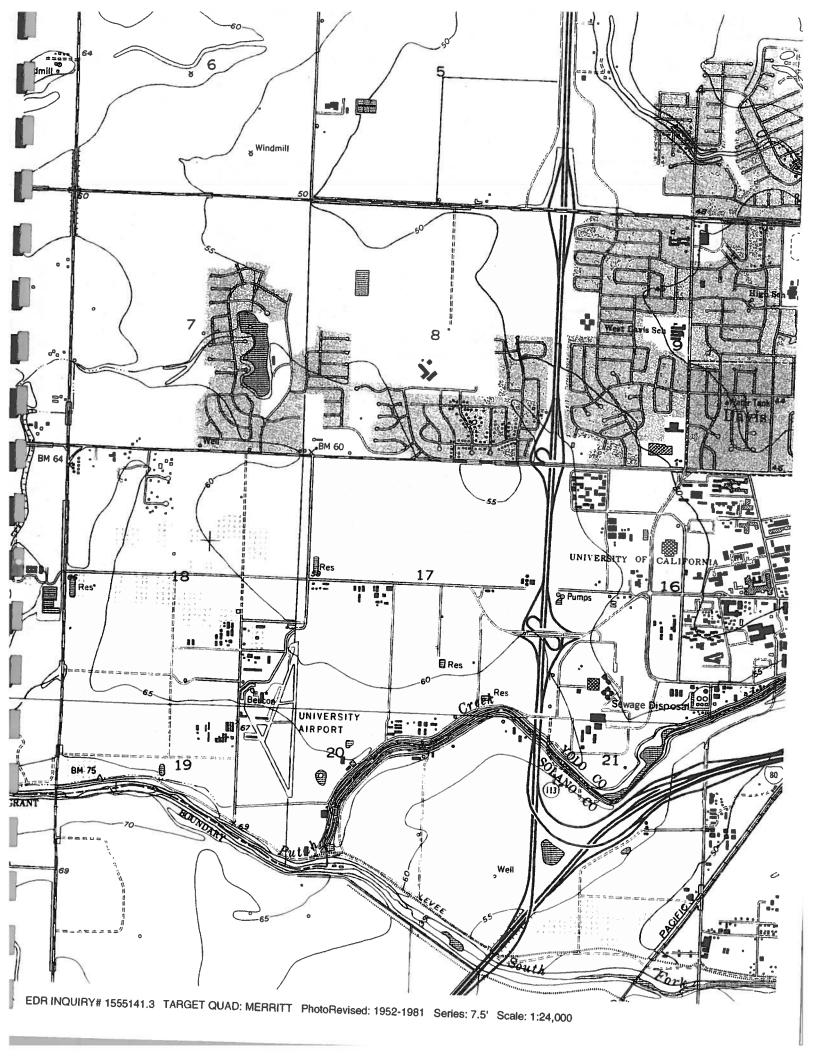


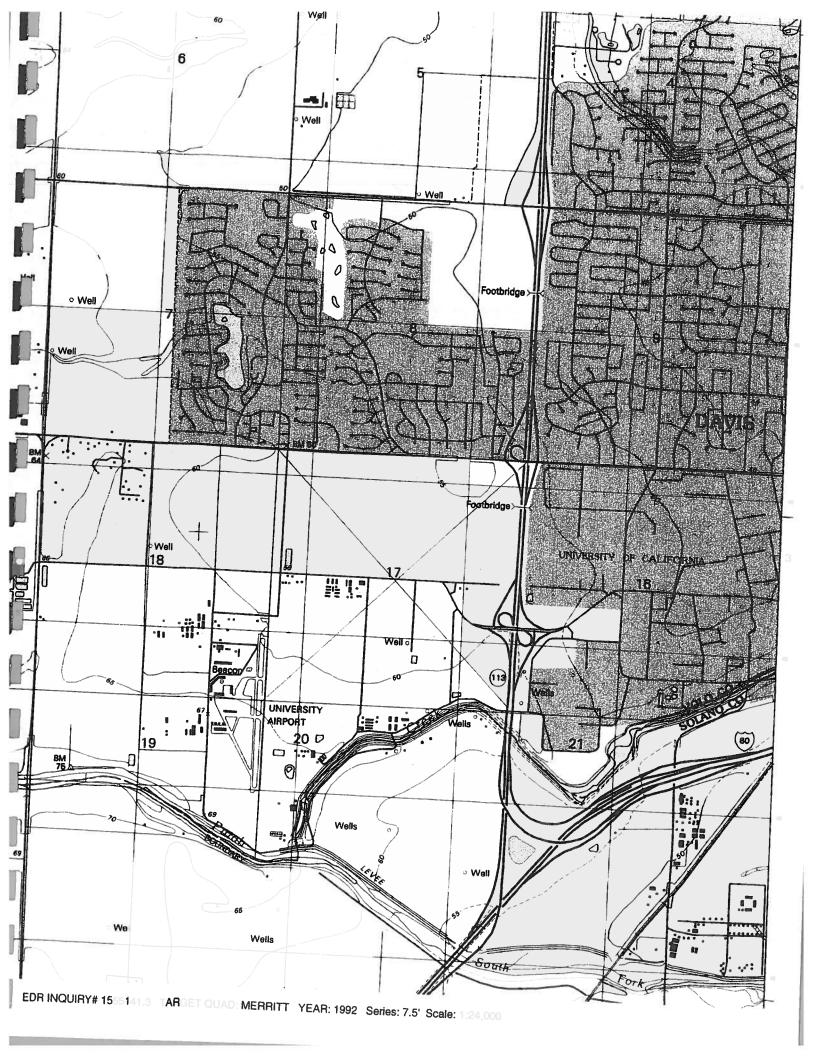












APPENDIX D

Historical Aerial Photographs

The EDR Aerial Photo Decade Package

UCD WEST VILLAGE Russell Boulevard Davis, CA 95616

Inquiry Number: 1555141.4

November 16, 2005



The Standard in Environmental Risk Management Information

440 Wheelers Farms Road Milford, Connecticut 06461

Nationwide Customer Service

Telephone:

1-800-352-0050

Fax:

1-800-231-6802

Internet:

www.edrnet.com

Environmental Data Resources, Inc. **Aerial Photography Print Service**

Environmental Data Resources, Inc.s (EDR) Aerial Photography Print Service is a screening tool designed to assist professionals in evaluating potential liability on a target property resulting from past activities. ASTM E 1527-00, Section 7.3 on Historical Use Information, identifies the prior use requirements for a Phase I environmental site assessment. The ASTM standard requires a review of reasonably ascertainable standard historical sources. Reasonably ascertainable means information that is publicly available, obtainable from a source with reasonable time and cost constraints, and practically reviewable.

To meet the prior use requirements of ASTM E 1527-00, Section 7.3.4, the following standard historical sources may be used: aerial photographs, fire insurance maps, property tax files, land title records (although these cannot be the sole historical source consulted), topographic maps, city directories, building department records, or zoning/land use records. ASTM E 1527-00 requires "All obvious uses of the property shall be identified from the present, back to the property's obvious first