Appendix A
LEED Checklist and Rating System

LEED 2009 for New Construction and Major Renovations

Project Checklist

Project Name

Date

Sustainable Sites — Possible Points: 26

Y	N	?			
Y			Prereq 1	Construction Activity Pollution Prevention	
			Credit 1	Site Selection	1
			Credit 2	Development Density and Community Connectivity	5
			Credit 3	Brownfield Redevelopment	1
			Credit 4.1	Alternative Transportation—Public Transportation Access	6
			Credit 4.2	Alternative Transportation—Bicycle Storage and Changing Rooms	1
			Credit 4.3	Alternative Transportation—Low-Emitting and Fuel-Efficient Vehicles	3
			Credit 4.4	Alternative Transportation—Parking Capacity	2
			Credit 5.1	Site Development—Protect or Restore Habitat	1
			Credit 5.2	Site Development—Maximize Open Space	1
			Credit 6.1	Stormwater Design—Quantity Control	1
			Credit 6.2	Stormwater Design—Quality Control	1
			Credit 7.1	Heat Island Effect—Non-roof	1
			Credit 7.2	Heat Island Effect—Roof	1
			Credit 8	Light Pollution Reduction	1

Water Efficiency — Possible Points: 10

Y			Prereq 1	Water Use Reduction—20% Reduction	
			Credit 1	Water Efficient Landscaping	2 to 4
			Credit 2	Innovative Wastewater Technologies	2
			Credit 3	Water Use Reduction	2 to 4

Energy and Atmosphere — Possible Points: 35

Y			Prereq 1	Fundamental Commissioning of Building Energy Systems	
Y			Prereq 2	Minimum Energy Performance	
Y			Prereq 3	Fundamental Refrigerant Management	
			Credit 1	Optimize Energy Performance	1 to 19
			Credit 2	On-Site Renewable Energy	1 to 7
			Credit 3	Enhanced Commissioning	2
			Credit 4	Enhanced Refrigerant Management	2
			Credit 5	Measurement and Verification	3
			Credit 6	Green Power	2

Materials and Resources — Possible Points: 14

Y			Prereq 1	Storage and Collection of Recyclables	
			Credit 1.1	Building Reuse—Maintain Existing Walls, Floors, and Roof	1 to 3
			Credit 1.2	Building Reuse—Maintain 50% of Interior Non-Structural Elements	1
			Credit 2	Construction Waste Management	1 to 2
			Credit 3	Materials Reuse	1 to 2

Materials and Resources, Continued

Y	N	?			
			Credit 4	Recycled Content	1 to 2
			Credit 5	Regional Materials	1 to 2
			Credit 6	Rapidly Renewable Materials	1
			Credit 7	Certified Wood	1

Indoor Environmental Quality — Possible Points: 15

Y			Prereq 1	Minimum Indoor Air Quality Performance	
Y			Prereq 2	Environmental Tobacco Smoke (ETS) Control	
			Credit 1	Outdoor Air Delivery Monitoring	1
			Credit 2	Increased Ventilation	1
			Credit 3.1	Construction IAQ Management Plan—During Construction	1
			Credit 3.2	Construction IAQ Management Plan—Before Occupancy	1
			Credit 4.1	Low-Emitting Materials—Adhesives and Sealants	1
			Credit 4.2	Low-Emitting Materials—Paints and Coatings	1
			Credit 4.3	Low-Emitting Materials—Flooring Systems	1
			Credit 4.4	Low-Emitting Materials—Composite Wood and Agrifiber Products	1
			Credit 5	Indoor Chemical and Pollutant Source Control	1
			Credit 6.1	Controllability of Systems—Lighting	1
			Credit 6.2	Controllability of Systems—Thermal Comfort	1
			Credit 7.1	Thermal Comfort—Design	1
			Credit 7.2	Thermal Comfort—Verification	1
			Credit 8.1	Daylight and Views—Daylight	1
			Credit 8.2	Daylight and Views—Views	1

Innovation and Design Process — Possible Points: 6

			Credit 1.1	Innovation in Design: Specific Title	1
			Credit 1.2	Innovation in Design: Specific Title	1
			Credit 1.3	Innovation in Design: Specific Title	1
			Credit 1.4	Innovation in Design: Specific Title	1
			Credit 1.5	Innovation in Design: Specific Title	1
			Credit 2	LEED Accredited Professional	1

Regional Priority Credits — Possible Points: 4

			Credit 1.1	Regional Priority: Specific Credit	1
			Credit 1.2	Regional Priority: Specific Credit	1
			Credit 1.3	Regional Priority: Specific Credit	1
			Credit 1.4	Regional Priority: Specific Credit	1

Total — Possible Points: 110

Certified 40 to 49 points Silver 50 to 59 points Gold 60 to 79 points Platinum 80 to 110

LEED 2009 FOR NEW CONSTRUCTION AND MAJOR RENOVATIONS

For Public Use and Display

LEED 2009 for New Construction and Major Renovations Rating System

USGBC Member Approved November 2008 (Updated July 2010)

PREFACE FROM USGBC

The built environment has a profound impact on our natural environment, economy, health, and productivity. Breakthroughs in building science, technology, and operations are now available to designers, builders, operators, and owners who want to build green and maximize both economic and environmental performance.

Through the LEED® green building certification program, the U.S. Green Building Council (USGBC) is transforming the built environment. The green building movement offers an unprecedented opportunity to respond to the most important challenges of our time, including global climate change, dependence on non sustainable and expensive sources of energy, and threats to human health. The work of innovative building professionals is a fundamental driving force in the green building moment. Such leadership is a critical component to achieving USGBC's mission of a sustainable built environment for all within a generation.

USGBC MEMBERSHIP

USGBC's greatest strength is the diversity of our membership. USGBC is a balanced, consensus based nonprofit with more than 18,000 member companies and organizations representing the entire building industry. Since its inception in 1993, USGBC has played a vital role in providing a leadership forum and a unique, integrating force for the building industry. USGBC's programs have three distinguishing characteristics:

Committee-based

The heart of this effective coalition is our committee structure, in which volunteer members design strategies that are implemented by staff and expert consultants. Our committees provide a forum for members to resolve differences, build alliances, and forge cooperative solutions for influencing change in all sectors of the building industry.

Member-driven

Membership is open and balanced and provides a comprehensive platform for carrying out important programs and activities. We target the issues identified by our members as the highest priority. We conduct an annual review of achievements that allows us to set policy, revise strategies, and devise work plans based on members' needs.

Consensus-focused

We work together to promote green buildings, and in doing so, we help foster greater economic vitality and environmental health at lower costs. We work to bridge ideological gaps between industry segments and develop balanced policies that benefit the entire industry.

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TRADEMARKS

ACKNOWLEDGMENTS

The LEED 2009 Rating System has been made possible only through the efforts of many dedicated volunteers, staff members, and others in the USGBC community. The Rating System improvement work was managed and implemented by USGBC staff and included review and input by many Technical Advisory Group (TAG) members with oversight by the LEED Steering Committee. We extend our deepest gratitude to all of our LEED committee members who participated in the development of this rating system, for their tireless volunteer efforts and constant support of USGBC's mission:

LEED Steering Committee

Scot Horst, Chair, LSC	Horst, Inc
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Stuart Carron	JohnsonDiversey, Inc.
Holley Henderson	H2 Ecodesign, LLC
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Kristin Shewfelt	Architectural Energy Corporation
Jessica Millman	Agora DC
Bryna Dunn	Moseley Architects
Neal Billetdeaux	JJR
Greg Kats	Managing Good Energies
Mark Webster	Simpson Gumpertz & Heger
Bob Thompson	EPA Indoor Environment Management Branch
Malcolm Lewis	Constructive Technologies Group, Inc.
John Boecker	7Group
Sara O'Mara	Choate Construction Company
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Ian Theaker	Rep Canada Green Building Council

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Gina Baker	Burt Hill
Ted Bardacke	Global Green USA
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Laura Case	Emory University Campus Services
Zach Christeson	the HOK Planning Group
Jay Enck	Commissioning & Green Building Services
Ron Hand	E/FECT. Sustainable Design Solutions
Richard Heinisch	Acuity Lighting Group
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Marita Roos	HNTB
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John Koeller, Vice-Chair	Alliance for Water Efficiency
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Bill Hoffman	H.W. Hoffman and Associates, LLC
Geoff Nara	Civil & Environmental Consultants
Stephanie Tanner	U.S. Environmental Protection Agency
Daniel Yeh	University of South Florida
David Bracciano	Tampa Bay Water
Robert Rubin	NCSU-BAE and McKim & Creed
Winston Huff	SSR Engineers
Robert Benazzi	Jaros Baum & Bolles
Gunnar Baldwin	TOTO USA, INC
Heather Kinkade	Forgotten Rain, LLC
Shabbir Rawalpindiwala	Kohler Company
Bill Wall	Clivus New England, Inc.

Energy & Atmosphere TAG

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Marcus Sheffer, Vice-Chair	7group
Drury Crawley	US Department of Energy
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Ellen Franconi	IPMVP and AEC
Mark Frankel	New Buildings Institute
Nathan Gauthier	Harvard Green Campus Initiative
Rusty Hodapp	Dallas/Fort Worth, Energy & Transportation Management
John Hogan	City of Seattle Department of Planning & Development
Bion Howard	Building Environmental Science and Technology
Dan Katzenberger	Engineering, Energy, and the Environment
Bob Maddox	Sterling Planet
Brenda Morawa	BVM Engineering, Inc.
Erik Ring	LPA, Inc.
Michael Rosenberg	Oregon Department of Energy
Mick Schwedler	Trane
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Gail Stranske	CTG Energetics
Michael Zimmer	Thompson Hine LLP

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Theresa Hogerheide-Reusch	Reusch Design Services
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Nancy Malone	Siegel & Strain Architects
Kirsten Ritchie	Gensler
Wayne Trusty	Athena Sustainable Materials Institute
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Jude Anders	Shoreline Concepts, LLC
Brian Cloward	Mithun Architects+Designers+Planners
Larry Dykhuis	Herman Miller, Inc
Francis (Bud) Offerman	Indoor Environmental Engineering
Christopher Schaffner	The Green Engineer
Dennis Stanke	Trane Company

The LEED 2009 for New Construction Rating System builds on the work of those who helped create previous versions:

LEED for New Construction Version 2.2 Core Committee

James H. Goldman, Chair	Turner Construction
Tom Scarola, Vice-Chair	Tishman Speyer Properties
Lee Burgett	Trane Company
Craig Kneeland	NYSERDA
Joe Higgins	Fidelity Real Estate Company
Harry Gordon	Burt Hill Kosar Rittelmann Associates
Muscoe Martin	Wallace Roberts & Todd, LLC
Chris Dixon	Mithun
Bill Odell	HOK Architects
Chris Schaffner	The Green Engineer
Wayne Trusty	Athena Sustainable Materials Institute
Jerry Yudelson	Greenway Consulting Group, LLC
Charlotte Matthews	Bovis Lend Lease
John McFarland	WorkingBuildings LLC
Prasad Vaidya	The Weidt Group
Aalok Deshmuk	The Rocky Mountain Institute

LEED 2009 FOR NEW CONSTRUCTION AND MAJOR RENOVATIONS PROJECT CHECKLIST

Sustainable Sites		26 Possible Points
☑ Prerequisite 1	Construction Activity Pollution Prevention	Required
☐ Credit 1	Site Selection	1
☐ Credit 2	Development Density and Community Connectivity	5
☐ Credit 3	Brownfield Redevelopment	1
☐ Credit 4.1	Alternative Transportation—Public Transportation Access	6
☐ Credit 4.2	Alternative Transportation—Bicycle Storage and Changing Rooms	1
☐ Credit 4.3	Alternative Transportation—Low-Emitting and Fuel-Efficient Vehicles	3
☐ Credit 4.4	Alternative Transportation—Parking Capacity	2
☐ Credit 5.1	Site Development—Protect or Restore Habitat	1
☐ Credit 5.2	Site Development—Maximize Open Space	1
☐ Credit 6.1	Stormwater Design—Quantity Control	1
☐ Credit 6.2	Stormwater Design—Quality Control	1
☐ Credit 7.1	Heat Island Effect—Nonroof	1
☐ Credit 7.2	Heat Island Effect—Roof	1
☐ Credit 8	Light Pollution Reduction	1

Water Efficiency		10 Possible Points
☑ Prerequisite 1	Water Use Reduction	Required
☐ Credit 1	Water Efficient Landscaping	2-4
☐ Credit 2	Innovative Wastewater Technologies	2
☐ Credit 3	Water Use Reduction	2-4

Energy and Atmosphere		35 Possible Points
☑ Prerequisite 1	Fundamental Commissioning of Building Energy Systems	Required
☑ Prerequisite 2	Minimum Energy Performance	Required
☑ Prerequisite 3	Fundamental Refrigerant Management	Required
☐ Credit 1	Optimize Energy Performance	1–19
☐ Credit 2	On-site Renewable Energy	1–7
☐ Credit 3	Enhanced Commissioning	2
☐ Credit 4	Enhanced Refrigerant Management	2
☐ Credit 5	Measurement and Verification	3
☐ Credit 6	Green Power	2

Materials and Resources		14 Possible Points
☑ Prerequisite 1	Storage and Collection of Recyclables	Required
☐ Credit 1.1	Building Reuse—Maintain Existing Walls, Floors and Roof	1-3
☐ Credit 1.2	Building Reuse—Maintain Existing Interior Nonstructural Elements	1
☐ Credit 2	Construction Waste Management	1-2
☐ Credit 3	Materials Reuse	1-2
☐ Credit 4	Recycled Content	1-2

☐ Credit 5	Regional Materials	1-2
☐ Credit 6	Rapidly Renewable Materials	1
☐ Credit 7	Certified Wood	1

Indoor Environmental Quality **15 Possible Points**

☑ Prerequisite 1	Minimum Indoor Air Quality Performance	Required
☑ Prerequisite 2	Environmental Tobacco Smoke (ETS) Control	Required
☐ Credit 1	Outdoor Air Delivery Monitoring	1
☐ Credit 2	Increased Ventilation	1
☐ Credit 3.1	Construction Indoor Air Quality Management Plan—During Construction	1
☐ Credit 3.2	Construction Indoor Air Quality Management Plan—Before Occupancy	1
☐ Credit 4.1	Low-Emitting Materials—Adhesives and Sealants	1
☐ Credit 4.2	Low-Emitting Materials—Paints and Coatings	1
☐ Credit 4.3	Low-Emitting Materials—Flooring Systems	1
☐ Credit 4.4	Low-Emitting Materials—Composite Wood and Agrifiber Products	1
☐ Credit 5	Indoor Chemical and Pollutant Source Control	1
☐ Credit 6.1	Controllability of Systems—Lighting	1
☐ Credit 6.2	Controllability of Systems—Thermal Comfort	1
☐ Credit 7.1	Thermal Comfort—Design	1
☐ Credit 7.2	Thermal Comfort—Verification	1
☐ Credit 8.1	Daylight and Views—Daylight	1
☐ Credit 8.2	Daylight and Views—Views	1

Innovation in Design **6 Possible Points**

☐ Credit 1	Innovation in Design	1-5
☐ Credit 2	LEED Accredited Professional	1

Regional Priority **4 Possible Points**

☐ Credit 1	Regional Priority	1-4

LEED 2009 for New Construction and Major Renovations

100 base points; 6 possible Innovation in Design and 4 Regional Priority points

Certified	40–49 points
Silver	50–59 points
Gold	60–79 points
Platinum	80 points and above

TABLE OF CONTENTS

INTRODUCTION

I. LEED® GREEN BUILDING RATING SYSTEM

Background on LEED®

Following the formation of the U.S. Green Building Council (USGBC) in 1993, the organization's members quickly realized that the sustainable building industry needed a system to define and measure "green buildings." USGBC began to research existing green building metrics and rating systems. Less than a year after formation, the members acted on the initial findings by establishing a committee to focus solely on this topic. The composition of the committee was diverse; it included architects, real estate agents, a building owner, a lawyer, an environmentalist, and industry representatives. This cross section of people and professions added a richness and depth both to the process and to the ultimate product.

The first LEED Pilot Project Program, also referred to as LEED Version 1.0, was launched at the USGBC Membership Summit in August 1998. After extensive modifications, LEED Green Building Rating System Version 2.0 was released in March 2000, with LEED Version 2.1 following in 2002 and LEED Version 2.2 following in 2005.

As LEED has evolved and matured, the program has undertaken new initiatives. In addition to a rating system specifically devoted to building operational and maintenance issues (LEED for Existing Buildings: Operations & Maintenance), LEED addresses the different project development and delivery processes that exist in the U.S. building design and construction market, through rating systems for specific building typologies, sectors, and project scopes: LEED for Core & Shell, LEED for New Construction, LEED for Schools, LEED for Neighborhood Development, LEED for Retail, LEED for Healthcare, LEED for Homes, and LEED for Commercial Interiors.

Project teams interact with the Green Building Certification Institute (GBCI) for project registration

and certification. GBCI was established in 2008 as a separately incorporated entity with the support of the U.S. Green Building Council. GBCI administers credentialing and certification programs related to green building practice. These programs support the application of proven strategies for increasing and measuring the performance of buildings and communities as defined by industry systems such as LEED.

The green building field is growing and changing daily. New technologies and products are being introduced into the marketplace, and innovative designs and practices are proving their effectiveness. The LEED rating systems and reference guides will evolve as well. Project teams must comply with the version of the rating system that is current at the time of their registration.

USGBC will highlight new developments on its website on a continual basis at www.usgbc.org.

Features of LEED®

The LEED Green Building Rating Systems are voluntary, consensus-based, and market-driven. Based on existing and proven technology, they evaluate environmental performance from a whole building perspective over a building's life cycle, providing a definitive standard for what constitutes a green building in design, construction, and operation.

The LEED rating systems are designed for rating new and existing commercial, institutional, and residential buildings. They are based on accepted energy and environmental principles and strike a balance between known, established practices and emerging concepts. Each rating system is organized into 5 environmental categories:

Sustainable Sites, Water Efficiency, Energy and Atmosphere, Materials and Resources, and Indoor Environmental Quality. An additional category, Innovation in Design, addresses sustainable building expertise as well as design measures not covered under the 5 environmental categories. Regional bonus points are another feature of LEED and acknowledge the importance of local conditions in determining best environmental design and construction practices.

The LEED Credit Weightings

In LEED 2009, the allocation of points between credits is based on the potential environmental impacts and human benefits of each credit with respect to a set of impact categories. The impacts are defined as the environmental or human effect of the design, construction, operation, and maintenance of the building, such as greenhouse gas emissions, fossil fuel use, toxins and carcinogens, air and water pollutants, indoor environmental conditions. A combination of approaches, including energy modeling, life-cycle assessment, and transportation analysis, is used to quantify each type of impact. The resulting allocation of points among credits is called credit weighting.

LEED 2009 uses the U.S. Environmental Protection Agency's TRACI[1] environmental impact categories as the basis for weighting each credit. TRACI was developed to assist with impact evaluation for life-cycle assessment, industrial ecology, process design, and pollution prevention.

LEED 2009 also takes into consideration the weightings developed by the National Institute of Standards and Technology (NIST); these compare impact categories with one another and assign a relative weight to each. Together, the 2 approaches provide a solid foundation for determining the point value of each credit in LEED 2009.

The LEED 2009 credit weightings process is based on the following parameters, which maintain consistency and usability across rating systems:

- All LEED credits are worth a minimum of 1 point.
- All LEED credits are positive, whole numbers; there are no fractions or negative values.
- All LEED credits receive a single, static weight in each rating system; there are no individualized scorecards based on project location.
- All LEED rating systems have 100 base points; Innovation in Design (or Operations) and Regional Priority credits provide opportunities for up to 10 bonus points.

Given the above criteria, the LEED 2009 credit weightings process involves 3 steps:

1. A reference building is used to estimate the environmental impacts in 13 categories associated with a typical building pursuing LEED certification.
2. The relative importance of building impacts in each category are set to reflect values based on the NIST weightings.[2]
3. Data that quantify building impacts on environmental and human health are used to assign points to individual credits.

Each credit is allocated points based on the relative importance of the building-related impacts that it addresses. The result is a weighted average that combines building impacts and the relative value of the impact categories. Credits that most directly address the most important impacts are given the greatest weight, subject to the system design parameters described above. Credit weights also reflect a decision by LEED to recognize the market implications of point allocation. The result is a significant change in allocation of points compared with previous LEED rating systems. Overall, the changes increase the relative emphasis on the reduction of energy consumption and greenhouse gas emissions associated with building systems, transportation, the embodied energy of water, the embodied energy of materials, and where applicable, solid waste.

The details of the weightings process vary slightly among individual rating systems. For example, LEED for Existing Buildings: Operations & Maintenance includes credits related to solid waste management but LEED for New Construction does not. This results in a difference in the portion of the environmental footprint addressed by each rating system and the relative allocation of points. The weightings process for each rating system is fully documented in a weightings workbook.

The credit weightings process will be reevaluated over time to incorporate changes in values ascribed to different building impacts and building types, based on both market reality and evolving scientific knowledge related to buildings. A complete explanation of the LEED credit weightings system is available on the USGBC website, at www.usgbc.org.

Regional Priority Credits

To provide incentive to address geographically specific environmental issues, USGBC regional councils and chapters have identified 6 credits per rating system that are of particular importance to specific areas. Each regional priority credit is worth an additional 1 point, and a total of 4 regional priority points may be earned. Upon project registration, LEED Online automatically determines a project's regional priority credits based on its zip code. If the project achieves more than 4 regional priority credits, the team can choose the credits for which these points will apply. The USGBC website also contains a searchable database of regional priority credits.

II. OVERVIEW AND PROCESS

The LEED 2009 Green Building Rating System for New Construction and Major Renovations is a set of performance standards for certifying the design and construction of commercial or institutional buildings and high-rise residential buildings of all sizes, both public and private. The intent is to promote healthful, durable, affordable, and environmentally sound practices in building design and construction.

Prerequisites and credits in the LEED 2009 for New Construction and Major Renovations addresses 7 topics:

- Sustainable Sites (SS)
- Water Efficiency (WE)
- Energy and Atmosphere (EA)
- Materials and Resources (MR)
- Indoor Environmental Quality (IEQ)
- Innovation in Design (ID)
- Regional Priority (RP)

LEED 2009 for New Construction and Major Renovations certifications are awarded according to the following scale:

Certified	40–49 points
Silver	50–59 points
Gold	60–79 points
Platinum	80 points and above

GBCI will recognize buildings that achieve 1 of these rating levels with a formal letter of certification.

When to Use LEED 2009 for New Construction

LEED for New Construction was designed primarily for new commercial office buildings, but it has been applied to many other building types by LEED practitioners. All commercial buildings, as defined by standard building codes, are eligible for certification as LEED for New Construction buildings. Examples of commercial occupancies include offices, institutional buildings (libraries, museums, churches, etc.), hotels, and residential buildings of 4 or more habitable stories.

LEED for New Construction addresses design and construction activities for both new buildings and major renovations of existing buildings. If the project scope does not involve significant design and construction activities and focuses more on operations and maintenance activities, LEED for Existing Buildings: Operations & Maintenance is more appropriate because it addresses operational and maintenance issues of working buildings.

Please see the Rating System Selection Policy, located in the LEED resources section of www.usgbc.org, for more information about choosing a rating system.

Registration

Project teams interested in earning LEED certification for their buildings must first register the project with GBCI. Projects can be registered on the GBCI website (www.gbci.org). The website also has information on registration costs for USGBC national members as well as nonmembers. Registration is an important step that establishes contact with GBCI and provides access to software tools, errata, critical communications, and other essential information.

Certification

To earn LEED certification, the applicant project must satisfy all the prerequisites and qualify for a minimum number of points to attain the established project ratings as listed below. Having satisfied the basic prerequisites of the program, applicant projects are then rated according to their degree of compliance within the rating system.

LEED 2009 for New Construction provides the option of splitting a certification application into two phases: design and construction. Documentation for design phase credits, identified in LEED-Online, can be submitted for review at the end of the design phase; the submittals for these credits can be fully evaluated based on documentation available during this phase of the project. For example, if a project site meets the requirements of LEED for New Construction SS Credit 3, Brownfield Redevelopment, the likelihood of credit achievement can be assessed before construction is complete. The LEED credit itself, however, is not awarded at the design review stage.

For more information on the LEED certification process including LEED-Online, Credit Interpretation Requests and Rulings, Appeals, and Fees please see the LEED Reference Guide for Green Building Design and Construction, 2009 Edition and visit www.usgbc.org or www.gbci.org.

III. MINIMUM PROGRAM REQUIREMENTS

The LEED 2009 Minimum Program Requirements (MPRs) define the minimum characteristics that a project must possess in order to be eligible for certification under LEED 2009. These requirements define the categories of buildings that the LEED rating systems were designed to evaluate, and taken together serve three goals: to give clear guidance to customers, to protect the integrity of the LEED program, and to reduce challenges that occur during the LEED certification process. It is expected that MPRs will evolve over time along with LEED rating system improvements. The requirements will apply only to those projects registering under LEED 2009.

To view the list of MPRs, please read the Minimum Program Requirements section of this document.

IV. EXEMPLARY PERFORMANCE STRATEGIES

Exemplary performance strategies result in performance that greatly exceeds the performance level or expands the scope required by an existing LEED 2009 for New Construction credit. To earn exemplary performance credits, teams must meet the performance level defined by the next step in the threshold progression. For credits with more than 1 compliance path, an Innovation in Design point can be earned by satisfying more than 1 compliance path if their benefits are additive.

The credits for which exemplary performance points are available through expanded performance or scope are noted in the LEED Reference Guide for Green Design & Construction, 2009 Edition and in LEED Online.

Endnotes

[1] Tools for the Reduction and Assessment of Chemical and Other Environmental Impacts (TRACI). U.S. Environmental Protection Agency, Office of Research and Development. http://www.epa.gov/nrmrl/std/sab/traci/.

[2] Relative impact category weights based on an exercise undertaken by NIST (National Institute of Standards and Technology) for the BEES program. http://www.bfrl.nist.gov/oae/software/bees/.

MINIMUM PROGRAM REQUIREMENTS

These Minimum Program Requirements were updated in October 2009 to include additional clarifying language. No new requirements have been added.

At this time U.S. Green Building Council, Inc. has authorized the Green Building Certification Institute (GBCI) to confer LEED Certification. A project must demonstrate compliance with all rating system requirements including each of these Minimum Program Requirements (MPRs) in order to achieve LEED Certification. Definitions, exceptions, and more extensive guidance relating to these MPRs are available in a separate document titled: *LEED 2009 MPR Supplemental Guidance*. Terms that are *italicized and underlined* here are defined in the Supplemental Guidance document (they are marked as such only the first time that they appear).

This document identifies the MPRs, or minimum characteristics that a project must possess in order to be eligible for LEED Certification. These requirements define the types of buildings that the LEED Green Building Rating Systems were designed to evaluate, and taken together serve three goals: to give clear guidance to customers, to protect the integrity of the LEED program, and to reduce complications that occur during the LEED Certification process. The requirements in this document will apply to all those, and only those projects seeking to demonstrate conformance with the rating systems listed above.

GBCI has agreed to consider requests for exceptions to MPRs that are not already defined in the LEED 2009 MPR Supplemental Guidance document on a case-by-case basis for special circumstances.

LEED 2009 Minimum Requirements for New Construction & Major Renovations

1. Must Comply with Environmental Laws

The *LEED project building or space*, all other *real property* within the *LEED project boundary*, and all *project work* must comply with applicable federal, state, and local building-related environmental laws and regulations in place where the project is located. This condition must be satisfied from the date of *LEED project registration* or the commencement of *schematic design*, whichever comes first, up and until the date that the building receives a *certificate of occupancy* or similar official indication that it is fit and ready for use.

A lapse in a project's compliance with a building-related environmental law or regulation that results from an unforeseen and unavoidable circumstance shall not necessarily result in non-compliance with this MPR. Such lapses shall be excused so long as they are remediated as soon as feasibly possible.

2. Must be a Complete, Permanent Building or Space

All LEED projects must be designed for, constructed on, and operated on a permanent location on already existing *land*. LEED projects shall not consist of mobile structures, equipment, or vehicles. No building or space that is designed to move at any point in its lifetime may pursue LEED Certification.

LEED projects must include the new, ground-up design and construction, or *major renovation*, of at least one commercial, institutional, or high-rise residential building in its *entirety*.

3. Must Use a Reasonable Site Boundary

1. The LEED project boundary must include all contiguous land that is associated with and supports normal building operations for the LEED project building, including all land that was or will be disturbed for the purpose of *undertaking the LEED project*.
2. The LEED project boundary may not include land that is owned by a party other than that which owns the LEED project unless that land is associated with and supports normal building operations for the LEED project building.

3. LEED projects located on a campus must have project boundaries such that if all the buildings on campus become LEED certified, then 100% of the gross land area on the campus would be included within a LEED boundary. If this requirement is in conflict with MPR #7, Must Comply with Minimum Building Area to Site Area Ratio, then MPR #7 will take precedence.
4. Any given parcel of real property may only be attributed to a single LEED project building.
5. *Gerrymandering* of a LEED project boundary is prohibited: the boundary may not unreasonably exclude sections of land to create boundaries in unreasonable shapes for the sole purpose of complying with prerequisites or credits.

4. Must Comply with Minimum Floor Area Requirements

The LEED project must include a minimum of 1,000 square feet (93 square meters) of gross floor area.

5. Must Comply with Minimum Occupancy Rates

The LEED project must serve 1 or more *Full Time Equivalent* (FTE) occupant(s), calculated as an annual average in order to use LEED in its entirety. If the project serves less than 1 annualized FTE, optional credits from the Indoor Environmental Quality category may not be earned (the prerequisites must still be earned).

6. Must Commit to Sharing Whole-Building Energy and Water Usage Data

All certified projects must commit to sharing with U.S, Green Building Council, Inc. all available actual whole-project energy and water usage data. The purpose of data collection is for research purposes to aid in improving the LEED program. USGBC may publish such data; however, any data that is made publicly available shall be presented in an aggregate form with no identifying project-specific characteristics. For all rating systems, Project Owners must comply with this MPR commencing on the project completion date and maintain their commitment to share data for a period of at least 5 years.

Sharing data includes supplying information on a regular basis in a free, accessible, and secure online tool or, in the alternative, either allowing USGBC to access the whole-project metering facility where such meters are in place, or taking any action necessary to authorize USGBC or its designee to collect project information directly from service or utility providers. LEED project buildings or spaces that do not have meters in place that measure energy and/or water usage for the entire LEED certified gross floor area will not be required to supply energy and/or water usage data unless and until such meters are installed.

If a LEED project is altered in such a way that the data for the original LEED project becomes impractical to collect, the building owner will no longer be required to provide the data or provide access to the data. Building owners must commit to using reasonable efforts to ensure that this commitment carries forward in the event that the building or space changes ownership or lessee. If all or part of a LEED project is sold, assigned or otherwise transferred in such a way that the data for the original LEED project becomes impractical to collect, the building owner will no longer be required to provide the data or provide access to the data.

7. Must Comply with a Minimum Building Area to Site Area Ratio

The gross floor area of the LEED project building must be no less than 2% of the gross land area within the LEED project boundary.

SS Prerequisite 1: Construction Activity Pollution Prevention

Required

Intent

To reduce pollution from construction activities by controlling soil erosion, waterway sedimentation and airborne dust generation.

Requirements

Create and implement an erosion and sedimentation control plan for all construction activities associated with the project. The plan must conform to the erosion and sedimentation requirements of the 2003 EPA Construction General Permit OR local standards and codes, whichever is more stringent. The plan must describe the measures implemented to accomplish the following objectives:

- To prevent loss of soil during construction by stormwater runoff and/or wind erosion, including protecting topsoil by stockpiling for reuse.
- To prevent sedimentation of storm sewers or receiving streams.
- To prevent pollution of the air with dust and particulate matter.

The EPA's construction general permit outlines the provisions necessary to comply with Phase I and Phase II of the National Pollutant Discharge Elimination System (NPDES) program. While the permit only applies to construction sites greater than 1 acre, the requirements are applied to all projects for the purposes of this prerequisite. Information on the EPA construction general permit is available at http://cfpub.epa.gov/npdes/stormwater/cgp.cfm.

Potential Technologies & Strategies

Create an erosion and sedimentation control plan during the design phase of the project. Consider employing strategies such as temporary and permanent seeding, mulching, earthen dikes, silt fencing, sediment traps and sediment basins.

SS Credit 1: Site Selection

1 Point

Intent

To avoid the development of inappropriate sites and reduce the environmental impact from the location of a building on a site.

Requirements

Do not develop buildings, hardscape, roads or parking areas on portions of sites that meet any of the following criteria:

- Prime farmland as defined by the U.S. Department of Agriculture in the United States Code of Federal Regulations, Title 7, Volume 6, Parts 400 to 699, Section 657.5 (citation 7CFR657.5)
- Previously undeveloped land whose elevation is lower than 5 feet above the elevation of the 100-year flood as defined by the Federal Emergency Management Agency (FEMA)
- Land specifically identified as habitat for any species on federal or state threatened or endangered lists
- Land within 100 feet of any wetlands as defined by the U.S. Code of Federal Regulations 40 CFR, Parts 230-233 and Part 22, and isolated wetlands or areas of special concern identified by state or local rule, OR within setback distances from wetlands prescribed in state or local regulations, as defined by local or state rule or law, whichever is more stringent
- Previously undeveloped land that is within 50 feet of a water body, defined as seas, lakes, rivers, streams and tributaries that support or could support fish, recreation or industrial use, consistent with the terminology of the Clean Water Act
- Land that prior to acquisition for the project was public parkland, unless land of equal or greater value as parkland is accepted in trade by the public landowner (park authority projects are exempt).

Potential Technologies & Strategies

During the site selection process, give preference to sites that do not include sensitive elements or restrictive land types. Select a suitable building location and design the building with a minimal footprint to minimize disruption of the environmentally sensitive areas identified above.

SS Credit 2: Development Density and Community Connectivity

5 Points

Intent

To channel development to urban areas with existing infrastructure, protect greenfields, and preserve habitat and natural resources.

Requirements

OPTION 1. Development Density

Construct or renovate a building on a previously developed site AND in a community with a minimum density of 60,000 square feet per acre net. The density calculation is based on a typical two-story downtown development and must include the area of the project being built.

OR

OPTION 2. Community Connectivity

Construct or renovate a building on a site that meets the following criteria:

- Is located on a previously developed site
- Is within 1/2 mile of a residential area or neighborhood with an average density of 10 units per acre net
- Is within 1/2 mile of at least 10 basic services
- Has pedestrian access between the building and the services

For mixed-use projects, no more than 1 service within the project boundary may be counted as 1 of the 10 basic services, provided it is open to the public. No more than 2 of the 10 services required may be anticipated (i.e., at least 8 must be existing and operational). In addition, the anticipated services must demonstrate that they will be operational in the locations indicated within 1 year of occupation of the applicant project.

Examples of basic services include the following:

- Bank
- Place of Worship
- Convenience Grocery
- Day Care Center
- Cleaners
- Fire Station
- Beauty Salon
- Hardware
- Laundry
- Library
- Medical or Dental Office
- Senior Care Facility
- Park
- Pharmacy
- Post Office
- Restaurant
- School
- Supermarket
- Theater
- Community Center
- Fitness Center
- Museum

Proximity is determined by drawing a 1/2-mile radius around a main building entrance on a site map and counting the services within that radius.

Potential Technologies & Strategies

During the site selection process, give preference to urban sites with pedestrian access to a variety of services.

SS Credit 3: Brownfield Redevelopment

1 Point

Intent

To rehabilitate damaged sites where development is complicated by environmental contamination and to reduce pressure on undeveloped land.

Requirements

OPTION 1

Develop on a site documented as contaminated (by means of an ASTM E1903-97 Phase II Environmental Site Assessment or a local voluntary cleanup program).

OR

OPTION 2

Develop on a site defined as a brownfield by a local, state, or federal government agency.

Potential Technologies & Strategies

During the site selection process, give preference to brownfield sites. Identify tax incentives and property cost savings. Coordinate site development plans with remediation activity, as appropriate.

SS Credit 4.1: Alternative Transportation—Public Transportation Access

6 Points

Intent

To reduce pollution and land development impacts from automobile use.

Requirements

OPTION 1. Rail Station Proximity

Locate the project within 1/2-mile walking distance (measured from a main building entrance) of an existing or planned and funded commuter rail, light rail or subway station.

OR

OPTION 2. Bus Stop Proximity

Locate the project within 1/4-mile walking distance (measured from a main building entrance) of 1 or more stops for 2 or more public, campus, or private bus lines usable by building occupants.

Potential Technologies & Strategies

Perform a transportation survey of future building occupants to identify transportation needs. Locate the building near mass transit.

SS Credit 4.2: Alternative Transportation—Bicycle Storage and Changing Rooms

1 Point

Intent

To reduce pollution and land development impacts from automobile use.

Requirements

CASE 1. Commercial or Institutional Projects

Provide secure bicycle racks and/or storage within 200 yards of a building entrance for 5% or more of all building users (measured at peak periods)

Provide shower and changing facilities in the building, or within 200 yards of a building entrance, for 0.5% of full-time equivalent (FTE) occupants.

CASE 2. Residential Projects

Provide covered storage facilities for securing bicycles for 15% or more of building occupants.

Potential Technologies & Strategies

Design the building with transportation amenities such as bicycle racks and shower/changing facilities.

SS Credit 4.3: Alternative Transportation—Low-Emitting and Fuel-Efficient Vehicles

3 Points

Intent

To reduce pollution and land development impacts from automobile use.

Requirements

OPTION 1

Provide preferred parking[1] for low-emitting and fuel-efficient vehicles[2] for 5% of the total vehicle parking capacity of the site. Providing a discounted parking rate is an acceptable substitute for preferred parking for low-emitting/fuel-efficient vehicles. To establish a meaningful incentive in all potential markets, the parking rate must be discounted at least 20%. The discounted rate must be available to all customers (i.e., not limited to the number of customers equal to 5% of the vehicle parking capacity), publicly posted at the entrance of the parking area and available for a minimum of 2 years.

OR

OPTION 2

Install alternative-fuel fueling stations for 3% of the total vehicle parking capacity of the site. Liquid or gaseous fueling facilities must be separately ventilated or located outdoors.

OR

OPTION 3

Provide low-emitting and fuel-efficient vehicles[2] for 3% of full-time equivalent (FTE) occupants.

Provide preferred parking[1] for these vehicles.

OR

OPTION 4

Provide building occupants access to a low-emitting or fuel-efficient vehicle-sharing program. The following requirements must be met:

- One low-emitting or fuel-efficient vehicle must be provided per 3% of FTE occupants, assuming that 1 shared vehicle can carry 8 persons (i.e., 1 vehicle per 267 FTE occupants). For buildings with fewer than 267 FTE occupants, at least 1 low emitting or fuel-efficient vehicle must be provided.
- A vehicle-sharing contract must be provided that has an agreement of at least 2 years.

1 For the purposes of this credit "preferred parking" refers to the parking spots that are closest to the main entrance of the project (exclusive of spaces designated for handicapped persons) or parking passes provided at a discounted price.

2 For the purposes of this credit, low-emitting and fuel-efficient vehicles are defined as vehicles that are either classified as Zero Emission Vehicles (ZEV) by the California Air Resources Board or have achieved a minimum green score of 40 on the American Council for an Energy Efficient Economy (ACEEE) annual vehicle rating guide.

- The estimated number of customers served per vehicle must be supported by documentation.
- A narrative explaining the vehicle-sharing program and its administration must be submitted.
- Parking for low-emitting and fuel-efficient vehicles must be located in the nearest available spaces in the nearest available parking area. Provide a site plan or area map clearly highlighting the walking path from the parking area to the project site and noting the distance.

Potential Technologies & Strategies

Provide transportation amenities such as alternative-fuel refueling stations. Consider sharing the costs and benefits of refueling stations with neighbors.

SS Credit 4.4: Alternative Transportation—Parking Capacity

2 Points

Intent

To reduce pollution and land development impacts from automobile use.

Requirements

CASE 1. Non-Residential Projects

OPTION 1

Size parking capacity to meet but not exceed minimum local zoning requirements.

Provide preferred parking for carpools or vanpools for 5% of the total parking spaces.

OR

OPTION 2

For projects that provide parking for less than 5% of full-time equivalent (FTE) building occupants:

Provide preferred parking[1] for carpools or vanpools, marked as such, for 5% of total parking spaces. Providing a discounted parking rate is an acceptable substitute for preferred parking for carpool or vanpool vehicles. To establish a meaningful incentive in all potential markets, the parking rate must be discounted at least 20%. The discounted rate must be available to all customers (i.e., not limited to the number of customers equal to 5% of the vehicle parking capacity), publicly posted at the entrance of the parking area, and available for a minimum of 2 years.

OR

OPTION 3

Provide no new parking.

OR

OPTION 4

For projects that have no minimum local zoning requirements, provide 25% fewer parking spaces than the applicable standard listed in the 2003 Institute of Transportation Engineers (ITE) "Parking Generation" study at http://www.ite.org.

CASE 2. Residential Projects

OPTION 1

Size parking capacity to meet but not exceed minimum local zoning requirements

Provide infrastructure and support programs to facilitate shared vehicle use such as carpool drop-off areas, designated parking for vanpools, car-share services, ride boards and shuttle services to mass transit.

1 For the purposes of this credit "preferred parking" refers to the parking spots that are closest to the main entrance of the project (exclusive of spaces designated for handicapped persons) or parking passes provided at a discounted price.

OR

OPTION 2

Provide no new parking.

CASE 3. Mixed Use (Residential with Commercial/Retail) Projects

OPTION 1

Mixed-use buildings with less than 10% commercial area must be considered residential and adhere to the residential requirements in Case 2. For mixed-use buildings with more than 10% commercial area, the commercial space must adhere to non-residential requirements in Case 1 and the residential component must adhere to residential requirements in Case 2.

OR

OPTION 2

Provide no new parking.

Potential Technologies & Strategies

Minimize parking lot/garage size. Consider sharing parking facilities with adjacent buildings. Consider alternatives that will limit the use of single occupancy vehicles.

SS Credit 5.1: Site Development—Protect or Restore Habitat

1 Point

Intent

To conserve existing natural areas and restore damaged areas to provide habitat and promote biodiversity.

Requirements

CASE 1. Greenfield Sites[1]

Limit all site disturbance to the following parameters:

- 40 feet beyond the building perimeter;
- 10 feet beyond surface walkways, patios, surface parking and utilities less than 12 inches in diameter;
- 15 feet beyond primary roadway curbs and main utility branch trenches;
- 25 feet beyond constructed areas with permeable surfaces (such as pervious paving areas, stormwater detention facilities and playing fields) that require additional staging areas to limit compaction in the constructed area.

CASE 2. Previously Developed[2] Areas or Graded Sites

Restore or protect a minimum of 50% of the site (excluding the building footprint) or 20% of the total site area (including building footprint), whichever is greater, with native or adapted vegetation[3]. Projects earning SS Credit 2: Development Density and Community Connectivity may include vegetated roof surface in this calculation if the plants are native or adapted, provide habitat, and promote biodiversity.

Potential Technologies & Strategies

Survey greenfield sites to identify site elements and adopt a master plan for developing the project site. Carefully site the building to minimize disruption to existing ecosystems and design the building to minimize its footprint. Strategies include stacking the building program, tuck-under parking and sharing parking facilities with neighbors. Establish clearly-marked construction boundaries to minimize disturbance of the existing site and restore previously degraded areas to their natural state. For previously developed sites, use local and regional governmental agencies, consultants, educational facilities and native plant societies as resources for the selection of appropriate native or adapted plants. Prohibit plants listed as invasive or noxious weed species. Once established, native/adapted plants require minimal or no irrigation; do not require active maintenance such as mowing or chemical inputs such as fertilizers, pesticides or herbicides; and provide habitat value and promote biodiversity through avoidance of monoculture plantings.

1 Greenfield sites are those that are not previously developed or graded and remain in a natural state.
2 Previously developed areas are those that previously contained buildings, roadways, parking lots or were graded or altered by direct human activities.
3 Native or adapted plants are plants indigenous to a locality or cultivars of native plants that are adapted to the local climate and are not considered invasive species or noxious weeds.

SS Credit 5.2: Site Development—Maximize Open Space

1 Point

Intent

To promote biodiversity by providing a high ratio of open space to development footprint.

Requirements

CASE 1. Sites with Local Zoning Open Space Requirements

Reduce the development footprint[1] and/or provide vegetated open space within the project boundary such that the amount of open space exceeds local zoning requirements by 25%.

CASE 2. Sites with No Local Zoning Requirements (e.g. some university campuses, military bases)

Provide a vegetated open space area adjacent to the building that is equal in area to the building footprint.

CASE 3. Sites with Zoning Ordinances but No Open Space Requirements

Provide vegetated open space equal to 20% of the project site area.

ALL CASES

For projects in urban areas that earn SS Credit 2: Development Density and Community Connectivity, vegetated roof areas can contribute to credit compliance.

For projects in urban areas that earn SS Credit 2: Development Density and Community Connectivity, pedestrian-oriented hardscape areas can contribute to credit compliance. For such projects, a minimum of 25% of the open space counted must be vegetated.

Wetlands or naturally designed ponds may count as open space and the side slope gradients average 1:4 (vertical: horizontal) or less and are vegetated.

Potential Technologies & Strategies

Perform a site survey to identify site elements and adopt a master plan for developing the project site. Select a suitable building location and design the building footprint to minimize site disruption. Strategies include stacking the building program, tuck-under parking and sharing parking facilities with neighbors to maximize the amount of open space on the site.

1 Development footprint is defined as the total area of the building footprint, hardscape, access roads and parking.

SS Credit 6.1: Stormwater Design—Quantity Control

1 Point

Intent

To limit disruption of natural hydrology by reducing impervious cover, increasing on-site infiltration, reducing or eliminating pollution from stormwater runoff and eliminating contaminants.

Requirements

CASE 1. Sites with Existing Imperviousness 50% or Less

OPTION 1

Implement a stormwater management plan that prevents the postdevelopment peak discharge rate and quantity from exceeding the predevelopment peak discharge rate and quantity for the 1- and 2-year 24-hour design storms.

OR

OPTION 2

Implement a stormwater management plan that protects receiving stream channels from excessive erosion. The stormwater management plan must include stream channel protection and quantity control strategies.

CASE 2. Sites with Existing Imperviousness Greater Than 50%

Implement a stormwater management plan that results in a 25% decrease in the volume of stormwater runoff from the 2-year 24-hour design storm.

Potential Technologies & Strategies

Design the project site to maintain natural stormwater flows by promoting infiltration. Specify vegetated roofs, pervious paving and other measures to minimize impervious surfaces. Reuse stormwater for non-potable uses such as landscape irrigation, toilet and urinal flushing, and custodial uses.

SS Credit 6.2: Stormwater Design—Quality Control

1 Point

Intent

To limit disruption and pollution of natural water flows by managing stormwater runoff.

Requirements

Implement a stormwater management plan that reduces impervious cover, promotes infiltration and captures and treats the stormwater runoff from 90% of the average annual rainfall[1] using acceptable best management practices (BMPs).

BMPs used to treat runoff must be capable of removing 80% of the average annual postdevelopment total suspended solids (TSS) load based on existing monitoring reports. BMPs are considered to meet these criteria if:

- They are designed in accordance with standards and specifications from a state or local program that has adopted these performance standards,

OR

- There exists infield performance monitoring data demonstrating compliance with the criteria. Data must conform to accepted protocol (e.g., Technology Acceptance Reciprocity Partnership [TARP], Washington State Department of Ecology) for BMP monitoring.

Potential Technologies & Strategies

Use alternative surfaces (e.g., vegetated roofs, pervious pavement, grid pavers) and nonstructural techniques (e.g., rain gardens, vegetated swales, disconnection of imperviousness, rainwater recycling) to reduce imperviousness and promote infiltration and thereby reduce pollutant loadings.

Use sustainable design strategies (e.g., low-impact development, environmentally sensitive design) to create integrated natural and mechanical treatment systems such as constructed wetlands, vegetated filters and open channels to treat stormwater runoff.

1 There are 3 distinct climates in the United States that influence the nature and amount of annual rainfall. Humid watersheds are defined as those that receive at least 40 inches of rainfall each year. Semiarid watersheds receive between 20 and 40 inches of rainfall per year, and arid watersheds receive less than 20 inches of rainfall per year. For this credit, 90% of the average annual rainfall is equivalent to treating the runoff from the following (based on climate):
- Humid Watersheds — 1 inch of rainfall
- Semiarid Watersheds — 0.75 inches of rainfall
- Arid Watersheds — 0.5 inches of rainfall

SS Credit 7.1: Heat Island Effect—Nonroof

1 Point

Intent

To reduce heat islands[1] to minimize impacts on microclimates and human and wildlife habitats.

Requirements

OPTION 1

Use any combination of the following strategies for 50% of the site hardscape (including roads, sidewalks, courtyards and parking lots):

- Provide shade from the existing tree canopy or within 5 years of landscape installation. Landscaping (trees) must be in place at the time of occupancy.
- Provide shade from structures covered by solar panels that produce energy used to offset some nonrenewable resource use.
- Provide shade from architectural devices or structures that have a solar reflectance index[2] (SRI) of at least 29.
- Use hardscape materials with an SRI of at least 29.
- Use an open-grid pavement system (at least 50% pervious).

OR

OPTION 2

Place a minimum of 50% of parking spaces under cover[3]. Any roof used to shade or cover parking must have an SRI of at least 29, be a vegetated green roof or be covered by solar panels that produce energy used to offset some nonrenewable resource use.

Potential Technologies & Strategies

Employ strategies, materials and landscaping techniques that reduce the heat absorption of exterior materials. Use shade (calculated on June 21, noon solar time) from native or adapted trees and large shrubs, vegetated trellises or other exterior structures supporting vegetation. Consider using new coatings and integral colorants for asphalt to achieve light-colored surfaces instead of blacktop. Position photovoltaic cells to shade impervious surfaces.

Consider replacing constructed surfaces (e.g., roof, roads, sidewalks, etc.) with vegetated surfaces such as vegetated roofs and open grid paving or specify high-albedo materials, such as concrete, to reduce heat absorption.

1 Heat islands are defined as thermal gradient differences between developed and undeveloped areas.
2 The solar reflectance index (SRI) is a measure of the constructed surface's ability to reflect solar heat, as shown by a small temperature rise. It is defined so that a standard black surface (reflectance 0.05, emittance 0.90) is 0 and a standard white surface (reflectance 0.80, emittance 0.90) is 100. To calculate the SRI for a given material, obtain the reflectance value and emittance value for the material. SRI is calculated according to ASTM E 1980. Reflectance is measured according to ASTM E 903, ASTM E 1918, or ASTM C 1549. Emittance is measured according to ASTM E 408 or ASTM C 1371.
3 For the purposes of this credit, under cover parking is defined as parking underground, under deck, under roof, or under a building.

SS Credit 7.2: Heat Island Effect—Roof

1 Point

Intent

To reduce heat islands[1] to minimize impacts on microclimates and human and wildlife habitats.

Requirements

OPTION 1

Use roofing materials with a solar reflectance index[2] (SRI) equal to or greater than the values in the table below for a minimum of 75% of the roof surface.

Roofing materials having a lower SRI value than those listed below may be used if the weighted rooftop SRI average meets the following criteria:

$$\frac{\text{Area Roof Meeting Minimum SRI}}{\text{Total Roof Area}} \times \frac{\text{SRI of Installed Roof}}{\text{Required SRI}} \geq 75\%$$

Roof Type	Slope	SRI
Low-sloped roof	≤ 2:12	78
Steep-sloped roof	> 2:12	29

OR

OPTION 2

Install a vegetated roof that covers at least 50% of the roof area.

OR

OPTION 3

Install high-albedo and vegetated roof surfaces that, in combination, meet the following criteria:

$$\frac{\text{Area Roof Meeting Minimum SRI}}{0.75} + \frac{\text{Area of Vegetated Roof}}{0.5} \geq \text{Total Roof Area}$$

Roof Type	Slope	SRI
Low-sloped roof	≤ 2:12	78
Steep-sloped roof	> 2:12	29

1 Heat islands are defined as thermal gradient differences between developed and undeveloped areas.

2 The solar reflectance index (SRI) is a measure of the constructed surface's ability to reflect solar heat, as shown by a small temperature rise. It is defined so that a standard black surface (reflectance 0.05, emittance 0.90) is 0 and a standard white surface (reflectance 0.80, emittance 0.90) is 100. To calculate the SRI for a given material, obtain the reflectance value and emittance value for the material. SRI is calculated according to ASTM E 1980. Reflectance is measured according to ASTM E 903, ASTM E 1918 or ASTM C 1549. Emittance is measured according to ASTM E 408 or ASTM C 1371.

Potential Technologies & Strategies

Consider installing high-albedo and vegetated roofs to reduce heat absorption. Default values will be available in the LEED Reference Guide for Green Building Design and Construction, 2009 Edition. Product information is available from the Cool Roof Rating Council Web site at http://www.coolroofs.org/ and the ENERGY STAR® Web site at http://www.energystar.gov/.

SS Credit 8: Light Pollution Reduction

1 Point

Intent

To minimize light trespass from the building and site, reduce sky-glow to increase night sky access, improve nighttime visibility through glare reduction and reduce development impact from lighting on nocturnal environments.

Requirements

Project teams must comply with 1 of the 2 options for interior lighting AND the requirement for exterior lighting.

For Interior Lighting

OPTION 1

Reduce the input power (by automatic device) of all nonemergency interior luminaires with a direct line of sight to any openings in the envelope (translucent or transparent) by at least 50% between 11 p.m. and 5 a.m. After-hours override may be provided by a manual or occupant-sensing device provided the override lasts no more than 30 minutes.

OR

OPTION 2

All openings in the envelope (translucent or transparent) with a direct line of sight to any nonemergency luminaires must have shielding (controlled/closed by automatic device for a resultant transmittance of less than 10% between 11 p.m. and 5 a.m.).

For Exterior Lighting

Light areas only as required for safety and comfort. Exterior lighting power densities shall not exceed those specified in ANSI/ASHRAE/IESNA Standard 90.1-2007 with Addenda 1 for the documented lighting zone. Justification shall be provided for the selected lighting zone. Lighting controls for all exterior lighting shall comply with section 9.4.1.3 of ANSI/ASHRAE/IESNA Standard 90.1- 2007, without amendments[1].

Classify the project under 1 of the following zones, as defined in IESNA RP-33, and follow all the requirements for that zone:

LZ1: Dark (**developed areas within national parks, state parks, forest land and rural areas**)
Design exterior lighting so that all site and building-mounted luminaires produce a maximum initial illuminance value no greater than 0.01 horizontal and vertical footcandles at the site boundary and beyond. Document that 0% of the total initial designed fixture lumens (sum total of all fixtures on site) are emitted at an angle of 90 degrees or higher from nadir (straight down).

1 The requirement to use ASHRAE Addenda I is unique to this credit and does not obligate Project teams to use ASHRAE approved addenda for other credits.

LZ2: Low (primarily residential zones, neighborhood business districts, light industrial areas with limited nighttime use and residential mixed-use areas)
Design exterior lighting so that all site and building-mounted luminaires produce a maximum initial illuminance value no greater than 0.10 horizontal and vertical footcandles at the site boundary and no greater than 0.01 horizontal footcandles 10 feet beyond the site boundary. Document that no more than 2% of the total initial designed fixture lumens (sum total of all fixtures on site) are emitted at an angle of 90 degrees or higher from nadir (straight down).

LZ3: Medium (all other areas not included in LZ1, LZ2 or LZ4, such as commercial/ industrial, and high-density residential)
Design exterior lighting so that all site and building-mounted luminaires produce a maximum initial illuminance value no greater than 0.20 horizontal and vertical footcandles at the site boundary and no greater than 0.01 horizontal footcandles 15 feet beyond the site. Document that no more than 5% of the total initial designed fixture lumens (sum total of all fixtures on site) are emitted at an angle of 90 degrees or higher from nadir (straight down).

LZ4: High[2] (high-activity commercial districts in major metropolitan areas)
Design exterior lighting so that all site and building-mounted luminaires produce a maximum initial illuminance value no greater than 0.60 horizontal and vertical footcandles at the site boundary and no greater than 0.01 horizontal footcandles 15 feet beyond the site. Document that no more than 10% of the total initial designed fixture lumens (sum total of all fixtures on site) are emitted at an angle of 90 degrees or higher from nadir (straight down).

LZ2, LZ3 and LZ4 - For site boundaries that abut public rights-of-way, light trespass requirements may be met relative to the curb line instead of the site boundary.

For All Zones
Illuminance generated from a single luminaire placed at the intersection of a private vehicular driveway and public roadway accessing the site is allowed to use the centerline of the public roadway as the site boundary for a length of 2 times the driveway width centered at the centerline of the driveway.

Potential Technologies & Strategies

Adopt site lighting criteria to maintain safe light levels while avoiding off-site lighting and night sky pollution. Minimize site lighting where possible, and use computer software to model the site lighting. Technologies to reduce light pollution include full cutoff luminaires, low-reflectance surfaces and low-angle spotlights.

2 To be LZ4, the area must be so designated by an organization with local jurisdiction, such as the local zoning authority.

WATER EFFICIENCY

WE Prerequisite 1: Water Use Reduction

Required

Intent

To increase water efficiency within buildings to reduce the burden on municipal water supply and wastewater systems.

Requirements

Employ strategies that in aggregate use 20% less water than the water use baseline calculated for the building (not including irrigation).

Calculate the baseline according to the commercial and/or residential baselines outlined below.[1] Calculations are based on estimated occupant usage and must include only the following fixtures and fixture fittings (as applicable to the project scope): water closets, urinals, lavatory faucets, showers, kitchen sink faucets and prerinse spray valves.

Commercial Fixtures, Fittings, and Appliances	Current Baseline
Commercial toilets	1.6 gallons per flush (gpf)* Except blow-out fixtures: 3.5 (gpf)
Commercial urinals	1.0 (gpf)
Commercial lavatory (restroom) faucets	2.2 gallons per minute (gpm) at 60 pounds per square inch (psi), private applications only (hotel or motel guest rooms, hospital patient rooms) 0.5 (gpm) at 60 (psi)** all others except private applications 0.25 gallons per cycle for metering faucets
Commercial prerinse spray valves (for food service applications)	Flow rate ≤ 1.6 (gpm) (no pressure specified; no performance requirement)

Residential Fixtures, Fittings, and Appliances	Current Baseline
Residential toilets	1.6 (gpf)***
Residential lavatory (bathroom) faucets	2.2 (gpm) at 60 psi
Residential kitchen faucet	
Residential showerheads	2.5 (gpm) at 80 (psi) per shower stall****

* EPAct 1992 standard for toilets applies to both commercial and residential models.
** In addition to EPAct requirements, the American Society of Mechanical Engineers standard for public lavatory faucets is 0.5 gpm at 60 psi (ASME A112.18.1-2005). This maximum has been incorporated into the national Uniform Plumbing Code and the International Plumbing Code.
*** EPAct 1992 standard for toilets applies to both commercial and residential models.
**** Residential shower compartment (stall) in dwelling units: The total allowable flow rate from all flowing showerheads at any given time, including rain systems, waterfalls, bodysprays, bodyspas and jets, must be limited to the allowable showerhead flow rate as specified above (2.5 gpm) per shower compartment, where the floor area of the shower compartment is less than 2,500 square inches. For each increment of 2,500 square inches of floor area thereafter or part thereof, an additional showerhead with total allowable flow rate from all flowing devices equal to or less than the allowable flow rate as specified above must be allowed. Exception: Showers that emit recirculated nonpotable water originating from within the shower compartment while operating are allowed to exceed the maximum as long as the total potable water flow does not exceed the flow rate as specified above.

1 Tables adapted from information developed and summarized by the U.S. Environmental Protection Agency (EPA) Office of Water based on requirements of the Energy Policy Act (EPAct) of 1992 and subsequent rulings by the Department of Energy, requirements of the EPAct of 2005, and the plumbing code requirements as stated in the 2006 editions of the Uniform Plumbing Code or International Plumbing Code pertaining to fixture performance.

The following fixtures, fittings and appliances are outside the scope of the water use reduction calculation:

- Commercial Steam Cookers
- Commercial Dishwashers
- Automatic Commercial Ice Makers
- Commercial (family sized) Clothes Washers
- Residential Clothes Washers
- Standard and Compact Residential Dishwashers

Potential Technologies & Strategies

WaterSense-certified fixtures and fixture fittings should be used where available. Use high-efficiency fixtures (e.g., water closets and urinals) and dry fixtures, such as toilets attached to composting systems, to reduce potable water demand. Consider using alternative on-site sources of water (e.g., rainwater, stormwater, and air conditioner condensate) and graywater for nonpotable applications such as custodial uses and toilet and urinal flushing. The quality of any alternative source of water used must be taken into consideration based on its application or use.

WE Credit 1: Water Efficient Landscaping

2–4 Points

Intent

To limit or eliminate the use of potable water or other natural surface or subsurface water resources available on or near the project site for landscape irrigation.

Requirements

OPTION 1. Reduce by 50% (2 points)

Reduce potable water consumption for irrigation by 50% from a calculated midsummer baseline case.

Reductions must be attributed to any combination of the following items:

- Plant species, density and microclimate factor
- Irrigation efficiency
- Use of captured rainwater
- Use of recycled wastewater
- Use of water treated and conveyed by a public agency specifically for nonpotable uses

Groundwater seepage that is pumped away from the immediate vicinity of building slabs and foundations may be used for landscape irrigation to meet the intent of this credit. However, the project team must demonstrate that doing so does not affect site stormwater management systems.

OR

OPTION 2. No Potable Water Use or Irrigation[1] (4 points)

Meet the requirements for Option 1.

AND

PATH 1

Use only captured rainwater, recycled wastewater, recycled graywater or water treated and conveyed by a public agency specifically for nonpotable uses for irrigation.

OR

PATH 2

Install landscaping that does not require permanent irrigation systems. Temporary irrigation systems used for plant establishment are allowed only if removed within a period not to exceed 18 months of installation.

1 If the percent reduction of potable water is 100% AND the percent reduction of total water is equal to or greater than 50%, both Option 1 and Option 2 are earned.

Potential Technologies & Strategies

Perform a soil/climate analysis to determine appropriate plant material and design the landscape with native or adapted plants to reduce or eliminate irrigation requirements. Where irrigation is required, use high-efficiency equipment and/or climate-based controllers.

WE Credit 2: Innovative Wastewater Technologies

2 Points

Intent

To reduce wastewater generation and potable water demand while increasing the local aquifer recharge.

Requirements

OPTION 1

Reduce potable water use for building sewage conveyance by 50% through the use of water-conserving fixtures (e.g., water closets, urinals) or nonpotable water (e.g., captured rainwater, recycled graywater, on-site or municipally treated wastewater).

OR

OPTION 2

Treat 50% of wastewater on-site to tertiary standards. Treated water must be infiltrated or used on-site.

Potential Technologies & Strategies

Specify high-efficiency fixtures and dry fixtures (e.g., composting toilet systems, nonwater-using urinals) to reduce wastewater volumes. Consider reusing stormwater or graywater for sewage conveyance or on-site mechanical and/or natural wastewater treatment systems. Options for on-site wastewater treatment include packaged biological nutrient removal systems, constructed wetlands and high-efficiency filtration systems.

WE Credit 3: Water Use Reduction

2–4 Points

Intent

To further increase water efficiency within buildings to reduce the burden on municipal water supply and wastewater systems.

Requirements

Employ strategies that in aggregate use less water than the water use baseline calculated for the building (not including irrigation). The minimum water savings percentage for each point threshold is as follows:

Percentage Reduction	Points
30%	2
35%	3
40%	4

Calculate the baseline according to the commercial and/or residential baselines outlined below.[1] Calculations are based on estimated occupant usage and must include only the following fixtures and fixture fittings (as applicable to the project scope): water closets, urinals, lavatory faucets, showers, kitchen sink faucets and pre-rinse spray valves.

Commercial Fixtures, Fittings, and Appliances	Current Baseline
Commercial toilets	1.6 gallons per flush (gpf)* Except blow-out fixtures: 3.5 (gpf)
Commercial urinals	1.0 (gpf)
Commercial lavatory (restroom) faucets	2.2 gallons per minute (gpm) at 60 pounds per square inch (psi), private applications only (hotel or motel guest rooms, hospital patient rooms) 0.5 (gpm) at 60 (psi)** all others except private applications 0.25 gallons per cycle for metering faucets
Commercial prerinse spray valves (for food service applications)	Flow rate ≤ 1.6 (gpm) (no pressure specified; no performance requirement)

Residential Fixtures, Fittings, and Appliances	Current Baseline
Residential toilets	1.6 (gpf)***
Residential lavatory (bathroom) faucets	2.2 (gpm) at 60 psi
Residential kitchen faucet	
Residential showerheads	2.5 (gpm) at 80 (psi) per shower stall****

* EPAct 1992 standard for toilets applies to both commercial and residential models.
** In addition to EPAct requirements, the American Society of Mechanical Engineers standard for public lavatory faucets is 0.5 gpm at 60 psi (ASME A112.18.1-2005). This maximum has been incorporated into the national Uniform Plumbing Code and the International Plumbing Code.
*** EPAct 1992 standard for toilets applies to both commercial and residential models.
**** Residential shower compartment (stall) in dwelling units: The total allowable flow rate from all flowing showerheads at any given time, including rain systems, waterfalls, bodysprays, bodyspas and jets, must be limited to the allowable showerhead flow rate as specified above (2.5 gpm) per shower compartment, where the floor area of the shower compartment is less than 2,500 square inches. For each increment of 2,500 square inches of floor area thereafter or part thereof, an additional showerhead with total allowable flow rate from all flowing devices equal to or less than the allowable flow rate as specified above must be allowed. Exception: Showers that emit recirculated nonpotable water originating from within the shower compartment while operating are allowed to exceed the maximum as long as the total potable water flow does not exceed the flow rate as specified above.

1 Tables adapted from information developed and summarized by the U.S. Environmental Protection Agency (EPA) Office of Water based on requirements of the Energy Policy Act (EPAct) of 1992 and subsequent rulings by the Department of Energy, requirements of the EPAct of 2005, and the plumbing code requirements as stated in the 2006 editions of the Uniform Plumbing Code or International Plumbing Code pertaining to fixture performance.

The following fixtures, fittings and appliances are outside the scope of the water use reduction calculation:

- Commercial Steam Cookers
- Commercial Dishwashers
- Automatic Commercial Ice Makers
- Commercial (family-sized) Clothes Washers
- Residential Clothes Washers
- Standard and Compact Residential Dishwashers

Potential Technologies & Strategies

Use WaterSense-certified fixtures and fixture fittings where available. Use high-efficiency fixtures (e.g., water closets and urinals) and dry fixtures, such as toilets attached to composting systems, to reduce the potable water demand. Consider using alternative on-site sources of water (e.g., rainwater, stormwater, and air conditioner condensate, graywater) for nonpotable applications (e.g., toilet and urinal flushing, custodial uses). The quality of any alternative source of water being used must be taken into consideration based on its application or use.

EA Prerequisite 1: Fundamental Commissioning of Building Energy Systems

Required

Intent

To verify that the project's energy-related systems are installed, and calibrated to perform according to the owner's project requirements, basis of design and construction documents.

Benefits of commissioning include reduced energy use, lower operating costs, fewer contractor callbacks, better building documentation, improved occupant productivity and verification that the systems perform in accordance with the owner's project requirements.

Requirements

The following commissioning process activities must be completed by the project team:

- Designate an individual as the commissioning authority (CxA) to lead, review and oversee the completion of the commissioning process activities.
  - The CxA must have documented commissioning authority experience in at least 2 building projects.
  - The individual serving as the CxA must be independent of the project design and construction management, though the CxA may be an employee of any firm providing those services. The CxA may be a qualified employee or consultant of the owner.
  - The CxA must report results, findings and recommendations directly to the owner.
  - For projects smaller than 50,000 gross square feet, the CxA may be a qualified person on the design or construction team who has the required experience.
- The owner must document the owner's project requirements. The design team must develop the basis of design. The CxA must review these documents for clarity and completeness. The owner and design team must be responsible for updates to their respective documents.
- Develop and incorporate commissioning requirements into the construction documents.
- Develop and implement a commissioning plan.
- Verify the installation and performance of the systems to be commissioned.
- Complete a summary commissioning report.

Commissioned Systems

Commissioning process activities must be completed for the following energy-related systems, at a minimum:

- Heating, ventilating, air conditioning and refrigeration (HVAC&R) systems (mechanical and passive) and associated controls
- Lighting and daylighting controls
- Domestic hot water systems
- Renewable energy systems (e.g., wind, solar)

Potential Technologies & Strategies

Engage a CxA as early as possible in the design process. Determine the owner's project requirements, develop and maintain a commissioning plan for use during design and construction and incorporate commissioning requirements in bid documents. Assemble the commissioning team, and prior to occupancy verify the performance of energy consuming systems. Complete the commissioning reports with recommendations prior to accepting the commissioned systems.

Owners are encouraged to seek out qualified individuals to lead the commissioning process. Qualified individuals are identified as those who possess a high level of experience in the following areas:

- Energy systems design, installation and operation
- Commissioning planning and process management
- Hands-on field experience with energy systems performance, interaction, start-up, balancing, testing, troubleshooting, operation and maintenance procedures
- Energy systems automation control knowledge

Owners are encouraged to consider including water-using systems, building envelope systems, and other systems in the scope of the commissioning plan as appropriate. The building envelope is an important component of a facility that impacts energy consumption, occupant comfort and indoor air quality. While this prerequisite does not require building envelope commissioning, an owner can achieve significant financial savings and reduce risk of poor indoor air quality by including it in the commissioning process.

The LEED Reference Guide for Green Building Design and Construction, 2009 Edition provides guidance on the rigor expected for this prerequisite for the following:

- Owner's project requirements
- Basis of design
- Commissioning plan
- Commissioning specification
- Performance verification documentation
- Commissioning report

EA Prerequisite 2: Minimum Energy Performance

Required

Intent

To establish the minimum level of energy efficiency for the proposed building and systems to reduce environmental and economic impacts associated with excessive energy use.

Requirements

OPTION 1. Whole Building Energy Simulation

Demonstrate a 10% improvement in the proposed building performance rating for new buildings, or a 5% improvement in the proposed building performance rating for major renovations to existing buildings, compared with the baseline building performance rating.

Calculate the baseline building performance rating according to the building performance rating method in Appendix G of ANSI/ASHRAE/IESNA Standard 90.1-2007 (with errata but without addenda[1]) using a computer simulation model for the whole building project.

Appendix G of Standard 90.1-2007 requires that the energy analysis done for the building performance rating method include all energy costs associated with the building project. To achieve points using this credit, the proposed design must meet the following criteria:

- Comply with the mandatory provisions (Sections 5.4, 6.4, 7.4, 8.4, 9.4 and 10.4) in Standard 90.1-2007 (with errata but without addenda[1]).
- Include all energy costs associated with the building project.
- Compare against a baseline building that complies with Appendix G of Standard 90.1-2007 (with errata but without addenda[1]). The default process energy cost is 25% of the total energy cost for the baseline building. If the building's process energy cost is less than 25% of the baseline building energy cost, the LEED submittal must include documentation substantiating that process energy inputs are appropriate.

For the purpose of this analysis, process energy is considered to include, but is not limited to, office and general miscellaneous equipment, computers, elevators and escalators, kitchen cooking and refrigeration, laundry washing and drying, lighting exempt from the lighting power allowance (e.g., lighting integral to medical equipment) and other (e.g., waterfall pumps).

Regulated (non-process) energy includes lighting (for the interior, parking garage, surface parking, façade, or building grounds, etc. except as noted above), heating, ventilation and air conditioning (HVAC) (for space heating, space cooling, fans, pumps, toilet exhaust, parking garage ventilation, kitchen hood exhaust, etc.), and service water heating for domestic or space heating purposes.

Process loads must be identical for both the baseline building performance rating and the proposed building performance rating. However, project teams may follow the exceptional calculation method (ANSI/ASHRAE/IESNA Standard 90.1-2007 G2.5) to document measures that reduce process loads. Documentation of process

1 Project teams wishing to use ASHRAE approved addenda for the purposes of this credit may do so at their discretion. Addenda must be applied consistently across all LEED credits.

load energy savings must include a list of the assumptions made for both the base and the proposed design, and theoretical or empirical information supporting these assumptions.

Projects in California may use Title 24-2005, Part 6 in place of ANSI/ASHRAE/IESNA Standard 90.1-2007 for Option 1.

OR

OPTION 2. Prescriptive Compliance Path: ASHRAE Advanced Energy Design Guide

Comply with the prescriptive measures of the ASHRAE Advanced Energy Design Guide appropriate to the project scope, outlined below. Project teams must comply with all applicable criteria as established in the Advanced Energy Design Guide for the climate zone in which the building is located.

PATH 1. ASHRAE Advanced Energy Design Guide for Small Office Buildings 2004

The building must meet the following requirements:

- Less than 20,000 square feet.
- Office occupancy.

PATH 2. ASHRAE Advanced Energy Design Guide for Small Retail Buildings 2006

The building must meet the following requirements:

- Less than 20,000 square feet.
- Retail occupancy.

PATH 3. ASHRAE Advanced Energy Design Guide for Small Warehouses and Self Storage Buildings 2008

The building must meet the following requirements:

- Less than 50,000 square feet.
- Warehouse or self-storage occupancy.

OR

OPTION 3. Prescriptive Compliance Path: Advanced Buildings™ Core Performance™ Guide

Comply with the prescriptive measures identified in the Advanced Buildings™ Core Performance™ Guide developed by the New Buildings Institute. The building must meet the following requirements:

- Less than 100,000 square feet.
- Comply with Section 1: Design Process Strategies, and Section 2: Core Performance Requirements.
- Office, school, public assembly, and retail projects less than 100,000 square feet must comply with Section 1 and Section 2 of the Core Performance Guide.
- Other project types less than 100,000 square feet implement the basic requirements of the Core Performance Guide.
- Health care, warehouse and laboratory projects are ineligible for this path.

Potential Technologies & Strategies

Design the building envelope and systems to meet baseline requirements. Use a computer simulation model to assess the energy performance and identify the most cost-effective energy efficiency measures. Quantify energy performance compared with a baseline building.

If local code has demonstrated quantitative and textual equivalence following, at a minimum, the U.S. Department of Energy (DOE) standard process for commercial energy code determination, then the results of that analysis may be used to correlate local code performance with ANSI/ASHRAE/IESNA Standard 90.1-2007. Details on the DOE process for commercial energy code determination can be found at http://www.energycodes.gov/implement/determinations_com.stm.

EA Prerequisite 3: Fundamental Refrigerant Management

Required

Intent

To reduce stratospheric ozone depletion.

Requirements

Zero use of chlorofluorocarbon (CFC)-based refrigerants in new base building heating, ventilating, air conditioning and refrigeration (HVAC&R) systems. When reusing existing base building HVAC equipment, complete a comprehensive CFC phase-out conversion prior to project completion. Phase-out plans extending beyond the project completion date will be considered on their merits.

Potential Technologies & Strategies

When reusing existing HVAC systems, conduct an inventory to identify equipment that uses CFC-based refrigerants and provide a replacement schedule for these refrigerants. For new buildings, specify new HVAC equipment in the base building that uses no CFC-based refrigerants.

EA Credit 1: Optimize Energy Performance

1–19 Points

Intent

To achieve increasing levels of energy performance beyond the prerequisite standard to reduce environmental and economic impacts associated with excessive energy use.

Requirements

Select 1 of the 3 compliance path options described below. Project teams documenting achievement using any of the 3 options are assumed to be in compliance with EA Prerequisite 2: Minimum Energy Performance.

OPTION 1. Whole Building Energy Simulation (1–19 points)

Demonstrate a percentage improvement in the proposed building performance rating compared with the baseline building performance rating. Calculate the baseline building performance according to Appendix G of ANSI/ASHRAE/IESNA Standard 90.1-2007 (with errata but without addenda[1]) using a computer simulation model for the whole building project. The minimum energy cost savings percentage for each point threshold is as follows:

New Buildings	Existing Building Renovations	Points
12%	8%	1
14%	10%	2
16%	12%	3
18%	14%	4
20%	16%	5
22%	18%	6
24%	20%	7
26%	22%	8
28%	24%	9
30%	26%	10
32%	28%	11
34%	30%	12
36%	32%	13
38%	34%	14
40%	36%	15
42%	38%	16
44%	40%	17
46%	42%	18
48%	44%	19

1 Project teams wishing to use ASHRAE approved addenda for the purposes of this credit may do so at their discretion. Addenda must be applied consistently across all LEED credits.

Appendix G of Standard 90.1-2007 requires that the energy analysis done for the building performance rating method include all the energy costs associated with the building project. To achieve points under this credit, the proposed design must meet the following criteria:

- Compliance with the mandatory provisions (Sections 5.4, 6.4, 7.4, 8.4, 9.4 and 10.4) in Standard 90.1-2007 (with errata but without addenda).
- Inclusion of all the energy costs within and associated with the building project.
- Comparison against a baseline building that complies with Appendix G of Standard 90.1-2007 (with errata but without addenda). The default process energy cost is 25% of the total energy cost for the baseline building. If the building's process energy cost is less than 25% of the baseline building energy cost, the LEED submittal must include documentation substantiating that process energy inputs are appropriate.

For the purpose of this analysis, process energy is considered to include, but is not limited to, office and general miscellaneous equipment, computers, elevators and escalators, kitchen cooking and refrigeration, laundry washing and drying, lighting exempt from the lighting power allowance (e.g., lighting integral to medical equipment) and other (e.g., waterfall pumps).

Regulated (non-process) energy includes lighting (e.g., for the interior, parking garage, surface parking, façade, or building grounds, etc. except as noted above), heating, ventilating, and air conditioning (HVAC) (e.g., for space heating, space cooling, fans, pumps, toilet exhaust, parking garage ventilation, kitchen hood exhaust, etc.), and service water heating for domestic or space heating purposes.

For this credit, process loads must be identical for both the baseline building performance rating and the proposed building performance rating. However, project teams may follow the exceptional calculation method (ANSI/ASHRAE/IESNA Standard 90.1-2007 G2.5) to document measures that reduce process loads. Documentation of process load energy savings must include a list of the assumptions made for both the base and proposed design, and theoretical or empirical information supporting these assumptions.

Projects in California may use Title 24-2005, Part 6 in place of ANSI/ASHRAE/IESNA Standard 90.1-2007 for Option 1.

OR

OPTION 2. Prescriptive Compliance Path: ASHRAE Advanced Energy Design Guide (1 point)

Comply with the prescriptive measures of the ASHRAE Advanced Energy Design Guide appropriate to the project scope, outlined below. Project teams must comply with all applicable criteria as established in the Advanced Energy Design Guide for the climate zone in which the building is located.

PATH 1. ASHRAE Advanced Energy Design Guide for Small Office Buildings 2004

The building must meet the following requirements:

- Less than 20,000 square feet.
- Office occupancy.

PATH 2. ASHRAE Advanced Energy Design Guide for Small Retail Buildings 2006

The building must meet the following requirements:

- Less than 20,000 square feet.
- Retail occupancy.

PATH 3. ASHRAE Advanced Energy Design Guide for Small Warehouses and Self Storage Buildings 2008

The building must meet the following requirements:

- Less than 50,000 square feet.
- Warehouse or self-storage occupancy.

OR

OPTION 3. Prescriptive Compliance Path: Advanced Buildings™ Core Performance™ Guide (1–3 points)

Comply with the prescriptive measures identified in the Advanced Buildings™ Core Performance™ Guide developed by the New Buildings Institute. The building must meet the following requirements:

- Less than 100,000 square feet.
- Comply with Section 1: Design Process Strategies, and Section 2: Core Performance Requirements.
- Health care, warehouse or laboratory projects are ineligible for this path.

Points achieved under Option 3 (1 point):

- 1 point is available for all projects (office, school, public assembly, and retail projects) less than 100,000 square feet that comply with Sections 1 and 2 of the Core Performance Guide.
- Up to 2 additional points are available to projects that implement performance strategies listed in Section 3, Enhanced Performance. For every 3 strategies implemented from this section, 1 point is available.
- The following strategies are addressed by other aspects of LEED and are not eligible for additional points under EA Credit 1:
  - 3.1 — Cool Roofs
  - 3.8 — Night Venting
  - 3.13 — Additional Commissioning

Potential Technologies & Strategies

Design the building envelope and systems to maximize energy performance. Use a computer simulation model to assess the energy performance and identify the most cost-effective energy efficiency measures. Quantify energy performance compared with a baseline building.

If local code has demonstrated quantitative and textual equivalence following, at a minimum, the U.S. Department of Energy (DOE) standard process for commercial energy code determination, the results of that analysis may be used to correlate local code performance with ANSI/ASHRAE/IESNA Standard 90.1-2007. Details on the DOE process for commercial energy code determination can be found at http://www.energycodes.gov/implement/determinations_com.stm.

EA Credit 2: On-site Renewable Energy

1–7 Points

Intent

To encourage and recognize increasing levels of on-site renewable energy self-supply to reduce environmental and economic impacts associated with fossil fuel energy use.

Requirements

Use on-site renewable energy systems to offset building energy costs. Calculate project performance by expressing the energy produced by the renewable systems as a percentage of the building's annual energy cost and use the table below to determine the number of points achieved.

Use the building annual energy cost calculated in EA Credit 1: Optimize Energy Performance or the U.S. Department of Energy's Commercial Buildings Energy Consumption Survey database to determine the estimated electricity use.

The minimum renewable energy percentage for each point threshold is as follows:

Percentage Renewable Energy	Points
1%	1
3%	2
5%	3
7%	4
9%	5
11%	6
13%	7

Potential Technologies & Strategies

Assess the project for nonpolluting and renewable energy potential including solar, wind, geothermal, low-impact hydro, biomass and bio-gas strategies. When applying these strategies, take advantage of net metering with the local utility.

EA Credit 3: Enhanced Commissioning

2 Points

Intent

To begin the commissioning process early in the design process and execute additional activities after systems performance verification is completed.

Requirements

Implement, or have a contract in place to implement, the following additional commissioning process activities in addition to the requirements of EA Prerequisite 1: Fundamental Commissioning of Building Energy Systems and in accordance with the LEED Reference Guide for Green Building Design and Construction, 2009 Edition:

- Prior to the start of the construction documents phase, designate an independent commissioning authority (CxA) to lead, review and oversee the completion of all commissioning process activities.
  - The CxA must have documented commissioning authority experience in at least 2 building projects.
  - The individual serving as the CxA:
    - Must be independent of the work of design and construction.
    - Must not be an employee of the design firm, though he or she may be contracted through them.
    - Must not be an employee of, or contracted through, a contractor or construction manager holding construction contracts.
    - May be a qualified employee or consultant of the owner.
  - The CxA must report results, findings and recommendations directly to the owner.
- The CxA must conduct, at a minimum, 1 commissioning design review of the owner's project requirements basis of design, and design documents prior to the mid-construction documents phase and back-check the review comments in the subsequent design submission.
- The CxA must review contractor submittals applicable to systems being commissioned for compliance with the owner's project requirements and basis of design. This review must be concurrent with the review of the architect or engineer of record and submitted to the design team and the owner.
- The CxA or other project team members must develop a systems manual that gives future operating staff the information needed to understand and optimally operate the commissioned systems.
- The CxA or other project team members must verify that the requirements for training operating personnel and building occupants have been completed.
- The CxA must be involved in reviewing the operation of the building with operations and maintenance (O&M) staff and occupants within 10 months after substantial completion. A plan for resolving outstanding commissioning-related issues must be included.

Potential Technologies & Strategies

Although it is preferable that the CxA be contracted by the owner, for the enhanced commissioning credit the CxA may also be contracted through the design firms or construction management firms not holding construction contracts.

The LEED Reference Guide for Green Building Design and Construction, 2009 Edition provides detailed guidance on the rigor expected for the following process activities:

- Commissioning design review
- Commissioning submittal review
- Systems manual.

EA Credit 4: Enhanced Refrigerant Management

2 Points

Intent

To reduce ozone depletion and support early compliance with the Montreal Protocol while minimizing direct contributions to climate change.

Requirements

OPTION 1

Do not use refrigerants.

OR

OPTION 2

Select refrigerants and heating, ventilation, air conditioning and refrigeration (HVAC&R) equipment that minimize or eliminate the emission of compounds that contribute to ozone depletion and climate change. The base building HVAC&R equipment must comply with the following formula, which sets a maximum threshold for the combined contributions to ozone depletion and global warming potential:

$$LCGWP + LCODP \times 10^5 \leq 100$$

Calculation definitions for LCGWP + LCODP x $10^5 \leq 100$
LCODP = [ODPr x (Lr x Life +Mr) x Rc]/Life
LCGWP = [GWPr x (Lr x Life +Mr) x Rc]/Life
LCODP: Lifecycle Ozone Depletion Potential (lb CFC 11/Ton-Year)
LCGWP: Lifecycle Direct Global Warming Potential (lb CO_2/Ton-Year)
GWPr: Global Warming Potential of Refrigerant (0 to 12,000 lb CO_2/lbr)
ODPr: Ozone Depletion Potential of Refrigerant (0 to 0.2 lb CFC 11/lbr)
Lr: Refrigerant Leakage Rate (0.5% to 2.0%; default of 2% unless otherwise demonstrated)
Mr: End-of-life Refrigerant Loss (2% to 10%; default of 10% unless otherwise demonstrated)
Rc: Refrigerant Charge (0.5 to 5.0 lbs of refrigerant per ton of gross ARI rated cooling capacity)
Life: Equipment Life (10 years; default based on equipment type, unless otherwise demonstrated)

For multiple types of equipment, a weighted average of all base building HVAC&R equipment must be calculated using the following formula:

$$\frac{\Sigma \left(LCGWP + LCODP \times 10^5 \right) \times Qunit}{Qtotal} \leq 100$$

Calculation definitions for $[\sum (LCGWP + LCODP \times 10^5) \times Qunit] / Qtotal \leq 100$
Qunit = Gross ARI rated cooling capacity of an individual HVAC or refrigeration unit (Tons)
Qtotal = Total gross ARI rated cooling capacity of all HVAC or refrigeration

Small HVAC units (defined as containing less than 0.5 pounds of refrigerant) and other equipment, such as standard refrigerators, small water coolers and any other cooling equipment that contains less than 0.5 pounds of refrigerant, are not considered part of the base building system and are not subject to the requirements of this credit.

Do not operate or install fire suppression systems that contain ozone-depleting substances such as CFCs, hydrochlorofluorocarbons (HCFCs) or halons.

Potential Technologies & Strategies

Design and operate the facility without mechanical cooling and refrigeration equipment. Where mechanical cooling is used, utilize base building HVAC&R systems for the refrigeration cycle that minimize direct impact on ozone depletion and global climate change. Select HVAC&R equipment with reduced refrigerant charge and increased equipment life. Maintain equipment to prevent leakage of refrigerant to the atmosphere. Use fire suppression systems that do not contain HCFCs or halons.

EA Credit 5: Measurement and Verification

3 Points

Intent

To provide for the ongoing accountability of building energy consumption over time.

Requirements

OPTION 1

Develop and implement a measurement and verification (M&V) plan consistent with Option D: Calibrated Simulation (Savings Estimation Method 2) as specified in the International Performance Measurement & Verification Protocol (IPMVP) Volume III: Concepts and Options for Determining Energy Savings in New Construction, April 2003.

The M&V period must cover at least 1 year of post-construction occupancy.

Provide a process for corrective action if the results of the M&V plan indicate that energy savings are not being achieved.

OR

OPTION 2

Develop and implement a measurement and verification (M&V) plan consistent with Option B: Energy Conservation Measure Isolation, as specified in the International Performance Measurement & Verification Protocol (IPMVP) Volume III: Concepts and Options for Determining Energy Savings in New Construction, April 2003.

The M&V period must cover at least 1 year of post-construction occupancy.

Provide a process for corrective action if the results of the M&V plan indicate that energy savings are not being achieved.

Potential Technologies & Strategies

Develop an M&V plan to evaluate building and/or energy system performance. Characterize the building and/or energy systems through energy simulation or engineering analysis. Install the necessary metering equipment to measure energy use. Track performance by comparing predicted performance to actual performance, broken down by component or system as appropriate. Evaluate energy efficiency by comparing actual performance to baseline performance.

While the IPMVP describes specific actions for verifying savings associated with energy conservation measures (ECMs) and strategies, this LEED credit expands upon typical IPMVP M&V objectives. Measurement & verification activities should not necessarily be confined to energy systems where ECMs or energy conservation strategies have been implemented. The IPMVP provides guidance on M&V strategies and their appropriate applications for various situations. These strategies should be used in conjunction with monitoring and trend logging of significant energy systems to provide for the ongoing accountability of building energy performance.

For the corrective action process, consider installing diagnostics within the control system to alert the staff when equipment is not being optimally operated. Conditions that might warrant alarms to alert staff could include:

- Leaking valves in the cooling and heating coils within air handling units;
- Missed economizer opportunities (e.g., faulty economizer damper controls) ;
- Software and manual overrides allowing equipment to operate 24 hours a day/7 days a week;
- Equipment operation during unusual circumstances (e.g., boiler on when outside air temperature is above 65 °F).

Besides control diagnostics, consider employing retro-commissioning services or dedicating staff to investigate increases in energy usage (such a staff member is usually a resource conservation manager — see http://www.energy.state.or.us/rcm/rcmhm.htm for additional information).

EA Credit 6: Green Power

2 Points

Intent

To encourage the development and use of grid-source, renewable energy technologies on a net zero pollution basis.

Requirements

Engage in at least a 2-year renewable energy contract to provide at least 35% of the building's electricity from renewable sources, as defined by the Center for Resource Solutions' Green-e Energy product certification requirements.

All purchases of green power shall be based on the quantity of energy consumed, not the cost.

OPTION 1. Determine Baseline Electricity Use

Use the annual electricity consumption from the results of EA Credit 1: Optimize Energy Performance.

OR

OPTION 2. Estimate Baseline Electricity Use

Use the U.S. Department of Energy's Commercial Buildings Energy Consumption Survey database to determine the estimated electricity use.

Potential Technologies & Strategies

Determine the energy needs of the building and investigate opportunities to engage in a green power contract. Green power is derived from solar, wind, geothermal, biomass or low-impact hydro sources. Visit http://www.green-e.org/energy for details about the Green-e Energy program. The green power product purchased to comply with credit requirements need not be Green-e Energy certified. Other sources of green power are eligible if they satisfy the Green-e Energy program's technical requirements. Renewable energy certificates (RECs), tradable renewable certificates (TRCs), green tags and other forms of green power that comply with the technical requirements of the Green-e Energy program may be used to document compliance with this credit.

MR Prerequisite 1: Storage and Collection of Recyclables

Required

Intent
To facilitate the reduction of waste generated by building occupants that is hauled to and disposed of in landfills.

Requirements
Provide an easily-accessible dedicated area or areas for the collection and storage of materials for recycling for the entire building. Materials must include, at a minimum: paper, corrugated cardboard, glass, plastics and metals.

Potential Technologies & Strategies
Designate an area for recyclable collection and storage that is appropriately sized and located in a convenient area. Identify local waste handlers and buyers for glass, plastic, metals, office paper, newspaper, cardboard and organic wastes. Instruct occupants on recycling procedures. Consider employing cardboard balers, aluminum can crushers, recycling chutes and other waste management strategies to further enhance the recycling program.

MR Credit 1.1: Building Reuse—Maintain Existing Walls, Floors and Roof

1–3 Points

Intent

To extend the lifecycle of existing building stock, conserve resources, retain cultural resources, reduce waste and reduce environmental impacts of new buildings as they relate to materials manufacturing and transport.

Requirements

Maintain the existing building structure (including structural floor and roof decking) and envelope (the exterior skin and framing, excluding window assemblies and non-structural roofing material). The minimum percentage building reuse for each point threshold is as follows:

Building Reuse	Points
55%	1
75%	2
95%	3

Hazardous materials that are remediated as a part of the project must be excluded from the calculation of the percentage maintained. If the project includes an addition that is more than 2 times the square footage of the existing building, this credit is not applicable.

Potential Technologies & Strategies

Consider reusing existing, previously-occupied building structures, envelopes and elements. Remove elements that pose a contamination risk to building occupants and upgrade components that would improve energy and water efficiency such as windows, mechanical systems and plumbing fixtures.

