

AGREEMENT FOR PURCHASE AND SALE

THIS AGREEMENT FOR PURCHASE AND SALE (Bottle Parcel) ("**Agreement**") is made and entered into as of _____, 2019 (the "**Effective Date**") by and between the SUCCESSOR AGENCY TO THE COMMUNITY IMPROVEMENT COMMISSION OF THE CITY OF ALAMEDA ("**Seller**" or "**Successor Agency**"), and LOISOS + UBBELOHDE, a sole proprietorship or permitted assignee ("**Buyer**") with regard to the purchase and sale of certain Property, upon the terms and conditions set forth herein.

RECITALS

WHEREAS, on or about August 1, 2001, the United State of America, acting by and through the Department of the Navy ("**Navy**") conveyed to Seller's predecessor in interest, the Community Improvement Commission of the City of Alameda ("**CIC**") the former U.S. Navy Fleet Industrial Supply Center, Alameda ("**FISC**"); and

WHEREAS, pursuant to AB X1 26 (as revised by AB 1484), the Successor Agency acquired from the CIC approximately 35,556 square foot (0.82 acres) of gross land area referred to as the "Bottle Parcel." The Long Range Property Management Plan ("**LRPMP**") of the Successor Agency, dated February 2015, proposed for the disposition of the Bottle Parcel by means of a sale. The LRPMP and the disposition of the properties listed therein, including the Bottle Parcel, was approved by the California Department of Finance by letter dated March 12, 2015; and

WHEREAS, this Agreement has been authorized by the Oversight Board for the Successor Agency to the Community Improvement Commission of the City of Alameda.

NOW, THEREFORE, for good and valuable consideration, the adequacy and receipt of which is hereby acknowledged, the parties agrees as follows:

1. Authority. Pursuant to Health & Safety Code §34181(a)(1), on June 4, 2018, the Oversight Board adopted Resolution No. 18-05, approving this Agreement and the sale and conveyance of the Bottle Parcel as set forth herein.

2. The Property. Seller hereby agrees to sell, assign and convey to Buyer, and Buyer hereby agrees to purchase from Seller, (a) the Real Property, defined as that approximately 0.82 acre unimproved parcel commonly known as 2350 5th Street, Alameda, APN 074-1356-023 (the "**Real Property**") together with all appurtenances, rights, privileges, warranties and easements benefiting, belonging or pertaining thereto, and (b) all of Seller's right, title and interest in any intangible property related to or associated with the Real Property, collectively the "**Property**".

3. Purchase Price. The Purchase Price for the Property is Two Hundred and Sixty One Thousand Dollars (\$261,000.00) (the "**Purchase Price**") and shall be paid by Buyer to Escrow Holder (as defined at Section 9.1 below) in good, same day funds, on or before the Closing Date. The Purchase Price was negotiated with the understanding that the cost to bring utilities to the Real Property will be in excess of Three Hundred and Fifty Thousand Dollars (\$350,000.00) as evidenced by those certain construction bids obtained by Buyer and delivered to Seller.

3.1 Initial Deposits. Concurrently with its execution of this Agreement, Buyer shall deposit with Escrow Holder an earnest money deposit in the amount of Ten Thousand Dollars (\$10,000) (the “**Initial Deposit**”). The Initial Deposit shall be held by Escrow Holder, pursuant to a separate escrow agreement in an interest bearing account, insured by the Federal Government. In the event the purchase and sale of the Property is consummated as contemplated hereunder, the Initial Deposit shall be credited against the Purchase Price at Closing.

3.2 Independent Consideration. Concurrently with the Initial Deposit, Buyer shall deliver to Escrow Holder as independent consideration for this Agreement the amount of One Hundred Dollars (\$100) the “**Independent Consideration**,” which consideration shall be non-refundable to Buyer under any circumstances. At Closing the Independent Consideration, together with all interest that accrues on the Independent Consideration while in Escrow Holder’s control, shall be applied as a credit toward the payment of the Purchase Price. If this Agreement is terminated for any reason by either party, the Independent Consideration shall be paid to Seller.