developed use, or back to 1940, whichever is earlier. This task requires reviewing only as many of the standard historical sources as are necessary, and that are reasonably ascertainable and likely to be useful." (ASTM E 1527-00, Section 7.3.2, page 12.)

Aerial Photographs

When delivered electronically by EDR, the aerial photo images included with this report are for ONE TIME USE ONLY. Further reproduction of these aerial photo images is prohibited without permission from EDR. For more information contact your EDR Account executive.

Aerial photographs are a valuable historical resource for documenting past land use and can be particularly helpful when other historical sources (such as city directories or fire insurance maps) are not reasonably ascertainable. The EDR Aerial Photograph Print Service includes a search of local aerial photograph collections flown by public and private agencies. EDRs professional field-based researchers provide digitally reproduced

> Thank you for your business. Please contact EDR at 1-800-352-0050 with any questions or comments.

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Date EDR Searched Historical Sources:

Aerial Photography November 16, 2005

Target Property:

Russell Boulevard

Davis, CA 95616

<u>Year</u> 1957	Scale Aerial Photograph. Scale: 1"=555"	Details Flight Year: 1957	Source Cartwright
1965	Aerial Photograph. Scale: I "=333"	Flight Year: 1965	Cartwright
1974	Aerial Photograph. Scale: 1"=541"	Flight Year: 1974	NASA
1984	Aerial Photograph. Scale: 1"=690'	Flight Year: 1984	WSA
1993	Aerial Photograph. Scale: 1"=666'	Flight Year: 1993	USGS
1998	Aerial Photograph. Scale: 1"=666'	Flight Year: 1998	USGS