MR Credit 1.2: Building Reuse—Maintain Interior Nonstructural Elements

1 Point

Intent

To extend the lifecycle of existing building stock, conserve resources, retain cultural resources, reduce waste and reduce environmental impacts of new buildings as they relate to materials manufacturing and transport.

Requirements

Use existing interior nonstructural elements (e.g., interior walls, doors, floor coverings and ceiling systems) in at least 50% (by area) of the completed building, including additions. If the project includes an addition with square footage more than 2 times the square footage of the existing building, this credit is not applicable.

Potential Technologies & Strategies

Consider reusing existing building structures, envelopes and interior nonstructural elements. Remove elements that pose a contamination risk to building occupants, and upgrade components that would improve energy and water efficiency such as mechanical systems and plumbing fixtures. Quantify the extent of building reuse.

MR Credit 2: Construction Waste Management

1–2 Points

Intent

To divert construction and demolition debris from disposal in landfills and incineration facilities. Redirect recyclable recovered resources back to the manufacturing process and reusable materials to appropriate sites.

Requirements

Recycle and/or salvage nonhazardous construction and demolition debris. Develop and implement a construction waste management plan that, at a minimum, identifies the materials to be diverted from disposal and whether the materials will be sorted on-site or comingled. Excavated soil and land-clearing debris do not contribute to this credit. Calculations can be done by weight or volume, but must be consistent throughout. The minimum percentage debris to be recycled or salvaged for each point threshold is as follows:

Recycled or Salvaged	Points
50%	1
75%	2

Potential Technologies & Strategies

Establish goals for diversion from disposal in landfills and incineration facilities and adopt a construction waste management plan to achieve these goals. Consider recycling cardboard, metal, brick, mineral fiber panel, concrete, plastic, clean wood, glass, gypsum wallboard, carpet and insulation. Construction debris processed into a recycled content commodity that has an open market value (e.g., wood derived fuel [WDF], alternative daily cover material, etc.) may be applied to the construction waste calculation. Designate a specific area(s) on the construction site for segregated or comingled collection of recyclable materials, and track recycling efforts throughout the construction process. Identify construction haulers and recyclers to handle the designated materials. Note that diversion may include donation of materials to charitable organizations and salvage of materials on-site.

MR Credit 3: Materials Reuse

1–2 Points

Intent

To reuse building materials and products to reduce demand for virgin materials and reduce waste, thereby lessening impacts associated with the extraction and processing of virgin resources.

Requirements

Use salvaged, refurbished or reused materials, the sum of which constitutes at least 5% or 10%, based on cost, of the total value of materials on the project. The minimum percentage materials reused for each point threshold is as follows:

Reused Materials	Points
5%	1
10%	2

Mechanical, electrical and plumbing components and specialty items such as elevators and equipment cannot be included in this calculation. Include only materials permanently installed in the project. Furniture may be included if it is included consistently in MR Credit 3: Materials Reuse through MR Credit 7: Certified Wood.

Potential Technologies & Strategies

Identify opportunities to incorporate salvaged materials into the building design, and research potential material suppliers. Consider salvaged materials such as beams and posts, flooring, paneling, doors and frames, cabinetry and furniture, brick, and decorative items.

MR Credit 4: Recycled Content

1–2 Points

Intent

To increase demand for building products that incorporate recycled content materials, thereby reducing impacts resulting from extraction and processing of virgin materials.

Requirements

Use materials with recycled content[1] such that the sum of postconsumer[2] recycled content plus 1/2 of the preconsumer[3] content constitutes at least 10% or 20%, based on cost, of the total value of the materials in the project. The minimum percentage materials recycled for each point threshold is as follows:

Recycled Content	Points
10%	1
20%	2

The recycled content value of a material assembly is determined by weight. The recycled fraction of the assembly is then multiplied by the cost of assembly to determine the recycled content value.

Mechanical, electrical and plumbing components and specialty items such as elevators cannot be included in this calculation. Include only materials permanently installed in the project. Furniture may be included if it is included consistently in MR Credit 3: Materials Reuse through MR Credit 7: Certified Wood.

Potential Technologies & Strategies

Establish a project goal for recycled content materials, and identify material suppliers that can achieve this goal. During construction, ensure that the specified recycled content materials are installed. Consider a range of environmental, economic and performance attributes when selecting products and materials.

1 Recycled content is defined in accordance with the International Organization of Standards document, ISO 14021 — Environmental labels and declarations — Self-declared environmental claims (Type II environmental labeling).
2 Postconsumer material is defined as waste material generated by households or by commercial, industrial and institutional facilities in their role as end-users of the product, which can no longer be used for its intended purpose.
3 Preconsumer material is defined as material diverted from the waste stream during the manufacturing process. Reutilization of materials (i.e., rework, regrind or scrap generated in a process and capable of being reclaimed within the same process that generated it) is excluded.

MR Credit 5: Regional Materials

1–2 Points

Intent

To increase demand for building materials and products that are extracted and manufactured within the region, thereby supporting the use of indigenous resources and reducing the environmental impacts resulting from transportation.

Requirements

Use building materials or products that have been extracted, harvested or recovered, as well as manufactured, within 500 miles of the project site for a minimum of 10% or 20%, based on cost, of the total materials value. If only a fraction of a product or material is extracted, harvested, or recovered and manufactured locally, then only that percentage (by weight) can contribute to the regional value. The minimum percentage regional materials for each point threshold is as follows:

Regional Materials	Points
10%	1
20%	2

Mechanical, electrical and plumbing components and specialty items such as elevators and equipment must not be included in this calculation. Include only materials permanently installed in the project. Furniture may be included if it is included consistently in MR Credit 3: Materials Reuse through MR Credit 7: Certified Wood.

Potential Technologies & Strategies

Establish a project goal for locally sourced materials, and identify materials and material suppliers that can achieve this goal. During construction, ensure that the specified local materials are installed, and quantify the total percentage of local materials installed. Consider a range of environmental, economic and performance attributes when selecting products and materials.

MR Credit 6: Rapidly Renewable Materials

1 Point

Intent

To reduce the use and depletion of finite raw materials and long-cycle renewable materials by replacing them with rapidly renewable materials.

Requirements

Use rapidly renewable building materials and products for 2.5% of the total value of all building materials and products used in the project, based on cost. Rapidly renewable building materials and products are made from plants that are typically harvested within a 10-year or shorter cycle.

Potential Technologies & Strategies

Establish a project goal for rapidly renewable materials, and identify products and suppliers that can support achievement of this goal. Consider materials such as bamboo, wool, cotton insulation, agrifiber, linoleum, wheatboard, strawboard and cork. During construction, ensure that the specified renewable materials are installed.

MR Credit 7: Certified Wood

1 Point

Intent

To encourage environmentally responsible forest management.

Requirements

Use a minimum of 50% (based on cost) of wood-based materials and products that are certified in accordance with the Forest Stewardship Council's principles and criteria, for wood building components. These components include at a minimum, structural framing and general dimensional framing, flooring, sub-flooring, wood doors and finishes.

Include only materials permanently installed in the project. Wood products purchased for temporary use on the project (e.g., formwork, bracing, scaffolding, sidewalk protection, and guard rails) may be included in the calculation at the project team's discretion. If any such materials are included, all such materials must be included in the calculation. If such materials are purchased for use on multiple projects, the applicant may include these materials for only one project, at its discretion. Furniture may be included if it is included consistently in MR Credits 3, Materials Reuse, through MR Credit 7, Certified Wood.

Potential Technologies & Strategies

Establish a project goal for FSC-certified wood products and identify suppliers that can achieve this goal. During construction, ensure that the FSC-certified wood products are installed and quantify the total percentage of FSC-certified wood products installed.

IEQ Prerequisite 1: Minimum Indoor Air Quality Performance

Required

Intent

To establish minimum indoor air quality (IAQ) performance to enhance indoor air quality in buildings, thus contributing to the comfort and well-being of the occupants.

Requirements

Meet the minimum requirements of Sections 4 through 7 of ASHRAE Standard 62.1-2007, Ventilation for Acceptable Indoor Air Quality (with errata but without addenda[1]).

AND

CASE 1. Mechanically Ventilated Spaces

Mechanical ventilation systems must be designed using the ventilation rate procedure or the applicable local code, whichever is more stringent.

CASE 2. Naturally Ventilated Spaces

Naturally ventilated buildings must comply with ASHRAE Standard 62.1-2007, Paragraph 5.1 (with errata but without addenda[1]).

Potential Technologies & Strategies

Design ventilation systems to meet or exceed the minimum outdoor air ventilation rates as described in the ASHRAE standard. Balance the impacts of ventilation rates on energy use and indoor air quality to optimize for energy efficiency and occupant comfort. Use the ASHRAE Standard 62.1-2007 Users Manual (with errata but without addenda[1]) for detailed guidance on meeting the referenced requirements.

1 Project teams wishing to use ASHRAE approved addenda for the purposes of this prerequisite may do so at their discretion. Addenda must be applied consistently across all LEED credits.

IEQ Prerequisite 2: Environmental Tobacco Smoke (ETS) Control

Required

Intent

To prevent or minimize exposure of building occupants, indoor surfaces and ventilation air distribution systems to environmental tobacco smoke (ETS).

Requirements

OPTION 1

Prohibit smoking in the building.

Prohibit on-property smoking within 25 feet of entries, outdoor air intakes and operable windows. Provide signage to allow smoking in designated areas, prohibit smoking in designated areas or prohibit smoking on the entire property.

OR

OPTION 2

CASE 1. Non-Residential Projects

Prohibit smoking in the building except in designated smoking areas.

Prohibit on-property smoking within 25 feet of entries, outdoor air intakes and operable windows. Provide signage to allow smoking in designated areas, prohibit smoking in designated areas or prohibit smoking on the entire property.

Provide designated smoking rooms designed to contain, capture and remove ETS from the building. At a minimum, the smoking room must be directly exhausted to the outdoors, away from air intakes and building entry paths, with no recirculation of ETS-containing air to nonsmoking areas and enclosed with impermeable deck-to-deck partitions. Operate exhaust sufficient to create a negative pressure differential with the surrounding spaces of at least an average of 5 Pascals (Pa) (0.02 inches of water gauge) and a minimum of 1 Pa (0.004 inches of water gauge) when the doors to the smoking rooms are closed.

Verify performance of the smoking rooms' differential air pressures by conducting 15 minutes of measurement, with a minimum of 1 measurement every 10 seconds, of the differential pressure in the smoking room with respect to each adjacent area and in each adjacent vertical chase with the doors to the smoking room closed. Conduct the testing with each space configured for worst-case conditions of transport of air from the smoking rooms (with closed doors) to adjacent spaces.

CASE 2. Residential and Hospitality Projects

Prohibit smoking in all common areas of the building.

Locate any exterior designated smoking areas, including balconies where smoking is permitted, at least 25 feet from entries, outdoor air intakes and operable windows opening to common areas.

Prohibit on-property smoking within 25 feet of entries, outdoor air intakes and operable windows. Provide signage to allow smoking in designated areas, prohibit smoking in designated areas or prohibit smoking on the entire property.

Weather-strip all exterior doors and operable windows in the residential units to minimize leakage from outdoors.

Minimize uncontrolled pathways for ETS transfer between individual residential units by sealing penetrations in walls, ceilings and floors in the residential units and by sealing vertical chases adjacent to the units.

Weather-strip all doors in the residential units leading to common hallways to minimize air leakage into the hallway[1].

Demonstrate acceptable sealing of residential units by a blower door test conducted in accordance with ANSI/ASTM-E779-03, Standard Test Method for Determining Air Leakage Rate By Fan Pressurization.

Use the progressive sampling methodology defined in Chapter 4 (Compliance Through Quality Construction) of the Residential Manual for Compliance with California's 2001 Energy Efficiency Standards. Residential units must demonstrate less than 1.25 square inches leakage area per 100 square feet of enclosure area (i.e., sum of all wall, ceiling and floor areas).

Potential Technologies & Strategies

Prohibit smoking in commercial buildings or effectively control the ventilation air in smoking rooms. For residential buildings, prohibit smoking in common areas and design building envelope and systems to minimize ETS transfer among dwelling units.

1 If the common hallways are pressurized with respect to the residential units then doors in the residential units leading to the common hallways need not be weather-stripped provided that the positive differential pressure is demonstrated as in Option 2, Case 1 above, considering the residential unit as the smoking room.

IEQ Credit 1: Outdoor Air Delivery Monitoring

1 Point

Intent

To provide capacity for ventilation system monitoring to help promote occupant comfort and well-being.

Requirements

Install permanent monitoring systems to ensure that ventilation systems maintain design minimum requirements. Configure all monitoring equipment to generate an alarm when airflow values or carbon dioxide (CO_2) levels vary by 10% or more from the design values via either a building automation system alarm to the building operator or a visual or audible alert to the building occupants

AND

CASE 1. Mechanically Ventilated Spaces

Monitor CO_2 concentrations within all densely occupied spaces (those with a design occupant density of 25 people or more per 1,000 square feet). CO_2 monitors must be between 3 and 6 feet above the floor.[1]

Provide a direct outdoor airflow measurement device capable of measuring the minimum outdoor air intake flow with an accuracy of plus or minus 15% of the design minimum outdoor air rate, as defined by ASHRAE 62.1-2007 (with errata but without addenda[2]) for mechanical ventilation systems where 20% or more of the design supply airflow serves nondensely occupied spaces.

CASE 2. Naturally Ventilated Spaces

Monitor CO_2 concentrations within all naturally ventilated spaces. CO_2 monitors must be between 3 and 6 feet above the floor. One CO_2 sensor may be used to monitor multiple nondensely occupied spaces if the natural ventilation design uses passive stack(s) or other means to induce airflow through those spaces equally and simultaneously without intervention by building occupants.

Potential Technologies & Strategies

Install CO_2 and airflow measurement equipment and feed the information to the heating, ventilating and air conditioning (HVAC) system and/or building automation system (BAS) to trigger corrective action, if applicable. If such automatic controls are not feasible with the building systems, use the measurement equipment to trigger alarms that inform building operators or occupants of a possible deficiency in outdoor air delivery.

1 CO_2 monitoring is required in densely occupied spaces, in addition to outdoor air intake flow measurement.
2 Project teams wishing to use ASHRAE approved addenda for the purposes of this credit may do so at their discretion. Addenda must be applied consistently across all LEED credits.

IEQ Credit 2: Increased Ventilation

1 Point

Intent

To provide additional outdoor air ventilation to improve indoor air quality (IAQ) and promote occupant comfort, well-being and productivity.

Requirements

CASE 1. Mechanically Ventilated Spaces

Increase breathing zone outdoor air ventilation rates to all occupied spaces by at least 30% above the minimum rates required by ASHRAE Standard 62.1-2007 (with errata but without addenda[1]) as determined by IEQ Prerequisite 1: Minimum Indoor Air Quality Performance.

CASE 2. Naturally Ventilated Spaces

Determine that natural ventilation is an effective strategy for the project by following the flow diagram process shown in Figure 2.8 of the CIBSE Applications Manual 10: 2005, Natural Ventilation in Non-domestic Buildings.

AND

OPTION 1

Show that the natural ventilation systems design meets the recommendations set forth in the CIBSE manuals appropriate to the project space.

PATH 1. CIBSE Applications Manual 10: 2005, Natural Ventilation in Non-domestic Buildings

PATH 2. CIBSE AM 13:2000, Mixed Mode Ventilation

OR

OPTION 2

Use a macroscopic, multizone, analytic model to predict that room-by-room airflows will effectively naturally ventilate, defined as providing the minimum ventilation rates required by ASHRAE 62.1-2007 Chapter 6 (with errata but without addenda[1]), for at least 90% of occupied spaces.

Potential Technologies & Strategies

For mechanically ventilated spaces: Use heat recovery, where appropriate, to minimize the additional energy consumption associated with higher ventilation rates.

For naturally ventilated spaces, follow the 8 design steps described in the Carbon Trust Good Practice Guide 237:

- Develop design requirements.
- Plan airflow paths.

1 Project teams wishing to use ASHRAE approved addenda for the purposes of this credit may do so at their discretion. Addenda must be applied consistently across all LEED credits.

- Identify building uses and features that might require special attention.
- Determine ventilation requirements.
- Estimate external driving pressures.
- Select types of ventilation devices.
- Size ventilation devices.
- Analyze the design.

Use public domain software such as NIST's CONTAM, Multizone Modeling Software, along with LoopDA, Natural Ventilation Sizing Tool, to analytically predict room-by-room airflows.

IEQ Credit 3.1: Construction Indoor Air Quality Management Plan—During Construction

1 Point

Intent

To reduce indoor air quality (IAQ) problems resulting from construction or renovation and promote the comfort and well-being of construction workers and building occupants.

Requirements

Develop and implement an IAQ management plan for the construction and preoccupancy phases of the building as follows:

- During construction, meet or exceed the recommended control measures of the Sheet Metal and Air Conditioning National Contractors Association (SMACNA) IAQ Guidelines For Occupied Buildings Under Construction, 2nd Edition 2007, ANSI/SMACNA 008-2008 (Chapter 3).
- Protect stored on-site and installed absorptive materials from moisture damage.
- If permanently installed air handlers are used during construction, filtration media with a minimum efficiency reporting value (MERV) of 8 must be used at each return air grille, as determined by ASHRAE Standard 52.2-1999 (with errata but without addenda[1]). Replace all filtration media immediately prior to occupancy.

Potential Technologies & Strategies

Adopt an IAQ management plan to protect the heating, ventilating and air conditioning (HVAC) system during construction, control pollutant sources and interrupt contamination pathways. Sequence the installation of materials to avoid contamination of absorptive materials, such as insulation, carpeting, ceiling tile and gypsum wallboard. Coordinate with IEQ Credit 3.2: Construction IAQ Management Plan — Before Occupancy and IEQ Credit 5: Indoor Chemical & Pollutant Source Control to determine the appropriate specifications and schedules for filtration media.

If possible, avoid using permanently installed air handlers for temporary heating/cooling during construction. Consult the LEED Reference Guide for Green Building Design and Construction, 2009 Edition for more detailed information on how to ensure the well-being of construction workers and building occupants if permanently installed air handlers must be used during construction.

1 Project teams wishing to use ASHRAE approved addenda for the purposes of this credit may do so at their discretion. Addenda must be applied consistently across all LEED credits.

IEQ Credit 3.2: Construction Indoor Air Quality Management Plan—Before Occupancy

1 Point

Intent

To reduce indoor air quality (IAQ) problems resulting from construction or renovation to promote the comfort and well-being of construction workers and building occupants.

Requirements

Develop an IAQ management plan and implement it after all finishes have been installed and the building has been completely cleaned before occupancy.

OPTION 1. Flush-Out[1]

PATH 1

After construction ends, prior to occupancy and with all interior finishes installed, install new filtration media and , perform a building flush-out by supplying a total air volume of 14,000 cubic feet of outdoor air per square foot of floor area while maintaining an internal temperature of at least 60° F and relative humidity no higher than 60%.

OR

PATH 2

If occupancy is desired prior to completion of the flush-out, the space may be occupied following delivery of a minimum of 3,500 cubic feet of outdoor air per square foot of floor area. Once the space is occupied, it must be ventilated at a minimum rate of 0.30 cubic feet per minute (cfm) per square foot of outside air or the design minimum outside air rate determined in IEQ Prerequisite 1: Minimum Indoor Air Quality Performance, whichever is greater. During each day of the flush-out period, ventilation must begin a minimum of 3 hours prior to occupancy and continue during occupancy. These conditions must be maintained until a total of 14,000 cubic feet per square foot of outside air has been delivered to the space.

OR

OPTION 2. Air Testing

Conduct baseline IAQ testing after construction ends and prior to occupancy using testing protocols consistent with the EPA Compendium of Methods for the Determination of Air Pollutants in Indoor Air and as additionally detailed in the LEED Reference Guide for Green Building Design and Construction, 2009 Edition.

1 All finishes must be installed prior to flush-out.

Demonstrate that the contaminant maximum concentration levels listed below are not exceeded:

Contaminant	Maximum Concentration
Formaldehyde	27 parts per billion
Particulates (PM10)	50 micrograms per cubic meter
Total volatile organic compounds (TVOCs)	500 micrograms per cubic meter
4-Phenylcyclohexene (4-PCH)*	6.5 micrograms per cubic meter
Carbon monoxide (CO)	9 part per million and no greater than 2 parts per million above outdoor levels
* This test is only required if carpets and fabrics with styrene butadiene rubber (SBR) latex backing are installed as part of the base building systems.	

For each sampling point where the maximum concentration limits are exceeded, conduct an additional flush-out with outside air and retest the noncompliant concentrations. Repeat until all requirements are met. When retesting noncompliant building areas, take samples from the same locations as in the first test, although it is not required.

Conduct the air sample testing as follows:

- All measurements must be conducted prior to occupancy, but during normal occupied hours with the building ventilation system started at the normal daily start time and operated at the minimum outside air flow rate for the occupied mode throughout the test.
- All interior finishes must be installed, including but not limited to millwork, doors, paint, carpet and acoustic tiles. Movable furnishings such as workstations and partitions should be in place for the testing, although it is not required.
- The number of sampling locations will depend on the size of the building and number of ventilation systems. For each portion of the building served by a separate ventilation system, the number of sampling points must not be less than 1 per 25,000 square feet or for each contiguous floor area, whichever is larger. Include areas with the least ventilation and greatest presumed source strength.
- Air samples must be collected between 3 and 6 feet from the floor to represent the breathing zone of occupants, and over a minimum 4-hour period.

Potential Technologies & Strategies

Prior to occupancy, perform a building flush-out or test the air contaminant levels in the building. The flush-out is often used where occupancy is not required immediately upon substantial completion of construction. IAQ testing can minimize schedule impacts but may be more costly. Coordinate with IEQ Credit 3.1: Construction IAQ Management Plan — During Construction and IEQ Credit 5: Indoor Chemical & Pollutant Source Control to determine the appropriate specifications and schedules for filtration media.

The intent of this credit is to eliminate IAQ problems that occur as a result of construction. Architectural finishes used in tenant build-outs constitute a significant source of air pollutants and must be addressed to qualify for this credit.

IEQ Credit 4.1: Low-Emitting Materials—Adhesives and Sealants

1 Point

Intent

To reduce the quantity of indoor air contaminants that are odorous, irritating and/or harmful to the comfort and well-being of installers and occupants.

Requirements

All adhesives and sealants used on the interior of the building (i.e., inside of the weatherproofing system and applied on-site) must comply with the following requirements as applicable to the project scope[1]:

- Adhesives, Sealants and Sealant Primers must comply with South Coast Air Quality Management District (SCAQMD) Rule #1168. Volatile organic compound (VOC) limits listed in the table below correspond to an effective date of July 1, 2005 and rule amendment date of January 7, 2005.

Architectural Applications	VOC Limit (g/L less water)	Specialty Applications	VOC Limit (g/L less water)
Indoor carpet adhesives	50	PVC welding	510
Carpet pad adhesives	50	CPVC welding	490
Wood flooring adhesives	100	ABS welding	325
Rubber floor adhesives	60	Plastic cement welding	250
Subfloor adhesives	50	Adhesive primer for plastic	550
Ceramic tile adhesives	65	Contact adhesive	80
VCT and asphalt adhesives	50	Special purpose contact adhesive	250
Drywall and panel adhesives	50	Structural wood member adhesive	140
Cove base adhesives	50	Sheet applied rubber lining operations	850
Multipurpose construction adhesives	70	Top and trim adhesive	250
Structural glazing adhesives	100		
Substrate Specific Applications	**VOC Limit (g/L less water)**	**Sealants**	**VOC Limit (g/L less water)**
Metal to metal	30	Architectural	250
Plastic foams	50	Nonmembrane roof	300
Porous material (except wood)	50	Roadway	250
Wood	30	Single-ply roof membrane	450
Fiberglass	80	Other	420
Sealant Primers	**VOC Limit (g/L less water)**		
Architectural, nonporous	250		
Architectural, porous	775		
Other	750		

1 The use of a VOC budget is permissible for compliance with this credit.

- Aerosol Adhesives must comply with Green Seal Standard for Commercial Adhesives GS-36 requirements in effect on October 19, 2000.

Aerosol Adhesives	VOC Limit
General purpose mist spray	65% VOCs by weight
General purpose web spray	55% VOCs by weight
Special purpose aerosol adhesives (all types)	70% VOCs by weight

Potential Technologies & Strategies

Specify low-VOC materials in construction documents. Ensure that VOC limits are clearly stated in each section of the specifications where adhesives and sealants are addressed. Common products to evaluate include general construction adhesives, flooring adhesives, fire-stopping sealants, caulking, duct sealants, plumbing adhesives and cove base adhesives. Review product cut sheets, material safety data (MSD) sheets, signed attestations or other official literature from the manufacturer clearly identifying the VOC contents or compliance with referenced standards.

IEQ Credit 4.2: Low-Emitting Materials—Paints and Coatings

1 Point

Intent

To reduce the quantity of indoor air contaminants that are odorous, irritating and/or harmful to the comfort and well-being of installers and occupants.

Requirements

Paints and coatings used on the interior of the building (i.e., inside of the weatherproofing system and applied on-site) must comply with the following criteria as applicable to the project scope[1]:

- Architectural paints and coatings applied to interior walls and ceilings must not exceed the volatile organic compound (VOC) content limits established in Green Seal Standard GS-11, Paints, 1st Edition, May 20, 1993.
- Anti-corrosive and anti-rust paints applied to interior ferrous metal substrates must not exceed the VOC content limit of 250 g/L established in Green Seal Standard GC-03, Anti-Corrosive Paints, 2nd Edition, January 7, 1997.
- Clear wood finishes, floor coatings, stains, primers, sealers, and shellacs applied to interior elements must not exceed the VOC content limits established in South Coast Air Quality Management District (SCAQMD) Rule 1113, Architectural Coatings, rules in effect on January 1, 2004.

Potential Technologies & Strategies

Specify low-VOC paints and coatings in construction documents. Ensure that VOC limits are clearly stated in each section of the specifications where paints and coatings are addressed. Track the VOC content of all interior paints and coatings during construction.

1 The use of a VOC budget is permissible for compliance with this credit.

IEQ Credit 4.3: Low-Emitting Materials—Flooring Systems

1 Point

Intent

To reduce the quantity of indoor air contaminants that are odorous, irritating and/or harmful to the comfort and well-being of installers and occupants.

Requirements

OPTION 1

All flooring must comply with the following as applicable to the project scope:

- All carpet installed in the building interior must meet the testing and product requirements of the Carpet and Rug Institute Green Label Plus[1] program.
- All carpet cushion installed in the building interior must meet the requirements of the Carpet and Rug Institute Green Label program.
- All carpet adhesive must meet the requirements of IEQ Credit 4.1: Adhesives and Sealants, which includes a volatile organic compound (VOC) limit of 50 g/L.
- All hard surface flooring must meet the requirements of the FloorScore[2] standard (current as of the date of this rating system, or more stringent version) as shown with testing by an independent third-party. Mineral-based finish flooring products such as tile, masonry, terrazzo, and cut stone without integral organic-based coatings and sealants and unfinished/untreated solid wood flooring qualify for credit without any IAQ testing requirements. However, associated site-applied adhesives, grouts, finishes and sealers must be compliant for a mineral-based or unfinished/untreated solid wood flooring system to qualify for credit.
- Concrete, wood, bamboo and cork floor finishes such as sealer, stain and finish must meet the requirements of South Coast Air Quality Management District (SCAQMD) Rule 1113, Architectural Coatings, rules in effect on January 1, 2004.
- Tile setting adhesives and grout must meet South Coast Air Quality Management District (SCAQMD) Rule 1168. VOC limits correspond to an effective date of July 1, 2005 and rule amendment date of January 7, 2005.

OR

OPTION 2

All flooring elements installed in the building interior must meet the testing and product requirements of the California Department of Health Services Standard Practice for the Testing of Volatile Organic Emissions

1 The Green Label Plus program for carpets and its associated VOC emission criteria in micrograms per square meter per hour, along with information on testing method and sample collection developed by the Carpet & Rug Institute (CRI) in coordination with California's Sustainable Building Task Force and the California Department of Public Health, are described in Section 9, Acceptable Emissions Testing for Carpet, DHS Standard Practice CA/DHS/EHLB/R-174, dated 07/15/04. This document is available at http://www.dhs.ca.gov/ps/deodc/ehlb/iaq/VOCS/Section01350_7_15_2004_FINAL_PLUS_ADDENDUM-2004-01.pdf (also published as Section 01350 Section 9 [dated 2004] by the Collaborative for High Performance Schools [http://www.chps.net]).

2 FloorScore is a voluntary, independent certification program that tests and certifies hard surface flooring and associated products for compliance with criteria adopted in California for indoor air emissions of VOCs with potential health effects. The program uses a small-scale chamber test protocol and incorporates VOC emissions criteria, which are widely known as Section 1350, developed by the California Department of Health Services.

from Various Sources Using Small-Scale Environmental Chambers, including 2004 Addenda. Mineral-based finish flooring products such as tile, masonry, terrazzo, and cut stone without integral organic-based coatings and sealants and unfinished/untreated solid wood flooring qualify for credit without any IAQ testing requirements. However, associated site-applied adhesives, grouts, finishes and sealers must be compliant for a mineral-based or unfinished/untreated solid wood flooring system to qualify for credit.

Potential Technologies & Strategies

Clearly specify requirements for product testing and/or certification in the construction documents. Select products that are either certified under the Green Label Plus program or for which testing has been done by qualified independent laboratories in accordance with the appropriate requirements.

IEQ Credit 4.4: Low-Emitting Materials—Composite Wood and Agrifiber Products

1 Point

Intent

To reduce the quantity of indoor air contaminants that are odorous, irritating and/or harmful to the comfort and well-being of installers and occupants.

Requirements

Composite wood and agrifiber products used on the interior of the building (i.e., inside the weatherproofing system) must contain no added urea-formaldehyde resins. Laminating adhesives used to fabricate on-site and shop-applied composite wood and agrifiber assemblies must not contain added urea-formaldehyde resins.

Composite wood and agrifiber products are defined as particleboard, medium density fiberboard (MDF), plywood, wheatboard, strawboard, panel substrates and door cores. Materials considered fixtures, furniture and equipment (FF&E) are not considered base building elements and are not included.

Potential Technologies & Strategies

Specify wood and agrifiber products that contain no added urea-formaldehyde resins. Specify laminating adhesives for field and shop-applied assemblies that contain no added urea-formaldehyde resins. Review product cut sheets, material safety data (MSD) sheets, signed attestations or other official literature from the manufacturer.

IEQ Credit 5: Indoor Chemical and Pollutant Source Control

1 Point

Intent

To minimize building occupant exposure to potentially hazardous particulates and chemical pollutants.

Requirements

Design to minimize and control the entry of pollutants into buildings and later cross-contamination of regularly occupied areas through the following strategies:

- Employ permanent entryway systems at least 10 feet long in the primary direction of travel to capture dirt and particulates entering the building at regularly used exterior entrances. Acceptable entryway systems include permanently installed grates, grill s and slotted systems that allow for cleaning underneath. Roll-out mats are acceptable only when maintained on a weekly basis by a contracted service organization.
- Sufficiently exhaust each space where hazardous gases or chemicals may be present or used (e.g., garages, housekeeping and laundry areas, copying and printing rooms) to create negative pressure with respect to adjacent spaces when the doors to the room are closed. For each of these spaces, provide self-closing doors and deck-to-deck partitions or a hard-lid ceiling. The exhaust rate must be at least 0.50 cubic feet per minute (cfm) per square foot with no air recirculation. The pressure differential with the surrounding spaces must be at least 5 Pascals (Pa) (0.02 inches of water gauge) on average and 1 Pa (0.004 inches of water) at a minimum when the doors to the rooms are closed.
- In mechanically ventilated buildings, each ventilation system that supplies outdoor air shall comply with the following:
  - Particle filters or air cleaning devices shall be provided to clean the outdoor air at any location prior to its introduction to occupied spaces.
  - These filters or devices shall be rated a minimum efficiency reporting value (MERV) of 13 or higher in accordance with ASHRAE Standard 52.2.
  - Clean air Filtration media shall be installed in all air systems after completion of construction and prior to occupancy.

Potential Technologies & Strategies

Design facility cleaning and maintenance areas with isolated exhaust systems for contaminants. Maintain physical isolation from the rest of the regularly occupied areas of the building. Install permanent architectural entryway systems such as grills or grates to prevent occupant-borne contaminants from entering the building. Install high-level filtration systems in air handling units processing both return air and outside supply air. Ensure that air handling units can accommodate required filter sizes and pressure drops.

IEQ Credit 6.1: Controllability of Systems—Lighting

1 Point

Intent

To provide a high level of lighting system control by individual occupants or groups in multi-occupant spaces (e.g., classrooms and conference areas) and promote their productivity, comfort and well-being.

Requirements

Provide individual lighting controls for 90% (minimum) of the building occupants to enable adjustments to suit individual task needs and preferences

Provide lighting system controls for all shared multi-occupant spaces to enable adjustments that meet group needs and preferences.

Potential Technologies & Strategies

Design the building with occupant controls for lighting. Strategies to consider include lighting controls and task lighting. Integrate lighting systems controllability into the overall lighting design, providing ambient and task lighting while managing the overall energy use of the building.

IEQ Credit 6.2: Controllability of Systems—Thermal Comfort

1 Point

Intent

To provide a high level of thermal comfort system control[1] by individual occupants or groups in multi-occupant spaces (e.g., classrooms or conference areas) and promote their productivity, comfort and well-being.

Requirements

Provide individual comfort controls for 50% (minimum) of the building occupants to enable adjustments to meet individual needs and preferences. Operable windows may be used in lieu of controls for occupants located 20 feet inside and 10 feet to either side of the operable part of a window. The areas of operable window must meet the requirements of ASHRAE Standard 62.1-2007 paragraph 5.1 Natural Ventilation (with errata but without addenda[2]).

Provide comfort system controls for all shared multi-occupant spaces to enable adjustments that meet group needs and preferences.

Conditions for thermal comfort are described in ASHRAE Standard 55-2004 (with errata but without addenda[2]) and include the primary factors of air temperature, radiant temperature, air speed and humidity.

Potential Technologies & Strategies

Design the building and systems with comfort controls to allow adjustments to suit individual needs or those of groups in shared spaces. ASHRAE Standard 55-2004 (with errata but without addenda[2]) identifies the factors of thermal comfort and a process for developing comfort criteria for building spaces that suit the needs of the occupants involved in their daily activities. Control strategies can be developed to expand on the comfort criteria and enable individuals to make adjustments to suit their needs and preferences. These strategies may involve system designs incorporating operable windows, hybrid systems integrating operable windows and mechanical systems, or mechanical systems alone. Individual adjustments may involve individual thermostat controls, local diffusers at floor, desk or overhead levels, control of individual radiant panels or other means integrated into the overall building, thermal comfort systems and energy systems design. Designers should evaluate the closely tied interactions between thermal comfort as required by ASHRAE Standard 55-2004 (with errata but without addenda[2]) and acceptable indoor air quality as required by ASHRAE Standard 62.1-2007 (with errata but without addenda[2]), whether natural or mechanical ventilation.

1 For the purposes of this credit, comfort system control is defined as control over at least 1 of the following primary factors in the occupant's vicinity: air temperature, radiant temperature, air speed and humidity.

2 Project teams wishing to use ASHRAE approved addenda for the purposes of this credit may do so at their discretion. Addenda must be applied consistently across all LEED credits.

IEQ Credit 7.1: Thermal Comfort—Design

1 Point

Intent

To provide a comfortable thermal environment that promotes occupant productivity and well-being.

Requirements

Design heating, ventilating and air conditioning (HVAC) systems and the building envelope to meet the requirements of ASHRAE Standard 55-2004, Thermal Comfort Conditions for Human Occupancy (with errata but without addenda[1]). Demonstrate design compliance in accordance with the Section 6.1.1 documentation.

Potential Technologies & Strategies

Establish comfort criteria according to ASHRAE 55-2004 (with errata but without addenda) that support the desired quality and occupant satisfaction with building performance. Design the building envelope and systems with the capability to meet the comfort criteria under expected environmental and use conditions. Evaluate air temperature, radiant temperature, air speed and relative humidity in an integrated fashion, and coordinate these criteria with IEQ Prerequisite 1: Minimum IAQ Performance, IEQ Credit 1: Outdoor Air Delivery Monitoring, and IEQ Credit 2: Increased Ventilation.

1 Project teams wishing to use ASHRAE approved addenda for the purposes of this credit may do so at their discretion. Addenda must be applied consistently across all LEED credits.

IEQ Credit 7.2: Thermal Comfort—Verification

1 point in addition to IEQ credit 7.1

Intent

To provide for the assessment of building occupant thermal comfort over time.

Requirements

Achieve IEQ Credit 7.1: Thermal Comfort—Design

Provide a permanent monitoring system to ensure that building performance meets the desired comfort criteria as determined by IEQ Credit 7.1: Thermal Comfort—Design.

Agree to conduct a thermal comfort survey of building occupants within 6 to 18 months after occupancy. This survey should collect anonymous responses about thermal comfort in the building, including an assessment of overall satisfaction with thermal performance and identification of thermal comfort-related problems. Agree to develop a plan for corrective action if the survey results indicate that more than 20% of occupants are dissatisfied with thermal comfort in the building. This plan should include measurement of relevant environmental variables in problem areas in accordance with ASHRAE Standard 55-2004 (with errata but without addenda[1]).

Residential projects are not eligible for this credit.

Potential Technologies & Strategies

ASHRAE 55-2004 provides guidance for establishing thermal comfort criteria and documenting and validating building performance to the criteria. While the standard is not intended for purposes of continuous monitoring and maintenance of the thermal environment, the principles expressed in the standard provide a basis for the design of monitoring and corrective action systems.

1 Project teams wishing to use ASHRAE approved addenda for the purposes of this credit may do so at their discretion. Addenda must be applied consistently across all LEED credits.

IEQ Credit 8.1: Daylight and Views—Daylight

1 Point

Intent

To provide building occupants with a connection between indoor spaces and the outdoors through the introduction of daylight and views into the regularly occupied areas of the building.

Requirements

Through 1 of the 4 options, achieve daylighting in at least the following spaces:

Regularly Occupied Spaces	Points
75%	1

OPTION 1. Simulation

Demonstrate through computer simulations that 75% or more of all regularly occupied spaces areas achieve daylight illuminance levels of a minimum of 25 footcandles (fc) and a maximum of 500 fc in a clear sky condition on September 21 at 9 a.m. and 3 p.m. Areas with illuminance levels below or above the range do not comply. However, designs that incorporate view-preserving automated shades for glare control may demonstrate compliance for only the minimum 25 fc illuminance level.

OR

OPTION 2. Prescriptive

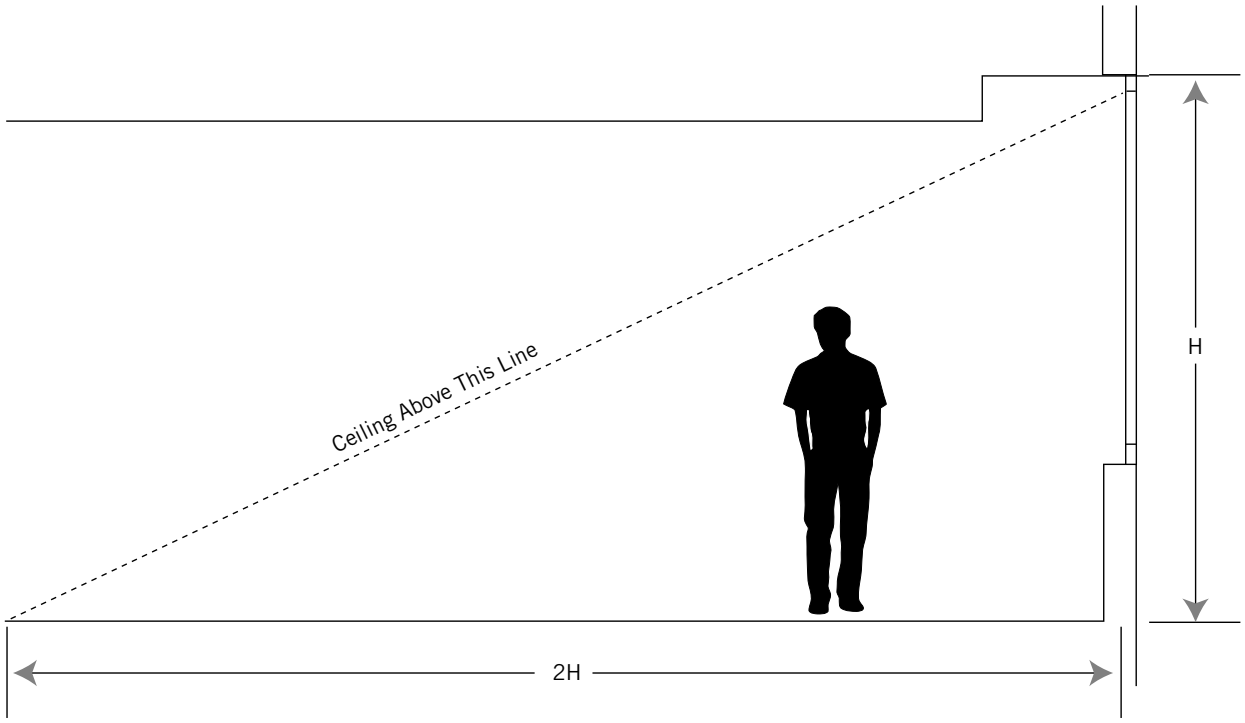
Use a combination of side-lighting and/or top-lighting to achieve a total daylighting zone (the floor area meeting the following requirements) that is at least 75% of all the regularly occupied spaces.

For the Side-lighting Daylight Zone (see diagram on the next page):

- Achieve a value, calculated as the product of the visible light transmittance (VLT) and window-to-floor area ratio (WFR) of daylight zone between 0.150 and 0.180. The window area included in the calculation must be at least 30 inches above the floor.

$$0.150 < VLT \times WFR < 0.180$$

- The ceiling must not obstruct a line in section that joins the window-head to a line on the floor that is parallel to the plane of the window; Is twice the height of the window-head above the floor in, distance from the plane of the glass as measured perpendicular to the plane of the glass.
- Provide sunlight redirection and/or glare control devices to ensure daylight effectiveness.



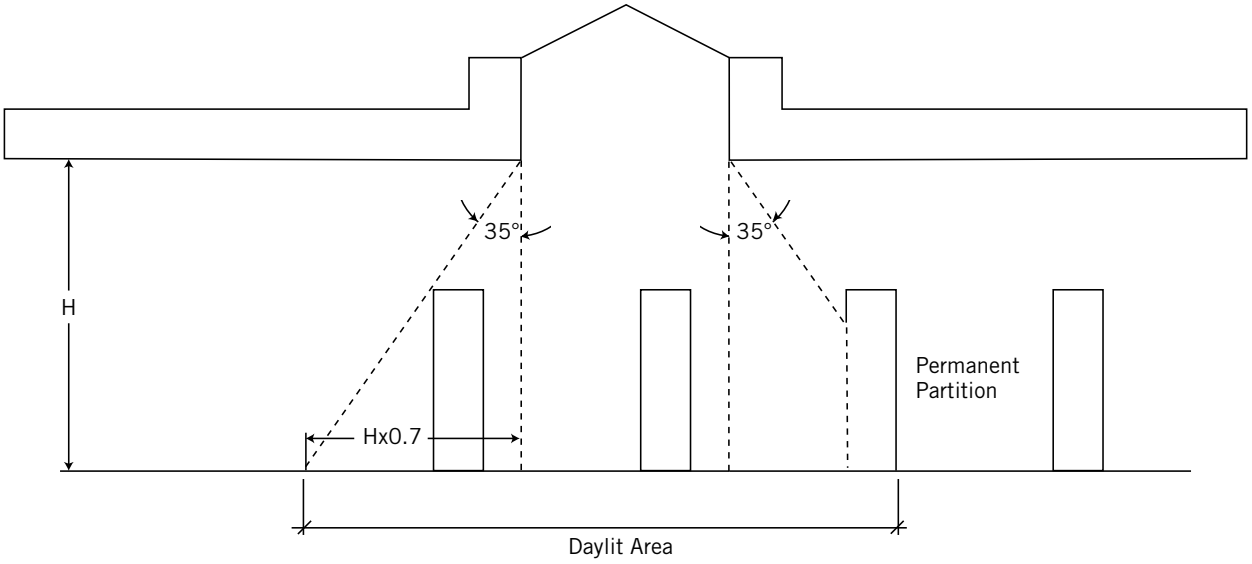
For Top-lighting Daylight Zone (see diagram on the next page):

- The daylight zone under a skylight is the outline of the opening beneath the skylight, plus in each direction the lesser of:
  - 70% of the ceiling height,

  OR
  - 1/2 the distance to the edge of the nearest skylight,

  OR
  - The distance to any permanent opaque partition (if transparent show VLT) farther than 70% of the distance between the top of the partition and the ceiling.
- Achieve skylight roof coverage between 3% and 6% of the roof area with a minimum 0.5 VLT.
- The distance between the skylights must not be more than 1.4 times the ceiling height.
- A skylight diffuser, if used, must have a measured haze value of greater than 90% when tested according to ASTM D1003. Avoid direct line of sight to the skylight diffuser.

Exceptions for areas where tasks would be hindered by the use of daylight will be considered on their merits.



OR

OPTION 3. Measurement

Demonstrate through records of indoor light measurements that a minimum daylight illumination level of 25 fc has been achieved in at least 75% of all regularly occupied areas. Measurements must be taken on a 10-foot grid for all occupied spaces and recorded on building floor plans.

Only the square footage associated with the portions of rooms or spaces meeting the minimum illumination requirements may be counted in the calculations.

For all projects pursuing this option, provide daylight redirection and/or glare control devices to avoid high-contrast situations that could impede visual tasks. Exceptions for areas where tasks would be hindered by daylight will be considered on their merits.

OR

OPTION 4. Combination

Any of the above calculation methods may be combined to document the minimum daylight illumination in at least 75% of all regularly occupied spaces. The different methods used in each space must be clearly recorded on all building plans.

In all cases, only the square footage associated with the portions of rooms or spaces meeting the requirements may be applied toward the 75% of total area calculation required to qualify for this credit.

In all cases, provide glare control devices to avoid high-contrast situations that could impede visual tasks. Exceptions for areas where tasks would be hindered by the use of daylight will be considered on their merits.

Potential Technologies & Strategies

Design the building to maximize interior daylighting. Strategies to consider include building orientation, shallow floor plates, increased building perimeter, exterior and interior permanent shading devices, high-performance glazing, and high-ceiling reflectance values; ly, additionally, automatic photocell-based controls can help to reduce energy use. Predict daylight factors via manual calculations or model daylighting strategies with a physical or computer model to assess footcandle levels and daylight factors achieved.

IEQ Credit 8.2: Daylight and Views—Views

1 Point

Intent

To provide building occupants a connection to the outdoors through the introduction of daylight and views into the regularly occupied areas of the building.

Requirements

Achieve a direct line of sight to the outdoor environment via vision glazing between 30 inches and 90 inches above the finish floor for building occupants in 90% of all regularly occupied areas. Determine the area with a direct line of sight by totaling the regularly occupied square footage that meets the following criteria:

- In plan view, the area is within sight lines drawn from perimeter vision glazing.
- In section view, a direct sight line can be drawn from the area to perimeter vision glazing.

The line of sight may be drawn through interior glazing. For private offices, the entire square footage of the office may be counted if 75% or more of the area has a direct line of sight to perimeter vision glazing. For multi-occupant spaces, the actual square footage with a direct line of sight to perimeter vision glazing is counted.

Potential Technologies & Strategies

Design the space to maximize daylighting and view opportunities. Strategies to consider include lower partitions, interior shading devices, interior glazing and automatic photocell-based controls.

ID Credit 1: Innovation in Design

1–5 Points

Intent

To provide design teams and projects the opportunity to achieve exceptional performance above the requirements set by the LEED Green Building Rating System and/or innovative performance in Green Building categories not specifically addressed by the LEED Green Building Rating System.

Requirements

Credit can be achieved through any combination of the Innovation in Design and Exemplary Performance paths as described below:

PATH 1. Innovation in Design (1-5 points)

Achieve significant, measurable environmental performance using a strategy not addressed in the LEED 2009 for New Construction and Major Renovations Rating System.

One point is awarded for each innovation achieved. No more than 5 points under IDc1 may be earned through PATH 1—Innovation in Design.

Identify the following in writing:

- The intent of the proposed innovation credit.
- The proposed requirement for compliance.
- The proposed submittals to demonstrate compliance.
- The design approach (strategies) used to meet the requirements.

PATH 2. Exemplary Performance (1-3 points)

Achieve exemplary performance in an existing LEED 2009 for New Construction and Major Renovations prerequisite or credit that allows exemplary performance as specified in the LEED Reference Guide for Green Building Design & Construction, 2009 Edition. An exemplary performance point may be earned for achieving double the credit requirements and/or achieving the next incremental percentage threshold of an existing credit in LEED.

One point is awarded for each exemplary performance achieved. No more than 3 points under IDc1 may be earned through PATH 2— Exemplary Performance.

PATH 3. Pilot Credit (1 point)

Attempt a pilot credit available in the Pilot Credit Library at www.usgbc.org/pilotcreditlibrary. Register as a pilot credit participant and complete the required documentation. Projects may pursue more than 1 pilot credit; however, a maximum of 1 point will be awarded.

Potential Technologies & Strategies

Substantially exceed a LEED 2009 for New Construction and Major Renovations performance credit such as energy performance or water efficiency. Apply strategies or measures that demonstrate a comprehensive approach and quantifiable environment and/or health benefits.

ID Credit 2: LEED Accredited Professional

1 Point

Intent

To support and encourage the design integration required by LEED to streamline the application and certification process.

Requirements

At least 1 principal participant of the project team shall be a LEED Accredited Professional (AP).

Potential Technologies & Strategies

Educate the project team members about green building design and construction, the LEED requirements and application process early in the life of the project. Consider assigning integrated design and construction process facilitation to the LEED AP.

REGIONAL PRIORITY

RP Credit 1: Regional Priority

1–4 Points

Intent

To provide an incentive for the achievement of credits that address geographically-specific environmental priorities.

Requirements

Earn 1-4 of the 6 Regional Priority credits identified by the USGBC regional councils and chapters as having environmental importance for a project's region. A database of Regional Priority credits and their geographic applicability is available on the USGBC website, http://www.usgbc.org.

One point is awarded for each Regional Priority credit achieved; no more than 4 credits identified as Regional Priority credits may be earned. Projects outside of the U.S. are not eligible for Regional Priority credits.

Potential Technologies & Strategies

Determine and pursue the prioritized credits for the project location.

Appendix B
Air Quality Data

Parenthetical URBEMIS2007 (Version 9.2.4) Assumptions
For: Lakeport Courthouse
Date: July 2010

LAND USES

Amount	Land Use Type	Unit Type	Trip Rate
50	Government office building	1,000 square feet	8.06

CONSTRUCTION SOURCES

Year	Duration (months)	Development
2012	8 months	Grading, Trenching, Paving, Building
2013	12 months	Building, Coating
2014	1 month	Building, Coating

Phase 1 - Grading:

Year	Total Acreage Disturbed	Acreage Disturbed Daily	Duration-(days)	Fugitive Dust	Soil Hauling (cubic yards)	Estimated Cut/Fill (cubic yards)
2012	5.74	2	20	Default		

Grading Equipment (URBEMIS2007 Default):

Quantity	Type	Hours of Daily Operation
1	Grader	6
1	Rubber Tired Dozer	6
1	Tractor/Loaders/Backhoe	7
1	Water Trucks	8

Phase 2 - Trenching:

Year	Duration
2012	10 days

Trenching Equipment (URBEMIS2007 Default):

Quantity	Type	Hours of Daily Operation
2	Excavators	8
1	Other General Industrial Equipment	8

Phase 3 - Paving:

Year	Duration (days)	Acres
2012	10	5.74

Equipment (URBEMIS2007 Default):

Quantity	Type	Hours of Daily Operation
4	Cement and Mortar Mixers	6
1	Paver	7
2	Paving Equipment	6
1	Roller	7

Phase 4 – Building Construction

Duration:

20 months

Equipment (URBEMIS2007 Default):

Quantity	Type	Hours of Daily Operation
1	Crane	4
2	Forklifts	6
1	Tractor/Loader/Backhoe	8

Phase 5 – Architectural Coatings:

Duration – 1.5Months
Low VOC coatings (Pursuant to SCAQMD Rule 1113)
(URBEMIS2007 default all phases)

Sub- Phase 5 - Worker Commute

(URBEMIS2007 default all phases)

Construction Mitigation:

Refer to URBEMIS2007 file output.

YEAR 2013 AREA SOURCES

Natural Gas Fuel Combustion:

(URBEMIS2007 default all phases)

Hearth Fuel Combustion:

Off

Landscape Fuel Combustion:

Year of Completion	Summer Days
2013	180

Consumer Products:

(URBEMIS2007 default all phases)

Architectural Coating:

(URBEMIS2007 default all phases)

Area Source Mitigation:

Low VOC coatings (Pursuant to SCAQMD Rule 1113)
Refer to URBEMIS2007 file output.

<u>YEAR 2013 OPERATIONAL SOURCES</u>

Vehicle Fleet %:

(URBEMIS2007 default all phases)

Year:

Year of Completion – 2013

Trip Characteristics:

(URBEMIS2007 Default all phases)

Temperature Data:

40 to 90 degrees Fahrenheit

Variable Starts:

(URBEMIS2007 default all phases)

Road Dust:

Paved – 100%
Unpaved – 0%

Pass By Trips (On/Off):

Off

Double-Counting(On/Off):

Off

Operational Mitigation Measures:

Refer to URBEMIS2007 file output.

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Urbemis 2007 Version 9.2.4

Combined Annual Emissions Reports (Tons/Year)

File Name: I:\pdata\00000100\10P\WPWIN\EddieT\Programs\Air\URBEMIS\URBEMIS2007\Lakeport Courthouse.urb924

Project Name: Lakeport Courthouse

Project Location: California State-wide

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2012 TOTALS (tons/year unmitigated)	0.14	0.97	0.77	0.00	0.46	0.06	0.52	0.10	0.05	0.15	132.04
2012 TOTALS (tons/year mitigated)	0.14	0.97	0.77	0.00	0.19	0.06	0.25	0.04	0.05	0.09	132.04
Percent Reduction	0.00	0.00	0.00	0.00	58.97	0.00	52.57	58.83	0.00	38.35	0.00
2013 TOTALS (tons/year unmitigated)	0.32	1.01	0.99	0.00	0.00	0.06	0.06	0.00	0.05	0.05	170.04
2013 TOTALS (tons/year mitigated)	0.20	1.01	0.99	0.00	0.00	0.06	0.06	0.00	0.05	0.05	170.04
Percent Reduction	37.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2014 TOTALS (tons/year unmitigated)	0.35	0.08	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	15.38
2014 TOTALS (tons/year mitigated)	0.21	0.08	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	15.38
Percent Reduction	41.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year, unmitigated)	0.06	0.06	0.19	0.00	0.00	0.00	73.25

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year, unmitigated)	0.50	0.73	5.79	0.01	0.96	0.19	532.80

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (tons/year, unmitigated)	0.56	0.79	5.98	0.01	0.96	0.19	606.05

Construction Unmitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2

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2012	0.14	0.97	0.77	0.00	0.46	0.06	0.52	0.10	0.05	0.15	132.04
Mass Grading 05/01/2012-05/31/2012	0.03	0.25	0.14	0.00	0.46	0.01	0.47	0.10	0.01	0.11	27.02
Mass Grading Dust	0.00	0.00	0.00	0.00	0.46	0.00	0.46	0.10	0.00	0.10	0.00
Mass Grading Off Road Diesel	0.03	0.25	0.13	0.00	0.00	0.01	0.01	0.00	0.01	0.01	25.84
Mass Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mass Grading Worker Trips	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.18
Trenching 06/01/2012-06/15/2012	0.01	0.08	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.99
Trenching Off Road Diesel	0.01	0.08	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.43
Trenching Worker Trips	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56
Asphalt 06/16/2012-06/30/2012	0.02	0.09	0.06	0.00	0.00	0.01	0.01	0.00	0.01	0.01	9.80
Paving Off-Gas	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	0.01	0.07	0.04	0.00	0.00	0.01	0.01	0.00	0.01	0.01	5.66
Paving On Road Diesel	0.00	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.11
Paving Worker Trips	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.02
Building 07/01/2012-01/31/2014	0.08	0.55	0.52	0.00	0.00	0.03	0.03	0.00	0.03	0.03	85.23
Building Off Road Diesel	0.07	0.52	0.30	0.00	0.00	0.03	0.03	0.00	0.03	0.03	58.52
Building Vendor Trips	0.00	0.02	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.29
Building Worker Trips	0.01	0.01	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	21.43

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2013	0.32	1.01	0.99	0.00	0.00	0.06	0.06	0.00	0.05	0.05	170.04
Building 07/01/2012-01/31/2014	0.14	1.01	0.99	0.00	0.00	0.06	0.06	0.00	0.05	0.05	169.83
Building Off Road Diesel	0.12	0.95	0.58	0.00	0.00	0.06	0.06	0.00	0.05	0.05	116.59
Building Vendor Trips	0.00	0.04	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.54
Building Worker Trips	0.01	0.02	0.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	42.70
Coating 12/15/2013-01/31/2014	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
Architectural Coating	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
2014	0.35	0.08	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	15.38
Building 07/01/2012-01/31/2014	0.01	0.08	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.97
Building Off Road Diesel	0.01	0.08	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.27
Building Vendor Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.93
Building Worker Trips	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.76
Coating 12/15/2013-01/31/2014	0.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41
Architectural Coating	0.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41

Phase Assumptions

Phase: Mass Grading 5/1/2012 - 5/31/2012 - Default Mass Site Grading Description

Total Acres Disturbed: 5.74

Maximum Daily Acreage Disturbed: 2

Fugitive Dust Level of Detail: Default

20 lbs per acre-day

On Road Truck Travel (VMT): 0

Off-Road Equipment:

1 Graders (174 hp) operating at a 0.61 load factor for 6 hours per day

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1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 6 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Trenching 6/1/2012 - 6/15/2012 - Default Trenching Description

Off-Road Equipment:

2 Excavators (168 hp) operating at a 0.57 load factor for 8 hours per day

1 Other General Industrial Equipment (238 hp) operating at a 0.51 load factor for 8 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 0 hours per day

Phase: Paving 6/16/2012 - 6/30/2012 - Default Paving Description

Acres to be Paved: 5.74

Off-Road Equipment:

4 Cement and Mortar Mixers (10 hp) operating at a 0.56 load factor for 6 hours per day

1 Pavers (100 hp) operating at a 0.62 load factor for 7 hours per day

2 Paving Equipment (104 hp) operating at a 0.53 load factor for 6 hours per day

1 Rollers (95 hp) operating at a 0.56 load factor for 7 hours per day

Phase: Building Construction 7/1/2012 - 1/31/2014 - Default Building Construction Description

Off-Road Equipment:

1 Cranes (399 hp) operating at a 0.43 load factor for 4 hours per day

2 Forklifts (145 hp) operating at a 0.3 load factor for 6 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day

Phase: Architectural Coating 12/15/2013 - 1/31/2014 - Default Architectural Coating Description

Rule: Residential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Residential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Nonresidential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Nonresidential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

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Construction Mitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Annual Tons Per Year, Mitigated

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2012	0.14	0.97	0.77	0.00	0.19	0.06	0.25	0.04	0.05	0.09	132.04
Mass Grading 05/01/2012-05/31/2012	0.03	0.25	0.14	0.00	0.19	0.01	0.20	0.04	0.01	0.05	27.02
Mass Grading Dust	0.00	0.00	0.00	0.00	0.19	0.00	0.19	0.04	0.00	0.04	0.00
Mass Grading Off Road Diesel	0.03	0.25	0.13	0.00	0.00	0.01	0.01	0.00	0.01	0.01	25.84
Mass Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mass Grading Worker Trips	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.18
Trenching 06/01/2012-06/15/2012	0.01	0.08	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.99
Trenching Off Road Diesel	0.01	0.08	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	9.43
Trenching Worker Trips	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56
Asphalt 06/16/2012-06/30/2012	0.02	0.09	0.06	0.00	0.00	0.01	0.01	0.00	0.01	0.01	9.80
Paving Off-Gas	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	0.01	0.07	0.04	0.00	0.00	0.01	0.01	0.00	0.01	0.01	5.66
Paving On Road Diesel	0.00	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.11
Paving Worker Trips	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.02
Building 07/01/2012-01/31/2014	0.08	0.55	0.52	0.00	0.00	0.03	0.03	0.00	0.03	0.03	85.23
Building Off Road Diesel	0.07	0.52	0.30	0.00	0.00	0.03	0.03	0.00	0.03	0.03	58.52
Building Vendor Trips	0.00	0.02	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.29
Building Worker Trips	0.01	0.01	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	21.43

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2013	0.20	1.01	0.99	0.00	0.00	0.06	0.06	0.00	0.05	0.05	170.04
Building 07/01/2012-01/31/2014	0.14	1.01	0.99	0.00	0.00	0.06	0.06	0.00	0.05	0.05	169.83
Building Off Road Diesel	0.12	0.95	0.58	0.00	0.00	0.06	0.06	0.00	0.05	0.05	116.59
Building Vendor Trips	0.00	0.04	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.54
Building Worker Trips	0.01	0.02	0.36	0.00	0.00	0.00	0.00	0.00	0.00	0.00	42.70
Coating 12/15/2013-01/31/2014	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
Architectural Coating	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.21
2014	0.21	0.08	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.00	15.38
Building 07/01/2012-01/31/2014	0.01	0.08	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.00	14.97
Building Off Road Diesel	0.01	0.08	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	10.27
Building Vendor Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.93
Building Worker Trips	0.00	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.76
Coating 12/15/2013-01/31/2014	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41
Architectural Coating	0.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.41

Construction Related Mitigation Measures

The following mitigation measures apply to Phase: Mass Grading 5/1/2012 - 5/31/2012 - Default Mass Site Grading Description

For Soil Stablizing Measures, the Water exposed surfaces 2x daily watering mitigation reduces emissions by:

PM10: 55% PM25: 55%

For Unpaved Roads Measures, the Reduce speed on unpaved roads to less than 15 mph mitigation reduces emissions by:

PM10: 44% PM25: 44%

For Unpaved Roads Measures, the Manage haul road dust 2x daily watering mitigation reduces emissions by:

PM10: 55% PM25: 55%

The following mitigation measures apply to Phase: Architectural Coating 12/15/2013 - 1/31/2014 - Default Architectural Coating Description

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For Residential Architectural Coating Measures, the Residential Exterior: Use Low VOC Coatings mitigation reduces emissions by:

ROG: 10%

For Residential Architectural Coating Measures, the Residential Interior: Use Low VOC Coatings mitigation reduces emissions by:

ROG: 10%

For Nonresidential Architectural Coating Measures, the Nonresidential Exterior: Use Low VOC Coatings mitigation reduces emissions by:

ROG: 10%

For Nonresidential Architectural Coating Measures, the Nonresidential Interior: Use Low VOC Coatings mitigation reduces emissions by:

ROG: 10%

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
Natural Gas	0.00	0.06	0.05	0.00	0.00	0.00	73.00
Hearth							
Landscape	0.01	0.00	0.14	0.00	0.00	0.00	0.25
Consumer Products	0.00						
Architectural Coatings	0.05						
TOTALS (tons/year, unmitigated)	0.06	0.06	0.19	0.00	0.00	0.00	73.25

Area Source Changes to Defaults

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Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Goverment office building	0.50	0.73	5.79	0.01	0.96	0.19	532.80
TOTALS (tons/year, unmitigated)	0.50	0.73	5.79	0.01	0.96	0.19	532.80

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2012 Season: Annual

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Goverment office building		8.06	1000 sq ft	50.00	403.00	3,048.70
					403.00	3,048.70

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	48.6	0.8	99.0	0.2
Light Truck < 3750 lbs	10.9	1.8	93.6	4.6
Light Truck 3751-5750 lbs	21.8	0.5	99.5	0.0
Med Truck 5751-8500 lbs	9.6	1.0	99.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	1.7	0.0	76.5	23.5
Lite-Heavy Truck 10,001-14,000 lbs	0.7	0.0	42.9	57.1

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Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Med-Heavy Truck 14,001-33,000 lbs	1.0	0.0	20.0	80.0
Heavy-Heavy Truck 33,001-60,000 lbs	0.9	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	3.5	60.0	40.0	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	1.0	0.0	90.0	10.0

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	10.8	7.3	7.5	9.5	7.4	7.4
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
Goverment office building				10.0	5.0	85.0

Operational Changes to Defaults

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Urbemis 2007 Version 9.2.4

Combined Summer Emissions Reports (Pounds/Day)

File Name: I:\pdata\00000100\10P\WPWIN\EddieT\Programs\Air\URBEMIS\URBEMIS2007\Lakeport Courthouse.urb924

Project Name: Lakeport Courthouse

Project Location: California State-wide

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

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Summary Report:

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2012 TOTALS (lbs/day unmitigated)	3.91	22.00	12.46	0.01	40.00	1.31	41.08	8.36	1.20	9.34	2,349.54
2012 TOTALS (lbs/day mitigated)	3.91	22.00	12.46	0.01	16.34	1.31	17.42	3.41	1.20	4.40	2,349.54
2013 TOTALS (lbs/day unmitigated)	30.83	7.75	7.86	0.00	0.02	0.45	0.47	0.01	0.41	0.42	1,336.86
2013 TOTALS (lbs/day mitigated)	10.74	7.75	7.86	0.00	0.02	0.45	0.47	0.01	0.41	0.42	1,336.86
2014 TOTALS (lbs/day unmitigated)	30.75	7.11	7.52	0.00	0.02	0.39	0.41	0.01	0.36	0.36	1,336.98
2014 TOTALS (lbs/day mitigated)	18.10	7.11	7.52	0.00	0.02	0.39	0.41	0.01	0.36	0.36	1,336.98

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	0.43	0.35	1.83	0.00	0.01	0.01	402.81

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	2.72	3.45	30.72	0.03	5.26	1.02	3,053.05

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	3.15	3.80	32.55	0.03	5.27	1.03	3,455.86

Construction Unmitigated Detail Report:

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CONSTRUCTION EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
Time Slice 5/1/2012-5/31/2012 Active Days: 23	2.72	**22.00**	**12.46**	0.00	**40.00**	1.07	**41.08**	**8.36**	0.99	**9.34**	**2,349.54**
Mass Grading 05/01/2012-05/31/2012	2.72	22.00	12.46	0.00	40.00	1.07	41.08	8.36	0.99	9.34	2,349.54
Mass Grading Dust	0.00	0.00	0.00	0.00	40.00	0.00	40.00	8.35	0.00	8.35	0.00
Mass Grading Off Road Diesel	2.69	21.95	11.51	0.00	0.00	1.07	1.07	0.00	0.99	0.99	2,247.32
Mass Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mass Grading Worker Trips	0.03	0.05	0.94	0.00	0.00	0.00	0.01	0.00	0.00	0.00	102.23
Time Slice 6/1/2012-6/15/2012 Active Days: 11	1.83	15.29	8.95	0.00	0.00	0.74	0.74	0.00	0.68	0.68	1,816.86
Trenching 06/01/2012-06/15/2012	1.83	15.29	8.95	0.00	0.00	0.74	0.74	0.00	0.68	0.68	1,816.86
Trenching Off Road Diesel	1.80	15.24	8.01	0.00	0.00	0.73	0.73	0.00	0.67	0.67	1,714.64
Trenching Worker Trips	0.03	0.05	0.94	0.00	0.00	0.00	0.01	0.00	0.00	0.00	102.23
Time Slice 6/18/2012-6/29/2012 Active Days: 10	3.91	17.20	11.24	**0.01**	0.03	**1.31**	1.34	0.01	**1.20**	1.21	1,959.16
Asphalt 06/16/2012-06/30/2012	3.91	17.20	11.24	0.01	0.03	1.31	1.34	0.01	1.20	1.21	1,959.16
Paving Off-Gas	1.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	2.23	13.48	8.10	0.00	0.00	1.17	1.17	0.00	1.07	1.07	1,131.92
Paving On Road Diesel	0.25	3.62	1.25	0.01	0.02	0.14	0.16	0.01	0.12	0.13	622.80
Paving Worker Trips	0.06	0.10	1.89	0.00	0.01	0.01	0.02	0.00	0.00	0.01	204.45

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Time Slice 7/2/2012-12/31/2012 Active Days: 131	1.16	8.37	7.89	0.00	0.02	0.51	0.53	0.01	0.47	0.47	1,301.24
Building 07/01/2012-01/31/2014	1.16	8.37	7.89	0.00	0.02	0.51	0.53	0.01	0.47	0.47	1,301.24
Building Off Road Diesel	1.03	7.87	4.56	0.00	0.00	0.49	0.49	0.00	0.45	0.45	893.39
Building Vendor Trips	0.03	0.34	0.30	0.00	0.00	0.01	0.02	0.00	0.01	0.01	80.73
Building Worker Trips	0.09	0.16	3.02	0.00	0.02	0.01	0.02	0.01	0.01	0.01	327.12
Time Slice 1/1/2013-12/13/2013 Active Days: 249	1.06	7.73	7.56	0.00	0.02	0.45	0.47	0.01	0.41	0.42	1,301.35
Building 07/01/2012-01/31/2014	1.06	7.73	7.56	0.00	0.02	0.45	0.47	0.01	0.41	0.42	1,301.35
Building Off Road Diesel	0.95	7.29	4.48	0.00	0.00	0.43	0.43	0.00	0.39	0.39	893.39
Building Vendor Trips	0.03	0.30	0.28	0.00	0.00	0.01	0.01	0.00	0.01	0.01	80.74
Building Worker Trips	0.09	0.15	2.79	0.00	0.02	0.01	0.02	0.01	0.01	0.01	327.23
Time Slice 12/16/2013-12/31/2013 Active Days: 12	**30.83**	7.75	7.86	0.00	0.02	0.45	0.47	0.01	0.41	0.42	1,336.86
Building 07/01/2012-01/31/2014	1.06	7.73	7.56	0.00	0.02	0.45	0.47	0.01	0.41	0.42	1,301.35
Building Off Road Diesel	0.95	7.29	4.48	0.00	0.00	0.43	0.43	0.00	0.39	0.39	893.39
Building Vendor Trips	0.03	0.30	0.28	0.00	0.00	0.01	0.01	0.00	0.01	0.01	80.74
Building Worker Trips	0.09	0.15	2.79	0.00	0.02	0.01	0.02	0.01	0.01	0.01	327.23
Coating 12/15/2013-01/31/2014	29.76	0.02	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	35.51
Architectural Coating	29.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.01	0.02	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	35.51

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Time Slice 1/1/2014-1/31/2014 Active Days: 23	30.75	7.11	7.52	0.00	0.02	0.39	0.41	0.01	0.36	0.36	1,336.98
Building 07/01/2012-01/31/2014	0.99	7.09	7.24	0.00	0.02	0.39	0.41	0.01	0.36	0.36	1,301.46
Building Off Road Diesel	0.88	6.70	4.39	0.00	0.00	0.37	0.37	0.00	0.34	0.34	893.39
Building Vendor Trips	0.02	0.26	0.26	0.00	0.00	0.01	0.01	0.00	0.01	0.01	80.74
Building Worker Trips	0.08	0.13	2.59	0.00	0.02	0.01	0.02	0.01	0.01	0.01	327.33
Coating 12/15/2013-01/31/2014	29.76	0.01	0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	35.52
Architectural Coating	29.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.01	0.01	0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	35.52

Phase Assumptions

Phase: Mass Grading 5/1/2012 - 5/31/2012 - Default Mass Site Grading Description

Total Acres Disturbed: 5.74

Maximum Daily Acreage Disturbed: 2

Fugitive Dust Level of Detail: Default

20 lbs per acre-day

On Road Truck Travel (VMT): 0

Off-Road Equipment:

1 Graders (174 hp) operating at a 0.61 load factor for 6 hours per day

1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 6 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Trenching 6/1/2012 - 6/15/2012 - Default Trenching Description

Off-Road Equipment:

2 Excavators (168 hp) operating at a 0.57 load factor for 8 hours per day

1 Other General Industrial Equipment (238 hp) operating at a 0.51 load factor for 8 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 0 hours per day

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Phase: Paving 6/16/2012 - 6/30/2012 - Default Paving Description

Acres to be Paved: 5.74

Off-Road Equipment:

4 Cement and Mortar Mixers (10 hp) operating at a 0.56 load factor for 6 hours per day

1 Pavers (100 hp) operating at a 0.62 load factor for 7 hours per day

2 Paving Equipment (104 hp) operating at a 0.53 load factor for 6 hours per day

1 Rollers (95 hp) operating at a 0.56 load factor for 7 hours per day

Phase: Building Construction 7/1/2012 - 1/31/2014 - Default Building Construction Description

Off-Road Equipment:

1 Cranes (399 hp) operating at a 0.43 load factor for 4 hours per day

2 Forklifts (145 hp) operating at a 0.3 load factor for 6 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day

Phase: Architectural Coating 12/15/2013 - 1/31/2014 - Default Architectural Coating Description

Rule: Residential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Residential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Nonresidential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Nonresidential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Construction Mitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Summer Pounds Per Day, Mitigated

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2

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Time Slice 5/1/2012-5/31/2012 Active Days: 23	2.72	**22.00**	**12.46**	0.00	16.34	1.07	17.42	3.41	0.99	4.40	**2,349.54**
Mass Grading 05/01/2012-05/31/2012	2.72	22.00	12.46	0.00	16.34	1.07	17.42	3.41	0.99	4.40	2,349.54
Mass Grading Dust	0.00	0.00	0.00	0.00	16.34	0.00	16.34	3.41	0.00	3.41	0.00
Mass Grading Off Road Diesel	2.69	21.95	11.51	0.00	0.00	1.07	1.07	0.00	0.99	0.99	2,247.32
Mass Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mass Grading Worker Trips	0.03	0.05	0.94	0.00	0.00	0.00	0.01	0.00	0.00	0.00	102.23
Time Slice 6/1/2012-6/15/2012 Active Days: 11	1.83	15.29	8.95	0.00	0.00	0.74	0.74	0.00	0.68	0.68	1,816.86
Trenching 06/01/2012-06/15/2012	1.83	15.29	8.95	0.00	0.00	0.74	0.74	0.00	0.68	0.68	1,816.86
Trenching Off Road Diesel	1.80	15.24	8.01	0.00	0.00	0.73	0.73	0.00	0.67	0.67	1,714.64
Trenching Worker Trips	0.03	0.05	0.94	0.00	0.00	0.00	0.01	0.00	0.00	0.00	102.23
Time Slice 6/18/2012-6/29/2012 Active Days: 10	3.91	17.20	11.24	**0.01**	0.03	**1.31**	1.34	0.01	**1.20**	1.21	1,959.16
Asphalt 06/16/2012-06/30/2012	3.91	17.20	11.24	0.01	0.03	1.31	1.34	0.01	1.20	1.21	1,959.16
Paving Off-Gas	1.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	2.23	13.48	8.10	0.00	0.00	1.17	1.17	0.00	1.07	1.07	1,131.92
Paving On Road Diesel	0.25	3.62	1.25	0.01	0.02	0.14	0.16	0.01	0.12	0.13	622.80
Paving Worker Trips	0.06	0.10	1.89	0.00	0.01	0.01	0.02	0.00	0.00	0.01	204.45
Time Slice 7/2/2012-12/31/2012 Active Days: 131	1.16	8.37	7.89	0.00	0.02	0.51	0.53	0.01	0.47	0.47	1,301.24
Building 07/01/2012-01/31/2014	1.16	8.37	7.89	0.00	0.02	0.51	0.53	0.01	0.47	0.47	1,301.24
Building Off Road Diesel	1.03	7.87	4.56	0.00	0.00	0.49	0.49	0.00	0.45	0.45	893.39
Building Vendor Trips	0.03	0.34	0.30	0.00	0.00	0.01	0.02	0.00	0.01	0.01	80.73
Building Worker Trips	0.09	0.16	3.02	0.00	0.02	0.01	0.02	0.01	0.01	0.01	327.12

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Time Slice 1/1/2013-12/13/2013 Active Days: 249	1.06	7.73	7.56	0.00	0.02	0.45	0.47	0.01	0.41	0.42	1,301.35
Building 07/01/2012-01/31/2014	1.06	7.73	7.56	0.00	0.02	0.45	0.47	0.01	0.41	0.42	1,301.35
Building Off Road Diesel	0.95	7.29	4.48	0.00	0.00	0.43	0.43	0.00	0.39	0.39	893.39
Building Vendor Trips	0.03	0.30	0.28	0.00	0.00	0.01	0.01	0.00	0.01	0.01	80.74
Building Worker Trips	0.09	0.15	2.79	0.00	0.02	0.01	0.02	0.01	0.01	0.01	327.23
Time Slice 12/16/2013-12/31/2013 Active Days: 12	10.74	7.75	7.86	0.00	0.02	0.45	0.47	0.01	0.41	0.42	1,336.86
Building 07/01/2012-01/31/2014	1.06	7.73	7.56	0.00	0.02	0.45	0.47	0.01	0.41	0.42	1,301.35
Building Off Road Diesel	0.95	7.29	4.48	0.00	0.00	0.43	0.43	0.00	0.39	0.39	893.39
Building Vendor Trips	0.03	0.30	0.28	0.00	0.00	0.01	0.01	0.00	0.01	0.01	80.74
Building Worker Trips	0.09	0.15	2.79	0.00	0.02	0.01	0.02	0.01	0.01	0.01	327.23
Coating 12/15/2013-01/31/2014	9.68	0.02	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	35.51
Architectural Coating	9.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.01	0.02	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	35.51
Time Slice 1/1/2014-1/31/2014 Active Days: 23	18.10	7.11	7.52	0.00	0.02	0.39	0.41	0.01	0.36	0.36	1,336.98
Building 07/01/2012-01/31/2014	0.99	7.09	7.24	0.00	0.02	0.39	0.41	0.01	0.36	0.36	1,301.46
Building Off Road Diesel	0.88	6.70	4.39	0.00	0.00	0.37	0.37	0.00	0.34	0.34	893.39
Building Vendor Trips	0.02	0.26	0.26	0.00	0.00	0.01	0.01	0.00	0.01	0.01	80.74
Building Worker Trips	0.08	0.13	2.59	0.00	0.02	0.01	0.02	0.01	0.01	0.01	327.33
Coating 12/15/2013-01/31/2014	17.12	0.01	0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	35.52
Architectural Coating	17.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.01	0.01	0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	35.52

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Construction Related Mitigation Measures

The following mitigation measures apply to Phase: Mass Grading 5/1/2012 - 5/31/2012 - Default Mass Site Grading Description

For Soil Stablizing Measures, the Water exposed surfaces 2x daily watering mitigation reduces emissions by:

PM10: 55% PM25: 55%

For Unpaved Roads Measures, the Reduce speed on unpaved roads to less than 15 mph mitigation reduces emissions by:

PM10: 44% PM25: 44%

For Unpaved Roads Measures, the Manage haul road dust 2x daily watering mitigation reduces emissions by:

PM10: 55% PM25: 55%

The following mitigation measures apply to Phase: Architectural Coating 12/15/2013 - 1/31/2014 - Default Architectural Coating Description

For Residential Architectural Coating Measures, the Residential Exterior: Use Low VOC Coatings mitigation reduces emissions by:

ROG: 10%

For Residential Architectural Coating Measures, the Residential Interior: Use Low VOC Coatings mitigation reduces emissions by:

ROG: 10%

For Nonresidential Architectural Coating Measures, the Nonresidential Exterior: Use Low VOC Coatings mitigation reduces emissions by:

ROG: 10%

For Nonresidential Architectural Coating Measures, the Nonresidential Interior: Use Low VOC Coatings mitigation reduces emissions by:

ROG: 10%

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
Natural Gas	0.02	0.33	0.28	0.00	0.00	0.00	400.00
Hearth							
Landscape	0.12	0.02	1.55	0.00	0.01	0.01	2.81
Consumer Products	0.00						
Architectural Coatings	0.29						
TOTALS (lbs/day, unmitigated)	0.43	0.35	1.83	0.00	0.01	0.01	402.81

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Area Source Changes to Defaults

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Goverment office building	2.72	3.45	30.72	0.03	5.26	1.02	3,053.05
TOTALS (lbs/day, unmitigated)	2.72	3.45	30.72	0.03	5.26	1.02	3,053.05

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2012 Temperature (F): 85 Season: Summer

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Goverment office building		8.06	1000 sq ft	50.00	403.00	3,048.70
					403.00	3,048.70

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	48.6	0.8	99.0	0.2
Light Truck < 3750 lbs	10.9	1.8	93.6	4.6
Light Truck 3751-5750 lbs	21.8	0.5	99.5	0.0

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Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Med Truck 5751-8500 lbs	9.6	1.0	99.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	1.7	0.0	76.5	23.5
Lite-Heavy Truck 10,001-14,000 lbs	0.7	0.0	42.9	57.1
Med-Heavy Truck 14,001-33,000 lbs	1.0	0.0	20.0	80.0
Heavy-Heavy Truck 33,001-60,000 lbs	0.9	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	3.5	60.0	40.0	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	1.0	0.0	90.0	10.0

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	10.8	7.3	7.5	9.5	7.4	7.4
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
Goverment office building				10.0	5.0	85.0

Operational Changes to Defaults

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Urbemis 2007 Version 9.2.4

Combined Winter Emissions Reports (Pounds/Day)

File Name: I:\pdata\00000100\10P\WPWIN\EddieT\Programs\Air\URBEMIS\URBEMIS2007\Lakeport Courthouse.urb924

Project Name: Lakeport Courthouse

Project Location: California State-wide

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

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Summary Report:

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2012 TOTALS (lbs/day unmitigated)	3.91	22.00	12.46	0.01	40.00	1.31	41.08	8.36	1.20	9.34	2,349.54
2012 TOTALS (lbs/day mitigated)	3.91	22.00	12.46	0.01	16.34	1.31	17.42	3.41	1.20	4.40	2,349.54
2013 TOTALS (lbs/day unmitigated)	30.83	7.75	7.86	0.00	0.02	0.45	0.47	0.01	0.41	0.42	1,336.86
2013 TOTALS (lbs/day mitigated)	10.74	7.75	7.86	0.00	0.02	0.45	0.47	0.01	0.41	0.42	1,336.86
2014 TOTALS (lbs/day unmitigated)	30.75	7.11	7.52	0.00	0.02	0.39	0.41	0.01	0.36	0.36	1,336.98
2014 TOTALS (lbs/day mitigated)	18.10	7.11	7.52	0.00	0.02	0.39	0.41	0.01	0.36	0.36	1,336.98

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	0.31	0.33	0.28	0.00	0.00	0.00	400.00

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	2.84	5.02	33.74	0.03	5.26	1.02	2,652.20

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	3.15	5.35	34.02	0.03	5.26	1.02	3,052.20

Construction Unmitigated Detail Report:

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CONSTRUCTION EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
Time Slice 5/1/2012-5/31/2012 Active Days: 23	2.72	**22.00**	**12.46**	0.00	**40.00**	1.07	**41.08**	**8.36**	0.99	**9.34**	**2,349.54**
Mass Grading 05/01/2012-05/31/2012	2.72	22.00	12.46	0.00	40.00	1.07	41.08	8.36	0.99	9.34	2,349.54
Mass Grading Dust	0.00	0.00	0.00	0.00	40.00	0.00	40.00	8.35	0.00	8.35	0.00
Mass Grading Off Road Diesel	2.69	21.95	11.51	0.00	0.00	1.07	1.07	0.00	0.99	0.99	2,247.32
Mass Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mass Grading Worker Trips	0.03	0.05	0.94	0.00	0.00	0.00	0.01	0.00	0.00	0.00	102.23
Time Slice 6/1/2012-6/15/2012 Active Days: 11	1.83	15.29	8.95	0.00	0.00	0.74	0.74	0.00	0.68	0.68	1,816.86
Trenching 06/01/2012-06/15/2012	1.83	15.29	8.95	0.00	0.00	0.74	0.74	0.00	0.68	0.68	1,816.86
Trenching Off Road Diesel	1.80	15.24	8.01	0.00	0.00	0.73	0.73	0.00	0.67	0.67	1,714.64
Trenching Worker Trips	0.03	0.05	0.94	0.00	0.00	0.00	0.01	0.00	0.00	0.00	102.23
Time Slice 6/18/2012-6/29/2012 Active Days: 10	3.91	17.20	11.24	**0.01**	0.03	**1.31**	1.34	0.01	**1.20**	1.21	1,959.16
Asphalt 06/16/2012-06/30/2012	3.91	17.20	11.24	0.01	0.03	1.31	1.34	0.01	1.20	1.21	1,959.16
Paving Off-Gas	1.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	2.23	13.48	8.10	0.00	0.00	1.17	1.17	0.00	1.07	1.07	1,131.92
Paving On Road Diesel	0.25	3.62	1.25	0.01	0.02	0.14	0.16	0.01	0.12	0.13	622.80
Paving Worker Trips	0.06	0.10	1.89	0.00	0.01	0.01	0.02	0.00	0.00	0.01	204.45

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Time Slice 7/2/2012-12/31/2012 Active Days: 131	1.16	8.37	7.89	0.00	0.02	0.51	0.53	0.01	0.47	0.47	1,301.24
Building 07/01/2012-01/31/2014	1.16	8.37	7.89	0.00	0.02	0.51	0.53	0.01	0.47	0.47	1,301.24
Building Off Road Diesel	1.03	7.87	4.56	0.00	0.00	0.49	0.49	0.00	0.45	0.45	893.39
Building Vendor Trips	0.03	0.34	0.30	0.00	0.00	0.01	0.02	0.00	0.01	0.01	80.73
Building Worker Trips	0.09	0.16	3.02	0.00	0.02	0.01	0.02	0.01	0.01	0.01	327.12
Time Slice 1/1/2013-12/13/2013 Active Days: 249	1.06	7.73	7.56	0.00	0.02	0.45	0.47	0.01	0.41	0.42	1,301.35
Building 07/01/2012-01/31/2014	1.06	7.73	7.56	0.00	0.02	0.45	0.47	0.01	0.41	0.42	1,301.35
Building Off Road Diesel	0.95	7.29	4.48	0.00	0.00	0.43	0.43	0.00	0.39	0.39	893.39
Building Vendor Trips	0.03	0.30	0.28	0.00	0.00	0.01	0.01	0.00	0.01	0.01	80.74
Building Worker Trips	0.09	0.15	2.79	0.00	0.02	0.01	0.02	0.01	0.01	0.01	327.23
Time Slice 12/16/2013-12/31/2013 Active Days: 12	**30.83**	7.75	7.86	0.00	0.02	0.45	0.47	0.01	0.41	0.42	1,336.86
Building 07/01/2012-01/31/2014	1.06	7.73	7.56	0.00	0.02	0.45	0.47	0.01	0.41	0.42	1,301.35
Building Off Road Diesel	0.95	7.29	4.48	0.00	0.00	0.43	0.43	0.00	0.39	0.39	893.39
Building Vendor Trips	0.03	0.30	0.28	0.00	0.00	0.01	0.01	0.00	0.01	0.01	80.74
Building Worker Trips	0.09	0.15	2.79	0.00	0.02	0.01	0.02	0.01	0.01	0.01	327.23
Coating 12/15/2013-01/31/2014	29.76	0.02	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	35.51
Architectural Coating	29.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.01	0.02	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	35.51

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Time Slice 1/1/2014-1/31/2014 Active Days: 23	30.75	7.11	7.52	0.00	0.02	0.39	0.41	0.01	0.36	0.36	1,336.98
Building 07/01/2012-01/31/2014	0.99	7.09	7.24	0.00	0.02	0.39	0.41	0.01	0.36	0.36	1,301.46
Building Off Road Diesel	0.88	6.70	4.39	0.00	0.00	0.37	0.37	0.00	0.34	0.34	893.39
Building Vendor Trips	0.02	0.26	0.26	0.00	0.00	0.01	0.01	0.00	0.01	0.01	80.74
Building Worker Trips	0.08	0.13	2.59	0.00	0.02	0.01	0.02	0.01	0.01	0.01	327.33
Coating 12/15/2013-01/31/2014	29.76	0.01	0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	35.52
Architectural Coating	29.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.01	0.01	0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	35.52

Phase Assumptions

Phase: Mass Grading 5/1/2012 - 5/31/2012 - Default Mass Site Grading Description

Total Acres Disturbed: 5.74

Maximum Daily Acreage Disturbed: 2

Fugitive Dust Level of Detail: Default

20 lbs per acre-day

On Road Truck Travel (VMT): 0

Off-Road Equipment:

1 Graders (174 hp) operating at a 0.61 load factor for 6 hours per day

1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 6 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Trenching 6/1/2012 - 6/15/2012 - Default Trenching Description

Off-Road Equipment:

2 Excavators (168 hp) operating at a 0.57 load factor for 8 hours per day

1 Other General Industrial Equipment (238 hp) operating at a 0.51 load factor for 8 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 0 hours per day

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Phase: Paving 6/16/2012 - 6/30/2012 - Default Paving Description

Acres to be Paved: 5.74

Off-Road Equipment:

4 Cement and Mortar Mixers (10 hp) operating at a 0.56 load factor for 6 hours per day

1 Pavers (100 hp) operating at a 0.62 load factor for 7 hours per day

2 Paving Equipment (104 hp) operating at a 0.53 load factor for 6 hours per day

1 Rollers (95 hp) operating at a 0.56 load factor for 7 hours per day

Phase: Building Construction 7/1/2012 - 1/31/2014 - Default Building Construction Description

Off-Road Equipment:

1 Cranes (399 hp) operating at a 0.43 load factor for 4 hours per day

2 Forklifts (145 hp) operating at a 0.3 load factor for 6 hours per day

1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day

Phase: Architectural Coating 12/15/2013 - 1/31/2014 - Default Architectural Coating Description

Rule: Residential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Residential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Nonresidential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Nonresidential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Construction Mitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Winter Pounds Per Day, Mitigated

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2

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Time Slice 5/1/2012-5/31/2012 Active Days: 23	2.72	**22.00**	**12.46**	0.00	16.34	1.07	17.42	3.41	0.99	4.40	**2,349.54**
Mass Grading 05/01/2012-05/31/2012	2.72	22.00	12.46	0.00	16.34	1.07	17.42	3.41	0.99	4.40	2,349.54
Mass Grading Dust	0.00	0.00	0.00	0.00	16.34	0.00	16.34	3.41	0.00	3.41	0.00
Mass Grading Off Road Diesel	2.69	21.95	11.51	0.00	0.00	1.07	1.07	0.00	0.99	0.99	2,247.32
Mass Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mass Grading Worker Trips	0.03	0.05	0.94	0.00	0.00	0.00	0.01	0.00	0.00	0.00	102.23
Time Slice 6/1/2012-6/15/2012 Active Days: 11	1.83	15.29	8.95	0.00	0.00	0.74	0.74	0.00	0.68	0.68	1,816.86
Trenching 06/01/2012-06/15/2012	1.83	15.29	8.95	0.00	0.00	0.74	0.74	0.00	0.68	0.68	1,816.86
Trenching Off Road Diesel	1.80	15.24	8.01	0.00	0.00	0.73	0.73	0.00	0.67	0.67	1,714.64
Trenching Worker Trips	0.03	0.05	0.94	0.00	0.00	0.00	0.01	0.00	0.00	0.00	102.23
Time Slice 6/18/2012-6/29/2012 Active Days: 10	3.91	17.20	11.24	**0.01**	0.03	**1.31**	1.34	0.01	**1.20**	1.21	1,959.16
Asphalt 06/16/2012-06/30/2012	3.91	17.20	11.24	0.01	0.03	1.31	1.34	0.01	1.20	1.21	1,959.16
Paving Off-Gas	1.37	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	2.23	13.48	8.10	0.00	0.00	1.17	1.17	0.00	1.07	1.07	1,131.92
Paving On Road Diesel	0.25	3.62	1.25	0.01	0.02	0.14	0.16	0.01	0.12	0.13	622.80
Paving Worker Trips	0.06	0.10	1.89	0.00	0.01	0.01	0.02	0.00	0.00	0.01	204.45
Time Slice 7/2/2012-12/31/2012 Active Days: 131	1.16	8.37	7.89	0.00	0.02	0.51	0.53	0.01	0.47	0.47	1,301.24
Building 07/01/2012-01/31/2014	1.16	8.37	7.89	0.00	0.02	0.51	0.53	0.01	0.47	0.47	1,301.24
Building Off Road Diesel	1.03	7.87	4.56	0.00	0.00	0.49	0.49	0.00	0.45	0.45	893.39
Building Vendor Trips	0.03	0.34	0.30	0.00	0.00	0.01	0.02	0.00	0.01	0.01	80.73
Building Worker Trips	0.09	0.16	3.02	0.00	0.02	0.01	0.02	0.01	0.01	0.01	327.12

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Time Slice 1/1/2013-12/13/2013 Active Days: 249	1.06	7.73	7.56	0.00	0.02	0.45	0.47	0.01	0.41	0.42	1,301.35
Building 07/01/2012-01/31/2014	1.06	7.73	7.56	0.00	0.02	0.45	0.47	0.01	0.41	0.42	1,301.35
Building Off Road Diesel	0.95	7.29	4.48	0.00	0.00	0.43	0.43	0.00	0.39	0.39	893.39
Building Vendor Trips	0.03	0.30	0.28	0.00	0.00	0.01	0.01	0.00	0.01	0.01	80.74
Building Worker Trips	0.09	0.15	2.79	0.00	0.02	0.01	0.02	0.01	0.01	0.01	327.23
Time Slice 12/16/2013-12/31/2013 Active Days: 12	10.74	7.75	7.86	0.00	0.02	0.45	0.47	0.01	0.41	0.42	1,336.86
Building 07/01/2012-01/31/2014	1.06	7.73	7.56	0.00	0.02	0.45	0.47	0.01	0.41	0.42	1,301.35
Building Off Road Diesel	0.95	7.29	4.48	0.00	0.00	0.43	0.43	0.00	0.39	0.39	893.39
Building Vendor Trips	0.03	0.30	0.28	0.00	0.00	0.01	0.01	0.00	0.01	0.01	80.74
Building Worker Trips	0.09	0.15	2.79	0.00	0.02	0.01	0.02	0.01	0.01	0.01	327.23
Coating 12/15/2013-01/31/2014	9.68	0.02	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	35.51
Architectural Coating	9.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.01	0.02	0.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	35.51
Time Slice 1/1/2014-1/31/2014 Active Days: 23	18.10	7.11	7.52	0.00	0.02	0.39	0.41	0.01	0.36	0.36	1,336.98
Building 07/01/2012-01/31/2014	0.99	7.09	7.24	0.00	0.02	0.39	0.41	0.01	0.36	0.36	1,301.46
Building Off Road Diesel	0.88	6.70	4.39	0.00	0.00	0.37	0.37	0.00	0.34	0.34	893.39
Building Vendor Trips	0.02	0.26	0.26	0.00	0.00	0.01	0.01	0.00	0.01	0.01	80.74
Building Worker Trips	0.08	0.13	2.59	0.00	0.02	0.01	0.02	0.01	0.01	0.01	327.33
Coating 12/15/2013-01/31/2014	17.12	0.01	0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	35.52
Architectural Coating	17.11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.01	0.01	0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.00	35.52

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Construction Related Mitigation Measures

The following mitigation measures apply to Phase: Mass Grading 5/1/2012 - 5/31/2012 - Default Mass Site Grading Description

For Soil Stablizing Measures, the Water exposed surfaces 2x daily watering mitigation reduces emissions by:

PM10: 55% PM25: 55%

For Unpaved Roads Measures, the Reduce speed on unpaved roads to less than 15 mph mitigation reduces emissions by:

PM10: 44% PM25: 44%

For Unpaved Roads Measures, the Manage haul road dust 2x daily watering mitigation reduces emissions by:

PM10: 55% PM25: 55%

The following mitigation measures apply to Phase: Architectural Coating 12/15/2013 - 1/31/2014 - Default Architectural Coating Description

For Residential Architectural Coating Measures, the Residential Exterior: Use Low VOC Coatings mitigation reduces emissions by:

ROG: 10%

For Residential Architectural Coating Measures, the Residential Interior: Use Low VOC Coatings mitigation reduces emissions by:

ROG: 10%

For Nonresidential Architectural Coating Measures, the Nonresidential Exterior: Use Low VOC Coatings mitigation reduces emissions by:

ROG: 10%

For Nonresidential Architectural Coating Measures, the Nonresidential Interior: Use Low VOC Coatings mitigation reduces emissions by:

ROG: 10%

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
Natural Gas	0.02	0.33	0.28	0.00	0.00	0.00	400.00
Hearth							
Landscaping - No Winter Emissions							
Consumer Products	0.00						
Architectural Coatings	0.29						
TOTALS (lbs/day, unmitigated)	0.31	0.33	0.28	0.00	0.00	0.00	400.00

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Area Source Changes to Defaults

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Goverment office building	2.84	5.02	33.74	0.03	5.26	1.02	2,652.20
TOTALS (lbs/day, unmitigated)	2.84	5.02	33.74	0.03	5.26	1.02	2,652.20

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2012 Temperature (F): 40 Season: Winter

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Goverment office building		8.06	1000 sq ft	50.00	403.00	3,048.70
					403.00	3,048.70

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	48.6	0.8	99.0	0.2
Light Truck < 3750 lbs	10.9	1.8	93.6	4.6
Light Truck 3751-5750 lbs	21.8	0.5	99.5	0.0

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Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Med Truck 5751-8500 lbs	9.6	1.0	99.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	1.7	0.0	76.5	23.5
Lite-Heavy Truck 10,001-14,000 lbs	0.7	0.0	42.9	57.1
Med-Heavy Truck 14,001-33,000 lbs	1.0	0.0	20.0	80.0
Heavy-Heavy Truck 33,001-60,000 lbs	0.9	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	3.5	60.0	40.0	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	1.0	0.0	90.0	10.0

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer
Urban Trip Length (miles)	10.8	7.3	7.5	9.5	7.4	7.4
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
Goverment office building				10.0	5.0	85.0

Operational Changes to Defaults

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14:37:28

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 ***  SCREEN3 MODEL RUN  ***
 *** VERSION DATED 96043 ***

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SIMPLE TERRAIN INPUTS:
   SOURCE TYPE                =         AREA
   EMISSION RATE (G/(S-M**2)) =     0.281600E-05
   SOURCE HEIGHT (M)          =       3.0000
   LENGTH OF LARGER SIDE (M)  =     152.4100
   LENGTH OF SMALLER SIDE (M) =     152.4100
   RECEPTOR HEIGHT (M)        =       1.5000
   URBAN/RURAL OPTION         =        URBAN
THE REGULATORY (DEFAULT) MIXING HEIGHT OPTION WAS SELECTED.
THE REGULATORY (DEFAULT) ANEMOMETER HEIGHT OF 10.0 METERS WAS ENTERED.