3.3 Second Deposit. Concurrently with its delivery of the Election to Proceed, as defined in Section 4.3 below, Buyer shall deliver to Escrow Holder a second deposit in the amount of Ten Thousand Dollars (\$10,000) (the “**Second Deposit**”). The Second Deposit, together with the Initial Deposit, are collectively referred to herein as the “**Deposit**”.

3.4 Balance of Purchase Price. The balance of the Purchase Price, together with all other funds required to be paid by Buyer under Section 9.6 below, shall be paid by Buyer to Escrow Holder in immediately available funds on or before the Closing Date. For purposes of calculating the balance of the Purchase Price payable by Buyer hereunder, Buyer shall be credited with (i) the Deposit, (ii) the Independent Consideration, (iii) all investment earnings on the Deposits that have not previously been distributed to Buyer, and (iv) Buyer’s share of the prorations in Buyer’s favor and other credits described in Section 9.6 below.

4. Due Diligence Investigations.

4.1 Physical Inspections. Subject to compliance with the terms and conditions set forth below, during the Due Diligence Period as defined in Section 4.3 below, Buyer and Buyer’s agents, employees, contractors, consultants and representatives (collectively, “**Buyer’s Agents**”) shall be entitled to enter onto the Real Property to perform a complete review of the Property and all matters related to the Real Property as Buyer determines is necessary in Buyer’s sole and absolute discretion and to perform any inspections, investigations, and tests of the Real Property, including but not limited to, geotechnical soil borings, test pits, physical inspections and other environmental tests of the Real Property (including testing for Hazardous Materials), all at Buyer’s sole cost and expense. Prior to making any geotechnical borings, test pits or testing wells (“**Environmental Testing**”), Buyer shall deliver to Seller a detailed scope of work and obtain Seller’s prior written approval for such work. Buyer shall also deliver to Seller any reports (draft or final), raw data, charts, notes or other materials received by Buyer reporting on the condition of the Real Property. In connection with Buyer’s entry on the Property pursuant to this Section 4.1, Buyer shall comply with all of the following:

(a) Buyer shall keep the Property free and clear of all liens arising out of Buyer’s and Buyer’s Agents activities conducted upon the Property. Buyer shall indemnify, defend and hold Seller free and harmless of and from all costs, expenses, damages, claims,

liabilities, attorneys' fees and costs or charges (collectively "**Adverse Consequences**") suffered or incurred by Seller to the extent caused by the activities of Buyer or Buyer's Agents while on the Property during the Due Diligence Period, excepting, however, any Adverse Consequences arising out of the mere discovery of any Hazardous Materials.

(b) Buyer or Buyer's Agents prior to entering the Real Property pursuant to this Section 4 to perform any Environmental Testing shall provide Seller with a certificate of commercial general liability insurance, with a combined single limit of liability not less than Two Million Dollars (\$2,000,000.00), which certificate names Seller as an additional insured and is primary and non-contributing with insurance carried by Seller.

(c) Buyer, at Buyer's sole cost, shall repair all physical damage to the Real Property caused by Buyer or Buyer's Agents in connection with any such inspection, testing or entry.

(d) Buyer's obligations under Sections 4.1(a)-(c) shall survive a termination of this Agreement before Closing.

4.2 Review of Due Diligence Materials. Seller has delivered to Buyer copies of all the documents described on **Exhibit "A"** attached hereto (collectively, the "**Due Diligence Documents**"). During the Due Diligence Period, Buyer and Buyer's Agents shall have the right to review the Due Diligence Materials, and any other materials or matters Buyer, in its sole and absolute discretion, may elect to obtain and review with respect to the Property, including, but not limited to, title reports, leases, records plans, zoning and land use matters and financing. Buyer acknowledges that Seller makes no representation or warranty regarding the truth, accuracy or completeness of any Due Diligence Materials. Upon a termination of this Agreement for any reason other than the default of Seller hereunder, Buyer shall promptly deliver, within a commercially reasonable time following Seller's written request, to the extent the same are not confidential or subject to the attorney-client privilege and disclosure of the same is not otherwise prohibited, copies of all reports, plans, specifications, studies, drawings, photographs, models, surveys, and test results prepared by or for Buyer relating to the Property (collectively, "**Buyer's Reports**") "AS-IS" without any representation or warranty whatsoever regarding their content, reliability, accuracy, completeness or any other aspect thereof and subject to the rights of third parties in such Buyer's Reports.