   MODEL ESTIMATES DIRECTION TO MAX CONCENTRATION


BUOY. FLUX =    0.000 M**4/S**3;  MOM. FLUX =    0.000 M**4/S**2.

*** FULL METEOROLOGY ***

**********************************
*** SCREEN AUTOMATED DISTANCES ***
**********************************

*** TERRAIN HEIGHT OF    0. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES ***

  DIST     CONC             U10M   USTK  MIX HT   PLUME  MAX DIR
   (M)   (UG/M**3)   STAB  (M/S)  (M/S)    (M)   HT (M)   (DEG)
-------  ----------  ----  -----  -----  ------  ------  -------
     1.   35.00        5     1.0    1.0 10000.0    3.00     45.
   100.   53.96        5     1.0    1.0 10000.0    3.00     45.
   200.   31.29        5     1.0    1.0 10000.0    3.00     45.
   300.   19.29        5     1.0    1.0 10000.0    3.00     45.
   400.   13.60        5     1.0    1.0 10000.0    3.00     45.
   500.   10.25        5     1.0    1.0 10000.0    3.00     45.
   600.   8.064        5     1.0    1.0 10000.0    3.00     45.
   700.   6.547        5     1.0    1.0 10000.0    3.00     42.
   800.   5.449        5     1.0    1.0 10000.0    3.00     45.
   900.   4.627        5     1.0    1.0 10000.0    3.00     45.
  1000.   3.995        5     1.0    1.0 10000.0    3.00     45.

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND     1. M:
   115.   56.05        5     1.0    1.0 10000.0    3.00     45.

     ***************************************
     *** SUMMARY OF SCREEN MODEL RESULTS ***
     ***************************************

 CALCULATION        MAX CONC    DIST TO   TERRAIN
  PROCEDURE        (UG/M**3)    MAX (M)    HT (M)
--------------    -----------   -------   -------
SIMPLE TERRAIN      56.05          115.        0.


***************************************************
** REMEMBER TO INCLUDE BACKGROUND CONCENTRATIONS **
***************************************************
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15:09:59
*** SCREEN3 MODEL RUN ***
*** VERSION DATED 96043 ***

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SIMPLE TERRAIN INPUTS:

SOURCE TYPE	=	AREA
EMISSION RATE (G/(S-M**2))	=	0.497210E-05
SOURCE HEIGHT (M)	=	3.0000
LENGTH OF LARGER SIDE (M)	=	152.4100
LENGTH OF SMALLER SIDE (M)	=	152.4100
RECEPTOR HEIGHT (M)	=	1.5000
URBAN/RURAL OPTION	=	URBAN

THE REGULATORY (DEFAULT) MIXING HEIGHT OPTION WAS SELECTED.
THE REGULATORY (DEFAULT) ANEMOMETER HEIGHT OF 10.0 METERS WAS ENTERED.

MODEL ESTIMATES DIRECTION TO MAX CONCENTRATION

BUOY. FLUX = 0.000 M**4/S**3; MOM. FLUX = 0.000 M**4/S**2.

*** FULL METEOROLOGY ***

****
*** SCREEN AUTOMATED DISTANCES ***
****

*** TERRAIN HEIGHT OF 0. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES ***

DIST (M)	CONC (UG/M**3)	STAB	U10M (M/S)	USTK (M/S)	MIX HT (M)	PLUME HT (M)	MAX DIR (DEG)
1.	61.79	5	1.0	1.0	10000.0	3.00	45.
100.	95.28	5	1.0	1.0	10000.0	3.00	45.
200.	55.25	5	1.0	1.0	10000.0	3.00	45.
300.	34.06	5	1.0	1.0	10000.0	3.00	45.
400.	24.01	5	1.0	1.0	10000.0	3.00	45.
500.	18.10	5	1.0	1.0	10000.0	3.00	45.
600.	14.24	5	1.0	1.0	10000.0	3.00	45.
700.	11.56	5	1.0	1.0	10000.0	3.00	42.
800.	9.622	5	1.0	1.0	10000.0	3.00	45.
900.	8.170	5	1.0	1.0	10000.0	3.00	45.
1000.	7.053	5	1.0	1.0	10000.0	3.00	45.

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 1. M:

115.	98.96	5	1.0	1.0	10000.0	3.00	45.

****
*** SUMMARY OF SCREEN MODEL RESULTS ***
****

CALCULATION PROCEDURE	MAX CONC (UG/M**3)	DIST TO MAX (M)	TERRAIN HT (M)

```
SIMPLE TERRAIN      98.96          115.        0.

**************************************************
** REMEMBER TO INCLUDE BACKGROUND CONCENTRATIONS **
**************************************************
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07/14/10

15:14:17
*** SCREEN3 MODEL RUN ***
*** VERSION DATED 96043 ***

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SIMPLE TERRAIN INPUTS:

SOURCE TYPE	=	AREA
EMISSION RATE (G/(S-M**2))	=	0.928430E-05
SOURCE HEIGHT (M)	=	3.0000
LENGTH OF LARGER SIDE (M)	=	152.4100
LENGTH OF SMALLER SIDE (M)	=	152.4100
RECEPTOR HEIGHT (M)	=	1.5000
URBAN/RURAL OPTION	=	URBAN

THE REGULATORY (DEFAULT) MIXING HEIGHT OPTION WAS SELECTED.
THE REGULATORY (DEFAULT) ANEMOMETER HEIGHT OF 10.0 METERS WAS ENTERED.

MODEL ESTIMATES DIRECTION TO MAX CONCENTRATION

BUOY. FLUX = 0.000 M**4/S**3; MOM. FLUX = 0.000 M**4/S**2.

*** FULL METEOROLOGY ***

****
*** SCREEN AUTOMATED DISTANCES ***
****

*** TERRAIN HEIGHT OF 0. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES ***

DIST (M)	CONC (UG/M**3)	STAB	U10M (M/S)	USTK (M/S)	MIX HT (M)	PLUME HT (M)	MAX DIR (DEG)
1.	115.4	5	1.0	1.0	10000.0	3.00	45.
100.	177.9	5	1.0	1.0	10000.0	3.00	45.
200.	103.2	5	1.0	1.0	10000.0	3.00	45.
300.	63.60	5	1.0	1.0	10000.0	3.00	45.
400.	44.84	5	1.0	1.0	10000.0	3.00	45.
500.	33.79	5	1.0	1.0	10000.0	3.00	45.
600.	26.59	5	1.0	1.0	10000.0	3.00	45.
700.	21.59	5	1.0	1.0	10000.0	3.00	42.
800.	17.97	5	1.0	1.0	10000.0	3.00	45.
900.	15.26	5	1.0	1.0	10000.0	3.00	45.
1000.	13.17	5	1.0	1.0	10000.0	3.00	45.

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 1. M:

115.	184.8	5	1.0	1.0	10000.0	3.00	45.

****
*** SUMMARY OF SCREEN MODEL RESULTS ***
****

CALCULATION PROCEDURE	MAX CONC (UG/M**3)	DIST TO MAX (M)	TERRAIN HT (M)

```
SIMPLE TERRAIN      184.8          115.        0.

**************************************************
** REMEMBER TO INCLUDE BACKGROUND CONCENTRATIONS **
**************************************************
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15:16:34
*** SCREEN3 MODEL RUN ***
*** VERSION DATED 96043 ***

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SIMPLE TERRAIN INPUTS:

SOURCE TYPE	=	AREA
EMISSION RATE (G/(S-M**2))	=	0.211090E-05
SOURCE HEIGHT (M)	=	3.0000
LENGTH OF LARGER SIDE (M)	=	152.4100
LENGTH OF SMALLER SIDE (M)	=	152.4100
RECEPTOR HEIGHT (M)	=	1.5000
URBAN/RURAL OPTION	=	URBAN

THE REGULATORY (DEFAULT) MIXING HEIGHT OPTION WAS SELECTED.
THE REGULATORY (DEFAULT) ANEMOMETER HEIGHT OF 10.0 METERS WAS ENTERED.

MODEL ESTIMATES DIRECTION TO MAX CONCENTRATION

BUOY. FLUX = 0.000 M**4/S**3; MOM. FLUX = 0.000 M**4/S**2.

*** FULL METEOROLOGY ***

****
*** SCREEN AUTOMATED DISTANCES ***
****

*** TERRAIN HEIGHT OF 0. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES ***

DIST (M)	CONC (UG/M**3)	STAB	U10M (M/S)	USTK (M/S)	MIX HT (M)	PLUME HT (M)	MAX DIR (DEG)
1.	26.23	5	1.0	1.0	10000.0	3.00	45.
100.	40.45	5	1.0	1.0	10000.0	3.00	45.
200.	23.46	5	1.0	1.0	10000.0	3.00	45.
300.	14.46	5	1.0	1.0	10000.0	3.00	45.
400.	10.20	5	1.0	1.0	10000.0	3.00	45.
500.	7.683	5	1.0	1.0	10000.0	3.00	45.
600.	6.045	5	1.0	1.0	10000.0	3.00	45.
700.	4.908	5	1.0	1.0	10000.0	3.00	42.
800.	4.085	5	1.0	1.0	10000.0	3.00	45.
900.	3.469	5	1.0	1.0	10000.0	3.00	45.
1000.	2.994	5	1.0	1.0	10000.0	3.00	45.

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 1. M:

115.	42.02	5	1.0	1.0	10000.0	3.00	45.

****
*** SUMMARY OF SCREEN MODEL RESULTS ***
****

CALCULATION PROCEDURE	MAX CONC (UG/M**3)	DIST TO MAX (M)	TERRAIN HT (M)

```
SIMPLE TERRAIN      42.02          115.        0.

**************************************************
** REMEMBER TO INCLUDE BACKGROUND CONCENTRATIONS **
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07/14/10

15:19:22
*** SCREEN3 MODEL RUN ***
*** VERSION DATED 96043 ***

C:\Documents and Settings\KCHIENE\My Documents\Lakes\Screen View \ConstructionCO

SIMPLE TERRAIN INPUTS:

SOURCE TYPE	=	AREA
EMISSION RATE (G/(S-M**2))	=	0.735650E-05
SOURCE HEIGHT (M)	=	3.0000
LENGTH OF LARGER SIDE (M)	=	152.4100
LENGTH OF SMALLER SIDE (M)	=	152.4100
RECEPTOR HEIGHT (M)	=	1.5000
URBAN/RURAL OPTION	=	URBAN

THE REGULATORY (DEFAULT) MIXING HEIGHT OPTION WAS SELECTED.
THE REGULATORY (DEFAULT) ANEMOMETER HEIGHT OF 10.0 METERS WAS ENTERED.

MODEL ESTIMATES DIRECTION TO MAX CONCENTRATION

BUOY. FLUX = 0.000 M**4/S**3; MOM. FLUX = 0.000 M**4/S**2.

*** FULL METEOROLOGY ***

****
*** SCREEN AUTOMATED DISTANCES ***
****

*** TERRAIN HEIGHT OF 0. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES ***

DIST (M)	CONC (UG/M**3)	STAB	U10M (M/S)	USTK (M/S)	MIX HT (M)	PLUME HT (M)	MAX DIR (DEG)
1.	91.42	5	1.0	1.0	10000.0	3.00	45.
100.	141.0	5	1.0	1.0	10000.0	3.00	45.
200.	81.74	5	1.0	1.0	10000.0	3.00	45.
300.	50.40	5	1.0	1.0	10000.0	3.00	45.
400.	35.53	5	1.0	1.0	10000.0	3.00	45.
500.	26.78	5	1.0	1.0	10000.0	3.00	45.
600.	21.07	5	1.0	1.0	10000.0	3.00	45.
700.	17.10	5	1.0	1.0	10000.0	3.00	42.
800.	14.24	5	1.0	1.0	10000.0	3.00	45.
900.	12.09	5	1.0	1.0	10000.0	3.00	45.
1000.	10.44	5	1.0	1.0	10000.0	3.00	45.

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 1. M:

115.	146.4	5	1.0	1.0	10000.0	3.00	45.

****
*** SUMMARY OF SCREEN MODEL RESULTS ***
****

CALCULATION PROCEDURE	MAX CONC (UG/M**3)	DIST TO MAX (M)	TERRAIN HT (M)

```
SIMPLE TERRAIN      146.4          115.        0.

**************************************************
** REMEMBER TO INCLUDE BACKGROUND CONCENTRATIONS **
**************************************************
```

07/14/10

15:29:13
*** SCREEN3 MODEL RUN ***
*** VERSION DATED 96043 ***

C:\Documents and Settings\KCHIENE\My Documents\Lakes\Screen View \ConstructionCO

SIMPLE TERRAIN INPUTS:

SOURCE TYPE	=	AREA
EMISSION RATE (G/(S-M**2))	=	0.858820E-06
SOURCE HEIGHT (M)	=	3.0000
LENGTH OF LARGER SIDE (M)	=	152.4100
LENGTH OF SMALLER SIDE (M)	=	152.4100
RECEPTOR HEIGHT (M)	=	1.5000
URBAN/RURAL OPTION	=	URBAN

THE REGULATORY (DEFAULT) MIXING HEIGHT OPTION WAS SELECTED.
THE REGULATORY (DEFAULT) ANEMOMETER HEIGHT OF 10.0 METERS WAS ENTERED.

MODEL ESTIMATES DIRECTION TO MAX CONCENTRATION

BUOY. FLUX = 0.000 M**4/S**3; MOM. FLUX = 0.000 M**4/S**2.

*** FULL METEOROLOGY ***

****
*** SCREEN AUTOMATED DISTANCES ***
****

*** TERRAIN HEIGHT OF 0. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES ***

DIST (M)	CONC (UG/M**3)	STAB	U10M (M/S)	USTK (M/S)	MIX HT (M)	PLUME HT (M)	MAX DIR (DEG)
1.	10.67	5	1.0	1.0	10000.0	3.00	45.
100.	16.46	5	1.0	1.0	10000.0	3.00	45.
200.	9.543	5	1.0	1.0	10000.0	3.00	45.
300.	5.883	5	1.0	1.0	10000.0	3.00	45.
400.	4.148	5	1.0	1.0	10000.0	3.00	45.
500.	3.126	5	1.0	1.0	10000.0	3.00	45.
600.	2.459	5	1.0	1.0	10000.0	3.00	45.
700.	1.997	5	1.0	1.0	10000.0	3.00	42.
800.	1.662	5	1.0	1.0	10000.0	3.00	45.
900.	1.411	5	1.0	1.0	10000.0	3.00	45.
1000.	1.218	5	1.0	1.0	10000.0	3.00	45.

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 1. M:

115.	17.09	5	1.0	1.0	10000.0	3.00	45.

****
*** SUMMARY OF SCREEN MODEL RESULTS ***
****

CALCULATION PROCEDURE	MAX CONC (UG/M**3)	DIST TO MAX (M)	TERRAIN HT (M)

```
SIMPLE TERRAIN      17.09          115.        0.

**************************************************
** REMEMBER TO INCLUDE BACKGROUND CONCENTRATIONS **
**************************************************
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07/14/10

15:31:32
*** SCREEN3 MODEL RUN ***
*** VERSION DATED 96043 ***

C:\Documents and Settings\KCHIENE\My Documents\Lakes\Screen View \ConstructionCO

SIMPLE TERRAIN INPUTS:

SOURCE TYPE	=	AREA
EMISSION RATE (G/(S-M**2))	=	0.119110E-05
SOURCE HEIGHT (M)	=	3.0000
LENGTH OF LARGER SIDE (M)	=	152.4100
LENGTH OF SMALLER SIDE (M)	=	152.4100
RECEPTOR HEIGHT (M)	=	1.5000
URBAN/RURAL OPTION	=	URBAN

THE REGULATORY (DEFAULT) MIXING HEIGHT OPTION WAS SELECTED.
THE REGULATORY (DEFAULT) ANEMOMETER HEIGHT OF 10.0 METERS WAS ENTERED.

MODEL ESTIMATES DIRECTION TO MAX CONCENTRATION

BUOY. FLUX = 0.000 M**4/S**3; MOM. FLUX = 0.000 M**4/S**2.

*** FULL METEOROLOGY ***

****
*** SCREEN AUTOMATED DISTANCES ***
****

*** TERRAIN HEIGHT OF 0. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES ***

DIST (M)	CONC (UG/M**3)	STAB	U10M (M/S)	USTK (M/S)	MIX HT (M)	PLUME HT (M)	MAX DIR (DEG)
1.	14.80	5	1.0	1.0	10000.0	3.00	45.
100.	22.82	5	1.0	1.0	10000.0	3.00	45.
200.	13.24	5	1.0	1.0	10000.0	3.00	45.
300.	8.160	5	1.0	1.0	10000.0	3.00	45.
400.	5.753	5	1.0	1.0	10000.0	3.00	45.
500.	4.335	5	1.0	1.0	10000.0	3.00	45.
600.	3.411	5	1.0	1.0	10000.0	3.00	45.
700.	2.769	5	1.0	1.0	10000.0	3.00	42.
800.	2.305	5	1.0	1.0	10000.0	3.00	45.
900.	1.957	5	1.0	1.0	10000.0	3.00	45.
1000.	1.690	5	1.0	1.0	10000.0	3.00	45.

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 1. M:

115.	23.71	5	1.0	1.0	10000.0	3.00	45.

****
*** SUMMARY OF SCREEN MODEL RESULTS ***
****

CALCULATION PROCEDURE	MAX CONC (UG/M**3)	DIST TO MAX (M)	TERRAIN HT (M)

```
SIMPLE TERRAIN      23.71          115.        0.

**************************************************
** REMEMBER TO INCLUDE BACKGROUND CONCENTRATIONS **
**************************************************
```

07/14/10

15:33:37
*** SCREEN3 MODEL RUN ***
*** VERSION DATED 96043 ***

C:\Documents and Settings\KCHIENE\My Documents\Lakes\Screen View \ConstructionCO

SIMPLE TERRAIN INPUTS:

SOURCE TYPE	=	AREA
EMISSION RATE (G/(S-M**2))	=	0.232790E-06
SOURCE HEIGHT (M)	=	3.0000
LENGTH OF LARGER SIDE (M)	=	152.4100
LENGTH OF SMALLER SIDE (M)	=	152.4100
RECEPTOR HEIGHT (M)	=	1.5000
URBAN/RURAL OPTION	=	URBAN

THE REGULATORY (DEFAULT) MIXING HEIGHT OPTION WAS SELECTED.
THE REGULATORY (DEFAULT) ANEMOMETER HEIGHT OF 10.0 METERS WAS ENTERED.

MODEL ESTIMATES DIRECTION TO MAX CONCENTRATION

BUOY. FLUX = 0.000 M**4/S**3; MOM. FLUX = 0.000 M**4/S**2.

*** FULL METEOROLOGY ***

****
*** SCREEN AUTOMATED DISTANCES ***
****

*** TERRAIN HEIGHT OF 0. M ABOVE STACK BASE USED FOR FOLLOWING DISTANCES ***

DIST (M)	CONC (UG/M**3)	STAB	U10M (M/S)	USTK (M/S)	MIX HT (M)	PLUME HT (M)	MAX DIR (DEG)
1.	2.893	5	1.0	1.0	10000.0	3.00	45.
100.	4.461	5	1.0	1.0	10000.0	3.00	45.
200.	2.587	5	1.0	1.0	10000.0	3.00	45.
300.	1.595	5	1.0	1.0	10000.0	3.00	45.
400.	1.124	5	1.0	1.0	10000.0	3.00	45.
500.	0.8473	5	1.0	1.0	10000.0	3.00	45.
600.	0.6666	5	1.0	1.0	10000.0	3.00	45.
700.	0.5413	5	1.0	1.0	10000.0	3.00	42.
800.	0.4505	5	1.0	1.0	10000.0	3.00	45.
900.	0.3825	5	1.0	1.0	10000.0	3.00	45.
1000.	0.3302	5	1.0	1.0	10000.0	3.00	45.

MAXIMUM 1-HR CONCENTRATION AT OR BEYOND 1. M:

115.	4.633	5	1.0	1.0	10000.0	3.00	45.

****
*** SUMMARY OF SCREEN MODEL RESULTS ***
****

CALCULATION PROCEDURE	MAX CONC (UG/M**3)	DIST TO MAX (M)	TERRAIN HT (M)

```
SIMPLE TERRAIN      4.633          115.        0.

**************************************************
** REMEMBER TO INCLUDE BACKGROUND CONCENTRATIONS **
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```

Title : Lake County Air Basin Subarea Winter CYr 2015 Default Title
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2010/07/13 16:15:33
Scen Year: 2015 -- All model years in the range 1971 to 2015 selected
Season : Winter
Area : Lake (LC)
****

Year: 2015 -- Model Years 1971 to 2015 Inclusive -- Winter
Emfac2007 Emission Factors: V2.3 Nov 1 2006

Lake (LC) Lake (LC) Lake (LC)

Table 1: Running Exhaust Emissions (grams/mile)

Pollutant Name: Reactive Org Gases Temperature: 70F Relative Humidity: 0%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0.408	0.646	0.643	3.992	6.115	4.746	0.721
35	0.073	0.125	0.117	0.481	0.971	1.910	0.141

Pollutant Name: Carbon Monoxide Temperature: 70F Relative Humidity: 0%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	4.326	8.096	6.273	33.570	36.820	24.989	7.426
35	2.230	3.827	2.542	6.787	7.088	16.281	3.300

Pollutant Name: Oxides of Nitrogen Temperature: 70F Relative Humidity: 0%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0.462	0.967	1.580	12.910	14.236	1.338	1.233
35	0.266	0.548	0.946	6.434	8.101	1.305	0.686

Pollutant Name: Carbon Dioxide Temperature: 70F Relative Humidity: 0%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	945.556	1161.349	1682.914	2611.395	2453.472	258.659	1167.527
35	308.007	384.654	519.841	1282.188	1660.838	134.622	395.307

Pollutant Name: Sulfur Dioxide Temperature: 70F Relative Humidity: 0%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0.009	0.011	0.016	0.025	0.024	0.003	0.011
35	0.003	0.004	0.005	0.012	0.016	0.002	0.004

Pollutant Name: PM2.5 Temperature: 70F Relative Humidity: 0%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0.052	0.093	0.096	0.551	0.226	0.029	0.090
35	0.009	0.017	0.018	0.150	0.053	0.013	0.018

Pollutant Name: PM2.5 - Tire Wear Temperature: 70F Relative Humidity: 0%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0.002	0.002	0.002	0.005	0.002	0.001	0.002
35	0.002	0.002	0.002	0.005	0.002	0.001	0.002

Pollutant Name: PM2.5 - Brake Wear Temperature: 70F Relative Humidity: 0%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0.005	0.005	0.005	0.008	0.005	0.003	0.005
35	0.005	0.005	0.005	0.008	0.005	0.003	0.005

Pollutant Name: Gasoline - mi/gal Temperature: 70F Relative Humidity: 0%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	9.286	7.380	4.903	3.339	3.300	28.296	8.219
35	28.445	22.589	16.900	16.898	16.741	53.231	24.931

Pollutant Name: Diesel - mi/gal Temperature: 70F Relative Humidity: 0%

Speed MPH	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	28.298	29.070	19.538	4.688	4.175	0.000	15.502
35	28.298	29.070	19.538	6.114	4.175	0.000	16.105

Title : Lake County Air Basin Subarea Winter CYr 2015 Default Title
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2010/07/13 16:15:33
Scen Year: 2015 -- All model years in the range 1971 to 2015 selected
Season : Winter
Area : Lake (LC)
****
*****

Year: 2015 -- Model Years 1971 to 2015 Inclusive -- Winter
Emfac2007 Emission Factors: V2.3 Nov 1 2006

Lake (LC) Lake (LC) Lake (LC)

Table 2: Starting Emissions (grams/trip)

Pollutant Name: Reactive Org Gases Temperature: 70F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0.070	0.123	0.115	1.057	0.284	0.851	0.164
10	0.124	0.207	0.207	1.329	0.553	0.968	0.249
20	0.225	0.362	0.379	1.848	1.049	1.202	0.409
30	0.316	0.503	0.536	2.335	1.487	1.435	0.555
40	0.397	0.629	0.679	2.789	1.868	1.667	0.687
50	0.469	0.739	0.808	3.211	2.191	1.898	0.805
60	0.529	0.830	0.920	3.523	2.456	2.055	0.901
120	0.669	1.000	1.232	3.673	2.704	2.234	1.086
180	0.664	1.008	1.254	3.924	2.869	2.303	1.106
240	0.703	1.067	1.330	4.170	3.029	2.457	1.172
300	0.741	1.125	1.404	4.410	3.183	2.609	1.237
360	0.778	1.181	1.477	4.646	3.333	2.758	1.301
420	0.814	1.236	1.549	4.876	3.477	2.905	1.363
480	0.850	1.289	1.619	5.101	3.616	3.049	1.423
540	0.884	1.341	1.688	5.320	3.750	3.192	1.482
600	0.917	1.391	1.756	5.535	3.878	3.331	1.540
660	0.950	1.440	1.822	5.744	4.001	3.469	1.596
720	0.982	1.487	1.887	5.948	4.119	3.604	1.651

Pollutant Name: Carbon Monoxide Temperature: 70F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0.716	1.359	1.256	10.818	4.255	3.756	1.651
10	1.304	2.372	2.292	14.218	8.338	4.086	2.629
20	2.419	4.285	4.259	20.667	15.984	4.741	4.484
30	3.451	6.049	6.087	26.647	22.938	5.392	6.200
40	4.401	7.664	7.778	32.159	29.201	6.037	7.779
50	5.268	9.129	9.330	37.204	34.773	6.677	9.220
60	6.052	10.445	10.744	41.781	39.652	7.312	10.524
120	8.420	13.774	14.635	48.918	45.483	10.593	13.810

180	7.976	13.337	14.422	52.757	46.812	10.954	13.652
240	8.433	14.039	15.330	56.370	48.186	12.244	14.468
300	8.856	14.697	16.161	59.757	49.603	13.415	15.227
360	9.245	15.313	16.913	62.919	51.064	14.468	15.928
420	9.599	15.886	17.587	65.854	52.569	15.401	16.572
480	9.919	16.417	18.182	68.563	54.118	16.215	17.159
540	10.205	16.904	18.700	71.047	55.710	16.911	17.689
600	10.456	17.349	19.139	73.304	57.347	17.488	18.161
660	10.672	17.751	19.500	75.336	59.027	17.946	18.576
720	10.854	18.110	19.782	77.141	60.751	18.285	18.934

Pollutant Name: Oxides of Nitrogen Temperature: 70F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0.251	0.391	1.005	0.963	1.261	0.175	0.480
10	0.288	0.456	1.123	1.412	1.900	0.210	0.565
20	0.354	0.572	1.332	2.202	3.022	0.271	0.715
30	0.408	0.667	1.506	2.847	3.936	0.322	0.838
40	0.451	0.743	1.646	3.346	4.643	0.362	0.936
50	0.483	0.798	1.751	3.699	5.142	0.393	1.008
60	0.504	0.834	1.821	3.907	5.433	0.413	1.053
120	0.529	0.872	1.932	3.936	5.472	0.416	1.099
180	0.531	0.874	1.932	3.919	5.452	0.410	1.099
240	0.527	0.868	1.918	3.893	5.421	0.402	1.091
300	0.522	0.858	1.897	3.858	5.380	0.392	1.080
360	0.514	0.846	1.868	3.815	5.328	0.380	1.064
420	0.504	0.830	1.831	3.763	5.266	0.366	1.045
480	0.493	0.811	1.787	3.703	5.192	0.350	1.022
540	0.479	0.790	1.735	3.635	5.109	0.331	0.995
600	0.464	0.765	1.675	3.557	5.014	0.311	0.965
660	0.446	0.737	1.608	3.472	4.909	0.288	0.930
720	0.427	0.706	1.533	3.377	4.793	0.264	0.892

Pollutant Name: Carbon Dioxide Temperature: 70F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	11.158	13.136	19.045	17.345	3.753	17.843	13.809
10	13.297	16.067	22.635	21.839	7.485	20.201	16.647
20	17.960	22.319	30.485	30.700	14.887	24.816	22.728
30	23.135	29.093	39.228	39.394	22.206	29.297	29.348
40	28.822	36.387	48.865	47.920	29.442	33.644	36.506
50	35.022	44.203	59.394	56.279	36.595	37.857	44.203
60	41.734	52.539	70.816	64.470	43.665	41.935	52.438
120	89.824	108.706	153.282	100.658	74.266	60.475	108.813
180	102.636	124.412	175.141	112.595	87.740	63.818	124.192
240	115.241	139.770	196.663	123.830	100.419	66.965	139.259
300	127.639	154.779	217.849	134.361	112.302	69.917	154.016
360	139.831	169.440	238.698	144.190	123.390	72.674	168.461
420	151.816	183.753	259.211	153.315	133.683	75.236	182.595
480	163.595	197.717	279.387	161.738	143.180	77.602	196.419
540	175.167	211.334	299.227	169.458	151.883	79.772	209.931
600	186.532	224.602	318.730	176.475	159.790	81.748	223.132
660	197.690	237.522	337.896	182.788	166.901	83.528	236.022

720	208.642	250.093	356.726	188.399	173.218	85.113	248.601

Pollutant Name: Sulfur Dioxide Temperature: 70F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0.000	0.000	0.000	0.000	0.000	0.000	0.000
10	0.000	0.000	0.000	0.000	0.000	0.000	0.000
20	0.000	0.000	0.000	0.001	0.000	0.000	0.000
30	0.000	0.000	0.000	0.001	0.001	0.000	0.000
40	0.000	0.000	0.001	0.001	0.001	0.000	0.000
50	0.000	0.001	0.001	0.001	0.001	0.001	0.001
60	0.001	0.001	0.001	0.001	0.001	0.001	0.001
120	0.001	0.001	0.002	0.002	0.001	0.001	0.001
180	0.001	0.001	0.002	0.002	0.002	0.001	0.001
240	0.001	0.002	0.002	0.002	0.002	0.001	0.002
300	0.001	0.002	0.002	0.002	0.002	0.001	0.002
360	0.002	0.002	0.003	0.002	0.002	0.001	0.002
420	0.002	0.002	0.003	0.003	0.002	0.001	0.002
480	0.002	0.002	0.003	0.003	0.002	0.001	0.002
540	0.002	0.002	0.003	0.003	0.002	0.001	0.002
600	0.002	0.002	0.003	0.003	0.003	0.001	0.002
660	0.002	0.003	0.004	0.003	0.003	0.001	0.003
720	0.002	0.003	0.004	0.003	0.003	0.001	0.003

Pollutant Name: PM2.5 Temperature: 70F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0.001	0.001	0.001	0.001	0.001	0.007	0.001
10	0.001	0.002	0.002	0.002	0.001	0.007	0.002
20	0.003	0.005	0.003	0.002	0.002	0.005	0.003
30	0.004	0.007	0.004	0.003	0.003	0.004	0.005
40	0.005	0.009	0.005	0.004	0.004	0.003	0.006
50	0.006	0.010	0.007	0.004	0.005	0.003	0.008
60	0.007	0.012	0.008	0.005	0.005	0.003	0.009
120	0.010	0.018	0.012	0.007	0.007	0.006	0.013
180	0.011	0.019	0.013	0.007	0.007	0.008	0.014
240	0.012	0.021	0.013	0.008	0.007	0.011	0.015
300	0.013	0.022	0.014	0.008	0.008	0.013	0.016
360	0.013	0.023	0.015	0.009	0.008	0.015	0.017
420	0.014	0.024	0.015	0.009	0.008	0.016	0.018
480	0.014	0.025	0.016	0.009	0.008	0.018	0.018
540	0.015	0.026	0.016	0.010	0.009	0.019	0.019
600	0.015	0.026	0.017	0.010	0.009	0.019	0.019
660	0.015	0.027	0.017	0.010	0.009	0.020	0.020
720	0.015	0.027	0.017	0.010	0.009	0.020	0.020

Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2010/07/13 16:15:33
Scen Year: 2015 -- All model years in the range 1971 to 2015 selected
Season : Winter
Area : Lake (LC)
****

Year: 2015 -- Model Years 1971 to 2015 Inclusive -- Winter
Emfac2007 Emission Factors: V2.3 Nov 1 2006

Lake (LC) Lake (LC) Lake (LC)

Table 4: Hot Soak Emissions (grams/trip)

Pollutant Name: Reactive Org Gases Temperature: 70F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
5	0.136	0.183	0.058	0.067	0.088	0.203	0.137
10	0.252	0.340	0.108	0.123	0.163	0.379	0.254
20	0.431	0.582	0.185	0.211	0.278	0.662	0.436
30	0.556	0.753	0.240	0.272	0.359	0.872	0.563
40	0.603	0.818	0.261	0.295	0.389	0.956	0.612

Hot soak results are scaled to reflect zero emissions for trip lengths of less than 5 minutes (about 25% of in-use trips).

Title : Lake County Air Basin Subarea Winter CYr 2015 Default Title
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2010/07/13 16:15:33
Scen Year: 2015 -- All model years in the range 1971 to 2015 selected
Season : Winter
Area : Lake (LC)
****

Year: 2015 -- Model Years 1971 to 2015 Inclusive -- Winter
Emfac2007 Emission Factors: V2.3 Nov 1 2006

Lake (LC) Lake (LC) Lake (LC)

Table 5a: Partial Day Diurnal Loss Emissions (grams/hour)

Pollutant Name: Reactive Org Gases Temperature: ALL Relative Humidity: ALL

Temp degF	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
70	0.218	0.327	0.113	0.029	0.005	0.452	0.260

Title : Lake County Air Basin Subarea Winter CYr 2015 Default Title
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2010/07/13 16:15:33
Scen Year: 2015 -- All model years in the range 1971 to 2015 selected
Season : Winter
Area : Lake (LC)
****
*****

Year: 2015 -- Model Years 1971 to 2015 Inclusive -- Winter
Emfac2007 Emission Factors: V2.3 Nov 1 2006

Lake (LC) Lake (LC) Lake (LC)

Table 5b: Multi-Day Diurnal Loss Emissions
(grams/hour)

Pollutant Name: Reactive Org Gases Temperature: ALL Relative Humidity:
ALL

Temp degF	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
70	0.018	0.025	0.009	0.001	0.002	0.041	0.021

Title : Lake County Air Basin Subarea Winter CYr 2015 Default Title
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2010/07/13 16:15:33
Scen Year: 2015 -- All model years in the range 1971 to 2015 selected
Season : Winter
Area : Lake (LC)
****
*****

Year: 2015 -- Model Years 1971 to 2015 Inclusive -- Winter
Emfac2007 Emission Factors: V2.3 Nov 1 2006

Lake (LC) Lake (LC) Lake (LC)

Table 6a: Partial Day Resting Loss Emissions
(grams/hour)

Pollutant Name: Reactive Org Gases Temperature: ALL Relative Humidity:
ALL

Temp degF	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
70	0.083	0.129	0.048	0.013	0.002	0.142	0.100

Title : Lake County Air Basin Subarea Winter CYr 2015 Default Title
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2010/07/13 16:15:33
Scen Year: 2015 -- All model years in the range 1971 to 2015 selected
Season : Winter
Area : Lake (LC)
****
*****

Year: 2015 -- Model Years 1971 to 2015 Inclusive -- Winter
Emfac2007 Emission Factors: V2.3 Nov 1 2006

Lake (LC) Lake (LC) Lake (LC)

Table 6b: Multi-Day Resting Loss Emissions
(grams/hour)

Pollutant Name: Reactive Org Gases Temperature: ALL Relative Humidity:
ALL

Temp degF	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
70	0.007	0.010	0.004	0.001	0.001	0.014	0.008

Title : Lake County Air Basin Subarea Winter CYr 2015 Default Title
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2010/07/13 16:15:33
Scen Year: 2015 -- All model years in the range 1971 to 2015 selected
Season : Winter
Area : Lake (LC)
****
*****

Year: 2015 -- Model Years 1971 to 2015 Inclusive -- Winter
Emfac2007 Emission Factors: V2.3 Nov 1 2006

Lake (LC) Lake (LC) Lake (LC)

Table 7: Estimated Travel Fractions

Pollutant Name: Temperature: ALL Relative Humidity:
ALL

	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
%VMT	0.412	0.424	0.116	0.032	0.001	0.015	1.000
%TRIP	0.363	0.383	0.184	0.053	0.000	0.017	1.000
%VEH	0.389	0.423	0.095	0.037	0.000	0.056	1.000

Title : Lake County Air Basin Subarea Winter CYr 2015 Default Title
Version : Emfac2007 V2.3 Nov 1 2006
Run Date : 2010/07/13 16:15:33
Scen Year: 2015 -- All model years in the range 1971 to 2015 selected
Season : Winter
Area : Lake (LC)
****
*****

Year: 2015 -- Model Years 1971 to 2015 Inclusive -- Winter
Emfac2007 Emission Factors: V2.3 Nov 1 2006

Lake (LC) Lake (LC) Lake (LC)

Table 8: Evaporative Running Loss Emissions (grams/minute)

Pollutant Name: Reactive Org Gases Temperature: 70F Relative Humidity: ALL

Time min	LDA	LDT	MDT	HDT	UBUS	MCY	ALL
1	0.030	0.942	0.499	1.233	0.716	0.024	0.510
2	0.031	0.493	0.262	0.655	0.373	0.062	0.275
3	0.034	0.347	0.185	0.464	0.260	0.083	0.199
4	0.038	0.276	0.148	0.369	0.205	0.096	0.163
5	0.041	0.234	0.127	0.313	0.172	0.105	0.143
10	0.050	0.156	0.087	0.203	0.109	0.132	0.106
15	0.056	0.137	0.078	0.170	0.091	0.149	0.098
20	0.061	0.134	0.077	0.156	0.085	0.163	0.099
25	0.066	0.138	0.080	0.150	0.084	0.176	0.102
30	0.069	0.145	0.084	0.156	0.088	0.184	0.107
35	0.071	0.151	0.087	0.161	0.091	0.193	0.111
40	0.073	0.157	0.091	0.167	0.095	0.201	0.116
45	0.075	0.163	0.094	0.172	0.098	0.209	0.120
50	0.077	0.168	0.097	0.177	0.101	0.215	0.123
55	0.078	0.174	0.100	0.182	0.104	0.221	0.126
60	0.079	0.179	0.103	0.187	0.107	0.227	0.130

1 CALINE4 - (DATED CALINE4x)

3.0.0 PC (32 BIT) VERSION

Run Began on 7/13/2010 at 16:30:35

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: Bevins-Lakeport
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U= 0.5 M/S Z0= 100. CM ALT= 0. (M)
BRG= WORST CASE VD= 0.0 CM/S
CLAS= 6 (F) VS= 0.0 CM/S
MIXH= 1000. M AMB= 3.5 PPM
SIGTH= 5. DEGREES TEMP= 15.0 DEGREE (C)

II. LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (M) X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
1. Y SB1	684	1256	711	1201	AG	262	3.3	0.0	23.3
2. Y SB2	711	1201	745	1133	AG	220	7.4	0.0	23.3
3. Y SB3	745	1133	800	1025	AG	226	3.3	0.0	23.3
4. Y SB4	800	1025	858	906	AG	226	3.3	0.0	23.3
5. Y NB1	868	911	813	1024	AG	30	3.3	0.0	23.3
6. Y NB2	814	1024	761	1138	AG	13	3.3	0.0	23.3
7. Y NB3	761	1138	728	1205	AG	286	3.3	0.0	23.3
8. Y NB4	728	1205	700	1263	AG	286	3.3	0.0	23.3
9. Y LT1	720	1198	753	1134	AG	42	7.4	0.0	23.3
10. Y LT2	753	1134	802	1038	AG	17	7.4	0.0	23.3
11. X EB1	596	1103	682	1125	AG	1013	3.3	0.0	24.1
12. X EB2	682	1125	750	1141	AG	740	7.4	0.0	24.1
13. X EB3	750	1141	826	1158	AG	782	3.3	0.0	24.1
14. X EB4	826	1158	923	1182	AG	782	3.3	0.0	24.1
15. X WB1	924	1170	832	1147	AG	385	3.3	0.0	24.1
16. X WB2	832	1147	757	1128	AG	379	7.4	0.0	24.1
17. X WB3	757	1128	687	1111	AG	396	3.3	0.0	24.1
18. X WB4	687	1111	599	1090	AG	396	3.3	0.0	24.1
19. X LT1	674	1115	753	1134	AG	273	7.4	0.0	24.1
20. X LT2	753	1134	841	1157	AG	6	7.4	0.0	24.1

III. RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (M) X	Y	Z
1. Recpt 1	805	1099	1.8
2. Recpt 2	691	1157	1.8
3. Recpt 3	729	1093	1.8
4. Recpt 4	778	1179	1.8

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) 1	2	3	4	5	6	7	8
1. Recpt 1	289.	3.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2. Recpt 2	110.	3.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3. Recpt 3	359.	3.9	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
4. Recpt 4	234.	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

RECEPTOR	CONC/LINK (PPM) 9	10	11	12	13	14	15	16
1. Recpt 1	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0
2. Recpt 2	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.1
3. Recpt 3	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0
4. Recpt 4	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0

RECEPTOR	CONC/LINK (PPM) 17	18	19	20
1. Recpt 1	0.0	0.0	0.1	0.0
2. Recpt 2	0.0	0.0	0.0	0.0
3. Recpt 3	0.0	0.0	0.1	0.0
4. Recpt 4	0.0	0.0	0.1	0.0

1

Run Ended on 7/13/2010 at 16:30:35

1 CALINE4 - (DATED CALINE4x)

3.0.0 PC (32 BIT) VERSION
(C) COPYRIGHT 2000, TRINITY CONSULTANTS

Run Began on 7/13/2010 at 16:34:29

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: Main-Lakeport
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U= 0.5 M/S Z0= 100. CM ALT= 0. (M)
BRG= WORST CASE VD= 0.0 CM/S
CLAS= 6 (F) VS= 0.0 CM/S
MIXH= 1000. M AMB= 3.5 PPM
SIGTH= 5. DEGREES TEMP= 15.0 DEGREE (C)

II. LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (M) X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
1. Y SB1	684	1256	711	1201	AG	683	3.3	0.0	20.3
2. Y SB2	711	1201	745	1133	AG	647	7.4	0.0	20.3
3. Y SB3	745	1133	800	1025	AG	647	3.3	0.0	20.3
4. Y SB4	800	1025	858	906	AG	647	3.3	0.0	20.3
5. Y NB1	868	911	813	1024	AG	384	3.3	0.0	20.3
6. Y NB2	814	1024	761	1138	AG	311	3.3	0.0	20.3
7. Y NB3	761	1138	728	1205	AG	714	3.3	0.0	20.3
8. Y NB4	728	1205	700	1263	AG	714	3.3	0.0	20.3
9. Y LT1	720	1198	753	1134	AG	36	7.4	0.0	20.3
10. Y LT2	753	1134	802	1038	AG	73	7.4	0.0	20.3
11. X EB1	596	1103	682	1125	AG	521	3.3	0.0	16.2
12. X EB2	682	1125	750	1141	AG	118	7.4	0.0	16.2
13. X EB3	750	1141	826	1158	AG	154	3.3	0.0	16.2
14. X EB4	826	1158	923	1182	AG	154	3.3	0.0	16.2
15. X WB1	924	1170	832	1147	AG	3	3.3	0.0	16.2
16. X WB2	832	1147	757	1128	AG	3	7.4	0.0	16.2
17. X WB3	757	1128	687	1111	AG	76	3.3	0.0	16.2
18. X WB4	687	1111	599	1090	AG	76	3.3	0.0	16.2
19. X LT1	674	1115	753	1134	AG	403	7.4	0.0	16.2
20. X LT2	753	1134	841	1157	AG	0	7.4	0.0	16.2

III. RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (M) X	Y	Z
1. Recpt 1	805	1099	1.8
2. Recpt 2	691	1157	1.8
3. Recpt 3	729	1093	1.8
4. Recpt 4	778	1179	1.8

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) 1	2	3	4	5	6	7	8
1. Recpt 1	314.	3.8	0.0	0.2	0.0	0.0	0.0	0.0	0.1	0.0
2. Recpt 2	139.	3.8	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
3. Recpt 3	357.	3.9	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.1
4. Recpt 4	232.	3.9	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0

RECEPTOR	CONC/LINK (PPM) 9	10	11	12	13	14	15	16
1. Recpt 1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2. Recpt 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3. Recpt 3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4. Recpt 4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

RECEPTOR	CONC/LINK (PPM) 17	18	19	20
1. Recpt 1	0.0	0.0	0.0	0.0
2. Recpt 2	0.0	0.0	0.1	0.0
3. Recpt 3	0.0	0.0	0.1	0.0
4. Recpt 4	0.0	0.0	0.1	0.0

1

Run Ended on 7/13/2010 at 16:34:29

1 CALINE4 - (DATED CALINE4x)

3.0.0 PC (32 BIT) VERSION

Run Began on 7/13/2010 at 16:27:29

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: SR29 NB Ramp-Lakeport Blvd
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U= 0.5 M/S Z0= 100. CM ALT= 0. (M)
BRG= WORST CASE VD= 0.0 CM/S
CLAS= 6 (F) VS= 0.0 CM/S
MIXH= 1000. M AMB= 3.5 PPM
SIGTH= 5. DEGREES TEMP= 15.0 DEGREE (C)

II. LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (M) X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
1. Link A	6284	-181	6284	-246	AG	388	3.3	0.0	19.1
2. Link B	6284	-246	6284	-300	AG	388	7.4	0.0	19.1
3. Link C	6284	-300	6279	-453	AG	572	3.3	0.0	19.1
4. Link D	6297	-460	6298	-378	AG	769	3.3	0.0	19.1
5. Link E	6298	-378	6298	-319	AG	769	3.3	0.0	19.1
6. Link F	6298	-319	6297	-176	AG	769	3.3	0.0	19.1
7. Link G	6284	-265	6300	-314	AG	0	7.4	0.0	19.1
8. Link H	6300	-314	6462	-325	AG	0	3.3	0.0	23.7
9. Link I	6523	-313	6380	-311	AG	635	3.3	0.0	23.7
10. Link J	6380	-311	6298	-301	AG	451	7.4	0.0	23.7
11. Link K	6370	-310	6284	-326	AG	184	7.4	0.0	23.7

III. RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (M) X	Y	Z
1. Recpt 1	6325	-280	1.7
2. Recpt 2	6315	-339	1.7
3. Recpt 3	6243	-327	1.7
4. Recpt 4	6246	-277	1.7

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) 1	2	3	4	5	6	7	8
1. Recpt 1	199.	3.9	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0

```
  2. Recpt 2  *  344. *   4.0 *  0.0  0.1  0.0  0.0  0.0  0.2  0.0  0.0
  3. Recpt 3  *   83. *   3.9 *  0.0  0.0  0.1  0.0  0.0  0.0  0.0  0.0
  4. Recpt 4  *  105. *   3.9 *  0.0  0.1  0.0  0.0  0.0  0.1  0.0  0.0


            *CONC/LINK
            *(PPM)
  RECEPTOR   *   9   10   11
 ------------*-------------------------------------------------
  1. Recpt 1  *  0.0  0.1  0.0
  2. Recpt 2  *  0.0  0.1  0.1
  3. Recpt 3  *  0.1  0.1  0.1
  4. Recpt 4  *  0.0  0.2  0.0


1

 Run Ended on  7/13/2010 at 16:27:29
```

1 CALINE4 - (DATED CALINE4x)

3.0.0 PC (32 BIT) VERSION

Run Began on 7/13/2010 at 16:25:31

CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
JUNE 1989 VERSION
PAGE 1

JOB: SR29 SB Ramp-Lakeport Blvd
RUN: Hour 1 (WORST CASE ANGLE)
POLLUTANT: Carbon Monoxide

I. SITE VARIABLES

U= 0.5 M/S Z0= 100. CM ALT= 0. (M)
BRG= WORST CASE VD= 0.0 CM/S
CLAS= 6 (F) VS= 0.0 CM/S
MIXH= 1000. M AMB= 3.5 PPM
SIGTH= 5. DEGREES TEMP= 15.0 DEGREE (C)

II. LINK VARIABLES

LINK DESCRIPTION	LINK COORDINATES (M) X1	Y1	X2	Y2	TYPE	VPH	EF (G/MI)	H (M)	W (M)
1. Link A	6284	-181	6284	-246	AG	572	3.3	0.0	17.0
2. Link B	6284	-246	6284	-300	AG	391	7.4	0.0	17.0
3. Link C	6284	-300	6279	-453	AG	391	3.3	0.0	17.0
4. Link D	6297	-460	6298	-378	AG	456	3.3	0.0	17.0
5. Link E	6298	-378	6298	-319	AG	456	3.3	0.0	17.0
6. Link F	6298	-319	6297	-176	AG	456	3.3	0.0	17.0
7. Link G	6284	-265	6300	-314	AG	181	7.4	0.0	17.0
8. Link H	6300	-314	6462	-325	AG	181	3.3	0.0	18.4
9. Link I	6523	-313	6380	-311	AG	0	3.3	0.0	18.4
10. Link J	6380	-311	6298	-301	AG	0	7.4	0.0	18.4
11. Link K	6370	-310	6284	-326	AG	0	7.4	0.0	18.4

III. RECEPTOR LOCATIONS

RECEPTOR	COORDINATES (M) X	Y	Z
1. Recpt 1	6325	-280	1.7
2. Recpt 2	6315	-339	1.7
3. Recpt 3	6243	-327	1.7
4. Recpt 4	6246	-277	1.7

IV. MODEL RESULTS (WORST CASE WIND ANGLE)

RECEPTOR	BRG (DEG)	PRED CONC (PPM)	CONC/LINK (PPM) 1	2	3	4	5	6	7	8
1. Recpt 1	253.	3.7	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0

```
  2. Recpt 2  *  338. *   3.9 *  0.0  0.1  0.0  0.0  0.0  0.1  0.1  0.0
  3. Recpt 3  *   40. *   3.7 *  0.0  0.1  0.0  0.0  0.0  0.0  0.0  0.0
  4. Recpt 4  *  108. *   3.7 *  0.0  0.1  0.0  0.0  0.0  0.0  0.0  0.0


            *CONC/LINK
            *(PPM)
  RECEPTOR   *   9   10   11
 ------------*-------------------------------------------------
  1. Recpt 1  *  0.0  0.0  0.0
  2. Recpt 2  *  0.0  0.0  0.0
  3. Recpt 3  *  0.0  0.0  0.0
  4. Recpt 4  *  0.0  0.0  0.0


1

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Appendix C
Biological Resources Documentation

Biological Study Report

Lake County Courthouse
675 Lakeport Boulevard, Lakeport, CA

Prepared for:

RBF Consulting
500-01

July 15, 2010

Prepared by:

ENPLAN
Environmental Scientists and Planners
www.enplan.com

TABLE OF CONTENTS

1. INTRODUCTION

The purpose of this biological study report is to identify and characterize sensitive natural communities and plant and wildlife resources that are known or expected to occur on a ±5.8-acre project site at 675 Lakeport Boulevard, in the City of Lakeport, Lake County. The site, identified as Lake County Assessor's Parcel Number 025-521-410, is being evaluated for potential construction of a new courthouse. As shown in Figure 1 of Appendix A, the site is located in near the center of Section 25, Township 14 North, Range 10 West, of the U.S. Geological Survey's Lakeport 7.5-minute quadrangle. Photographs of the site are provided in Appendix B.

2. METHODOLOGY AND STAFF QUALIFICATIONS

Prior to conducting fieldwork, a biological records search was completed. This consisted of reviewing the California Department of Fish and Game's California Natural Diversity Data Base (CNDDB) as well as available local records. The CNDDB records search covered a 10-mile radius around the site. This entailed review of records for portions of the following quadrangles: Cow Mountain, Upper Lake, Bartlett Mountain, Purdy's Garden, Lakeport, Lucerne, Clearlake Oaks, Hopland, Highland Springs, Kelseyville, and Clearlake Highlands. Available local records consisted of a biological study report and wetland delineation (Northwest Biosurvey, 2006) prepared for a site approximately 0.3 miles to the north of the subject site on Martin Street, and an Initial Study for the same site (City of Lakeport, 2010). The Martin Street site has physical and biological characteristics similar to the subject site, supports several of the same special-status plant species, and was used as a reference site to check the phenology of local special-status plant species.

Upon completion of the pre-field review, a botanical field survey was undertaken in general accordance with *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities* (DFG, 2009). Because of the potential requirement for frontage improvements on Lakeport Boulevard, lands between the subject parcel and the street were included in the biological study area. The botanical survey was conducted on April 9 and 29, May 17, and June 19, 2010. All of the special-status plant species potentially occurring in the study area would have been evident at the time the fieldwork was conducted. The survey consisted of an intensive and systematic evaluation of the site; the field survey effort included four to six hours of field time during each of the four site visits.

The locations and approximate population numbers/densities of the identified special-status plant populations were determined by gridding each population into a number of small polygons and then estimating the number of plants in each polygon.

The wildlife evaluation was conducted in three phases. The first phase consisted of the records search described above. Under the second phase, the habitats and special habitat elements in the study area were determined through field reconnaissance. A list of wildlife species that could potentially occur in the identified

habitats was then compiled using the DFG's Wildlife Habitat Relationships (WHR) System, Version 8.2 (DFG, 2008). This is a predictive system based on scientific information regarding wildlife species and their known habitat relationships. It is useful as a general pre-field screen and provides a somewhat broader view of special-status species potentially occurring in the study area.

The wildlife survey was conducted on March 17, 2010. Many of the special-status animal species potentially occurring in the study area would have been evident at the time the fieldwork was conducted. The potential presence of species not readily identifiable during the field surveys was determined on the basis of observed habitat characteristics. The initial field effort included approximately three hours of field observations; additional wildlife observations were made during the botanical field survey visits.

The botanical field surveys were conducted by Donald Burk. Mr. Burk has a Bachelor of Arts degree in Biological Sciences and a Master of Science degree in Botany. He has over 25 years of experience in the design and implementation of botanical field studies. He has previously conducted botanical surveys in Lakeport and is familiar with flora of the region as well as state and federal statutes pertaining to special-status species. The wildlife evaluation was conducted by Darrin Doyle. Mr. Doyle has a Bachelor of Science degree in biology, and has 10 years of experience conducting biological surveys in California. He is familiar with wildlife species of the region and their habitat requirements. Mr. Doyle possesses a federal "take" permit for California red-legged frog and vernal pool crustaceans.

3. RESULTS

Plant Communities/Wildlife Habitats

The study site is situated between approximately 1,340 and 1,400 feet above sea level, and is surrounded on three sides by urban development. The site was historically an oak woodland, and was used for agriculture and grazing beginning in the late 1930s; the site was cleared of trees and shrubs in the early 1970s, and was graded prior to 1988 (URS, 2009). Soils on the site are identified as Henneke-Montara-rock outcrop complex, 15 to 50 percent slopes, with a negligible amount of Still loam, stratified substratum, in the extreme northeast corner of the site (USDA, NRCS, 2009). The Henneke-Montara complex consists of very deep, moderately well-drained soils formed in alluvium from mixed rock types. However, grading activities dramatically altered the soils and natural contours of the site. Roughly 20 feet of surface material was removed from the upper portion of the site, resulting in two level terraces.

Small rocks of serpentine origin are exposed on the upper terrace and hillsides, which support a serpentine herb community. The lower terrace supports a disturbed annual grassland. These two communities are described in more detail below; locations of the communities are shown on Figure 3 of Appendix A and photographs are provided in Appendix B. Two small, shallow seasonal waters with rock substrates are present on the upper terrace. Most runoff from the site enters constructed ditches that convey flow to the east. Flow enters the City's storm drain system, which discharges into Clear Lake approximately ¼-mile east of the site.

<u>Annual grassland</u>

Annual grasslands are characterized by a sparse to dense cover of annual grasses with inclusions of numerous species of native annual forbs ("wildflowers"). Germination occurs with the onset of the fall rains; growth, flowering, and seed-set occur from winter through spring. With a few exceptions, the plants are dead through the summer-fall dry season, persisting as seeds. On the subject site, the annual grassland community is best represented on the lower terrace of the site, on the eastern edge of the study area. Common species in this community include wild oats, soft

chess, California meadow barley, cream sacs, winter vetch, Spanish lotus, and various clovers. Although several special-status plant species were observed on the fringe of the annual grassland community, the community itself is not considered unique or sensitive.

High-quality annual grasslands are inhabited by a variety of wildlife species. Common mammals include black-tailed jackrabbit, coyote, gophers, moles, and several species of mice and voles. Snakes are often abundant in annual grasslands, feeding on small rodents. Amphibians are relatively uncommon in annual grasslands; however, species such as the western toad and Pacific treefrog may be locally abundant near aquatic habitats. Annual grassland also provides nesting and foraging habitat for certain migratory birds, including western meadowlarks, various sparrows, western kingbirds, and horned larks. The WHR data base predicts that this habitat type may be inhabited by 83 species of wildlife (Appendix C). However, because the onsite grassland is a small, fragmented relic of the grassland that historically was interspersed among the oak woodland, far fewer animal species are expected to be present. Overall, the onsite grassland has low value to wildlife species.

Serpentine herb community

The onsite serpentine herb community generally consists of a sparse, low-growing cover of annual and perennial forbs and grasses on the upper terrace and hillsides. Serpentine soils have unique chemical properties that prohibit the growth of many common plant species. A number of other plant species have evolved mechanisms allowing them to survive on serpentine soils. The flora of serpentine sites is thus unique and often supports plants of limited distribution, including a number of endemic species. Plant species observed on the site include naked buckwheat, wicker buckwheat, reflexed fescue, serpentine phacelia, fringed checkerbloom, bearded jewelflower, Douglas's sandwort, and Gambel's dwarf milkvetch. As discussed below, four serpentine-adapted special-status plant species were also observed in this community.

With the exception of crevices between boulders, the serpentine herb community lacks sufficient cover objects for most animal species. Accordingly, this habitat type

supports relatively few species of wildlife. Ground squirrels, which are present in small numbers on the site, create their own shelter by burrowing into hillsides or under large boulders. A number of birds may forage in this habitat; gulls, ravens, and crows were observed overhead, and may feed on picnic remains from the adjacent visitor's center. While the serpentine herb community does not provide tree-nesting habitat for birds, ground-nesting species such as the killdeer could potentially nest on the site. Overall, this habitat type has low value to wildlife species. No estimate on the number of animals that may potentially utilize the serpentine herb community is available, as there is no corresponding WHR habitat type for this community.

Site grading resulted in the creation of two very shallow depressions on the western edge of the serpentine herb community. These depressions pond water to a depth of two to three inches. Because of the underlying bedrock, the water ponds for long duration. These features appear to be subject to U.S. Army Corps of Engineers jurisdiction as non-wetland "waters of the United States." They drain to the northwest and southwest corners of the upper terrace and overflow enters small constructed ditches that ultimately discharge to the City's storm drain system. These waters are essentially unvegetated and provide minimal wildlife value. However, they do attract some species, such as killdeer. A delineation of wetlands and other waters on the subject site has been completed by ENPLAN and is presented in a separate report (ENPLAN, 2010).

The serpentine herb community is considered to be a sensitive natural community due to its somewhat restricted distribution and the high potential for endemic plant species to be present. The onsite community has been highly disturbed by grading. Although this has reduced the value of the site for some plant species, it has formed a "serpentine barren" that supports a unique suite of species, including four special-status species. Loss of the serpentine herb community as a result of project development is considered a significant adverse impact. Mitigation for this loss is best considered in conjunction with impacts on the four special-status plant species, and is addressed below.

Special-Status Plant Species

Review of CNDDB records showed that two special-status plant species, green jewel-flower and mayacamas popcorn-flower, have been broadly mapped to include the study area. Twenty-six other special-status plant species are known to occur within a 10-mile radius: Anthony's Peak lupine, beaked tracyina, bent-flowered fiddleneck, Boggs Lake hedge-hyssop, Bolander's horkelia, Brandegee's eriastrum, bristly sedge, Burke's goldfields, Colusa layia, dimorphic snapdragon, eel-grass pondweed, glandular western flax, Koch's cord moss, Konocti manzanita, Napa bluecurls, Norris' beard moss, oval-leaved viburnum, Raiche's manzanita, Rincon Ridge ceanothus, robust monardella, serpentine cryptantha, small-flowered calycadenia, small groundcone, Sonoma canescent manzanita, two-carpellate western flax, and woolly meadowfoam (Appendix D). The potential for each special-status plant species to utilize the study area is evaluated in Appendix E.

The botanical survey confirmed the presence of four special-status plant species on the project site: Colusa layia, bent-flowered fiddleneck, serpentine cryptantha, and Tracy's clarkia (a special-status species not reported in the CNDDB records search). The locations of the plant populations are shown in Figure 3 of Appendix A. A checklist of vascular plant species observed during the botanical field surveys is provided in Appendix F. Data forms documenting the special-status plant occurrences have been submitted to the California Natural Diversity Data Base.

Colusa layia *(Layia septentrionalis)*

Colusa layia is an annual herb that occurs in oak woodlands, chaparral, valley and foothill grasslands, and in sandy serpentinite. The species is not state or federally listed, but is on CNPS List 1B.2 (Plants Rare, Threatened, or Endangered in California and Elsewhere; Fairly Threatened in California). The species occurs between 300 and 3,600 feet in elevation. A total of 44 populations are reported in CNDDB records. These populations occur in the North Coast Range and Sutter Buttes (Colusa, Glenn, Lake, Mendocino, Napa, Sonoma, Sutter, Tehama, and Yolo counties). Reported population sizes (available for only about 25 percent of the records) range mostly from 100 to 200 plants, with the largest reported population having about 2,000 plants. With

roughly 20,000 to 25,000 plants observed on the subject site, the onsite Colusa layia population is by far the largest of those for which data is available. On the subject site, the species is most abundant on hillsides within the serpentine herb community, with a small number of plants present on the upper and lower terraces.

Bent-flowered fiddleneck (*Amsinckia lunaris*)

Bent-flowered fiddleneck occurs in cismontane woodlands, and valley and foothill grassland. The species is not state or federally listed, but is on CNPS List 1B.2 (Plants Rare, Threatened, or Endangered in California and Elsewhere; Fairly Threatened in California). The species is reported between 50 and 1,500 feet in elevation. A total of 50 populations are reported in CNDDB records. Populations are known to occur in Lake, Marin, Napa, Colusa, Contra Costa, Alameda, San Benito, Santa Clara, Santa Cruz, Yolo, and San Mateo counties. Reported population sizes (available for only about 35 percent of the records) range mostly from 10 to 300 plants. The largest quantified population size estimate is 3,650 plants, although the plants are noted to be "common" at other sites. Approximately 500 bent-flowered fiddleneck plants were observed on the subject site, primarily growing on hillsides within the serpentine herb community.

Serpentine cryptantha (*Cryptantha clevelandii* ssp. *dissita*)

Serpentine cryptantha generally occurs on serpentine rock outcrops in chaparral communities. The species is reported between 1,100 and 2,400 feet in elevation. The species is not state or federally listed, but is on CNPS List 1B.1 (Plants Rare, Threatened, or Endangered in California and Elsewhere; Seriously Threatened in California). A total of 10 populations are reported in CNDDB records. Populations are known to occur in Lake, Mendocino, Napa, and Sonoma counties. Six of the ten populations were observed between 1902 and 1967, the remaining four populations were observed between 1999 and 2003. No population size data is available. Approximately 10,000 serpentine cryptantha plants were observed on the subject site. Most of the plants occur within the serpentine herb community, on the upper terrace and on the hillside just below the upper terrace.

Tracy's clarkia (*Clarkia gracilis* ssp. *tracyi*)

Tracy's clarkia generally occurs on serpentine soils in chaparral communities. The species is reported from 200 to 2,200 feet above sea level. The species is not state or federally listed, but is on CNPS List 4.2 (Plants of Limited Distribution (A Watch List); Fairly Threatened in California). Populations are known to occur in Colusa, Humboldt, Lake, Mendocino, Napa, Trinity, and Tehama counties. Because of the lower CNPS status, the CNDDB does not offer online data regarding the number of recorded populations or population sizes. Nearly 10,000 Tracy's clarkia plants were observed on the site. All of these plants were growing on the periphery of the site, on both undisturbed and highly disturbed soils.

As noted above, Colusa layia, serpentine cryptantha, and bent-flowered fiddleneck are on the California Native Plant Society's List 1B. Although not state or federally listed, plants with this CNPS listing status are generally considered to qualify as "endangered, rare, or threatened" under Section 15380(d) of the California Environmental Quality Act (CEQA) Guidelines and thus require consideration during CEQA review. Tracy's clarkia is on CNPS List 4; plants of this status rarely qualify for state listing, but may be locally significant. As such, potential impacts to this species should also be evaluated during the CEQA process.

Because detailed site development plans have not yet been prepared, the extent of impacts to the serpentine herb community and the four onsite special-status plant species cannot be quantified. However, in general terms, site development has a high potential to adversely affect these resources. It appears that Tracy's clarkia, which is the least sensitive of the plants, would be least affected because it primarily occurs on the periphery of the site. Serpentine cryptantha, which is the most sensitive of the four species on the site, is the most centrally located and would be the most difficult to avoid during site development. Because all four of the special-status plant species have an affinity for serpentine soils, mitigation for the loss of the plants would also provide at least some mitigation for the loss of the serpentine herb community.

Department of Fish and Game staff were contacted following discovery of the special-status plant populations. However, the DFG has not conducted a field review of

the site or provided guidance as to potential mitigation strategies. Because full avoidance of the special-status plant populations and serpentine herb community does not appear to be possible, we recommend that the project proponent prepare a mitigation plan acceptable to DFG prior to project construction. Mitigation would likely include avoidance of at least some of the onsite serpentine herb community and associated special-status plant populations. Detailed mapping of the extent and densities of the special-status plant communities prepared as part of the botanical study (Figure 3 of Appendix A) will assist in preparing a site design that minimizes impacts to the populations. We recommend that the mitigation plan be prepared as early as possible, in conjunction with preparation of site design and development plans. Other options for mitigation include preservation of other local populations of these special-status plants, restoration of degraded populations on other sites in the area, and/or creation or new populations.

Special-Status Animal Species

Review of CNDDB records showed that one special-status animal species, American badger, has been broadly mapped as occurring within the study area. In addition, eight other special-status animal species are known to occur within a 10-mile radius: Clear Lake hitch, foothill yellow-legged frog, grasshopper sparrow, Pacific fisher, Sacramento perch, Townsend's big-eared bat, tricolored blackbird, and western pond turtle (Appendix D). The CNDDB records search also identified seven non-status animal species within the search radius: *Calasellus californicus*, Bell's sage sparrow, blennosperma vernal pool andrenid bee, double-crested cormorant, great blue heron, osprey, and silver-haired bat.

The potential for each special-status animal species to utilize the study area is evaluated in Appendix E. No special-status animal species were observed in the study area during the wildlife evaluation. However, as documented in Appendix E, two special-status animal species, grasshopper sparrow and Townsend's big-eared bat, as well as the non-status silver-haired bat could potentially utilize the site as some point during their life cycles. A checklist of wildlife species observed at the site is presented in Appendix G.

The grasshopper sparrow, a migratory bird, has a low potential to nest in the onsite annual grassland community. Potential adverse effects on nesting grasshopper sparrows can be avoided through proper timing of vegetation removal (see Nesting Migratory Birds below).

Townsend's big-eared bat and silver-haired bat could potentially forage on the site. However, they are very unlikely to roost on the site, given the lack of suitable roosting sites. Because suitable roosting habitat is much more available on other local sites and similar or higher quality foraging habitat is widely available, site development would have a negligible effect on these bat species; no mitigation is warranted.

Nesting Migratory Birds

Although no bird nests were observed in the study area during the field inspections, it is possible that migratory birds, particularly ground-nesting species, could nest on the study area in future years. The federal Migratory Bird Treaty Act requires that nesting migratory birds not be adversely affected by human activities. To ensure compliance with the Act, vegetation should be removed from the project area outside of the nesting season. In the local area, most birds nest between March 1 and July 31. Accordingly, the potential for adversely affecting nesting birds can be greatly minimized by removing vegetation before March 1 or after July 31. If this is not possible, a nesting survey should be conducted within two weeks prior to vegetation removal. If active nests are present, work within 500 feet of the nest(s) should be postponed until the young have fledged, unless a smaller nest buffer zone is authorized by the DFG.

Resource-Agency Permit Requirements

If the Corps of Engineers confirms that the small depressions and constructed ditches are waters subject to federal jurisdiction, a Department of the Army permit would be required prior to fill of the features. As a condition of the Department of the Army permit, issuance of a Water Quality Certification by the Regional Water Quality Control Board would also be required. It is unlikely that a Streambed or Lakebed Alteration Agreement would be required by the Department of Fish and Game; however, we recommend this be confirmed through consultation with Department staff. As for any

project involving more than one acre of surface disturbance, a General Construction Activity Storm Water Permit must be obtained from the State Water Resources Control Board; this requires preparation and implementation of a Storm Water Pollution Prevention Plan. Project implementation would also necessitate obtaining other permits (e.g., encroachment permits, air quality permits), but these involve issues beyond the scope of this document.

4. CONCLUSIONS AND RECOMENDATIONS

In summary, we find that the study area supports non-wetland "waters of the United States," a unique serpentine herb community, and four special-status plant species: Colusa layia, serpentine cryptantha, bent-flowered fiddleneck, and Tracy's clarkia. In addition, two special-status animal species (grasshopper sparrow and Townsend's big-eared bat), the non-status silver-haired bat, and nesting migratory birds could potentially utilize the site at some point during their life cycle.

Mitigation is not warranted for the bat species because they are unlikely to roost on the site and foraging habitat is widely available. Mitigation is not warranted for Tracy's clarkia given its relative abundance and low listing status; however, mitigation for the serpentine herb community and other three special-status plants is expected to offset the loss of Tracy's clarkia. Implementation of the following measures would reduce the remaining biological impacts to a level below that of significance.

1. Obtain Required Resource-Agency Permits. The project proponent shall obtain all necessary resource-agency permits prior to initiating any grading or construction activities within "waters of the United States." The required permits may include a Department of the Army Nationwide Permit from the U.S. Army Corps of Engineers, Water Quality Certification from the Regional Water Quality Control Board, and possibly a Streambed Alteration Agreement from the California Department of Fish and Game.
2. Avoid/Minimize/Offset the Loss of the Serpentine Herb Community and Associated Special-Status Plants. The project proponent shall prepare a mitigation plan identifying specific impacts of the proposed courthouse project on the serpentine herb community, Colusa layia, serpentine cryptantha, and bent-flowered fiddleneck. The plan shall include measures to avoid and minimize impacts to these resources through careful site design and establishment of onsite avoidance areas. To the extent feasible, Tracy's clarkia shall also be avoided/protected. If avoidance is not possible or does not provide sufficient mitigation, other mitigation measures shall be designated in the plan, including preservation of offsite serpentine habitats and special-status plant populations, restoration of degraded habitats on other local sites capable of supporting the sensitive resources, and/or creation of new habitats capable of supporting the sensitive resources. The mitigation plan shall be submitted to the California Department of Fish and Game for review, and must be approved in writing by DFG prior to initiation of site construction activities.

3. Avoid Disturbance of Nesting Migratory Birds, Including Grasshopper Sparrow. If feasible, vegetation removal shall be conducted between August 1 and February 28. If vegetation removal must be conducted between March 1 and July 31, a nesting bird survey shall be conducted within two weeks prior to initiation of work; if active nests are present, work within 500 feet of the nest(s) shall be postponed until the young have fledged, unless a smaller nest buffer zone is authorized by the DFG.

5. REFERENCES CITED

California Department of Fish and Game. 2010. California Natural Diversity Data Base, RareFind Printout, March 2010 Data.

_____. 2009. Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities. <http://nrm.dfg.ca.gov/documents/docviewer.aspx>

_____. 2008. California Interagency Wildlife Task Group. California Wildlife Habitat Relationships Systems, Version 8.2, personal computer version. Sacramento, California.

City of Lakeport. 2010. Mitigated Negative Declaration and Initial Environmental Study, Lakeport Pacific Associates. AR 10-03 / ARC 10-02 / ER 10-02.

ENPLAN. 2010. Pre-jurisdictional Delineation Report: Lake County Courthouse Site, 675 Lakeport Boulevard, Lakeport, California. Unpublished report on file with ENLAN.

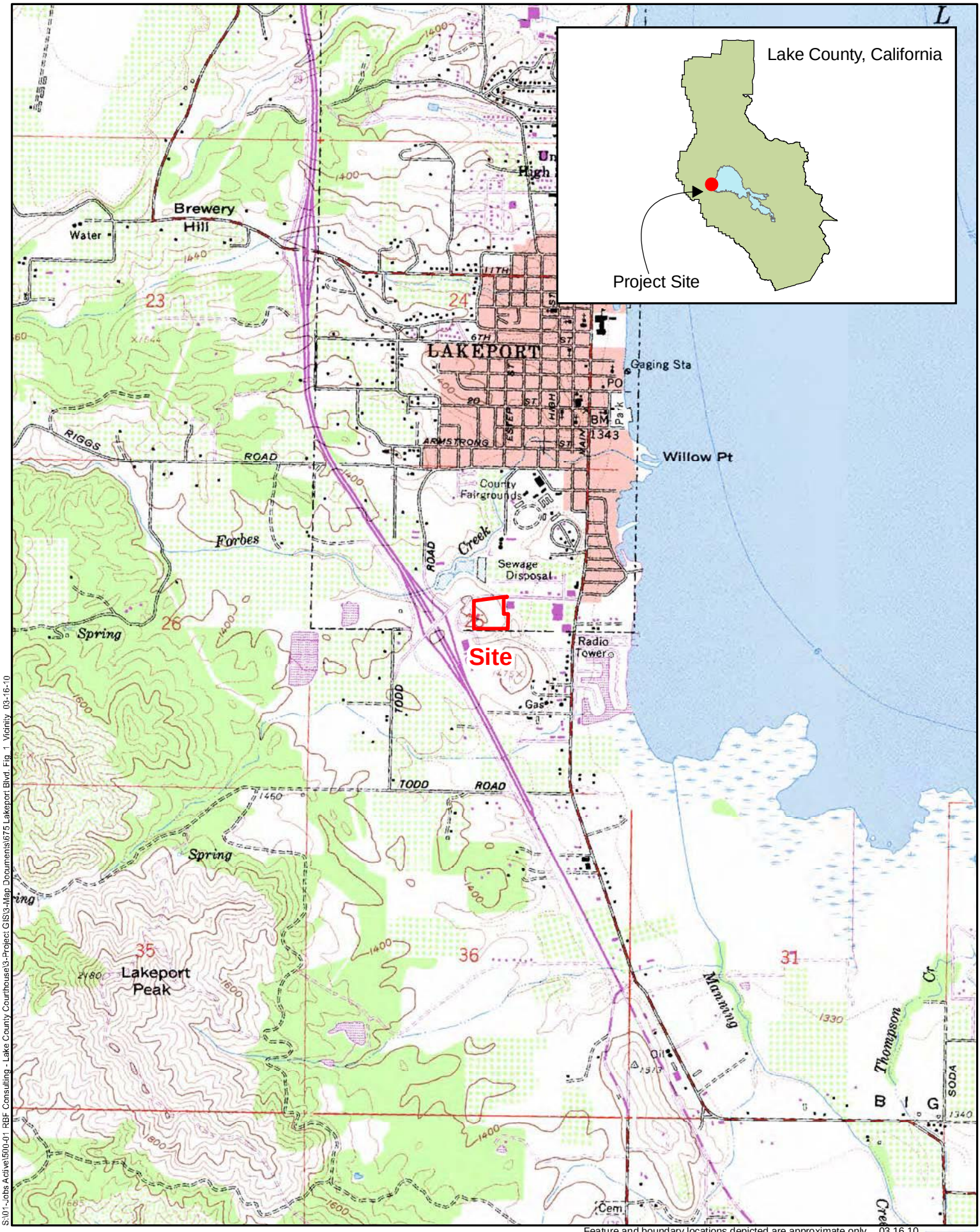
Northwest Biosurvey. June 30, 2006. Biological Assessment with Botanical Survey and Wetland Delineation for the Scott Johnson Property, APN 025-431-35. <http://www.cityoflakeport.com/departments/docs.aspx>

URS Corporation. December 2009. Final Draft Phase I Environmental Site Assessment Report: Proposed New Lakeport Courthouse – 675 Lakeport Boulevard Site. 675 Lakeport Boulevard, Lakeport CA 95453. Unpublished document on file with the Judicial Council of California, Administrative Office of the Courts.

U.S. Department of Agriculture, Natural Resources Conservation Service. 2009. Web Soil Survey, August 31, 2009 Map Data. <http://websoilsurvey.nrcs.usda.gov/app/.>

Appendix A

Figures



S:\01-Jobs Active\500-01 RBF Consulting - Lake County Courthouse\3-Project GIS\3-Map Documents\675 Lakeport Blvd. Fig. 1 Vicinity 03-16-10

Feature and boundary locations depicted are approximate only. 03.16.10

0 2,000 Feet

Figure 1

Project Vicinity Map

ENPLAN

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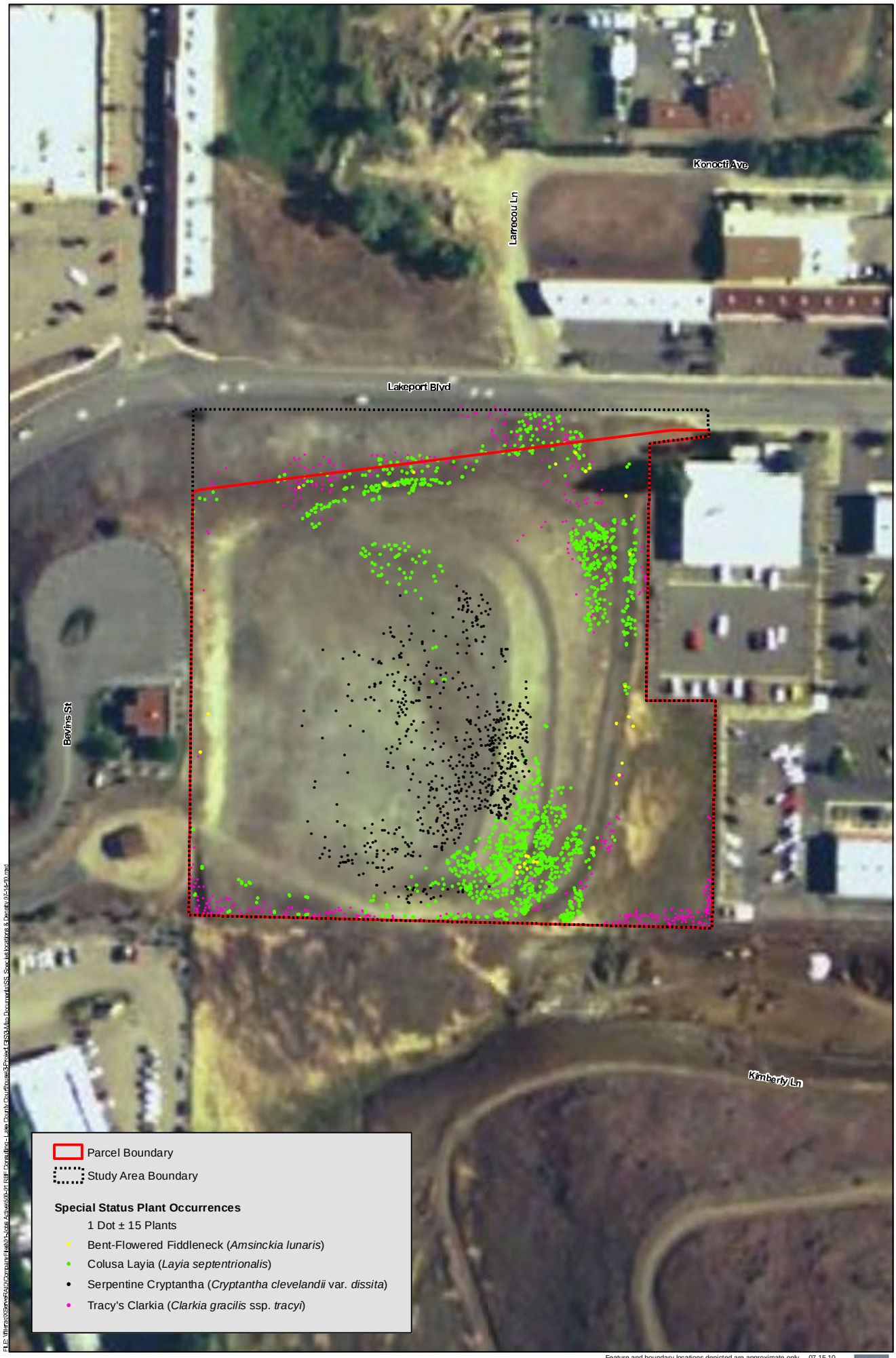
Feature and boundary locations depicted are approximate only. 07.12.10

0 300 Feet

Figure 2

Project APE and Area Surveyed

ENPLAN



Feature and boundary locations depicted are approximate only. 07.15.10

Feet
0 70

Figure 3

Special-Status Plant Population Locations and Density Representation

ENPLAN

Appendix B

Site Photographs

Site Photographs

Annual Grassland (front) and Serpentine Herb (back) Communities 3/17/10

Annual Grassland Community 6/17/10

Serpentine Herb Community on Upper Terrace 3/17/10

Serpentine Herb Community on Undisturbed Slope 6/17/10

Ponded Water on Upper Terrace 2/8/10

Constructed Drainage Ditch 4/29/10

Bent-flowered Fiddleneck 4/9/10

Colusa Layia 5/19/10

Serpentine Cryptantha 6/17/10

Serpentine Cryptantha on Hillside 6/17/10

Tracy's Clarkia 6/17/10

Tracy's Clarkia Habitat 6/17/10

Appendix C

Wildlife Habitat Relationships Report Summary

WHR SPECIES SUMMARY REPORT (VERSION 8.2)
Lake County Courthouse
675 Lakeport Boulevard, Lakeport, CA

ID	SPECIES NAME	STATUS													
		1	2	3	4	5	6	7	8	9	10	11	12	13	14
A007	California newt							7							
A043	Foothill yellow-legged frog							7				11	12		
A046	Bullfrog														14
A071	California red-legged frog		2					7							
R004	Western pond turtle							7				11	12		
R036	Western skink							7				11			
R048	Ringneck snake												12		
R057	Gopher snake							7							
R059	California mountain kingsnake							7					12		
R061	Common garter snake	1		3		5		7							
B051	Great blue heron													13	
B052	Great egret													13	
B071	Snow goose														14
B075	Canada goose														14
B077	Green-winged teal														14
B079	Mallard														14
B080	Northern pintail														14
B083	Cinnamon teal														14
B084	Northern shoverler														14
B085	Gadwall														14
B086	Eurasian wigeon														14
B087	American widgeon														14
B094	Lesser scaup														14
B110	Osprey													13	
B111	White-tailed kite					5									
B113	Bald eagle			3		5								13	
B114	Northern harrier							7							
B124	Ferruginous hawk											11			
B126	Golden eagle					5						11		13	
B129	Peregrine falcon			3		5							12	13	
B133	Ring-necked pheasant														14
B134	Sooty grouse							7							14
B138	Wild turkey														14
B140	California quail							7							14
B141	Mountain quail														14
B149	American coot														14
B255	Mourning dove														14
B269	Burrowing owl							7				11			
B272	Long-eared owl							7							
B273	Short-eared owl							7							
B338	Purple martin							7							
B342	Bank swallow				4										
B353	American crow														14
B410	Loggerhead shrike	1						7							
B461	Common yellowthroat							7							
B487	Rufous-crowned sparrow							7							
B499	Savannah sparrow			3				7							
B501	Grasshopper sparrow							7							
B505	Song sparrow							7							

ID	SPECIES NAME	STATUS													
B519	Red-winged blackbird							7							
B520	Tricolored blackbird							7							
B522	Yellow-headed blackbird							7							
M001	Virginia opossum														14
M006	Ornate shrew	1						7							
M018	Broad-footed mole							7							
M023	Yuma myotis											11			
M026	Fringed myotis											11			
M033	Western red bat							7					12		
M037	Townsend's big-eared bat							7				11	12		
M038	Pallid bat							7				11	12		
M045	Brush rabbit	1		3											14
M047	Desert cottontail														14
M051	Black-tailed jackrabbit							7							14
M087	San Joaquin pocket mouse							7				11			
M105	California kangaroo rat							7				11			
M112	American beaver														14
M117	Deer mouse							7							
M134	California vole	1		3				7				11			
M146	Coyote														14
M147	Red fox				4								12		14
M149	Gray fox														14
M151	Black bear														14
M152	Ringtail					5									
M153	Raccoon														14
M157	Long-tailed weasel														14
M160	American badger							7							14
M161	Western spotted skunk							7							14
M162	Striped skunk														14
M165	Mountain lion							7							
M166	Bobcat														14
M176	Wild pig														14
M177	Elk														14
M181	Mule deer														14

Total Number of Species: 83

Habitats Selected:

Annual grassland

STATUS KEY:

1 = Federal Endangered
2 = Federal Threatened
3 = California Endangered
4 = Caifornia Threatened
5 = Caifornia Fully Protected
6 = California Protected
7 = California Species of Special Concern
8 = Federally - Proposed Endangered
9 = Federally - Proposed Threatened
10 = Federal Candidate
11 = BLM Sensitive
12 = USFS Sensitive
13 = CDF Sensitive
14 = Harvest

Appendix D

Rarefind (CNDDB) Report Summary

Rarefind (CNDDB) Report Summary (March 2010 Data)
Lake County Courthouse
675 Lakeport Boulevard, Lakeport, CA

Listed Element	Quadrangle[1]											Status[2]
	CM	UL	BM	PG	LA	LU	CO	HO	HS	KE	CH	
Animals												
American badger					●							SSC
Calasellus californicus										●		None
Bell's sage sparrow									●			None
Blennosperma vernal pool andrenid bee					●							None
Clear Lake hitch		●			●	●	●		●		●	SSC
Double-crested cormorant					●							None
Foothill yellow-legged frog				●					●	●		SSC
Grasshopper sparrow				●				●				SSC
Great blue heron					●							None
Osprey			●	●	●	●	●			●		None
Pacific fisher				●								FC, SSC
Sacramento perch					●	●	●				●	SSC
Silver-haired bat			●			●						None
Townsend's big-eared bat				●								SSC
Tricolored blackbird		●			●							SSC
Western pond turtle		●						●	●	●		SSC
Plants												
Anthony's Peak lupine			●									1B.3
Beaked tracyina				●	●			●				1B.2
Bent-flowered fiddleneck					●	●			●			1B.2
Boggs Lake hedge-hyssop										●		SE, 1B.2
Bolander's horkelia				●					●			1B.2
Brandegee's eriastrum										●		1B.2
Bristly sedge	●							●				2.1
Burke's goldfields										●		FE, SE, 1B.1
Colusa layia					●	●	●	●	●	●		1B.2
Dimorphic snapdragon									●			4.3
Eel-grass pondweed						●	●			●	●	2.2
Glandular western flax			●		●	●			●	●		1B.2
Green jewel-flower					●							1B.2
Koch's cord moss				●				●				1B.3
Konocti manzanita						●			●	●		1B.3
Mayacamas popcorn-flower					●							1A
Napa bluecurls										●		1B.2
Norris' beard moss			●		●	●			●			2.2
Oval-leaved viburnum								●				2.3
Raiche's manzanita				●								1B.1
Rincon Ridge ceanothus				●								1B.1
Robust monardella										●		1B.2
Serpentine cryptantha					●				●			1B.1
Small-flowered calycadenia									●			1B.2
Small groundcone				●				●				2.3
Sonoma canescent				●								1B.2

Rarefind (CNDDB) Report Summary (March 2010 Data)
Lake County Courthouse
675 Lakeport Boulevard, Lakeport, CA

Listed Element	Quadrangle[1]											Status[2]
	CM	UL	BM	PG	LA	LU	CO	HO	HS	KE	CH	
manzanita												
Two-carpellate western flax			●			●						1B.2
Woolly meadowfoam										●		4.2
Natural Communities												
Clear Lake Drainage Cyprinid /Catostomid Stream						●				●		None
Clear Lake Drainage Resident Trout Stream										●		None
Clear Lake Drainage Seasonal Lakefish Spawning Stream						●				●		None
Coastal and Valley Freshwater Marsh		●			●	●						None
Northern Interior Cypress Forest				●								None
Serpentine Bunchgrass				●								None

Highlighting denotes the quadrangle in which the project site is located.