4.3 Due Diligence Notice. Buyer shall have the right, during the period commencing on the Effective Date and expiring at 5:00 p.m. California time one hundred and eighty (180) days thereafter (the "**Due Diligence Period**"), to elect to approve or disapprove, in Buyer's sole and absolute discretion, the Due Diligence Materials, the suitability or desirability of the Property for Buyer's intended purposes, title, zoning and land use issues, environmental or physical condition of the Property, and/or any other aspect of the Property, or the feasibility of this transaction. The Due Diligence Period may be extended only by a writing, signed by both Buyer and Seller. In the event Buyer (for any reason or no reason) disapproves the Property, Buyer may terminate its obligation to purchase the Property by delivering written notice of its disapproval of the Property ("**Disapproval Notice**") to Seller at any time prior to the expiration of the Due Diligence Period, in which case the Independent Consideration shall be disbursed to Seller, the Initial Deposit shall be immediately refunded to Buyer, less any amounts due to Escrow Holder from Buyer pursuant to this Agreement, Buyer's obligation to purchase, and Seller's obligation to sell the Property shall terminate, and neither Party shall have any further obligation to the other except as otherwise expressly provided in this Agreement. In the event that Buyer elects in its sole and absolute discretion to proceed with this transaction, then prior to

the expiration of the Due Diligence Period, Buyer shall deliver written notice of its election to proceed with this transaction on the terms and conditions set forth herein ("**Election to Proceed**") to Seller and, concurrently therewith, Buyer shall also deposit with Escrow Holder the Second Deposit. Thereafter, except in the event of a Seller default, the Deposit shall thereafter be non-refundable to Buyer. If Buyer fails to deliver a Disapproval Notice or an Election to Proceed to Seller prior to the expiration of the Due Diligence Period, Buyer shall be deemed to have delivered a Disapproval Notice.

4.4 Environmental and Defect Nondisclosure. Until the Close of Escrow, without the Seller's prior written consent, which consent shall not be unreasonably withheld, conditioned or delayed, Buyer and its employees shall not disclose to any third party, including any governmental or quasi-governmental authority (other than Seller or the City of Alameda), the results of any physical or environmental examinations, tests, analyses, investigations, inquiries or other inspections conducted by, or at the request of, Buyer on or regarding the physical condition of the Property, such as Phase 1 or Phase 2 reports if Buyer elects not to proceed with the acquisition of the Property except: (a) to the extent that Buyer is required to do so pursuant to applicable law or legal process, provided that, prior to such disclosure, Buyer shall notify Seller of Buyer's belief that Buyer is required to disclose such information; (b) to those of Buyer's employees, investors, members, lenders, counsel, accountants, agents, contractors, engineers and consultants who require such information in order to perform the services for which they were retained, provided that those to whom such information is disclosed are informed of the confidential nature thereof, or (c) to any governmental or quasi-governmental authorities in connection with Buyer's contemplated or intended use and development of the Property, provided however, that as a condition precedent to such disclosure, Buyer shall first disclose to Seller the governmental authority and the environmental information it wishes to disclose and Seller shall have approved in writing such disclosure. Seller's approval shall not be unreasonably withheld, conditioned or delayed. After the Close of Escrow, Buyer and its employees shall not be bound by this Section 4.4.

5. Condition of Property.

5.1 Property Sold in an "As-Is" Condition "With All Faults". Seller and Buyer mutually acknowledge and agree that the Property is being sold in an "As-Is" condition "with all faults" known or unknown, contingent or existing, and without any representation or warranty by Seller as to its fitness for any purpose. Buyer has the sole responsibility to fully inspect the Property, to investigate all matters relevant thereto and to reach its own independent evaluation of the risks (environmental or otherwise) or rewards associated with the ownership of the Property. Buyer acknowledges that the Building is in need of significant capital repairs, which has been accounted for in the agreed upon Purchase Price. Effective as of the Closing Date, except as otherwise expressly set forth herein, Buyer hereby waives and releases Seller and its successors and assigns from and against any claims, obligations or liabilities arising out of or in connection with the physical condition of the Property.

5.2 Waiver of Environmental Conditions. To the fullest extent permitted by law, and except as expressly set forth in this Agreement, Buyer does hereby unconditionally waive and release the Seller from any present or future claims and liabilities of any nature arising from or relating to the presence or alleged presence of hazardous materials in, on, at, from, under, or about the Property including, without limitation, any claims under or on account of any hazardous materials laws regardless if other such hazardous materials are located in, on, at, from, under, or about the Property prior to or after the date hereof.

5.3 Waiver of Natural Hazards. Buyer further acknowledges that “Natural Hazards” described in the following California Code Sections (the “**Natural Hazard Laws**”) may affect the Property: Government Code Sections 8589.4; 8589.3; Government Code Sections 51183.4, 51183.5 (Fire Hazard Severity Zone); Public Resource Code Section 2621.9 (Earthquake Fault Zone); Public Resource Code Section 2694 (Seismic Hazard Zone); and Public Resource Code Section 4136 (Wildlands Area). Subject to Buyer’s receipt of a Natural Hazard Disclosure Report (“**NHDR**”), Buyer acknowledges and agrees that Buyer has had the opportunity independently to evaluate and investigate whether any or all of such Natural Hazards effect the Property and Seller shall have no liabilities or obligations with respect thereto. Without limiting the foregoing and except for Seller’s obligation to deliver a NHDR to Buyer with the Property Information, Buyer acknowledges and agrees that Buyer knowingly and intentionally waives and releases Seller from, any disclosures, obligations or requirements of Seller with respect to Natural Hazards, including, without limitation, any disclosure obligations or requirements under the aforementioned Code Sections or under California Civil Code Section 1102.

5.4 Private Sewer Lateral/Gas Shutoff Valve. The East Bay Municipal Utility District (“EBMUD”) Wastewater Control Ordinance requires property owners in certain areas of the EBMUD wastewater service area to obtain a compliance certificate that shows their private sewer laterals are without defects and have proper connections. The ordinance requires property owners to test and, if needed, repair or replace their private sewer laterals. Buyer shall be responsible for any costs associated with the testing/repair/replacement of the existing sewer lateral and, if needed, the installation of a shutoff valve at any gas meter.

6. Title.

6.1 Title Review. Among the Due Diligence Documents provided to Buyer, is a current Preliminary Title Report (“**Preliminary Report**”). The Preliminary Report is only an offer by the title insurer to issue a policy of title insurance and may not contain every title item affecting title to the Property. Buyer’s review of the Preliminary Report and any other matters which may affect title shall be completed during the Due Diligence Period and a delivery by Buyer of an Election to Proceed, as specified in Section 4.3, shall be conclusively deemed an acceptance by Buyer of the Condition of Title as shown in the Preliminary Report.

6.2 Title at Closing. Upon and subject to Close of Escrow, Seller shall convey title to the Real Property to Buyer by quitclaim deed, subject to all encumbrances, easements, covenants, conditions, restrictions, rights and other matters, whether of record or not, except for any monetary encumbrances other than non-delinquent taxes or assessments.

7. {Intentionally Omitted}

8. Conditions Precedent. The following shall be the conditions precedent to the Parties’ obligations to consummate the purchase and sale transaction contemplated herein:

8.1 Conditions to Buyer’s Obligations. Buyer’s obligation to consummate the purchase transaction provided for herein is subject to the satisfaction of each of the following conditions, each of which is for the sole benefit of Buyer and may only be waived by Buyer in writing:

8.1.1 Owner's Policy. Title Company shall be irrevocably committed to issue, at the Closing, a CLTA policy of title insurance ("**Owner's Policy**").

8.1.2 Due Performance. Seller shall not be in default under this Agreement and shall have duly performed each and every covenant, undertaking and agreement to be performed by it prior to the Close of Escrow hereunder.

8.1.3 Condemnation. This Agreement shall not have been terminated by Buyer as a result of any condemnation or threatened condemnation of the Property.