[1]Quadrangle Code

CM = Cow Mountain
UL = Upper Lake
BM = Bartlet Mtn.
PG = Purdy's Garden
LA = Lakeport
LU = Lucerne
CO = Clearlake Oaks
HO = Hopland
HS = Highland Springs
KE = Kelseville
CH = Clearlake Highlands

[2]Status Codes

Federal/State

FE = Federally Listed – Endangered
FT = Federally Listed – Threatened
FC = Federal Candidate Species
FD = Federally Delisted
SE = State Listed – Endangered
ST = State Listed – Threatened
SSC = State Species of Concern

California Native Plant Society

List 1A = Plants Presumed Extinct in California
List 1B = Plants Rare, Threatened or Endangered in California and Elsewhere
List 2 = Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere
List 3 = Plants About Which We Need More Information – A Review List
List 4 = Plants of Limited Distribution – A Watch List

Threat Ranks

0.1 = Seriously Threatened in California
0.2 = Fairly Threatened in California
0.3 = Not Very Threatened in California

Appendix E

Evaluation of the Potential for Special-Status Species or Other Species Identified by the CNDDB to Occur at the Project Site

Evaluation of the Potential for Special-Status Species or Other Species Identified by the CNDDB to Occur on the Site

	Habitat Requirements	Potential to Occur
Wildlife		
American badger *Taxidea taxus*	Badgers are most commonly found in dry, open areas in shrub, forest, and herbaceous habitats, with friable soils. Badgers dig burrows in dry, sandy soil, usually in areas with sparse overstory.	Review of CNDDB records found that the American badger has been broadly mapped to include the project site. The exact location of this occurrence is uncertain, but has been mapped to include most of the community of Lakeport. Field inspection found no badgers or badger dens. The American badger is thus not expected to be present or affected by project implementation.
Calasellus californicus	*Calasellus californicus,* a freshwater isopod, is found in association with springs and seeps. The species is known to occur in Lake, Santa Clara, and Napa counties.	Springs and seeps do not occur on the project site. *Calasellus californicus* would thus not be present or affected by project implementation.
Bell's sage sparrow *Amphispiza belli belli*	Bell's sage sparrow nest in chaparral dominated by dense stands of chamise.	The project area does not support chaparral or dense stands of chamise. Bell's sage sparrow would thus not be present.
Blennosperma vernal pool andrenid bee *Andrena blennospermatis*	The blennosperma vernal pool andrenid bee is a solitary, ground-nesting bee that inhabits upland areas around vernal pools. This bee has a patchy distribution in California's Sacramento Valley and foothills.	Vernal pools do not occur on or adjacent to the project site. The blennosperma vernal pool andrendid bee would thus not be present or affected by project implementation.
Clear Lake hitch *Lavinia exilicauda chi*	Clear Lake hitch are endemic to Clear Lake (Lake County) and its associated tributaries. Hitch are also found in nearby Thurston Lake and Lampson Pond. Adults spawn in seasonal tributary streams to Clear Lake, such as Kelsey, Seigler Canyon, Adobe, Middle, Scotts, Cole, and Manning creeks. Spawning occurs in gravelly areas in the lower reaches of these streams.	The project area lacks lakes and streams. Clear Lake hitch would thus not be present or affected by project implementation.
Double-crested cormorant *Phalacrocorax auritis*	Double-crested cormorant is a year-long resident along the coast and inland lakes and rivers, and feeds primarily on fish. Double-crested cormorants are colonial nesters, and nest from April through August. Nesting/roosting habitat includes off-shore rocks, islands, cliffs, wharfs, jetties, or overhanging tree branches along lakes and rivers.	The project area lacks suitable nesting and foraging habitat for the double-crested cormorant. The double-crested cormorant would thus not be present or affected by project implementation.

Evaluation of the Potential for Special-Status Species or Other Species Identified by the CNDDB to Occur on the Site

	Habitat Requirements	Potential to Occur
Foothill yellow-legged frog *Rana boylii*	Foothill yellow-legged frogs are typically found in partly-shaded, shallow streams and riffles with a rocky substrate in a variety of aquatic habitats. This frog needs at least some cobble-sized substrate for egg-laying. Foothill yellow-legged frogs generally prefer low to moderate gradient streams, especially for breeding and egg-laying, although juvenile and adult frogs may utilize moderate- to steep-gradient streams during summer and early fall.	The project area lacks suitable habitat for the foothill yellow-legged frog. The foothill yellow-legged frog was not observed during the wildlife survey and is not expected to be present or affected by project implementation.
Grasshopper sparrow *Ammodramus savannarum*	Grasshopper sparrows frequent dry or well-drained native grasslands. Nesting occurs from early April through mid-July in these grasslands. Nests are constructed of grasses or forbs in slight depressions on the ground, usually at the base of an overhanging clump of grass or forbs.	Although not observed during the wildlife survey, the grassland on the project site has a low potential to provide nesting habitat for the grasshopper sparrow.
Great blue heron *Ardea herodias*	Great blue herons nest in colonies along marshes, lake margins, tideflats, wet meadows, rivers, and streams. Nests are generally in the tops of tall trees and snags. Uncommon nest sites include rock ledges, sea cliffs, and tule mats.	The project site lacks suitable nesting habitat for the great blue heron. Great blue herons were not observed during the wildlife survey and are not expected to nest on the site.
Osprey *Pandion haliaetus*	Ospreys require large bodies of permanent water and suitable nest sites. Nesting occurs on large decadent trees or structures such as powerline towers, buildings, and bridges. Ospreys are primarily associated with pine and mixed-conifer habitats, although urban or suburban nests are not unusual.	The project site lacks suitable nesting habitat for the osprey. Ospreys were not observed during the wildlife survey and are not expected to nest on the site. Review of CNDDB records found that the nearest reported osprey nest is approximately ¼-mile southeast of the project site, along the shore of Clear Lake.
Pacific fisher *Martes pennanti pacificus*	Pacific fishers primarily inhabit mixed conifer forests dominated by Douglas-fir, although they also are encountered frequently in higher elevation fir and pine forests, and mixed evergreen/broadleaf forests. Suitable habitat for Pacific fishers consists of large areas of mature, dense forest stands with snags and greater than 50 percent canopy closure.	No forest habitat occurs on the project site. Field inspection found no fishers or fisher dens on the site. The Pacific fisher would thus not den on the site or be affected by project implementation.
Sacramento perch *Archoplites interruptus*	The Sacramento perch is a warm-water fish that historically occurred in Clear Lake (Lake County), as well as the Sacramento, San Joaquin, Pajaro, and Salinas river systems. The species is presently restricted to Clear Lake and several small reservoirs and farm ponds where they have been introduced. Adults and juveniles associate with beds of aquatic vegetation in shallow water.	Lakes and streams do not occur on the project site. The Sacramento perch would thus not be present or affected by project implementation.

Evaluation of the Potential for Special-Status Species or Other Species Identified by the CNDDB to Occur on the Site

	Habitat Requirements	Potential to Occur
Silver-haired bat *Lasionycteris noctivagans*	Silver-haired bats occur in coastal and montane forests. Silver-haired bats roost in hollow trees, snags, rock crevices, caves, and under bark.	The project site provides suitable foraging habitat for the silver-haired bat, but does not provide roosting habitat.
Townsend's big-eared bat *Corynorhinus townsendii pallescens*	Townsend's big-eared bat is found throughout California except in subalpine and alpine habitats, and may be found at any season throughout its range. The species is most abundant in mesic habitats. The bat requires caves, mines, tunnels, buildings, or other human-made structures for roosting.	The project site provides suitable foraging habitat for Townsend's big-eared bat, but does not provide roosting habitat.
Tricolored blackbird *Agelaius tricolor*	Tricolored blackbirds require open water, usually nesting in dense cattails or tules although they can also nest in thickets of willow, blackberry, wild rose and tall herbs. Tricolored blackbirds are colonial nesters. Nesting areas must be large enough to support a minimum colony of about 50 pairs.	The project site lacks suitable nesting habitat for the tricolored blackbird. Tricolored blackbirds were not observed during the wildlife survey and are not expected to nest on the site.
Western pond turtle *Actinemys marmorata*	The western pond turtle associates with permanent or nearly permanent water in a variety of habitats. This turtle is typically found in quiet water environments. Pond turtles require basking sites such as partially submerged logs, rocks, or open mud banks, and suitable (sandy banks or grassy open fields) upland habitat for egg-laying. In cold weather, pond turtles hibernate underwater in bottom mud.	The project site lacks suitable habitat for the western pond turtle. The western pond turtle was not observed during the wildlife survey and is not expected to be present or affected by project implementation.
PLANTS		
Anthony's Peak lupine *Lupinus antoninus*	Anthony's Peak lupine occurs on rocky outcrops and dry talus and shaley slopes on mountaintops above timberline (4,000 to 7,500 feet above sea level). The species is known to occur in Mendocino, Trinity, and Lake counties. The flowering period is May through July.	The project site is well below the elevational range of Anthony's Peak lupine. The species was not observed during the botanical survey and is not expected to be present or affected by project implementation.

Evaluation of the Potential for Special-Status Species or Other Species Identified by the CNDDB to Occur on the Site

	Habitat Requirements	Potential to Occur
Beaked tracyina *Tracyina rostrata*	Beaked tracyina is an annual herb that usually occurs on dry, grassy slopes in coastal prairie. The species is reported between 400 and 1,000 feet in elevation. Most populations are reported in Humboldt and Mendocino counties, although several populations are found in Lake and Sonoma counties. The flowering period is May through June.	The disturbed grassland on the project site has a low potential to support beaked tracyina. However, beaked tracyina was not observed during the botanical survey and is not expected to be present or affected by project implementation.
Bent-flowered fiddleneck *Amsinckia lunaris*	Bent-flowered fiddleneck occurs in cismontane woodland, and valley and foothill grassland. The species is reported between 50 and 1,500 feet in elevation. Populations are known to occur in Lake, Marin, Napa, Colusa, Contra Costa, Alameda, San Benito, Santa Clara, Santa Cruz, Yolo, and San Mateo counties. The flowering period is March through June.	The project site provides suitable habitat for bent-flowered fiddleneck, and the species was observed during the botanical survey.
Boggs Lake hedge-hyssop *Gratiola heterosepala*	Boggs Lake hedge-hyssop occurs in marshes, swamps, and vernal pools. The species is reported from sea level to 7,800 feet in elevation. The flowering period is April through August.	The project site lacks marshes, swamps, and vernal pools. Boggs Lake hedge-hyssop was not observed during the botanical survey and is not expected to be present or affected by project implementation.
Bolander's horkelia *Horkelia bolanderi*	Bolander's horkelia occurs along grassy margins of vernal pools. The species is reported between 1,500 and 3,000 feet in elevation. Populations are known to occur in Colusa, Lake, and Mendocino counties. The flowering period is June through August.	Vernal pools do not occur on the project site. Bolander's horkelia was not observed during the botanical survey and is not expected to be present or affected by project implementation.
Brandegee's eriastrum *Eriastrum brandegeae*	Brandegee's eriastrum occurs on dry gravelly to loamy soils on flats and benches in chaparral or closed-cone pine forests. The species is reported between 1,000 and 3,400 feet in elevation in the northern Coast Range. Populations are known to occur in Colusa, Glenn, Lake, Shasta (extreme southwestern portion), Trinity, Santa Clara, and San Mateo counties. The flowering period is April through August.	Chaparral or closed-cone pine forests do not occur on the project site. Brandegee's eriastrum was not observed during the botanical survey and is not expected to be present or affected by project implementation.
Bristly sedge *Carex comosa*	Bristly sedge occurs in marshes, and swamps, or along lake margins. This species is reported from sea level to 2,100 feet in elevation. The flowering period is May through September.	Marshes, swamps, or lake margins do not occur on the project site. Bristly sedge was not observed during the botanical survey and is not expected to be present or affected by project implementation.

Evaluation of the Potential for Special-Status Species or Other Species Identified by the CNDDB to Occur on the Site

	Habitat Requirements	Potential to Occur
Burke's goldfields *Lasthenia burkei*	Burke's goldfields occurs in vernal pools, meadows, and seeps. The species is reported between 50 and 2,000 feet in elevation. Populations are known to occur in Lake, Mendocino, Napa, and Sonoma counties. The flowering period is April through June.	Vernal pools, meadows, and seeps do not occur on the project site. Burke's goldfields was not observed during the botanical survey and is not expected to be present or affected by project implementation.
Colusa layia *Layia septentrionalis*	Colusa layia is an annual herb that occurs in oak woodland, chaparral, valley and foothill grasslands, and in sandy serpentinite. The species is reported between 300 and 3,600 feet in elevation. Populations are known to occur in the Coast Range and Sutter Buttes (Colusa, Glenn, Lake, Mendocino, Napa, Sonoma, Sutter, Tehama, and Yolo counties). The flowering period is April through May.	The project site provides suitable habitat for Colusa layia, and the species was observed on the northern portion of the upper terrace and on the slope below the terrace.
Dimorphic snapdragon *Antirrhinum subcordatum*	Dimorphic snapdragon occurs on serpentine or shale soils in foothill woodland or chaparral on south or west-facing slopes, between 600 and 2,500 feet above sea level. The flowering period is April through July.	Serpentine rocks cover most of the project site. However, dimorphic snapdragon was not observed during the botanical survey and is not expected to be present.
Eel grass pondweed *Potamogeton zosteriformis*	Eel grass pondweed occurs in ponds, lakes, streams, marshes, and swamps up to 6,000 feet in elevation. This aquatic plant has been reported in Lassen, Shasta, Modoc, Contra Costa, and Lake counties.	Suitable habitat for eel grass pondweed does not occur on the project site. Eel grass pondweed was not observed during the botanical survey and is not expected to be present or affected by project implementation.
Glandular western flax *Hesperolinon adenophyllum*	Glandular western flax generally occurs on serpentine soils in chaparral. The species is reported between 1,400 and 4,300 feet in elevation. Populations are known to occur in Lake and Mendocino counties. The flowering period is May through August.	Serpentine rocks cover most of the project site. However, glandular western flax was not observed during the botanical survey and is not expected to be present.
Green jewel-flower *Streptanthus breweri* var. *hesperidis*	Green jewel-flower occurs in openings in chaprarral and cismontane woodland, or on serpentine or rocky sites. The species is reported between 400 and 2,500 feet in elevation. Populations are known to occur in Glenn, Lake, Napa, and Sonoma counties. The flowering period is May through July.	Review of CNDDB records found that the green jewel-flower has been broadly mapped to include the project site. The exact location of this occurrence is uncertain, but has been mapped to include most of the community of Lakeport. Serpentine rocks cover most of the project site. However, green jewel-flower was not observed during the botanical survey and is not expected to be present or affected by project implementation.

Evaluation of the Potential for Special-Status Species or Other Species Identified by the CNDDB to Occur on the Site

	Habitat Requirements	Potential to Occur
Koch's cord moss *Entosthodon kochii*	Koch's cord moss occurs on moist soils in cismontane woodland. The species is reported between 1,600 and 3,300 feet in elevation. Populations are known to occur in San Luis Obispo, Mariposa, Marin, and Mendocino counties.	The project site lacks cismontane woodland and is slightly below the reported elevation range for Koch's cord moss. Koch's cord moss is not expected to be present or affected by project implementation.
Konocti manzanita *Arctostaphylos manzanita* ssp. *elegans*	Konocti manzanita occurs on volcanic soils in chaparral, cismontane woodland, and lower montane coniferous forest. The species is reported between 1,300 and 4,600 feet in elevation. Populations are known to occur in Colusa, Glenn, Tehama, Lake, Napa, and Sonoma counties. The flowering period is March through May.	The project site is nearly devoid of trees and shrubs, and lacks suitable habitat for Konocti manzanita. Konocti manzanita was not observed during the botanical survey and is not expected to be present or affected by project implementation.
Mayacamas popcorn-flower *Plagiobothrys lithocaryus*	Mayacamas popcorn-flower occurs on moist sites in cismontane woodland, and valley and foothill grasslands. The species is reported between 900 and 1,500 feet in elevation. Populations are known to occur in Mendocino and Lake counties. The flowering period is April through May.	Review of CNDDB records found that the Mayacamas popcorn-flower has been broadly mapped to include the project site. The exact location of this occurrence is uncertain, but has been mapped to include most of the community of Lakeport. The onsite grassland provides marginally suitable habitat for Mayacamas popcorn-flower. The species was not observed during the botanical survey and is not expected to be present or affected by project implementation.
Napa bluecurls *Trichostema ruygtii*	Napa bluecurls occurs in vernal pools in valley and foothill grasslands, and in openings in chaparral, cismontane woodland, and lower montane coniferous forest. The species is reported between 100 and 2,000 feet in elevation. Populations are known to occur in Napa and Solano counties. The flowering period is June through October.	The project site lacks vernal pools, chaparral, and cismontane woodland. Napa bluecurls was not observed during the botanical survey and is not expected to be present or affected by project implementation.
Norris' beard moss *Didymodon norrisii*	Norris' beard moss occurs on rocks in cismontane woodland and lower montane coniferous forest. The species is reported to occur between 2,000 and 6,500 feet in elevation.	The project site is well below the elevational range of Norris' beard moss. The species would thus not be present.

Evaluation of the Potential for Special-Status Species or Other Species Identified by the CNDDB to Occur on the Site

	Habitat Requirements	Potential to Occur
Oval-leaved viburnum *Viburnum ellipticum*	Oval-leaved viburnum inhabits chaparral, cismontane woodland, and lower montane coniferous forests. The species often occurs on north-facing slopes covered by dense brush. Oval-leaved viburnum is found between 700 and 4,600 feet in elevation. The flowering period is May through June.	The project site lacks chaparral, cismontane woodland, and montane coniferous forest. Oval-leaved viburnum was not observed during the botanical survey and is not expected to be present or affected by project implementation.
Raiche's manzanita *Arctostaphylos stanfordiana* ssp. *raichei*	Raiche's manzanita occurs on serpentine soils in chaparral and lower montane coniferous forest. The species is reported between 1,500 and 3,300 feet in elevation. Populations are known to occur in Mendocino County. The flowering period is February through April.	The project site is nearly devoid of trees and shrubs, and lacks suitable habitat for Raiche's manzanita. Raiche's manzanita was not observed during the botanical survey and is not expected to be present or affected by project implementation.
Rincon Ridge ceanothus *Ceanothus confusus*	Rincon Ridge ceanothus occurs on dry, serpentine or volcanic soils in chaparral, cismontane woodland, and lower montane coniferous forests. The species is reported between 250 and 3,500 feet in elevation. Populations are known to occur in Lake, Mendocino, Napa, and Sonoma counties. The flowering period is February through June.	The project site is nearly devoid of trees and shrubs, and lacks suitable habitat for Rincon Ridge ceanothus. Rincon Ridge ceanothus was not observed during the botanical survey and is not expected to be present or affected by project implementation.
Robust monardella *Monardella villosa* ssp. *globosa*	Robust monardella occurs in openings in chaparral and oak woodlands. The species is reported from sea level to 4,300 feet in elevation. Populations are known to occur in Alameda, Contra Costa, Humboldt, Lake, Mendocino, Napa, Santa Clara, Santa Cruz, San Mateo, and Sonoma counties. The flowering period is June through July.	The project site is nearly barren of trees and shrubs. Robust monardella was not observed during the botanical survey and is not expected to be present or affected by project implementation.
Serpentine cryptantha *Cryptantha clevelandii* var. *dissita*	Serpentine cryptantha occurs on serpentine rock outcrops in chaparral. The species is reported between 1,100 and 2,400 feet in elevation. Populations are known to occur in Lake, Mendocino, Napa, and Sonoma counties. The flowering period is April through June.	Serpentine cryptantha was observed on the project site.
Small-flowered calycadenia *Calycadenia micrantha*	Small-flowered calycadenia generally occurs on rocky talus or in sparsely vegetated areas, but is occasionally found on serpentine soils and roadsides. The species is reported from sea level to 5,000 feet in elevation. Populations are known to occur in Monterey, Trinity, Lake, Napa, and Colusa counties. The flowering period is June through September.	The project site has a moderate potential to support small-flowered calycadenia. However, small-flowered calycadenia was not observed during the botanical survey and is not expected to be present or affected by project implementation.

Evaluation of the Potential for Special-Status Species or Other Species Identified by the CNDDB to Occur on the Site

	Habitat Requirements	Potential to Occur
Small groundcone *Boschniakia hookeri*	Small groundcone occurs in North Coast coniferous forests, and is often found in association with salal. The species is reported between 300 and 2,900 feet in elevation. Populations are known to occur in Del Norte, Humboldt, Mendocino, Marin, and Trinity counties. The flowering period is April through August.	The project site is nearly devoid of trees and shrubs, and does not have suitable habitat for small groundcone. Small groundcone was not observed during the botanical survey and is not expected to be present or affected by project implementation.
Sonoma canescent manzanita *Arctostaphylos canescens* ssp. *sonomensis*	Sonoma canescent manzanita generally occurs in openings in chaparral. The species is most often found on dry, rocky ridges and slopes of serpentine origin. In the southern portion of its range, the species is found on volcanic soils. Sonoma canscent manzanita is reported between 650 and 4,900 feet in elevation. Populations are known to occur in Humboldt, Trinity, Mendocino, Lake, Colusa, Tehama, and Sonoma counties. The flowering period is January through June.	The project site is nearly devoid of trees and shrubs, and lacks suitable habitat for Sonoma canescent manzanita. Sonoma canescent manzanita was not observed during the botanical survey and is not expected to be present or affected by project implementation.
Two-carpellate western flax *Hesperolinon bicarpellatum*	Two-carpellate western flax occurs in serpentine barrens at the edge of chaparral. The species is reported between 500 and 2,700 feet in elevation. Populations are known to occur in Lake, Napa, and Sonoma counties. The flowering period is May through July.	Serpentine rocks cover most of the project site. However, two-carpellate western flax was not observed during the botanical survey and is not expected to be present or affected by project implementation.
Woolly meadowfoam *Limnanthes floccosa* ssp. *floccosa*	Woolly meadowfoam generally occurs in vernal pools, ditches, and ponds in valley foothill and grasslands, cismontane woodland, and chaparral. The species is reported between 200 and 3,600 feet in elevation. The flowering period is March through June.	A ditch in the southeast portion of the project site has marginally suitable habitat for woolly meadowfoam. However, woolly meadowfoam was not observed during the botanical survey and is not expected to be present or affected by project implementation.

Appendix F

Checklist of Vascular Plant Species Observed

CHECKLIST OF VASCULAR PLANT SPECIES OBSERVED

Lake County Courthouse Site

April 9 and 29, May 17, and June 19, 2010

Amaranthaceae	**Amaranth Family**
Amaranthus albus	Tumbleweed
Apiaceae	**Carrot Family**
Lomatium macrocarpum	Large-fruited lomatium
Perideridia sp.	Yampah
Torilis arvensis	Field hedge-parsley
Asteraceae	**Sunflower Family**
Achyrachaena mollis	Blow-wives
Agoseris grandiflora	Large-flowered agoseris
Agoseris heterophylla	Annual agoseris
Ancistrocarphus filagineus	Wooly fishhooks/false neststraw
Anthemis cotula	Stinking chamomile
Baccharis pilularis	Coyote-brush
Calycadenia pauciflora	Smallflower western rosinweed
Carduus pycnocephalus	Italian thistle
Centaurea solstitialis	Yellow star thistle
Chamomilla suaveolens	Pineapple weed
Cirsium cymosum	Peregrine thistle
Filago gallica	Narrow-leaved filago
Hemizonia congesta ssp. *clevelandii*	Hayfield tarweed
Hypochaeris glabra	Smooth cat's ear
Lactuca sp.	Prickly lettuce
Lagophylla ramosissima var. *ramosissima*	Common hareleaf
Lasthenia californica	California goldfields
Layia septentrionalis	Colusa tidytips
Micropus californicus var. *californicus*	Slender cottonweed
Microseris douglasii ssp. *douglasii*	Douglas' silverpuffs
Psilocarphus tenellus var. *tenellus*	Slender woolly marbles
Rigiopappus leptocladus	Rigiopappus
Senecio vulgaris	Old-man-in-the-Spring
Sonchus asper ssp. *asper*	Prickly sow thistle
Uropappus lindleyi	Silverpuffs
Boraginaceae	**Borage Family**
Amsinckia lunaris	Bent-flowered fiddleneck
Amsinckia menziesii var. *menziesii*	Menzies' fiddleneck
Cryptantha clevelandii var. *dissita*	Cleveland's cryptantha
Plagiobothrys nothofulvus	Rusty popcorn-flower
Brassicaceae	**Mustard Family**
Athysanus pusillus	Petty athysanus
Brassica rapa	Field-mustard
Capsella bursa-pastoris	Shepherd's purse
Lepidium sp.	Peppergrass
Lepidium nitidum var. *nitidum*	Shining peppergrass
Streptanthus barbiger	Bearded jewelflower
Thysanocarpus curvipes	Lace pod

CHECKLIST OF VASCULAR PLANT SPECIES OBSERVED

Lake County Courthouse Site

Campanulaceae	**Bluebell Family**
Githopsis specularioides	Common bluecup
Caryophyllaceae	**Pink Family**
Cerastium glomeratum	Mouse-eared chickweed
Minuartia douglasii	Douglas' sandwort
Petrorhagia dubia	Grass pink
Scleranthus annuus ssp. *annuus*	German knotgrass
Spergularia rubra	Ruby sand spurry
Convolvulaceae	**Morning Glory Family**
Convolvulus arvensis	Bindweed
Crassulaceae	**Stonecrop Family**
Crassula tillaea	Moss pygmy weed
Cucurbitaceae	**Gourd Family**
Marah sp.	Man-root
Cuscutaceae	**Dodder Family**
Cuscuta californica	Chaparral dodder
Euphorbiaceae	**Spurge Family**
Eremocarpus setigerus	Dove weed
Fabaceae	**Legume Family**
Astragalus gambelianus	Gambel's dwarf milkvetch
Lotus sp.	Lotus
Lotus denticulatus	Riverbar birds-foot trefoil
Lotus humistratus	Hairy lotus
Lotus purshianus	Spanish lotus
Lupinus bicolor	Bicolored lupine
Medicago minima	Hairy bur-clover
Medicago polymorpha	California bur-clover
Medicago praecox	Mediterranean bur-clover
Trifolium albopurpureum var. *dichotomum*	Branched Indian clover
Trifolium bifidum var. *decipiens*	Deceptive clover
Trifolium dubium	Little hop clover
Trifolium hirtum	Rose clover
Trifolium willdenovii	Tomcat clover
Vicia sativa ssp. *nigra*	Garden vetch
Vicia villosa ssp. *villosa*	Winter vetch
Fagaceae	**Oak Family**
Quercus lobata	Valley oak (seedling)
Gentianaceae	**Gentian Family**
Centaurium muehlenbergii	Muhlenberg's centaury

CHECKLIST OF VASCULAR PLANT SPECIES OBSERVED

Lake County Courthouse Site

Geraniaceae	**Geranium Family**
Erodium botrys	Long-beaked filaree
Erodium brachycarpum	Short-fruited storksbill
Erodium cicutarium	Red-stemmed filaree
Hydrophyllaceae	**Waterleaf Family**
Phacelia corymbosa	Serpentine phacelia
Iridaceae	**Iris Family**
Sisyrinchium bellum	Blue-eyed grass
Juncaceae	**Rush Family**
Juncus bufonius	Toad rush
Liliaceae	**Lily Family**
Allium falcifolium	Scytheleaf onion
Brodiaea californica var. *californica*	California brodiaea
Calochortus vestae	Coast Range mariposa lily
Chlorogalum sp.	Soap plant
Dichelostemma capitatum ssp. *capitatum*	Blue dicks
Malvaceae	**Mallow Family**
Sidalcea diploscypha	Fringed checkerbloom
Onagraceae	**Evening-Primrose Family**
Camissonia graciliflora	Hill suncup
Clarkia gracilis ssp. *gracilis*	Slender clarkia
Clarkia gracilis ssp. *tracyi*	Tracy's clarkia
Clarkia purpurea ssp. *quadrivulnera*	Winecup clarkia
Epilobium minutum	Chaparral willowherb
Orobanchaceae	**Broom-rape Family**
Orobanche fasciculata	Clustered broom-rape
Papaveraceae	**Poppy Family**
Eschscholzia californica	California poppy
Platystemon califonicus	Creamcups
Plantaginaceae	**Plantain Family**
Plantago sp.	Plantain
Plantago erecta	Hooker's plantain
Poaceae	**Grass Family**
Aegilops triuncialis	Barbed goatgrass
Aira caryophyllea	Silver hairgrass
Avena barbata	Slender wild oats
Avena fatua	Wild oats
Bromus carinatus var. *carinatus*	California brome
Bromus diandrus	Ripgut grass
Bromus hordeaceus	Soft chess
Bromus madritensis ssp. *rubens*	Red brome
Deschampsia danthonioides	Annual hairgrass

CHECKLIST OF VASCULAR PLANT SPECIES OBSERVED

Lake County Courthouse Site

Elymus multisetus	Big squirreltail
Hordeum brachyantherum ssp. *californicum*	California barley
Hordeum marinum ssp. *gussoneanum*	Mediterranean barley
Hordeum murinum	Foxtail barley
Lolium multiflorum	Annual ryegrass
Melica californica	California melic
Nasella pulchra	Purple needlegrass
Poa annua	Annual bluegrass
Poa secunda ssp. *secunda*	One-sided bluegrass
Scribneria bolanderi	Scribner grass
Secale cereale	Rye
Taeniatherum caput-medusae	Medusa head
Vulpia microstachys var. *ciliata*	Fringed fescue
Vulpia microstachys var. *microstachys*	Small fescue
Vulpia microstachys var. *pauciflora*	Few-flowered fescue
Vulpia myuros var. *myuros*	Rattail fescue
Polemoniaceae	**Phlox Family**
Gilia capitata ssp. *capita*	Globe gilia
Gilia tricolor	Bird's eyes
Leptosiphon bolanderi	Bolander's linanthus
Linanthus bicolor	Bicolored linanthus
Polygonaceae	**Buckwheat Family**
Eriogonum nudum	Naked buckwheat
Eriogonum vimineum	Wicker buckwheat
Rumex crispus	Curly dock
Portulacaceae	**Purslane Family**
Calandrinia ciliata	Red maids
Claytonia exigua ssp. *exigua*	Little miner's-lettuce
Claytonia perfoliata	Common miner's lettuce
Primulaceae	**Primrose Family**
Anagallis arvensis	Scarlet pimpernel
Pteridaceae	**Brake Family**
Pentagramma triangularis ssp. *triangularis*	Goldback fern
Ranunculaceae	**Buttercup Family**
Delphinium hansenii ssp. *hansenii*	Eldorado larkspur
Ranunculus sp.	Buttercup
Rosaceae	**Rose Family**
Crataegus sp.	Hawthorn (horticultural)
Rubiaceae	**Madder Family**
Galium aparine	Cleavers
Galium parisiense	Wall bedstraw

CHECKLIST OF VASCULAR PLANT SPECIES OBSERVED

Lake County Courthouse Site

Scrophulariaceae	**Snapdragon Family**
Castilleja attenuata	Valley tassels
Castilleja exserta ssp. *exserta*	Exserted Indian paintbrush
Castilleja rubicundala ssp. *lithospermoides*	Cream sacs
Collinsia sparsiflora var. *sparsiflora*	Spinster's blue eyed Mary
Mimulus guttatus	Common monkey-flower
Triphysaria eriantha	Johnny tuck
Verbascum blattaria	Moth mullein
Taxodiaceae	**Bald Cypress Family**
Sequoia sempervirens	Redwood (horticultural)
Valerianaceae	**Valerian Family**
Plectritis macrocera	White plectritis

Appendix G

Checklist of Wildlife Species Observed

Checklist of Wildlife Species Observed
Lake County Courthouse
675 Lakeport Boulevard, Lakeport, CA

Common Name	Scientific Name	Status
BIRDS		
American crow	*Corvus brachyrhynchos*	None
Black-tailed jackrabbit	*Lepus californicus*	None
California gull	*Larus californicus*	None
Common raven	*Corvus corax*	None
Killdeer	*Charadrius vociferus*	None
Red-tailed hawk	*Buteo jamaicensis*	None
Western scrub-jay	*Aphelocoma californica*	None
MAMMALS		
California ground squirrel	*Otospermophilus beecheyi*	None
Gopher	*Thomomys* sp.	None
REPTILES		
Western fence lizard	*Sceloperus occidentalis*	None

Pre-jurisdictional Delineation Report

Lake County Courthouse Site
675 Lakeport Boulevard
Lake County, California

Prepared for:

Adminstrative Office of the Courts

July 16, 2010

500-01

ENPLAN

Lake County Courthouse Site
Pre-jurisdictional Delineation Report

Applicant/Land Owner:
Administrative Office of the Courts
2860 Gateway Oaks Drive, Suite 400
Sacramento, CA 95833
Attention: Laura Sainz

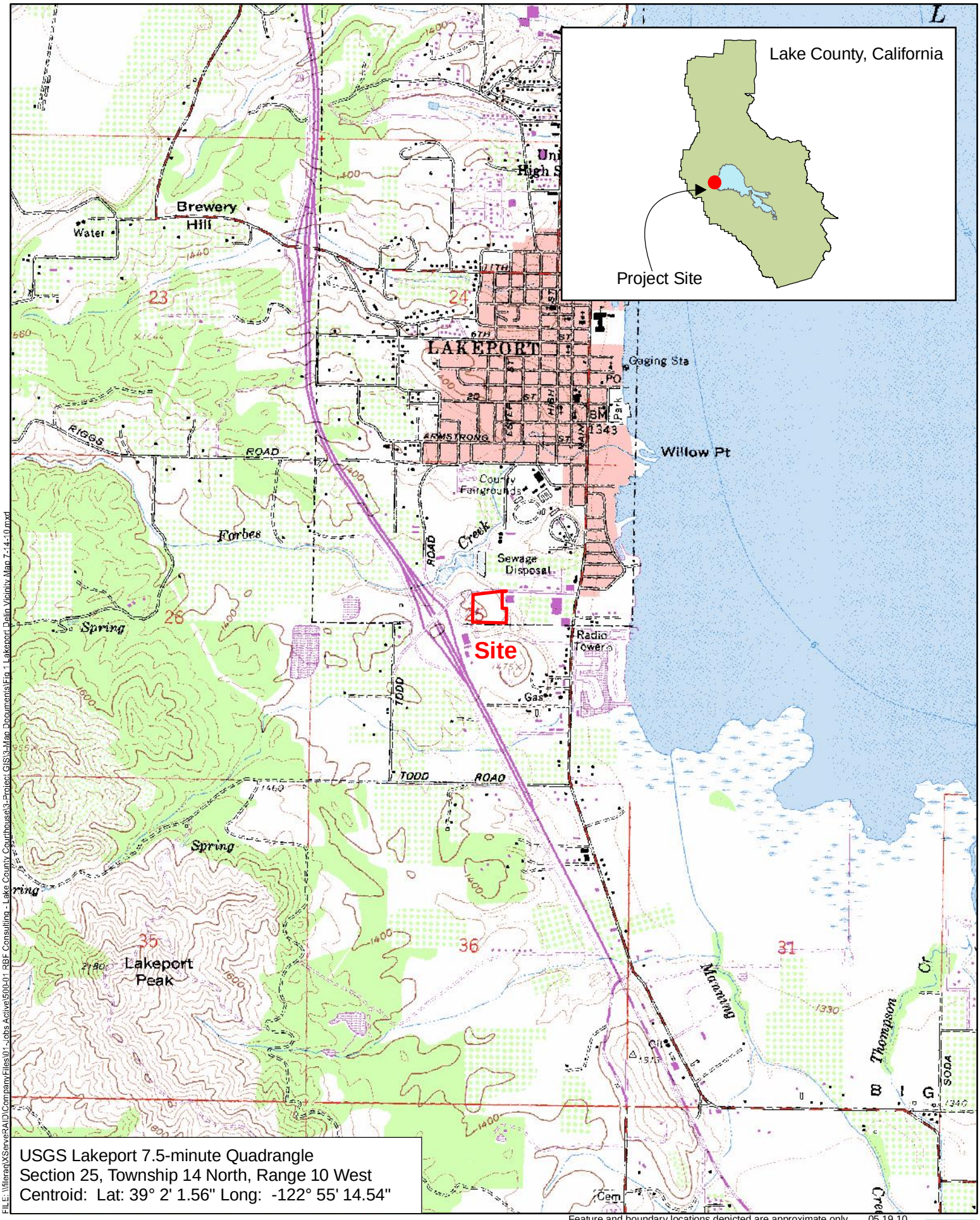
Access:
From Lakeport, take Highway 29 to the Lakeport Boulevard exit. Travel east on Lakeport Boulevard approximately 1000 feet. The site is on the south side of Lakeport Boulevard and can be accessed from the road margin.

I. INTRODUCTION

The ±6.4-acre study site is located east of the intersection of Lakeport Boulevard and Highway 29 in the City of Lakeport, Lake County. The study site encompasses the subject ±5.8-acre parcel as well as the southern fill slope along Lakeport Boulevard to the north. As shown in Figure 1, the site is situated near the center of Section 25, Township 14 North, Range 10 West (Lakeport, CA, 7.5-minute quadrangle). The site is identified as Lake County Assessor's Parcel Number 025-521-410 and is being evaluated for potential construction of a new Lake County courthouse.

The site elevation ranges between 1,340 and 1,400 feet above sea level. The site was historically an oak woodland, and was used for agriculture and grazing beginning in the late 1930s; the site was cleared of trees and shrubs in the early 1970s, and was graded prior to 1988 (URS, 2009). Grading dramatically altered the natural contours of the site. Roughly 20 feet of surface material was removed from the upper portion of the site, resulting in two level terraces.

Small rocks of serpentine origin are exposed on the upper terrace and hillsides, which support a serpentine herb community. The serpentine herb community generally consists of a sparse, low-growing cover of annual and perennial forbs and grasses including naked buckwheat, wicker buckwheat, reflexed fescue, serpentine phacelia, fringed checkerbloom, bearded jewelflower, Douglas's sandwort, and Gambel's dwarf milkvetch. The lower terrace, on the eastern edge of the study area, supports an annual grassland community. Common species in this community include wild oats, soft chess, California meadow barley, cream sacs, winter vetch, Spanish lotus, and various clovers. All of the above species have an indicator status of FACU or drier.



USGS Lakeport 7.5-minute Quadrangle
Section 25, Township 14 North, Range 10 West
Centroid: Lat: 39° 2' 1.56" Long: -122° 55' 14.54"

Feature and boundary locations depicted are approximate only. 05.19.10

Feet
0 2,000

Figure 1
Project Vicinity Map

ENPLAN

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According to the U.S. Department of Agriculture, Natural Resources Conservation Service (NRCS, 2010), two soil units are present on the study site. Henneke-Montara-rock outcrop complex, 15-30 percent slopes, covers nearly the entirety of the study site. A very small amount of Still loam, stratified substratum, is mapped as occurring in the extreme northeast corner of the site. The Henneke-Montara-rock outcrop complex is not considered hydric, while the Still soil unit is partly hydric, i.e., it may contain inclusions of hydric soils. It should be noted that past grading activities on the site have resulted in removal and/or redistribution of most of the on-site soils.

The climate of the project vicinity is of the Mediterranean type, with cool, moist winters and hot, dry summers. Annual precipitation averages ±28.4 inches in the community of Lakeport, which reasonably approximates conditions on the subject site (Western Regional Climate Center, 2010).

II. METHODOLOGY

Prior to undertaking the field studies, National Wetlands Inventory maps (U.S. Fish and Wildlife Service, n.d.) were reviewed to determine if any jurisdictional waters had been previously reported on or within one-half mile of the project site. Such data is not available for the Lakeport quadrangle.

The primary field investigation was conducted on April 29 and 30, 2010. During the field investigation, field conditions were relatively wet. Average April rainfall for the City of Lakeport measures 2.19 inches; actual rainfall totals for April 2010 measured 6.89 inches (NOAA, 2010).

The wetland investigation was conducted in accordance with technical methods outlined in the Corps of Engineers Wetlands Delineation Manual (U.S. Department of the Army, Corps of Engineers, 1987) and under the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (U.S. Department of the Army, Corps of Engineers, 2008), which is referred to as the “Arid West Supplement” in this report. Wetland Determination Data Forms are presented in Appendix A of this report.

Although no wetlands were identified, several non-wetland waters of the United States are present. The limit of the Corps of Engineers' jurisdiction over these features is represented by the ordinary high water mark. As described in the Code of Federal Regulations Title 33: Navigation and Navigable Waters-Sec. 328.3(e), the ordinary high water mark is defined as the line on the shore established by fluctuations of water indicated by physical characteristics. These may include a clear/natural line on the bank, shelving, changes in soil, destruction of terrestrial vegetation, presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas. The limits of on-site ditches and seasonal waters were identified in the field using these indicators.

Scientific nomenclature for plants cited in this report is in accordance with the taxonomic treatments presented in *A Synonymized Checklist of the Vascular Flora of the United States, Canada, and Greenland* (Kartesz, 1994). The wetland indicator status of the plants was determined using the *National List of Plant Species That Occur in Wetlands: California (Region 0)* (U.S. Department of the Interior, Fish and Wildlife Service, 1988). Soil colors were identified using *Munsell Soil Color Charts* (Kollmorgen Instruments Corporation, 2000).

Coordinates along the perimeters of non-linear waters were obtained using a global positioning system (GPS) unit capable of sub-meter accuracy. Coordinates for the centerlines of ditches were also recorded with the GPS unit; the aerial extent of the ditches was calculated based on cross-sectional measurements taken at roughly 25-foot intervals. The GPS coordinates were downloaded into ArcMap for mapping and acreage calculations.

III. RESULTS

During the field investigation, ENPLAN mapped eight non-wetland waters of the United States within two categories: seasonal waters and constructed ditches. These features are characterized below. The results of the field delineation effort are summarized in Tables 1 and 2 and shown in Figure 2. Representative photos are presented in Appendix B.

Seasonal Waters: Two seasonal waters, on the western edge of the upper terrace, were created when the site was graded and bedrock was exposed. Water now ponds to a depth of two to three inches in these shallow depressions underlain by bedrock. Representative plant species include scribner grass (*Scribneria bolanderi*, UPL), annual hairgrass (*Deschampsia danthonioides*, FACW), and rigiopappus (*Rigiopappus leptocladus*, UPL), but vegetative cover is less than five percent. As described in the Arid West Supplement, features with an ordinary high water mark and less than five percent vegetative cover are non-wetland waters. The extent of ponding was documented through site inspections on February 8 and April 9, 29 and 30, 2010, as well as by the presence of water-stained rock, sediment deposits, and a biotic crust.

Constructed Ditches: Constructed ditches are excavated features that may be located in either wetlands or uplands, and may convey water collected from sheet flow or diverted from other water bodies. The jurisdictional status of constructed ditches depends in part on these characteristics. The on-site ditches are constructed in uplands, and receive sheet-flow runoff and discharge from the two non-wetland waters on the upper terrace. Most of the ditches have only ephemeral flow. However, 3:CD and 8:CD do not drain well and support wetland plant species in their lower ends; species present include annual ryegrass (*Lolium multiflorum = L. perenne*, FAC*), *Hordeum marinum* ssp. *gussoneanum = H. hystrix*, FAC), and common monkey-flower (*Mimulus guttatus*, OBL).

Table 1
Summary of Waters by Type

Type	Area	
	sq. ft.	acres
Constructed Ditches	2,108	0.048
Seasonal Waters	3,793	0.087
Total Waters	**5,901**	**0.135**

Table 2
Waters by Map ID

Map ID	Type	Average Width	Length	Area	
				sq. ft.	acres
1	Constructed Ditch	1.7	350	595	0.014
2	Constructed Ditch	0.5	20	10	0.000
3	Constructed Ditch	4.6	206	948	0.022
4	Seasonal Water	–	–	2,599	0.060
5	Seasonal Water	–	–	1,194	0.027
6	Constructed Ditch	1.6	178	285	0.007
7	Constructed Ditch	1.5	10	15	0.000
8	Constructed Ditch	2.3	111	255	0.006
			Total Waters	**5,901**	**0.135**

Figure 2	
Potential Waters of the U.S. and/or State	
Project:	Lake County Courthouse Site
Delineator:	Don Burk
Date:	February 8 & April 9, 29, & 30, 2010
Date Revised:	

Potential Waters by Map ID					
Map ID	Type	Average Width (feet)	Length (feet)	Area	
				sq. ft.	acres
1:CD	Constructed Ditch	1.7	350	595	0.014
2:CD	Constructed Ditch	0.5	20	10	0.000
3:CD	Constructed Ditch	4.6	206	948	0.022
4:RW	Seasonal Water	–	–	2,599	0.060
5:RW	Seasonal Water	–	–	1,194	0.027
6:CD	Constructed Ditch	1.6	178	285	0.007
7:CD	Constructed Ditch	1.5	10	15	0.000
8:CD	Constructed Ditch	2.3	111	255	0.006
			Total Waters	5,901	0.135

FILE: \\fileraq\XServerRAID\CompanyFiles\01-Jobs Active\500-01 RBF Consulting - Lake County Courthouse\3-Project GIS\3-Map Documents\Fig 2 - Lakeport Delin 7-16-10.mxd

Feature and boundary locations depicted are approximate only. 07.16.10

Feet
0 100

ENPLAN

IV. JURISDICTIONAL DETERMINATION

As described in Regulatory Guidance Letter 08-02, the applicant concurs with the Army Corps of Engineers that waters regulated under the Clean Water Act may be present on the site. As such, these waters will be treated as jurisdictional for the purpose of calculating fill and satisfying future mitigation requirements. The applicant understands that they can later request and obtain an approved JD if that later becomes necessary or appropriate during the permit process or during the administrative appeal process.

V. REFERENCES

Kartesz, J.T. 1994. *A Synonymized Checklist of the Vascular Flora of the United States, Canada, and Greenland*. 2nd edition. Volume 1 — Checklist, Volume 2 — Thesaurus. Timber Press, Inc., Portland, Oregon.

Kollmorgen Instruments Corporation. 2000. *Munsell Soil Color Charts.*

URS Corporation. December 2009. Final Draft Phase I Environmental Site Assessment Report: Proposed New Lakeport Courthouse – 675 Lakeport Boulevard Site. 675 Lakeport Boulevard, Lakeport CA 95453. Unpublished document on file with the Judicial Council of California, Administrative Office of the Courts.

U.S. Department of Agriculture, Natural Resources Conservation Service. 2009. Web Soil Survey, August 31, 2009 Map Data. <http://websoilsurvey.nrcs.usda.gov/app/.>

U.S. Department of the Army, Corps of Engineers. 1987. *Corps of Engineers Wetlands Delineation Manual.* Technical Report Y-87-1. National Technical Information Service, Springfield Virginia.

_____. 2008. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0),* eds. J.S. Wakeley, R.W. Lichvar, and C.V. Noble. ERDC/EL TR-08-28. Vicksburg, MS: U.S. Army Engineer Research and Development Center.

U.S. Department of the Interior, Fish and Wildlife Service. 1988. *National List of Plant Species That Occur in Wetlands: California (Region 0).* Biological Report 88 (26.10).

_____. n.d. National Wetlands Inventory. *www.wetlandsfws.er.usgs.gov.*

U.S. Geological Survey. 1958. Lakeport, California, 7.5-minute quadrangle sheet. Photo-revised 1978.

Western Regional Climate Center (WRCC). 2010. Lakeport, CA. *www.wrcc.dri.edu/climsum.html*.

APPENDIX A

Wetland Determination Forms

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Lake County Courthouse Site City/County: Lake County Sampling Date: 4-30-10

Applicant/Owner: Administrative Office of the Courts State: CA Sampling Point: DP1

Investigator(s): Don Burk Section, Township, Range: Section 25, Township 14 North, Range 10 West

Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Concave Slope (%): 1

Subregion (LRR): C Lat: 39º 2' 3.89" Long: 122º 55' 12.06" Datum: NAD83

Soil Map Unit Name: Henneke-Montara-Rock Outcrop Complex, 15-30 percent slopes NWI classification: N.A.

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

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

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? No (If needed, explain any answers in Remarks.)

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

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

Remarks: Although wetland characteristics are evident, the sample site is at the lower end of a constructed drainage ditch, and is best defined as a non-wetland water of the United States.

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:			
Herb Stratum			
1. Lolium multiflorum ssp. perenne	30	Yes	FAC*
2. Hordeum marinum ssp. gussoneaum (=H. hystrix)	60	Yes	FAC
3. Vulpia microstachys var. pauciflora	8	No	NL
4. Achyrachaena mollis	2	No	FAC
5.			
6.			
7.			
8.			
Total Cover:	100		
Woody Vine Stratum			
1.			
2.			
Total Cover:			

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

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No _____

Remarks:

SOIL

Sampling Point: DP1

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-2	7.5YR 2.5/2	100					loam	
2-4	5YR 3/1	100						
4-14	7.5YR 3/2	100						

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

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

Secondary Indicators (2 or more required)

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

Field Observations:

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

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

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

Wetland Hydrology Present? Yes X No ___

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

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Lake County Courthouse Site City/County: Lake County Sampling Date: 4-30-10

Applicant/Owner: Administrative Office of the Courts State: CA Sampling Point: DP1

Investigator(s): Don Burk Section, Township, Range: Section 25, Township 14 North, Range 10 West

Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Concave Slope (%): 1

Subregion (LRR): C Lat: 39º 2' 3.89" Long: 122º 55' 12.06" Datum: NAD83

Soil Map Unit Name: Henneke-Montara-Rock Outcrop Complex, 15-30 percent slopes NWI classification: N.A.

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

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

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? No (If needed, explain any answers in Remarks.)

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

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

Remarks: Although wetland characteristics are evident, the sample site is at the lower end of a constructed drainage ditch, and is best defined as a non-wetland water of the United States.

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:			
Herb Stratum			
1. Lolium multiflorum ssp. perenne	30	Yes	FAC*
2. Hordeum marinum ssp. gussoneaum (=H. hystrix)	60	Yes	FAC
3. Vulpia microstachys var. pauciflora	8	No	NL
4. Achyrachaena mollis	2	No	FAC
5.			
6.			
7.			
8.			
Total Cover:	100		
Woody Vine Stratum			
1.			
2.			
Total Cover:			

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

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

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

Remarks:

SOIL

Sampling Point: DP1

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-2	7.5YR 2.5/2	100					loam	
2-4	5YR 3/1	100						
4-14	7.5YR 3/2	100						

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

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

Secondary Indicators (2 or more required)

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

Field Observations:

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

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

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

Wetland Hydrology Present? Yes X No ___

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

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Lake County Courthouse Site City/County: Lake County Sampling Date: 4-30-10

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Investigator(s): Don Burk Section, Township, Range: Section 25, Township 14 North, Range 10 West

Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Concave Slope (%): 1

Subregion (LRR): C Lat: 39º 2' 3.89" Long: 122º 55' 12.06" Datum: NAD83

Soil Map Unit Name: Henneke-Montara-Rock Outcrop Complex, 15-30 percent slopes NWI classification: N.A.

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

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

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? No (If needed, explain any answers in Remarks.)

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

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

Remarks:
Although wetland characteristics are evident, the sample site is at the lower end of a constructed drainage ditch, and is best defined as a non-wetland water of the United States.

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
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4.			
Total Cover:			
Sapling/Shrub Stratum			
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Total Cover:			
Herb Stratum			
1. Lolium multiflorum ssp. perenne	30	Yes	FAC*
2. Hordeum marinum ssp. gussoneaum (=H. hystrix)	60	Yes	FAC
3. Vulpia microstachys var. pauciflora	8	No	NL
4. Achyrachaena mollis	2	No	FAC
5.			
6.			
7.			
8.			
Total Cover:	100		
Woody Vine Stratum			
1.			
2.			
Total Cover:			

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

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Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

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

Remarks:

SOIL

Sampling Point: DP1

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-2	7.5YR 2.5/2	100					loam	
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[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix. [2]Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
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- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- X Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
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- ___ Hydrogen Sulfide Odor (C1)
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Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
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Field Observations:

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

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

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

Wetland Hydrology Present? Yes X No ___

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

Remarks:

APPENDIX B

Representative Photos

Representative Photos of On-site Waters

4:SW looking southeast 2/8/10

5:SW looking southeast 2/8/10

Biotic crust in 5:SW 4/29/10

1:CD looking west 4/29/10

Lower terminus of 1:CD and 2:CD, with discharge to uplands 4/29/10

3:CD looking north 4/29/10

6:CD (foreground) looking northeast 4/29/10

8:CD looking west toward culvert 3/17/10

Storm drain inlet at terminus of 8:CD 4/29/10

Non-jurisdictional drainage near 7:CD with no evidence of OHWM 4/29/10

Appendix C
Biological Resources Documentation

Biological Study Report

Lake County Courthouse
675 Lakeport Boulevard, Lakeport, CA

Prepared for:

RBF Consulting
500-01

July 15, 2010

Prepared by:

ENPLAN
Environmental Scientists and Planners
www.enplan.com

TABLE OF CONTENTS

1. INTRODUCTION

The purpose of this biological study report is to identify and characterize sensitive natural communities and plant and wildlife resources that are known or expected to occur on a ±5.8-acre project site at 675 Lakeport Boulevard, in the City of Lakeport, Lake County. The site, identified as Lake County Assessor's Parcel Number 025-521-410, is being evaluated for potential construction of a new courthouse. As shown in Figure 1 of Appendix A, the site is located in near the center of Section 25, Township 14 North, Range 10 West, of the U.S. Geological Survey's Lakeport 7.5-minute quadrangle. Photographs of the site are provided in Appendix B.

2. METHODOLOGY AND STAFF QUALIFICATIONS

Prior to conducting fieldwork, a biological records search was completed. This consisted of reviewing the California Department of Fish and Game's California Natural Diversity Data Base (CNDDB) as well as available local records. The CNDDB records search covered a 10-mile radius around the site. This entailed review of records for portions of the following quadrangles: Cow Mountain, Upper Lake, Bartlett Mountain, Purdy's Garden, Lakeport, Lucerne, Clearlake Oaks, Hopland, Highland Springs, Kelseyville, and Clearlake Highlands. Available local records consisted of a biological study report and wetland delineation (Northwest Biosurvey, 2006) prepared for a site approximately 0.3 miles to the north of the subject site on Martin Street, and an Initial Study for the same site (City of Lakeport, 2010). The Martin Street site has physical and biological characteristics similar to the subject site, supports several of the same special-status plant species, and was used as a reference site to check the phenology of local special-status plant species.

Upon completion of the pre-field review, a botanical field survey was undertaken in general accordance with *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities* (DFG, 2009). Because of the potential requirement for frontage improvements on Lakeport Boulevard, lands between the subject parcel and the street were included in the biological study area. The botanical survey was conducted on April 9 and 29, May 17, and June 19, 2010. All of the special-status plant species potentially occurring in the study area would have been evident at the time the fieldwork was conducted. The survey consisted of an intensive and systematic evaluation of the site; the field survey effort included four to six hours of field time during each of the four site visits.

The locations and approximate population numbers/densities of the identified special-status plant populations were determined by gridding each population into a number of small polygons and then estimating the number of plants in each polygon.

The wildlife evaluation was conducted in three phases. The first phase consisted of the records search described above. Under the second phase, the habitats and special habitat elements in the study area were determined through field reconnaissance. A list of wildlife species that could potentially occur in the identified

habitats was then compiled using the DFG's Wildlife Habitat Relationships (WHR) System, Version 8.2 (DFG, 2008). This is a predictive system based on scientific information regarding wildlife species and their known habitat relationships. It is useful as a general pre-field screen and provides a somewhat broader view of special-status species potentially occurring in the study area.

The wildlife survey was conducted on March 17, 2010. Many of the special-status animal species potentially occurring in the study area would have been evident at the time the fieldwork was conducted. The potential presence of species not readily identifiable during the field surveys was determined on the basis of observed habitat characteristics. The initial field effort included approximately three hours of field observations; additional wildlife observations were made during the botanical field survey visits.

The botanical field surveys were conducted by Donald Burk. Mr. Burk has a Bachelor of Arts degree in Biological Sciences and a Master of Science degree in Botany. He has over 25 years of experience in the design and implementation of botanical field studies. He has previously conducted botanical surveys in Lakeport and is familiar with flora of the region as well as state and federal statutes pertaining to special-status species. The wildlife evaluation was conducted by Darrin Doyle. Mr. Doyle has a Bachelor of Science degree in biology, and has 10 years of experience conducting biological surveys in California. He is familiar with wildlife species of the region and their habitat requirements. Mr. Doyle possesses a federal "take" permit for California red-legged frog and vernal pool crustaceans.

3. RESULTS

Plant Communities/Wildlife Habitats

The study site is situated between approximately 1,340 and 1,400 feet above sea level, and is surrounded on three sides by urban development. The site was historically an oak woodland, and was used for agriculture and grazing beginning in the late 1930s; the site was cleared of trees and shrubs in the early 1970s, and was graded prior to 1988 (URS, 2009). Soils on the site are identified as Henneke-Montara-rock outcrop complex, 15 to 50 percent slopes, with a negligible amount of Still loam, stratified substratum, in the extreme northeast corner of the site (USDA, NRCS, 2009). The Henneke-Montara complex consists of very deep, moderately well-drained soils formed in alluvium from mixed rock types. However, grading activities dramatically altered the soils and natural contours of the site. Roughly 20 feet of surface material was removed from the upper portion of the site, resulting in two level terraces.

Small rocks of serpentine origin are exposed on the upper terrace and hillsides, which support a serpentine herb community. The lower terrace supports a disturbed annual grassland. These two communities are described in more detail below; locations of the communities are shown on Figure 3 of Appendix A and photographs are provided in Appendix B. Two small, shallow seasonal waters with rock substrates are present on the upper terrace. Most runoff from the site enters constructed ditches that convey flow to the east. Flow enters the City's storm drain system, which discharges into Clear Lake approximately ¼-mile east of the site.

<u>Annual grassland</u>

Annual grasslands are characterized by a sparse to dense cover of annual grasses with inclusions of numerous species of native annual forbs ("wildflowers"). Germination occurs with the onset of the fall rains; growth, flowering, and seed-set occur from winter through spring. With a few exceptions, the plants are dead through the summer-fall dry season, persisting as seeds. On the subject site, the annual grassland community is best represented on the lower terrace of the site, on the eastern edge of the study area. Common species in this community include wild oats, soft

chess, California meadow barley, cream sacs, winter vetch, Spanish lotus, and various clovers. Although several special-status plant species were observed on the fringe of the annual grassland community, the community itself is not considered unique or sensitive.

High-quality annual grasslands are inhabited by a variety of wildlife species. Common mammals include black-tailed jackrabbit, coyote, gophers, moles, and several species of mice and voles. Snakes are often abundant in annual grasslands, feeding on small rodents. Amphibians are relatively uncommon in annual grasslands; however, species such as the western toad and Pacific treefrog may be locally abundant near aquatic habitats. Annual grassland also provides nesting and foraging habitat for certain migratory birds, including western meadowlarks, various sparrows, western kingbirds, and horned larks. The WHR data base predicts that this habitat type may be inhabited by 83 species of wildlife (Appendix C). However, because the onsite grassland is a small, fragmented relic of the grassland that historically was interspersed among the oak woodland, far fewer animal species are expected to be present. Overall, the onsite grassland has low value to wildlife species.

Serpentine herb community

The onsite serpentine herb community generally consists of a sparse, low-growing cover of annual and perennial forbs and grasses on the upper terrace and hillsides. Serpentine soils have unique chemical properties that prohibit the growth of many common plant species. A number of other plant species have evolved mechanisms allowing them to survive on serpentine soils. The flora of serpentine sites is thus unique and often supports plants of limited distribution, including a number of endemic species. Plant species observed on the site include naked buckwheat, wicker buckwheat, reflexed fescue, serpentine phacelia, fringed checkerbloom, bearded jewelflower, Douglas's sandwort, and Gambel's dwarf milkvetch. As discussed below, four serpentine-adapted special-status plant species were also observed in this community.

With the exception of crevices between boulders, the serpentine herb community lacks sufficient cover objects for most animal species. Accordingly, this habitat type

supports relatively few species of wildlife. Ground squirrels, which are present in small numbers on the site, create their own shelter by burrowing into hillsides or under large boulders. A number of birds may forage in this habitat; gulls, ravens, and crows were observed overhead, and may feed on picnic remains from the adjacent visitor's center. While the serpentine herb community does not provide tree-nesting habitat for birds, ground-nesting species such as the killdeer could potentially nest on the site. Overall, this habitat type has low value to wildlife species. No estimate on the number of animals that may potentially utilize the serpentine herb community is available, as there is no corresponding WHR habitat type for this community.

Site grading resulted in the creation of two very shallow depressions on the western edge of the serpentine herb community. These depressions pond water to a depth of two to three inches. Because of the underlying bedrock, the water ponds for long duration. These features appear to be subject to U.S. Army Corps of Engineers jurisdiction as non-wetland "waters of the United States." They drain to the northwest and southwest corners of the upper terrace and overflow enters small constructed ditches that ultimately discharge to the City's storm drain system. These waters are essentially unvegetated and provide minimal wildlife value. However, they do attract some species, such as killdeer. A delineation of wetlands and other waters on the subject site has been completed by ENPLAN and is presented in a separate report (ENPLAN, 2010).

The serpentine herb community is considered to be a sensitive natural community due to its somewhat restricted distribution and the high potential for endemic plant species to be present. The onsite community has been highly disturbed by grading. Although this has reduced the value of the site for some plant species, it has formed a "serpentine barren" that supports a unique suite of species, including four special-status species. Loss of the serpentine herb community as a result of project development is considered a significant adverse impact. Mitigation for this loss is best considered in conjunction with impacts on the four special-status plant species, and is addressed below.

Special-Status Plant Species

Review of CNDDB records showed that two special-status plant species, green jewel-flower and mayacamas popcorn-flower, have been broadly mapped to include the study area. Twenty-six other special-status plant species are known to occur within a 10-mile radius: Anthony's Peak lupine, beaked tracyina, bent-flowered fiddleneck, Boggs Lake hedge-hyssop, Bolander's horkelia, Brandegee's eriastrum, bristly sedge, Burke's goldfields, Colusa layia, dimorphic snapdragon, eel-grass pondweed, glandular western flax, Koch's cord moss, Konocti manzanita, Napa bluecurls, Norris' beard moss, oval-leaved viburnum, Raiche's manzanita, Rincon Ridge ceanothus, robust monardella, serpentine cryptantha, small-flowered calycadenia, small groundcone, Sonoma canescent manzanita, two-carpellate western flax, and woolly meadowfoam (Appendix D). The potential for each special-status plant species to utilize the study area is evaluated in Appendix E.

The botanical survey confirmed the presence of four special-status plant species on the project site: Colusa layia, bent-flowered fiddleneck, serpentine cryptantha, and Tracy's clarkia (a special-status species not reported in the CNDDB records search). The locations of the plant populations are shown in Figure 3 of Appendix A. A checklist of vascular plant species observed during the botanical field surveys is provided in Appendix F. Data forms documenting the special-status plant occurrences have been submitted to the California Natural Diversity Data Base.

Colusa layia *(Layia septentrionalis)*

Colusa layia is an annual herb that occurs in oak woodlands, chaparral, valley and foothill grasslands, and in sandy serpentinite. The species is not state or federally listed, but is on CNPS List 1B.2 (Plants Rare, Threatened, or Endangered in California and Elsewhere; Fairly Threatened in California). The species occurs between 300 and 3,600 feet in elevation. A total of 44 populations are reported in CNDDB records. These populations occur in the North Coast Range and Sutter Buttes (Colusa, Glenn, Lake, Mendocino, Napa, Sonoma, Sutter, Tehama, and Yolo counties). Reported population sizes (available for only about 25 percent of the records) range mostly from 100 to 200 plants, with the largest reported population having about 2,000 plants. With

roughly 20,000 to 25,000 plants observed on the subject site, the onsite Colusa layia population is by far the largest of those for which data is available. On the subject site, the species is most abundant on hillsides within the serpentine herb community, with a small number of plants present on the upper and lower terraces.

Bent-flowered fiddleneck (*Amsinckia lunaris*)

Bent-flowered fiddleneck occurs in cismontane woodlands, and valley and foothill grassland. The species is not state or federally listed, but is on CNPS List 1B.2 (Plants Rare, Threatened, or Endangered in California and Elsewhere; Fairly Threatened in California). The species is reported between 50 and 1,500 feet in elevation. A total of 50 populations are reported in CNDDB records. Populations are known to occur in Lake, Marin, Napa, Colusa, Contra Costa, Alameda, San Benito, Santa Clara, Santa Cruz, Yolo, and San Mateo counties. Reported population sizes (available for only about 35 percent of the records) range mostly from 10 to 300 plants. The largest quantified population size estimate is 3,650 plants, although the plants are noted to be "common" at other sites. Approximately 500 bent-flowered fiddleneck plants were observed on the subject site, primarily growing on hillsides within the serpentine herb community.

Serpentine cryptantha (*Cryptantha clevelandii* ssp. *dissita*)

Serpentine cryptantha generally occurs on serpentine rock outcrops in chaparral communities. The species is reported between 1,100 and 2,400 feet in elevation. The species is not state or federally listed, but is on CNPS List 1B.1 (Plants Rare, Threatened, or Endangered in California and Elsewhere; Seriously Threatened in California). A total of 10 populations are reported in CNDDB records. Populations are known to occur in Lake, Mendocino, Napa, and Sonoma counties. Six of the ten populations were observed between 1902 and 1967, the remaining four populations were observed between 1999 and 2003. No population size data is available. Approximately 10,000 serpentine cryptantha plants were observed on the subject site. Most of the plants occur within the serpentine herb community, on the upper terrace and on the hillside just below the upper terrace.

Tracy's clarkia (*Clarkia gracilis* ssp. *tracyi*)

Tracy's clarkia generally occurs on serpentine soils in chaparral communities. The species is reported from 200 to 2,200 feet above sea level. The species is not state or federally listed, but is on CNPS List 4.2 (Plants of Limited Distribution (A Watch List); Fairly Threatened in California). Populations are known to occur in Colusa, Humboldt, Lake, Mendocino, Napa, Trinity, and Tehama counties. Because of the lower CNPS status, the CNDDB does not offer online data regarding the number of recorded populations or population sizes. Nearly 10,000 Tracy's clarkia plants were observed on the site. All of these plants were growing on the periphery of the site, on both undisturbed and highly disturbed soils.

As noted above, Colusa layia, serpentine cryptantha, and bent-flowered fiddleneck are on the California Native Plant Society's List 1B. Although not state or federally listed, plants with this CNPS listing status are generally considered to qualify as "endangered, rare, or threatened" under Section 15380(d) of the California Environmental Quality Act (CEQA) Guidelines and thus require consideration during CEQA review. Tracy's clarkia is on CNPS List 4; plants of this status rarely qualify for state listing, but may be locally significant. As such, potential impacts to this species should also be evaluated during the CEQA process.

Because detailed site development plans have not yet been prepared, the extent of impacts to the serpentine herb community and the four onsite special-status plant species cannot be quantified. However, in general terms, site development has a high potential to adversely affect these resources. It appears that Tracy's clarkia, which is the least sensitive of the plants, would be least affected because it primarily occurs on the periphery of the site. Serpentine cryptantha, which is the most sensitive of the four species on the site, is the most centrally located and would be the most difficult to avoid during site development. Because all four of the special-status plant species have an affinity for serpentine soils, mitigation for the loss of the plants would also provide at least some mitigation for the loss of the serpentine herb community.

Department of Fish and Game staff were contacted following discovery of the special-status plant populations. However, the DFG has not conducted a field review of

the site or provided guidance as to potential mitigation strategies. Because full avoidance of the special-status plant populations and serpentine herb community does not appear to be possible, we recommend that the project proponent prepare a mitigation plan acceptable to DFG prior to project construction. Mitigation would likely include avoidance of at least some of the onsite serpentine herb community and associated special-status plant populations. Detailed mapping of the extent and densities of the special-status plant communities prepared as part of the botanical study (Figure 3 of Appendix A) will assist in preparing a site design that minimizes impacts to the populations. We recommend that the mitigation plan be prepared as early as possible, in conjunction with preparation of site design and development plans. Other options for mitigation include preservation of other local populations of these special-status plants, restoration of degraded populations on other sites in the area, and/or creation or new populations.

Special-Status Animal Species

Review of CNDDB records showed that one special-status animal species, American badger, has been broadly mapped as occurring within the study area. In addition, eight other special-status animal species are known to occur within a 10-mile radius: Clear Lake hitch, foothill yellow-legged frog, grasshopper sparrow, Pacific fisher, Sacramento perch, Townsend's big-eared bat, tricolored blackbird, and western pond turtle (Appendix D). The CNDDB records search also identified seven non-status animal species within the search radius: *Calasellus californicus*, Bell's sage sparrow, blennosperma vernal pool andrenid bee, double-crested cormorant, great blue heron, osprey, and silver-haired bat.

The potential for each special-status animal species to utilize the study area is evaluated in Appendix E. No special-status animal species were observed in the study area during the wildlife evaluation. However, as documented in Appendix E, two special-status animal species, grasshopper sparrow and Townsend's big-eared bat, as well as the non-status silver-haired bat could potentially utilize the site as some point during their life cycles. A checklist of wildlife species observed at the site is presented in Appendix G.

The grasshopper sparrow, a migratory bird, has a low potential to nest in the onsite annual grassland community. Potential adverse effects on nesting grasshopper sparrows can be avoided through proper timing of vegetation removal (see Nesting Migratory Birds below).

Townsend's big-eared bat and silver-haired bat could potentially forage on the site. However, they are very unlikely to roost on the site, given the lack of suitable roosting sites. Because suitable roosting habitat is much more available on other local sites and similar or higher quality foraging habitat is widely available, site development would have a negligible effect on these bat species; no mitigation is warranted.

Nesting Migratory Birds

Although no bird nests were observed in the study area during the field inspections, it is possible that migratory birds, particularly ground-nesting species, could nest on the study area in future years. The federal Migratory Bird Treaty Act requires that nesting migratory birds not be adversely affected by human activities. To ensure compliance with the Act, vegetation should be removed from the project area outside of the nesting season. In the local area, most birds nest between March 1 and July 31. Accordingly, the potential for adversely affecting nesting birds can be greatly minimized by removing vegetation before March 1 or after July 31. If this is not possible, a nesting survey should be conducted within two weeks prior to vegetation removal. If active nests are present, work within 500 feet of the nest(s) should be postponed until the young have fledged, unless a smaller nest buffer zone is authorized by the DFG.

Resource-Agency Permit Requirements

If the Corps of Engineers confirms that the small depressions and constructed ditches are waters subject to federal jurisdiction, a Department of the Army permit would be required prior to fill of the features. As a condition of the Department of the Army permit, issuance of a Water Quality Certification by the Regional Water Quality Control Board would also be required. It is unlikely that a Streambed or Lakebed Alteration Agreement would be required by the Department of Fish and Game; however, we recommend this be confirmed through consultation with Department staff. As for any

project involving more than one acre of surface disturbance, a General Construction Activity Storm Water Permit must be obtained from the State Water Resources Control Board; this requires preparation and implementation of a Storm Water Pollution Prevention Plan. Project implementation would also necessitate obtaining other permits (e.g., encroachment permits, air quality permits), but these involve issues beyond the scope of this document.

4. CONCLUSIONS AND RECOMENDATIONS

In summary, we find that the study area supports non-wetland "waters of the United States," a unique serpentine herb community, and four special-status plant species: Colusa layia, serpentine cryptantha, bent-flowered fiddleneck, and Tracy's clarkia. In addition, two special-status animal species (grasshopper sparrow and Townsend's big-eared bat), the non-status silver-haired bat, and nesting migratory birds could potentially utilize the site at some point during their life cycle.

Mitigation is not warranted for the bat species because they are unlikely to roost on the site and foraging habitat is widely available. Mitigation is not warranted for Tracy's clarkia given its relative abundance and low listing status; however, mitigation for the serpentine herb community and other three special-status plants is expected to offset the loss of Tracy's clarkia. Implementation of the following measures would reduce the remaining biological impacts to a level below that of significance.

1. Obtain Required Resource-Agency Permits. The project proponent shall obtain all necessary resource-agency permits prior to initiating any grading or construction activities within "waters of the United States." The required permits may include a Department of the Army Nationwide Permit from the U.S. Army Corps of Engineers, Water Quality Certification from the Regional Water Quality Control Board, and possibly a Streambed Alteration Agreement from the California Department of Fish and Game.
2. Avoid/Minimize/Offset the Loss of the Serpentine Herb Community and Associated Special-Status Plants. The project proponent shall prepare a mitigation plan identifying specific impacts of the proposed courthouse project on the serpentine herb community, Colusa layia, serpentine cryptantha, and bent-flowered fiddleneck. The plan shall include measures to avoid and minimize impacts to these resources through careful site design and establishment of onsite avoidance areas. To the extent feasible, Tracy's clarkia shall also be avoided/protected. If avoidance is not possible or does not provide sufficient mitigation, other mitigation measures shall be designated in the plan, including preservation of offsite serpentine habitats and special-status plant populations, restoration of degraded habitats on other local sites capable of supporting the sensitive resources, and/or creation of new habitats capable of supporting the sensitive resources. The mitigation plan shall be submitted to the California Department of Fish and Game for review, and must be approved in writing by DFG prior to initiation of site construction activities.

3. Avoid Disturbance of Nesting Migratory Birds, Including Grasshopper Sparrow. If feasible, vegetation removal shall be conducted between August 1 and February 28. If vegetation removal must be conducted between March 1 and July 31, a nesting bird survey shall be conducted within two weeks prior to initiation of work; if active nests are present, work within 500 feet of the nest(s) shall be postponed until the young have fledged, unless a smaller nest buffer zone is authorized by the DFG.

5. REFERENCES CITED

California Department of Fish and Game. 2010. California Natural Diversity Data Base, RareFind Printout, March 2010 Data.

_____. 2009. Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities. <http://nrm.dfg.ca.gov/documents/docviewer.aspx>

_____. 2008. California Interagency Wildlife Task Group. California Wildlife Habitat Relationships Systems, Version 8.2, personal computer version. Sacramento, California.

City of Lakeport. 2010. Mitigated Negative Declaration and Initial Environmental Study, Lakeport Pacific Associates. AR 10-03 / ARC 10-02 / ER 10-02.

ENPLAN. 2010. Pre-jurisdictional Delineation Report: Lake County Courthouse Site, 675 Lakeport Boulevard, Lakeport, California. Unpublished report on file with ENLAN.

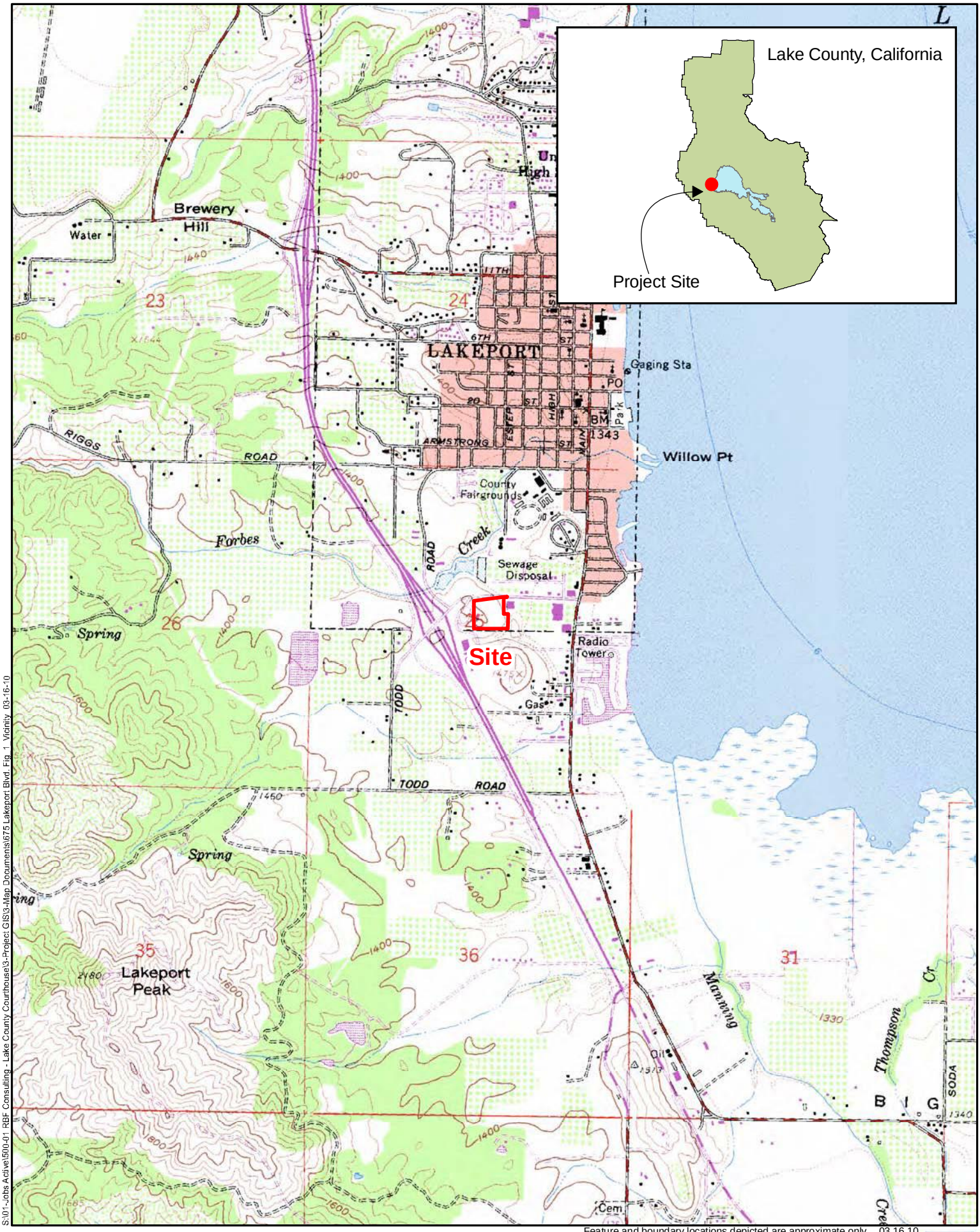
Northwest Biosurvey. June 30, 2006. Biological Assessment with Botanical Survey and Wetland Delineation for the Scott Johnson Property, APN 025-431-35. <http://www.cityoflakeport.com/departments/docs.aspx>

URS Corporation. December 2009. Final Draft Phase I Environmental Site Assessment Report: Proposed New Lakeport Courthouse – 675 Lakeport Boulevard Site. 675 Lakeport Boulevard, Lakeport CA 95453. Unpublished document on file with the Judicial Council of California, Administrative Office of the Courts.

U.S. Department of Agriculture, Natural Resources Conservation Service. 2009. Web Soil Survey, August 31, 2009 Map Data. <http://websoilsurvey.nrcs.usda.gov/app/.>

Appendix A

Figures



S:\01-Jobs Active\500-01 RBF Consulting - Lake County Courthouse\3-Project GIS\3-Map Documents\675 Lakeport Blvd. Fig. 1 Vicinity 03-16-10

Feature and boundary locations depicted are approximate only. 03.16.10

0 2,000 Feet

Figure 1

Project Vicinity Map

ENPLAN

FILE: S:\01-Jobs Active\500-01 RBF Consulting - Lake County Courthouse\3-Project GIS\3-Map Documents\Archeo\Fig_2_ProjLocationAPE_CR.mxd

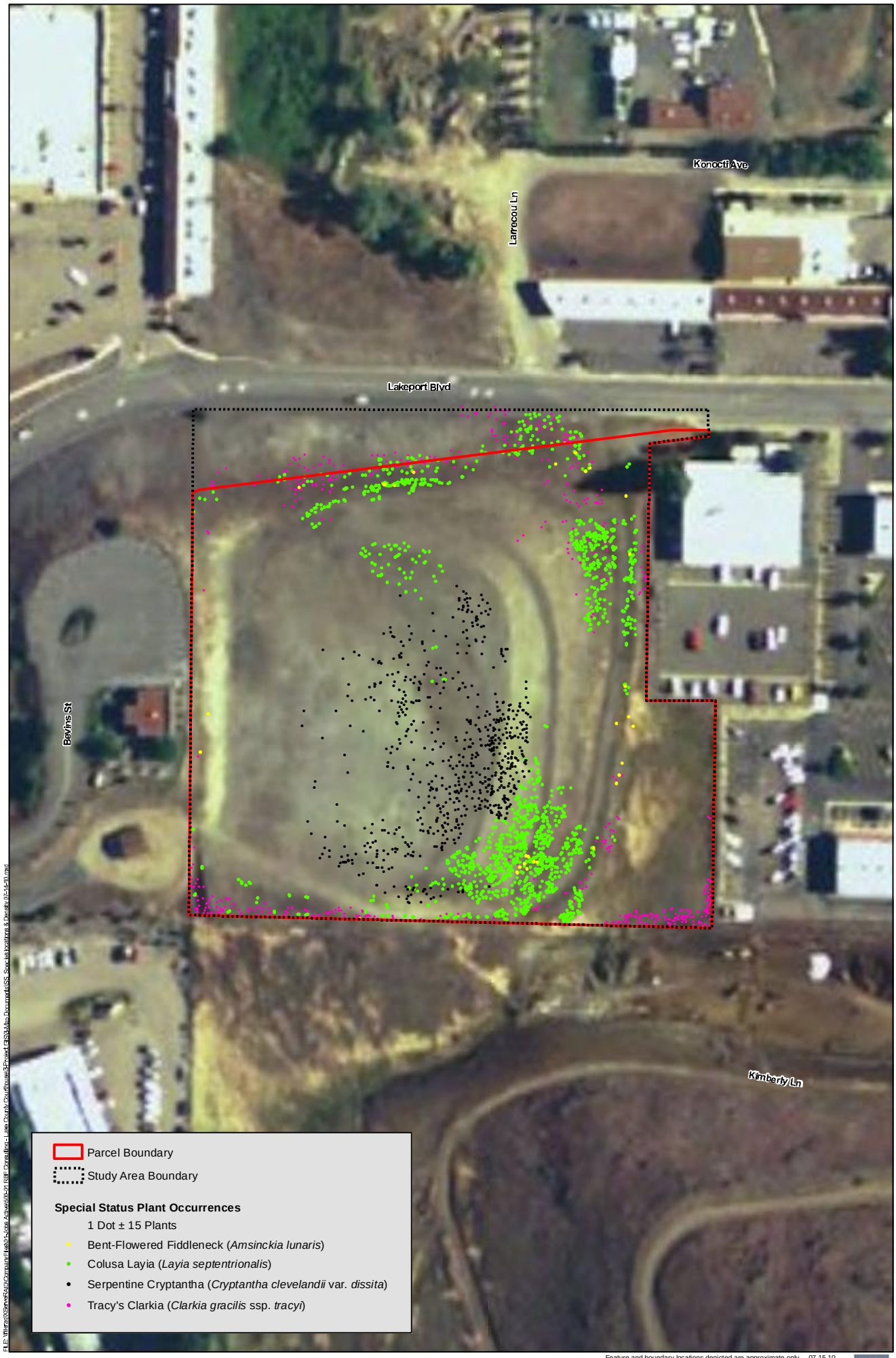
Feature and boundary locations depicted are approximate only. 07.12.10

0 300 Feet

Figure 2

Project APE and Area Surveyed

ENPLAN



Feature and boundary locations depicted are approximate only. 07.15.10

Feet
0 70

Figure 3

Special-Status Plant Population Locations and Density Representation

ENPLAN

Appendix B

Site Photographs

Site Photographs

Annual Grassland (front) and Serpentine Herb (back) Communities 3/17/10

Annual Grassland Community 6/17/10

Serpentine Herb Community on Upper Terrace 3/17/10

Serpentine Herb Community on Undisturbed Slope 6/17/10

Ponded Water on Upper Terrace 2/8/10

Constructed Drainage Ditch 4/29/10

Bent-flowered Fiddleneck 4/9/10

Colusa Layia 5/19/10

Serpentine Cryptantha 6/17/10

Serpentine Cryptantha on Hillside 6/17/10

Tracy's Clarkia 6/17/10

Tracy's Clarkia Habitat 6/17/10

Appendix C

Wildlife Habitat Relationships Report Summary

WHR SPECIES SUMMARY REPORT (VERSION 8.2)
Lake County Courthouse
675 Lakeport Boulevard, Lakeport, CA

ID	SPECIES NAME	STATUS													
		1	2	3	4	5	6	7	8	9	10	11	12	13	14
A007	California newt							7							
A043	Foothill yellow-legged frog							7				11	12		
A046	Bullfrog														14
A071	California red-legged frog		2					7							
R004	Western pond turtle							7				11	12		
R036	Western skink							7				11			
R048	Ringneck snake												12		
R057	Gopher snake							7							
R059	California mountain kingsnake							7					12		
R061	Common garter snake	1		3		5		7							
B051	Great blue heron													13	
B052	Great egret													13	
B071	Snow goose														14
B075	Canada goose														14
B077	Green-winged teal														14
B079	Mallard														14
B080	Northern pintail														14
B083	Cinnamon teal														14
B084	Northern shoverler														14
B085	Gadwall														14
B086	Eurasian wigeon														14
B087	American widgeon														14
B094	Lesser scaup														14
B110	Osprey													13	
B111	White-tailed kite					5									
B113	Bald eagle			3		5								13	
B114	Northern harrier							7							
B124	Ferruginous hawk											11			
B126	Golden eagle					5						11		13	
B129	Peregrine falcon			3		5							12	13	
B133	Ring-necked pheasant														14
B134	Sooty grouse							7							14
B138	Wild turkey														14
B140	California quail							7							14
B141	Mountain quail														14
B149	American coot														14
B255	Mourning dove														14
B269	Burrowing owl							7				11			
B272	Long-eared owl							7							
B273	Short-eared owl							7							
B338	Purple martin							7							
B342	Bank swallow				4										
B353	American crow														14
B410	Loggerhead shrike	1						7							
B461	Common yellowthroat							7							
B487	Rufous-crowned sparrow							7							
B499	Savannah sparrow			3				7							
B501	Grasshopper sparrow							7							
B505	Song sparrow							7							

ID	SPECIES NAME	STATUS													
B519	Red-winged blackbird							7							
B520	Tricolored blackbird							7							
B522	Yellow-headed blackbird							7							
M001	Virginia opossum														14
M006	Ornate shrew	1						7							
M018	Broad-footed mole							7							
M023	Yuma myotis											11			
M026	Fringed myotis											11			
M033	Western red bat							7					12		
M037	Townsend's big-eared bat							7				11	12		
M038	Pallid bat							7				11	12		
M045	Brush rabbit	1		3											14
M047	Desert cottontail														14
M051	Black-tailed jackrabbit							7							14
M087	San Joaquin pocket mouse							7				11			
M105	California kangaroo rat							7				11			
M112	American beaver														14
M117	Deer mouse							7							
M134	California vole	1		3				7				11			
M146	Coyote														14
M147	Red fox				4								12		14
M149	Gray fox														14
M151	Black bear														14
M152	Ringtail					5									
M153	Raccoon														14
M157	Long-tailed weasel														14
M160	American badger							7							14
M161	Western spotted skunk							7							14
M162	Striped skunk														14
M165	Mountain lion							7							
M166	Bobcat														14
M176	Wild pig														14
M177	Elk														14
M181	Mule deer														14

Total Number of Species: 83

Habitats Selected:

Annual grassland

STATUS KEY:

1 = Federal Endangered
2 = Federal Threatened
3 = California Endangered
4 = Caifornia Threatened
5 = Caifornia Fully Protected
6 = California Protected
7 = California Species of Special Concern
8 = Federally - Proposed Endangered
9 = Federally - Proposed Threatened
10 = Federal Candidate
11 = BLM Sensitive
12 = USFS Sensitive
13 = CDF Sensitive
14 = Harvest

Appendix D

Rarefind (CNDDB) Report Summary

Rarefind (CNDDB) Report Summary (March 2010 Data)
Lake County Courthouse
675 Lakeport Boulevard, Lakeport, CA

Listed Element	Quadrangle[1]											Status[2]
	CM	UL	BM	PG	LA	LU	CO	HO	HS	KE	CH	
Animals												
American badger					●							SSC
Calasellus californicus										●		None
Bell's sage sparrow									●			None
Blennosperma vernal pool andrenid bee					●							None
Clear Lake hitch		●			●	●	●		●		●	SSC
Double-crested cormorant					●							None
Foothill yellow-legged frog				●					●	●		SSC
Grasshopper sparrow				●				●				SSC
Great blue heron					●							None
Osprey			●	●	●	●	●			●		None
Pacific fisher				●								FC, SSC
Sacramento perch					●	●	●				●	SSC
Silver-haired bat			●			●						None
Townsend's big-eared bat				●								SSC
Tricolored blackbird		●			●							SSC
Western pond turtle		●						●	●	●		SSC
Plants												
Anthony's Peak lupine			●									1B.3
Beaked tracyina				●	●			●				1B.2
Bent-flowered fiddleneck					●	●			●			1B.2
Boggs Lake hedge-hyssop										●		SE, 1B.2
Bolander's horkelia				●					●			1B.2
Brandegee's eriastrum										●		1B.2
Bristly sedge	●							●				2.1
Burke's goldfields										●		FE, SE, 1B.1
Colusa layia					●	●	●	●	●	●		1B.2
Dimorphic snapdragon									●			4.3
Eel-grass pondweed						●	●			●	●	2.2
Glandular western flax			●		●	●			●	●		1B.2
Green jewel-flower					●							1B.2
Koch's cord moss				●				●				1B.3
Konocti manzanita						●			●	●		1B.3
Mayacamas popcorn-flower					●							1A
Napa bluecurls										●		1B.2
Norris' beard moss			●		●	●			●			2.2
Oval-leaved viburnum								●				2.3
Raiche's manzanita				●								1B.1
Rincon Ridge ceanothus				●								1B.1
Robust monardella										●		1B.2
Serpentine cryptantha					●				●			1B.1
Small-flowered calycadenia									●			1B.2
Small groundcone				●				●				2.3
Sonoma canescent				●								1B.2

Rarefind (CNDDB) Report Summary (March 2010 Data)
Lake County Courthouse
675 Lakeport Boulevard, Lakeport, CA

Listed Element	Quadrangle[1]											Status[2]
	CM	UL	BM	PG	LA	LU	CO	HO	HS	KE	CH	
manzanita												
Two-carpellate western flax			●			●						1B.2
Woolly meadowfoam										●		4.2
Natural Communities												
Clear Lake Drainage Cyprinid /Catostomid Stream						●				●		None
Clear Lake Drainage Resident Trout Stream										●		None
Clear Lake Drainage Seasonal Lakefish Spawning Stream						●				●		None
Coastal and Valley Freshwater Marsh		●			●	●						None
Northern Interior Cypress Forest				●								None
Serpentine Bunchgrass				●								None

Highlighting denotes the quadrangle in which the project site is located.