8.1.4 No Pending Action. There shall exist no pending or threatened actions, suits, arbitrations, claims, attachments, or other proceedings, against Seller or affecting the Property that would materially and adversely affect Seller's ability to unconditionally perform its obligations under this Agreement; and there shall exist no pending or threatened action, suit or proceeding with respect to Seller or the Property before or by any court or administrative agency which seeks to restrain or prohibit, or to obtain damages or a discovery order with respect to, this Agreement or the consummation of the transaction contemplated hereby.

8.2 Buyer's Waiver of conditions. Buyer may at any time or times on or before the Close of Escrow, in its sole and absolute discretion, waive any of the conditions precedent to Buyer's obligations under Section 8 or otherwise and consummate the sale, but any such waiver shall be effective only if contained in a writing signed by Buyer and delivered to Seller. In the event any of the conditions precedent for the benefit of Buyer that are contained in this Agreement are not completely fulfilled and satisfied, then Buyer may terminate its obligation to purchase the Property, and (a) the Independent Consideration shall be disbursed to Seller, (b) the Deposit(s) and all accrued interest thereon shall immediately be returned to Buyer less any amounts due to Escrow Holder from Buyer pursuant to this Agreement, (c) Buyer's obligation to purchase, and Seller's obligation to sell, the Property shall terminate, and (d) neither Party shall have any further obligation to the other except as specifically provided in this Agreement.

8.3 Conditions to Seller's Obligations. Seller's obligation to consummate the purchase transaction provided for herein is subject to the satisfaction, in Seller's sole and absolute discretion, of each of the following conditions, each of which is for the sole benefit of Seller and may be waived by Seller in writing:

8.3.1 Due Deliveries. Buyer shall have delivered to Escrow Holder the items required to be delivered by Buyer pursuant to Section 9.4 hereof.

8.3.2 Due Performance. Buyer shall not be in default under this Agreement and shall have duly performed each and every covenant, undertaking and agreement to be performed by it prior to the Close of Escrow hereunder.

9. Closing.

9.1 Establishment of Escrow. Concurrent with the execution of this Agreement, Seller shall establish an escrow with First American Title Company, 1850 Mt. Diablo Boulevard, Suite 300, Walnut Creek, California 94596 ("**Escrow Holder**" or "**Title Company**") and shall promptly give Buyer notice of the escrow number for this transaction.

9.2 Time. The “**Close of Escrow**” or “**Closing**” shall mean and refer to the payment of the Purchase Price to Seller and the concurrent recordation of the quitclaim deed, which shall occur through escrow with Escrow Holder, within fifteen (15) days after expiration of the Due Diligence Period, or such shorter or longer time as the parties may agree. The “**Closing Date**” shall mean and refer to the date on which the Close of Escrow occurs.

9.3 Deposit of Documents by Seller. On or before the Closing Date, Seller shall deposit with Escrow Holder:

9.3.1 a duly executed and acknowledged quitclaim deed conveying the Property to Buyer;

9.3.2 written instructions to Escrow Holder instructing the Escrow Holder to close the escrow in accordance with the terms of this Section;

9.3.3 any other documents as may be reasonably requested by Buyer or the Escrow Holder as may be necessary to consummate the transaction including, but not limited to, any statement of information requested by the Escrow Holder.

9.4 Deposit of Documents and Money by Buyer. On or before the Closing Date, Buyer shall deposit with Escrow Holder:

9.4.1 the balance of the Purchase Price in cash, increased or reduced, as the case may be, by Buyer’s share of the closing costs and other prorations;

9.4.2 written instructions to the Escrow Holder instructing the Escrow Holder to close the escrow in accordance with the terms of this Article; and

9.4.3 any other documents or money as may be reasonably requested by the Seller or the Escrow Holder as necessary to consummate the transaction.

9.5 Closing. Escrow shall close by Escrow Holder’s performing of the following in the following order:

9.5.1 recording the quitclaim deed conveying the Property to Buyer;

9.5.2 payment of the Purchase Price to Seller, less Seller’s share of closing costs and prorations as required by this Section; and

9.5.3 obtaining from the Title Company for delivery to Buyer an owner’s policy of title insurance in form and with endorsements designated by Buyer in the amount of the Purchase Price showing title to the Real Property vested of record as of the Closing Date in Buyer.