[1]Quadrangle Code

CM = Cow Mountain
UL = Upper Lake
BM = Bartlet Mtn.
PG = Purdy's Garden
LA = Lakeport
LU = Lucerne
CO = Clearlake Oaks
HO = Hopland
HS = Highland Springs
KE = Kelseville
CH = Clearlake Highlands

[2]Status Codes

Federal/State

FE = Federally Listed – Endangered
FT = Federally Listed – Threatened
FC = Federal Candidate Species
FD = Federally Delisted
SE = State Listed – Endangered
ST = State Listed – Threatened
SSC = State Species of Concern

California Native Plant Society

List 1A = Plants Presumed Extinct in California
List 1B = Plants Rare, Threatened or Endangered in California and Elsewhere
List 2 = Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere
List 3 = Plants About Which We Need More Information – A Review List
List 4 = Plants of Limited Distribution – A Watch List

Threat Ranks

0.1 = Seriously Threatened in California
0.2 = Fairly Threatened in California
0.3 = Not Very Threatened in California

Appendix E

Evaluation of the Potential for Special-Status Species or Other Species Identified by the CNDDB to Occur at the Project Site

Evaluation of the Potential for Special-Status Species or Other Species Identified by the CNDDB to Occur on the Site

	Habitat Requirements	Potential to Occur
Wildlife		
American badger *Taxidea taxus*	Badgers are most commonly found in dry, open areas in shrub, forest, and herbaceous habitats, with friable soils. Badgers dig burrows in dry, sandy soil, usually in areas with sparse overstory.	Review of CNDDB records found that the American badger has been broadly mapped to include the project site. The exact location of this occurrence is uncertain, but has been mapped to include most of the community of Lakeport. Field inspection found no badgers or badger dens. The American badger is thus not expected to be present or affected by project implementation.
Calasellus californicus	*Calasellus californicus,* a freshwater isopod, is found in association with springs and seeps. The species is known to occur in Lake, Santa Clara, and Napa counties.	Springs and seeps do not occur on the project site. *Calasellus californicus* would thus not be present or affected by project implementation.
Bell's sage sparrow *Amphispiza belli belli*	Bell's sage sparrow nest in chaparral dominated by dense stands of chamise.	The project area does not support chaparral or dense stands of chamise. Bell's sage sparrow would thus not be present.
Blennosperma vernal pool andrenid bee *Andrena blennospermatis*	The blennosperma vernal pool andrenid bee is a solitary, ground-nesting bee that inhabits upland areas around vernal pools. This bee has a patchy distribution in California's Sacramento Valley and foothills.	Vernal pools do not occur on or adjacent to the project site. The blennosperma vernal pool andrendid bee would thus not be present or affected by project implementation.
Clear Lake hitch *Lavinia exilicauda chi*	Clear Lake hitch are endemic to Clear Lake (Lake County) and its associated tributaries. Hitch are also found in nearby Thurston Lake and Lampson Pond. Adults spawn in seasonal tributary streams to Clear Lake, such as Kelsey, Seigler Canyon, Adobe, Middle, Scotts, Cole, and Manning creeks. Spawning occurs in gravelly areas in the lower reaches of these streams.	The project area lacks lakes and streams. Clear Lake hitch would thus not be present or affected by project implementation.
Double-crested cormorant *Phalacrocorax auritis*	Double-crested cormorant is a year-long resident along the coast and inland lakes and rivers, and feeds primarily on fish. Double-crested cormorants are colonial nesters, and nest from April through August. Nesting/roosting habitat includes off-shore rocks, islands, cliffs, wharfs, jetties, or overhanging tree branches along lakes and rivers.	The project area lacks suitable nesting and foraging habitat for the double-crested cormorant. The double-crested cormorant would thus not be present or affected by project implementation.

Evaluation of the Potential for Special-Status Species or Other Species Identified by the CNDDB to Occur on the Site

	Habitat Requirements	Potential to Occur
Foothill yellow-legged frog *Rana boylii*	Foothill yellow-legged frogs are typically found in partly-shaded, shallow streams and riffles with a rocky substrate in a variety of aquatic habitats. This frog needs at least some cobble-sized substrate for egg-laying. Foothill yellow-legged frogs generally prefer low to moderate gradient streams, especially for breeding and egg-laying, although juvenile and adult frogs may utilize moderate- to steep-gradient streams during summer and early fall.	The project area lacks suitable habitat for the foothill yellow-legged frog. The foothill yellow-legged frog was not observed during the wildlife survey and is not expected to be present or affected by project implementation.
Grasshopper sparrow *Ammodramus savannarum*	Grasshopper sparrows frequent dry or well-drained native grasslands. Nesting occurs from early April through mid-July in these grasslands. Nests are constructed of grasses or forbs in slight depressions on the ground, usually at the base of an overhanging clump of grass or forbs.	Although not observed during the wildlife survey, the grassland on the project site has a low potential to provide nesting habitat for the grasshopper sparrow.
Great blue heron *Ardea herodias*	Great blue herons nest in colonies along marshes, lake margins, tideflats, wet meadows, rivers, and streams. Nests are generally in the tops of tall trees and snags. Uncommon nest sites include rock ledges, sea cliffs, and tule mats.	The project site lacks suitable nesting habitat for the great blue heron. Great blue herons were not observed during the wildlife survey and are not expected to nest on the site.
Osprey *Pandion haliaetus*	Ospreys require large bodies of permanent water and suitable nest sites. Nesting occurs on large decadent trees or structures such as powerline towers, buildings, and bridges. Ospreys are primarily associated with pine and mixed-conifer habitats, although urban or suburban nests are not unusual.	The project site lacks suitable nesting habitat for the osprey. Ospreys were not observed during the wildlife survey and are not expected to nest on the site. Review of CNDDB records found that the nearest reported osprey nest is approximately ¼-mile southeast of the project site, along the shore of Clear Lake.
Pacific fisher *Martes pennanti pacificus*	Pacific fishers primarily inhabit mixed conifer forests dominated by Douglas-fir, although they also are encountered frequently in higher elevation fir and pine forests, and mixed evergreen/broadleaf forests. Suitable habitat for Pacific fishers consists of large areas of mature, dense forest stands with snags and greater than 50 percent canopy closure.	No forest habitat occurs on the project site. Field inspection found no fishers or fisher dens on the site. The Pacific fisher would thus not den on the site or be affected by project implementation.
Sacramento perch *Archoplites interruptus*	The Sacramento perch is a warm-water fish that historically occurred in Clear Lake (Lake County), as well as the Sacramento, San Joaquin, Pajaro, and Salinas river systems. The species is presently restricted to Clear Lake and several small reservoirs and farm ponds where they have been introduced. Adults and juveniles associate with beds of aquatic vegetation in shallow water.	Lakes and streams do not occur on the project site. The Sacramento perch would thus not be present or affected by project implementation.

Evaluation of the Potential for Special-Status Species or Other Species Identified by the CNDDB to Occur on the Site

	Habitat Requirements	Potential to Occur
Silver-haired bat *Lasionycteris noctivagans*	Silver-haired bats occur in coastal and montane forests. Silver-haired bats roost in hollow trees, snags, rock crevices, caves, and under bark.	The project site provides suitable foraging habitat for the silver-haired bat, but does not provide roosting habitat.
Townsend's big-eared bat *Corynorhinus townsendii pallescens*	Townsend's big-eared bat is found throughout California except in subalpine and alpine habitats, and may be found at any season throughout its range. The species is most abundant in mesic habitats. The bat requires caves, mines, tunnels, buildings, or other human-made structures for roosting.	The project site provides suitable foraging habitat for Townsend's big-eared bat, but does not provide roosting habitat.
Tricolored blackbird *Agelaius tricolor*	Tricolored blackbirds require open water, usually nesting in dense cattails or tules although they can also nest in thickets of willow, blackberry, wild rose and tall herbs. Tricolored blackbirds are colonial nesters. Nesting areas must be large enough to support a minimum colony of about 50 pairs.	The project site lacks suitable nesting habitat for the tricolored blackbird. Tricolored blackbirds were not observed during the wildlife survey and are not expected to nest on the site.
Western pond turtle *Actinemys marmorata*	The western pond turtle associates with permanent or nearly permanent water in a variety of habitats. This turtle is typically found in quiet water environments. Pond turtles require basking sites such as partially submerged logs, rocks, or open mud banks, and suitable (sandy banks or grassy open fields) upland habitat for egg-laying. In cold weather, pond turtles hibernate underwater in bottom mud.	The project site lacks suitable habitat for the western pond turtle. The western pond turtle was not observed during the wildlife survey and is not expected to be present or affected by project implementation.
PLANTS		
Anthony's Peak lupine *Lupinus antoninus*	Anthony's Peak lupine occurs on rocky outcrops and dry talus and shaley slopes on mountaintops above timberline (4,000 to 7,500 feet above sea level). The species is known to occur in Mendocino, Trinity, and Lake counties. The flowering period is May through July.	The project site is well below the elevational range of Anthony's Peak lupine. The species was not observed during the botanical survey and is not expected to be present or affected by project implementation.

Evaluation of the Potential for Special-Status Species or Other Species Identified by the CNDDB to Occur on the Site

	Habitat Requirements	Potential to Occur
Beaked tracyina *Tracyina rostrata*	Beaked tracyina is an annual herb that usually occurs on dry, grassy slopes in coastal prairie. The species is reported between 400 and 1,000 feet in elevation. Most populations are reported in Humboldt and Mendocino counties, although several populations are found in Lake and Sonoma counties. The flowering period is May through June.	The disturbed grassland on the project site has a low potential to support beaked tracyina. However, beaked tracyina was not observed during the botanical survey and is not expected to be present or affected by project implementation.
Bent-flowered fiddleneck *Amsinckia lunaris*	Bent-flowered fiddleneck occurs in cismontane woodland, and valley and foothill grassland. The species is reported between 50 and 1,500 feet in elevation. Populations are known to occur in Lake, Marin, Napa, Colusa, Contra Costa, Alameda, San Benito, Santa Clara, Santa Cruz, Yolo, and San Mateo counties. The flowering period is March through June.	The project site provides suitable habitat for bent-flowered fiddleneck, and the species was observed during the botanical survey.
Boggs Lake hedge-hyssop *Gratiola heterosepala*	Boggs Lake hedge-hyssop occurs in marshes, swamps, and vernal pools. The species is reported from sea level to 7,800 feet in elevation. The flowering period is April through August.	The project site lacks marshes, swamps, and vernal pools. Boggs Lake hedge-hyssop was not observed during the botanical survey and is not expected to be present or affected by project implementation.
Bolander's horkelia *Horkelia bolanderi*	Bolander's horkelia occurs along grassy margins of vernal pools. The species is reported between 1,500 and 3,000 feet in elevation. Populations are known to occur in Colusa, Lake, and Mendocino counties. The flowering period is June through August.	Vernal pools do not occur on the project site. Bolander's horkelia was not observed during the botanical survey and is not expected to be present or affected by project implementation.
Brandegee's eriastrum *Eriastrum brandegeae*	Brandegee's eriastrum occurs on dry gravelly to loamy soils on flats and benches in chaparral or closed-cone pine forests. The species is reported between 1,000 and 3,400 feet in elevation in the northern Coast Range. Populations are known to occur in Colusa, Glenn, Lake, Shasta (extreme southwestern portion), Trinity, Santa Clara, and San Mateo counties. The flowering period is April through August.	Chaparral or closed-cone pine forests do not occur on the project site. Brandegee's eriastrum was not observed during the botanical survey and is not expected to be present or affected by project implementation.
Bristly sedge *Carex comosa*	Bristly sedge occurs in marshes, and swamps, or along lake margins. This species is reported from sea level to 2,100 feet in elevation. The flowering period is May through September.	Marshes, swamps, or lake margins do not occur on the project site. Bristly sedge was not observed during the botanical survey and is not expected to be present or affected by project implementation.

Evaluation of the Potential for Special-Status Species or Other Species Identified by the CNDDB to Occur on the Site

	Habitat Requirements	Potential to Occur
Burke's goldfields *Lasthenia burkei*	Burke's goldfields occurs in vernal pools, meadows, and seeps. The species is reported between 50 and 2,000 feet in elevation. Populations are known to occur in Lake, Mendocino, Napa, and Sonoma counties. The flowering period is April through June.	Vernal pools, meadows, and seeps do not occur on the project site. Burke's goldfields was not observed during the botanical survey and is not expected to be present or affected by project implementation.
Colusa layia *Layia septentrionalis*	Colusa layia is an annual herb that occurs in oak woodland, chaparral, valley and foothill grasslands, and in sandy serpentinite. The species is reported between 300 and 3,600 feet in elevation. Populations are known to occur in the Coast Range and Sutter Buttes (Colusa, Glenn, Lake, Mendocino, Napa, Sonoma, Sutter, Tehama, and Yolo counties). The flowering period is April through May.	The project site provides suitable habitat for Colusa layia, and the species was observed on the northern portion of the upper terrace and on the slope below the terrace.
Dimorphic snapdragon *Antirrhinum subcordatum*	Dimorphic snapdragon occurs on serpentine or shale soils in foothill woodland or chaparral on south or west-facing slopes, between 600 and 2,500 feet above sea level. The flowering period is April through July.	Serpentine rocks cover most of the project site. However, dimorphic snapdragon was not observed during the botanical survey and is not expected to be present.
Eel grass pondweed *Potamogeton zosteriformis*	Eel grass pondweed occurs in ponds, lakes, streams, marshes, and swamps up to 6,000 feet in elevation. This aquatic plant has been reported in Lassen, Shasta, Modoc, Contra Costa, and Lake counties.	Suitable habitat for eel grass pondweed does not occur on the project site. Eel grass pondweed was not observed during the botanical survey and is not expected to be present or affected by project implementation.
Glandular western flax *Hesperolinon adenophyllum*	Glandular western flax generally occurs on serpentine soils in chaparral. The species is reported between 1,400 and 4,300 feet in elevation. Populations are known to occur in Lake and Mendocino counties. The flowering period is May through August.	Serpentine rocks cover most of the project site. However, glandular western flax was not observed during the botanical survey and is not expected to be present.
Green jewel-flower *Streptanthus breweri* var. *hesperidis*	Green jewel-flower occurs in openings in chaprarral and cismontane woodland, or on serpentine or rocky sites. The species is reported between 400 and 2,500 feet in elevation. Populations are known to occur in Glenn, Lake, Napa, and Sonoma counties. The flowering period is May through July.	Review of CNDDB records found that the green jewel-flower has been broadly mapped to include the project site. The exact location of this occurrence is uncertain, but has been mapped to include most of the community of Lakeport. Serpentine rocks cover most of the project site. However, green jewel-flower was not observed during the botanical survey and is not expected to be present or affected by project implementation.

Evaluation of the Potential for Special-Status Species or Other Species Identified by the CNDDB to Occur on the Site

	Habitat Requirements	Potential to Occur
Koch's cord moss *Entosthodon kochii*	Koch's cord moss occurs on moist soils in cismontane woodland. The species is reported between 1,600 and 3,300 feet in elevation. Populations are known to occur in San Luis Obispo, Mariposa, Marin, and Mendocino counties.	The project site lacks cismontane woodland and is slightly below the reported elevation range for Koch's cord moss. Koch's cord moss is not expected to be present or affected by project implementation.
Konocti manzanita *Arctostaphylos manzanita* ssp. *elegans*	Konocti manzanita occurs on volcanic soils in chaparral, cismontane woodland, and lower montane coniferous forest. The species is reported between 1,300 and 4,600 feet in elevation. Populations are known to occur in Colusa, Glenn, Tehama, Lake, Napa, and Sonoma counties. The flowering period is March through May.	The project site is nearly devoid of trees and shrubs, and lacks suitable habitat for Konocti manzanita. Konocti manzanita was not observed during the botanical survey and is not expected to be present or affected by project implementation.
Mayacamas popcorn-flower *Plagiobothrys lithocaryus*	Mayacamas popcorn-flower occurs on moist sites in cismontane woodland, and valley and foothill grasslands. The species is reported between 900 and 1,500 feet in elevation. Populations are known to occur in Mendocino and Lake counties. The flowering period is April through May.	Review of CNDDB records found that the Mayacamas popcorn-flower has been broadly mapped to include the project site. The exact location of this occurrence is uncertain, but has been mapped to include most of the community of Lakeport. The onsite grassland provides marginally suitable habitat for Mayacamas popcorn-flower. The species was not observed during the botanical survey and is not expected to be present or affected by project implementation.
Napa bluecurls *Trichostema ruygtii*	Napa bluecurls occurs in vernal pools in valley and foothill grasslands, and in openings in chaparral, cismontane woodland, and lower montane coniferous forest. The species is reported between 100 and 2,000 feet in elevation. Populations are known to occur in Napa and Solano counties. The flowering period is June through October.	The project site lacks vernal pools, chaparral, and cismontane woodland. Napa bluecurls was not observed during the botanical survey and is not expected to be present or affected by project implementation.
Norris' beard moss *Didymodon norrisii*	Norris' beard moss occurs on rocks in cismontane woodland and lower montane coniferous forest. The species is reported to occur between 2,000 and 6,500 feet in elevation.	The project site is well below the elevational range of Norris' beard moss. The species would thus not be present.

Evaluation of the Potential for Special-Status Species or Other Species Identified by the CNDDB to Occur on the Site

	Habitat Requirements	Potential to Occur
Oval-leaved viburnum *Viburnum ellipticum*	Oval-leaved viburnum inhabits chaparral, cismontane woodland, and lower montane coniferous forests. The species often occurs on north-facing slopes covered by dense brush. Oval-leaved viburnum is found between 700 and 4,600 feet in elevation. The flowering period is May through June.	The project site lacks chaparral, cismontane woodland, and montane coniferous forest. Oval-leaved viburnum was not observed during the botanical survey and is not expected to be present or affected by project implementation.
Raiche's manzanita *Arctostaphylos stanfordiana* ssp. *raichei*	Raiche's manzanita occurs on serpentine soils in chaparral and lower montane coniferous forest. The species is reported between 1,500 and 3,300 feet in elevation. Populations are known to occur in Mendocino County. The flowering period is February through April.	The project site is nearly devoid of trees and shrubs, and lacks suitable habitat for Raiche's manzanita. Raiche's manzanita was not observed during the botanical survey and is not expected to be present or affected by project implementation.
Rincon Ridge ceanothus *Ceanothus confusus*	Rincon Ridge ceanothus occurs on dry, serpentine or volcanic soils in chaparral, cismontane woodland, and lower montane coniferous forests. The species is reported between 250 and 3,500 feet in elevation. Populations are known to occur in Lake, Mendocino, Napa, and Sonoma counties. The flowering period is February through June.	The project site is nearly devoid of trees and shrubs, and lacks suitable habitat for Rincon Ridge ceanothus. Rincon Ridge ceanothus was not observed during the botanical survey and is not expected to be present or affected by project implementation.
Robust monardella *Monardella villosa* ssp. *globosa*	Robust monardella occurs in openings in chaparral and oak woodlands. The species is reported from sea level to 4,300 feet in elevation. Populations are known to occur in Alameda, Contra Costa, Humboldt, Lake, Mendocino, Napa, Santa Clara, Santa Cruz, San Mateo, and Sonoma counties. The flowering period is June through July.	The project site is nearly barren of trees and shrubs. Robust monardella was not observed during the botanical survey and is not expected to be present or affected by project implementation.
Serpentine cryptantha *Cryptantha clevelandii* var. *dissita*	Serpentine cryptantha occurs on serpentine rock outcrops in chaparral. The species is reported between 1,100 and 2,400 feet in elevation. Populations are known to occur in Lake, Mendocino, Napa, and Sonoma counties. The flowering period is April through June.	Serpentine cryptantha was observed on the project site.
Small-flowered calycadenia *Calycadenia micrantha*	Small-flowered calycadenia generally occurs on rocky talus or in sparsely vegetated areas, but is occasionally found on serpentine soils and roadsides. The species is reported from sea level to 5,000 feet in elevation. Populations are known to occur in Monterey, Trinity, Lake, Napa, and Colusa counties. The flowering period is June through September.	The project site has a moderate potential to support small-flowered calycadenia. However, small-flowered calycadenia was not observed during the botanical survey and is not expected to be present or affected by project implementation.

Evaluation of the Potential for Special-Status Species or Other Species Identified by the CNDDB to Occur on the Site

	Habitat Requirements	Potential to Occur
Small groundcone *Boschniakia hookeri*	Small groundcone occurs in North Coast coniferous forests, and is often found in association with salal. The species is reported between 300 and 2,900 feet in elevation. Populations are known to occur in Del Norte, Humboldt, Mendocino, Marin, and Trinity counties. The flowering period is April through August.	The project site is nearly devoid of trees and shrubs, and does not have suitable habitat for small groundcone. Small groundcone was not observed during the botanical survey and is not expected to be present or affected by project implementation.
Sonoma canescent manzanita *Arctostaphylos canescens* ssp. *sonomensis*	Sonoma canescent manzanita generally occurs in openings in chaparral. The species is most often found on dry, rocky ridges and slopes of serpentine origin. In the southern portion of its range, the species is found on volcanic soils. Sonoma canscent manzanita is reported between 650 and 4,900 feet in elevation. Populations are known to occur in Humboldt, Trinity, Mendocino, Lake, Colusa, Tehama, and Sonoma counties. The flowering period is January through June.	The project site is nearly devoid of trees and shrubs, and lacks suitable habitat for Sonoma canescent manzanita. Sonoma canescent manzanita was not observed during the botanical survey and is not expected to be present or affected by project implementation.
Two-carpellate western flax *Hesperolinon bicarpellatum*	Two-carpellate western flax occurs in serpentine barrens at the edge of chaparral. The species is reported between 500 and 2,700 feet in elevation. Populations are known to occur in Lake, Napa, and Sonoma counties. The flowering period is May through July.	Serpentine rocks cover most of the project site. However, two-carpellate western flax was not observed during the botanical survey and is not expected to be present or affected by project implementation.
Woolly meadowfoam *Limnanthes floccosa* ssp. *floccosa*	Woolly meadowfoam generally occurs in vernal pools, ditches, and ponds in valley foothill and grasslands, cismontane woodland, and chaparral. The species is reported between 200 and 3,600 feet in elevation. The flowering period is March through June.	A ditch in the southeast portion of the project site has marginally suitable habitat for woolly meadowfoam. However, woolly meadowfoam was not observed during the botanical survey and is not expected to be present or affected by project implementation.

Appendix F

Checklist of Vascular Plant Species Observed

CHECKLIST OF VASCULAR PLANT SPECIES OBSERVED

Lake County Courthouse Site

April 9 and 29, May 17, and June 19, 2010

Amaranthaceae	**Amaranth Family**
Amaranthus albus	Tumbleweed
Apiaceae	**Carrot Family**
Lomatium macrocarpum	Large-fruited lomatium
Perideridia sp.	Yampah
Torilis arvensis	Field hedge-parsley
Asteraceae	**Sunflower Family**
Achyrachaena mollis	Blow-wives
Agoseris grandiflora	Large-flowered agoseris
Agoseris heterophylla	Annual agoseris
Ancistrocarphus filagineus	Wooly fishhooks/false neststraw
Anthemis cotula	Stinking chamomile
Baccharis pilularis	Coyote-brush
Calycadenia pauciflora	Smallflower western rosinweed
Carduus pycnocephalus	Italian thistle
Centaurea solstitialis	Yellow star thistle
Chamomilla suaveolens	Pineapple weed
Cirsium cymosum	Peregrine thistle
Filago gallica	Narrow-leaved filago
Hemizonia congesta ssp. *clevelandii*	Hayfield tarweed
Hypochaeris glabra	Smooth cat's ear
Lactuca sp.	Prickly lettuce
Lagophylla ramosissima var. *ramosissima*	Common hareleaf
Lasthenia californica	California goldfields
Layia septentrionalis	Colusa tidytips
Micropus californicus var. *californicus*	Slender cottonweed
Microseris douglasii ssp. *douglasii*	Douglas' silverpuffs
Psilocarphus tenellus var. *tenellus*	Slender woolly marbles
Rigiopappus leptocladus	Rigiopappus
Senecio vulgaris	Old-man-in-the-Spring
Sonchus asper ssp. *asper*	Prickly sow thistle
Uropappus lindleyi	Silverpuffs
Boraginaceae	**Borage Family**
Amsinckia lunaris	Bent-flowered fiddleneck
Amsinckia menziesii var. *menziesii*	Menzies' fiddleneck
Cryptantha clevelandii var. *dissita*	Cleveland's cryptantha
Plagiobothrys nothofulvus	Rusty popcorn-flower
Brassicaceae	**Mustard Family**
Athysanus pusillus	Petty athysanus
Brassica rapa	Field-mustard
Capsella bursa-pastoris	Shepherd's purse
Lepidium sp.	Peppergrass
Lepidium nitidum var. *nitidum*	Shining peppergrass
Streptanthus barbiger	Bearded jewelflower
Thysanocarpus curvipes	Lace pod

CHECKLIST OF VASCULAR PLANT SPECIES OBSERVED

Lake County Courthouse Site

Campanulaceae	**Bluebell Family**
Githopsis specularioides	Common bluecup
Caryophyllaceae	**Pink Family**
Cerastium glomeratum	Mouse-eared chickweed
Minuartia douglasii	Douglas' sandwort
Petrorhagia dubia	Grass pink
Scleranthus annuus ssp. *annuus*	German knotgrass
Spergularia rubra	Ruby sand spurry
Convolvulaceae	**Morning Glory Family**
Convolvulus arvensis	Bindweed
Crassulaceae	**Stonecrop Family**
Crassula tillaea	Moss pygmy weed
Cucurbitaceae	**Gourd Family**
Marah sp.	Man-root
Cuscutaceae	**Dodder Family**
Cuscuta californica	Chaparral dodder
Euphorbiaceae	**Spurge Family**
Eremocarpus setigerus	Dove weed
Fabaceae	**Legume Family**
Astragalus gambelianus	Gambel's dwarf milkvetch
Lotus sp.	Lotus
Lotus denticulatus	Riverbar birds-foot trefoil
Lotus humistratus	Hairy lotus
Lotus purshianus	Spanish lotus
Lupinus bicolor	Bicolored lupine
Medicago minima	Hairy bur-clover
Medicago polymorpha	California bur-clover
Medicago praecox	Mediterranean bur-clover
Trifolium albopurpureum var. *dichotomum*	Branched Indian clover
Trifolium bifidum var. *decipiens*	Deceptive clover
Trifolium dubium	Little hop clover
Trifolium hirtum	Rose clover
Trifolium willdenovii	Tomcat clover
Vicia sativa ssp. *nigra*	Garden vetch
Vicia villosa ssp. *villosa*	Winter vetch
Fagaceae	**Oak Family**
Quercus lobata	Valley oak (seedling)
Gentianaceae	**Gentian Family**
Centaurium muehlenbergii	Muhlenberg's centaury

CHECKLIST OF VASCULAR PLANT SPECIES OBSERVED

Lake County Courthouse Site

Geraniaceae	**Geranium Family**
Erodium botrys	Long-beaked filaree
Erodium brachycarpum	Short-fruited storksbill
Erodium cicutarium	Red-stemmed filaree
Hydrophyllaceae	**Waterleaf Family**
Phacelia corymbosa	Serpentine phacelia
Iridaceae	**Iris Family**
Sisyrinchium bellum	Blue-eyed grass
Juncaceae	**Rush Family**
Juncus bufonius	Toad rush
Liliaceae	**Lily Family**
Allium falcifolium	Scytheleaf onion
Brodiaea californica var. *californica*	California brodiaea
Calochortus vestae	Coast Range mariposa lily
Chlorogalum sp.	Soap plant
Dichelostemma capitatum ssp. *capitatum*	Blue dicks
Malvaceae	**Mallow Family**
Sidalcea diploscypha	Fringed checkerbloom
Onagraceae	**Evening-Primrose Family**
Camissonia graciliflora	Hill suncup
Clarkia gracilis ssp. *gracilis*	Slender clarkia
Clarkia gracilis ssp. *tracyi*	Tracy's clarkia
Clarkia purpurea ssp. *quadrivulnera*	Winecup clarkia
Epilobium minutum	Chaparral willowherb
Orobanchaceae	**Broom-rape Family**
Orobanche fasciculata	Clustered broom-rape
Papaveraceae	**Poppy Family**
Eschscholzia californica	California poppy
Platystemon califonicus	Creamcups
Plantaginaceae	**Plantain Family**
Plantago sp.	Plantain
Plantago erecta	Hooker's plantain
Poaceae	**Grass Family**
Aegilops triuncialis	Barbed goatgrass
Aira caryophyllea	Silver hairgrass
Avena barbata	Slender wild oats
Avena fatua	Wild oats
Bromus carinatus var. *carinatus*	California brome
Bromus diandrus	Ripgut grass
Bromus hordeaceus	Soft chess
Bromus madritensis ssp. *rubens*	Red brome
Deschampsia danthonioides	Annual hairgrass

CHECKLIST OF VASCULAR PLANT SPECIES OBSERVED

Lake County Courthouse Site

Elymus multisetus	Big squirreltail
Hordeum brachyantherum ssp. *californicum*	California barley
Hordeum marinum ssp. *gussoneanum*	Mediterranean barley
Hordeum murinum	Foxtail barley
Lolium multiflorum	Annual ryegrass
Melica californica	California melic
Nasella pulchra	Purple needlegrass
Poa annua	Annual bluegrass
Poa secunda ssp. *secunda*	One-sided bluegrass
Scribneria bolanderi	Scribner grass
Secale cereale	Rye
Taeniatherum caput-medusae	Medusa head
Vulpia microstachys var. *ciliata*	Fringed fescue
Vulpia microstachys var. *microstachys*	Small fescue
Vulpia microstachys var. *pauciflora*	Few-flowered fescue
Vulpia myuros var. *myuros*	Rattail fescue
Polemoniaceae	**Phlox Family**
Gilia capitata ssp. *capita*	Globe gilia
Gilia tricolor	Bird's eyes
Leptosiphon bolanderi	Bolander's linanthus
Linanthus bicolor	Bicolored linanthus
Polygonaceae	**Buckwheat Family**
Eriogonum nudum	Naked buckwheat
Eriogonum vimineum	Wicker buckwheat
Rumex crispus	Curly dock
Portulacaceae	**Purslane Family**
Calandrinia ciliata	Red maids
Claytonia exigua ssp. *exigua*	Little miner's-lettuce
Claytonia perfoliata	Common miner's lettuce
Primulaceae	**Primrose Family**
Anagallis arvensis	Scarlet pimpernel
Pteridaceae	**Brake Family**
Pentagramma triangularis ssp. *triangularis*	Goldback fern
Ranunculaceae	**Buttercup Family**
Delphinium hansenii ssp. *hansenii*	Eldorado larkspur
Ranunculus sp.	Buttercup
Rosaceae	**Rose Family**
Crataegus sp.	Hawthorn (horticultural)
Rubiaceae	**Madder Family**
Galium aparine	Cleavers
Galium parisiense	Wall bedstraw

CHECKLIST OF VASCULAR PLANT SPECIES OBSERVED

Lake County Courthouse Site

Scrophulariaceae	**Snapdragon Family**
Castilleja attenuata	Valley tassels
Castilleja exserta ssp. *exserta*	Exserted Indian paintbrush
Castilleja rubicundala ssp. *lithospermoides*	Cream sacs
Collinsia sparsiflora var. *sparsiflora*	Spinster's blue eyed Mary
Mimulus guttatus	Common monkey-flower
Triphysaria eriantha	Johnny tuck
Verbascum blattaria	Moth mullein
Taxodiaceae	**Bald Cypress Family**
Sequoia sempervirens	Redwood (horticultural)
Valerianaceae	**Valerian Family**
Plectritis macrocera	White plectritis

Appendix G

Checklist of Wildlife Species Observed

Checklist of Wildlife Species Observed
Lake County Courthouse
675 Lakeport Boulevard, Lakeport, CA

Common Name	Scientific Name	Status
BIRDS		
American crow	*Corvus brachyrhynchos*	None
Black-tailed jackrabbit	*Lepus californicus*	None
California gull	*Larus californicus*	None
Common raven	*Corvus corax*	None
Killdeer	*Charadrius vociferus*	None
Red-tailed hawk	*Buteo jamaicensis*	None
Western scrub-jay	*Aphelocoma californica*	None
MAMMALS		
California ground squirrel	*Otospermophilus beecheyi*	None
Gopher	*Thomomys* sp.	None
REPTILES		
Western fence lizard	*Sceloperus occidentalis*	None

Pre-jurisdictional Delineation Report

Lake County Courthouse Site
675 Lakeport Boulevard
Lake County, California

Prepared for:

Adminstrative Office of the Courts

July 16, 2010

500-01

ENPLAN

Lake County Courthouse Site
Pre-jurisdictional Delineation Report

Applicant/Land Owner:
Administrative Office of the Courts
2860 Gateway Oaks Drive, Suite 400
Sacramento, CA 95833
Attention: Laura Sainz

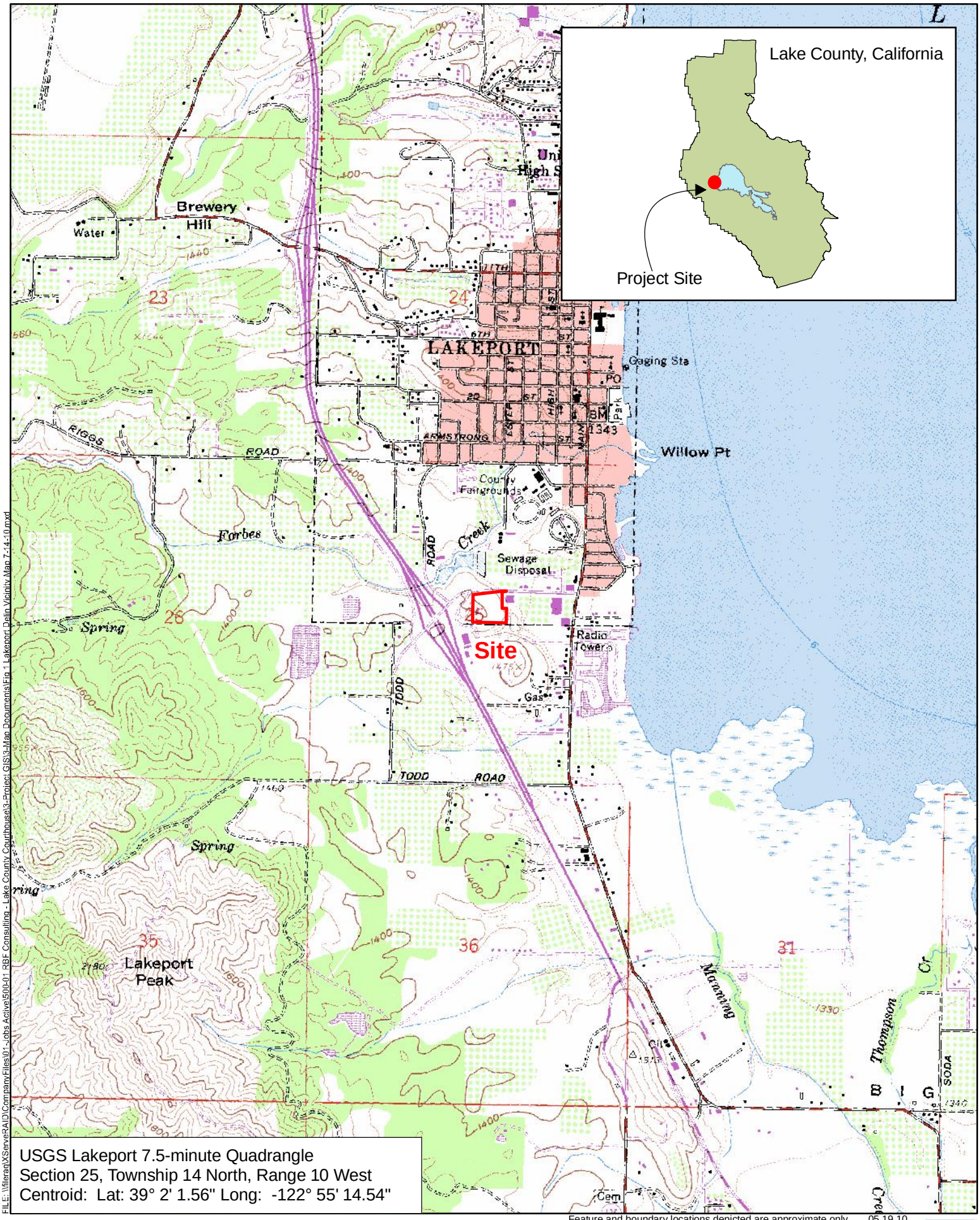
Access:
From Lakeport, take Highway 29 to the Lakeport Boulevard exit. Travel east on Lakeport Boulevard approximately 1000 feet. The site is on the south side of Lakeport Boulevard and can be accessed from the road margin.

I. INTRODUCTION

The ±6.4-acre study site is located east of the intersection of Lakeport Boulevard and Highway 29 in the City of Lakeport, Lake County. The study site encompasses the subject ±5.8-acre parcel as well as the southern fill slope along Lakeport Boulevard to the north. As shown in Figure 1, the site is situated near the center of Section 25, Township 14 North, Range 10 West (Lakeport, CA, 7.5-minute quadrangle). The site is identified as Lake County Assessor's Parcel Number 025-521-410 and is being evaluated for potential construction of a new Lake County courthouse.

The site elevation ranges between 1,340 and 1,400 feet above sea level. The site was historically an oak woodland, and was used for agriculture and grazing beginning in the late 1930s; the site was cleared of trees and shrubs in the early 1970s, and was graded prior to 1988 (URS, 2009). Grading dramatically altered the natural contours of the site. Roughly 20 feet of surface material was removed from the upper portion of the site, resulting in two level terraces.

Small rocks of serpentine origin are exposed on the upper terrace and hillsides, which support a serpentine herb community. The serpentine herb community generally consists of a sparse, low-growing cover of annual and perennial forbs and grasses including naked buckwheat, wicker buckwheat, reflexed fescue, serpentine phacelia, fringed checkerbloom, bearded jewelflower, Douglas's sandwort, and Gambel's dwarf milkvetch. The lower terrace, on the eastern edge of the study area, supports an annual grassland community. Common species in this community include wild oats, soft chess, California meadow barley, cream sacs, winter vetch, Spanish lotus, and various clovers. All of the above species have an indicator status of FACU or drier.



USGS Lakeport 7.5-minute Quadrangle
Section 25, Township 14 North, Range 10 West
Centroid: Lat: 39° 2' 1.56" Long: -122° 55' 14.54"

Feature and boundary locations depicted are approximate only. 05.19.10

Feet
0 2,000

Figure 1
Project Vicinity Map

ENPLAN

FILE: \\fileraq\XServeRAID\CompanyFiles\01-Jobs Active\500-01 RBF Consulting - Lake County Courthouse\3-Project GIS\3-Map Documents\Fig 1 Lakeport Delin Vicinity Map 7-14-10.mxd

According to the U.S. Department of Agriculture, Natural Resources Conservation Service (NRCS, 2010), two soil units are present on the study site. Henneke-Montara-rock outcrop complex, 15-30 percent slopes, covers nearly the entirety of the study site. A very small amount of Still loam, stratified substratum, is mapped as occurring in the extreme northeast corner of the site. The Henneke-Montara-rock outcrop complex is not considered hydric, while the Still soil unit is partly hydric, i.e., it may contain inclusions of hydric soils. It should be noted that past grading activities on the site have resulted in removal and/or redistribution of most of the on-site soils.

The climate of the project vicinity is of the Mediterranean type, with cool, moist winters and hot, dry summers. Annual precipitation averages ±28.4 inches in the community of Lakeport, which reasonably approximates conditions on the subject site (Western Regional Climate Center, 2010).

II. METHODOLOGY

Prior to undertaking the field studies, National Wetlands Inventory maps (U.S. Fish and Wildlife Service, n.d.) were reviewed to determine if any jurisdictional waters had been previously reported on or within one-half mile of the project site. Such data is not available for the Lakeport quadrangle.

The primary field investigation was conducted on April 29 and 30, 2010. During the field investigation, field conditions were relatively wet. Average April rainfall for the City of Lakeport measures 2.19 inches; actual rainfall totals for April 2010 measured 6.89 inches (NOAA, 2010).

The wetland investigation was conducted in accordance with technical methods outlined in the Corps of Engineers Wetlands Delineation Manual (U.S. Department of the Army, Corps of Engineers, 1987) and under the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (U.S. Department of the Army, Corps of Engineers, 2008), which is referred to as the “Arid West Supplement” in this report. Wetland Determination Data Forms are presented in Appendix A of this report.

Although no wetlands were identified, several non-wetland waters of the United States are present. The limit of the Corps of Engineers' jurisdiction over these features is represented by the ordinary high water mark. As described in the Code of Federal Regulations Title 33: Navigation and Navigable Waters-Sec. 328.3(e), the ordinary high water mark is defined as the line on the shore established by fluctuations of water indicated by physical characteristics. These may include a clear/natural line on the bank, shelving, changes in soil, destruction of terrestrial vegetation, presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas. The limits of on-site ditches and seasonal waters were identified in the field using these indicators.

Scientific nomenclature for plants cited in this report is in accordance with the taxonomic treatments presented in *A Synonymized Checklist of the Vascular Flora of the United States, Canada, and Greenland* (Kartesz, 1994). The wetland indicator status of the plants was determined using the *National List of Plant Species That Occur in Wetlands: California (Region 0)* (U.S. Department of the Interior, Fish and Wildlife Service, 1988). Soil colors were identified using *Munsell Soil Color Charts* (Kollmorgen Instruments Corporation, 2000).

Coordinates along the perimeters of non-linear waters were obtained using a global positioning system (GPS) unit capable of sub-meter accuracy. Coordinates for the centerlines of ditches were also recorded with the GPS unit; the aerial extent of the ditches was calculated based on cross-sectional measurements taken at roughly 25-foot intervals. The GPS coordinates were downloaded into ArcMap for mapping and acreage calculations.

III. RESULTS

During the field investigation, ENPLAN mapped eight non-wetland waters of the United States within two categories: seasonal waters and constructed ditches. These features are characterized below. The results of the field delineation effort are summarized in Tables 1 and 2 and shown in Figure 2. Representative photos are presented in Appendix B.

Seasonal Waters: Two seasonal waters, on the western edge of the upper terrace, were created when the site was graded and bedrock was exposed. Water now ponds to a depth of two to three inches in these shallow depressions underlain by bedrock. Representative plant species include scribner grass (*Scribneria bolanderi*, UPL), annual hairgrass (*Deschampsia danthonioides*, FACW), and rigiopappus (*Rigiopappus leptocladus*, UPL), but vegetative cover is less than five percent. As described in the Arid West Supplement, features with an ordinary high water mark and less than five percent vegetative cover are non-wetland waters. The extent of ponding was documented through site inspections on February 8 and April 9, 29 and 30, 2010, as well as by the presence of water-stained rock, sediment deposits, and a biotic crust.

Constructed Ditches: Constructed ditches are excavated features that may be located in either wetlands or uplands, and may convey water collected from sheet flow or diverted from other water bodies. The jurisdictional status of constructed ditches depends in part on these characteristics. The on-site ditches are constructed in uplands, and receive sheet-flow runoff and discharge from the two non-wetland waters on the upper terrace. Most of the ditches have only ephemeral flow. However, 3:CD and 8:CD do not drain well and support wetland plant species in their lower ends; species present include annual ryegrass (*Lolium multiflorum = L. perenne*, FAC*), *Hordeum marinum* ssp. *gussoneanum = H. hystrix*, FAC), and common monkey-flower (*Mimulus guttatus*, OBL).

Table 1
Summary of Waters by Type

Type	Area	
	sq. ft.	acres
Constructed Ditches	2,108	0.048
Seasonal Waters	3,793	0.087
Total Waters	**5,901**	**0.135**

Table 2
Waters by Map ID

Map ID	Type	Average Width	Length	Area	
				sq. ft.	acres
1	Constructed Ditch	1.7	350	595	0.014
2	Constructed Ditch	0.5	20	10	0.000
3	Constructed Ditch	4.6	206	948	0.022
4	Seasonal Water	–	–	2,599	0.060
5	Seasonal Water	–	–	1,194	0.027
6	Constructed Ditch	1.6	178	285	0.007
7	Constructed Ditch	1.5	10	15	0.000
8	Constructed Ditch	2.3	111	255	0.006
			Total Waters	**5,901**	**0.135**

Figure 2	
Potential Waters of the U.S. and/or State	
Project:	Lake County Courthouse Site
Delineator:	Don Burk
Date:	February 8 & April 9, 29, & 30, 2010
Date Revised:	

Potential Waters by Map ID					
Map ID	Type	Average Width (feet)	Length (feet)	Area	
				sq. ft.	acres
1:CD	Constructed Ditch	1.7	350	595	0.014
2:CD	Constructed Ditch	0.5	20	10	0.000
3:CD	Constructed Ditch	4.6	206	948	0.022
4:RW	Seasonal Water	–	–	2,599	0.060
5:RW	Seasonal Water	–	–	1,194	0.027
6:CD	Constructed Ditch	1.6	178	285	0.007
7:CD	Constructed Ditch	1.5	10	15	0.000
8:CD	Constructed Ditch	2.3	111	255	0.006
			Total Waters	5,901	0.135

FILE: \\fileraq\XServerRAID\CompanyFiles\01-Jobs Active\500-01 RBF Consulting - Lake County Courthouse\3-Project GIS\3-Map Documents\Fig 2 - Lakeport Delin 7-16-10.mxd

Feature and boundary locations depicted are approximate only. 07.16.10

Feet
0 100

ENPLAN

IV. JURISDICTIONAL DETERMINATION

As described in Regulatory Guidance Letter 08-02, the applicant concurs with the Army Corps of Engineers that waters regulated under the Clean Water Act may be present on the site. As such, these waters will be treated as jurisdictional for the purpose of calculating fill and satisfying future mitigation requirements. The applicant understands that they can later request and obtain an approved JD if that later becomes necessary or appropriate during the permit process or during the administrative appeal process.

V. REFERENCES

Kartesz, J.T. 1994. *A Synonymized Checklist of the Vascular Flora of the United States, Canada, and Greenland*. 2nd edition. Volume 1 — Checklist, Volume 2 — Thesaurus. Timber Press, Inc., Portland, Oregon.

Kollmorgen Instruments Corporation. 2000. *Munsell Soil Color Charts.*

URS Corporation. December 2009. Final Draft Phase I Environmental Site Assessment Report: Proposed New Lakeport Courthouse – 675 Lakeport Boulevard Site. 675 Lakeport Boulevard, Lakeport CA 95453. Unpublished document on file with the Judicial Council of California, Administrative Office of the Courts.

U.S. Department of Agriculture, Natural Resources Conservation Service. 2009. Web Soil Survey, August 31, 2009 Map Data. <http://websoilsurvey.nrcs.usda.gov/app/.>

U.S. Department of the Army, Corps of Engineers. 1987. *Corps of Engineers Wetlands Delineation Manual.* Technical Report Y-87-1. National Technical Information Service, Springfield Virginia.

_____. 2008. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0),* eds. J.S. Wakeley, R.W. Lichvar, and C.V. Noble. ERDC/EL TR-08-28. Vicksburg, MS: U.S. Army Engineer Research and Development Center.

U.S. Department of the Interior, Fish and Wildlife Service. 1988. *National List of Plant Species That Occur in Wetlands: California (Region 0).* Biological Report 88 (26.10).

_____. n.d. National Wetlands Inventory. *www.wetlandsfws.er.usgs.gov.*

U.S. Geological Survey. 1958. Lakeport, California, 7.5-minute quadrangle sheet. Photo-revised 1978.

Western Regional Climate Center (WRCC). 2010. Lakeport, CA. *www.wrcc.dri.edu/climsum.html*.

APPENDIX A

Wetland Determination Forms

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Lake County Courthouse Site City/County: Lake County Sampling Date: 4-30-10

Applicant/Owner: Administrative Office of the Courts State: CA Sampling Point: DP1

Investigator(s): Don Burk Section, Township, Range: Section 25, Township 14 North, Range 10 West

Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Concave Slope (%): 1

Subregion (LRR): C Lat: 39º 2' 3.89" Long: 122º 55' 12.06" Datum: NAD83

Soil Map Unit Name: Henneke-Montara-Rock Outcrop Complex, 15-30 percent slopes NWI classification: N.A.

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

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

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? No (If needed, explain any answers in Remarks.)

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

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

Remarks: Although wetland characteristics are evident, the sample site is at the lower end of a constructed drainage ditch, and is best defined as a non-wetland water of the United States.

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:			
Herb Stratum			
1. Lolium multiflorum ssp. perenne	30	Yes	FAC*
2. Hordeum marinum ssp. gussoneaum (=H. hystrix)	60	Yes	FAC
3. Vulpia microstachys var. pauciflora	8	No	NL
4. Achyrachaena mollis	2	No	FAC
5.			
6.			
7.			
8.			
Total Cover:	100		
Woody Vine Stratum			
1.			
2.			
Total Cover:			

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

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes X No _____

Remarks:

SOIL

Sampling Point: DP1

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-2	7.5YR 2.5/2	100					loam	
2-4	5YR 3/1	100						
4-14	7.5YR 3/2	100						

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

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

Secondary Indicators (2 or more required)

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

Field Observations:

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

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

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

Wetland Hydrology Present? Yes X No ___

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

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Lake County Courthouse Site City/County: Lake County Sampling Date: 4-30-10

Applicant/Owner: Administrative Office of the Courts State: CA Sampling Point: DP1

Investigator(s): Don Burk Section, Township, Range: Section 25, Township 14 North, Range 10 West

Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Concave Slope (%): 1

Subregion (LRR): C Lat: 39º 2' 3.89" Long: 122º 55' 12.06" Datum: NAD83

Soil Map Unit Name: Henneke-Montara-Rock Outcrop Complex, 15-30 percent slopes NWI classification: N.A.

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

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

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? No (If needed, explain any answers in Remarks.)

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

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

Remarks: Although wetland characteristics are evident, the sample site is at the lower end of a constructed drainage ditch, and is best defined as a non-wetland water of the United States.

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:			
Herb Stratum			
1. Lolium multiflorum ssp. perenne	30	Yes	FAC*
2. Hordeum marinum ssp. gussoneaum (=H. hystrix)	60	Yes	FAC
3. Vulpia microstachys var. pauciflora	8	No	NL
4. Achyrachaena mollis	2	No	FAC
5.			
6.			
7.			
8.			
Total Cover:	100		
Woody Vine Stratum			
1.			
2.			
Total Cover:			

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

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

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

Remarks:

SOIL

Sampling Point: DP1

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-2	7.5YR 2.5/2	100					loam	
2-4	5YR 3/1	100						
4-14	7.5YR 3/2	100						

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

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

Secondary Indicators (2 or more required)

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

Field Observations:

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

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

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

Wetland Hydrology Present? Yes X No ___

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

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Lake County Courthouse Site City/County: Lake County Sampling Date: 4-30-10

Applicant/Owner: Administrative Office of the Courts State: CA Sampling Point: DP1

Investigator(s): Don Burk Section, Township, Range: Section 25, Township 14 North, Range 10 West

Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Concave Slope (%): 1

Subregion (LRR): C Lat: 39º 2' 3.89" Long: 122º 55' 12.06" Datum: NAD83

Soil Map Unit Name: Henneke-Montara-Rock Outcrop Complex, 15-30 percent slopes NWI classification: N.A.

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

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

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? No (If needed, explain any answers in Remarks.)

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

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

Remarks:
Although wetland characteristics are evident, the sample site is at the lower end of a constructed drainage ditch, and is best defined as a non-wetland water of the United States.

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:			
Herb Stratum			
1. Lolium multiflorum ssp. perenne	30	Yes	FAC*
2. Hordeum marinum ssp. gussoneaum (=H. hystrix)	60	Yes	FAC
3. Vulpia microstachys var. pauciflora	8	No	NL
4. Achyrachaena mollis	2	No	FAC
5.			
6.			
7.			
8.			
Total Cover:	100		
Woody Vine Stratum			
1.			
2.			
Total Cover:			

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

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

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

Remarks:

SOIL

Sampling Point: DP1

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-2	7.5YR 2.5/2	100					loam	
2-4	5YR 3/1	100						
4-14	7.5YR 3/2	100						

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

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

Secondary Indicators (2 or more required)

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

Field Observations:

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

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

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

Wetland Hydrology Present? Yes X No ___

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

Remarks:

APPENDIX B

Representative Photos

Representative Photos of On-site Waters

4:SW looking southeast 2/8/10

5:SW looking southeast 2/8/10

Biotic crust in 5:SW 4/29/10

1:CD looking west 4/29/10

Lower terminus of 1:CD and 2:CD, with discharge to uplands 4/29/10

3:CD looking north 4/29/10

6:CD (foreground) looking northeast 4/29/10

8:CD looking west toward culvert 3/17/10

Storm drain inlet at terminus of 8:CD 4/29/10

Non-jurisdictional drainage near 7:CD with no evidence of OHWM 4/29/10

Appendix D
Cultural Resources Inventory

Cultural Resources Inventory
for the Proposed Lake County Courthouse Site,
in the City of Lakeport, Lake County, California

Prepared for:

RBF Consulting
500-01

July 2010

Prepared by:

ENPLAN
Environmental Scientists and Planners
www.enplan.com

TABLE OF CONTENTS

INTRODUCTION

ENPLAN was contracted by the RBF Consulting to conduct a cultural resources inventory for construction of a new courthouse in Lake County, California, by the State of California Administrative Office of the Courts, Office of Court Construction and Management. The project site located on Lakeport Boulevard, in the City of Lakeport. The proposed project consists of the construction of a four-room courthouse for the Superior Court of California. As shown in Figure 1, the site is located in Township 14 North, Range 10 West, Section 25 (U.S.G.S. Lakeport California 7.5-minute quadrangle).

This project has the potential to adversely affect cultural resources that may be located within the project area. A good faith effort was therefore made to identify any cultural resources within and immediately adjacent to the Area of Potential Effects (APE). All work associated with the project was conducted in compliance with the California Environmental Quality Act (CEQA) and its implementing regulations. Additionally, this project may affect "waters of the United States;" as such, this project would be considered by the U.S. Army Corps of Engineers (ACOE) as a federal "undertaking" and thus must meet the requirements of Section 404 of the Clean Water Act. Because the State of California Administrative Office of the Courts, Office of Court Construction and Management, may need a permit from the ACOE, Sacramento District, the cultural resources study was conducted in compliance with Section 106 of the National Historic Preservation Act (NHPA) and its implementing regulations (36 CFR Part 800).

An archaeological survey of the project area was conducted by ENPLAN on April 29, 2010. ENPLAN is an environmental consulting firm with over 30 years of experience with projects throughout northern California. ENPLAN's cultural resources studies are conducted in accordance with the Secretary of Interior's Standards and in compliance with all applicable state and federal codes, acts, regulations, and orders relating to cultural resources, where applicable.

The survey was conducted and survey report prepared by Wayne Wiant, Senior Archaeologist, ENPLAN. Mr. Wiant holds an M.A. in Anthropology and has over 40 years of experience in California and Great Basin Archaeology.

PROJECT DESCRIPTION

The proposed project consists of the construction of a four-room courthouse for the Superior Court of California at 675 Lakeport Boulevard, adjacent to the Lakeport Visitors Center. The courthouse will be two stories high and will include space for associated support and records storage. Approximately 120 parking spaces will be associated with the new courthouse. The project site is a 5.74-acre vacant lot, and is large enough to accommodate the proposed facility. The project area is shown in Figure 2.

AREA OF POTENTIAL EFFECTS (APE)

The APE for both CEQA and the National Historic Preservation Act and its implementing regulations (36 CFR Part 800) has both a horizontal and vertical component. The APE consists of all areas needed for the construction of the courthouse including access, equipment storage, utility placement, and any other activity necessary for the project's completion. The horizontal component encompasses all surface area required to construct the new facility. For the purposes of this project, the horizontal APE would encompass the entire proposed project site. The vertical component of the APE is based on the depth of excavation associated with the project. Although the scope of these excavations is unknown at this time, there is little chance of the project affecting subsurface cultural deposits since the majority of the project site has been previously leveled with up to 20 feet of the original hilltop having been removed. Little original ground remains within the parcel's boundaries. The project's Area of Potential Effects (APE) is shown on Figure 2.

SOURCES CONSULTED

The following sources were consulted to obtain information concerning known archaeological sites, historic properties, and historic activities within and/or adjacent to the study area: the Northwestern Center of the California Historical Resources Information System at California State University, Sonoma (NW/CHRIS); the Native American Heritage Commission (NAHC); the Lakeport Historical Society; and members of the local Native American community.

A request for a records search was sent to the NW/CHRIS by ENPLAN on May 26, 2010, and covered an approximate one-half-mile radius around the APE for previously recorded archaeological sites and for previous surveys. The size and scope of the search area was determined to be sufficient based on the results. Results of the records search were received on June 29, 2010. Research included reviewing maps and records for archaeological surveys, sites, and other cultural resources in this portion of Lake County and the following documents: National Register of Historic Places (1979-2002 and supplements); the California Register of Historical Resources (1992 and supplemental information to date); California Inventory of Historic Resources (1976); California Historical Landmarks (1996 and supplemental information to date); California Points of Historical Interest (1992 and supplemental information to date); Office of Historic Preservation Directory of Properties in the Historic Property Data File (2010) for Lakeport; and Historic Spots in California (Hoover et al. 1990). General Land Office Maps from 1868 and 1876 were also reviewed. Results of this research are outlined below.

Records indicated that there are no recorded historic or archaeological sites within the project's APE. The NW/CHRIS's records indicate that eighteen previous surveys have been conducted within a half-mile radius of the project site. No sites were found during these surveys. The records, however, do show that three prehistoric sites have been recorded within one-half mile of the project. One, P-17-000492—known as Prayer Hill—is located 1,000 feet southeast of the proposed courthouse site. There is no site record for this feature, but an article published by the Lake County Chamber of

Commerce (Geoble ND), suggests that it was used by the local Native Americans for ceremonies prior to the historic period. This feature has been substantially altered by a road cut and quarrying, with much of the hills top removed.

Historic features were also noted by the NW/CHRIS. According to their records, there are numerous historic structures documented throughout Lakeport, although none are within or adjacent to the project area.

A letter was sent to the NAHC requesting a sacred lands search on March 16, 2010. The commission responded on March 25, 2010, and indicted that their files did not show the presence of any Native American cultural resources within the project area. They enclosed a list of other Native American organizations and individuals that might have additional information. Letters were sent to these organizations and to the Lakeport Historical Society on April 2, 2010. An email response was received from Mr. Shannon Ford of the Scotts Valley Band of the Pomo Indians on April 15, 2010. Mr. Ford requested that a member of his tribe monitor the area during ground disturbing activities. The Lakeport Historical Society contacted ENPLAN by phone on April 20, 2010. The society indicated that they had no concerns with the project. (Copies of project correspondence are attached in Appendix B.)

BACKGROUND

Environmental

The project area lies in a relatively low part of the Northern Coast Ranges that is surrounded by mountains. The elevation for Lakeport is 1,343 feet above mean sea level. Clear Lake, the largest natural lake in the Coast Ranges, lies just to the east of the project site (Figure 1). Lake County is characterized by warm, dry summers and cool, wet winters. The mean annual precipitation is about 20 to 40 inches. Most of the precipitation is rain, but some is snow. Mean annual temperature is about 50° to 56° F (Western Regional Climate Center 2009)

The site is surrounded by urban development. The site was historically an oak woodland, and was used for agriculture and grazing beginning in the late 1930s. The site was cleared of trees and shrubs in the early 1970s, and was graded prior to 1988. Grading activities dramatically altered the natural contours of the site, resulting in two level terraces (Figure 2). Small, weathered rocks of serpentine origin are exposed on the upper terrace and hillsides. The lower terrace supports a disturbed grassland while the upper terrace and hillsides support a serpentine herb community. Two small, shallow seasonal wetlands with rock substrates are present on the upper terrace. Soils on the site are identified as Henneke-Montara-rock outcrop complex. The complex consists of very deep, moderately well-drained soils, formed in alluvium from mixed rock types. Most runoff from the site enters constructed ditches that convey flow east. Flow enters the City's storm drain system, which discharges into Clear Lake (approximately ¼-mile east of the site). The nearest named stream is Forbes Creek, a seasonal stream approximately 500 feet north of the site (ENPLAN 2010).

Ethnographic

The project area was inhabited by the Eastern Pomo at the time of Euro-American contact. Ethnographic sources for the Eastern Pomo include Loeb (1926), Kroeber (1925), Gifford (1923, 1926) and McLendon and Lowy (1978). The following summary is taken from the latter source. The Pomo, identified as part of the Hokan language family, consisted of twelve groups who spoke seven separate, distinct dialects.

The Eastern Pomo followed a seasonal round that was based upon the environment of the Clear Lake area. Heavy winter rains led to rushing streams in the spring and a full lake at the beginning of summer. Dry summers led to a lower lake level and access to lakeside marshlands. Subsistence activities were tied to this weather pattern. Fish, which were dried for year-round use, were caught in streams in the spring while waterfowl were obtained in the fall. Acorns, a dietary staple, were gathered during the autumn. Roots were dug and tules were harvested in early summer; lake fishing and clam collection took place in early summer as well.

Villages were along the lake or permanent streams. They were occupied for much of the year; however, many of the inhabitants left the village at certain times of the year in order to obtain specific resources (e.g., acorns).

Tules were a key raw material used by the Eastern Pomo for housing, boats, and clothing, as well as household items and food. Clam shell beads were used as the medium of exchange for the Eastern Pomo. The shells were brought back from the coast, broken, shaped and drilled into beads. Although bartering sometimes took place, beads were principally used to trade for salt, obsidian blades, and a number of other items.

Archaeological

The first archaeological work in the Clear Lake region was that of Harrington (1948) at the Borax Lake site (CA-LAK-36). The site was estimated to date to 10000 B.P., a date that was later validated through obsidian hydration. Although no further large scale archaeological investigations took place in the area until work was conducted at Anderson Flat (White and Frederickson 1992, White et al. 1995, 2002), several broad chronological schemes were developed to interpret the prehistory of the area. White and Frederickson (1992) present a more specific framework for the Clear Lake Basin based upon six sites. The earliest human activity in the area is identified at the Borax Lake site. This pattern (10000-7500 B.P.) is associated with large points, crescents, scrapers, and choppers and assumed to be related to big game hunting. However, the location of the site near the lake may indicate lacustrine use. The sequence continues through the Houx Aspect of the Berkeley Pattern (7500-1200 B.P.), with a drier climate, a shift away from hunting to a more diversified subsistence strategy and increasing populations. The chronology ends with the late prehistoric to early historic Clear Lake Aspect (1200 B.P. – historic contact). Interestingly, two distinct populations are identified occupying the area simultaneously between 4000- 1200 B.P. The intrusive Mendocino Pattern people exhibit similarities to cultures associated with

the surrounding mountains while the pre-existing Houx Aspect peoples had ties to Clear Lake.

Historic

The area now known as Lake County may have first been visited by Euro-Americans in 1821 when Captain Luis Arguello led a military expedition north from San Francisco. Fur trappers, explorers and settlers soon followed. Miners travelling to and from the gold fields traversed the area beginning in the 1840s and many returned after the gold rush to settle here.

Lake County was formed from a part of Napa County. Lakeport was originally named Forbestown after an early settler. Forbes donated land to the local government in exchange for making the town the County Seat in1861. At the same time, a decision was made to change the name of the town to Lakeport to advertise its natural port.

Important industries in Lake County have included mining, agriculture, and ranching. Today, the economy is boosted by tourism, wineries, and agricultural products including nuts, fruit, and grapes (http://www.cityoflakeport.com/visitors/history.aspx).

Sensitivity

The results of archival research, comment solicitation, previous surveys adjacent to the study area, and the environmental context all contribute to an assessment of the sensitivity level for a given project area. Three prehistoric sites were noted near the project area, and Clear Lake, a-half mile to the east, was a very important resource to the Pomo. Therefore, there is a likelihood of finding prehistoric sites near the project area. The site's proximity to central Lakeport also suggests a moderate to high chance of historic use. However, the extensive amount of ground disturbance evident within the project's APE greatly reduces the likelihood of finding intact evidence of prehistoric or historic cultural resources within or adjacent to the APE (Figure 2).

FIELD METHODS

Wayne Wiant, ENPLAN Staff Archaeologist, conducted the pedestrian survey of the entire project APE on April 29, 2010. The survey focused on the exposed soil in road cuts, cleared areas, and animal burrows. To address the possibility of buried cultural soils, the exposed cutbank on the parcel's north end and existing road cuts on the parcel were examined. The northern bank was visible to a depth of approximately 20+ feet. Ground visibility varied from good (approximately 80% exposed ground on top of the hill) to fair (20% – 30% visibility near the base) for the survey area. This survey is considered to have been adequate in locating any cultural resources present within the project's APE.

SURVEY RESULTS

No historic or prehistoric sites were noted during the cultural resources survey, however, it should be noted that the entire top 20 feet of the project area was previously removed to create a building pad. This action would have destroyed any cultural resources which might have been present.

CONCLUSIONS AND RECOMMENDATIONS

No historic resources were identified during the cultural resource survey of the Lake County Courthouse Project. Therefore, the proposed project will not affect any sites or structures eligible for inclusion on the California Register of Historical Resources or the National Register of Historic Places.

This report satisfies the requirements for CEQA, and, if the ACOE forwards this determination of "No Historic Properties Affected" to the SHPO, and if the SHPO concurs with this determination, then the ACOE will be in compliance with 36 CFR 800 regulations. ENPLAN recommends, however, that strict adherence to California Health and Safety Codes Section 7050.5 and 5097.98 (as amended by AB 2641) of the Public Resources Code be followed in the event that human remains are encountered as a result of project developments. We also recommend that the following stipulations be included as a condition of project approval by State of California Administrative Office of the Courts, and the ACOE, and that these stipulations be included on all project construction/design plans:

A. *If any human remains are encountered during any phase of construction, all earth-disturbing work shall stop within 50 feet of the find until a qualified archaeologist can make an assessment of the discovery and recommend/implement mitigation measures as necessary.*

B. *If any previously unevaluated cultural resources (i.e., burnt animal bone, midden soils, projectile points or other humanly-modified lithics, historic artifacts, etc.) are encountered, all earth-disturbing work shall stop within 50 feet of the find until a qualified archaeologist can make an assessment of the discovery and recommend/implement mitigation measures as necessary. This stipulation does not apply to those cultural resources evaluated and determined not Historical Resources/Historic Properties in this report.*

C. *In the event that project plans change to include areas not surveyed, additional archaeological reconnaissance may be required.*

REFERENCES

City of Lakeport
2009 Lakeport's History. http://www.cityoflakeport.com/visitors/history.aspx

ENPLAN
2010 Biological Study Report, Lake County Courthouse 675 Lakeport Boulevard, Lakeport, CA. Report on File ENPLAN, Redding, CA

Geoble, Merion
ND The Old Indian Prayer Hill. Lake County Chamber of Commerce, Lakeport CA.

Gifford, E.
1923 Pomo Lands on Clear Lake. University of California Publications in American Archaeology and Ethnology 20(5) 77-92. Berkeley.

1926 Clear Lake Pomo Society. University of California Publications in American Archaeology and Ethnology 18(2):287-390. Berkeley.

Harrington, J.P.
1948 An Ancient Site at Borax Lake, California. Southwest Museum Papers 16, Los Angeles.

Kroeber, Alfred L.
1925 Handbook of the Indians of California. Dover Publications, New York (1976 printing).

Loeb, E.
1926 Pomo Folkways. University of California Publications in American Archaeology and Ethnology 19(2) 149-405. Berkeley.

McLendon, S. and M. Lowy
1978 Eastern Pomo and Southeastern Pomo. Handbook of North American Indians, Vol. 8, California. pp 306-323. Robert Heizer, ed. Smithsonian Institution, Washington.

White, G., and D.A. Fredrickson
1992 A Research Design for the Anderson Flat Project, Archaeological Data Recovery Investigation at Sites CA-Lak-72, 509, 501, 536, 542, and 1375, Lake County, California. Prepared for California Department of Transportation, District 1, Eureka.

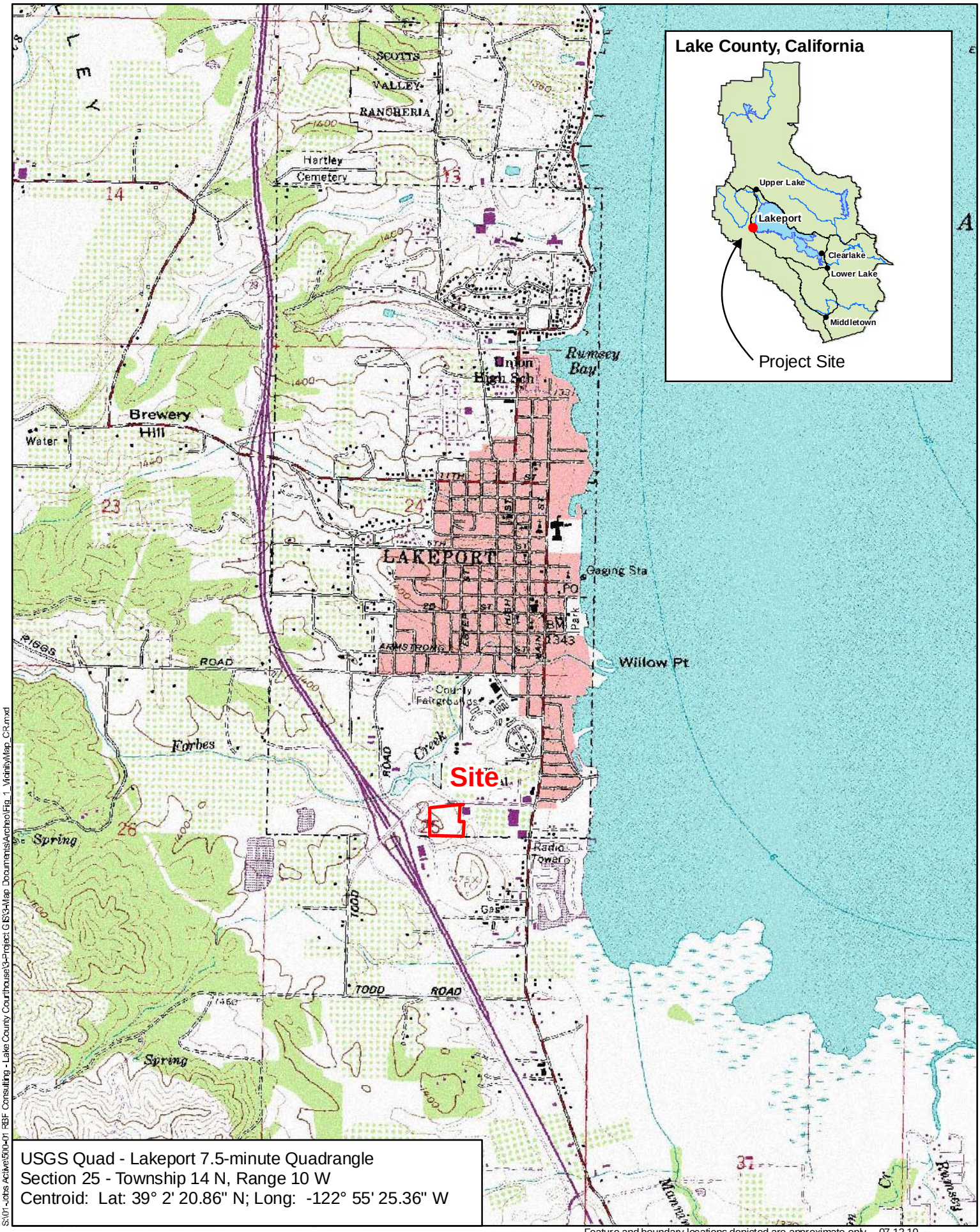
White, G., D.A. Fredrickson, D.G. Bieling, J. Haney, J. Meyer, S. Psota, N. French, N. Thomas, W. Dworkin, C. Whatford, M. Love, and S. Searle

1995 Draft Final Report of the Anderson Flat Project, Lower Lake, Lake County, California. Volume I. Prepared for California State Department of Transportation, District 1, Eureka.

2002 Culture History and Culture Change in Prehistoric Clear Lake Basin: Final Report of the Anderson Flat Project. In Center for Archaeological Research at Davis, Publication No. 13, University of California, Davis.

Western Regional Climate Center
2009. <http://www.wrcc.dri.edu/>

APPENDIX A. Figures



USGS Quad - Lakeport 7.5-minute Quadrangle
Section 25 - Township 14 N, Range 10 W
Centroid: Lat: 39° 2' 20.86" N; Long: -122° 55' 25.36" W

S:\01-Jobs Active\500-01 RBF Consulting - Lake County Courthouse\3-Project GIS\3-Map Documents\Archeo\Fig_1_VicinityMap_CR.mxd

Feature and boundary locations depicted are approximate only. 07.12.10

0 2,000 Feet

Figure 1
Vicinity Map

ENPLAN

FILE: S:\01-Jobs Active\500-01 RBF Consulting - Lake County Courthouse\3-Project GIS\3-Map Documents\Archeo\Fig_2_ProjLocationAPE_CR.mxd

Feature and boundary locations depicted are approximate only. 07.12.10

0 300 Feet

Figure 2

Project APE and Area Surveyed

ENPLAN

APPENDIX B. Correspondence

- Request for Sacred Lands Search letter sent to NAHC 3/16/10
- NAHC response received dated 3/25/10
- Request for Comment letters sent 4/2/10 to the Lake County Historical Society and appropriate individuals on distribution list provided by NAHC
- Response from the Scott Valley Band of the Pomo Indians received 4/15/10
- Records Search Request to NW/CHRIS sent 5/25/10
- Response from NW/CHRIS dated 6/28/10

ENPLAN

500-01
March 16, 2010

REQUEST FOR SACRED LANDS SEARCH

TO: Native American Heritage Commission

FROM: Wayne Wiant, Archaeologist (530) 221-0440 Ext. 105

EMAIL: wwiant@enplan.com

PROPOSED PROJECT: Lakeport Courthouse, Lake County, CA

SITE LOCATION: T14N, R10W, Section 25, USGS Lakeport 7.5-minute quadrangle

SITE SIZE: ±5 acres

ENPLAN is conducting the necessary records search and comment solicitation pursuant to Section 106 of the National Historic Preservation Act and the California Environmental Quality Act (CEQA).

The proposed project is to construct a new courthouse on a city lot within the City of Lakeport, Lake County, California.

We would appreciate any information you could provide regarding cultural resources in the area or Native American groups that we might contact for more information. You may respond by phone, letter, fax, or e-mail.

Thank you for your assistance.

Enclosure

STATE OF CALIFORNIA

Arnold Schwarzenegger, Governor

(916)

Mr. Wiant

Sent by

Pages: 2

Re: Proposed Lakeport Courthouse; Lake County.

Dear Mr. Wiant:

According to the sacred lands file have failed to indicate the presence of Native American cultural resources in the immediate project area. The absence of specific site information in the sacred lands file does not indicate the absence of cultural resources in any project area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

Enclosed is a list of Native Americans individuals/organizations who may have knowledge of cultural resources in the project area. The Commission makes no recommendation or preference of a single individual, or group over another. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. I suggest you contact all of those indicated, if they cannot supply information, they might recommend others with specific knowledge. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from any of these individuals or groups, please notify me. With your assistance we are able to assure that our lists contain current information. If you have any questions or need additional information, please contact me at (916) 653-4040.

Sincerely,

Katy Sanchez

Katy Sanchez
Program Analyst

ENPLAN

500-01
April 2, 2010

REQUEST FOR COMMENT

TO: Native American Heritage Commission
Valentino Jack, Chairperson, Big Valley Rancheria of Pomo Indians
Sara Ryan, EPA Director, Big Valley Rancheria of Pomo Indians
Donald Arnold, Chairperson, Scott Valley Band of Pomo
Shannon Ford, Cultural Resources/Environment, Scott Valley Band of Pomo
Nelson Hopper
Lake County Historical Society

FROM: Wayne Wiant Archaeologist ((530) 221-0440 x105)

EMAIL: wwiant@enplan.com

PROPOSED PROJECT: Lakeport Courthouse, Lake County, CA

SITE LOCATION: In the town of Lakeport, Township 14 North, Range 10 West, Section 25, USGS Lakeport 7.5-minute quadrangle

SITE SIZE: ± 5 acres

ENPLAN is conducting the necessary records search and comment solicitation pursuant to Section 106 of the National Historic Preservation Act and the California Environmental Quality Act (CEQA).

The proposed project is to construct a new courthouse on a city lot within the City of Lakeport, Lake County, California.

We would appreciate any information you could provide regarding known cultural resources in the project vicinity. You may respond by phone, letter, fax, or e-mail. We will attempt to reach you by phone to confirm your receipt of this letter. If we have not received a response within 30 days from the date of this letter, we will assume you have no concerns or relevant information to provide.

Thank you for your assistance.

Enclosure

Archaeologist: Wayne Wiant
3179 Bechelli Lane, suite 100
Redding, Ca. 96002

Re: Lakeport, Courthouse, Lake County, Ca.

Site location: Township 14 North, range 10 West, Section 25, USGS Lakeport 7.5-minute quadrangle

Date: April 15, 2010

Dear Mr. Wiant,

On behalf of Scotts Valley Band of Pomo Indians we would like to have monitors on any ground disturbance. Lake County is rich in culturally sensitive areas. Scotts Valley would like to protect these areas. Other that the sensitive areas in the ground, that have not been found, Scotts Valley has no other concerns.

Senior Planner
Mr. Shannon "Bear" Ford

ENPLAN

500-01
May 25, 2010

RECORDS SEARCH REQUEST

TO: NW/CHRIS

FROM: Wayne Wiant, Archaeologist ((530) 221-0440 x105)

EMAIL: wwiant@enplan.com

PROPOSED PROJECT: Lakeport Courthouse, Lake County, CA

SITE LOCATION: T14N, R10W, Section 25, USGS Lakeport 7.5-minute quadrangle (See attached Map)

SITE SIZE: ±5 acres

SEARCH RADIUS: 0.5 miles

PLEASE PROVIDE:

- X Your standard informational abstract, without ethnographic information, unless related to specific villages in the locale.
- X All site recordation forms for all sites/features located in the half-mile records search area.
- X Report covers, results, and maps for all surveys within the half-mile records search area.
- — Full reports of any surveys conducted within or immediately adjacent to the project area.

Please feel free to call with any questions.

Thank you for your assistance.

Enclosure

CALIFORNIA
HISTORICAL
RESOURCES
INFORMATION
SYSTEM

ALAMEDA
COLUSA
CONTRA COSTA
LAKE
MARIN
MENDOCINO
MONTEREY
NAPA
SAN BENITO
SAN FRANCISCO
SAN MATEO
SANTA CLARA
SANTA CRUZ
SOLANO
SONOMA
YOLO

Northwest Information Center
Sonoma State University
1303 Maurice Avenue
Rohnert Park, California 94928-3609
Tel: 707.664.0880 • Fax: 707.664.0890
Email: leigh.jordan@sonoma.edu
http://www.sonoma.edu/nwic

Date: [illegible] 10 File No.: 09-[illegible]

To: Wayne Wiant, [illegible] CHM and [illegible], 3179 [illegible] Lane, [illegible]ling, CA 96001

From: Leigh Jordan, Coordinator

Re: Lake County Courthouse

Lakeport Quad

Sites in:	None
Sites within .5- mile:	P-17-000316, -000492, -000797 (see disk for PDF version location Map 1; copies of records on disk)
Studies in:	None
Studies within .5-mile:	S-7179, S-7871, S-8195, S-9106, S-11689, S-12787, S-13519, S-22514, S-25901, S-26921, S-30951, S-31281, S-31293, S-34445, S-35818 (see disk for PDF version of Report Database and hard-copy location Map 2)
OHP HPD:	Several listings in vicinity see Lakeport OHP HPD on disk
OHP ADOE:	None on above resource on list of evaluated resources
California Inventory:	several listings in vicinity, see hard-copy enclosed
Historical Literature:	Historic Spots in California (Hoover et al. 1990:139), hard-copy enclosed for City of Lakeport
Local Inventory:	None
GLO:	1868 & 1876 T14N / R10W City of Lakeport and vicinity (easy to copy so included at no cost) – see disk

Appendix E
Greenhouse Gas Data

Construction Emissions

Year 2012

Building

Duration (days): 120

Equipment	Emission Factors			Hours/day	Quantity	Emissions (pounds/hour)			Emissions (tons/year)		
	CO_2	CH_4	N_2O			CO_2	CH_4	N_2O	CO_2	CH_4	N_2O
Forklifts	54.4	0.0062	0.0014	6	2	108.8	0.0124	0.0028	39.1680	0.0045	0.0010
Cranes	128.7	0.0144	0.0033	4	1	128.7	0.0144	0.0033	30.8880	0.0035	0.0008
Tractors/Loaders/Backhoes	66.8	0.0092	0.0017	8	1	66.8	0.0092	0.0017	32.0640	0.0044	0.0008
								Total Emissions	102.1200	0.0123	0.0026

Trenching

Duration (days): 10

Equipment	Emission Factors			Hours/day	Quantity	Emissions (pounds/hour)			Emissions (tons/year)		
	CO_2	CH_4	N_2O			CO_2	CH_4	N_2O	CO_2	CH_4	N_2O
Excavators	119.6	0.0134	0.0031	8	2	239.2	0.0268	0.0062	9.5680	0.0011	0.0002
Other General Industrial Equipment	152.2	0.0166	0.004	8	1	152.2	0.0166	0.0040	6.0880	0.0007	0.0002
								Total Emissions	15.6560	0.0017	0.0004

Paving

Duration (days): 10

Equipment	Emission Factors			Hours/day	Quantity	Emissions (pounds/hour)			Emissions (tons/year)		
	CO_2	CH_4	N_2O			CO_2	CH_4	N_2O	CO_2	CH_4	N_2O
Cement and Mortar Mixers	7.2	0.0009	0.0002	6	4	28.8	0.0036	0.0008	0.8640	0.0001	0.0000
Pavers	77.9	0.016	0.002	7	1	77.9	0.0160	0.0020	2.7265	0.0006	0.0001
Paving Equipment	68.9	0.012	0.0018	6	2	137.8	0.0240	0.0036	4.1340	0.0007	0.0001
Rollers	67.1	0.0106	0.0018	7	1	67.1	0.0106	0.0018	2.3485	0.0004	0.0001
								Total Emissions	10.0730	0.0018	0.0003

Grading

Duration (days): 20

Equipment	Emission Factors			Hours/day	Quantity	Emissions (pounds/hour)			Emissions (tons/year)		
	CO_2	CH_4	N_2O			CO_2	CH_4	N_2O	CO_2	CH_4	N_2O
Graders	132.7	0.0155	0.0035	6	1	132.7	0.0155	0.0035	7.9620	0.0009	0.0002
Rubber Tired Dozers	239.1	0.0305	0.0062	6	1	239.1	0.0305	0.0062	14.3460	0.0018	0.0004
Off-Highway Trucks	260.1	0.0224	0.0067	8	1	260.1	0.0224	0.0067	20.8080	0.0018	0.0005
Tractors/Loaders/Backhoes	66.8	0.0092	0.0017	7	1	66.8	0.0092	0.0017	4.6760	0.0006	0.0001
								Total Emissions	47.7920	0.0052	0.0012

Total Construction Emissions - Year 2012

tons/year	175.64	0.02	0.00	
metric tons/year	159.34	0.02	0.00	
metric tons CO_2 eq/year	159.34	5.91	0.09	165.34

Year 2013

Building

Duration (days): 240

Equipment	Emission Factors			Hours/day	Quantity	Emissions (pounds/hour)			Emissions (tons/year)		
	CO_2	CH_4	N_2O			CO_2	CH_4	N_2O	CO_2	CH_4	N_2O
Forklifts	54.4	0.0062	0.0014	6	2	108.8	0.0124	0.0028	78.3360	0.0089	0.0020
Cranes	128.7	0.0144	0.0033	4	1	128.7	0.0144	0.0033	61.7760	0.0069	0.0016
Tractors/Loaders/Backhoes	66.8	0.0092	0.0017	8	1	66.8	0.0092	0.0017	64.1280	0.0088	0.0016
								Total Emissions	204.2400	0.0157	0.0032

Total Construction Emissions - Year 2013

tons/year	204.24	0.02	0.00	
metric tons/year	185.28	0.01	0.00	
metric tons CO_2 eq/year	185.28	4.43	0.06	189.77

Year 2014

Building

Duration (days): 20

Equipment	Emission Factors			Hours/day	Quantity	Emissions (pounds/hour)			Emissions (tons/year)		
	CO_2	CH_4	N_2O			CO_2	CH_4	N_2O	CO_2	CH_4	N_2O
Forklifts	54.4	0.0062	0.0014	6	2	108.8	0.0124	0.0028	6.5280	0.0007	0.0002
Cranes	128.7	0.0144	0.0033	4	1	128.7	0.0144	0.0033	61.7760	0.0006	0.0001
Tractors/Loaders/Backhoes	66.8	0.0092	0.0017	8	1	66.8	0.0092	0.0017	64.1280	0.0007	0.0001
								Total Emissions	132.4320	0.0013	0.0003

Total Construction Emissions - Year 2014

tons/year	132.43	0.00	0.00	
metric tons/year	120.14	0.00	0.00	
metric tons CO_2 eq/year	120.14	0.37	0.01	120.51

ANNUALIZED (30 years)

tons/year	512.31	0.04	0.01	
metric tons/year	464.76	0.03	0.01	464.80
metric tons CO_2 eq/year	15.49	0.36	0.01	15.85

Notes:
Construction Equipment Emission Factor Source: Provided by SCAQMD.
Refer to the URBEMIS 2007 assumptions and model output for construction equipment assumptions

Emissions From Natural Gas Consumed By Land Uses

Land Use	*Amount*	Cubic feet per unit/square feet/customer per month	*CO* 2.00E+01	*ROG* 5.30E+00	*NO_X* *Residential* 8.00E+01	*NO_X* *Non-Residential* 1.20E+02	*SO_X* negligible	*PM_{10}* 2.00E-01	*CO_2* 0.12	*N_2O* 2.20E-06	*CH_4* 2.30E-06
Residential											
Single Family Units		6,665	0.00	0.00	0.00	0.00	--	0.00	0.00	0.00	0.00
Multi-Family Units		4,011.5	0.00	0.00	0.00	0.00	--	0.00	0.00	0.00	0.00
NonResidential											
Indutsrial		25	0.00	0.00	0.00	0.00	--	0.00	0.00	0.00	0.00
Hotel/Motel		4.8	0.00	0.00	0.00	0.00	--	0.00	0.00	0.00	0.00
Retail/Shopping Center		2.9	0.00	0.00	0.00	0.00	--	0.00	0.00	0.00	0.00
Office	50,000	2.9	0.10	0.03	0.39	0.58	--	0.00	572.37	0.01	0.01
Blank		35.0	0.00	0.00	0.00	0.00	--	0.00	0.00	0.00	0.00
TOTAL - pounds per day	--	--	**9.67E-02**	**2.56E-02**	**3.87E-01**	**5.80E-01**	--	**9.67E-04**	**572.37**	**0.01**	**0.01**
TOTAL - tons per year	--	--	**1.76E-02**	**4.68E-03**	**7.06E-02**	**1.06E-01**	--	**1.76E-04**	**104.4572**	**0.0019**	**0.0020**
TOTAL - metric tons per year	--	--	**1.60E-02**	**4.24E-03**	**6.40E-02**	**9.60E-02**	--	**1.60E-04**	**9.48E+01**	**1.74E-03**	**1.82E-03**

	CO_2	N_2O	CH_4	
metric tons per year	94.76	0.00	0.00	
metric tons CO_2eq per year	94.76	0.54	0.04	95.34

Notes:

1. Usage rate; average for SCE and LADWP.

Source:

South Coast Air Quality Management District, *CEQA Air Quality Handbook*, November 1993, Table A9-12.

Emissions From Electricity Consumed By Land Uses

Land Use	*Amount*	kilowatt-hours per year[1]	*CO* 2.00E-04	*ROG* 1.00E-05	*NO_X* 1.15E-03	*SO_X* 1.20E-04	*PM_{10}* 4.00E-05	*CO_2* 0.772	*N_2O* 6.59E-06	*CH_4* 4.04E-05
Residential (Dwelling Units)		5626.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Food Store (SF)		53.3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Restaurant (SF)		47.45	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hospitals (SF)		21.7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Retail (SF)		13.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
College/University (SF)		11.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
High School (SF)		10.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Elementary School (SF)		5.9	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Office (SF)	50,000	12.95	0.35	0.02	2.04	0.21	0.07	1,369.51	0.01	0.07
Hotel/Motel (SF)		9.95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Warehouse (SF)		4.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Miscellaneous (SF)		10.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Blank			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL - pounds per day	--	--	**3.55E-04**	**1.77E-02**	**2.04E+00**	**2.13E-01**	**7.10E-02**	**1,369.51**	**0.01**	**0.07**
TOTAL - tons per year	--	--	**6.48E-05**	**3.24E-03**	**3.72E-01**	**3.89E-02**	**1.30E-02**	**249.94**	**0.00**	**0.01**
TOTAL - metric tons per year	--	--	**5.87E-05**	**2.94E-03**	**3.38E-01**	**3.52E-02**	**1.17E-02**	**226.74**	**0.00**	**0.01**

	CO_2	N_2O	CH_4	
metric tons per year	226.74	0.00	0.01	
metric tons CO_2eq per year	226.74	0.60	0.25	227.59

Notes:

1. Usage rate; average for SCE and LADWP.

Source:

South Coast Air Quality Management District, *CEQA Air Quality Handbook*, November 1993, Table A9-11.

Source for greenhouse gas emissions rates:

U.S. Energy Information Administration, *Domestic Electricity Emissions Factors 1999-2002*, October 2007. http://www.eia.doe.gov/oiaf/1605/techassist.html

Water Consumption Indirect Emissions

	Acre Feet per year	Electricity Usage kWh/year	Units	CO	ROG	NO_X	SO_X	PM_{10}	CO_2	N_2O	CH_4
				2.00E-04	1.00E-05	1.15E-03	1.20E-04	4.00E-05	0.772	6.59E-06	4.04E-05
Project Demand	28	1,226	pounds/yr	2.45E-01	1.23E-02	1.41E+00	1.47E-01	4.91E-02	9.47E+02	8.08E-03	4.95E-02
			tons/yr	1.23E-04	6.13E-06	7.05E-04	7.36E-05	2.45E-05	4.73E-01	4.04E-06	2.48E-05
			mt/yr	1.11E-04	5.56E-06	6.40E-04	6.68E-05	2.23E-05	4.29E-01	3.67E-06	2.25E-05
								$MTCO_2EQ$	0.43	0.00	0.00

Energy Factor 44 kWh/acre-foot

Based on energy usage factors for water conveyance from the California Energy Commission, Water Energy Use in California, Accessed May 2009.
http://www.energy.ca.gov/research/iaw/industry/water.html

Mobile Source Emissions Calculations

	Total	Breakdown		Emission Factor		Total Emis Passenger	Total Emis Delivery	Passnger	Delivery	Total Emissions	
	VMT	Passnger	Delivery	Passnger	Delivery	pounds/day		tons/year	tons/year	tons/year	metric tons/year
CO	3,049	2896.55	152.45	0.00709228	0.01407778	20.54	2.15	3.75	0.39	4.14	3.76
NO_X	3,049	2896.55	152.45	0.00071158	0.01577311	2.06	2.40	0.38	0.44	0.81	0.74
N_2O[1]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.04	0.04
ROG	3,049	2896.55	152.45	0.00074567	0.00206295	2.16	0.31	0.39	0.06	0.45	0.41
SO_X	3,049	2896.55	152.45	0.00001072	0.00002682	0.03	0.00	0.01	0.00	0.01	0.01
PM_{10}	3,049	2896.55	152.45	0.00009067	0.00059956	0.26	0.09	0.05	0.02	0.06	0.06
$PM_{2.5}$	3,049	2896.55	152.45	0.00005834	0.00050174	0.17	0.08	0.03	0.01	0.04	0.04
CH_4	3,049	2896.55	152.45	0.00006707	0.00009703	0.19	0.01	0.04	0.00	0.04	0.03
CO_2	3,049	2896.55	152.45	1.10087435	2.78163459	3188.74	424.06	581.94	77.39	659.34	598.14

	CO_2	N_2O	CH_4
metric tons per year	598.14	0.04	0.03
metric tons CO_2eq per year	598.14	11.17	0.73

Notes:
1. VMT based upon URBEMIS 2007 model output.
2. Emission Factor based upon EMFAC 2007 (version 2.3), *Highest (Most Conservative) Emission Factors fo On-Road Passenger Vehicles and Delivery Trucks* .
3. Breakdown of Passenger and Delivery Trucks assumes 95% auto and 5% truck.
4. Emission Factor for N_2O based upon a conversion ratio of 0.04873 from NO_X to N_2O. Based upon California Air Resources Board: *Estimates of Nitrous Oxide*

Appendix F
Phase I Environmental Site Assessment Report

FINAL DRAFT

Phase I Environmental Site Assessment Report
Proposed New Lakeport Courthouse - 675 Lakeport Boulevard Site
675 Lakeport Boulevard
Lakeport, CA 95453

Prepared for:

Judicial Council of California – Administrative Office of the Courts
2255 North Ontario Street, Suite 200
Burbank, California 91504

Prepared by:

URS Corporation
2870 Gateway Oaks Drive, Suite 150
Sacramento, California 95833
(916) 679-2000

URS Corporation Job No.
17326303

December, 2009

Executive Summary

URS Corporation (URS) conducted a Phase I Environmental Site Assessment (Phase I ESA) of an approximately 5.74-acre parcel of vacant land located at 675 Lakeport Boulevard, Lakeport, Lake County, California (subject property).

Based on review of historical documents, the subject property appears to have been located in an area of agriculture and grazing land back to at least 1938. The first development of the subject property occurred in about 1972 when grading took place for the adjacent Lake County Visitor's Information Center and the subject property was concurrently partially graded. It is not clear when the subject property grading was completed. However, based on aerial photographs, it appears to have been prior to 1987.

This assessment has revealed no recognized environmental conditions (RECs) or historical recognized environmental conditions (HRECs) in connection with the subject property. No significant data gaps were encountered.

This assessment identified no items of concern in connection with the subject property except the following:

- The subject property is located within an area of Lake County known to have naturally occurring asbestos in soils weathered from serpentine bedrock materials that underlie the subject property and surrounding area. In the event that site work performed on the subject property includes excavation, grading, or other ground surface disturbances, mitigation measures should be enacted to control dust and be protective of human health and the environment.

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Figures

Appendices

1.0 INTRODUCTION

1.1. Purpose

This report documents the methods and findings of a Phase I Environmental Site Assessment (ESA) conducted by URS Corporation (URS) for the State of California, Judicial Council of California, Administrative Office of the Courts (AOC, Client). The purpose of the Phase I was to evaluate environmental conditions associated with the subject property and neighboring properties and assess whether any recognized environmental conditions (RECs) exist at the subject property.

1.2. Detailed Scope of Services

The scope of services consisted of visual observation of site conditions during a site visit; review of practically reviewable and reasonably ascertainable information on historical site usage, and surface and subsurface conditions; and review of information provided by individuals, public agencies, and others. The services provided by URS were performed under a written contract with the State of California, Judicial Council of California, Administrative Office of the Courts (AOC), dated May 28, 2008. Authorization for this Phase I ESA was received on July 11, 2008 from Mr. Pradip Desai, representing AOC.

The following specific tasks were performed by URS:

- Reviewed pertinent, available documents and maps regarding local physiographic and hydrogeologic conditions in the vicinity of the subject property.
- Reviewed and interpreted available historical sources (e.g., topographic maps, Sanborn Fire Insurance maps, aerial photographs, city directories) of the subject property and immediate vicinity from readily available sources.
- Reviewed available documents regarding past and/or current site development (e.g., previous environmental and geotechnical investigations, site maps, environmental permits, records of hazardous materials generation, use, storage and/or disposal).
- Reviewed a database report of available federal, state, and local agency lists including, but not limited to: (a) known or potential hazardous waste sites or landfills; (b) sites currently under investigation for environmental violations; (c) sites which manufacture, generate, use, store, and/or dispose of hazardous materials or hazardous waste; (d) sites which have underground storage tanks (USTs); and (e) sites with recorded violations of regulations concerning USTs and hazardous materials/hazardous wastes. This task was intended to identify whether the subject property is listed or whether facilities in the area may have impacted environmental conditions at the subject property.
- Performed a reconnaissance survey of the subject property to make visual observations of existing conditions and activities, and performed a drive-by survey of the area within an approximate one-half-mile radius of the subject property to observe general land uses within the search area.
- Conducted interviews with the subject property owner, occupant, manager, and/or others knowledgeable, as appropriate, regarding history and operations at the subject property.
- Conducted inquiries with applicable federal, state, and municipal regulatory agencies for information regarding building or environmental permits, environmental violations or incidents, and/or status of enforcement actions at the site.
- Prepared this Phase I Environmental Site Assessment (ESA) report describing the investigation performed and presenting URS' findings, professional opinions, and

recommendations regarding the potential for environmental contamination at the subject property.

Additional work scope elements included:

- A limited visual review of suspect asbestos containing materials (ACM) in on-site buildings, if present. Information regarding suspect friable ACM in on-site buildings is included in this Phase I ESA.
- A visual review of wetlands was made during the site reconnaissance, including looking for saturated soils, wetland-type vegetation, or fill areas. In addition, Federal Emergency Management Agency (FEMA) Flood Maps and zoning records were reviewed and findings are included in this report.
- An evaluation of the potential for elevated indoor radon levels based upon review of the National Radon Database developed by the U.S. Environmental Protection Agency (USEPA) and readily available published materials.
- A limited review for Lead-Based Paint (LBP) was conducted during the site reconnaissance. Information regarding chipped and peeling paint is included in this Phase I ESA report.

1.3 Significant Assumptions

No significant assumptions were made as part of this Phase I ESA.

1.4 Limitations and Exceptions

URS conducted this Phase I ESA in general accordance with the ASTM Standard Practice for Environmental Site Assessments: Phase I Site Assessment Process (E 1527-05) and the USEPA's Standards and Practices for All Appropriate Inquiries: 40 CFR Part 312 (AAI). However, uncertainty is not wholly eliminated when conducting Phase I ESAs, and the investigations are not exhaustive. The environmental professionals involved used reasonable limits of time and cost when performing the work.

Deviations from the standard scope of services that occurred during the performance of this Phase I ESA are discussed in detail in Section 10.0.

1.5 Special Terms and Conditions

This Phase I ESA was not subject to any special terms or conditions.

1.6 User Reliance

This Phase I ESA report is intended solely for the use of AOC for the purpose indicated in Section 1.1.

2.0 SITE DESCRIPTION

2.1 Site Location and Legal Description

The subject property consists of an approximately 5.74-acre parcel of vacant land located at 675 Lakeport Boulevard, Lakeport, Lake County, California (subject property). The County Assessor's parcel number is 025-521-41. A Site Location Map is presented as Figure 1.

2.2 Site and Vicinity General Characteristics

Based on review of historical documents, the subject property appears to have been located in an area of agriculture and grazing land back to at least 1938. The first development of the subject property occurred in about 1972 when grading took place for the adjacent Lake County Visitor's Information Center and the subject property was concurrently partially graded. It is not clear when the subject property grading was completed. However, based on aerial photographs, it appears to have been prior to 1987.

The site is located in an area currently zoned C-2 (Major Retail). Based on the neighborhood reconnaissance, the area is characterized by mixed uses, including predominantly retail and commercial development with the Lake County Visitor's Information Center located north of the site. Photographs of the site are provided in Appendix A.

2.3 Current Use of the Site

The site is currently vacant. A Site Map is presented as Figure 2.

2.4 Description of Structures, Roads, and Other Improvements

The subject property parcel is bare land that has been graded and includes two terraces. The lower terrace is located on the east side of the subject property and is accessed from Lakeport Boulevard on the north. The upper terrace has two approaches from the east side lower terrace, one on the north end and one on the south end. There are no structures on the subject property.

2.5 Current Use of Adjoining Properties

URS observed the following features of neighboring properties at the time of the site visit. Our evaluation of these properties was limited to conditions visible from the site and from public rights-of-way.

North: Lakeport Boulevard; beyond Lakeport Boulevard, to the northeast is a small strip-mall shopping center; north is vacant City-owned property; and northwest is the Vista Point Shopping Center.

East: AT&T Telephone building; a large retail shopping center; and southeast is a storage facility.

South: Vacant land; southwest is the Lake County Agriculture Center

West: Lake County Visitor's Information Center; State Route Highway 29.

3.0 USER-PROVIDED INFORMATION

3.1 Title Records

No information related to property title records was provided to URS.

3.2 Environmental Liens or Activity Use Limitations

URS obtained information related to environmental liens and activity use limitations (AULs) from EDR. According to the information provided, the subject property is not subject to any liens or AULs. A copy of the EDR Environmental LienSearch™ Report is included as Appendix B.

3.3 Specialized Knowledge

URS submitted a User Questionnaire per AAI standards to Mr. Pradip Desai, representing AOC, regarding specialized user knowledge of the subject property. Mr. Desai stated that, to the best of his knowledge, there are no known environmental concerns associated with the subject property, and that there are no environmental liens or activity or use limitations associated with the subject property.

Mr. Mark A. Doughty, attorney for the subject property trust, and representative of the owner, indicated that, to the best of his knowledge, there are no known environmental concerns associated with the subject property, and that there are no environmental liens or activity or use limitations associated with the subject property.

3.4 Commonly Known or Reasonably Ascertainable Information

URS requested whether AOC was aware of any commonly known or reasonably ascertainable information within the local community about the subject property that might result in the finding of a REC in connection with the subject property. Mr. Desai was not aware of any such information.

Mr. Doughty indicated that, to the best of his knowledge, there is no information available within the local community about the subject property that might result in the finding of a REC in connection with the subject property.

3.5 Valuation Reduction for Environmental Issues

URS requested whether AOC is aware of any reduction in value of the subject property that might be associated with the finding of a REC in connection with the subject property. Mr. Desai was not aware of any such reduction in value.

3.6 Owner, Property Manager, and Occupant Information

AOC provided the following contact information to assist URS in conducting the Phase I ESA:

- Site Contact: Mr. James P. Sartain, Senior Real Estate Advisor with Keegan & Coppin Company, Inc.; Mr. Sartain provided URS with the property owner contact information.
- Site Owner contact: Mr. Mark A. Doughty, attorney for the Mary P. Seregow Trust, and representative of the owner.

3.7 Reason for Performing this Phase I ESA

The Phase I ESA was conducted as part of the shift of governance of California's Superior Court buildings from County governments to the State of California per the Trial Court Facilities Act of

2002 (Senate Bill 1732, Escutia). The AOC wants an assessment of whether RECs are present on the subject property.

4.0 RECORDS REVIEW

URS contracted with Environmental Data Resources, Inc. (EDR) to conduct a review of applicable regulatory agency lists of known and potential hazardous waste sites, properties or facilities currently under investigation for potential environmental violations, and those sites storing or using hazardous materials. URS utilized the ASTM Standard with respect to list search radii for Phase I ESAs (ASTM E 1527-05). Documents and lists were reviewed to identify properties or facilities located within the site vicinity that may have the potential to adversely impact environmental conditions at the site. The complete list of reviewed databases is provided in the EDR report, included in Appendix C, and is summarized in the following table.

4.1 Standard Environmental Records Sources

The following table presents the EDR database report results for the standard environmental records.

Agency Database	Survey Distance	Number of Sites Identified
Federal National Priority List	1 mile	1
Federal CERCLIS List	0.5 mile	1
U.S. EPA RCRA Registered Small Quantity Generators of Hazardous Waste	0.25 mile	2
State EnviroStor Database (ENVIROSTOR) List	1 mile	4
State Solid Waste Disposal Site List	0.5 mile	1
State Leaking Underground Storage Tank (LUST) List	0.5 mile	10
State Underground Storage Tanks (UST) Lists	0.25 mile	5 (total)
Statewide Recycler Database (SWRCY) List	0.5 mile	1
USEPA ROD	1 mile	1
Hist Cortese	0.5 mile	7

The subject property was not identified in the databases reviewed.

The regional groundwater is expected to flow east (see section 4.3). Therefore, sites west of the subject property are considered to be upgradient with respect to groundwater flow direction.

The following sites, including those in the Orphan Summary, were identified within the ASTM-specified search distance for each of the public databases reviewed:

Federal National Priority List

One NPL site was identified within one mile of the subject property: the Sulphur Bank Mercury site. The mine is over 13 miles away from the subject property, on the southeast side of Clear Lake. The mine was once the largest producer of mercury in California. Elevated concentrations of mercury in the waters of Clear Lake have been attributed to erosion of waste rock and tailings from the mine into the Lake. The subject property is approximately 0.5 mile from the western edge of the Lake. Any development at the subject property would be supplied with potable water from the City of Lakeport municipal water supply and not from onsite wells that could potentially draft from Clear Lake. Based on this information, this site is not expected to have a significant negative environmental impact on the subject property, and therefore is not a REC at the subject site.

Federal CERCLIS List

One CERCLIS site was identified within one mile of the subject property. This site is discussed in the NPL section above. Based on this information, this site is not expected to have a significant

negative environmental impact on the subject property and, therefore, is not a REC at the subject site.

RCRA-SQG List

Two RCRA-SQG sites were identified within ¼ mile of the subject property. Although the former Pacific bell site (currently AT&T) is adjacent to the subject property on the east, both of these sites are located down or cross gradient from the subject property with no violations reported. Based on this information, these sites are not expected to have a significant negative environmental impact on the subject property, and therefore are not RECs at the subject site.

State ENVIROSTOR List

Four ENVIROSTOR sites were identified within 1 mile of the subject property. Two of the sites have different names for the same location. The active sites are located over 0.4 mile northeast (cross gradient) of the subject property with no violations or investigations listed. Based on this information, these sites are not expected to have a significant negative environmental impact on the subject property, and therefore is not a REC at the subject site.

The other site is located further than ½ mile northwest (cross gradient) from the subject property. The case has been closed since 2007 and no further action is necessary. Since closed sites do not require additional environmental action, this site is not expected to have a significant negative environmental impact on the subject property, and therefore is not a REC at the subject site.

State Solid Waste Disposal Site List

One solid waste disposal site was identified within ½ mile of the subject property. The Lakeport Transfer Station is located approximately 550 feet north (cross gradient) from the subject property. The Transfer Station does not accept or handle toxic or hazardous waste material. Based on its distance, cross gradient position, lack of potential for hazardous materials, and no recorded violations, this site is not expected to have a significant negative environmental impact on the subject property, and therefore is not a REC at the subject site.

State LUST List

Ten LUST sites were identified within ½ mile of the subject property. One site, AT&T, is listed twice, and is located adjacent to the subject property on the east, however the site is downgradient of the subject property and the case has closed status. Eight sites are located over ¼ mile down or cross gradient from the subject site. Seven of these sites have a closed status. One site located over ¼ mile west/northwest (upgradient) of the subject property has case closed status. Closed sites do not require additional environmental action. Based on distance, down or cross gradient position, or closed status these sites are not expected to have a significant negative environmental impact on the subject property, and therefore are not a REC at the subject property.

State UST Lists (CA FID UST, UST, HIST UST, SWEEPS UST)

Five UST sites were identified within ¼ mile of the subject property. Those sites with reported leaks are listed in the LUST section above. Three of these sites are the same location, Pacific Bell (currently AT&T Telephone) located adjacent east of the subject property, and downgradient. One site is located over 1,200 feet downgradient from the subject site with no violations reported. One site, Lake County Department of Agriculture, is located adjacent to the subject property on the southwest side and upgradient, however with no violations reported. Based on this information, these sites are not expected to have a significant negative environmental impact on the subject property and, therefore, are not RECs at the subject site.

SWRCY List

One SWRCY site was identified within ½ mile of the subject property: the Tomira Pacific Inc. site, located approximately 2,200 feet southeast (downgradient) from the subject property. The site does not accept or handle toxic or hazardous waste material. Based on the distance, downgradient position, and lack of potential for hazardous materials, this site is not expected to have a significant negative environmental impact on the subject property, and therefore is not a REC at the subject site.

USEPA ROD

One USEPA Record of Decision for a site within 1 mile of the subject property was identified. This site is discussed in the NPL section above. Based on this information, this site is not expected to have a significant negative environmental impact on the subject property and, therefore, is not a REC at the subject site.

Hist Cortese List

Seven Historic Cortese sites were identified within ½ mile of the subject property. Six of these sites have a closed status and are cross-referenced in the LUST list summary above. Based on this information, these sites are not expected to have a significant negative environmental impact on the subject property and, therefore, are not RECs at the subject site.

The remaining site is located further than ¼ mile downgradient from the subject property. Based on this information, these sites are not expected to have a significant negative environmental impact on the subject property and, therefore, are not RECs at the subject site.

4.2 Historical Use Information on Subject Properties and Adjoining Properties

URS requested EDR to search four different types of historical records for the subject property and surrounding properties:

- Historical Aerial Photographs
- Historical Topographic Maps
- Sanborn Fire Insurance Maps
- City Directories

The results of these record searches for the subject property and the surrounding area are summarized below.

Historical Aerial Photographs

URS examined historic aerial photographs of the subject property for the years 1952, 1972, 1987, 1993, 1998, and 2005 obtained from EDR. A description of these aerial photographs is presented in the table below. No RECs were identified through this review. A copy of the Historical Aerial Photographs is provided in Appendix D.

Summary of Aerial Photograph Review	
Year of Photo	**Finding**
1952	Subject Property: Undeveloped. Surrounding Properties: Developed with agriculture (orchards) west and northeast. A few rural residences are visible. Rural roadways transect the area. Some urbanization further north.

1972	Subject Property: Undeveloped except for partial grading. Surrounding Properties: Present day State Route Highway 29, Lakeport Boulevard, and several other local roadways are present. The Lake County Visitor's Information Center appears to the west of the subject property and the AT&T Telephone building appears to the east. Other parcels in the vicinity north and east of the subject property appear to be graded or under construction. Urbanization is expanding from the north.
1987 1993 1998 2005	Subject Property: Undeveloped except for grading. Surrounding Properties: Adjacent properties appear developed similar to current appearance.

Historical Topographic Maps

URS reviewed historic topographic maps dated 1933, 1958, and 1978 that were provided by EDR for the subject property and surrounding area. A description of these maps is presented in the table below. No RECs were identified through this review. A copy of the Historical Topographic maps is provided in Appendix E.

Table 2. Summary of Topographic Map Photograph Review

Year of Map	Finding
1938	Subject Property: Undeveloped. Surrounding Properties: Few roadways transect area. Area appears undeveloped.
1958	Subject Property: Undeveloped. Surrounding Properties: Area appears to be developing as agricultural land; urbanization appears north and east of the subject property.
1978	Subject Property: Increased urbanization in the vicinity of the subject property, however, the subject property remains undeveloped. Surrounding Properties: Present day State Route Highway 29, Lakeport Boulevard, and several other local roadways are present. Structures interpreted to be the present day Lake County Visitor's Information Center, the Lake County Agriculture Center, and the AT&T Telephone building are present.

Sanborn Fire Insurance Maps

URS also contacted EDR to obtain Sanborn fire insurance maps for the subject property and surrounding area. EDR reported no coverage of the vicinity. A copy of the Sanborn Fire Insurance Map search results is provided in Appendix F.

City Directories

URS requested historical City Directories information from EDR for the subject site and surrounding area. Neither the site address, 675 Lakeport Boulevard, nor adjacent properties are listed in any City Directory databases searched by EDR.

A copy of the City Directory Abstract is provided in Appendix G.

4.3 Physical Setting Sources

Geology

The Clear lake area is characterized by late Pliocene and Quaternary volcanism and sedimentation within a basement of the Jura-Cretaceous Franciscan Complex. Locally there are thick outliers of Great Valley sequence strata, as well as limited exposure of early Tertiary rocks (Berkland, 1972).

Magmatic activity is still present in the area, as evidenced by numerous fumaroles at the Geysers and by thermal mineral springs, which are abundant in the region surrounding Clear Lake, however no Recent volcanism has occurred in the California Coast Ranges north of the latitude of the central part of Clear Lake. Adjacent to Clear Lake, great thicknesses of Plio-Pleistocene fluvial and

lacustrine sediments have accumulated in subsiding basins and locally covered with overlying Clear Lake volcanics of Pleistocene-Holocene age. The volcanics range in lithology from olivine basalt to rhyolitic obsidian (Brice, 1953).

The town of Lakeport is considered to be a highly active earthquake area. Active faults exist within seven miles of the project site; additionally, the Healdsburg and San Andreas faults are located 15 and 30 miles west of the site, respectively. Soils around the project site can potentially liquefy during an earthquake.

Soils

The Lakeport area is located on a sediment-filled valley adjacent to Clear Lake. Exposed materials within the area are limited to serpentine and quaternary sediments. These sediments are poorly consolidated to unconsolidated mixtures of sand, silt, clay, and gravel derived from older rock in the adjacent mountains. Because of the low strength of the quaternary sediments, they are subject to rapid erosion and shallow slumping.

The subject property is located within an area of Lake County known to have naturally occurring asbestos in soils weathered from serpentine bedrock materials that underlie the subject property and surrounding area.

According to the University of California Davis, California Soil Resource Lab, soils beneath the site have been identified in the Henneke-Montara-Rock Outcrop Complex. The Complex consists of very deep, moderately well drained soils; medium runoff; very slow permeability formed in alluvium from mixed rock sources. These soils are on alluvial terraces and have slopes of 15 to 50 percent. Reaction is medium acid to neutral.

Topography

The site is located in Section 25, Township 14 North, Range 10 West. Topographic map coverage of the site is provided by the U. S. Geological Survey, Lakeport, California, 7.5 minute quadrangle, 1:24000 series, dated 1958, photo revised 1978. The elevation of the upper terrace of the site is approximately 1380 feet above mean sea level with a decrease in topographic relief to the east. The lower terrace is approximately 1365 feet above mean sea level. The closest body of water is the seasonal Forbes Creek, located approximately 500 feet north of the subject property.

Hydrogeology/Hydrology

The site is located within the Scotts Valley Groundwater Basin. The Scotts Valley Basin lies adjacent to the west side of Clear Lake and extends northwesterly along Scotts Creek north to Hidden Lake. The valley is bordered to the east by the shoreline of Clear Lake and bounded on the west and the north by the Jurassic-Cretaceous Franciscan complex of metamorphic and sedimentary rocks which constitute the basement rock in the basin. The basin shares a boundary with the Big Valley Basin to the south and may be hydrologically contiguous (DWR, 2003).

No site-specific groundwater data were available for the subject property; however information available from the California Department of Water Resources (DWR) for wells in the general vicinity of the subject property indicates that the depth to groundwater is approximately 25 feet below ground surface. Based on topographic relief at the site, the groundwater flow direction is inferred to be to the east, downgradient toward Clear Lake. According to the EDR report, the subject property does not lie within a FEMA mapped 500-year flood zone.

No standing water or indicator species of flora and fauna typically associated with wetlands were identified on the subject property during the site reconnaissance. The EDR report did not identify any wetlands within approximately 0.5 mile of the subject site.

5.0 SITE RECONNAISSANCE

Mr. Frank Gegunde of URS conducted a site reconnaissance at the subject property on October 28, 2009. Mr. James P. Sartain, Senior Real Estate Advisor with Keegan & Coppin Company, Inc. escorted URS personnel around the subject property and answered questions relating to the operations.

5.1 Methodology and Limiting Conditions

URS' methodology is provided in Section 1.2. The purpose of the site reconnaissance was to make visual observations that enable the development of conclusions relating to the likelihood of RECs in connections with the subject property. All accessible and unobstructed exterior areas of the subject property and all interior areas or representative interior areas were visually and/or physically observed as part of this Phase I ESA. For larger properties, URS staff conducting the exterior site reconnaissance traversed the periphery of the property and other areas with storage of materials or equipment.

No limitations such as physical obstructions or access restrictions were encountered during the site visit.

5.2 General Site Setting

The subject property is located in a portion of Lake County typically characterized by rolling, hilly terrain in a section of the city of Lakeport that is predominantly retail and commercial development. At the time of the site reconnaissance, the subject property consisted of approximately 5.74 acres of bare land that has been graded and includes two terraces. The lower terrace is located on the east side of the subject property and is accessed from Lakeport Boulevard on the north. The upper terrace has two approaches from the east side lower terrace, one on the north end and one on the south end. There are no structures on the subject property.

Photographs taken during the site reconnaissance are included in Appendix A.

5.3 Solid Waste

No waste-generating activities are currently conducted onsite.

5.4 Hazardous Materials Handling and Storage

No hazardous wastes appeared to be generated or stored on the subject property at the time of the site visit.

5.5 Aboveground Storage Tanks

URS did not observe evidence of ASTs on the subject property at the time of the site visit.

5.6 Underground Storage Tanks

At the time of URS' site visit, evidence of USTs (e.g., fill ports, piping, or vent pipes) was not observed on the subject property.

5.7 Potential PCB-Containing Exterior Electrical Transformers

At the time of the site visit, no suspect PCB-containing items, such as transformers, were observed on the subject property.

5.8 Other Potential PCB-Containing Interior or Exterior Equipment

At the time of the site visit, no other suspect PCB-containing items were observed on the subject property.

5.9 Suspect Asbestos-Containing Materials

An asbestos survey was not conducted as part of this Phase I ESA. There are no structures located on-site.

The subject property is located within an area of Lake County known to have naturally occurring asbestos in soils weathered from serpentine bedrock materials that underlie the subject property and surrounding area.

5.10 Lead-Based Paint

A lead-based paint survey was not conducted as part of this Phase I ESA. There are no structures located onsite.

5.11 Air Quality and Odors

During the site visit, URS observed no activities requiring an air emission permit on the subject property.

No strong, pungent, or noxious odors were noted during the site reconnaissance.

5.12 Stains

URS did not observe evidence of stained soil or stressed vegetation on the subject property during the site visit.

5.13 Radon

The subject site is located in Zone 3 on the California EPA Map of Radon Zones developed by the U.S. EPA and the U.S. Geological Survey. Buildings in Zone 3 have a predicted average indoor radon screening level less than 2 picoCuries per liter (pCi/L). Frequent exposure to radon levels above 4 pCi/L is considered a potential health risk. There are no structures, and therefore no basements or unventilated areas below ground surface that could become a reservoir for radon gas on the site.

5.14 Railroad Rights-of-Way

No railroad rights-of-way are located on or adjacent to the subject property.

5.15 Surface Water

URS observed no surface water bodies on the subject property at the time of the site visit. The closest body of water is Forbes Creek, located approximately 500 feet north of the subject property.

At the time of the site visit, no retention basins were observed on the subject property. Storm water appears to leave the property via percolation or sheet runoff to the east.

URS did not observe evidence of pits, ponds, or lagoons on the subject property during the site visit.

5.16 Potable Water Supply and Wells

Municipal water supply is provided to the properties in the area.

URS did not observe evidence of dry wells, irrigation wells, injection wells, abandoned wells, or supply wells on the subject property during the site visit.

5.17 Wastewater and Sewer System

No wastewater is generated on the subject property. Municipal sanitary sewer service is provided to the properties in the area.

5.18 Mold or Mold-like Substances

No buildings were present on the site at the time of URS' visit. URS did not observe any visual mold or mold-like substances at the time of the site visit.

6.0 INTERVIEWS

Mr. Frank Gegunde of URS conducted interviews with appropriate representatives of the subject property using the ASTM Checklist as a guide. Information obtained through these interviews is presented below. Mr. Mark A. Doughty is the Attorney for the Mary P. Seregow Trust, and the *Key Site Manager*. The surviving property owner, Mrs. Seregow, lives in a rest home and was unavailable for an interview. Mr. Doughty was interviewed by telephone before and after the site reconnaissance.

6.1 Interview with Owner

Person interviewed: Mr. Mark A. Doughty
Relationship to Subject Property: Attorney for the Mary P. Seregow Trust, and representative of the owner.

Mr. Doughty provided URS with information regarding past and present uses of the subject property dating back over 20 years. He was not aware of the use of the site prior to the present grading. To the best of his knowledge, there have never been any structures on the subject property. He was not aware of any environmental concerns associated with the property. Mr. Doughty appeared to be forthcoming during the interview.

6.2 Interview with Site Manager

Person interviewed: Mr. Mark A. Doughty
Relationship to Subject Property: Attorney for the Mary P. Seregow Trust, and representative of the owner.

Refer to Section 6.1 above.

6.3 Interviews with Occupants

The subject property was not occupied at the time of URS's site visit.

6.4 Interview with Local Government Officials

URS contacted Mr. Ken Williams, REHS, Hazardous Material Specialist, of the Lake County Health Services Department (LCHSD) regarding any files or information pertaining to hazardous materials use, handling, or storage at the subject property. Mr. Williams indicated that they had no files for the subject property address or assessor's parcel number.

URS contacted Mr. Richard Knoll, Redevelopment Director, the City of Lakeport Community Development Department, Planning Services, regarding any files or information pertaining to any development, past or present, at the subject property. According to City staff, they had no files for the subject property address or assessor's parcel number beyond routine tax assessment information, which indicated that no development has ever occurred at the subject property. No grading permit was on file for the grading that was apparent at the subject property during the site reconnaissance.

6.5 Interviews with Others

No other interviews were conducted as part of this Phase I ESA.

7.0 FINDINGS

URS has performed a Phase I Environmental Site Assessment in conformance with the scope and limitations of ASTM Practice E 1527-05 of an approximately 5.74-acre parcel of vacant land located at 675 Lakeport Boulevard, Lakeport, Lake County, California. Any exceptions to, or deletions from, this practice are described in Section 1.4 of this report. The findings are presented below.

Based on review of historical documents, the subject property appears to have been located in an area of agriculture and grazing land back to at least 1938. The first development of the subject property occurred in about 1972 when grading take place for the adjacent Lake County Visitor's Information Center and the subject property was concurrently partially graded. It is not clear when the subject property grading was completed. However, based on aerial photographs, it appears to have been prior to 1987.

7.1 Data Gaps

ASTM E 1527-05 or AAI data gaps are summarized as follows:

- No previous owner/user was interviewed because no representative was identified;
- No reasonably accessible historical use information could be located prior to 1938, when the subject property appears to have been vacant land within an area of agriculture and grazing land.

7.2 Items of Concern

This assessment identified no items of concern in connection with the subject property except the following:

- The subject property is located within an area of Lake County known to have naturally occurring asbestos in soils weathered from serpentine bedrock materials that underlie the subject property and surrounding area.

7.3 Recognized Environmental Conditions

This assessment identified no RECs in connection with the subject property.

7.4 Historical RECs

This assessment identified no historical RECs in connection with the subject property.

7.5 De Minimis Conditions

No *de minimis* conditions were observed on the subject property at the time of URS' site visit.

8.0 OPINION

8.1 Data Gaps

The data gaps discovered during this Phase I ESA are discussed above in Section 7.1. No previous owner/user was interviewed and no standard historical source was readily available discussing site use prior to 1938, when the subject property appears to have been undeveloped grazing land. Based on the absence of development of the subject property, it is URS' opinion that these data gaps are not significant enough to warrant further investigation.

8.2 Items of Concern

Naturally occurring asbestos occurs in soils weathered from serpentine bedrock materials that underlie the subject property and surrounding area. In the event that site work performed on the subject property includes excavation, grading, or other ground surface disturbances, mitigation measures should be enacted to control dust and be protective of human health and the environment.

8.3 Recognized Environmental Conditions

No RECs were identified.

8.4 Historical RECs

No historical RECs were identified.

8.5 De Minimis Conditions

No *de minimis* conditions were observed.

9.0 CONCLUSIONS

URS Corporation (URS) conducted a Phase I Environmental Site Assessment (Phase I ESA) in conformance with the scope and limitations of ASTM Practice E 1527 of an approximately 5.74-acre parcel of vacant land located at 675 Lakeport Boulevard, Lakeport, Lake County, California (subject property). Any exceptions to, or deletions from, this practice are described in Section 1.4 of this report. This assessment has revealed no evidence of recognized environmental conditions in connection with the subject property.

This Phase I ESA was accomplished by, and limited to, a reconnaissance of the site, a drive-by survey of the site vicinity, and review of agency databases and other records regarding past and current land use for indications of the manufacture, generation, use, storage and/or disposal of hazardous substances at the site.

The services provided by URS are performed under a contract with the State of California, Judicial Council of California, Administrative Office of the Courts (AOC), dated May 28, 2008. Authorization for this Phase I ESA was received on July 11, 2008 from Mr. Pradip Desai, representing AOC.

10.0 DEVIATIONS

No deviations from the scope of services occurred during the performance of this Phase I ESA.

11.0 ADDITIONAL SERVICES

No additional services were included in URS' contract with AOC.

12.0 REFERENCES

- American Society of Testing and Materials (ASTM) *Standard Practice for Environmental Site Assessments* (Standard E 1527-05).
- Berkland, J.O., 1972, Clear Lake Basin, A Deformed Quaternary Caldera?, *in* Geologic Guide to the Northern Coast Ranges, Lake, Sonoma, and Mendocino Counties, California. Annual field trip guidebook of the Geologic Society of Sacramento, 1972. p. 6-26.
- Brice, J.C., 1953, Geology of the Lower Lake quadrangle, California: California Division of Mines Bulletin 166, 72 p.
- California Department of Water Resources (DWR) (2003). California's Groundwater – Bulletin 118, 2003 Update. Sacramento River Hydrologic Region - Scotts Valley Groundwater Basin.
- California Department of Water Resources (DWR) State Groundwater Level Data, Water Data Library: http://www.sjd.water.ca.gov/groundwater/leveldata/index.cfm
- Environmental Data Resources, Inc. (EDR), The EDR Radius Map Report, Inquiry Number: 2622183.9s, October 23, 2009.
- Environmental Data Resources, Inc. (EDR), The EDR Aerial Photo Decade Package, Inquiry Number: 2622183.5, October 27, 2009.
- Environmental Data Resources, Inc. (EDR), The EDR Historical Topographic Map Report, Inquiry Number: 2622183.4, October 26, 2009.
- Environmental Data Resources, Inc. (EDR), Certified Sanborn Map Report, Inquiry Number: 2622183.3, October 23, 2009.
- Environmental Data Resources, Inc. (EDR), The EDR City Directory Abstract, Inquiry Number: 2622183.6, November 3, 2009.
- Environmental Data Resources, Inc. (EDR), The EDR Environmental Lien Search Report, Inquiry Number: 2622183.10, October 27, 2009.
- Personal Interviews: Mr. Mark A. Doughty, Attorney for the Mary P. Seregow Trust, and representative of the owner; Mr. James P. Sartain, Senior Real Estate Advisor with Keegan & Coppin Company, Inc.; Mr. Ken Williams, REHS, Hazardous Material Specialist, of the Lake County Health Services Department (LCHSD); and Mr. Richard Knoll, Redevelopment Director, the City of Lakeport Community Development Department, Planning Services.
- University of California Davis, California Soil Resource Lab website online at: http://casoilresource.lawr.ucdavis.edu/drupal/node/27
- URS' General Agreement with State of California, Administrative Office of the Courts, May 28, 2008.
- USEPA Federal Register, Vol. 70, No. 210. 2005. Standards and Practices for All Appropriate Inquiries; Final Rule (40 CFR Part 312). November.
- USEPA California Map of Radon Zones http://www.epa.gov/iaq/radon/zonemap.html.
- USGS 7.5 Minute Topographic Map, Lakeport, California, 1958, photo revised 1978.

13.0 SIGNATURE(S) OF ENVIRONMENTAL PROFESSIONAL(S)

The conclusions presented in this report are professional opinions based solely upon URS' visual observations of the site and the immediate site vicinity, and upon URS' interpretations of the readily available historical information, conversations with personnel identified by the client to be knowledgeable about the site, and other readily available information, as identified in this report. The conclusions are intended exclusively for the purpose stated herein, at the site indicated, and for the project indicated.

This report is intended for the sole use of AOC. The scope of services performed during this investigation may not be appropriate for other users, and any use or re-use of this document or of the findings, conclusions, or recommendations presented herein is at the sole risk of said user.

This study was not intended to be an exhaustive investigation of any potential contamination that could exist at the subject property. Given that the scope of services for this investigation was limited, and given that no exploratory soils borings, soil, or groundwater sampling, or laboratory analyses were performed, currently unrecognized contamination may exist on the site, and level of this potential contamination may vary across the site.

A limited visual inspection of suspect ACM was conducted. This inspection was not intended to substitute for an Asbestos Hazard Emergency Response Act-type survey, nor was it intended to determine the extent or limits of asbestos-containing materials that may be present. A limited visual inspection for damaged paint that has the potential to be lead-based paint was also performed; however, this visual inspection does not identify whether lead-based paint is present on the subject property.

This report is intended to be used in its entirety. No excerpts may be taken to be representative of the findings of this assessment.

Opinions and recommendations presented in this report apply to site conditions and features as they existed at the time of URS' site visit and those reasonably foreseeable. They cannot necessarily apply to conditions and features of which URS is unaware and has not had an opportunity to evaluate.

The environmental professionals listed below indicate the following by signing this document:

"I declare that, to the best of my professional knowledge and belief, I meet the definition of Environmental Professional as defined in §312.10 of 40 CFR 312."

"I have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. I have developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312."

This report was prepared by:

PROFESSIONAL GEOLOGIST
FRANK GEGUNDE
No. 7998
Exp. 6/30/11
STATE OF CALIFORNIA

Frank L. Gegunde, PG, REA
Senior Geologist

This report was reviewed by:

Casper van Keppel, EIT
Project Engineer

13.1 Statement of Quality Assurance

This project was conducted in accordance with URS' Quality Assurance/Quality Control (QA/QC) manual. The main QA/QC procedures (with a summary of their applicability to this project) are provided below:

- Central Files – both hard copy and electronic central files are established and file plans created to ensure all documents are maintained in an orderly fashion.
- Program Management Plan (PMP) and Task Order Instructions – A PMP that provides information related to the overall contract is prepared and provided to the program team. Once tasks are awarded under the contract, Task Order Instructions that provide deadlines, budgets, and scope of work are prepared by the Task Manager and then distributed to the team.
- Independent Technical Review (ITR) – Each report is reviewed by an experienced, qualified staff member to ensure the contract requirements are met, the standards are followed, and the conclusions are sound.
- Periodic internal audits are performed to ensure all the QA/QC requirements are met for this contract.

14.0 QUALIFICATION(S) OF ENVIRONMENTAL PROFESSIONAL(S)

Utilizing the combined resources of more than 55,000 employees in a network of offices in more than 300 cities worldwide, URS serves a variety of public sector clients at the local, municipal, state, and federal level. We work closely with private sector clients in the oil, petrochemical, natural gas, chemical, forest products, mining, power, communications, and general manufacturing industries.

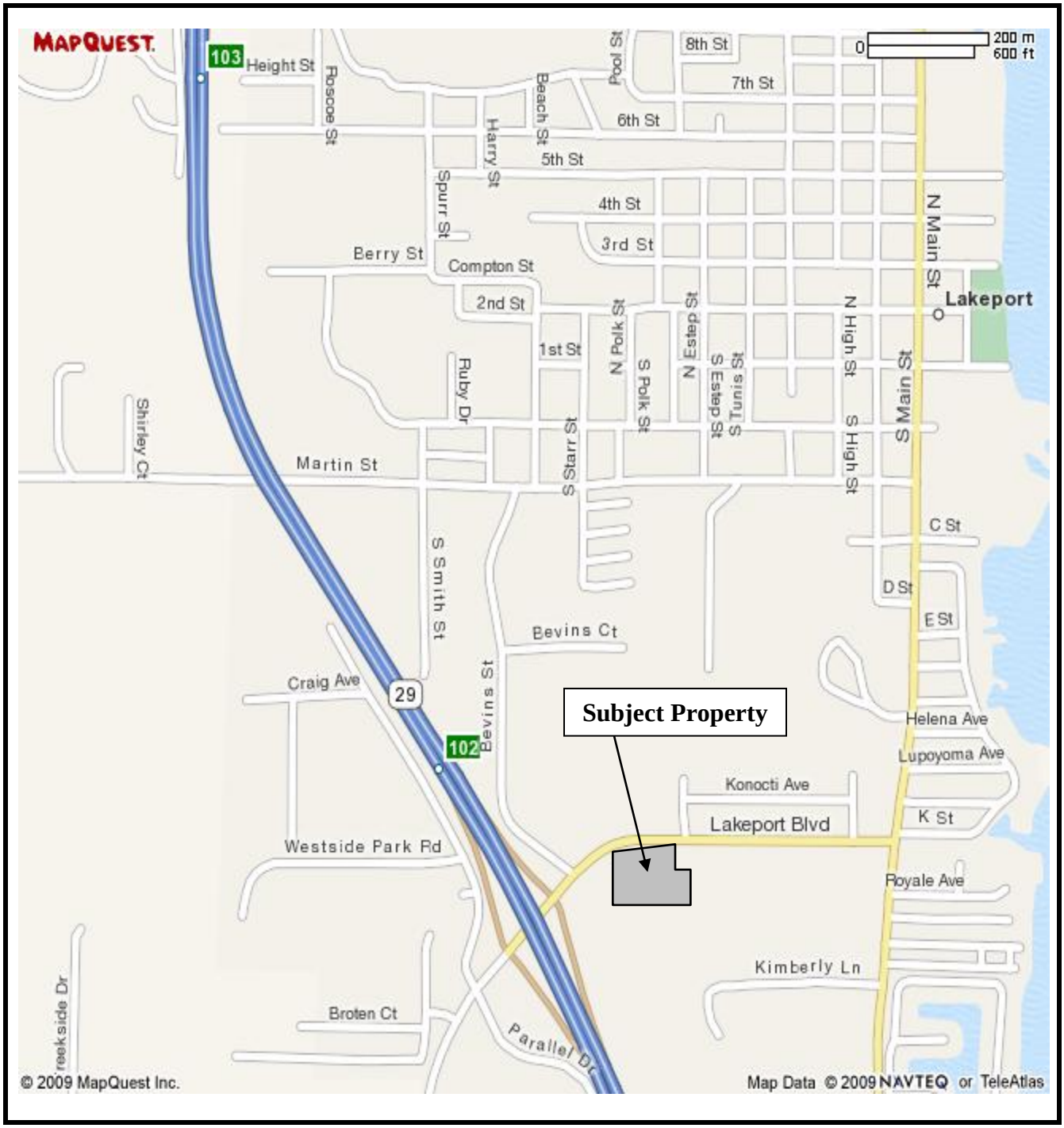
URS offers a variety of environmental site assessment services designed to provide our clients with the information they require to assess the risks associated with hazardous materials, including polychlorinated biphenyls (PCBs) and asbestos; regulatory requirements; soil and foundation conditions; seismic vulnerability; wetlands; and sensitive biological resources.

URS Corporation has more than 100 offices located in the United States including Alaska and Hawaii. URS has over 2,000 personnel in California including: air quality specialists, archeologists, architects, biologists (aquatic and wildlife), construction managers/inspectors, drafters, engineers (including chemical, civil, environmental, electrical, geotechnical, industrial, mechanical, sanitary, structural, and wastewater), estimators, geologists, hydrogeologists, hydrologists, industrial hygienists, interior designers, landscape architects, permitting specialists, planners, regulatory specialists, soil scientists, surveyors, and technical writers. This combination of staff and offices make it possible for URS to provide multidiscipline services in a cost-effective manner with personnel who are experienced in local conditions and are readily available.

URS staff members have successfully completed thousands of environmental site assessments in the United States including Alaska and Hawaii. We have worked for a wide variety of clients and have participated with their legal counsel in evaluating potential environmental liability and associated costs.

The resumes of the Environmental Professionals involved in this Phase I ESA are included in Appendix H.

FIGURES



Mapquest.com, Inc., November, 2009

N

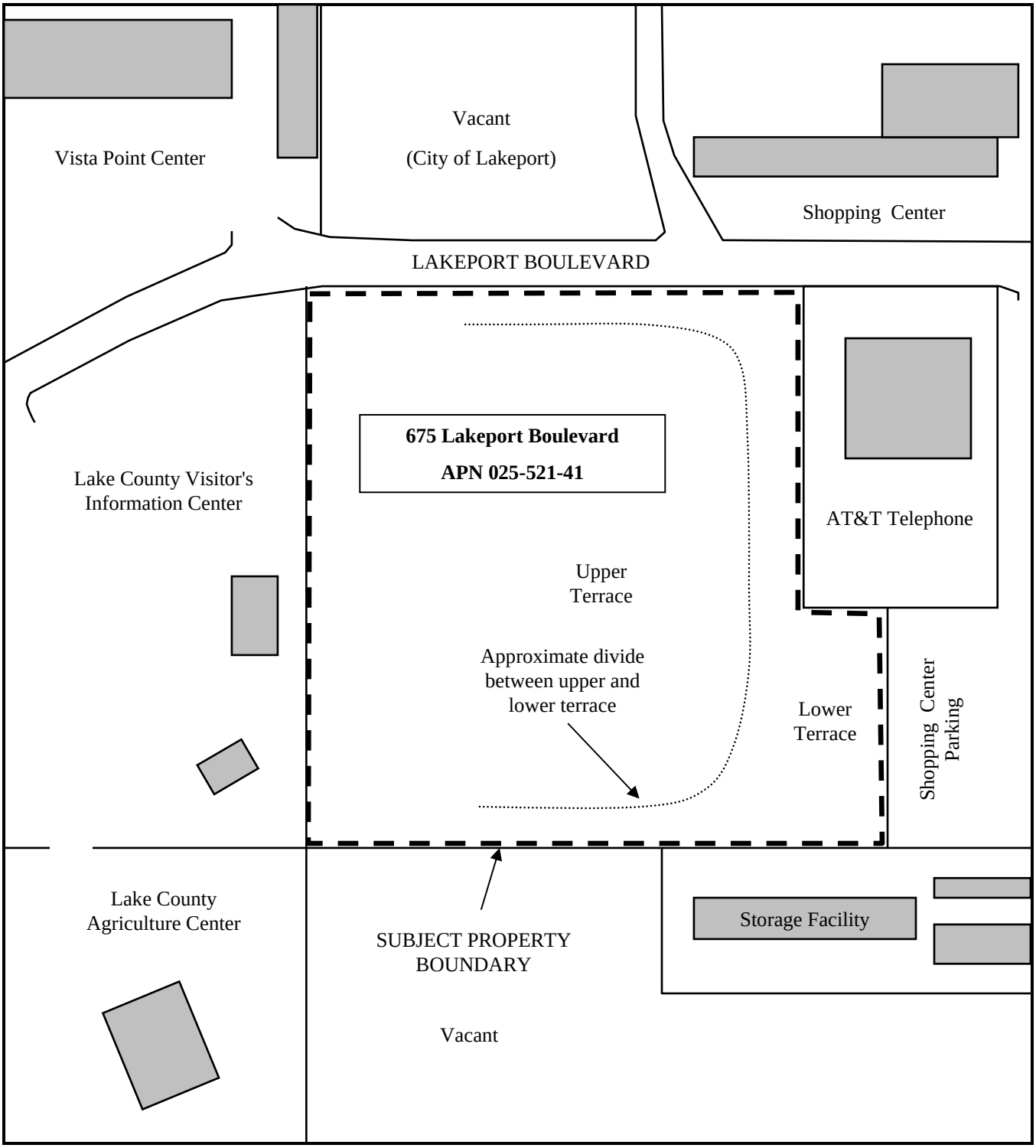
SITE LOCATION MAP

Phase I Environmental Site Assessment
Vacant Parcel
675 Lakeport Blvd.
Lakeport, California

November, 2009
17326303.01001

URS

FIGURE 1



Not to Scale

N

SITE MAP

Phase I Environmental Site Assessment
Vacant Parcel
675 Lakeport Blvd
Lakeport, California

November, 2009
17326303.01001

URS

FIGURE 2

APPENDICES

APPENDIX A
SITE PHOTOGRAPHS

URS

PHOTOGRAPHIC LOG

Administrative Office of the Court	**Phase I ESA – Vacant Parcel** 675 Lakeport Boulevard Lakeport, California 95453	**URS Project No. 17326303.01001** **Date:** 10/28/09

Photo No.
1

Direction Photo Taken:

Looking southwest

Description:

Entrance to the Subject Property from Lakeport Boulevard at the northeast corner of the parcel.

Photo No.
2

Direction Photo Taken:

Looking west

Description:

North side of the Subject Property along Lakeport Boulevard.

URS

PHOTOGRAPHIC LOG

Administrative Office of the Court	**Phase I ESA – Vacant Parcel** 675 Lakeport Boulevard Lakeport, California 95453	**URS Project No. 17326303.01001** **Date:** 10/28/09

Photo No.
3

Direction Photo Taken:

Looking east

Description:

Northern approach to the upper terrace of the Subject Property. Lakeport Boulevard is on the left of the frame. Note the AT&T Telecommunications structure beyond the northeastern boundary of the Subject Property.

Photo No.
4

Direction Photo Taken:

Looking southwest

Description:

View of the upper terrace of the Subject Property from the northeast corner.

URS	PHOTOGRAPHIC LOG	
Administrative Office of the Court	**Phase I ESA – Vacant Parcel** 675 Lakeport Boulevard Lakeport, California 95453	**URS Project No. 17326303.01001** **Date:** 10/28/09

Photo No.
5

Direction Photo Taken:

Looking south

Description:

View of the upper terrace from the top of the northern approach in the northwest corner of the upper terrace. The hill in the background is beyond the south boundary of Subject Property.

Photo No.
6

Direction Photo Taken:

Looking southwest

Description:

View from the northeast corner of the upper terrace of the Subject Property. Structure on the next terrace is the Lakeport Visitor's Center located on the parcel adjacent to the west of the Subject Property.

URS	PHOTOGRAPHIC LOG	
Administrative Office of the Court	**Phase I ESA – Vacant Parcel** 675 Lakeport Boulevard Lakeport, California 95453	**URS Project No. 17326303.01001** **Date:** 10/28/09

Photo No.
7

Direction Photo Taken:

Looking northwest

Description:

View from the southeast corner of the upper terrace. The Lakeport Visitor's Center is on the adjacent parcel.

Photo No.
8

Direction Photo Taken:

Looking east

Description:

Southern approach to the upper terrace. A shopping center and storage facility are located beyond the southeastern boundary of the Subject Property. Clear Lake is visible in the distance.

URS	PHOTOGRAPHIC LOG	
Administrative Office of the Court	**Phase I ESA – Vacant Parcel** 675 Lakeport Boulevard Lakeport, California 95453	**URS Project No. 17326303.01001** **Date:** 10/28/09

Photo No. **9**	
Direction Photo Taken: Looking south	
Description: View of the eastern side of the Subject Property and the lower terrace. A storage facility is located beyond the southeastern corner of the Subject Property.	

Photo No. **10**	
Direction Photo Taken: Looking southeast	
Description: Another view of the lower terrace on the southern side of the Subject Property.	

URS	PHOTOGRAPHIC LOG	
Administrative Office of the Court	**Phase I ESA – Vacant Parcel** 675 Lakeport Boulevard Lakeport, California 95453	**URS Project No. 17326303.01001** **Date:** 10/28/09

Photo No.
11

Direction Photo Taken:

Looking north

Description:

View if the southern boundary and northeast corner of the Subject Property from the lower terrace. A Lakeport Boulevard and a strip mall are beyond the tall trees in the frame. An AT&T Telecommunications structure is located east of the northeast corner of the Subject Property.

Photo No.
12

Direction Photo Taken:

Looking northeast

Description:

View of the AT&T Telecommunications Structure west side, adjacent to the Subject Property. Note the above ground diesel storage tank (AST). Reportedly there was also a leaking underground storage tank (LUST) removed from the AT&T parcel and the LUST case has received regulatory agency closure.

APPENDIX B
EDR ENVIRONMENTAL LienSearch™ REPORT

The EDR Environmental LienSearch™ Report

675 LAKEPORT BOULEVARD SITE
LAKE COUNTY
LAKEPORT, CA 95453

Project Number 02622183.10

October 27, 2009

EDR® Environmental Data Resources Inc

NCO℠

The Standard in Environmental Risk Information

440 Wheelers Farm Road
Milford, Connecticut 06461

Nationwide Customer Service

Telephone: 1-800-352-0050
Fax: 1-800-231-6802
Internet: www.edrnet.com

EDR Environmental LienSearch™ Report

The EDR Environmental LienSearch Report includes results from a search of available current land title records for environmental cleanup liens and other activity and use limitations, such as engineering controls and institutional controls.

A network of professional, trained researchers follows established procedures to:

- search for parcel information, legal description, and ownership based on client supplied address information;
- research indexes and title repositories;
- obtain a copy of the deed;
- search for environmental encumbering instrument(s) associated with the deed;
- provide a copy of any environmental encumbrance(s) based upon a review of key words in the instrument (title, parties involved, and description); and
- provide a copy of the deed.

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

EDR Environmental LienSearch™ Report

TARGET PROPERTY INFORMATION

ADDRESS

675 LAKEPORT BOULEVARD SITE
675 LAKEPORT BOULEVARD SITE
LAKEPORT, CA 95453

RESEARCH SOURCE

Sources: Lake County

DEED INFORMATION

Type of Deed: WD ☐ QCD ☐ Other ☒ DEED

Title is vested in: Mary Paveloff Seregow, as Successor Trustee, of the John W. Seregow Trust dated September 24, 1984 and Amended April 22, 1991, an undivided 40% interest; The General Council of the Assemblies of God, a Missouri corporation, an undivided 60% interest

Title received from: Mary Paveloff Seregow, as Successor Trustee, of the John W. Seregow Trust dated September 24, 1984 and Amended April 22, 1991

Deed Dated: September 29, 1998
Deed Recorded: September 30, 1998
Document No.: 98-017143

LEGAL DESCRIPTION

Description: Legal attached as Exhibit "A."

Assessor's Parcel Number: 025-521-41

ENVIRONMENTAL LIEN

Environmental Lien: Found ☐ Not Found ☒

If yes:

1st Party:

2nd Party:

Dated:
Recorded:
Book:
Page:
Comments:

OTHER ACTIVITY AND USE LIMITATIONS (AULs)

Other AUL's: Found ☐ Not Found ☒

EDR Environmental LienSearch™ Report

EXHIBIT A

RECORDING REQUESTED BY:

When Recorded Mail Document and Tax Statement To:

Mary Paveloff Seregow
102 Lupoyoma Heights
Lakeport, CA 95453

Escrow No.
Title Order No. 16743
APN:

DOCUMENT NUMBER
98-017143

R	5
M	3
ST	2
GC	3
LN	
CC	✓

RECORDED AT REQUEST OF
FIDELITY NATIONAL TITLE COMPANY
98 SEP 30 PM 2:56
LAKE COUNTY
ASSESSOR-RECORDER
DAN L. IRWIN
CR

SPACE ABOVE THIS LINE FOR RECORDER'S USE

GRANT DEED

The undersigned grantor(s) declare(s)
Documentary transfer tax is $ 0.00 City tax $ 0.00 No consideration
| | computed on full value of property conveyed, or
| | computed on full value less value of liens or encumbrances remaining at time of sale.
| | Unincorporated Area City of _____

FOR A VALUABLE CONSIDERATION, receipt of which is hereby acknowledged,
Mary Paveloff Seregow, as Successor Trustee, of the John W. Seregow Trust dated September 24, 1984 and Amended April 22, 1991
hereby GRANT(S) to Mary Paveloff Seregow, as Successor Trustee, of the John W. Seregow Trust dated September 24, 1984 and Amended April 22, 1991, an undivided 40% interest; The General Council of the Assemblies of God, a Missouri corporation, an undivided 60% interest
the following described real property in the City of Lakeport
County of Lake

State of California:

See Exhibit A Attached

DATED: Sept. 29, 1998

Mary Paveloff Seregow, Trustee
Mary Paveloff Seregow, as Successor Trustee of the John W. Seregow Trust, dated September 24, 1984 and Amended April 22, 1991

STATE OF CALIFORNIA
COUNTY OF Lake
ON September 29, 1998 before me, Sharon Salvador personally appeared Mary Paveloff Seregow

personally known to me (or proved to me on the basis of satisfactory evidence) to be the person(s) whose name(s) (is/are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

SHARON SALVADOR
Commission # 1146018
Notary Public — California
Lake County
My Comm. Expires Nov 21, 2001

Witness my hand and official seal.

Signature _____

MAIL TAX STATEMENT AS DIRECTED ABOVE

EXHIBIT XXXXXXX "A"

THE LAND REFERRED TO IN THIS REPORT IS SITUATED IN THE CITY OF LAKEPORT, COUNTY OF LAKE, STATE OF CALIFORNIA, AND IS DESCRIBED AS FOLLOWS:

TRACT ONE:

PARCEL B, as shown on that certain Parcel Map filed in the Office of the County Recorder of said Lake County on July 18, 1973 in Book 6 of Parcel Maps, at Page 37, Lake County Records.

APN: 025-521-41 and 42

TRACT TWO:

PARCEL C, as shown on that certain Parcel Map filed in the Office of the County Recorder of said Lake County on July 18, 1973 in Book 6 of Parcel Maps, at Page 37, Lake County Records.

Excepting therefrom, a portion of Parcel "C" as said Parcel "C" is shown and so designated on that certain Parcel Map filed July 18, 1973 in Book 6 of Parcel Maps, at Page 37, Lake County Records, more particularly described as follows:

Beginning at a point on the Southerly line of said Parcel "C" that is South 89° 22' 00" West, 128.08 feet from the Southeast corner thereof, said point being located between two existing buildings; thence North 01° 17' 42" West, 3.07 feet to the North end of said existing buildings; thence continuing North 01° 17' 42" West, 14.00 feet to the North line of the existing concrete sidewalk and directly under the building roof overhang; thence North 89° 43' 46" East, 55.63 feet along said sidewalk overhang to the Northeast corner thereof; thence South 00° 32' 30" East, 16.71 feet to th Southerly line of said Parcel "C"; thence South 89° 22' 00" West, 14.02 feet along said Southerly line to the East line of an existing building; thence continuing 89° 22' 00" West, 41.39 feet along said Southerly line to the point of beginning.

APN: 025-521-44-00

TRACT THREE:

PARCEL ONE:

A PORTION of the Northeast quarter of Section 25, Township 14 North, Range 10 West, Mount Diablo Meridian, more particularly described as follows:

BEGINNING at a 1/2" rebar on the quarter section line running East and West through Section 25, Township 14 North, Range 10 West, Mount Diablo Meridian, from which a 1 1/4" iron pipe marking the Southwest corner of Lot 7 in Block 2 of West Lupoyoma Park Subdivision, bears North 89° 22' East, 19.50 feet distant; thence from said true point of beginning South 89° 22' West, 251.31 feet along above said quarter

CONTINUED ON NEXT PAGE...

TRACT THREE, PARCEL ONE CONTINUED:

section line to a 1/2" rebar tagged L.S. 2920; thence, continuing South 89° 22' West, 199.04 feet along said quarter section line to a point; thence North 00° 39' West, [illegible].00 feet; thence North 89° 22' East, 199.04 feet to a 1/2" rebar; thence continuing North 89° 22' East, 251.31 feet to a spike and [illegible] in existing black top; thence South 00° 38' East, 14.00 feet to a [illegible]" rebar; thence, continuing South 00° 38' East, 125.00 feet to the point of beginning.

PARCEL TWO:

A portion of the Northeast quarter of Section 25, Township 14 North, Range 10 West, Mount Diablo Base and Meridian, described as follows:

COMMENCING at the Southeast corner of Lot 7, Block 2 of "WEST LUPOYOMA PARK SUBDIVISION NO. 1", filed March 9, 1925 in Book 4 of Town Maps, at Page 41 and running thence South 89° 22' 10" West, 125.15 feet along the quarter section line running East and West through said Section 25 to the Southeast corner of Parcel "A" as shown and so designated on that certain Parcel Map filed July 18, 1973 in Book 6 of Parcel Maps, at Page 37, Lake County Records and the true point of beginning of the following described tract of land:

Thence from said true point of beginning North 00° 38' 00" West, 125.00 feet along the East line of said Parcel "A" to a point; thence North 89° 22' 00" East, 8.36 feet to a point between two existing buildings; thence South 01° 17' 42" East, 125.01 feet to the above said quarter section line; thence South 89° 22' 00" West, 9.81 feet to the point of beginning.

APN: 025-521-46-00

END OF DOC 3

APPENDIX C
EDR ENVIRONMENTAL DATABASE SEARCH

675 Lakeport Boulevard Site
675 Lakeport Boulevard
Lakeport, CA 95453

Inquiry Number: 2622183.9s
October 23, 2009

The EDR Radius Map™ Report

EDR® Environmental Data Resources Inc

440 Wheelers Farms Road
Milford, CT 06461
Toll Free: 800.352.0050
www.edrnet.com

TABLE OF CONTENTS

GEOCHECK ADDENDUM

GeoCheck - Not Requested

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

EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-05) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

675 LAKEPORT BOULEVARD
LAKEPORT, CA 95453

COORDINATES

Latitude (North):	39.034300 - 39˚ 2' 3.5''
Longitude (West):	122.921500 - 122˚ 55' 17.4''
Universal Tranverse Mercator:	Zone 10
UTM X (Meters):	506794.3
UTM Y (Meters):	4320378.0
Elevation:	1388 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	39122-A8 LAKEPORT, CA
Most Recent Revision:	1994

TARGET PROPERTY SEARCH RESULTS

The target property was not listed in any of the databases searched by EDR.

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

Proposed NPL..... Proposed National Priority List Sites
NPL LIENS..... Federal Superfund Liens

Federal Delisted NPL site list

Delisted NPL..... National Priority List Deletions

Federal CERCLIS NFRAP site List

CERC-NFRAP..... CERCLIS No Further Remedial Action Planned

EXECUTIVE SUMMARY

Federal RCRA CORRACTS facilities list

CORRACTS..... Corrective Action Report

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF..... RCRA - Transporters, Storage and Disposal

Federal RCRA generators list

RCRA-LQG..... RCRA - Large Quantity Generators
RCRA-CESQG..... RCRA - Conditionally Exempt Small Quantity Generator

Federal institutional controls / engineering controls registries

US ENG CONTROLS..... Engineering Controls Sites List
US INST CONTROL..... Sites with Institutional Controls

Federal ERNS list

ERNS..... Emergency Response Notification System

State- and tribal - equivalent NPL

RESPONSE..... State Response Sites

State and tribal leaking storage tank lists

SLIC..... Statewide SLIC Cases
INDIAN LUST..... Leaking Underground Storage Tanks on Indian Land

State and tribal registered storage tank lists

AST..... Aboveground Petroleum Storage Tank Facilities
INDIAN UST..... Underground Storage Tanks on Indian Land

State and tribal voluntary cleanup sites

VCP..... Voluntary Cleanup Program Properties
INDIAN VCP..... Voluntary Cleanup Priority Listing

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS..... A Listing of Brownfields Sites

Local Lists of Landfill / Solid Waste Disposal Sites

DEBRIS REGION 9..... Torres Martinez Reservation Illegal Dump Site Locations
ODI..... Open Dump Inventory
WMUDS/SWAT..... Waste Management Unit Database
HAULERS..... Registered Waste Tire Haulers Listing

EXECUTIVE SUMMARY

INDIAN ODI ..... Report on the Status of Open Dumps on Indian Lands

Local Lists of Hazardous waste / Contaminated Sites

US CDL ..... Clandestine Drug Labs
HIST Cal-Sites ..... Historical Calsites Database
SCH ..... School Property Evaluation Program
Toxic Pits ..... Toxic Pits Cleanup Act Sites
CDL ..... Clandestine Drug Labs
US HIST CDL ..... National Clandestine Laboratory Register

Local Lists of Registered Storage Tanks

CA FID UST ..... Facility Inventory Database

Local Land Records

LIENS 2 ..... CERCLA Lien Information
LUCIS ..... Land Use Control Information System
LIENS ..... Environmental Liens Listing
DEED ..... Deed Restriction Listing

Records of Emergency Release Reports

HMIRS ..... Hazardous Materials Information Reporting System
CHMIRS ..... California Hazardous Material Incident Report System
LDS ..... Land Disposal Sites Listing
MCS ..... Military Cleanup Sites Listing

Other Ascertainable Records

RCRA-NonGen ..... RCRA - Non Generators
DOT OPS ..... Incident and Accident Data
DOD ..... Department of Defense Sites
FUDS ..... Formerly Used Defense Sites
CONSENT ..... Superfund (CERCLA) Consent Decrees
UMTRA ..... Uranium Mill Tailings Sites
MINES ..... Mines Master Index File
TRIS ..... Toxic Chemical Release Inventory System
TSCA ..... Toxic Substances Control Act
FTTS ..... FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
HIST FTTS ..... FIFRA/TSCA Tracking System Administrative Case Listing
SSTS ..... Section 7 Tracking Systems
ICIS ..... Integrated Compliance Information System
PADS ..... PCB Activity Database System
MLTS ..... Material Licensing Tracking System
RADINFO ..... Radiation Information Database
FINDS ..... Facility Index System/Facility Registry System
RAATS ..... RCRA Administrative Action Tracking System
CA BOND EXP. PLAN ..... Bond Expenditure Plan
CA WDS ..... Waste Discharge System
NPDES ..... NPDES Permits Listing
Cortese ..... "Cortese" Hazardous Waste & Substances Sites List
Notify 65 ..... Proposition 65 Records

EXECUTIVE SUMMARY

DRYCLEANERS..... Cleaner Facilities
WIP..... Well Investigation Program Case List
HAZNET..... Facility and Manifest Data
EMI..... Emissions Inventory Data
INDIAN RESERV..... Indian Reservations
SCRD DRYCLEANERS..... State Coalition for Remediation of Drycleaners Listing
PCB TRANSFORMER..... PCB Transformer Registration Database

EDR PROPRIETARY RECORDS

EDR Proprietary Records

Manufactured Gas Plants..... EDR Proprietary Manufactured Gas Plants

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.
Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL: Also known as Superfund, the National Priority List database is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund program. The source of this database is the U.S. EPA.

A review of the NPL list, as provided by EDR, and dated 06/29/2009 has revealed that there is 1 NPL site within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
SULPHUR BANK MERCURY MINE	***SULPHUR BANK ROAD***	***E 1/4 - 1/2 (0.449 mi.)***	***0***	***7***

Federal CERCLIS list

CERCLIS: The Comprehensive Environmental Response, Compensation and Liability Information System contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive

Environmental Response, Compensation and Liability Act (CERCLA). CERCLIS contains sites which are either proposed to or on the National Priorities List (NPL) and sites which are in the screening and assessment phase for possible inclusion on the NPL.

A review of the CERCLIS list, as provided by EDR, and dated 06/30/2009 has revealed that there is 1 CERCLIS site within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
SULPHUR BANK MERCURY MINE	***SULPHUR BANK ROAD***	***E 1/4 - 1/2 (0.449 mi.)***	***0***	***7***

Federal RCRA generators list

RCRA-SQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

A review of the RCRA-SQG list, as provided by EDR, and dated 11/12/2008 has revealed that there are 2 RCRA-SQG sites within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
PACIFIC BELL	***555 LAKEPORT BOULEVARD***	***NE 0 - 1/8 (0.051 mi.)***	***A4***	***13***
BRUNO FOODS	***355 LAKEPORT BLVD***	***E 1/8 - 1/4 (0.165 mi.)***	***7***	***23***

State- and tribal - equivalent CERCLIS

ENVIROSTOR: The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifes sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

A review of the ENVIROSTOR list, as provided by EDR, and dated 08/27/2009 has revealed that there are 4 ENVIROSTOR sites within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
PARKSIDE SUBDIVISION Status: No Further Action	***1453 MARTIN STREET***	***NW 1/2 - 1 (0.551 mi.)***	***21***	***38***

Lower Elevation	Address	Direction / Distance	Map ID	Page
TIME OIL CO/JACKPOT FOOD MART Status: Refer: RWQCB	***202 S MAIN ST***	***NE 1/4 - 1/2 (0.429 mi.)***	***D16***	***32***
AN-LEE Status: Refer: RWQCB	201 S MAIN ST	NE 1/4 - 1/2 (0.429 mi.)	D18	35

Lower Elevation	Address	Direction / Distance	Map ID	Page
JACKPOT STATION Status: Refer: RWQCB	202 S MAIN	NE 1/4 - 1/2 (0.429 mi.)	D20	37

State and tribal landfill and/or solid waste disposal site lists

SWF/LF: The Solid Waste Facilities/Landfill Sites records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. The data come from the Integrated Waste Management Board's Solid Waste Information System (SWIS) database.

A review of the SWF/LF list, as provided by EDR, and dated 09/02/2009 has revealed that there is 1 SWF/LF site within approximately 0.5 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
LAKEPORT TRANSFER STATION	910 BEVINS STREET	W 0 - 1/8 (0.063 mi.)	B6	22

State and tribal leaking storage tank lists

LUST: The Leaking Underground Storage Tank Incident Reports contain an inventory of reported leaking underground storage tank incidents. The data come from the State Water Resources Control Board Leaking Underground Storage Tank Information System.

A review of the LUST list, as provided by EDR, and dated 09/05/2009 has revealed that there are 10 LUST sites within approximately 0.5 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
AT&T Status: Completed - Case Closed	555 LAKEPORT BOULEVARD	NE 0 - 1/8 (0.051 mi.)	A2	13
AT&T Status: Completed - Case Closed	555 LAKEPORT BOULEVARD	NE 0 - 1/8 (0.051 mi.)	A3	13
TESORO 67075 Status: Open - Remediation	***975 MAIN ST***	***SE 1/4 - 1/2 (0.332 mi.)***	***9***	***26***
UNITED PARCEL SER CALAK Status: Completed - Case Closed	***924 PARALLEL DR***	***WNW 1/4 - 1/2 (0.342 mi.)***	***10***	***27***
CHEVRON #1802 Status: Completed - Case Closed	***1050 MAIN ST S***	***SE 1/4 - 1/2 (0.363 mi.)***	***11***	***29***
LAKEPORT SHELL Status: Open - Verification Monitoring	***301 MAIN ST S***	***NE 1/4 - 1/2 (0.378 mi.)***	***C12***	***30***
SOPER-REESE COMMUNITY THEATER Status: Completed - Case Closed	275 SOUTH MAIN STREET	NE 1/4 - 1/2 (0.389 mi.)	C13	31
LANGE BROTHERS CONSTRUCTION CO Status: Completed - Case Closed	***301 INDUSTRIAL AVE***	***SSE 1/4 - 1/2 (0.398 mi.)***	***14***	***31***
JACKPOT FOOD MART Status: Completed - Case Closed	***202 MAIN ST S***	***NE 1/4 - 1/2 (0.429 mi.)***	***D17***	***34***
EXXON Status: Completed - Case Closed	***201 MAIN ST S***	***NE 1/4 - 1/2 (0.429 mi.)***	***D19***	***36***

EXECUTIVE SUMMARY

State and tribal registered storage tank lists

UST: The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the State Water Resources Control Board's Hazardous Substance Storage Container Database.

A review of the UST list, as provided by EDR, and dated 09/05/2009 has revealed that there is 1 UST site within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
PACIFIC BELL TD-255/LKPTCA022	555 LAKEPORT BLVD	NE 0 - 1/8 (0.051 mi.)	A1	12

ADDITIONAL ENVIRONMENTAL RECORDS

Local Lists of Landfill / Solid Waste Disposal Sites

SWRCY: A listing of recycling facilities in California.

A review of the SWRCY list, as provided by EDR, and dated 09/25/2009 has revealed that there is 1 SWRCY site within approximately 0.5 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
TOMRA PACIFIC INC	1155 S MAIN ST	SE 1/4 - 1/2 (0.417 mi.)	15	32

Local Lists of Registered Storage Tanks

HIST UST: Historical UST Registered Database.

A review of the HIST UST list, as provided by EDR, and dated 10/15/1990 has revealed that there are 3 HIST UST sites within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
PACIFIC BELL	***555 LAKEPORT BOULEVARD***	***NE 0 - 1/8 (0.051 mi.)***	***A4***	***13***
LAKE COUNTY DEPARTMENT OF AGRI	***883 LAKEPORT BLVD***	***W 0 - 1/8 (0.060 mi.)***	***B5***	***19***
CLEAR LAKE MARINA	1400 SO MAIN ST LAKEPOR	ESE 1/8 - 1/4 (0.224 mi.)	8	25

SWEEPS UST: Statewide Environmental Evaluation and Planning System. This underground storage tank listing was updated and maintained by a company contacted by the SWRCB in the early 1990's. The listing is no longer updated or maintained. The local agency is the contact for more information on a site on the SWEEPS list.

A review of the SWEEPS UST list, as provided by EDR, and dated 06/01/1994 has revealed that there is 1 SWEEPS UST site within approximately 0.25 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
PACIFIC BELL	***555 LAKEPORT BOULEVARD***	***NE 0 - 1/8 (0.051 mi.)***	***A4***	***13***

Other Ascertainable Records

ROD: Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid the cleanup.

A review of the ROD list, as provided by EDR, and dated 09/01/2009 has revealed that there is 1 ROD site within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
SULPHUR BANK MERCURY MINE	*SULPHUR BANK ROAD*	*E 1/4 - 1/2 (0.449 mi.)*	*0*	*7*

HIST CORTESE: The sites for the list are designated by the State Water Resource Control Board [LUST], the Integrated Waste Board [SWF/LS], and the Department of Toxic Substances Control [CALSITES].

A review of the HIST CORTESE list, as provided by EDR, and dated 04/01/2001 has revealed that there are 7 HIST CORTESE sites within approximately 0.5 miles of the target property.

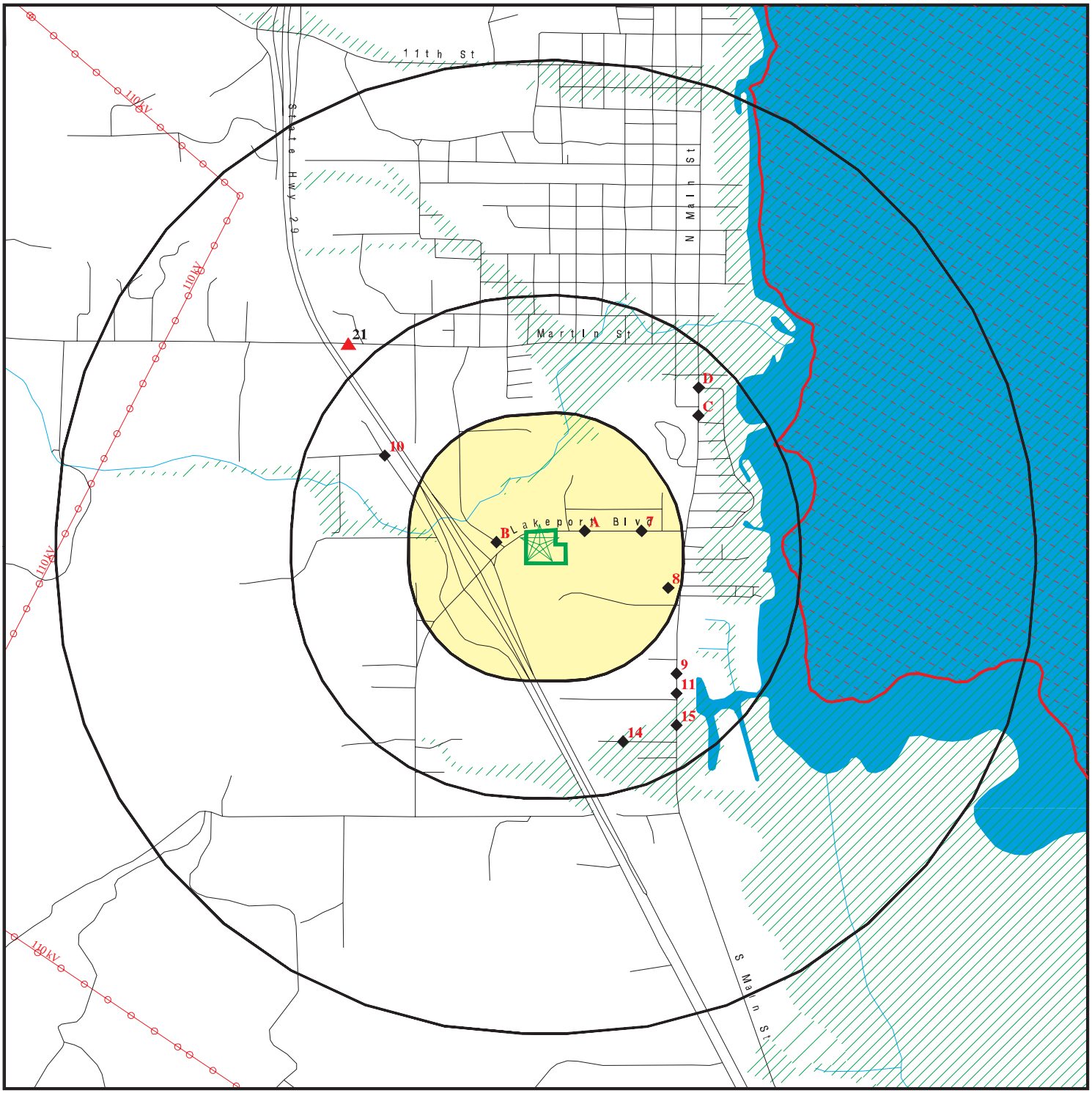
Lower Elevation	Address	Direction / Distance	Map ID	Page
TESORO 67075	*975 MAIN ST*	*SE 1/4 - 1/2 (0.332 mi.)*	*9*	*26*
UNITED PARCEL SER CALAK	*924 PARALLEL DR*	*WNW 1/4 - 1/2 (0.342 mi.)*	*10*	*27*
CHEVRON #1802	*1050 MAIN ST S*	*SE 1/4 - 1/2 (0.363 mi.)*	*11*	*29*
LAKEPORT SHELL	*301 MAIN ST S*	*NE 1/4 - 1/2 (0.378 mi.)*	*C12*	*30*
LANGE BROTHERS CONSTRUCTION CO	*301 INDUSTRIAL AVE*	*SSE 1/4 - 1/2 (0.398 mi.)*	*14*	*31*
JACKPOT FOOD MART	*202 MAIN ST S*	*NE 1/4 - 1/2 (0.429 mi.)*	*D17*	*34*
EXXON	*201 MAIN ST S*	*NE 1/4 - 1/2 (0.429 mi.)*	*D19*	*36*

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped:

Site Name	Database(s)
TRANSFER STATION	LUST, HIST CORTESE
LAKEPORT MS4 PHASE II	NPDES
PETES AUTOMOTIVE	LUST
PETES AUTOMOTIVE	LUST
LAKEPORT CHEVRON	UST
GRANITE HWY. 175 QUARRY	AST
LAKEPORT LAGOONS MARINA **	ERNS
WELL SITE NAME	ERNS
CITY OF LAKEPORT WWTP	FINDS
LAKEPORT WASTEWTR TREATMNT FAC	FINDS
LAKE COUNTY CSA 21 - NORTH LAKEPOR	FINDS
COBB MOUNTAIN DUMP SITE	FINDS
WILLIAMS TANK LINES HIGHWAY 29 ACC	SLIC

OVERVIEW MAP - 2622183.9s



Target Property

Sites at elevations higher than or equal to the target property

Sites at elevations lower than the target property

Manufactured Gas Plants

National Priority List Sites

Dept. Defense Sites

0 1/4 1/2 1 Miles

Indian Reservations BIA

Power transmission lines

Oil & Gas pipelines

100-year flood zone

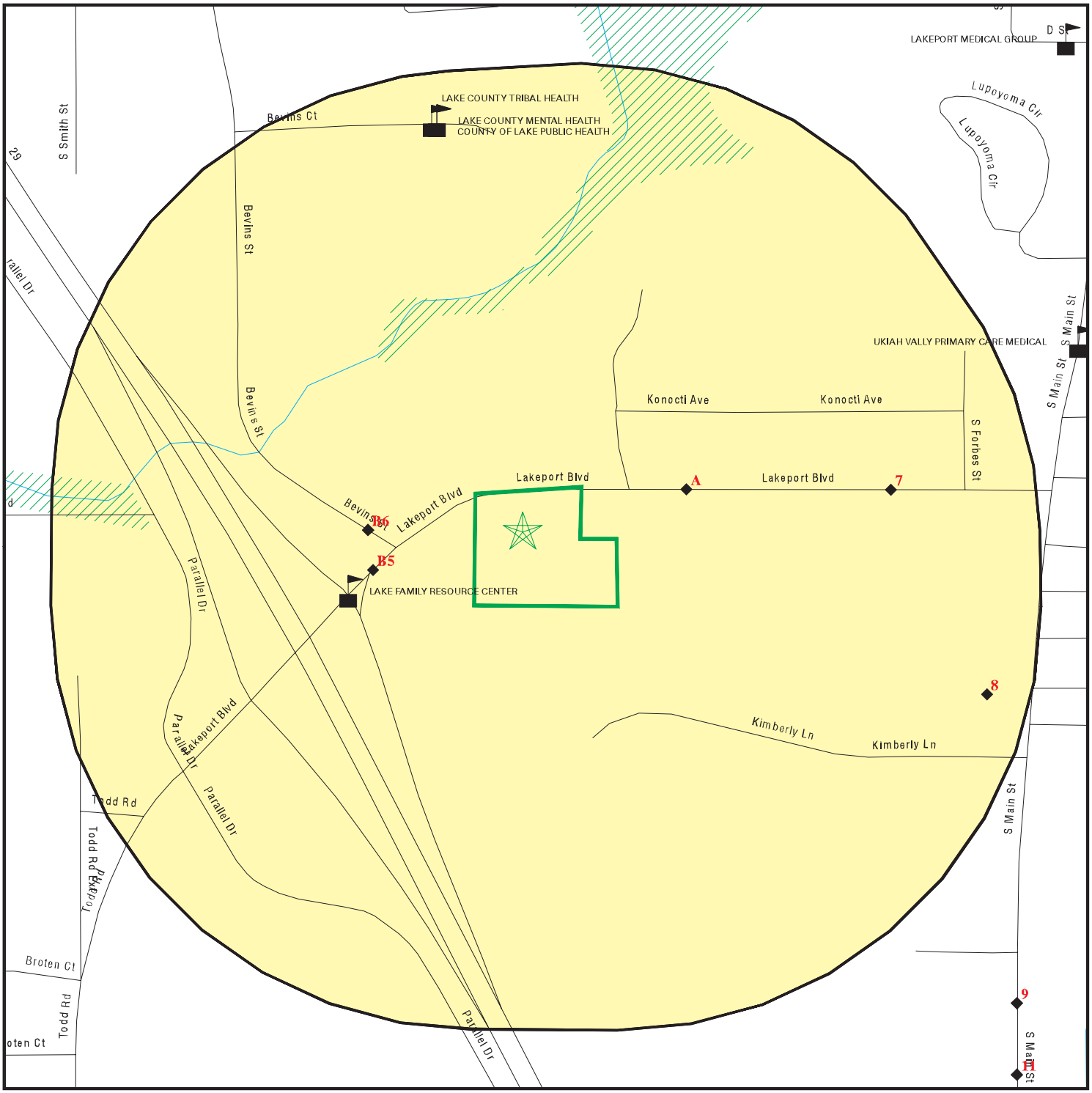
500-year flood zone

Areas of Concern

N

SITE NAME: 675 Lakeport Boulevard Site	CLIENT: URS Corporation
ADDRESS: 675 Lakeport Boulevard Lakeport CA 95453	CONTACT: Frank Gegunde INQUIRY #: 2622183.9s
LAT/LONG: 39.0343 / 122.9215	DATE: October 23, 2009 4:35 pm

DETAIL MAP - 2622183.9s



0 1/16 1/8 1/4 Miles

- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- Sensitive Receptors
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Oil & Gas pipelines
- 100-year flood zone
- 500-year flood zone
- Areas of Concern

SITE NAME: 675 Lakeport Boulevard Site	CLIENT: URS Corporation
ADDRESS: 675 Lakeport Boulevard Lakeport CA 95453	CONTACT: Frank Gegunde INQUIRY #: 2622183.9s
LAT/LONG: 39.0343 / 122.9215	DATE: October 23, 2009 4:35 pm

MAP FINDINGS SUMMARY

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
Federal NPL site list								
NPL		1.000	0	0	1	0	NR	1
Proposed NPL		1.000	0	0	0	0	NR	0
NPL LIENS		TP	NR	NR	NR	NR	NR	0
Federal Delisted NPL site list								
Delisted NPL		1.000	0	0	0	0	NR	0
Federal CERCLIS list								
CERCLIS		0.500	0	0	1	NR	NR	1
Federal CERCLIS NFRAP site List								
CERC-NFRAP		0.500	0	0	0	NR	NR	0
Federal RCRA CORRACTS facilities list								
CORRACTS		1.000	0	0	0	0	NR	0
Federal RCRA non-CORRACTS TSD facilities list								
RCRA-TSDF		0.500	0	0	0	NR	NR	0
Federal RCRA generators list								
RCRA-LQG		0.250	0	0	NR	NR	NR	0
RCRA-SQG		0.250	1	1	NR	NR	NR	2
RCRA-CESQG		0.250	0	0	NR	NR	NR	0
Federal institutional controls / engineering controls registries								
US ENG CONTROLS		0.500	0	0	0	NR	NR	0
US INST CONTROL		0.500	0	0	0	NR	NR	0
Federal ERNS list								
ERNS		TP	NR	NR	NR	NR	NR	0
State- and tribal - equivalent NPL								
RESPONSE		1.000	0	0	0	0	NR	0
State- and tribal - equivalent CERCLIS								
ENVIROSTOR		1.000	0	0	3	1	NR	4
State and tribal landfill and/or solid waste disposal site lists								
SWF/LF		0.500	1	0	0	NR	NR	1
State and tribal leaking storage tank lists								
LUST		0.500	2	0	8	NR	NR	10
SLIC		0.500	0	0	0	NR	NR	0
INDIAN LUST		0.500	0	0	0	NR	NR	0

MAP FINDINGS SUMMARY

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
State and tribal registered storage tank lists								
UST		0.250	1	0	NR	NR	NR	1
AST		0.250	0	0	NR	NR	NR	0
INDIAN UST		0.250	0	0	NR	NR	NR	0
State and tribal voluntary cleanup sites								
VCP		0.500	0	0	0	NR	NR	0
INDIAN VCP		0.500	0	0	0	NR	NR	0
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS		0.500	0	0	0	NR	NR	0
Local Lists of Landfill / Solid Waste Disposal Sites								
DEBRIS REGION 9		0.500	0	0	0	NR	NR	0
ODI		0.500	0	0	0	NR	NR	0
WMUDS/SWAT		0.500	0	0	0	NR	NR	0
SWRCY		0.500	0	0	1	NR	NR	1
HAULERS		TP	NR	NR	NR	NR	NR	0
INDIAN ODI		0.500	0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US CDL		TP	NR	NR	NR	NR	NR	0
HIST Cal-Sites		1.000	0	0	0	0	NR	0
SCH		0.250	0	0	NR	NR	NR	0
Toxic Pits		1.000	0	0	0	0	NR	0
CDL		TP	NR	NR	NR	NR	NR	0
US HIST CDL		TP	NR	NR	NR	NR	NR	0
Local Lists of Registered Storage Tanks								
CA FID UST		0.250	0	0	NR	NR	NR	0
HIST UST		0.250	2	1	NR	NR	NR	3
SWEEPS UST		0.250	1	0	NR	NR	NR	1
Local Land Records								
LIENS 2		TP	NR	NR	NR	NR	NR	0
LUCIS		0.500	0	0	0	NR	NR	0
LIENS		TP	NR	NR	NR	NR	NR	0
DEED		0.500	0	0	0	NR	NR	0
Records of Emergency Release Reports								
HMIRS		TP	NR	NR	NR	NR	NR	0
CHMIRS		TP	NR	NR	NR	NR	NR	0
LDS		TP	NR	NR	NR	NR	NR	0
MCS		TP	NR	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA-NonGen		0.250	0	0	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
DOT OPS		TP	NR	NR	NR	NR	NR	0
DOD		1.000	0	0	0	0	NR	0
FUDS		1.000	0	0	0	0	NR	0
CONSENT		1.000	0	0	0	0	NR	0
ROD		1.000	0	0	1	0	NR	1
UMTRA		0.500	0	0	0	NR	NR	0
MINES		0.250	0	0	NR	NR	NR	0
TRIS		TP	NR	NR	NR	NR	NR	0
TSCA		TP	NR	NR	NR	NR	NR	0
FTTS		TP	NR	NR	NR	NR	NR	0
HIST FTTS		TP	NR	NR	NR	NR	NR	0
SSTS		TP	NR	NR	NR	NR	NR	0
ICIS		TP	NR	NR	NR	NR	NR	0
PADS		TP	NR	NR	NR	NR	NR	0
MLTS		TP	NR	NR	NR	NR	NR	0
RADINFO		TP	NR	NR	NR	NR	NR	0
FINDS		TP	NR	NR	NR	NR	NR	0
RAATS		TP	NR	NR	NR	NR	NR	0
CA BOND EXP. PLAN		1.000	0	0	0	0	NR	0
CA WDS		TP	NR	NR	NR	NR	NR	0
NPDES		TP	NR	NR	NR	NR	NR	0
Cortese		0.500	0	0	0	NR	NR	0
HIST CORTESE		0.500	0	0	7	NR	NR	7
Notify 65		1.000	0	0	0	0	NR	0
DRYCLEANERS		0.250	0	0	NR	NR	NR	0
WIP		0.250	0	0	NR	NR	NR	0
HAZNET		TP	NR	NR	NR	NR	NR	0
EMI		TP	NR	NR	NR	NR	NR	0
INDIAN RESERV		1.000	0	0	0	0	NR	0
SCRD DRYCLEANERS		0.500	0	0	0	NR	NR	0
PCB TRANSFORMER		TP	NR	NR	NR	NR	NR	0
EDR PROPRIETARY RECORDS								
EDR Proprietary Records								
Manufactured Gas Plants		1.000	0	0	0	0	NR	0

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

NPL **SULPHUR BANK MERCURY MINE** **CERCLIS** **1000707971**
Region **SULPHUR BANK ROAD** **FINDS** **CAD980893275**
East **CLEARLAKE OAKS, CA 95422** **NPL**
1/4-1/2 **ROD**
2370 ft.

CERCLIS:

Site ID:	0902228
Federal Facility:	Not a Federal Facility
NPL Status:	Currently on the Final NPL
Non NPL Status:	Not reported

CERCLIS Site Contact Name(s):

Contact Name:	Not reported
Contact Tel:	Not reported
Contact Title:	92711
Contact Name:	Not reported
Contact Tel:	Not reported
Contact Title:	13002
Contact Name:	Not reported
Contact Tel:	Not reported
Contact Title:	92700
Contact Name:	Not reported
Contact Tel:	Not reported
Contact Title:	92704
Contact Name:	Not reported
Contact Tel:	Not reported
Contact Title:	92700

Site Description: INACTIVE SULPHUR +MERCURY MINE ON CLEAR LAKE IN NORTHERN CALIFORNIA

CERCLIS Assessment History:

Action:	DISCOVERY
Date Started:	Not reported
Date Completed:	4/1/1985 0:00:00
Priority Level:	Not reported
Action:	HRS PACKAGE
Date Started:	Not reported
Date Completed:	6/1/1987 0:00:00
Priority Level:	Not reported
Action:	PRELIMINARY ASSESSMENT
Date Started:	Not reported
Date Completed:	6/1/1987 0:00:00
Priority Level:	Higher priority for further assessment
Action:	SITE INSPECTION
Date Started:	Not reported
Date Completed:	6/1/1987 0:00:00
Priority Level:	Low priority for further assessment
Action:	PROPOSAL TO NPL
Date Started:	Not reported
Date Completed:	6/24/1988 0:00:00

SULPHUR BANK MERCURY MINE (Continued) **1000707971**

Priority Level: Not reported

Action: REMOVAL ASSESSMENT
Date Started: 8/23/1989 0:00:00
Date Completed: 8/23/1989 0:00:00
Priority Level: Not reported

Action: REMOVAL ASSESSMENT
Date Started: 7/20/1990 0:00:00
Date Completed: 7/20/1990 0:00:00
Priority Level: Not reported

Action: FINAL LISTING ON NPL
Date Started: Not reported
Date Completed: 8/30/1990 0:00:00
Priority Level: Not reported

Action: Notice Letters Issued
Date Started: Not reported
Date Completed: 11/29/1990 0:00:00
Priority Level: Not reported

Action: REMOVAL ASSESSMENT
Date Started: 1/31/1991 0:00:00
Date Completed: 1/31/1991 0:00:00
Priority Level: Not reported

Action: NPL RP SEARCH
Date Started: 8/17/1989 0:00:00
Date Completed: 4/26/1991 0:00:00
Priority Level: Not reported

Action: Notice Letters Issued
Date Started: Not reported
Date Completed: 3/30/1992 0:00:00
Priority Level: Not reported

Action: ADMINISTRATIVE RECORDS
Date Started: 5/27/1992 0:00:00
Date Completed: 5/27/1992 0:00:00
Priority Level: Admin Record Compiled for a Removal Event

Action: REMOVAL COMMUNITY RELATIONS
Date Started: 5/14/1992 0:00:00
Date Completed: 12/29/1992 0:00:00
Priority Level: Not reported

Action: REMOVAL
Date Started: 5/14/1992 0:00:00
Date Completed: 6/21/1993 0:00:00
Priority Level: Stabilized

Action: REMOVAL
Date Started: 8/30/1993 0:00:00
Date Completed: 10/30/1993 0:00:00
Priority Level: Partially Cleaned up

SULPHUR BANK MERCURY MINE (Continued) **1000707971**

Action: REMOVAL
Date Started: 1/14/1995 0:00:00
Date Completed: 6/23/1998 0:00:00
Priority Level: Cleaned up

Action: REMOVAL
Date Started: 2/16/1998 0:00:00
Date Completed: 6/23/1998 0:00:00
Priority Level: Stabilized

Action: ENGINEERING EVAL/COST ANALYSIS
Date Started: Not reported
Date Completed: 9/21/1999 0:00:00
Priority Level: Not reported

Action: REMOVAL
Date Started: 9/29/1999 0:00:00
Date Completed: 1/14/2000 0:00:00
Priority Level: Stabilized

Action: REMOVAL
Date Started: 9/11/2000 0:00:00
Date Completed: 1/18/2001 0:00:00
Priority Level: Stabilized

Action: ADMIN ORDER ON CONSENT
Date Started: Not reported
Date Completed: 12/8/2004 0:00:00
Priority Level: Not reported

Action: NPL RP SEARCH
Date Started: 3/6/1992 0:00:00
Date Completed: 4/12/2005 0:00:00
Priority Level: Not reported

Action: ENGINEERING EVAL/COST ANALYSIS
Date Started: 7/21/2005 0:00:00
Date Completed: 4/6/2006 0:00:00
Priority Level: Not reported

Action: REMOVAL
Date Started: 6/13/2006 0:00:00
Date Completed: 12/14/2006 0:00:00
Priority Level: Cleaned up

Action: REMOVAL
Date Started: 1/22/2008 0:00:00
Date Completed: 2/23/2008 0:00:00
Priority Level: Cleaned up

Action: NPL RP SEARCH
Date Started: 11/7/2007 0:00:00
Date Completed: 8/27/2008 0:00:00
Priority Level: Not reported

Action: COMBINED RI/FS
Date Started: 9/28/1990 0:00:00

SULPHUR BANK MERCURY MINE (Continued) **1000707971**

Date Completed: Not reported
Priority Level: Not reported

Action: COMBINED RI/FS
Date Started: 9/28/1990 0:00:00
Date Completed: Not reported
Priority Level: Not reported

Action: COMBINED RI/FS
Date Started: 11/18/1991 0:00:00
Date Completed: Not reported
Priority Level: Not reported

Action: TECHNICAL ASSISTANCE GRANT
Date Started: 3/8/2004 0:00:00
Date Completed: Not reported
Priority Level: Not reported

FINDS:

Registry ID: 110009329164

Environmental Interest/Information System
CERCLIS (Comprehensive Environmental Response, Compensation, and Liability Information System) is the Superfund database that is used to support management in all phases of the Superfund program. The system contains information on all aspects of hazardous waste sites, including an inventory of sites, planned and actual site activities, and financial information.

Registry ID: 110033618011

Environmental Interest/Information System
California Department of Toxic Substances Control EnviroStor System (DTSC-EnviroStor) is an online search and Geographic Information System (GIS) tool for identifying sites that have known contamination or sites for which there may be reasons to investigate further. The EnviroStor database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites.

NPL:
EPA ID: CAD980893275
EPA Region: 09
Federal: N
Final Date: 8/30/1990

Category Details:
NPL Status: Currently on the Final NPL
Category Description: Depth To Aquifer-<= 10 Feet
Category Value: 6

NPL Status: Currently on the Final NPL

SULPHUR BANK MERCURY MINE (Continued) **1000707971**

Category Description: Distance To Nearest Population-> 0 And <= 1/4 Mile
Category Value: 100

Site Details:
Site Name: SULPHUR BANK MERCURY MINE
Site Status: Final
Site Zip: 95422
Site City: CLEARLAKE
Site State: CA
Federal Site: No
Site County: LAKE
EPA Region: 09
Date Proposed: 06/24/88
Date Deleted: Not reported
Date Finalized: 08/30/90

Substance Details:
NPL Status: Currently on the Final NPL
Substance ID: Not reported
Substance: Not reported
CAS #: Not reported
Pathway: Not reported
Scoring: Not reported

NPL Status: Currently on the Final NPL
Substance ID: C460
Substance: MERCURY
CAS #: 7439-97-6
Pathway: GROUND WATER PATHWAY
Scoring: 4

NPL Status: Currently on the Final NPL
Substance ID: C460
Substance: MERCURY
CAS #: 7439-97-6
Pathway: SURFACE WATER PATHWAY
Scoring: 3

NPL Status: Currently on the Final NPL
Substance ID: D004
Substance: ARSENIC
CAS #: 7440-38-2
Pathway: GROUND WATER PATHWAY
Scoring: 4

NPL Status: Currently on the Final NPL
Substance ID: D004
Substance: ARSENIC
CAS #: 7440-38-2
Pathway: SURFACE WATER PATHWAY
Scoring: 3

Summary Details:

Conditions at proposal June 24, 1988): The Sulphur Bank Mercury SBM) Mine is on the east shore of the Oaks Arm of Clear Lake, in Clear Lake, Lake County, California. The area was initially mined for sulfur during 1865-68.

SULPHUR BANK MERCURY MINE (Continued) **1000707971**

Mercury ore wasmined by underground methods during 1899-1902 and 1915-18. The majority of the mercury ore was mined using open pit methods during 1922-47 and 1955-57. The mine, once one of the largest producers of mercury in California, has been inactive since 1957 and is presently owned by Bradley Mining Co. BMC) of San Francisco. Approximately 120 acres of tailings and an open, unlined mine pit called the Herman Pit) are on the property. The mine tailings extend into the Oaks Arm of Clear Lake along 1,320 feet of shoreline. The Herman Pit covers approximately 23 acres and is 750 feet upgradient of the lake. The pit is filled with water to a depth of 150 feet. The California Regional Water Quality Control Board CRWQCB) is coordinating an ongoing investigation of SBM. Department of Health Services, Department of Fish and Game, and CRWQCB analyses indicate that mercury is present in the tailings and in the biota and bottom sediments in the Oaks Arm of ClearLake. The levels of mercury in fish from Clear Lake led the State to issue an advisory on May 14, 1986 against consumption of the fish. The lake is a major recreational area. On March 13, 1987, CRWQCB informed BMC that the Herman Pit isregulated under the Toxic Pits Cleanup Act TPCA). Under the act, BMC is required to submit a Hydrogeologic Assessment Report HAR). The property owners are conducting a waste characteri ation study of the site prior to submitting a HAR to determine if the site may be exempt from the TPCA. On November 4, 1987, CRWQCB awarded a contract for a pollution abatement study of the Oaks Arm of Clear Lake and the adjacent mine site. The study is scheduled to be completed in early 1989.An estimated 4,700 people obtain drinking water from Clear Lake Oaks Water District wells about 1 mile from the site. Status August 30, 1990): The property owners submitted their HAR to CRWQCB in July 1988. CRWQCB exempted the HermanPit from TPCA in April 1990. CRWQCB s study of Clear Lake was completed in late 1989. It indicated that the largest continued input of mercury to Clear Lake is probably from erosion of waste rock and tailings into the lake.

Site Status Details:

NPL Status:	Final
Proposed Date:	06/24/1988
Final Date:	08/30/1990
Deleted Date:	Not reported

Narratives Details:

NPL Name:	SULPHUR BANK MERCURY MINE
City:	CLEARLAKE
State:	CA

ROD:

Full-text of USEPA Record of Decision(s) is available from EDR.

A1 **PACIFIC BELL TD-255/LKPTCA022** **UST** **U003779259**
NE **555 LAKEPORT BLVD** **N/A**
< 1/8 **LAKEPORT, CA 95453**
0.051 mi.
267 ft. **Site 1 of 4 in cluster A**

Relative:
Lower

Actual:
1350 ft.

UST:

Global ID:	4624
Latitude:	39.03463
Longitude:	-122.91951

A2
NE
< 1/8
0.051 mi.
267 ft.

AT&T
555 LAKEPORT BOULEVARD
LAKEPORT, CA 95453

Site 2 of 4 in cluster A

LUST **S108277126**
N/A

Relative:
Lower

Actual:
1350 ft.

LUST REG 5:

Region:	5
Status:	Case Closed
Case Number:	170114
Case Type:	Soil only
Substance:	DIESEL
Staff Initials:	GTM
Lead Agency:	Regional
Program:	LUST
MTBE Code:	N/A

A3
NE
< 1/8
0.051 mi.
267 ft.

AT&T
555 LAKEPORT BOULEVARD
LAKEPORT, CA 95453

Site 3 of 4 in cluster A

LUST **S108086954**
N/A

Relative:
Lower

Actual:
1350 ft.

LUST:

Region:	STATE
Global Id:	T0603315849
Latitude:	39.034643
Longitude:	-122.919696
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	2006-11-27 00:00:00
Lead Agency:	CENTRAL VALLEY RWQCB (REGION 5S)
Case Worker:	Not reported
Local Agency:	LAKE COUNTY
RB Case Number:	Not reported
LOC Case Number:	Not reported
File Location:	Not reported
Potential Media Affect:	Soil
Potential Contaminants of Concern:	Diesel
Site History:	Not reported

A4
NE
< 1/8
0.051 mi.
267 ft.

PACIFIC BELL
555 LAKEPORT BOULEVARD
LAKEPORT, CA 95453

Site 4 of 4 in cluster A

RCRA-SQG **1000251835**
FINDS **CAT080028863**
HAZNET
HIST UST
EMI
SWEEPS UST

Relative:
Lower

Actual:
1350 ft.

RCRA-SQG:

Date form received by agency:	09/01/1996
Facility name:	PACIFIC BELL
Facility address:	555 LAKEPORT BOULEVARD LAKEPORT, CA 95453
EPA ID:	CAT080028863
Mailing address:	3707 KINGS WAY SEC A-6 SACRAMENTO, CA 95821
Contact:	Not reported
Contact address:	Not reported

PACIFIC BELL (Continued) **1000251835**

	Not reported
Contact country:	Not reported
Contact telephone:	Not reported
Contact email:	Not reported
EPA Region:	09
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	THE PACIFIC TELEPHONE AND TELEGRAPH CO
Owner/operator address:	NOT REQUIRED NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(415) 555-1212
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Owner/operator name:	NOT REQUIRED
Owner/operator address:	NOT REQUIRED NOT REQUIRED, ME 99999
Owner/operator country:	Not reported
Owner/operator telephone:	(415) 555-1212
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	Unknown
Mixed waste (haz. and radioactive):	Unknown
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	Unknown
Furnace exemption:	Unknown
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No
Off-site waste receiver:	Commercial status unknown

Historical Generators:

Date form received by agency:	02/05/1981
Facility name:	PACIFIC BELL
Classification:	Large Quantity Generator

PACIFIC BELL (Continued) **1000251835**

Violation Status: No violations found

FINDS:

Registry ID: 110002954857

Environmental Interest/Information System

The NEI (National Emissions Inventory) database contains information on stationary and mobile sources that emit criteria air pollutants and their precursors, as well as hazardous air pollutants (HAPs).

California Hazardous Waste Tracking System - Datamart (HWTS-DATAMART) provides California with information on hazardous waste shipments for generators, transporters, and treatment, storage, and disposal facilities.

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

HAZNET:

Gepaid:	CAT080028863
Contact:	SHARON BAYLE/STAFF ASSOC
Telephone:	9258675741
Facility Addr2:	Not reported
Mailing Name:	Not reported
Mailing Address:	PO BOX 5095 RM 3E000
Mailing City,St,Zip:	SAN RAMON, CA 945830995
Gen County:	Lakes
TSD EPA ID:	CAD009452657
TSD County:	San Mateo
Waste Category:	Aqueous solution with 10% or more total organic residues
Disposal Method:	Recycler
Tons:	2.91
Facility County:	Not reported

HIST UST:

Region:	STATE
Facility ID:	00000057526
Facility Type:	Other
Other Type:	SIC 4800
Total Tanks:	0001
Contact Name:	E.J. KOEHLER
Telephone:	4155426758
Owner Name:	PACIFIC BELL
Owner Address:	370 THIRD STREET
Owner City,St,Zip:	SAN FRANCISCO, CA 94107

Tank Num:	001
Container Num:	1
Year Installed:	1970
Tank Capacity:	00001500
Tank Used for:	PRODUCT

PACIFIC BELL (Continued) **1000251835**

Type of Fuel: DIESEL
Tank Construction: Not reported
Leak Detection: None

EMI:

Year:	1996
County Code:	17
Air Basin:	LC
Facility ID:	214
Air District Name:	LAK
SIC Code:	4911
Air District Name:	LAKE COUNTY AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	1997
County Code:	17
Air Basin:	LC
Facility ID:	214
Air District Name:	LAK
SIC Code:	4911
Air District Name:	LAKE COUNTY AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	1998
County Code:	17
Air Basin:	LC
Facility ID:	214
Air District Name:	LAK
SIC Code:	4911
Air District Name:	LAKE COUNTY AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year: 1999

PACIFIC BELL (Continued) **1000251835**

County Code:	17
Air Basin:	LC
Facility ID:	214
Air District Name:	LAK
SIC Code:	4911
Air District Name:	LAKE COUNTY AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	2000
County Code:	17
Air Basin:	LC
Facility ID:	214
Air District Name:	LAK
SIC Code:	4911
Air District Name:	LAKE COUNTY AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	2001
County Code:	17
Air Basin:	LC
Facility ID:	214
Air District Name:	LAK
SIC Code:	4911
Air District Name:	LAKE COUNTY AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	2002
County Code:	17
Air Basin:	LC
Facility ID:	214
Air District Name:	LAK
SIC Code:	4911
Air District Name:	LAKE COUNTY AQMD

PACIFIC BELL (Continued) **1000251835**

Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	2003
County Code:	17
Air Basin:	LC
Facility ID:	214
Air District Name:	LAK
SIC Code:	4911
Air District Name:	LAKE COUNTY AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	2004
County Code:	17
Air Basin:	LC
Facility ID:	214
Air District Name:	LAK
SIC Code:	4911
Air District Name:	LAKE COUNTY AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0.01
Reactive Organic Gases Tons/Yr:	0.01
Carbon Monoxide Emissions Tons/Yr:	0.02
NOX - Oxides of Nitrogen Tons/Yr:	0.11
SOX - Oxides of Sulphur Tons/Yr:	0.01
Particulate Matter Tons/Yr:	0.01
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0.01

Year:	2005
County Code:	17
Air Basin:	LC
Facility ID:	214
Air District Name:	LAK
SIC Code:	4911
Air District Name:	LAKE COUNTY AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	.01
Reactive Organic Gases Tons/Yr:	.008367
Carbon Monoxide Emissions Tons/Yr:	.02
NOX - Oxides of Nitrogen Tons/Yr:	.11

PACIFIC BELL (Continued) **1000251835**

SOX - Oxides of Sulphur Tons/Yr:	.01
Particulate Matter Tons/Yr:	.01
Part. Matter 10 Micrometers & Smllr Tons/Yr:	.00976

Year:	2006
County Code:	17
Air Basin:	LC
Facility ID:	214
Air District Name:	LAK
SIC Code:	4911
Air District Name:	LAKE COUNTY AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	.01
Reactive Organic Gases Tons/Yr:	.008367
Carbon Monoxide Emissions Tons/Yr:	.02
NOX - Oxides of Nitrogen Tons/Yr:	.11
SOX - Oxides of Sulphur Tons/Yr:	.01
Particulate Matter Tons/Yr:	.01
Part. Matter 10 Micrometers & Smllr Tons/Yr:	.00976

SWEEPS UST:

Status:	A
Comp Number:	57526
Number:	9
Board Of Equalization:	44-001027
Ref Date:	Not reported
Act Date:	10-29-88
Created Date:	02-29-88
Tank Status:	A
Owner Tank Id:	1
Swrcb Tank Id:	17-000-057526-000001
Actv Date:	10-29-88
Capacity:	1500
Tank Use:	M.V. FUEL
Stg:	P
Content:	DIESEL
Number Of Tanks:	1

B5 **LAKE COUNTY DEPARTMENT OF AGRI** **HIST UST** **U001610369**
West **883 LAKEPORT BLVD** **EMI** **N/A**
< 1/8 **LAKEPORT, CA 95453**
0.060 mi.
316 ft. **Site 1 of 2 in cluster B**

Relative:
Lower

Actual:
1385 ft.

HIST UST:

Region:	STATE
Facility ID:	00000031035
Facility Type:	Other
Other Type:	OFFICE
Total Tanks:	0001
Contact Name:	DON TOMPKINS
Telephone:	7072632271
Owner Name:	LAKE COUNTY DEPARTMENT OF AGRI
Owner Address:	883 LAKEPORT BOULEVARD
Owner City,St,Zip:	LAKEPORT, CA 95453

LAKE COUNTY DEPARTMENT OF AGRI (Continued) **U001610369**

Tank Num:	001
Container Num:	1975 AG
Year Installed:	1975
Tank Capacity:	00001000
Tank Used for:	WASTE
Type of Fuel:	Not reported
Tank Construction:	4 inches
Leak Detection:	None

EMI:

Year:	2000
County Code:	17
Air Basin:	LC
Facility ID:	178
Air District Name:	LAK
SIC Code:	7261
Air District Name:	LAKE COUNTY AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	2001
County Code:	17
Air Basin:	LC
Facility ID:	178
Air District Name:	LAK
SIC Code:	7261
Air District Name:	LAKE COUNTY AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	2002
County Code:	17
Air Basin:	LC
Facility ID:	178
Air District Name:	LAK
SIC Code:	7261
Air District Name:	LAKE COUNTY AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0

LAKE COUNTY DEPARTMENT OF AGRI (Continued) **U001610369**

SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	2003
County Code:	17
Air Basin:	LC
Facility ID:	178
Air District Name:	LAK
SIC Code:	7261
Air District Name:	LAKE COUNTY AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0
Reactive Organic Gases Tons/Yr:	0
Carbon Monoxide Emissions Tons/Yr:	0
NOX - Oxides of Nitrogen Tons/Yr:	0
SOX - Oxides of Sulphur Tons/Yr:	0
Particulate Matter Tons/Yr:	0
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0

Year:	2004
County Code:	17
Air Basin:	LC
Facility ID:	178
Air District Name:	LAK
SIC Code:	7261
Air District Name:	LAKE COUNTY AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	0.01
Reactive Organic Gases Tons/Yr:	0.01
Carbon Monoxide Emissions Tons/Yr:	0.03
NOX - Oxides of Nitrogen Tons/Yr:	0.09
SOX - Oxides of Sulphur Tons/Yr:	0.004
Particulate Matter Tons/Yr:	0.01
Part. Matter 10 Micrometers & Smllr Tons/Yr:	0.01

Year:	2005
County Code:	17
Air Basin:	LC
Facility ID:	178
Air District Name:	LAK
SIC Code:	7261
Air District Name:	LAKE COUNTY AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	.01
Reactive Organic Gases Tons/Yr:	.006986
Carbon Monoxide Emissions Tons/Yr:	.03
NOX - Oxides of Nitrogen Tons/Yr:	.09
SOX - Oxides of Sulphur Tons/Yr:	.004
Particulate Matter Tons/Yr:	.01
Part. Matter 10 Micrometers & Smllr Tons/Yr:	.007

Year:	2006
County Code:	17

LAKE COUNTY DEPARTMENT OF AGRI (Continued) **U001610369**

Air Basin:	LC
Facility ID:	178
Air District Name:	LAK
SIC Code:	7261
Air District Name:	LAKE COUNTY AQMD
Community Health Air Pollution Info System:	Not reported
Consolidated Emission Reporting Rule:	Not reported
Total Organic Hydrocarbon Gases Tons/Yr:	.01
Reactive Organic Gases Tons/Yr:	.006986
Carbon Monoxide Emissions Tons/Yr:	.03
NOX - Oxides of Nitrogen Tons/Yr:	.09
SOX - Oxides of Sulphur Tons/Yr:	.004
Particulate Matter Tons/Yr:	.01
Part. Matter 10 Micrometers & Smllr Tons/Yr:	.007

B6 **LAKEPORT TRANSFER STATION** **SWF/LF** **S102360551**
West **910 BEVINS STREET** **N/A**
< 1/8 **LAKEPORT, CA**
0.063 mi.
333 ft. **Site 2 of 2 in cluster B**

Relative:
Lower

Actual:
1379 ft.

SWF/LF (SWIS):

Region:	STATE
Facility ID:	17-AA-0002
Lat/Long:	39.03455 / -122.9233
Owner Name:	County Of Lake
Owner Telephone:	7072621760
Owner Address:	Not reported
Owner Address2:	333 North Second Street
Owner City,St,Zip:	Lakeport, CA 95453
Operator:	County Of Lake
Operator Phone:	7072621760
Operator Address:	Not reported
Operator Address2:	333 North Second Street
Operator City,St,Zip:	Lakeport, CA 95453
Operator's Status:	Active
Permit Date:	11/3/1995
Permit Status:	Permitted
Permitted Acreage:	2
Activity:	Large Volume Transfer/Proc Facility
Regulation Status:	Permitted
Landuse Name:	Commercial
GIS Source:	Map
Category:	Transfer/Processing
Unit Number:	01
Inspection Frequency:	Monthly
Accepted Waste:	Mixed municipal
Closure Date:	Not reported
Closure Type:	Not reported
Disposal Acreage:	Not reported
Swisnumber:	17-AA-0002
Issue & Observations:	Lakeport, CA 95453
Program Type:	Not reported
Permitted Throughput with Units:	200
Actual Throughput with Units:	Tons/day
Permitted Capacity with Units:	200
Remaining Capacity:	Not reported
Remaining Capacity with Units:	Tons/day

7 **East** **1/8-1/4** **0.165 mi.** **869 ft.**	**BRUNO FOODS** **355 LAKEPORT BLVD** **LAKEPORT, CA 95453**	**RCRA-SQG** **FINDS** **HAZNET**	**1001217358** **CAR000032862**

Relative:
Lower

Actual:
1341 ft.

RCRA-SQG:

Date form received by agency:	10/20/1997
Facility name:	BRUNO FOODS
Facility address:	355 LAKEPORT BLVD LAKEPORT, CA 954535412
EPA ID:	CAR000032862
Contact:	RAY STARK
Contact address:	355 LAKEPORT BLVD LAKEPORT, CA 954535412
Contact country:	US
Contact telephone:	(707) 263-7337
Contact email:	Not reported
EPA Region:	09
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	WILLIAM BRUNETTI
Owner/operator address:	355 LAKEPORT BLVD LAKEPORT, CA 95453
Owner/operator country:	Not reported
Owner/operator telephone:	(707) 263-7337
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	Not reported
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	Unknown
Mixed waste (haz. and radioactive):	Unknown
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	Unknown
Furnace exemption:	Unknown
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No
Off-site waste receiver:	Commercial status unknown

Hazardous Waste Summary:

Waste code:	D011
Waste name:	SILVER

BRUNO FOODS (Continued) **1001217358**

Violation Status: No violations found

FINDS:

Registry ID: 110002919637

Environmental Interest/Information System
California Hazardous Waste Tracking System - Datamart (HWTS-DATAMART) provides California with information on hazardous waste shipments for generators, transporters, and treatment, storage, and disposal facilities.

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

HAZNET:

Gepaid:	CAR000032862
Contact:	WILLIAM BRUNETTI
Telephone:	7072637337
Facility Addr2:	Not reported
Mailing Name:	Not reported
Mailing Address:	355 LAKEPORT BLVD
Mailing City,St,Zip:	LAKEPORT, CA 954535412
Gen County:	Lakes
TSD EPA ID:	CA0000084517
TSD County:	Sacramento
Waste Category:	Photochemicals/photoprocessing waste
Disposal Method:	Transfer Station
Tons:	2.0016
Facility County:	Lakes

Gepaid:	CAR000032862
Contact:	TOM ROGERS SAFETY MGR
Telephone:	0
Facility Addr2:	Not reported
Mailing Name:	Not reported
Mailing Address:	355 LAKEPORT BLVD
Mailing City,St,Zip:	LAKEPORT, CA 954535412
Gen County:	Lakes
TSD EPA ID:	CA0000084517
TSD County:	Lakes
Waste Category:	Photochemicals/photoprocessing waste
Disposal Method:	Transfer Station
Tons:	0.62
Facility County:	Lakes

Gepaid:	CAR000032862
Contact:	TOM ROGERS SAFETY MGR
Telephone:	Not reported
Facility Addr2:	Not reported
Mailing Name:	Not reported
Mailing Address:	355 LAKEPORT BLVD

BRUNO FOODS (Continued) **1001217358**

Mailing City,St,Zip: LAKEPORT, CA 954535412
Gen County: Lakes
TSD EPA ID: CA0000084517
TSD County: Sacramento
Waste Category: Photochemicals/photoprocessing waste
Disposal Method: Transfer Station
Tons: 0.07
Facility County: Not reported

Gepaid: CAR000032862
Contact: WILLIAM BRUNETTI
Telephone: 7072637337
Facility Addr2: Not reported
Mailing Name: Not reported
Mailing Address: 355 LAKEPORT BLVD
Mailing City,St,Zip: LAKEPORT, CA 954535412
Gen County: Lakes
TSD EPA ID: CA0000084517
TSD County: Sacramento
Waste Category: Photochemicals/photoprocessing waste
Disposal Method: Transfer Station
Tons: .2502
Facility County: Lakes

Gepaid: CAR000032862
Contact: TOM ROGERS SAFETY MGR
Telephone: --
Facility Addr2: Not reported
Mailing Name: Not reported
Mailing Address: 355 LAKEPORT BLVD
Mailing City,St,Zip: LAKEPORT, CA 954535412
Gen County: Lakes
TSD EPA ID: Not reported
TSD County: Sacramento
Waste Category: Photochemicals/photoprocessing waste
Disposal Method: Transfer Station
Tons: 1
Facility County: Not reported

Click this hyperlink while viewing on your computer to access
3 additional CA_HAZNET: record(s) in the EDR Site Report.

8
ESE
1/8-1/4
0.224 mi.
1183 ft.

CLEAR LAKE MARINA **HIST UST** **U001610340**
1400 SO MAIN ST LAKEPORT-B-5 **N/A**
LAKEPORT, CA 95453

Relative:
Lower

Actual:
1337 ft.

HIST UST:
Region: STATE
Facility ID: 00000006831
Facility Type: Gas Station
Other Type: BOAT
Total Tanks: 0003
Contact Name: SAME
Telephone: 7072636645
Owner Name: CHARLES YOZSA
Owner Address: 1400 SO MAIN ST LAKEPORT-B-5

CLEAR LAKE MARINA (Continued) **U001610340**

Owner City,St,Zip: LAKEPORT, CA 95453

Tank Num: 001
Container Num: 1
Year Installed: 1975
Tank Capacity: 00001000
Tank Used for: PRODUCT
Type of Fuel: PREMIUM
Tank Construction: 10 gauge
Leak Detection: Stock Inventor

Tank Num: 002
Container Num: 2
Year Installed: 1975
Tank Capacity: 00000550
Tank Used for: PRODUCT
Type of Fuel: REGULAR
Tank Construction: 12 gauge
Leak Detection: None

Tank Num: 003
Container Num: 3
Year Installed: 1975
Tank Capacity: 00000550
Tank Used for: PRODUCT
Type of Fuel: REGULAR
Tank Construction: 10 gauge
Leak Detection: None

9
SE
1/4-1/2
0.332 mi.
1754 ft.

TESORO 67075
975 MAIN ST
LAKEPORT, CA 95453

HAZNET **S101295438**
LUST **N/A**
HIST CORTESE

Relative:
Lower

Actual:
1336 ft.

HAZNET:
Gepaid: CAL000252738
Contact: ROBERT HOOVER
Telephone: 2538968801
Facility Addr2: Not reported
Mailing Name: Not reported
Mailing Address: 3450 S 344TH ST STE 100
Mailing City,St,Zip: AUBURN, WA 980015931
Gen County: Lakes
TSD EPA ID: Not reported
TSD County: San Bernardino
Waste Category: Other organic solids
Disposal Method: Transfer Station
Tons: 0.88
Facility County: Not reported

LUST:
Region: STATE
Global Id: T0603300005
Latitude: 39.035484667
Longitude: -122.915624842
Case Type: LUST Cleanup Site

TESORO 67075 (Continued) **S101295438**

Status:	Open - Remediation
Status Date:	2006-08-10 00:00:00
Lead Agency:	CENTRAL VALLEY RWQCB (REGION 5S)
Case Worker:	Not reported
Local Agency:	LAKE COUNTY
RB Case Number:	Not reported
LOC Case Number:	Not reported
File Location:	Not reported
Potential Media Affect:	Aquifer used for drinking water supply
Potential Contaminants of Concern:	Gasoline
Site History:	Not reported

LUST REG 5:

Region:	5
Status:	Remediation Plan
Case Number:	170013
Case Type:	Drinking Water Aquifer affected
Substance:	GASOLINE
Staff Initials:	GTM
Lead Agency:	Regional
Program:	LUST
MTBE Code:	N/A

CORTESE:

Region:	CORTESE
Facility County Code:	17
Reg By:	LTNKA
Reg Id:	170013

10
WNW
1/4-1/2
0.342 mi.
1808 ft.

UNITED PARCEL SER CALAK
924 PARALLEL DR
LAKEPORT, CA 95453

LUST **S101307306**
NPDES **N/A**
CA WDS
HIST CORTESE

Relative:
Lower

Actual:
1370 ft.

LUST:

Region:	STATE
Global Id:	T0603300017
Latitude:	39.0370332
Longitude:	-122.9278095
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	1996-08-20 00:00:00
Lead Agency:	CENTRAL VALLEY RWQCB (REGION 5S)
Case Worker:	Not reported
Local Agency:	LAKE COUNTY
RB Case Number:	Not reported
LOC Case Number:	Not reported
File Location:	Not reported
Potential Media Affect:	Soil
Potential Contaminants of Concern:	Waste Oil / Motor / Hydraulic / Lubricating
Site History:	Not reported

LUST REG 5:

Region:	5
Status:	Case Closed

UNITED PARCEL SER CALAK (Continued) **S101307306**

Case Number: 170033
Case Type: Soil only
Substance: WASTE OIL
Staff Initials: GTM
Lead Agency: Regional
Program: LUST
MTBE Code: N/A

NPDES:

Npdes Number:	Not reported
Facility Status:	Active
Agency Id:	47846
Region:	5S
Regulatory Measure Id:	198507
Order No:	97-03-DWQ
Regulatory Measure Type:	Storm water industrial
Place Id:	269125
WDID:	5S17I002100
Program Type:	INDSTW
Adoption Date Of Regulatory Measure:	Not reported
Effective Date Of Regulatory Measure:	3/30/1992
Expiration Date Of Regulatory Measure:	Not reported
Termination Date Of Regulatory Measure:	Not reported
Discharge Name:	United Parcel Service
Discharge Address:	2222 17th St
Discharge City:	South San Francisco
Discharge State:	CA
Discharge Zip:	94103

CA WDS:

Facility ID:	5S 17I002100
Facility Type:	Industrial - Facility that treats and/or disposes of liquid or semisolid wastes from any servicing, producing, manufacturing or processing operation of whatever nature, including mining, gravel washing, geothermal operations, air conditioning, ship building and repairing, oil production, storage and disposal operations, water pumping.
Facility Status:	Active - Any facility with a continuous or seasonal discharge that is under Waste Discharge Requirements.
NPDES Number:	CAS000001 The 1st 2 characters designate the state. The remaining 7 are assigned by the Regional Board
Subregion:	0
Facility Telephone:	4157373758
Facility Contact:	STAN PREDKI
Agency Name:	UNITED PARCEL SERVICE
Agency Address:	2222 17TH ST
Agency City,St,Zip:	SAN FRANCISCO 94103
Agency Contact:	STAN PREDKI
Agency Telephone:	Not reported
Agency Type:	Private
SIC Code:	0
SIC Code 2:	Not reported
Primary Waste:	Not reported
Primary Waste Type:	Not reported
Secondary Waste:	Not reported
Secondary Waste Type:	Not reported

UNITED PARCEL SER CALAK (Continued) **S101307306**

Design Flow:	0
Baseline Flow:	0
Reclamation:	Not reported
POTW:	Not reported
Treat To Water:	Minor Threat to Water Quality. A violation of a regional board order should cause a relatively minor impairment of beneficial uses compared to a major or minor threat. Not: All nurds without a TTWQ will be considered a minor threat to water quality unless coded at a higher Level. A Zero (0) may be used to code those NURDS that are found to represent no threat to water quality.
Complexity:	Category C - Facilities having no waste treatment systems, such as cooling water dischargers or thosewho must comply through best management practices, facilities with passive waste treatment and disposal systems, such as septic systems with subsurface disposal, or dischargers having waste storage systems with land disposal such as dairy waste ponds.

CORTESE:

Region:	CORTESE
Facility County Code:	17
Reg By:	LTNKA
Reg Id:	170033

11
SE
1/4-1/2
0.363 mi.
1918 ft.

CHEVRON #1802 **LUST** **S102427018**
1050 MAIN ST S **HIST CORTESE** **N/A**
LAKEPORT, CA 95453

Relative:
Lower

Actual:
1336 ft.

LUST:

Region:	STATE
Global Id:	T0603300043
Latitude:	39.0345993
Longitude:	-122.915511
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	2001-01-16 00:00:00
Lead Agency:	CENTRAL VALLEY RWQCB (REGION 5S)
Case Worker:	Not reported
Local Agency:	LAKE COUNTY
RB Case Number:	Not reported
LOC Case Number:	Not reported
File Location:	Not reported
Potential Media Affect:	Aquifer used for drinking water supply
Potential Contaminants of Concern:	Gasoline
Site History:	Not reported

LUST REG 5:

Region:	5
Status:	Case Closed
Case Number:	170063
Case Type:	Drinking Water Aquifer affected
Substance:	GASOLINE
Staff Initials:	GTM
Lead Agency:	Regional
Program:	LUST
MTBE Code:	4

CHEVRON #1802 (Continued) **S102427018**

CORTESE:

Region:	CORTESE
Facility County Code:	17
Reg By:	LTNKA
Reg Id:	170063

C12 **LAKEPORT SHELL** **LUST** **S104403187**
NE **301 MAIN ST S** **HIST CORTESE** **N/A**
1/4-1/2 **LAKEPORT, CA 95453**
0.378 mi.
1995 ft. **Site 1 of 2 in cluster C**

Relative:
Lower

Actual:
1336 ft.

LUST:

Region:	STATE
Global Id:	T0603300069
Latitude:	39.040341935
Longitude:	-122.915274592
Case Type:	LUST Cleanup Site
Status:	Open - Verification Monitoring
Status Date:	2003-06-13 00:00:00
Lead Agency:	CENTRAL VALLEY RWQCB (REGION 5S)
Case Worker:	Not reported
Local Agency:	LAKE COUNTY
RB Case Number:	Not reported
LOC Case Number:	Not reported
File Location:	Not reported
Potential Media Affect:	Aquifer used for drinking water supply
Potential Contaminants of Concern:	Gasoline
Site History:	Not reported

LUST REG 5:

Region:	5
Status:	Post remedial action monitoring
Case Number:	170090
Case Type:	Drinking Water Aquifer affected
Substance:	GASOLINE
Staff Initials:	GTM
Lead Agency:	Regional
Program:	LUST
MTBE Code:	7

CORTESE:

Region:	CORTESE
Facility County Code:	17
Reg By:	LTNKA
Reg Id:	170090

C13 NE 1/4-1/2 0.389 mi. 2056 ft. | **SOPER-REESE COMMUNITY THEATER** | **LUST** | **S106859257**
275 SOUTH MAIN STREET | **N/A**
LAKEPORT, CA 95453

Site 2 of 2 in cluster C

Relative: Lower

Actual: 1333 ft.

LUST:

Region:	STATE
Global Id:	T0603346446
Latitude:	39.0406176666667
Longitude:	-122.915501333333
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	2008-12-12 00:00:00
Lead Agency:	CENTRAL VALLEY RWQCB (REGION 5S)
Case Worker:	Not reported
Local Agency:	LAKE COUNTY
RB Case Number:	Not reported
LOC Case Number:	Not reported
File Location:	Archived
Potential Media Affect:	Aquifer used for drinking water supply
Potential Contaminants of Concern:	Diesel, Waste Oil / Motor / Hydraulic / Lubricating
Site History:	Not reported

LUST REG 5:

Region:	5
Status:	Post remedial action monitoring
Case Number:	170111
Case Type:	Drinking Water Aquifer affected
Substance:	Not reported
Staff Initials:	GTM
Lead Agency:	Regional
Program:	LUST
MTBE Code:	N/A

---

14 SSE 1/4-1/2 0.398 mi. 2101 ft. | **LANGE BROTHERS CONSTRUCTION CO** | **LUST** | **S100851204**
301 INDUSTRIAL AVE | **HIST CORTESE** | **N/A**
LAKEPORT, CA 95453

Relative: Lower

Actual: 1341 ft.

LUST:

Region:	STATE
Global Id:	T0603300028
Latitude:	39.0281335
Longitude:	-122.9167741
Case Type:	LUST Cleanup Site
Status:	Completed - Case Closed
Status Date:	1994-10-19 00:00:00
Lead Agency:	CENTRAL VALLEY RWQCB (REGION 5S)
Case Worker:	Not reported
Local Agency:	LAKE COUNTY
RB Case Number:	Not reported
LOC Case Number:	Not reported
File Location:	Not reported
Potential Media Affect:	Aquifer used for drinking water supply
Potential Contaminants of Concern:	Gasoline
Site History:	Not reported

LANGE BROTHERS CONSTRUCTION CO (Continued) **S100851204**

LUST REG 5:

Region:	5
Status:	Case Closed
Case Number:	170047
Case Type:	Drinking Water Aquifer affected
Substance:	GASOLINE
Staff Initials:	GTM
Lead Agency:	Regional
Program:	LUST
MTBE Code:	N/A

CORTESE:

Region:	CORTESE
Facility County Code:	17
Reg By:	LTNKA
Reg Id:	170047

15
SE
1/4-1/2
0.417 mi.
2201 ft.

TOMRA PACIFIC INC **SWRCY** **S107138048**
1155 S MAIN ST **N/A**
LAKEPORT, CA 95453

Relative:
Lower

Actual:
1334 ft.

SWRCY:

Certification Status:	O
Facility Phone Number:	Not reported
Date facility became certified:	9/2/1998
Date facility began operating:	10/1/1998
Date facility ceased operating:	Still operating
Whether The Facility Is Grandfathered:	Not reported
Convenience Zone Where Faciltiy Located:	459
Convenience Zone Where Faciltiy Located 2:	4621
Convenience Zone Where Faciltiy Located 3:	5225
Convenience Zone Where Faciltiy Located 4:	Not Accepted
Convenience Zone Where Faciltiy Located 5:	Not Accepted
Convenience Zone Where Faciltiy Located 6:	Not Accepted
Convenience Zone Where Faciltiy Located 7:	Not Accepted
Aluminum Beverage Containers Redeemed:	AL
Glass Beverage Containers Redeemed:	GL
Plastic Beverage Containers Redeemed:	PL
Other mat beverage containers redeemed:	Not reported
Refillable Beverage Containers Redeemed:	Not reported

D16
NE
1/4-1/2
0.429 mi.
2267 ft.

TIME OIL CO/JACKPOT FOOD MART **HAZNET** **S101480526**
202 S MAIN ST **ENVIROSTOR** **N/A**
LAKEPORT, CA 95453

Site 1 of 5 in cluster D

Relative:
Lower

Actual:
1335 ft.

HAZNET:

Gepaid:	CAL000264271
Contact:	WALTER SPRAGUE GENERAL MANAGER
Telephone:	2062864505
Facility Addr2:	Not reported
Mailing Name:	Not reported

TIME OIL CO/JACKPOT FOOD MART (Continued) **S101480526**

Mailing Address: 2737 W COMMADORE WAY
Mailing City,St,Zip: SEATTLE, WA 981991257
Gen County: Lakes
TSD EPA ID: CAD028409019
TSD County: Los Angeles
Waste Category: Unspecified organic liquid mixture
Disposal Method: Transfer Station
Tons: Not reported
Facility County: Not reported

Gepaid: CAC001040032
Contact: TIME OIL CO
Telephone: 0000000000
Facility Addr2: Not reported
Mailing Name: Not reported
Mailing Address: 2737 W COMMADORE WAY
Mailing City,St,Zip: SEATTLE, WA 981991233
Gen County: Lakes
TSD EPA ID: CAD043260702
TSD County: San Mateo
Waste Category: Unspecified oil-containing waste
Disposal Method: Recycler
Tons: .6880
Facility County: Lakes

ENVIROSTOR:
Site Type: Evaluation
Site Type Detailed: Evaluation
Acres: 1
NPL: NO
Regulatory Agencies: NONE SPECIFIED
Lead Agency: NONE SPECIFIED
Program Manager: Not reported
Supervisor: Referred - Not Assigned
Division Branch: Sacramento
Facility ID: 17510002
Site Code: Not reported
Assembly: 01
Senate: 02
Special Program: * Rural County Survey Program
Status: Refer: RWQCB
Status Date: 2008-12-31 00:00:00
Restricted Use: NO
Funding: Not reported
Latitude: 39.0411134926845
Longitude: -122.914905087341
Alias Name: 17510010
Alias Type: Envirostor ID Number
Alias Name: Jackpot Station
Alias Type: Alternate Name
Alias Name: 17510002
Alias Type: Envirostor ID Number

APN: NONE SPECIFIED
APN Description: Not reported

Completed Info:

TIME OIL CO/JACKPOT FOOD MART (Continued) **S101480526**

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: * Discovery
Completed Date: 1988-02-25 00:00:00

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Screening
Completed Date: 1988-07-14 00:00:00

Confirmed: NONE SPECIFIED
Confirmed Description: Not reported
Future Area Name: Not reported
Future Sub Area Name: Not reported
Future Document Type: Not reported
Future Due Date: Not reported
Media Affected: NONE SPECIFIED
Media Affected Desc: Not reported

Management:
Management Required: NONE SPECIFIED
Management Required Desc: Not reported
Potential: NONE SPECIFIED
Potenital Description: Not reported
Schedule Area Name: Not reported
Schedule Sub Area Name: Not reported
Schedule Document Type: Not reported
Schedule Due Date: Not reported
Schedule Revised Date: Not reported
PastUse: NONE SPECIFIED

D17 **JACKPOT FOOD MART** **LUST** **S104164499**
NE **202 MAIN ST S** **HIST CORTESE** **N/A**
1/4-1/2 **LAKEPORT, CA 95453**
0.429 mi.
2267 ft. **Site 2 of 5 in cluster D**

Relative:
Lower

Actual:
1335 ft.

LUST:
Region: STATE
Global Id: T0603300001
Latitude: 39.0402761
Longitude: -122.9160671
Case Type: LUST Cleanup Site
Status: Completed - Case Closed
Status Date: 1998-12-09 00:00:00
Lead Agency: CENTRAL VALLEY RWQCB (REGION 5S)
Case Worker: Not reported
Local Agency: LAKE COUNTY
RB Case Number: Not reported
LOC Case Number: Not reported
File Location: Not reported
Potential Media Affect: Surface water
Potential Contaminants of Concern: Gasoline
Site History: Not reported

LUST REG 5:
Region: 5
Status: Case Closed

JACKPOT FOOD MART (Continued) **S104164499**

Case Number: 170003
Case Type: Surface Water
Substance: GASOLINE
Staff Initials: GTM
Lead Agency: Regional
Program: LUST
MTBE Code: N/A

CORTESE:
Region: CORTESE
Facility County Code: 17
Reg By: LTNKA
Reg Id: 170003

D18 **AN-LEE** **ENVIROSTOR** **S100714259**
NE **201 S MAIN ST** **N/A**
1/4-1/2 **LAKEPORT, CA 95453**
0.429 mi.
2267 ft. **Site 3 of 5 in cluster D**

Relative:
Lower

Actual:
1335 ft.

ENVIROSTOR:
Site Type: Evaluation
Site Type Detailed: Evaluation
Acres: 1
NPL: NO
Regulatory Agencies: NONE SPECIFIED
Lead Agency: NONE SPECIFIED
Program Manager: Not reported
Supervisor: Referred - Not Assigned
Division Branch: Sacramento
Facility ID: 17510005
Site Code: Not reported
Assembly: 01
Senate: 02
Special Program: * Rural County Survey Program
Status: Refer: RWQCB
Status Date: 2008-12-31 00:00:00
Restricted Use: NO
Funding: Not reported
Latitude: 39.0410896750381
Longitude: -122.915440804965
Alias Name: T0603300008
Alias Type: GeoTracker Global ID
Alias Name: Exxon
Alias Type: Alternate Name
Alias Name: 17510005
Alias Type: Envirostor ID Number

APN: NONE SPECIFIED
APN Description: Not reported

Completed Info:
Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: * Discovery
Completed Date: 1988-05-19 00:00:00

Completed Area Name: PROJECT WIDE

AN-LEE (Continued) **S100714259**

Completed Sub Area Name: Not reported
Completed Document Type: * Discovery
Completed Date: 1988-02-25 00:00:00

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Screening
Completed Date: 1988-07-14 00:00:00

Confirmed: NONE SPECIFIED
Confirmed Description: Not reported
Future Area Name: Not reported
Future Sub Area Name: Not reported
Future Document Type: Not reported
Future Due Date: Not reported
Media Affected: NONE SPECIFIED
Media Affected Desc: Not reported

Management:
Management Required: NONE SPECIFIED
Management Required Desc: Not reported
Potential: NONE SPECIFIED
Potenital Description: Not reported
Schedule Area Name: Not reported
Schedule Sub Area Name: Not reported
Schedule Document Type: Not reported
Schedule Due Date: Not reported
Schedule Revised Date: Not reported
PastUse: NONE SPECIFIED

D19 **EXXON** **LUST** **S102429340**
NE **201 MAIN ST S** **HIST CORTESE** **N/A**
1/4-1/2 **LAKEPORT, CA 95453**
0.429 mi.
2267 ft. **Site 4 of 5 in cluster D**

Relative:
Lower

Actual:
1335 ft.

LUST:
Region: STATE
Global Id: T0603300008
Latitude: 39.0402761
Longitude: -122.9160671
Case Type: LUST Cleanup Site
Status: Completed - Case Closed
Status Date: 2006-03-23 00:00:00
Lead Agency: CENTRAL VALLEY RWQCB (REGION 5S)
Case Worker: Not reported
Local Agency: LAKE COUNTY
RB Case Number: Not reported
LOC Case Number: Not reported
File Location: Not reported
Potential Media Affect: Aquifer used for drinking water supply
Potential Contaminants of Concern: Gasoline
Site History: Not reported

LUST REG 5:
Region: 5
Status: Case Closed
Case Number: 170019

EXXON (Continued) **S102429340**

Case Type: Drinking Water Aquifer affected
Substance: GASOLINE
Staff Initials: GTM
Lead Agency: Regional
Program: LUST
MTBE Code: N/A

CORTESE:
Region: CORTESE
Facility County Code: 17
Reg By: LTNKA
Reg Id: 170019

D20 **JACKPOT STATION** **ENVIROSTOR** **S101480529**
NE **202 S MAIN** **N/A**
1/4-1/2 **LAKEPORT, CA 95453**
0.429 mi.
2267 ft. **Site 5 of 5 in cluster D**

Relative:
Lower

Actual:
1335 ft.

ENVIROSTOR:
Site Type: Evaluation
Site Type Detailed: Evaluation
Acres: 1
NPL: NO
Regulatory Agencies: NONE SPECIFIED
Lead Agency: NONE SPECIFIED
Program Manager: Not reported
Supervisor: Referred - Not Assigned
Division Branch: Sacramento
Facility ID: 17510010
Site Code: Not reported
Assembly: 01
Senate: 02
Special Program: * Rural County Survey Program
Status: Refer: RWQCB
Status Date: 2008-12-31 00:00:00
Restricted Use: NO
Funding: Not reported
Latitude: 39.0411134926845
Longitude: -122.914905087341
Alias Name: 17510002
Alias Type: Envirostor ID Number
Alias Name: T0603300001
Alias Type: GeoTracker Global ID
Alias Name: Jackpot Food Mart
Alias Type: Alternate Name
Alias Name: Time Oil Company
Alias Type: Alternate Name
Alias Name: 17510010
Alias Type: Envirostor ID Number

APN: NONE SPECIFIED
APN Description: Not reported

Completed Info:
Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: * Discovery

JACKPOT STATION (Continued) **S101480529**

Completed Date: 1988-02-25 00:00:00

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Site Screening
Completed Date: 1988-07-13 00:00:00

Confirmed: NONE SPECIFIED
Confirmed Description: Not reported
Future Area Name: Not reported
Future Sub Area Name: Not reported
Future Document Type: Not reported
Future Due Date: Not reported
Media Affected: NONE SPECIFIED
Media Affected Desc: Not reported

Management:
Management Required: NONE SPECIFIED
Management Required Desc: Not reported
Potential: NONE SPECIFIED
Potenital Description: Not reported
Schedule Area Name: Not reported
Schedule Sub Area Name: Not reported
Schedule Document Type: Not reported
Schedule Due Date: Not reported
Schedule Revised Date: Not reported
PastUse: NONE SPECIFIED

21
NW
1/2-1
0.551 mi.
2911 ft.

PARKSIDE SUBDIVISION **VCP** **S108054453**
1453 MARTIN STREET **ENVIROSTOR** **N/A**
LAKEPORT, CA 95453

Relative:
Higher

Actual:
1396 ft.

VCP:
Facility ID: 60000339
Site Type: Voluntary Cleanup
Site Type Detail: Voluntary Cleanup
Acres: 22.4
National Priorities List: NO
Cleanup Oversight Agencies: SMBRP, LAKE COUNTY
Lead Agency: SMBRP
Lead Agency Description: DTSC - Site Mitigation And Brownfield Reuse Program
Project Manager: TAMI TREARSE
Supervisor: Fernando A. Amador
Division Branch: Sacramento
Site Code: 101792
Assembly: 01
Senate: 02
Special Programs Code: Voluntary Cleanup Program
Status: No Further Action
Status Date: 2007-03-27 00:00:00
Restricted Use: NO
Funding: Responsible Party
Lat/Long: 39.0384695239589 / -122.932305347295
Alias Name: 110033610466
Alias Type: EPA (FRS #)
Alias Name: 101792

PARKSIDE SUBDIVISION (Continued) **S108054453**

Alias Type: Project Code (Site Code)
Alias Name: 60000339
Alias Type: Envirostor ID Number

APN: NONE SPECIFIED
APN Description: Not reported

Completed Info:
Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Voluntary Cleanup Agreement
Completed Date: 2006-06-16 00:00:00

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 2007-03-27 00:00:00

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Preliminary Endangerment Assessment Report
Completed Date: 2007-03-27 00:00:00

Confirmed: 30001
Confirmed Description: Arsenic
Future Area Name: Not reported
Future Sub Area Name: Not reported
Future Document Type: Not reported
Future Due Date: Not reported
Media Affected: 30001
Media Affected Desc: Not reported

Management:
Management Required: NONE SPECIFIED
Management Required Desc: Not reported
Potential: SOIL
Potenital Description: Not reported
Schedule Area Name: Not reported
Schedule Sub Area Name: Not reported
Schedule Document Type: Not reported
Schedule Due Date: Not reported
Schedule Revised Date: Not reported
PastUse: AGRICULTURAL - ORCHARD

ENVIROSTOR:
Site Type: Voluntary Cleanup
Site Type Detailed: Voluntary Cleanup
Acres: 22.4
NPL: NO
Regulatory Agencies: SMBRP, LAKE COUNTY
Lead Agency: SMBRP
Program Manager: TAMI TREARSE
Supervisor: Fernando A. Amador
Division Branch: Sacramento
Facility ID: 60000339
Site Code: 101792
Assembly: 01
Senate: 02

PARKSIDE SUBDIVISION (Continued) **S108054453**

Special Program: Voluntary Cleanup Program
Status: No Further Action
Status Date: 2007-03-27 00:00:00
Restricted Use: NO
Funding: Responsible Party
Latitude: 39.0384695239589
Longitude: -122.932305347295
Alias Name: 110033610466
Alias Type: EPA (FRS #)
Alias Name: 101792
Alias Type: Project Code (Site Code)
Alias Name: 60000339
Alias Type: Envirostor ID Number

APN: NONE SPECIFIED
APN Description: Not reported

Completed Info:
Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Voluntary Cleanup Agreement
Completed Date: 2006-06-16 00:00:00

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Correspondence
Completed Date: 2007-03-27 00:00:00

Completed Area Name: PROJECT WIDE
Completed Sub Area Name: Not reported
Completed Document Type: Preliminary Endangerment Assessment Report
Completed Date: 2007-03-27 00:00:00

Confirmed: 30001
Confirmed Description: Arsenic
Future Area Name: Not reported
Future Sub Area Name: Not reported
Future Document Type: Not reported
Future Due Date: Not reported
Media Affected: 30001
Media Affected Desc: Not reported

Management:
Management Required: NONE SPECIFIED
Management Required Desc: Not reported
Potential: SOIL
Potenital Description: Not reported
Schedule Area Name: Not reported
Schedule Sub Area Name: Not reported
Schedule Document Type: Not reported
Schedule Due Date: Not reported
Schedule Revised Date: Not reported
PastUse: AGRICULTURAL - ORCHARD

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
LAKEPORT	A100324015	GRANITE HWY. 175 QUARRY	4220 HIGHWAY 175	95453	AST
LAKEPORT	S106230298	WILLIAMS TANK LINES HIGHWAY 29 ACC	HIGHWAY 29, BETWEEN HIGHWAY 17	95453	SLIC
LAKEPORT	S100224266	TRANSFER STATION	BEVINS ST	95453	LUST, HIST CORTESE
LAKEPORT	91209999	LAKEPORT LAGOONS MARINA **	LAKEPORT LAGOONS MARINA **		ERNS
LAKEPORT	1012085731	CITY OF LAKEPORT WWTP	2800 LINDA LANE	95453	FINDS
LAKEPORT	1008210750	LAKEPORT WASTEWTR TREATMNT FAC	795 LINDA LANE	95453	FINDS
LAKEPORT	U003779275	LAKEPORT CHEVRON	1050 MAIN ST	95453	UST
LAKEPORT	1008040044	LAKE COUNTY CSA 21 - NORTH LAKEPOR	230A MAIN STREET	95453	FINDS
LAKEPORT	S108087174	PETES AUTOMOTIVE	1665 MAIN STREET	95453	LUST
LAKEPORT	S108147314	PETES AUTOMOTIVE	1665 MAIN STREET	95453	LUST
LAKEPORT	S109448083	LAKEPORT MS4 PHASE II	255 PARK	95453	NPDES
LAKEPORT	1006838838	COBB MOUNTAIN DUMP SITE	8583 SULPHER CREEK ROAD	95453	FINDS
LAKEPORT	2008884438	WELL SITE NAME	WELL SITE NAME		ERNS

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 06/29/2009
Date Data Arrived at EDR: 07/31/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 52

Source: EPA
Telephone: N/A
Last EDR Contact: 10/14/2009
Next Scheduled EDR Contact: 01/25/2010
Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 6
Telephone: 214-655-6659

EPA Region 3
Telephone 215-814-5418

EPA Region 7
Telephone: 913-551-7247

EPA Region 4
Telephone 404-562-8033

EPA Region 8
Telephone: 303-312-6774

EPA Region 5
Telephone 312-886-6686

EPA Region 9
Telephone: 415-947-4246

EPA Region 10
Telephone 206-553-8665

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 06/29/2009
Date Data Arrived at EDR: 07/31/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 52

Source: EPA
Telephone: N/A
Last EDR Contact: 10/14/2009
Next Scheduled EDR Contact: 01/25/2010
Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 08/17/2009
Next Scheduled EDR Contact: 11/16/2009
Data Release Frequency: No Update Planned

Federal Delisted NPL site list

DELISTED NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 06/29/2009	Source: EPA
Date Data Arrived at EDR: 07/31/2009	Telephone: N/A
Date Made Active in Reports: 09/21/2009	Last EDR Contact: 10/14/2009
Number of Days to Update: 52	Next Scheduled EDR Contact: 01/25/2010
	Data Release Frequency: Quarterly

Federal CERCLIS list

CERCLIS: Comprehensive Environmental Response, Compensation, and Liability Information System

CERCLIS contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). CERCLIS contains sites which are either proposed to or on the National Priorities List (NPL) and sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 06/30/2009	Source: EPA
Date Data Arrived at EDR: 08/11/2009	Telephone: 703-412-9810
Date Made Active in Reports: 09/21/2009	Last EDR Contact: 09/30/2009
Number of Days to Update: 41	Next Scheduled EDR Contact: 01/11/2010
	Data Release Frequency: Quarterly

Federal CERCLIS NFRAP site List

CERCLIS-NFRAP: CERCLIS No Further Remedial Action Planned

Archived sites are sites that have been removed and archived from the inventory of CERCLIS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list this site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site.

Date of Government Version: 06/23/2009	Source: EPA
Date Data Arrived at EDR: 09/02/2009	Telephone: 703-412-9810
Date Made Active in Reports: 09/21/2009	Last EDR Contact: 09/09/2009
Number of Days to Update: 19	Next Scheduled EDR Contact: 12/14/2009
	Data Release Frequency: Quarterly

Federal RCRA CORRACTS facilities list

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 06/30/2009	Source: EPA
Date Data Arrived at EDR: 07/01/2009	Telephone: 800-424-9346
Date Made Active in Reports: 09/21/2009	Last EDR Contact: 08/31/2009
Number of Days to Update: 82	Next Scheduled EDR Contact: 11/30/2009
	Data Release Frequency: Quarterly

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF: RCRA - Transporters, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 11/12/2008
Date Data Arrived at EDR: 11/18/2008
Date Made Active in Reports: 03/16/2009
Number of Days to Update: 118

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 10/07/2009
Next Scheduled EDR Contact: 01/18/2010
Data Release Frequency: Quarterly

Federal RCRA generators list

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 11/12/2008
Date Data Arrived at EDR: 11/18/2008
Date Made Active in Reports: 03/16/2009
Number of Days to Update: 118

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 10/07/2009
Next Scheduled EDR Contact: 01/18/2010
Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 11/12/2008
Date Data Arrived at EDR: 11/18/2008
Date Made Active in Reports: 03/16/2009
Number of Days to Update: 118

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 10/07/2009
Next Scheduled EDR Contact: 01/18/2010
Data Release Frequency: Quarterly

RCRA-CESQG: RCRA - Conditionally Exempt Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 11/12/2008
Date Data Arrived at EDR: 11/18/2008
Date Made Active in Reports: 03/16/2009
Number of Days to Update: 118

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 10/07/2009
Next Scheduled EDR Contact: 01/18/2010
Data Release Frequency: Varies

Federal institutional controls / engineering controls registries

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 03/31/2009
Date Data Arrived at EDR: 04/22/2009
Date Made Active in Reports: 05/05/2009
Number of Days to Update: 13

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 09/18/2009
Next Scheduled EDR Contact: 12/28/2009
Data Release Frequency: Varies

US INST CONTROL: Sites with Institutional Controls

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 03/31/2009
Date Data Arrived at EDR: 04/22/2009
Date Made Active in Reports: 05/05/2009
Number of Days to Update: 13

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 09/18/2009
Next Scheduled EDR Contact: 12/28/2009
Data Release Frequency: Varies

Federal ERNS list

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 05/15/2009
Date Data Arrived at EDR: 07/21/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 62

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 10/06/2009
Next Scheduled EDR Contact: 01/18/2010
Data Release Frequency: Annually

State- and tribal - equivalent NPL

RESPONSE: State Response Sites

Identifies confirmed release sites where DTSC is involved in remediation, either in a lead or oversight capacity. These confirmed release sites are generally high-priority and high potential risk.

Date of Government Version: 08/27/2009
Date Data Arrived at EDR: 08/27/2009
Date Made Active in Reports: 09/18/2009
Number of Days to Update: 22

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 08/27/2009
Next Scheduled EDR Contact: 11/23/2009
Data Release Frequency: Quarterly

State- and tribal - equivalent CERCLIS

ENVIROSTOR: EnviroStor Database

The Department of Toxic Substances Control's (DTSC's) Site Mitigation and Brownfields Reuse Program's (SMBRP's) EnviroStor database identifes sites that have known contamination or sites for which there may be reasons to investigate further. The database includes the following site types: Federal Superfund sites (National Priorities List (NPL)); State Response, including Military Facilities and State Superfund; Voluntary Cleanup; and School sites. EnviroStor provides similar information to the information that was available in CalSites, and provides additional site information, including, but not limited to, identification of formerly-contaminated properties that have been released for reuse, properties where environmental deed restrictions have been recorded to prevent inappropriate land uses, and risk characterization information that is used to assess potential impacts to public health and the environment at contaminated sites.

Date of Government Version: 08/27/2009
Date Data Arrived at EDR: 08/27/2009
Date Made Active in Reports: 09/18/2009
Number of Days to Update: 22

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 08/27/2009
Next Scheduled EDR Contact: 11/23/2009
Data Release Frequency: Quarterly

State and tribal landfill and/or solid waste disposal site lists

SWF/LF (SWIS): Solid Waste Information System

Active, Closed and Inactive Landfills. SWF/LF records typically contain an inve ntory of solid waste disposal facilities or landfills. These may be active or i nactive facilities or open dumps that failed to meet RCRA Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 09/02/2009
Date Data Arrived at EDR: 09/04/2009
Date Made Active in Reports: 09/18/2009
Number of Days to Update: 14

Source: Integrated Waste Management Board
Telephone: 916-341-6320
Last EDR Contact: 09/04/2009
Next Scheduled EDR Contact: 12/07/2009
Data Release Frequency: Quarterly

State and tribal leaking storage tank lists

LUST REG 1: Active Toxic Site Investigation
Del Norte, Humboldt, Lake, Mendocino, Modoc, Siskiyou, Sonoma, Trinity counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/01/2001
Date Data Arrived at EDR: 02/28/2001
Date Made Active in Reports: 03/29/2001
Number of Days to Update: 29

Source: California Regional Water Quality Control Board North Coast (1)
Telephone: 707-570-3769
Last EDR Contact: 08/17/2009
Next Scheduled EDR Contact: 11/16/2009
Data Release Frequency: No Update Planned

LUST REG 8: Leaking Underground Storage Tanks
California Regional Water Quality Control Board Santa Ana Region (8). For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 02/14/2005
Date Data Arrived at EDR: 02/15/2005
Date Made Active in Reports: 03/28/2005
Number of Days to Update: 41

Source: California Regional Water Quality Control Board Santa Ana Region (8)
Telephone: 909-782-4496
Last EDR Contact: 10/16/2009
Next Scheduled EDR Contact: 02/01/2010
Data Release Frequency: Varies

LUST REG 7: Leaking Underground Storage Tank Case Listing
Leaking Underground Storage Tank locations. Imperial, Riverside, San Diego, Santa Barbara counties.

Date of Government Version: 02/26/2004
Date Data Arrived at EDR: 02/26/2004
Date Made Active in Reports: 03/24/2004
Number of Days to Update: 27

Source: California Regional Water Quality Control Board Colorado River Basin Region (7)
Telephone: 760-776-8943
Last EDR Contact: 08/17/2009
Next Scheduled EDR Contact: 11/16/2009
Data Release Frequency: No Update Planned

LUST REG 5: Leaking Underground Storage Tank Database
Leaking Underground Storage Tank locations. Alameda, Alpine, Amador, Butte, Colusa, Contra Costa, Calveras, El Dorado, Fresno, Glenn, Kern, Kings, Lake, Lassen, Madera, Mariposa, Merced, Modoc, Napa, Nevada, Placer, Plumas, Sacramento, San Joaquin, Shasta, Solano, Stanislaus, Sutter, Tehama, Tulare, Tuolumne, Yolo, Yuba counties.

Date of Government Version: 07/01/2008
Date Data Arrived at EDR: 07/22/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 9

Source: California Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-4834
Last EDR Contact: 10/05/2009
Next Scheduled EDR Contact: 01/18/2010
Data Release Frequency: Quarterly

LUST REG 4: Underground Storage Tank Leak List
Los Angeles, Ventura counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35

Source: California Regional Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6710
Last EDR Contact: 09/14/2009
Next Scheduled EDR Contact: 12/21/2009
Data Release Frequency: No Update Planned

LUST REG 2: Fuel Leak List
Leaking Underground Storage Tank locations. Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, Sonoma counties.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: California Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-622-2433
Last EDR Contact: 09/23/2009
Next Scheduled EDR Contact: 01/04/2010
Data Release Frequency: Quarterly

LUST: Geotracker's Leaking Underground Fuel Tank Report

Leaking Underground Storage Tank Incident Reports. LUST records contain an inventory of reported leaking underground storage tank incidents. Not all states maintain these records, and the information stored varies by state. For more information on a particular leaking underground storage tank sites, please contact the appropriate regulatory agency.

Date of Government Version: 09/05/2009
Date Data Arrived at EDR: 09/28/2009
Date Made Active in Reports: 10/13/2009
Number of Days to Update: 15

Source: State Water Resources Control Board
Telephone: see region list
Last EDR Contact: 09/28/2009
Next Scheduled EDR Contact: 01/04/2010
Data Release Frequency: Quarterly

LUST REG 9: Leaking Underground Storage Tank Report

Orange, Riverside, San Diego counties. For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 03/01/2001
Date Data Arrived at EDR: 04/23/2001
Date Made Active in Reports: 05/21/2001
Number of Days to Update: 28

Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-637-5595
Last EDR Contact: 09/28/2009
Next Scheduled EDR Contact: 01/11/2010
Data Release Frequency: No Update Planned

LUST REG 3: Leaking Underground Storage Tank Database

Leaking Underground Storage Tank locations. Monterey, San Benito, San Luis Obispo, Santa Barbara, Santa Cruz counties.

Date of Government Version: 05/19/2003
Date Data Arrived at EDR: 05/19/2003
Date Made Active in Reports: 06/02/2003
Number of Days to Update: 14

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-542-4786
Last EDR Contact: 10/16/2009
Next Scheduled EDR Contact: 02/01/2010
Data Release Frequency: No Update Planned

LUST REG 6L: Leaking Underground Storage Tank Case Listing

For more current information, please refer to the State Water Resources Control Board's LUST database.

Date of Government Version: 09/09/2003
Date Data Arrived at EDR: 09/10/2003
Date Made Active in Reports: 10/07/2003
Number of Days to Update: 27

Source: California Regional Water Quality Control Board Lahontan Region (6)
Telephone: 530-542-5572
Last EDR Contact: 08/31/2009
Next Scheduled EDR Contact: 11/30/2009
Data Release Frequency: No Update Planned

LUST REG 6V: Leaking Underground Storage Tank Case Listing

Leaking Underground Storage Tank locations. Inyo, Kern, Los Angeles, Mono, San Bernardino counties.

Date of Government Version: 06/07/2005
Date Data Arrived at EDR: 06/07/2005
Date Made Active in Reports: 06/29/2005
Number of Days to Update: 22

Source: California Regional Water Quality Control Board Victorville Branch Office (6)
Telephone: 760-241-7365
Last EDR Contact: 09/18/2009
Next Scheduled EDR Contact: 12/28/2009
Data Release Frequency: No Update Planned

SLIC: Statewide SLIC Cases

The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/05/2009
Date Data Arrived at EDR: 09/28/2009
Date Made Active in Reports: 10/13/2009
Number of Days to Update: 15

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 09/28/2009
Next Scheduled EDR Contact: 01/04/2010
Data Release Frequency: Varies

SLIC REG 1: Active Toxic Site Investigations
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2003
Date Data Arrived at EDR: 04/07/2003
Date Made Active in Reports: 04/25/2003
Number of Days to Update: 18

Source: California Regional Water Quality Control Board, North Coast Region (1)
Telephone: 707-576-2220
Last EDR Contact: 08/17/2009
Next Scheduled EDR Contact: 11/16/2008
Data Release Frequency: No Update Planned

SLIC REG 2: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/30/2004
Date Data Arrived at EDR: 10/20/2004
Date Made Active in Reports: 11/19/2004
Number of Days to Update: 30

Source: Regional Water Quality Control Board San Francisco Bay Region (2)
Telephone: 510-286-0457
Last EDR Contact: 09/23/2009
Next Scheduled EDR Contact: 01/04/2010
Data Release Frequency: Quarterly

SLIC REG 3: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/18/2006
Date Data Arrived at EDR: 05/18/2006
Date Made Active in Reports: 06/15/2006
Number of Days to Update: 28

Source: California Regional Water Quality Control Board Central Coast Region (3)
Telephone: 805-549-3147
Last EDR Contact: 10/16/2009
Next Scheduled EDR Contact: 02/01/2010
Data Release Frequency: Semi-Annually

SLIC REG 4: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/17/2004
Date Data Arrived at EDR: 11/18/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 47

Source: Region Water Quality Control Board Los Angeles Region (4)
Telephone: 213-576-6600
Last EDR Contact: 10/05/2009
Next Scheduled EDR Contact: 01/18/2010
Data Release Frequency: Varies

SLIC REG 5: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/01/2005
Date Data Arrived at EDR: 04/05/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 16

Source: Regional Water Quality Control Board Central Valley Region (5)
Telephone: 916-464-3291
Last EDR Contact: 09/18/2009
Next Scheduled EDR Contact: 12/28/2009
Data Release Frequency: Semi-Annually

SLIC REG 6V: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 05/24/2005
Date Data Arrived at EDR: 05/25/2005
Date Made Active in Reports: 06/16/2005
Number of Days to Update: 22

Source: Regional Water Quality Control Board, Victorville Branch
Telephone: 619-241-6583
Last EDR Contact: 09/18/2009
Next Scheduled EDR Contact: 12/28/2009
Data Release Frequency: Semi-Annually

SLIC REG 6L: SLIC Sites
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/07/2004
Date Data Arrived at EDR: 09/07/2004
Date Made Active in Reports: 10/12/2004
Number of Days to Update: 35

Source: California Regional Water Quality Control Board, Lahontan Region
Telephone: 530-542-5574
Last EDR Contact: 08/31/2009
Next Scheduled EDR Contact: 11/30/2009
Data Release Frequency: No Update Planned

SLIC REG 7: SLIC List
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 11/24/2004
Date Data Arrived at EDR: 11/29/2004
Date Made Active in Reports: 01/04/2005
Number of Days to Update: 36

Source: California Regional Quality Control Board, Colorado River Basin Region
Telephone: 760-346-7491
Last EDR Contact: 08/17/2009
Next Scheduled EDR Contact: 11/16/2009
Data Release Frequency: No Update Planned

SLIC REG 8: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 04/03/2008
Date Data Arrived at EDR: 04/03/2008
Date Made Active in Reports: 04/14/2008
Number of Days to Update: 11

Source: California Region Water Quality Control Board Santa Ana Region (8)
Telephone: 951-782-3298
Last EDR Contact: 09/18/2009
Next Scheduled EDR Contact: 12/28/2009
Data Release Frequency: Semi-Annually

SLIC REG 9: Spills, Leaks, Investigation & Cleanup Cost Recovery Listing
The SLIC (Spills, Leaks, Investigations and Cleanup) program is designed to protect and restore water quality from spills, leaks, and similar discharges.

Date of Government Version: 09/10/2007
Date Data Arrived at EDR: 09/11/2007
Date Made Active in Reports: 09/28/2007
Number of Days to Update: 17

Source: California Regional Water Quality Control Board San Diego Region (9)
Telephone: 858-467-2980
Last EDR Contact: 08/26/2009
Next Scheduled EDR Contact: 11/23/2009
Data Release Frequency: Annually

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 08/20/2009
Date Data Arrived at EDR: 08/26/2009
Date Made Active in Reports: 10/22/2009
Number of Days to Update: 57

Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 08/17/2009
Next Scheduled EDR Contact: 11/16/2009
Data Release Frequency: Semi-Annually

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 08/21/2009
Date Data Arrived at EDR: 10/06/2009
Date Made Active in Reports: 10/22/2009
Number of Days to Update: 16

Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 08/17/2009
Next Scheduled EDR Contact: 11/16/2009
Data Release Frequency: Quarterly

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 08/20/2009
Date Data Arrived at EDR: 08/21/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 31

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 08/17/2009
Next Scheduled EDR Contact: 11/16/2009
Data Release Frequency: Quarterly

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land
A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 02/19/2009
Date Data Arrived at EDR: 02/19/2009
Date Made Active in Reports: 03/16/2009
Number of Days to Update: 25

Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 08/17/2009
Next Scheduled EDR Contact: 11/16/2009
Data Release Frequency: Varies

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 08/24/2009
Date Data Arrived at EDR: 08/26/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 26

Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 08/17/2009
Next Scheduled EDR Contact: 11/16/2009
Data Release Frequency: Varies

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 03/24/2009
Date Data Arrived at EDR: 05/20/2009
Date Made Active in Reports: 06/17/2009
Number of Days to Update: 28

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 08/21/2009
Next Scheduled EDR Contact: 11/16/2009
Data Release Frequency: Varies

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 08/24/2009
Date Data Arrived at EDR: 09/10/2009
Date Made Active in Reports: 10/22/2009
Number of Days to Update: 42

Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 08/17/2009
Next Scheduled EDR Contact: 11/16/2009
Data Release Frequency: Quarterly

State and tribal registered storage tank lists

UST: Active UST Facilities
Active UST facilities gathered from the local regulatory agencies

Date of Government Version: 09/05/2009
Date Data Arrived at EDR: 09/28/2009
Date Made Active in Reports: 10/22/2009
Number of Days to Update: 24

Source: SWRCB
Telephone: 916-480-1028
Last EDR Contact: 09/28/2009
Next Scheduled EDR Contact: 01/04/2010
Data Release Frequency: Semi-Annually

AST: Aboveground Petroleum Storage Tank Facilities
Registered Aboveground Storage Tanks.

Date of Government Version: 08/01/2009
Date Data Arrived at EDR: 09/10/2009
Date Made Active in Reports: 10/01/2009
Number of Days to Update: 21

Source: State Water Resources Control Board
Telephone: 916-341-5712
Last EDR Contact: 10/09/2009
Next Scheduled EDR Contact: 01/25/2010
Data Release Frequency: Quarterly

INDIAN UST R10: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 08/20/2009
Date Data Arrived at EDR: 08/21/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 31

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 08/17/2009
Next Scheduled EDR Contact: 11/16/2009
Data Release Frequency: Quarterly

INDIAN UST R5: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 09/08/2008
Date Data Arrived at EDR: 09/19/2008
Date Made Active in Reports: 10/16/2008
Number of Days to Update: 27

Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 10/22/2009
Next Scheduled EDR Contact: 11/16/2009
Data Release Frequency: Varies

INDIAN UST R4: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 08/20/2009
Date Data Arrived at EDR: 08/26/2009
Date Made Active in Reports: 10/22/2009
Number of Days to Update: 57

Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 08/17/2009
Next Scheduled EDR Contact: 11/16/2009
Data Release Frequency: Semi-Annually

INDIAN UST R1: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 02/19/2009
Date Data Arrived at EDR: 02/19/2009
Date Made Active in Reports: 03/16/2009
Number of Days to Update: 25

Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 08/17/2009
Next Scheduled EDR Contact: 11/16/2009
Data Release Frequency: Varies

INDIAN UST R6: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 08/24/2009
Date Data Arrived at EDR: 08/26/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 26

Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 08/17/2009
Next Scheduled EDR Contact: 11/16/2009
Data Release Frequency: Semi-Annually

INDIAN UST R7: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 04/01/2008
Date Data Arrived at EDR: 12/30/2008
Date Made Active in Reports: 03/16/2009
Number of Days to Update: 76

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 08/21/2009
Next Scheduled EDR Contact: 11/16/2009
Data Release Frequency: Varies

INDIAN UST R8: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 08/24/2009
Date Data Arrived at EDR: 09/10/2009
Date Made Active in Reports: 10/22/2009
Number of Days to Update: 42

Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 08/17/2009
Next Scheduled EDR Contact: 11/16/2009
Data Release Frequency: Quarterly

INDIAN UST R9: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 08/21/2009
Date Data Arrived at EDR: 08/26/2009
Date Made Active in Reports: 10/22/2009
Number of Days to Update: 57

Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 08/17/2009
Next Scheduled EDR Contact: 11/16/2009
Data Release Frequency: Quarterly

State and tribal voluntary cleanup sites

INDIAN VCP R7: Voluntary Cleanup Priority Lisitng
A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27

Source: EPA, Region 7
Telephone: 913-551-7365
Last EDR Contact: 04/20/2009
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

INDIAN VCP R1: Voluntary Cleanup Priority Listing
A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 04/02/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27

Source: EPA, Region 1
Telephone: 617-918-1102
Last EDR Contact: 10/05/2009
Next Scheduled EDR Contact: 01/18/2010
Data Release Frequency: Varies

VCP: Voluntary Cleanup Program Properties
Contains low threat level properties with either confirmed or unconfirmed releases and the project proponents have request that DTSC oversee investigation and/or cleanup activities and have agreed to provide coverage for DTSC's costs.

Date of Government Version: 08/27/2009
Date Data Arrived at EDR: 08/27/2009
Date Made Active in Reports: 09/18/2009
Number of Days to Update: 22

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 08/27/2009
Next Scheduled EDR Contact: 11/23/2009
Data Release Frequency: Quarterly

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: A Listing of Brownfields Sites

Included in the listing are brownfields properties addresses by Cooperative Agreement Recipients and brownfields properties addressed by Targeted Brownfields Assessments. Targeted Brownfields Assessments-EPA's Targeted Brownfields Assessments (TBA) program is designed to help states, tribes, and municipalities--especially those without EPA Brownfields Assessment Demonstration Pilots--minimize the uncertainties of contamination often associated with brownfields. Under the TBA program, EPA provides funding and/or technical assistance for environmental assessments at brownfields sites throughout the country. Targeted Brownfields Assessments supplement and work with other efforts under EPA's Brownfields Initiative to promote cleanup and redevelopment of brownfields. Cooperative Agreement Recipients-States, political subdivisions, territories, and Indian tribes become Brownfields Cleanup Revolving Loan Fund (BCRLF) cooperative agreement recipients when they enter into BCRLF cooperative agreements with the U.S. EPA. EPA selects BCRLF cooperative agreement recipients based on a proposal and application process. BCRLF cooperative agreement recipients must use EPA funds provided through BCRLF cooperative agreement for specified brownfields-related cleanup activities.

Date of Government Version: 10/01/2008
Date Data Arrived at EDR: 11/14/2008
Date Made Active in Reports: 12/23/2008
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 09/11/2009
Next Scheduled EDR Contact: 01/11/2010
Data Release Frequency: Semi-Annually

Local Lists of Landfill / Solid Waste Disposal Sites

ODI: Open Dump Inventory

An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations

A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009
Date Data Arrived at EDR: 05/07/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 137

Source: EPA, Region 9
Telephone: 415-972-3336
Last EDR Contact: 09/23/2009
Next Scheduled EDR Contact: 12/21/2009
Data Release Frequency: Varies

WMUDS/SWAT: Waste Management Unit Database

Waste Management Unit Database System. WMUDS is used by the State Water Resources Control Board staff and the Regional Water Quality Control Boards for program tracking and inventory of waste management units. WMUDS is composed of the following databases: Facility Information, Scheduled Inspections Information, Waste Management Unit Information, SWAT Program Information, SWAT Report Summary Information, SWAT Report Summary Data, Chapter 15 (formerly Subchapter 15) Information, Chapter 15 Monitoring Parameters, TPCA Program Information, RCRA Program Information, Closure Information, and Interested Parties Information.

Date of Government Version: 04/01/2000
Date Data Arrived at EDR: 04/10/2000
Date Made Active in Reports: 05/10/2000
Number of Days to Update: 30

Source: State Water Resources Control Board
Telephone: 916-227-4448
Last EDR Contact: 08/31/2009
Next Scheduled EDR Contact: 11/30/2009
Data Release Frequency: Quarterly

SWRCY: Recycler Database

A listing of recycling facilities in California.

Date of Government Version: 09/25/2009
Date Data Arrived at EDR: 09/28/2009
Date Made Active in Reports: 10/13/2009
Number of Days to Update: 15

Source: Department of Conservation
Telephone: 916-323-3836
Last EDR Contact: 09/28/2009
Next Scheduled EDR Contact: 01/04/2010
Data Release Frequency: Quarterly

HAULERS: Registered Waste Tire Haulers Listing
A listing of registered waste tire haulers.

Date of Government Version: 10/05/2009
Date Data Arrived at EDR: 10/05/2009
Date Made Active in Reports: 10/13/2009
Number of Days to Update: 8

Source: Integrated Waste Management Board
Telephone: 916-341-6422
Last EDR Contact: 09/23/2009
Next Scheduled EDR Contact: 12/07/2009
Data Release Frequency: Varies

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands
Location of open dumps on Indian land.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52

Source: Environmental Protection Agency
Telephone: 703-308-8245
Last EDR Contact: 08/26/2009
Next Scheduled EDR Contact: 11/23/2009
Data Release Frequency: Varies

Local Lists of Hazardous waste / Contaminated Sites

US CDL: Clandestine Drug Labs
A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 03/01/2009
Date Data Arrived at EDR: 06/22/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 91

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 03/26/2009
Next Scheduled EDR Contact: 06/22/2009
Data Release Frequency: Quarterly

HIST CAL-SITES: Calsites Database
The Calsites database contains potential or confirmed hazardous substance release properties. In 1996, California EPA reevaluated and significantly reduced the number of sites in the Calsites database. No longer updated by the state agency. It has been replaced by ENVIROSTOR.

Date of Government Version: 08/08/2005
Date Data Arrived at EDR: 08/03/2006
Date Made Active in Reports: 08/24/2006
Number of Days to Update: 21

Source: Department of Toxic Substance Control
Telephone: 916-323-3400
Last EDR Contact: 02/23/2009
Next Scheduled EDR Contact: 05/25/2009
Data Release Frequency: No Update Planned

SCH: School Property Evaluation Program
This category contains proposed and existing school sites that are being evaluated by DTSC for possible hazardous materials contamination. In some cases, these properties may be listed in the CalSites category depending on the level of threat to public health and safety or the environment they pose.

Date of Government Version: 08/27/2009
Date Data Arrived at EDR: 08/27/2009
Date Made Active in Reports: 09/18/2009
Number of Days to Update: 22

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 08/27/2009
Next Scheduled EDR Contact: 11/23/2009
Data Release Frequency: Quarterly

TOXIC PITS: Toxic Pits Cleanup Act Sites
Toxic PITS Cleanup Act Sites. TOXIC PITS identifies sites suspected of containing hazardous substances where cleanup has not yet been completed.

Date of Government Version: 07/01/1995
Date Data Arrived at EDR: 08/30/1995
Date Made Active in Reports: 09/26/1995
Number of Days to Update: 27

Source: State Water Resources Control Board
Telephone: 916-227-4364
Last EDR Contact: 01/26/2009
Next Scheduled EDR Contact: 04/27/2009
Data Release Frequency: No Update Planned

CDL: Clandestine Drug Labs

A listing of drug lab locations. Listing of a location in this database does not indicate that any illegal drug lab materials were or were not present there, and does not constitute a determination that the location either requires or does not require additional cleanup work.

Date of Government Version: 06/30/2009
Date Data Arrived at EDR: 07/23/2009
Date Made Active in Reports: 08/03/2009
Number of Days to Update: 11

Source: Department of Toxic Substances Control
Telephone: 916-255-6504
Last EDR Contact: 10/05/2009
Next Scheduled EDR Contact: 01/18/2010
Data Release Frequency: Varies

US HIST CDL: National Clandestine Laboratory Register

A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 09/01/2007
Date Data Arrived at EDR: 11/19/2008
Date Made Active in Reports: 03/30/2009
Number of Days to Update: 131

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 03/23/2009
Next Scheduled EDR Contact: 06/22/2009
Data Release Frequency: No Update Planned

Local Lists of Registered Storage Tanks

CA FID UST: Facility Inventory Database

The Facility Inventory Database (FID) contains a historical listing of active and inactive underground storage tank locations from the State Water Resource Control Board. Refer to local/county source for current data.

Date of Government Version: 10/31/1994
Date Data Arrived at EDR: 09/05/1995
Date Made Active in Reports: 09/29/1995
Number of Days to Update: 24

Source: California Environmental Protection Agency
Telephone: 916-341-5851
Last EDR Contact: 12/28/1998
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

UST MENDOCINO: Mendocino County UST Database

A listing of underground storage tank locations in Mendocino County.

Date of Government Version: 09/23/2009
Date Data Arrived at EDR: 09/23/2009
Date Made Active in Reports: 10/01/2009
Number of Days to Update: 8

Source: Department of Public Health
Telephone: 707-463-4466
Last EDR Contact: 09/23/2009
Next Scheduled EDR Contact: 12/21/2009
Data Release Frequency: Varies

HIST UST: Hazardous Substance Storage Container Database

The Hazardous Substance Storage Container Database is a historical listing of UST sites. Refer to local/county source for current data.

Date of Government Version: 10/15/1990
Date Data Arrived at EDR: 01/25/1991
Date Made Active in Reports: 02/12/1991
Number of Days to Update: 18

Source: State Water Resources Control Board
Telephone: 916-341-5851
Last EDR Contact: 07/26/2001
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

SWEEPS UST: SWEEPS UST Listing

Statewide Environmental Evaluation and Planning System. This underground storage tank listing was updated and maintained by a company contacted by the SWRCB in the early 1990's. The listing is no longer updated or maintained. The local agency is the contact for more information on a site on the SWEEPS list.

Date of Government Version: 06/01/1994
Date Data Arrived at EDR: 07/07/2005
Date Made Active in Reports: 08/11/2005
Number of Days to Update: 35

Source: State Water Resources Control Board
Telephone: N/A
Last EDR Contact: 06/03/2005
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

Local Land Records

LIENS 2: CERCLA Lien Information

A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 08/18/2009
Date Data Arrived at EDR: 08/21/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 31

Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 08/17/2009
Next Scheduled EDR Contact: 11/16/2009
Data Release Frequency: Varies

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 12/09/2005
Date Data Arrived at EDR: 12/11/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 31

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 09/08/2009
Next Scheduled EDR Contact: 12/07/2009
Data Release Frequency: Varies

LIENS: Environmental Liens Listing

A listing of property locations with environmental liens for California where DTSC is a lien holder.

Date of Government Version: 08/13/2009
Date Data Arrived at EDR: 08/14/2009
Date Made Active in Reports: 08/20/2009
Number of Days to Update: 6

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 10/19/2009
Next Scheduled EDR Contact: 02/01/2010
Data Release Frequency: Varies

DEED: Deed Restriction Listing

Site Mitigation and Brownfields Reuse Program Facility Sites with Deed Restrictions & Hazardous Waste Management Program Facility Sites with Deed / Land Use Restriction. The DTSC Site Mitigation and Brownfields Reuse Program (SMBRP) list includes sites cleaned up under the program's oversight and generally does not include current or former hazardous waste facilities that required a hazardous waste facility permit. The list represents deed restrictions that are active. Some sites have multiple deed restrictions. The DTSC Hazardous Waste Management Program (HWMP) has developed a list of current or former hazardous waste facilities that have a recorded land use restriction at the local county recorder's office. The land use restrictions on this list were required by the DTSC HWMP as a result of the presence of hazardous substances that remain on site after the facility (or part of the facility) has been closed or cleaned up. The types of land use restriction include deed notice, deed restriction, or a land use restriction that binds current and future owners.

Date of Government Version: 09/21/2009
Date Data Arrived at EDR: 09/22/2009
Date Made Active in Reports: 10/13/2009
Number of Days to Update: 21

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 12/30/2009
Next Scheduled EDR Contact: 12/28/2009
Data Release Frequency: Semi-Annually

Records of Emergency Release Reports

HMIRS: Hazardous Materials Information Reporting System

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 07/16/2009
Date Data Arrived at EDR: 07/16/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 67

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 10/05/2009
Next Scheduled EDR Contact: 01/11/2010
Data Release Frequency: Annually

CHMIRS: California Hazardous Material Incident Report System

California Hazardous Material Incident Reporting System. CHMIRS contains information on reported hazardous material incidents (accidental releases or spills).

Date of Government Version: 12/31/2007
Date Data Arrived at EDR: 05/09/2008
Date Made Active in Reports: 06/20/2008
Number of Days to Update: 42

Source: Office of Emergency Services
Telephone: 916-845-8400
Last EDR Contact: 08/18/2009
Next Scheduled EDR Contact: 11/16/2009
Data Release Frequency: Varies

LDS: Land Disposal Sites Listing

The Land Disposal program regulates of waste discharge to land for treatment, storage and disposal in waste management units.

Date of Government Version: 09/05/2009
Date Data Arrived at EDR: 09/28/2009
Date Made Active in Reports: 10/13/2009
Number of Days to Update: 15

Source: State Water Qualilty Control Board
Telephone: 866-480-1028
Last EDR Contact: 09/28/2009
Next Scheduled EDR Contact: 01/04/2010
Data Release Frequency: Quarterly

MCS: Military Cleanup Sites Listing

The State Water Resources Control Board and nine Regional Water Quality Control Boards partner with the Department of Defense (DoD) through the Defense and State Memorandum of Agreement (DSMOA) to oversee the investigation and remediation of water quality issues at military facilities.

Date of Government Version: 09/05/2009
Date Data Arrived at EDR: 09/28/2009
Date Made Active in Reports: 10/13/2009
Number of Days to Update: 15

Source: State Water Resources Control Board
Telephone: 866-480-1028
Last EDR Contact: 09/28/2009
Next Scheduled EDR Contact: 01/04/2010
Data Release Frequency: Quarterly

Other Ascertainable Records

RCRA-NonGen: RCRA - Non Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 11/12/2008
Date Data Arrived at EDR: 11/18/2008
Date Made Active in Reports: 03/16/2009
Number of Days to Update: 118

Source: Environmental Protection Agency
Telephone: (415) 495-8895
Last EDR Contact: 10/07/2009
Next Scheduled EDR Contact: 01/18/2010
Data Release Frequency: Varies

DOT OPS: Incident and Accident Data

Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 05/14/2008
Date Data Arrived at EDR: 05/28/2008
Date Made Active in Reports: 08/08/2008
Number of Days to Update: 72

Source: Department of Transporation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 08/27/2009
Next Scheduled EDR Contact: 11/23/2009
Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 11/10/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 62

Source: USGS
Telephone: 703-692-8801
Last EDR Contact: 10/23/2009
Next Scheduled EDR Contact: 02/01/2010
Data Release Frequency: Semi-Annually

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 12/31/2007
Date Data Arrived at EDR: 09/05/2008
Date Made Active in Reports: 09/23/2008
Number of Days to Update: 18

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 09/30/2009
Next Scheduled EDR Contact: 12/28/2009
Data Release Frequency: Varies

CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 04/24/2009
Date Data Arrived at EDR: 05/19/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 125

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 10/06/2009
Next Scheduled EDR Contact: 01/18/2010
Data Release Frequency: Varies

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 09/01/2009
Date Data Arrived at EDR: 09/22/2009
Date Made Active in Reports: 10/22/2009
Number of Days to Update: 30

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 09/22/2009
Next Scheduled EDR Contact: 12/28/2009
Data Release Frequency: Annually

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 01/05/2009
Date Data Arrived at EDR: 05/07/2009
Date Made Active in Reports: 05/08/2009
Number of Days to Update: 1

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 09/14/2009
Next Scheduled EDR Contact: 12/14/2009
Data Release Frequency: Varies

MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 05/28/2009
Date Data Arrived at EDR: 06/23/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 90

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 09/18/2009
Next Scheduled EDR Contact: 12/21/2009
Data Release Frequency: Semi-Annually

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2007
Date Data Arrived at EDR: 04/09/2009
Date Made Active in Reports: 06/17/2009
Number of Days to Update: 69

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 09/14/2009
Next Scheduled EDR Contact: 12/14/2009
Data Release Frequency: Annually

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2002
Date Data Arrived at EDR: 04/14/2006
Date Made Active in Reports: 05/30/2006
Number of Days to Update: 46

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 10/07/2009
Next Scheduled EDR Contact: 01/11/2010
Data Release Frequency: Every 4 Years

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 09/10/2009
Next Scheduled EDR Contact: 12/14/2009
Data Release Frequency: Quarterly

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA
Telephone: 202-566-1667
Last EDR Contact: 09/10/2009
Next Scheduled EDR Contact: 12/14/2009
Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing

A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2007
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing

A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2008
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 12/31/2007
Date Data Arrived at EDR: 05/19/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 125

Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 09/29/2009
Next Scheduled EDR Contact: 01/11/2010
Data Release Frequency: Annually

ICIS: Integrated Compliance Information System

The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 08/21/2009
Date Data Arrived at EDR: 08/27/2009
Date Made Active in Reports: 10/22/2009
Number of Days to Update: 56

Source: Environmental Protection Agency
Telephone: 202-564-5088
Last EDR Contact: 09/28/2009
Next Scheduled EDR Contact: 01/11/2010
Data Release Frequency: Quarterly

PADS: PCB Activity Database System

PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 05/27/2009
Date Data Arrived at EDR: 08/05/2009
Date Made Active in Reports: 09/29/2009
Number of Days to Update: 55

Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 10/21/2009
Next Scheduled EDR Contact: 02/01/2010
Data Release Frequency: Annually

MLTS: Material Licensing Tracking System

MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 07/06/2009
Date Data Arrived at EDR: 07/13/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 70

Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
Last EDR Contact: 09/21/2009
Next Scheduled EDR Contact: 12/28/2009
Data Release Frequency: Quarterly

RADINFO: Radiation Information Database

The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 07/28/2009
Date Data Arrived at EDR: 07/28/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 55

Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 10/16/2009
Next Scheduled EDR Contact: 01/25/2010
Data Release Frequency: Quarterly

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 07/23/2009
Date Data Arrived at EDR: 07/28/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 55

Source: EPA
Telephone: (415) 947-8000
Last EDR Contact: 09/18/2009
Next Scheduled EDR Contact: 12/28/2009
Data Release Frequency: Quarterly

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 06/02/2008
Next Scheduled EDR Contact: 09/01/2008
Data Release Frequency: No Update Planned

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2007
Date Data Arrived at EDR: 02/19/2009
Date Made Active in Reports: 05/22/2009
Number of Days to Update: 92

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 09/09/2009
Next Scheduled EDR Contact: 12/07/2009
Data Release Frequency: Biennially

CA BOND EXP. PLAN: Bond Expenditure Plan

Department of Health Services developed a site-specific expenditure plan as the basis for an appropriation of Hazardous Substance Cleanup Bond Act funds. It is not updated.

Date of Government Version: 01/01/1989
Date Data Arrived at EDR: 07/27/1994
Date Made Active in Reports: 08/02/1994
Number of Days to Update: 6

Source: Department of Health Services
Telephone: 916-255-2118
Last EDR Contact: 05/31/1994
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

NPDES: NPDES Permits Listing

A listing of NPDES permits, including stormwater.

Date of Government Version: 08/31/2009
Date Data Arrived at EDR: 09/04/2009
Date Made Active in Reports: 09/18/2009
Number of Days to Update: 14

Source: State Water Resources Control Board
Telephone: 916-445-9379
Last EDR Contact: 09/04/2009
Next Scheduled EDR Contact: 12/07/2009
Data Release Frequency: Quarterly

CA WDS: Waste Discharge System

Sites which have been issued waste discharge requirements.

Date of Government Version: 06/19/2007
Date Data Arrived at EDR: 06/20/2007
Date Made Active in Reports: 06/29/2007
Number of Days to Update: 9

Source: State Water Resources Control Board
Telephone: 916-341-5227
Last EDR Contact: 06/15/2009
Next Scheduled EDR Contact: 09/14/2009
Data Release Frequency: Quarterly

CORTESE: "Cortese" Hazardous Waste & Substances Sites List

The sites for the list are designated by the State Water Resource Control Board (LUST), the Integrated Waste Board (SWF/LS), and the Department of Toxic Substances Control (Cal-Sites). This listing is no longer updated by the state agency.

Date of Government Version: 10/06/2009
Date Data Arrived at EDR: 10/07/2009
Date Made Active in Reports: 10/13/2009
Number of Days to Update: 6

Source: CAL EPA/Office of Emergency Information
Telephone: 916-323-3400
Last EDR Contact: 10/07/2009
Next Scheduled EDR Contact: 01/18/2010
Data Release Frequency: Quarterly

HIST CORTESE: Hazardous Waste & Substance Site List

The sites for the list are designated by the State Water Resource Control Board [LUST], the Integrated Waste Board [SWF/LS], and the Department of Toxic Substances Control [CALSITES].

Date of Government Version: 04/01/2001
Date Data Arrived at EDR: 01/22/2009
Date Made Active in Reports: 04/08/2009
Number of Days to Update: 76

Source: Department of Toxic Substances Control
Telephone: 916-323-3400
Last EDR Contact: 01/22/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

NOTIFY 65: Proposition 65 Records

Proposition 65 Notification Records. NOTIFY 65 contains facility notifications about any release which could impact drinking water and thereby expose the public to a potential health risk.

Date of Government Version: 10/21/1993
Date Data Arrived at EDR: 11/01/1993
Date Made Active in Reports: 11/19/1993
Number of Days to Update: 18

Source: State Water Resources Control Board
Telephone: 916-445-3846
Last EDR Contact: 09/28/2009
Next Scheduled EDR Contact: 01/11/2010
Data Release Frequency: No Update Planned

DRYCLEANERS: Cleaner Facilities

A list of drycleaner related facilities that have EPA ID numbers. These are facilities with certain SIC codes: power laundries, family and commercial; garment pressing and cleaner's agents; linen supply; coin-operated laundries and cleaning; drycleaning plants, except rugs; carpet and upholster cleaning; industrial launderers; laundry and garment services.

Date of Government Version: 09/22/2009
Date Data Arrived at EDR: 09/23/2009
Date Made Active in Reports: 10/13/2009
Number of Days to Update: 20

Source: Department of Toxic Substance Control
Telephone: 916-327-4498
Last EDR Contact: 09/18/2009
Next Scheduled EDR Contact: 12/28/2009
Data Release Frequency: Annually

WIP: Well Investigation Program Case List

Well Investigation Program case in the San Gabriel and San Fernando Valley area.

Date of Government Version: 07/03/2009
Date Data Arrived at EDR: 07/21/2009
Date Made Active in Reports: 08/03/2009
Number of Days to Update: 13

Source: Los Angeles Water Quality Control Board
Telephone: 213-576-6726
Last EDR Contact: 10/15/2009
Next Scheduled EDR Contact: 01/18/2010
Data Release Frequency: Varies

HAZNET: Facility and Manifest Data

Facility and Manifest Data. The data is extracted from the copies of hazardous waste manifests received each year by the DTSC. The annual volume of manifests is typically 700,000 - 1,000,000 annually, representing approximately 350,000 - 500,000 shipments. Data are from the manifests submitted without correction, and therefore many contain some invalid values for data elements such as generator ID, TSD ID, waste category, and disposal method.

Date of Government Version: 12/31/2007
Date Data Arrived at EDR: 02/17/2009
Date Made Active in Reports: 04/08/2009
Number of Days to Update: 50

Source: California Environmental Protection Agency
Telephone: 916-255-1136
Last EDR Contact: 10/21/2009
Next Scheduled EDR Contact: 02/01/2010
Data Release Frequency: Annually

EMI: Emissions Inventory Data

Toxics and criteria pollutant emissions data collected by the ARB and local air pollution agencies.

Date of Government Version: 12/31/2007
Date Data Arrived at EDR: 07/14/2009
Date Made Active in Reports: 07/23/2009
Number of Days to Update: 9

Source: California Air Resources Board
Telephone: 916-322-2990
Last EDR Contact: 10/08/2009
Next Scheduled EDR Contact: 01/11/2010
Data Release Frequency: Varies

INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 12/08/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 34

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 10/23/2009
Next Scheduled EDR Contact: 02/01/2010
Data Release Frequency: Semi-Annually

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 09/09/2009
Date Data Arrived at EDR: 09/09/2009
Date Made Active in Reports: 10/22/2009
Number of Days to Update: 43

Source: Environmental Protection Agency
Telephone: 615-532-8599
Last EDR Contact: 09/08/2009
Next Scheduled EDR Contact: 11/09/2009
Data Release Frequency: Varies

FEDLAND: Federal and Indian Lands

Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 02/06/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 339

Source: U.S. Geological Survey
Telephone: 888-275-8747
Last EDR Contact: 10/23/2009
Next Scheduled EDR Contact: 02/01/2010
Data Release Frequency: N/A

PCB TRANSFORMER: PCB Transformer Registration Database

The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 01/01/2008
Date Data Arrived at EDR: 02/18/2009
Date Made Active in Reports: 05/29/2009
Number of Days to Update: 100

Source: Environmental Protection Agency
Telephone: 202-566-0517
Last EDR Contact: 08/21/2009
Next Scheduled EDR Contact: 11/16/2009
Data Release Frequency: Varies

EDR PROPRIETARY RECORDS

EDR Proprietary Records

Manufactured Gas Plants: EDR Proprietary Manufactured Gas Plants

The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

COUNTY RECORDS

ALAMEDA COUNTY:

Contaminated Sites

A listing of contaminated sites overseen by the Toxic Release Program (oil and groundwater contamination from chemical releases and spills) and the Leaking Underground Storage Tank Program (soil and ground water contamination from leaking petroleum USTs).

Date of Government Version: 07/20/2009
Date Data Arrived at EDR: 07/20/2009
Date Made Active in Reports: 08/03/2009
Number of Days to Update: 14

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 10/05/2009
Next Scheduled EDR Contact: 01/18/2010
Data Release Frequency: Semi-Annually

Underground Tanks

Underground storage tank sites located in Alameda county.

Date of Government Version: 07/20/2009
Date Data Arrived at EDR: 07/20/2009
Date Made Active in Reports: 07/31/2009
Number of Days to Update: 11

Source: Alameda County Environmental Health Services
Telephone: 510-567-6700
Last EDR Contact: 10/05/2009
Next Scheduled EDR Contact: 01/18/2010
Data Release Frequency: Semi-Annually

CONTRA COSTA COUNTY:

Site List
List includes sites from the underground tank, hazardous waste generator and business plan/2185 programs.

Date of Government Version: 09/01/2009
Date Data Arrived at EDR: 09/02/2009
Date Made Active in Reports: 09/18/2009
Number of Days to Update: 16

Source: Contra Costa Health Services Department
Telephone: 925-646-2286
Last EDR Contact: 08/26/2009
Next Scheduled EDR Contact: 11/23/2009
Data Release Frequency: Semi-Annually

FRESNO COUNTY:

CUPA Resources List
Certified Unified Program Agency. CUPA's are responsible for implementing a unified hazardous materials and hazardous waste management regulatory program. The agency provides oversight of businesses that deal with hazardous materials, operate underground storage tanks or aboveground storage tanks.

Date of Government Version: 07/21/2009
Date Data Arrived at EDR: 07/23/2009
Date Made Active in Reports: 08/03/2009
Number of Days to Update: 11

Source: Dept. of Community Health
Telephone: 559-445-3271
Last EDR Contact: 10/16/2009
Next Scheduled EDR Contact: 02/01/2010
Data Release Frequency: Semi-Annually

KERN COUNTY:

Underground Storage Tank Sites & Tank Listing
Kern County Sites and Tanks Listing.

Date of Government Version: 09/18/2009
Date Data Arrived at EDR: 09/18/2009
Date Made Active in Reports: 10/01/2009
Number of Days to Update: 13

Source: Kern County Environment Health Services Department
Telephone: 661-862-8700
Last EDR Contact: 09/18/2009
Next Scheduled EDR Contact: 11/30/2009
Data Release Frequency: Quarterly

LOS ANGELES COUNTY:

San Gabriel Valley Areas of Concern
San Gabriel Valley areas where VOC contamination is at or above the MCL as designated by region 9 EPA office.

Date of Government Version: 03/30/2009
Date Data Arrived at EDR: 03/31/2009
Date Made Active in Reports: 10/23/2009
Number of Days to Update: 206

Source: EPA Region 9
Telephone: 415-972-3178
Last EDR Contact: 09/28/2009
Next Scheduled EDR Contact: 01/11/2010
Data Release Frequency: No Update Planned

HMS: Street Number List
Industrial Waste and Underground Storage Tank Sites.

Date of Government Version: 05/28/2009
Date Data Arrived at EDR: 08/13/2009
Date Made Active in Reports: 08/20/2009
Number of Days to Update: 7

Source: Department of Public Works
Telephone: 626-458-3517
Last EDR Contact: 10/19/2009
Next Scheduled EDR Contact: 02/01/2010
Data Release Frequency: Semi-Annually

List of Solid Waste Facilities
Solid Waste Facilities in Los Angeles County.

Date of Government Version: 08/10/2009
Date Data Arrived at EDR: 08/17/2009
Date Made Active in Reports: 08/20/2009
Number of Days to Update: 3

Source: La County Department of Public Works
Telephone: 818-458-5185
Last EDR Contact: 08/10/2009
Next Scheduled EDR Contact: 11/09/2009
Data Release Frequency: Varies

City of Los Angeles Landfills
Landfills owned and maintained by the City of Los Angeles.

Date of Government Version: 03/05/2009
Date Data Arrived at EDR: 03/10/2009
Date Made Active in Reports: 04/08/2009
Number of Days to Update: 29

Source: Engineering & Construction Division
Telephone: 213-473-7869
Last EDR Contact: 09/08/2009
Next Scheduled EDR Contact: 12/07/2009
Data Release Frequency: Varies

Site Mitigation List
Industrial sites that have had some sort of spill or complaint.

Date of Government Version: 02/11/2009
Date Data Arrived at EDR: 04/23/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 18

Source: Community Health Services
Telephone: 323-890-7806
Last EDR Contact: 10/23/2009
Next Scheduled EDR Contact: 02/08/2010
Data Release Frequency: Annually

City of El Segundo Underground Storage Tank
Underground storage tank sites located in El Segundo city.

Date of Government Version: 08/10/2009
Date Data Arrived at EDR: 08/17/2009
Date Made Active in Reports: 08/27/2009
Number of Days to Update: 10

Source: City of El Segundo Fire Department
Telephone: 310-524-2236
Last EDR Contact: 08/10/2009
Next Scheduled EDR Contact: 11/09/2009
Data Release Frequency: Semi-Annually

City of Long Beach Underground Storage Tank
Underground storage tank sites located in the city of Long Beach.

Date of Government Version: 03/28/2003
Date Data Arrived at EDR: 10/23/2003
Date Made Active in Reports: 11/26/2003
Number of Days to Update: 34

Source: City of Long Beach Fire Department
Telephone: 562-570-2563
Last EDR Contact: 08/17/2009
Next Scheduled EDR Contact: 11/16/2009
Data Release Frequency: Annually

City of Torrance Underground Storage Tank
Underground storage tank sites located in the city of Torrance.

Date of Government Version: 06/12/2009
Date Data Arrived at EDR: 08/31/2009
Date Made Active in Reports: 09/04/2009
Number of Days to Update: 4

Source: City of Torrance Fire Department
Telephone: 310-618-2973
Last EDR Contact: 10/19/2009
Next Scheduled EDR Contact: 02/01/2010
Data Release Frequency: Semi-Annually

MARIN COUNTY:

Underground Storage Tank Sites
Currently permitted USTs in Marin County.

Date of Government Version: 08/04/2009
Date Data Arrived at EDR: 08/18/2009
Date Made Active in Reports: 08/27/2009
Number of Days to Update: 9

Source: Public Works Department Waste Management
Telephone: 415-499-6647
Last EDR Contact: 10/13/2009
Next Scheduled EDR Contact: 01/25/2010
Data Release Frequency: Semi-Annually

NAPA COUNTY:

Sites With Reported Contamination
A listing of leaking underground storage tank sites located in Napa county.

Date of Government Version: 07/09/2008
Date Data Arrived at EDR: 07/09/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 22

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 09/14/2009
Next Scheduled EDR Contact: 12/21/2009
Data Release Frequency: Semi-Annually

Closed and Operating Underground Storage Tank Sites
Underground storage tank sites located in Napa county.

Date of Government Version: 01/15/2008
Date Data Arrived at EDR: 01/16/2008
Date Made Active in Reports: 02/08/2008
Number of Days to Update: 23

Source: Napa County Department of Environmental Management
Telephone: 707-253-4269
Last EDR Contact: 09/14/2009
Next Scheduled EDR Contact: 12/21/2009
Data Release Frequency: Annually

ORANGE COUNTY:

List of Industrial Site Cleanups
Petroleum and non-petroleum spills.

Date of Government Version: 07/01/2009
Date Data Arrived at EDR: 08/31/2009
Date Made Active in Reports: 09/18/2009
Number of Days to Update: 18

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 08/28/2009
Next Scheduled EDR Contact: 11/30/2009
Data Release Frequency: Annually

List of Underground Storage Tank Cleanups
Orange County Underground Storage Tank Cleanups (LUST).

Date of Government Version: 08/13/2009
Date Data Arrived at EDR: 09/04/2009
Date Made Active in Reports: 09/18/2009
Number of Days to Update: 14

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 08/31/2009
Next Scheduled EDR Contact: 11/30/2009
Data Release Frequency: Quarterly

List of Underground Storage Tank Facilities
Orange County Underground Storage Tank Facilities (UST).

Date of Government Version: 08/05/2009
Date Data Arrived at EDR: 08/31/2009
Date Made Active in Reports: 09/04/2009
Number of Days to Update: 4

Source: Health Care Agency
Telephone: 714-834-3446
Last EDR Contact: 12/02/2009
Next Scheduled EDR Contact: 11/30/2009
Data Release Frequency: Quarterly

PLACER COUNTY:

Master List of Facilities
List includes aboveground tanks, underground tanks and cleanup sites.

Date of Government Version: 07/15/2009
Date Data Arrived at EDR: 07/16/2009
Date Made Active in Reports: 07/23/2009
Number of Days to Update: 7

Source: Placer County Health and Human Services
Telephone: 530-889-7312
Last EDR Contact: 06/28/2009
Next Scheduled EDR Contact: 09/28/2009
Data Release Frequency: Semi-Annually

RIVERSIDE COUNTY:

Listing of Underground Tank Cleanup Sites
Riverside County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 08/24/2009
Date Data Arrived at EDR: 08/26/2009
Date Made Active in Reports: 09/18/2009
Number of Days to Update: 23

Source: Department of Public Health
Telephone: 951-358-5055
Last EDR Contact: 09/28/2009
Next Scheduled EDR Contact: 01/11/2010
Data Release Frequency: Quarterly

Underground Storage Tank Tank List
Underground storage tank sites located in Riverside county.

Date of Government Version: 08/24/2009
Date Data Arrived at EDR: 08/26/2009
Date Made Active in Reports: 09/16/2009
Number of Days to Update: 21

Source: Health Services Agency
Telephone: 951-358-5055
Last EDR Contact: 09/28/2009
Next Scheduled EDR Contact: 01/11/2010
Data Release Frequency: Quarterly

SACRAMENTO COUNTY:

Toxic Site Clean-Up List
List of sites where unauthorized releases of potentially hazardous materials have occurred.

Date of Government Version: 06/04/2009
Date Data Arrived at EDR: 07/28/2009
Date Made Active in Reports: 08/03/2009
Number of Days to Update: 6

Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 10/16/2009
Next Scheduled EDR Contact: 01/25/2010
Data Release Frequency: Quarterly

Master Hazardous Materials Facility List
Any business that has hazardous materials on site - hazardous material storage sites, underground storage tanks, waste generators.

Date of Government Version: 06/04/2009
Date Data Arrived at EDR: 07/28/2009
Date Made Active in Reports: 08/03/2009
Number of Days to Update: 6

Source: Sacramento County Environmental Management
Telephone: 916-875-8406
Last EDR Contact: 10/16/2009
Next Scheduled EDR Contact: 01/25/2010
Data Release Frequency: Quarterly

SAN BERNARDINO COUNTY:

Hazardous Material Permits
This listing includes underground storage tanks, medical waste handlers/generators, hazardous materials handlers, hazardous waste generators, and waste oil generators/handlers.

Date of Government Version: 09/18/2009
Date Data Arrived at EDR: 09/21/2009
Date Made Active in Reports: 10/13/2009
Number of Days to Update: 22

Source: San Bernardino County Fire Department Hazardous Materials Division
Telephone: 909-387-3041
Last EDR Contact: 08/31/2009
Next Scheduled EDR Contact: 11/30/2009
Data Release Frequency: Quarterly

SAN DIEGO COUNTY:

Hazardous Materials Management Division Database
The database includes: HE58 - This report contains the business name, site address, business phone number, establishment 'H' permit number, type of permit, and the business status. HE17 - In addition to providing the same information provided in the HE58 listing, HE17 provides inspection dates, violations received by the establishment, hazardous waste generated, the quantity, method of storage, treatment/disposal of waste and the hauler, and information on underground storage tanks. Unauthorized Release List - Includes a summary of environmental contamination cases in San Diego County (underground tank cases, non-tank cases, groundwater contamination, and soil contamination are included.)

Date of Government Version: 07/16/2008
Date Data Arrived at EDR: 10/29/2008
Date Made Active in Reports: 11/26/2008
Number of Days to Update: 28

Source: Hazardous Materials Management Division
Telephone: 619-338-2268
Last EDR Contact: 09/24/2009
Next Scheduled EDR Contact: 12/28/2009
Data Release Frequency: Quarterly

Solid Waste Facilities

San Diego County Solid Waste Facilities.

Date of Government Version: 11/01/2008
Date Data Arrived at EDR: 12/23/2008
Date Made Active in Reports: 01/27/2009
Number of Days to Update: 35

Source: Department of Health Services
Telephone: 619-338-2209
Last EDR Contact: 08/17/2009
Next Scheduled EDR Contact: 11/16/2009
Data Release Frequency: Varies

Environmental Case Listing

The listing contains all underground tank release cases and projects pertaining to properties contaminated with hazardous substances that are actively under review by the Site Assessment and Mitigation Program.

Date of Government Version: 08/18/2009
Date Data Arrived at EDR: 09/22/2009
Date Made Active in Reports: 10/13/2009
Number of Days to Update: 21

Source: San Diego County Department of Environmental Health
Telephone: 619-338-2371
Last EDR Contact: 09/22/2009
Next Scheduled EDR Contact: 12/28/2009
Data Release Frequency: Varies

SAN FRANCISCO COUNTY:

Local Oversite Facilities

A listing of leaking underground storage tank sites located in San Francisco county.

Date of Government Version: 09/19/2008
Date Data Arrived at EDR: 09/19/2008
Date Made Active in Reports: 09/29/2008
Number of Days to Update: 10

Source: Department Of Public Health San Francisco County
Telephone: 415-252-3920
Last EDR Contact: 08/31/2009
Next Scheduled EDR Contact: 11/30/2009
Data Release Frequency: Quarterly

Underground Storage Tank Information

Underground storage tank sites located in San Francisco county.

Date of Government Version: 09/19/2008
Date Data Arrived at EDR: 09/19/2008
Date Made Active in Reports: 10/01/2008
Number of Days to Update: 12

Source: Department of Public Health
Telephone: 415-252-3920
Last EDR Contact: 09/14/2009
Next Scheduled EDR Contact: 11/30/2009
Data Release Frequency: Quarterly

SAN JOAQUIN COUNTY:

San Joaquin Co. UST

A listing of underground storage tank locations in San Joaquin county.

Date of Government Version: 08/21/2009
Date Data Arrived at EDR: 08/21/2009
Date Made Active in Reports: 08/27/2009
Number of Days to Update: 6

Source: Environmental Health Department
Telephone: N/A
Last EDR Contact: 09/28/2009
Next Scheduled EDR Contact: 01/11/2010
Data Release Frequency: Semi-Annually

SAN MATEO COUNTY:

Business Inventory

List includes Hazardous Materials Business Plan, hazardous waste generators, and underground storage tanks.

Date of Government Version: 07/27/2009
Date Data Arrived at EDR: 07/28/2009
Date Made Active in Reports: 08/03/2009
Number of Days to Update: 6

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 09/23/2009
Next Scheduled EDR Contact: 01/04/2010
Data Release Frequency: Annually

Fuel Leak List

A listing of leaking underground storage tank sites located in San Mateo county.

Date of Government Version: 04/07/2009
Date Data Arrived at EDR: 04/07/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 34

Source: San Mateo County Environmental Health Services Division
Telephone: 650-363-1921
Last EDR Contact: 09/23/2009
Next Scheduled EDR Contact: 01/04/2010
Data Release Frequency: Semi-Annually

SANTA CLARA COUNTY:

HIST LUST - Fuel Leak Site Activity Report

A listing of open and closed leaking underground storage tanks. This listing is no longer updated by the county. Leaking underground storage tanks are now handled by the Department of Environmental Health.

Date of Government Version: 03/29/2005
Date Data Arrived at EDR: 03/30/2005
Date Made Active in Reports: 04/21/2005
Number of Days to Update: 22

Source: Santa Clara Valley Water District
Telephone: 408-265-2600
Last EDR Contact: 03/23/2009
Next Scheduled EDR Contact: 06/22/2009
Data Release Frequency: No Update Planned

LOP Listing

A listing of leaking underground storage tanks located in Santa Clara county.

Date of Government Version: 05/29/2009
Date Data Arrived at EDR: 06/01/2009
Date Made Active in Reports: 06/15/2009
Number of Days to Update: 14

Source: Department of Environmental Health
Telephone: 408-918-3417
Last EDR Contact: 09/23/2009
Next Scheduled EDR Contact: 12/21/2009
Data Release Frequency: Varies

Hazardous Material Facilities

Hazardous material facilities, including underground storage tank sites.

Date of Government Version: 08/31/2009
Date Data Arrived at EDR: 08/31/2009
Date Made Active in Reports: 09/18/2009
Number of Days to Update: 18

Source: City of San Jose Fire Department
Telephone: 408-277-4659
Last EDR Contact: 08/31/2009
Next Scheduled EDR Contact: 11/30/2009
Data Release Frequency: Annually

SOLANO COUNTY:

Leaking Underground Storage Tanks

A listing of leaking underground storage tank sites located in Solano county.

Date of Government Version: 09/21/2009
Date Data Arrived at EDR: 09/25/2009
Date Made Active in Reports: 10/13/2009
Number of Days to Update: 18

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 09/14/2009
Next Scheduled EDR Contact: 12/21/2009
Data Release Frequency: Quarterly

Underground Storage Tanks
Underground storage tank sites located in Solano county.

Date of Government Version: 09/21/2009
Date Data Arrived at EDR: 09/28/2009
Date Made Active in Reports: 10/22/2009
Number of Days to Update: 24

Source: Solano County Department of Environmental Management
Telephone: 707-784-6770
Last EDR Contact: 09/14/2009
Next Scheduled EDR Contact: 12/21/2009
Data Release Frequency: Quarterly

SONOMA COUNTY:

Leaking Underground Storage Tank Sites
A listing of leaking underground storage tank sites located in Sonoma county.

Date of Government Version: 10/05/2009
Date Data Arrived at EDR: 10/06/2009
Date Made Active in Reports: 10/13/2009
Number of Days to Update: 7

Source: Department of Health Services
Telephone: 707-565-6565
Last EDR Contact: 10/05/2009
Next Scheduled EDR Contact: 01/18/2010
Data Release Frequency: Quarterly

SUTTER COUNTY:

Underground Storage Tanks
Underground storage tank sites located in Sutter county.

Date of Government Version: 04/01/2009
Date Data Arrived at EDR: 04/02/2009
Date Made Active in Reports: 04/09/2009
Number of Days to Update: 7

Source: Sutter County Department of Agriculture
Telephone: 530-822-7500
Last EDR Contact: 09/18/2009
Next Scheduled EDR Contact: 12/28/2009
Data Release Frequency: Semi-Annually

VENTURA COUNTY:

Business Plan, Hazardous Waste Producers, and Operating Underground Tanks
The BWT list indicates by site address whether the Environmental Health Division has Business Plan (B), Waste Producer (W), and/or Underground Tank (T) information.

Date of Government Version: 08/28/2009
Date Data Arrived at EDR: 09/08/2009
Date Made Active in Reports: 09/18/2009
Number of Days to Update: 10

Source: Ventura County Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 09/04/2009
Next Scheduled EDR Contact: 12/07/2009
Data Release Frequency: Quarterly

Inventory of Illegal Abandoned and Inactive Sites
Ventura County Inventory of Closed, Illegal Abandoned, and Inactive Sites.

Date of Government Version: 08/01/2009
Date Data Arrived at EDR: 10/05/2009
Date Made Active in Reports: 10/13/2009
Number of Days to Update: 8

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 09/28/2009
Next Scheduled EDR Contact: 11/30/2009
Data Release Frequency: Annually

Listing of Underground Tank Cleanup Sites
Ventura County Underground Storage Tank Cleanup Sites (LUST).

Date of Government Version: 05/29/2008
Date Data Arrived at EDR: 06/24/2008
Date Made Active in Reports: 07/31/2008
Number of Days to Update: 37

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 09/04/2009
Next Scheduled EDR Contact: 12/07/2009
Data Release Frequency: Quarterly

Underground Tank Closed Sites List
Ventura County Operating Underground Storage Tank Sites (UST)/Underground Tank Closed Sites List.

Date of Government Version: 08/26/2009
Date Data Arrived at EDR: 09/28/2009
Date Made Active in Reports: 10/22/2009
Number of Days to Update: 24

Source: Environmental Health Division
Telephone: 805-654-2813
Last EDR Contact: 09/28/2009
Next Scheduled EDR Contact: 01/04/2010
Data Release Frequency: Quarterly

YOLO COUNTY:

Underground Storage Tank Comprehensive Facility Report
Underground storage tank sites located in Yolo county.

Date of Government Version: 07/22/2009
Date Data Arrived at EDR: 09/04/2009
Date Made Active in Reports: 09/16/2009
Number of Days to Update: 12

Source: Yolo County Department of Health
Telephone: 530-666-8646
Last EDR Contact: 10/13/2009
Next Scheduled EDR Contact: 01/11/2010
Data Release Frequency: Annually

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

CT MANIFEST: Hazardous Waste Manifest Data
Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 12/31/2007
Date Data Arrived at EDR: 08/26/2009
Date Made Active in Reports: 09/11/2009
Number of Days to Update: 16

Source: Department of Environmental Protection
Telephone: 860-424-3375
Last EDR Contact: 09/09/2009
Next Scheduled EDR Contact: 12/07/2009
Data Release Frequency: Annually

NJ MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2008
Date Data Arrived at EDR: 05/05/2009
Date Made Active in Reports: 05/22/2009
Number of Days to Update: 17

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 10/20/2009
Next Scheduled EDR Contact: 02/01/2010
Data Release Frequency: Annually

NY MANIFEST: Facility and Manifest Data
Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 07/28/2009
Date Data Arrived at EDR: 08/27/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 25

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 08/27/2009
Next Scheduled EDR Contact: 11/23/2009
Data Release Frequency: Annually

PA MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2007
Date Data Arrived at EDR: 09/11/2008
Date Made Active in Reports: 10/02/2008
Number of Days to Update: 21

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 09/08/2009
Next Scheduled EDR Contact: 12/07/2009
Data Release Frequency: Annually

RI MANIFEST: Manifest information
Hazardous waste manifest information

Date of Government Version: 06/01/2009
Date Data Arrived at EDR: 06/12/2009
Date Made Active in Reports: 06/29/2009
Number of Days to Update: 17

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 09/14/2009
Next Scheduled EDR Contact: 12/14/2009
Data Release Frequency: Annually

WI MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2008
Date Data Arrived at EDR: 07/17/2009
Date Made Active in Reports: 08/10/2009
Number of Days to Update: 24

Source: Department of Natural Resources
Telephone: N/A
Last EDR Contact: 09/24/2009
Next Scheduled EDR Contact: 01/04/2010
Data Release Frequency: Annually

Oil/Gas Pipelines: This data was obtained by EDR from the USGS in 1994. It is referred to by USGS as GeoData Digital Line Graphs from 1:100,000-Scale Maps. It was extracted from the transportation category including some oil, but primarily gas pipelines.

Electric Power Transmission Line Data
Source: PennWell Corporation
Telephone: (800) 823-6277
This map includes information copyrighted by PennWell Corporation. This information is provided on a best effort basis and PennWell Corporation does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of PennWell.

Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:
Source: American Hospital Association, Inc.
Telephone: 312-280-5991
The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing
Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000
A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes
Source: National Institutes of Health
Telephone: 301-594-6248
Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on private school locations in the United States.
Daycare Centers: Licensed Facilities
Source: Department of Social Services
Telephone: 916-657-4041

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 1999 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002 and 2005 from the U.S. Fish and Wildlife Service.

STREET AND ADDRESS INFORMATION

APPENDIX D
HISTORICAL AERIAL PHOTOGRAPHS

818 Lakeport Boulevard Site
818 Lakeport Boulevard
Lakeport, CA 95453

Inquiry Number: 2622183.5
October 27, 2009

The EDR Aerial Photo Decade Package

EDR® Environmental Data Resources Inc

440 Wheelers Farms Road
Milford, CT 06461
800.352.0050
www.edrnet.com

EDR Aerial Photo Decade Package

Environmental Data Resources, Inc. (EDR) Aerial Photo Decade Package is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDRs professional researchers provide digitally reproduced historical aerial photographs, and when available, provide one photo per decade.

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.

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

Date EDR Searched Historical Sources:

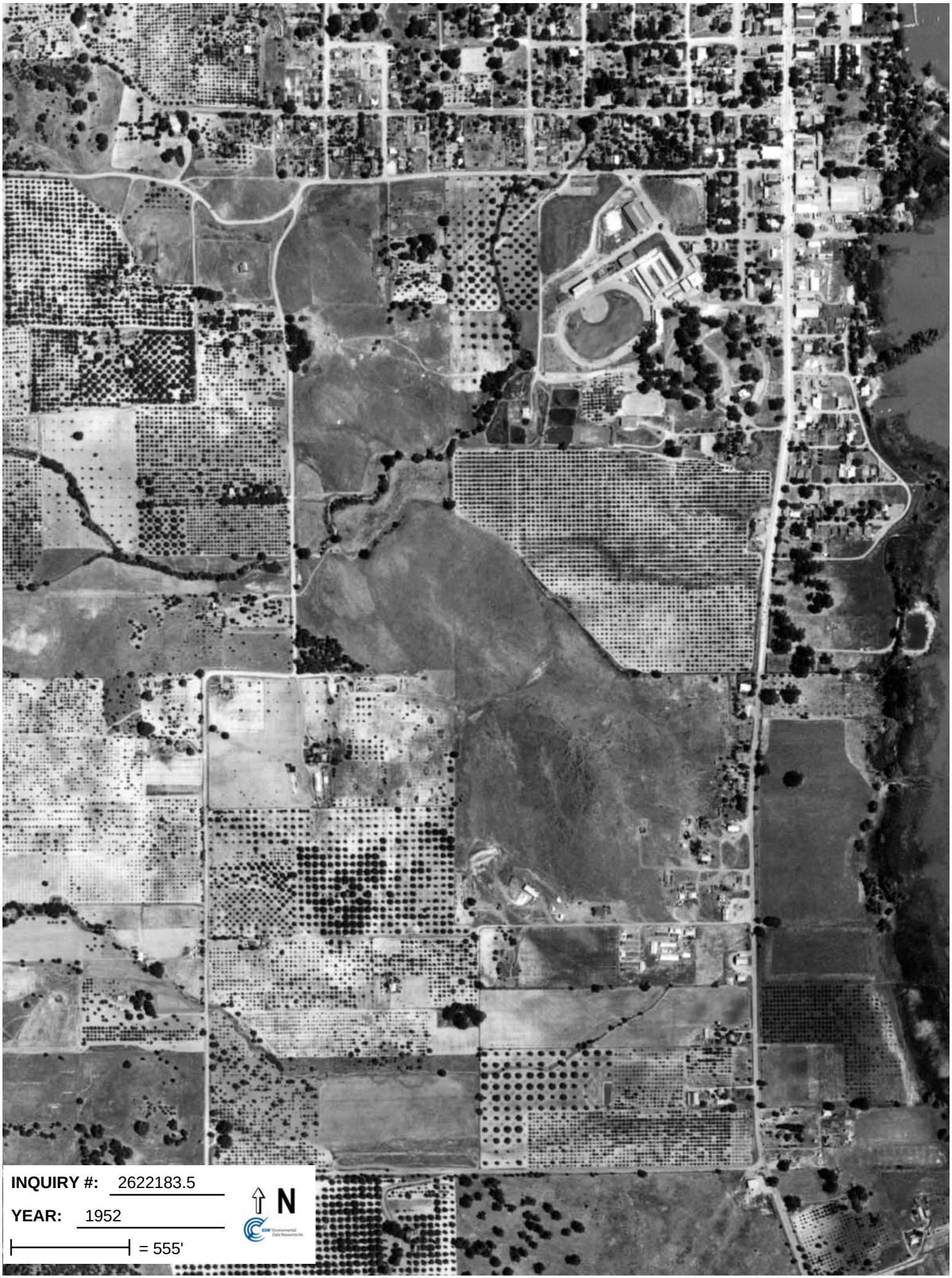
Aerial Photography October 27, 2009

Target Property:

818 Lakeport Boulevard

Lakeport, CA 95453

Year	***Scale***	***Details***	***Source***
1952	Aerial Photograph. Scale: 1"=555'	Flight Year: 1952	Southwestern
1972	Aerial Photograph. Scale: 1"=333'	Flight Year: 1972	CH2M Hill
1987	Aerial Photograph. Scale: 1"=666'	Flight Year: 1987	USGS
1993	Aerial Photograph. Scale: 1"=666'	Flight Year: 1993	USGS
1998	Aerial Photograph. Scale: 1"=666'	Flight Year: 1998	USGS
2005	Aerial Photograph. 1" = 604'	Flight Year: 2005	EDR


INQUIRY #: 2622183.5
YEAR: 1952
= 555'
N


INQUIRY #: 2622183.5
YEAR: 1972
= 333'
N


INQUIRY #: 2622183.5
YEAR: 1987
= 666'
N


INQUIRY #: 2622183.5
YEAR: 1993
= 666'
N


INQUIRY #: 2622183.5
YEAR: 1998
= 666'
N


INQUIRY #: 2622183.5
YEAR: 2005
= 604'
N

APPENDIX E
HISTORICAL TOPOGRAPHIC MAPS

818 Lakeport Boulevard Site
818 Lakeport Boulevard
Lakeport, CA 95453

Inquiry Number: 2622183.4
October 26, 2009

The EDR Historical Topographic Map Report

EDR® Environmental Data Resources Inc

440 Wheelers Farms Road
Milford, CT 06461
800.352.0050
www.edrnet.com

EDR Historical Topographic Map Report

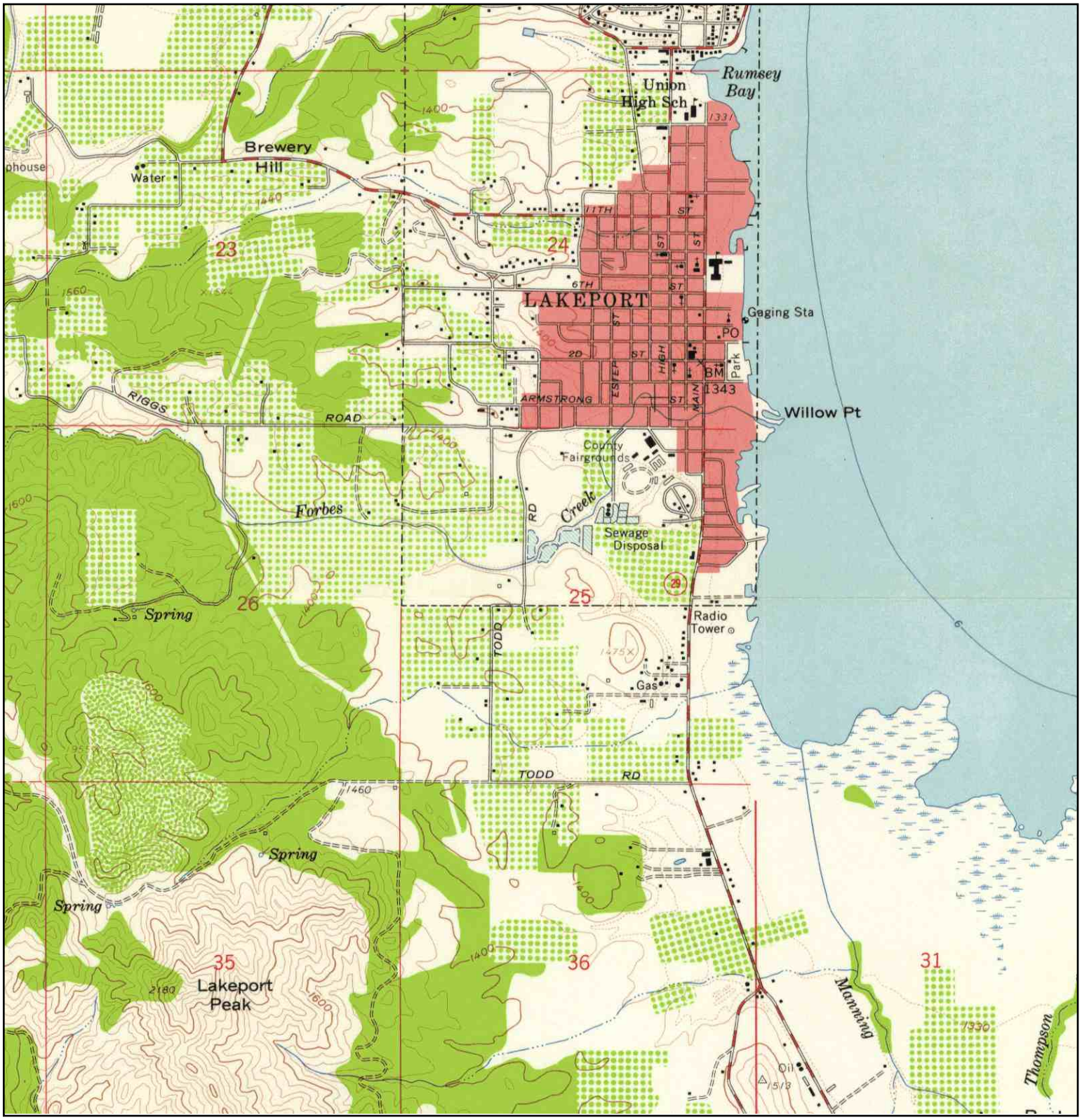
Environmental Data Resources, Inc.s (EDR) Historical Topographic Map Report is designed to assist professionals in evaluating potential liability on a target property resulting from past activities. EDRs Historical Topographic Map Report includes a search of a collection of public and private color historical topographic maps, dating back to the early 1900s.

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

Historical Topographic Map

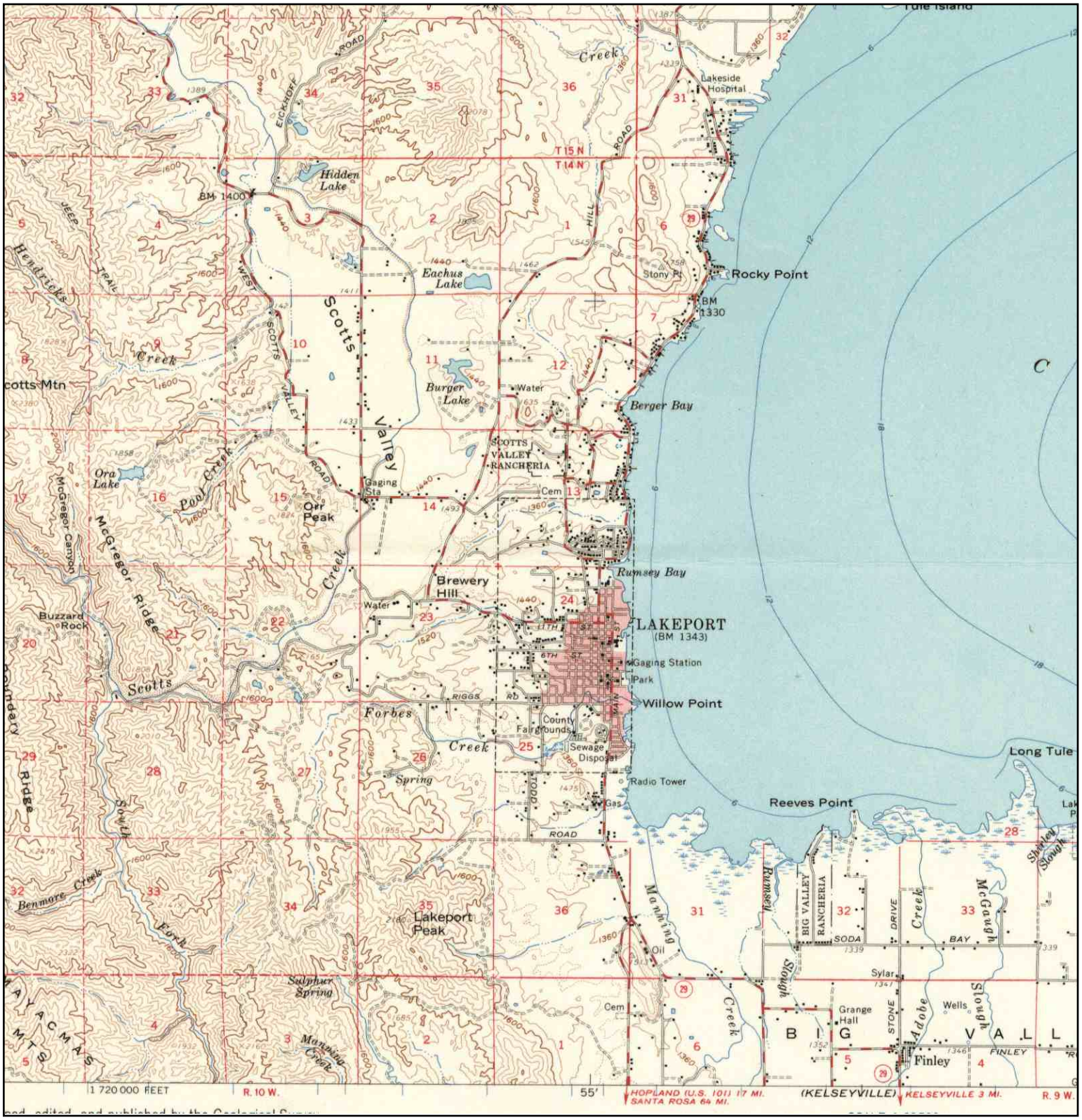
N	TARGET QUAD NAME: LAKEPORT MAP YEAR: 1938 SERIES: 15 SCALE: 1:62500	SITE NAME: 818 Lakeport Boulevard Site ADDRESS: 818 Lakeport Boulevard Lakeport, CA 95453 LAT/LONG: 39.0344 / 122.922	CLIENT: URS Corporation CONTACT: Frank Gegunde INQUIRY#: 2622183.4 RESEARCH DATE: 10/26/2009

Historical Topographic Map



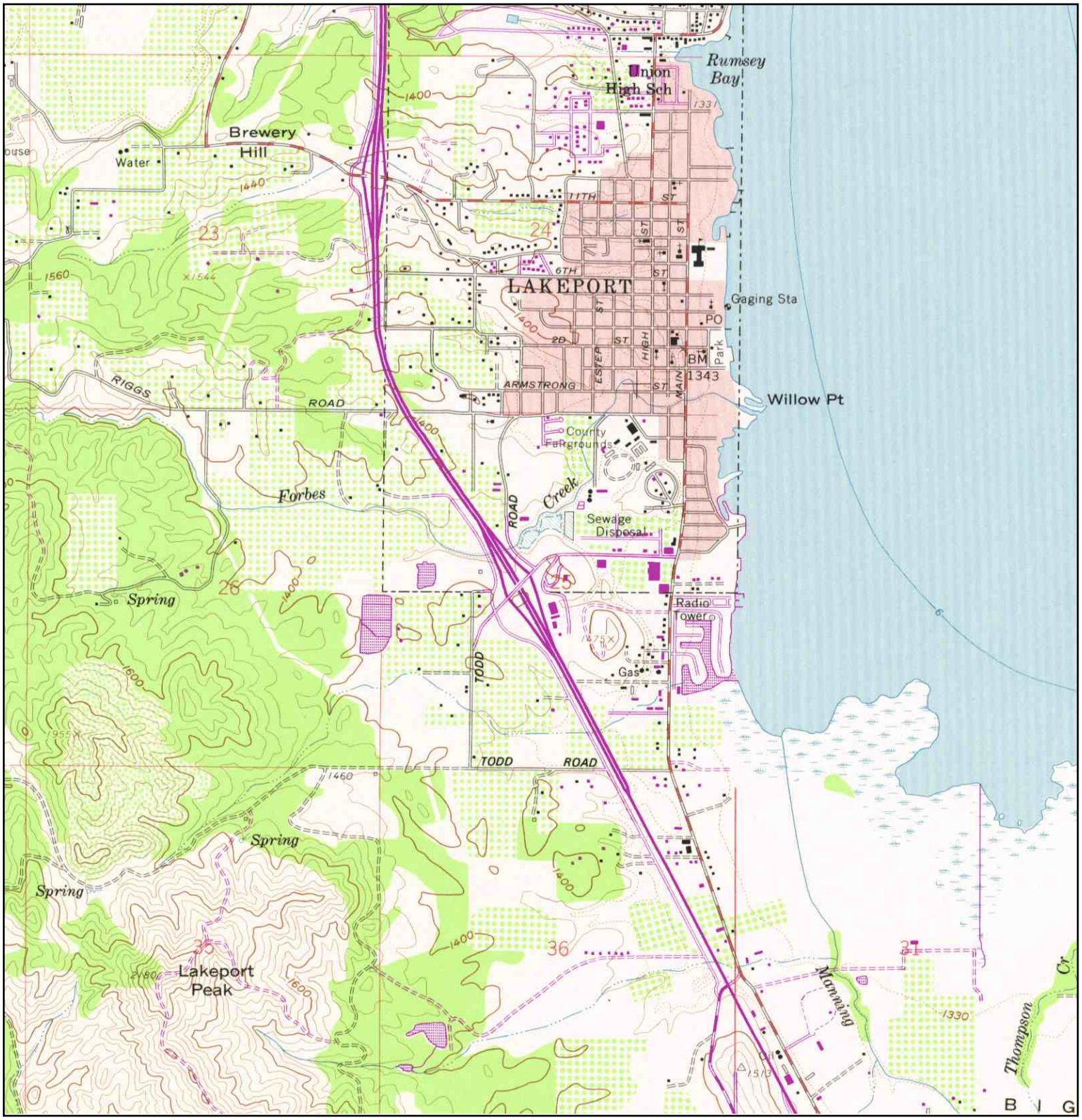
N	TARGET QUAD NAME: LAKEPORT MAP YEAR: 1958 SERIES: 7.5 SCALE: 1:24000	SITE NAME: 818 Lakeport Boulevard Site ADDRESS: 818 Lakeport Boulevard Lakeport, CA 95453 LAT/LONG: 39.0344 / 122.922	CLIENT: URS Corporation CONTACT: Frank Gegunde INQUIRY#: 2622183.4 RESEARCH DATE: 10/26/2009

Historical Topographic Map



N	TARGET QUAD NAME: LAKEPORT MAP YEAR: 1958 SERIES: 15 SCALE: 1:62500	SITE NAME: 818 Lakeport Boulevard Site ADDRESS: 818 Lakeport Boulevard Lakeport, CA 95453 LAT/LONG: 39.0344 / 122.922	CLIENT: URS Corporation CONTACT: Frank Gegunde INQUIRY#: 2622183.4 RESEARCH DATE: 10/26/2009

Historical Topographic Map



N	TARGET QUAD NAME: LAKEPORT MAP YEAR: 1978 PHOTOREVISED FROM:1958 SERIES: 7.5 SCALE: 1:24000	SITE NAME: 818 Lakeport Boulevard Site ADDRESS: 818 Lakeport Boulevard Lakeport, CA 95453 LAT/LONG: 39.0344 / 122.922	CLIENT: URS Corporation CONTACT: Frank Gegunde INQUIRY#: 2622183.4 RESEARCH DATE: 10/26/2009

APPENDIX F
SANBORN FIRE INSURANCE MAPS

818 Lakeport Boulevard Site
818 Lakeport Boulevard
Lakeport, CA 95453

Inquiry Number: 2622183.3
October 23, 2009

Certified Sanborn® Map Report

EDR® Environmental Data Resources Inc

440 Wheelers Farms Road
Milford, CT 06461
800.352.0050
www.edrnet.com

Certified Sanborn® Map Report

10/23/09

Site Name:
818 Lakeport Boulevard Site
818 Lakeport Boulevard
Lakeport, CA 95453

Client Name:
URS Corporation
2870 Gateway Oaks Drive
Sacramento, CA 95833

EDR Inquiry # 2622183.3

Contact: Frank Gegunde

EDR® Environmental Data Resources Inc

The complete Sanborn Library collection has been searched by EDR, and fire insurance maps covering the target property location provided by URS Corporation were identified for the years listed below. The certified Sanborn Library search results in this report can be authenticated by visiting www.edrnet.com/sanborn and entering the certification number. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by Sanborn Library LLC, the copyright holder for the collection.

Certified Sanborn Results:

Site Name:	818 Lakeport Boulevard Site
Address:	818 Lakeport Boulevard
City, State, Zip:	Lakeport, CA 95453
Cross Street:	
P.O. #	17326295.01001
Project:	17326295.01001
Certification #	C1E5-44DE-A791

Sanborn® Library search results
Certification # C1E5-44DE-A791

UNMAPPED PROPERTY

This report certifies that the complete holdings of the Sanborn Library, LLC collection have been searched based on client supplied target property information, and fire insurance maps covering the target property were not found.

The Sanborn Library includes more than 1.2 million Sanborn fire insurance maps, which track historical property usage in approximately 12,000 American cities and towns. Collections searched:

- ✔ Library of Congress
- ✔ University Publications of America
- ✔ EDR Private Collection

Limited Permission To Make Copies

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APPENDIX G
CITY DIRECTORY ABSTRACT

818 Lakeport Boulevard Site
818 Lakeport Boulevard
Lakeport, CA 95453

Inquiry Number: 2622183.6
November 03, 2009

The EDR-City Directory Abstract

Environmental Data Resources Inc

440 Wheelers Farms Road
Milford, CT 06461
800.352.0050
www.edrnet.com

TABLE OF CONTENTS

SECTION

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

2009 Enhancements to EDR City Directory Abstract

New for 2009, the EDR City Directory Abstract has been enhanced with additional information and features. These enhancements will make your city directory research process more efficient, flexible, and insightful than ever before. The enhancements will improve the options for selecting adjoining properties, and will speed up your review of the report.

City Directory Report. Three important enhancements have been made to the EDR City Directory Abstract:

1. *Executive Summary.* The report begins with an Executive Summary that lists the sources consulted in the preparation of the report. Where available, a parcel map is also provided within the report, showing the locations of properties researched.

2. *Page Images.* Where available, the actual page source images will be included in the Appendix, so that you can review them for information that may provide additional insight. EDR has copyright permission to include these images.

3. *Findings Listed by Location.* Another useful enhancement is that findings are now grouped by address. This will significantly reduce the time you need to review your abstracts. Findings are provided under each property address, listed in reverse chronological order and referencing the source for each entry.

Options for Selecting Adjoining Properties. Ensuring that the right adjoining property addresses are searched is one of the biggest challenges that environmental professionals face when conducting city directory historical research. EDR's new enhancements make it easier for you to meet this challenge. Now, when you place an order for the EDR City Directory Abstract, you have the following choices for determining which addresses should be researched.

1. *You Select Addresses and EDR Selects Addresses.* Use the "Add Another Address" feature to specify the addresses you want researched. Your selections will be supplemented by addresses selected by EDR researchers using our established research methods. Where available, a digital map will be shown, indicating property lines overlaid on a color aerial photo and their corresponding addresses. Simply use the address list below the map to check off which properties shown on the map you want to include. You may also select other addresses using the "Add Another Address" feature at the bottom of the list.

2. *EDR Selects Addresses.* Choose this method if you want EDR's researchers to select the addresses to be researched for you, using our established research methods.

3. *You Select Addresses.* Use this method for research based solely on the addresses you select or enter into the system.

4. *Hold City Directory Research Option.* If you choose to select your own adjoining addresses, you may pause production of your EDR City Directory Abstract report until you have had a chance to look at your other EDR reports and sources. Sources for property addresses include: your Certified Sanborn Map Report may show you the location of property addresses; the new EDR Property Tax Map Report may show the location of property addresses; and your field research can supplement these sources with additional address information. To use this capability, simply click "Hold City Directory research" box under "Other Options" at the bottom of the page. Once you have determined what addresses you want researched, go to your EDR Order Status page, select the EDR City Directory Abstract, and enter the addresses and submit for production.

Questions? Contact your EDR representative at 800-352-0050. For more information about all of EDR's 2009 report and service enhancements, visit www.edrnet.com/2009enhancements

EXECUTIVE SUMMARY

DESCRIPTION

Environmental Data Resources, Inc.'s (EDR) City Directory Abstract is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's City Directory Abstract includes a search and abstract of available city directory data. For each address, the directory lists the name of the corresponding occupant at five year intervals.

RESEARCH SUMMARY

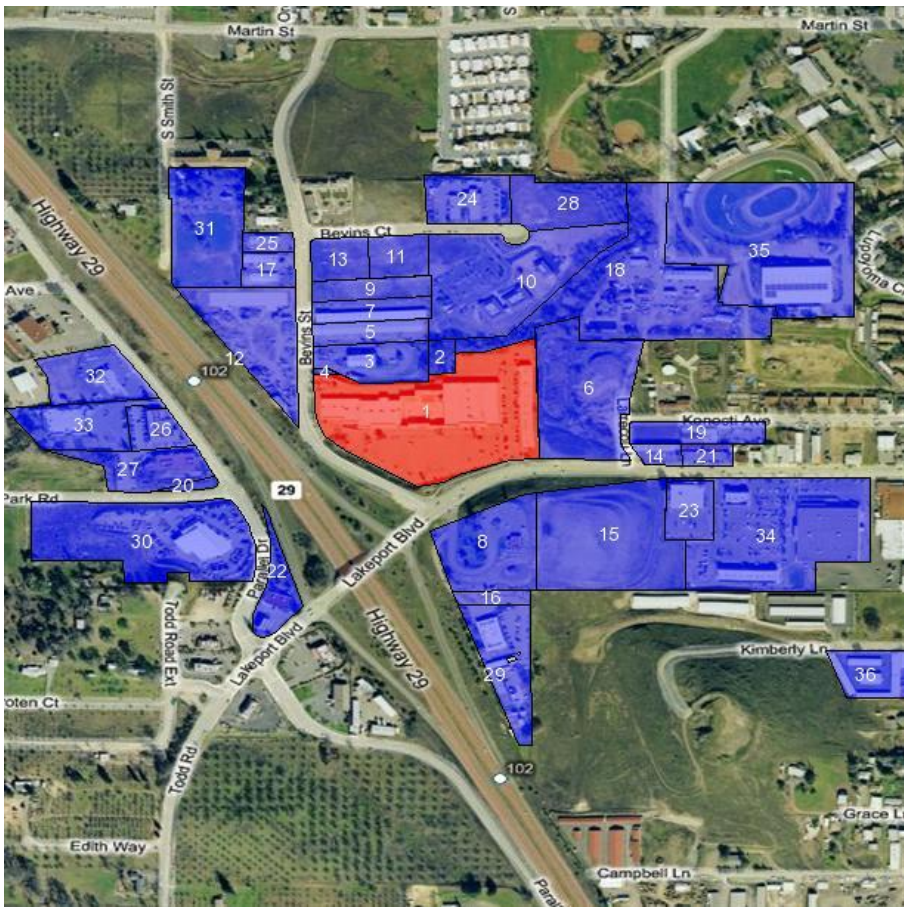
The following research sources were consulted in the preparation of this report. An "X" indicates where information was identified in the source and provided in this report.

Year	Source	TP	Adjoining	Text Abstract	Source Image
2007	Haines Criss-Cross Directory	X	X	X	-
2000	Haines Criss-Cross Directory	X	X	X	-
1996	Haines Criss-Cross Directory	X	X	X	-
1992	Haines Criss-Cross Directory	-	X	X	-

EXECUTIVE SUMMARY

MAP INFORMATION

The Overview Map provides information on nearby property parcel boundaries. Properties on this map that were selected for research are listed below the map.



SELECTED ADDRESSES

The following addresses were selected by the client. Detailed findings are contained in the findings section. An "X" indicates where information was identified.

Address	***Type***	***Findings***
910 BEVINS CT	Map ID: 0	X
675 LAKEPORT BLVD	Map ID: 0	
1075 MARTIN ST	Client Entered	
818 Lakeport Boulevard	Client Entered	X
922 BEVINS CT	Client Entered	X
940 BEVINS CT	Client Entered	
958 BEVINS CT	Client Entered	X

FINDINGS

TARGET PROPERTY INFORMATION

ADDRESS

818 Lakeport Boulevard
Lakeport, CA 95453

MapID: 1

FINDINGS DETAIL

Target Property research detail.

Year	Uses	Source
2007	Long Keith DDS	Haines Criss-Cross Directory
2000	No Return	Haines Criss-Cross Directory
1996	Lakeport Dental Gro	Haines Criss-Cross Directory

FINDINGS

ADJOINING PROPERTY DETAIL

The following Adjoining Property addresses were researched for this report. Detailed findings are provided for each address.

BEVINS CT

910 BEVINS CT Not Mapped

Year	Uses	Source
2007	Lake Co Waste Management	Haines Criss-Cross Directory
2000	Lake Co Waste Management	Haines Criss-Cross Directory
	Lake Co Waste Mng Transfer Sta	Haines Criss-Cross Directory
1996	Lake Co Solid Waste	Haines Criss-Cross Directory
1992	Lake Co Solid Waste	Haines Criss-Cross Directory

922 BEVINS CT Not Mapped

Year	Uses	Source
2007	Office Building (13 Occupants)	Haines Criss-Cross Directory
2000	Office Building (13 Occupants)	Haines Criss-Cross Directory
1996	Office Building (12 Occupants)	Haines Criss-Cross Directory
1992	Office Building (16 Occupants)	Haines Criss-Cross Directory

958 BEVINS CT Not Mapped

Year	Uses	Source
2007	Residential	Haines Criss-Cross Directory

FINDINGS

TARGET PROPERTY: ADDRESS NOT LISTED IN RESEARCH SOURCE

The following Target Property addresses were researched for this report, and the addresses were not listed in the research source.

Address Researched	Address Not Listed in Research Source
818 Lakeport Boulevard	1992

ADJOINING PROPERTY: ADDRESSES NOT LISTED IN RESEARCH SOURCE

The following Adjoining Property addresses were researched for this report, and the addresses were not listed in research source.

Address Researched	Address Not Listed in Research Source
1075 MARTIN ST	2007, 2000, 1996, 1992
675 LAKEPORT BLVD	2007, 2000, 1996, 1992
940 BEVINS CT	2007, 2000, 1996, 1992
958 BEVINS CT	2000, 1996, 1992

APPENDIX H
RESUMES OF ENVIRONMENTAL PROFESSIONALS

URS

FRANK L. GEGUNDE, P.G., R.E.A.

Senior Geologist

Overview

Mr. Gegunde is a California-licensed Professional Geologist and a Registered Environmental Assessor. Mr. Gegunde has extensive experience in conducting all aspects of Phase I and Phase II environmental site assessments (ESAs). Mr. Gegunde also has a thorough knowledge of soil boring and sampling techniques including continuous coring, split-spoon sampling, cone penetrometer testing technology (CPT) and Geoprobe™ direct push apparatus and in conducting bedrock fracture analysis using state-of-the-art field methods and RockWare™ stereonet software. He is well versed in monitoring well and piezometer installation methods as well as groundwater sampling and well monitoring procedures. Mr. Gegunde is proficient in the use of field-testing equipment including Hydac, YSI, and Horiba multiple parameter meters, photoionization hydrocarbon detection equipment, Explosimeters, PetroFLAG™ field hydrocarbon detection tests, and MiniTroll™ water monitoring data logger with Win-Situ or similar software. Mr. Gegunde also has conducted numerous passive soil gas investigations using GoreSorber™ technology to isolate "hotspots" of contamination for further subsurface investigation.

Mr. Gegunde brings organizational and supervisory skills to URS from 27 years in the dairy and transportation industries.

Areas of Expertise

Environmental Site Assessments
Environmental Geology
Landfill Investigations
Water Resources

Years of Experience

With URS: 3 Years
With Other Firms: 6 Years

Education

BS/Geology/2000/California State University, Fresno

Registration/Certification

2005/Professional Geologist/CA/#7998/Expires June 2011
Registered Environmental Assessor/CA DTSC/#08095/Expires June 2010

Project Specific Experience

Senior Geologist and Field Task Manager, McKittrick, CA, Confidential Client, 2008 - 2009: Provided observation and documentation for Health and Safety and Environmental Sensitivity aspects of the completion of a deep sandstone formation Class I Non-Hazardous Waste Injection Well. The well was authorized to inject into the Olig sand zone of the Reef Ridge Formation for the purpose of disposal of industrial nonhazardous wastewater fluids. These fluids consist primarily of cooling tower blowdown from a power plant cooling process, but also include boiler and evaporative cooler blowdown, wash water, filter backwash, equipment drains, and storm water from equipment containment.

Project Manager, Phase I Environmental Site Assessments, Kern County and Tulare County, CA, Confidential Client, 2008 - 2009, $26,000 to $32,000: Conducted Phase I environmental site assessments for a confidential client on properties in Kern and Tulare Counties, California. The Phase I ESAs were conducted with an emphasis on satisfying requirements for transferring property custodianship of multiple professional buildings between County and State agencies.

Site Auditor, Confidential Client, Limestone Mining and Cement Manufacturing, California, 2009: Environmental compliance audit and site assessment of this client's mining and manufacturing sites in California.

Senior Geologist, TDPI Pipeline Project, Bakersfield/Coalinga Area, CA, Chevron, 2008: Conducted oversight and supervision of Phase II pipeline viability assessments of idled or inactive oilfield pipelines in conjunction with other Chevron-subcontracted firms. Activities included a rigorous health and safety oversight regimen. Investigation included pipeline location, intrusive activities to reveal pipelines, connection isolation, sampling pipeline wrap for asbestos, wall thickness measurements, soil sampling, pipeline cold taps, pipeline content sampling, air quality monitoring, and project field documentation including Global Positioning System (GPS) documentation.

Project Manager, Phase I Environmental Site Assessments, Fresno, CA, Merced, CA, and Stockton, CA, Confidential Client, 2008, $6,000 to $8,000: Conducted Phase I environmental site assessments for a confidential client on properties in Fresno, Merced, and San Joaquin Counties, California. The Phase I ESAs were conducted with an emphasis on satisfying requirements for submission of applications for siting and construction of three natural gas-fired electrical power generation plants.

Senior Geologist, Heated-oil Pipeline Project, Coalinga Area, CA, Chevron, 2007: Conducted boring activities for a portion of the San Ardo Heated-oil Pipeline geotechnical investigation in advance of pipeline construction. Duties involved geotechnical boring and field-testing within a larger effort to assess feasibility of construction of the pipeline across geologically complex and abrupt terrain including multiple faults and landslides. Investigation included directing the drilling subcontractor to advance borings ranging from 30 to 60 feet below ground surface using Sonic drilling technology and HQ coring methodology, collection of continuous core samples, lithologic logging, and documentation of the investigation.

Senior Geologist, Retail Environmental Phase II Site Assessments, Los Angeles Area, CA, Shell, 2007: Supervised field activities for a portion of the Inland Empire portfolio within a larger effort to conduct 94 Phase II ESAs in 90 days. Field tasks included responsibility for a two person team overseeing drilling at active retail stations and coordination with project management to meet project objectives and schedule. Investigation of each site included directing the drilling subcontractor to advance several hollow stem auger borings ranging from 30 to 50 feet below ground surface, collection of samples, lithologic logging, and documentation of the investigation.

Senior Geologist, Storm Water Conveyance System Cross Connection Survey, Naval Air Station Lemoore, CA, Department of the Navy, 2007: Supervised field activities for the Illicit Connection Illicit Discharge (ICID) survey of selected storm water conveyance systems as necessary for National Pollutant Discharge Elimination System (NPDES) compliance for storm water management at NAVFAC SW facilities. Field survey methods included a review of all available as-built or best construction drawings, visual inspections, and where appropriate dye testing, smoke testing, closed circuit television inspection, and

electromagnetic tracer survey. Results of the survey were documented in a comprehensive investigation report.

Associate Geologist and Technical Manager, Operational Unit 1, Purity Oil Sales Superfund Site, Fresno, CA, Chevron Environmental Management Company, 2002 - 2006: Oversaw the design, installation, and implementation of low flow sampling systems using QED MicroPurge® bladder pumps in 25 on- and offsite monitoring wells. Oversaw quarterly groundwater monitoring, sampling, and reporting for the extensive monitoring well network. Oversaw operation and maintenance (O&M) of the groundwater extraction and treatment system including a three-vessel greensands filtration system and a high-volume VOC airstripper. Oversaw several phases of CPT and HydroPunch investigations at the site. Reported monthly progress and activities to the lead agencies including the US Environmental Protection Agency, the Regional Water Quality Control Board, and the California Department of Toxic Substances Control.

Project Manager, Environmental Site Assessments (Phase I/II), San Joaquin Valley and Sacramento Valley Region, CA, Multiple Clients, 2000 – 2006, $1,500 to $10,000: Conducted Phase I environmental site assessments for GE Capital – Business Asset Funding on properties throughout the San Joaquin Valley including Fresno, Kings, and San Joaquin Counties, California. Conducted Phase I environmental site assessments and Environmental Facility Entrance Assessments for a confidential client in the health services field on properties throughout the San Joaquin Valley including Fresno, Stanislaus, Placer, Sacramento, and San Joaquin Counties, California. Conducted Phase I and Phase II environmental site assessments for Pacific Gas & Electric Company in Kern, Madera, Merced and Stanislaus Counties, California. Conducted Phase I environmental site assessment for Chevron Pipe Line Company for portions of the Wait-Midway crude oil pipeline in Kern County, California.

Project Manager, Drinking Water Availability Studies, Fresno/Madera Counties, CA, Private Landowners, 2005 – 2006, $5,900 to $7,800: Conducted groundwater availability investigations and potential yield analysis for drinking water sources in the foothill regions of Fresno County and Madera County, California. Investigations included local and regional aquifer surveys for groundwater use and groundwater conditions, and pumping tests for specific yield data for wells in compliance with regulatory mandates for such testing on drinking water sources.

Field Task Manager, Blue Hills Disposal Facility, Coalinga, CA, Fresno County Department of Public Works and Planning, 2005 – 2006: Supervised quarterly groundwater monitoring at the former agricultural chemicals container disposal facility in southwestern Fresno County. The California Department of Toxic Substances Control requires quarterly monitoring at the site due to elevated concentrations of constituents of concern including herbicides in groundwater underling the

site. Also co-authored the revised Groundwater Monitoring Plan for the Site Corrective Action Plan.

Project Geologist and Field Task Manager, Goodyear Tire Service Centers, Multiple Locations, CA, Goodyear Tire and Rubber Company, 2004 – 2005: Performed soil boring and sampling at multiple Goodyear Service Centers in Fresno, Madera, Kings, Kern, Stanislaus, and Placer Counties. Borings were advanced inside the Center's service bays adjacent to hydraulic lifts and oil/water separators.

Project Geologist and Field Task Manager, Woodville Solid Wastes Landfill, Tulare, CA, Tulare County Resource Management Agency, 2004 – 2005: Oversight of the implementation and upgrade of Detection Monitoring Plans and Evaluation Monitoring Plans (California Code of Regulations Title 27) at the Woodville solid waste landfill in Tulare County, California.

Awards

2007/2cd Quarter 2007 Outstanding Achievement Award – URS Corporation
2000/Department of Geology Special Recognition Award – California State University, Fresno

Specialized Training

2000/ OSHA 40-Hour HAZWOPER w/ subsequent 8-hour refreshers
2002/OSHA 8-Hour Hazardous Waste Site Supervisor
2005/RTBU (Chevron) Loss Prevention System
2007/American Red Cross Standard First Aid
2007/American Red Cross Adult CPR
2006/URS Loss Prevention System (Chevron/Exxon Mobile)
2008/Westec - Contractor Safety Orientation (BKF Area Oilfields)
2006/SJVBU (Chevron) Business Partner Orientation
2009/e-Railsafe Rail Security Awareness Training
2009/BNSF Railroad Contractor Orientation and Safety Course

Chronology

10/06 – Present:	URS Corporation, Senior Geologist, Fresno, CA
07/00 – 10/06:	SECOR International Incorporated, Associate Geologist, Fresno, CA

Contact Information

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Direct: 559.256.1468
Fax: 559.256.1478
frank_gegunde@urscorp.com

URS

Casper van Keppel

Project Engineer

Overview

Mr. Van Keppel is a chemical process engineer with experience in process and environmental engineering, project management, site characterization, soil and groundwater remediation, unit operations design, construction oversight, start-up assistance, stormwater pollution prevention, air emissions reduction and dust control, and environmental compliance monitoring and sampling.

Areas of Expertise

Process Engineering
Hazop Studies
Emission Reduction
Environmental Remediation
Ethanol Production

Years of Experience

With URS: 6 Years
With Other Firms: 14 Years

Education

Masters Degree (Ir.)/Chemical Engineer/1988/Delft University of Technology, Netherlands

Project Specific Experience

Environmental Compliance

Project Engineer, Confidential Client, Manure Digester Facilities, California and Nevada, 2008: Evaluation of environmental compliance of candidate dairy sites for proposed bio-energy generation through cow manure digesters.

Project Manager, Navy Facilities, Lemoore Naval Air Station, CA, 2007: Housing and contractor park facilities inspection and preparation of an Environmental Conditions of Property report for base housing Public Private Venture project.

Project Engineer, Alcoa-Kawneer, Visalia, CA, FAA, 2006: Hazardous materials inventory for TRI-ME air emissions program, administered by EPA.

Project Engineer, Fresno Yosemite International Airport, Fresno, CA, FAA, 2003: Hazardous materials inventory of outdated radar installations.

Site Auditor, Private Client, Shafter, CA, 2004: Phase One Site Assessment and follow-up Phase 2 investigation the former Air Force training base section of the Shafter Airport. This training base was active during World War II.

Site Auditor, Private Client, Fremont, CA, 2004: Phase One Site Assessment and environmental compliance audit at an electronics production facility.

Site Auditor, Unilever, Merced, CA, 2004: Environmental data verification audit at a tomato processing plant.

Site Auditor, Grumman – Olsen, Visalia, CA, 2003: Phase One Site Assessment at a truck manufacturing facility.

Site Auditor, Private Clients, over 40 sites in Central California, 2003-present: Phase One Site Assessments. Sites included hospitals,

industrial production facilities, cellular phone antenna towers, former gas station properties, shopping centers, and undeveloped areas.

Project Manager, Private Clients, near Chowchilla, CA, 2005 – Present: Environmental compliance assistance and groundwater monitoring for three dairy facilities.

Project Manager, Private Client, Tulare County, CA, 2006: Preparation of spill prevention, control, and countermeasure plans for three agricultural chemicals distribution facilities.

NPDES-Related Projects

Project Manager / Process Engineer, Aquatic Pesticide Monitoring, Alta, Consolidated, and Fresno Irrigation Districts, CA, 2002-2003: Project management of monitoring program for aquatic herbicides (copper sulfate) application to the canal systems of the three districts working together as Upper Districts. Monitoring included observation and sampling of all spill locations to the San Joaquin River and Kings River during the herbicide application season. The monitoring program also included a study on the fate of the applied chemicals.

Project Manager / Process Engineer, Aquatic Pesticide Monitoring, Fresno Irrigation Districts, CA, 2002-2003: Project management of a monitoring program for aquatic herbicide (acrolein) application to the canal system of Fresno Irrigation District. Monitoring included observation and sampling of all spill locations to the San Joaquin River during the herbicide application season.

Project Engineer, Modern Custom Fabrication, Fresno, CA, 2002: Preparation of a spill prevention, control and countermeasure (SPCC) plan for tank manufacturing facility.

Area Manger, United States Postal Service, Fresno and Bakersfield, CA, 2003-2006: Stormwater monitoring program for five USPS locations.

Water Resources and Wastewater

Private Client, Fresno County, CA 2006: Evaluate current wastewater treatment facilities for a mountain resort, and make recommendations for upgrading to 100,000 gpd.

Community of Riverdale, Fresno County, CA 2006: Peer review of process design and operations manuals for arsenic removal installation at municipal well site.

Tulare County Resource Management Agency, Tulare, CA, 2005: The well and aquifer study included the evaluation of water demands, groundwater supplies and quality, water distribution network, water conservation BMPs, and available treatment technologies for existing and projected drinking water supplies within the Richgrove Community Services District (RCSD). Treatment alternatives addressed contaminants

of concern in the drinking water supply, which included arsenic, dibromochloropropane, hydrogen sulfide, and nitrate.

Groundwater Remediation

Project Manager / Project Engineer, AAF-McQuay, Inc. (American Air Filter), Visalia, CA, 2002-present: Managing operations and maintenance of Visalia, California site groundwater remediation system. System involves several wells and two activated carbon adsorption units.

Project Manager / Project Engineer, Private site, near Earlimart, CA, private client, 2003-2008: For this site with deep fuel contamination, following scope was implemented: Site characterization to 150-ft below ground surface with laser-induced fluorescence (push-probing); preparation of a feasibility study, corrective action plan, and remedial action plan; site remediation; and groundwater monitoring.

Project Engineer, Private site, Pinehurst, CA, private, 2002: Design of well water treatment for private property. Site was characterized by passive soil gas sampling (Gore-Sorber TM technology), results were used to develop a groundwater monitoring plan, and to apply for Californina UST Fund project funding.

Project Engineer, Former C&T Gas Station, Huron, CA, private, 2002-2003: Soil vapor extraction pilot test design and design of a soil vapor extraction system, comprising thermal oxidizer and carbon adsorption system. Application for air pollution control permit.

Project Engineer, Gas-N-Save Gas Station, Merced, CA, private, 2002-2003: Design of soil vapor extraction system (thermal oxidizer), and applications for building permit and air pollution permit. Subcontracting construction activities.

Process Engineer / Project Manager, Akzo-Nobel, Weert, Holland, Akzo-Nobel, 2001-2002: Design of soil remediation, ground water purification part Project manager and lead chemical engineering for tele-monitored smart pump-and-treat system, involving chlorinated and fluorinated hydrocarbons and heavy metals removal.

URS

Site Remediation (Brownfields)

Project Manager, Private Client, Voluntary Remediation of Former Crop Dusting Airport for Residential Development, Fresno, CA, 2004-present: Phase 1 Investigation, Phase 2 Site characterization, removal action plan preparation, interaction with Department of Toxic Substances Control, San Joaquin Valley Air Pollution Control District, and Fresno County, and turn-key excavation and disposal of the soils impacted by toxaphene, DDD, DDE and DDT. Clean-up to residential standards. Excavation and load-out was performed by URS' Construction Division. Excavation volume approx. 50,000 cubic yards.

Project Engineer, 50th Street Property, Rosamond, CA, Department of Toxic Substances Control, 2007: Remedial Action Workplan for metals-contaminated site. Remedial work will include excavation of impacted soils.

Project Engineer, Proposed Livingston High School Site, Livingston, CA, Department of Toxic Substances Control, 2007: Supplemental Site Investigation Workplan review. Investigative work included soil sampling for organochlorine pesticides at a former farmstead.

Project Engineer, Proposed Reedley Elementary School Site, Reedley, CA, Kings Canyon Unified School District, 2007: Preliminary Endangerment Assessment Report. Review of report on investigative work according DTSC guidelines for school sites. The report included risk assessment calculations.

Project Engineer, Oakdale Unified School District/Department of Toxic Substances Control, Oakdale, CA, 2004: Preparation of a Remedial Action Workplan for a lead and pesticide contaminated future school site. Remedial work will include excavation of impacted soils.

Project Engineer, Fresno Battery Exchange/Department of Toxic Substances Control, Fresno, CA, Department of Toxic Substances Control, 2004-2005: Preparation of a Remedial Action Workplan for lead contaminated future residential site. Remedial work will include debris removal and excavation of impacted soils.

Project Engineer, H.S. Mann Property/Department of Toxic Substances Control, Fresno, CA, Department of Toxic Substances Control, 2004: Waste classification as part of Remedial Action Workplan for lead contaminated industrial site. Oversight air monitoring program during remediation activities.

Project Manager and Project Engineer, Private Client, Remediation of Leaking Underground Storage Tank Site, Tulare County, CA, 2003-present: Managing groundwater monitoring, site characterization,

and remediation of a farm property where leaking fuel tanks contaminated soil and deep groundwater.

Project Engineer, Former Railroad Property/City of Visalia, Visalia, CA, City of Visalia, 2002, Geophysical investigation and soil sampling oversight: Site investigation of railroad property within the City of Visalia. The Phase II Environmental Site Assessment of this property intended to provide additional information to City of Visalia regarding environmental risks related to acquisition of the property. At the time of the investigation, an automotive sale and repair shop and a fuel and oil storage and distribution company occupied parts of the property. After clearing the boring locations by a geophysical survey, soil samples from up to 60 feet below ground surface were collected with a low-profile direct-push rig and submitted to an analytical laboratory.

Industrial Projects

Starwood Midway Power, LLC, Fresno County, CA, 2008: Air Quality Construction Mitigation Manager. Preparer of dust control plan and stormwater pollution prevention plan. During construction phase responsible for contractor implementation of and compliance with particulate emissions mitigation measures.

Process Engineer, Confidential Client, CA, 2008: Design of a sugar cane to ethanol plant. Specific tasks in conceptual design: vinasse evaporator design; overall design check; compliance with California water and wastewater regulations. Project halted in May 2008 due to funding issues.

Panoche Energy Center, Fresno County, CA, 2007-2008: Air Quality Construction Mitigation Manager. Preparer of dust control plan. During construction phase responsible for contractor implementation of and compliance with particulate emissions mitigation measures.

Lead Process Engineer, Colusa Biomass Energy Corporation, Colusa, CA, 2007-present: Process development of a cellulosic ethanol plant utilizing rice straw as feed stock, and producing silica as a byproduct. Project halted in development stage due to poor reproducibility of patented process on bench-scale.

Project Engineer, City of Wasco, California, 2006:
Managed and prepared the air quality section of the Envionmental Impact Report (EIR) for a new industrial park in Wasco, California. The project included a potential 100M GPY ethanol production plant.

Project Engineer, Flying J Big West Refinery, Bakersfield, 2005-2006: Process safety study of the clean fuels retrofit EIR for this refinery. The study involved an inventory of hazardous materials and related release scenarios for the planned refinery upgrade, based on PFDs and P&IDs. Further, a conceptual design was developed for sulfuric acid alkylation as an alternative to hydrofluoric acid alkylation.

Process Engineer, Pacific Ethanol California, Madera, CA, 2005: Report of Waste Discharge preparation for a double-lined evaporation basin. Process calculations and mass balance of generated waste indicated evaporation basin would not work at that location. Directed client to water treatment technology providers.

Phoenix Bio Industries, LLC, Goshen, CA, 2005-2006: Preparation of a sampling protocol for monitoring potential ethanol emissions from the wet distillers grain storage. Following its preparation, the protocol was implemented during several sampling events.

Process Engineer, TKV Containers, Inc., Fresno, CA, 2002: Vacuum and Cooling System design. Basic design of closed loop cooling system and centralized vacuum system for this Styrofoam box producer, to replace the existing open system.

Process Engineer, Advanced Food Products, LLC, Visalia, CA, 2003: Monitoring of process wastewater from a cheese sauce plant via data logger technology, and preparation of an air toxics inventory.

Process Engineer, Nedalco BV Bergen op Zoom, Holland, 1995-1999: Assistance process engineering department. Projects and processes dealt with are:

- Debottlenecking consumption alcohol distillation, which resulted in a 15% increase of the production with only $100k investment. This project included distillation process simulations, reboiler heat transfer design calculations, and specification of process modifications.
- Reconstruction of a 7-effect falling film evaporator train for vinasse (distillation bottoms) to reduce scaling. This improved the performance with 30%. Work included numerical modeling of heat transfer and mass balance, calibrating the model, optimizing the flow rates and equipment sequence, specifying modifications to equipment internals, pumps, and piping, construction supervision, startup.
- Heat exchanger design checks with HTRI software, and specifying modifications to the existing equipment resulting in increased production capacity.
- Debottlenecking liquid ring vacuum systems, resulting in ethanol emissions reduction.
- Complete responsibility for various utility design and construction projects (steam system / cooling towers / water softener / storage tanks) resulting in increased operation efficiency.

Process Engineer, Distillerie Orbat, Forlimpopoli, Italy, 1998-1999: Debottlenecking consumption alcohol and absolute alcohol production. The quality of the produced alcohol was not high enough, therefore the distillation section had to be reorganized. Using as much of the existing equipment the alcohol quality was improved considerably, which gave the plant a better market position. Modifications were made based on computer simulations of the distillation and long-term experience of the

Nedalco's production staff. Further, the distillation bottoms concentrator (falling film evaporator train) was analyzed for possible optimizations.

Site Auditor, Eridania, Ferrara, Italy, 1998: Technical and environmental assessment of the total production facility for consumption and technical grade alcohol on behalf of possible investors. Environmental permits and procedures were checked. The production process (including utilities and waste stream handling) evaluated. Maintenance of the equipment and necessary future investments were discussed.

Process Engineer, S.C. Johnson Polymer B.V., Heerenveen, Holland, 1994: Basic design polymer production plant, tank farm and utilities (steam / cooling water / process water). A variety of processes and equipment were designed for the emulsion polymerization process of this new factory (Greenfield project).

Process Engineer, Master Foods C.V., Oud-Beijerland, Holland, 1992-1993: Design, construction and start-up of a sauce production line within an existing plant (Hot Fill).

Process Engineer, ARCO Chemie Nederland Ltd., Rozenburg, Holland, 1989: Design of a propylene oxide scrubbing system.

Process Engineer, Avecia NeoResins, Waalwijk, Holland, 2000-2001: Pilot testing and engineering of dryer system for polymer powder. Lead process engineer, selection of test facilities at manufacturers' laboratories, test oversight, evaluation of results, process design of full scale unit based on test results, preparation bid package, bid comparison.

Process Engineer, Fuji Photo Film B.V., Tilburg, Holland, 1990-1992: Design, construction, and start-up of a photo-chemical emulsion plant. A variety of unit operations were used in the preparation of photographic emulsions. Equipment was sized, specified and ordered. Construction supervision and start-up of various systems was part of this job too.

Lead Process Engineer, Allied Signal BV, Weert, Holland, 1995: Design of cooling water system based on canal water for refrigerant production plant. The project involved selection and installation of a surface water filtration system, a heat exchanger for process water cooling and a water cooled chiller as a backup for the summer season.

Process Engineer, Vlisco BV, Helmond, Holland; Abidjan, Ivory Coast; Accra, Ghana, 2000-2001: Process design and budget estimates for various engineering/construction projects dealing with trichloroethylene recovery and emissions reduction in the client's wax print processes in Europe and Africa. Some projects required design of pilot test equipment.

Project Manager, Pasminco, Budel, Holland, 2000: Management of mechanical design for filtration press section in Cadmium plant of Zinc ore processing. Assisting client's engineering group in designing piping and structural steel modifications necessary for installation of new low-emission filterpresses for cadmium precipitation and purification process.

Process Engineer, Isover B.V., Etten-Leur, Holland, 1999: Technical evaluation of electrostatic precipitator section at fiberglass insulation manufacturer's facility. The project involved collection of samples from the exhaust of the glass furnace and comparing renovation of the system with total replacement to comply with new emissions control act. Isover is part of the multinational Saint Gobain group.

Hazop Team Chairman, Trespa BV, Weert, Holland, 2000: Hazop study on high-pressure (2000 psi) hydraulic and cooling water system, which is part of a woodchip/paper/resin construction laminate factory.

Lead Chemical Engineer, FSM Europe, Sittard, Holland, 2000-2001: Basic design of production facilities for TV tube shadow masks. An improved design was made for the production of TV tube shadow masks out of steel sheeting. Special attention has been paid to the handling of strong acids used in the etching process. A hazop study was part of this project.

Process Engineer, Fuji Photo Film B.V., Tilburg, Holland, 1990: Start-up of a silver recovery waste water treatment plant. Assistance at the start-up of this silver co-precipitation process. After start-up the process was supervised for several weeks to assure proper operation and to optimize dosing of various process chemicals.

Process Engineer, AKZO Salt & Basic Chemicals, Holland, 1989-1990: Reconstruction of a rock salt exploitation location. Well head Christmas trees and booster pump stations for brine transportation had to be redesigned to facilitate future natural gas storage in the underground salt caverns.

Process Engineer, DSM Engineering Stamicarbon, Urmond, Holland, 1995: Pressure relief system design check of the refinery's butadiene plant according API rules.

Process Engineer, Vlisco B.V. Helmond, Holland, 1994: Basic engineering resin recovery plant. A full-scale filtration system with dry cake discharge was designed to recover resin from an industrial waste water stream, based on pilot test results.

Process Engineer, Master Foods C.V., Oud-Beijerland, Holland, 1998: Start-up of utility systems for new sauce production plant. Greenfield project.

Process Engineer, Hoogers Chemisch Afval B.V., Geldrop, Holland, 1994: Emission calculations of solid waste handling activities. For this chemical waste handling facility, solvent emissions to air from the various recycling and processing steps were calculated. These calculations were the basis for their emissions permit.

Professional Societies/Affiliates

Association of Facilities Engineers, San Joaquin Valley Chapter

Languages

English, Dutch, German, French

Specialized Training

2006 Dust Control Training San Joaquin Valley Air Pollution Control District
2005 HAZWOPER Supervisor
2003 HAZWOPER 40-hr (annual 8-hr updates since)
2002 Hazardous Waste Management

Chronology

01/03 - Present: URS Corporation, Project Engineer, Fresno, CA
05/02 - 01/03: BSK Associates, Project Engineer, Fresno, CA
04/89 - 02/02: Tebodin Consultants and Engineers, Process Engineer and Project Manager, The Hague, Netherlands

Contact Information

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