9.6 Closing Costs and Prorations.

9.6.1 Closing Costs.

Buyer shall pay:

(a) All ordinary and customary escrow fees;

- (b) All premium costs and expenses incurred in connection with any policy of title insurance obtained by or on behalf of Buyer;
- (c) Any real estate transfer tax;
- (d) Recording fees, if any; and
- (e) The expense of its own counsel.

Seller shall pay:

- (f) The expense of its own counsel.

Any other closing costs not specified herein shall be divided equally between the parties.

9.7 Prorations and Adjustments. The following shall be prorated and adjusted between Seller and Buyer as of the Closing Date, except as otherwise specified:

9.7.1 It is acknowledged that prior to the Closing Date, the Property has not been subject to ad valorem taxes or assessments thus no proration of such taxes is required.

9.7.2 All utility charges and other expenses incurred in operating the Property shall be prorated effective as of 11:59 p.m. on the day prior to the Closing Date. If the exact amount of any item to be prorated is not known as of the Closing Date, the proration shall be based upon a reasonable estimate thereof made by Seller and Buyer, and, as soon after the Closing as the exact amount of the item is known, the proration shall be adjusted.

10. Default Remedies.

10.1 Notice and Cure. Notwithstanding anything contained in this Agreement to the contrary, if a party is in breach under this Agreement ("**Defaulting Party**") the other party ("**Non-defaulting Party**") shall deliver written notice to the Defaulting Party of such breach, and (a) the Defaulting Party shall have until 5:00 p.m. California time on the date that is five (5) business days after the Defaulting Party's receipt of such written notice to cure the breach, and (b) the Defaulting Party shall not be in default under this Agreement if the Defaulting Party cures such breach on or prior to 5:00 p.m. California time on the date that is five (5) business days after the Defaulting Party's receipt of such written notice.

10.2 Buyer Default: Liquidated Damages. In the event Closing does not occur as a result of Buyer's default, Seller may, as its sole and exclusive remedy, terminate this Agreement by delivery of a notice of termination to Buyer, whereupon neither party shall have any further rights or obligations hereunder except those which expressly survive a termination of this Agreement. Buyer and Seller acknowledge and agree that, with the fluctuation in land values, the unpredictable state of the economy and of government regulations, the fluctuating money market for real estate loans of all types, and other factors that directly affect the value and marketability of the property, it would be extremely difficult and impracticable to ascertain with any degree of certainty the amount of damages that would be suffered by Seller in the event of the failure of the transaction which is the subject of this Agreement to close escrow as a result of Buyer's default in its obligation under this Agreement to purchase the Property. The parties hereby agree that the reasonable estimate of said damages is the amount of \$20,000

and in the event that all of the conditions to Buyer's obligations contained in this Agreement have been satisfied or waived and seller is not otherwise in default under this Agreement, if Buyer defaults in its obligation under this Agreement to purchase the Property, and the Close of Escrow fails to occur as a result, Seller shall, as its sole and exclusive remedy, be entitled to the Deposit as liquidated damages. Except as provided in the preceding sentence, Seller hereby waives all other claims, damages and other remedies including the provisions of California Civil Code Sections 3384, 3387 and 3389. The Deposit has been determined with reference by the parties to the above considerations in establishing a reasonable sum as liquidated damages. The parties acknowledge that the payment of such liquidated damages is not intended as a forfeiture or penalty within the meaning of California Civil Code Sections 3275 or 3369, but is intended to constitute liquidated damages to Seller pursuant to California Civil Code Sections 1671, 1676 and 1677.

Buyers Initials

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 Seller's Initials _____

10.3 Seller's Default. In the event Closing does not occur as a result of Seller's default, Buyer, as Buyer's sole and exclusive remedy, may terminate this Agreement by delivery of notice of termination to Seller, whereupon all amounts deposited by Buyer with Escrow Holder, with the exception of the Independent Consideration, shall be returned to Buyer and neither party shall thereafter have any further rights or obligations hereunder except any which expressly survive a Termination of this Agreement.

11. General Provisions.

11.1 Capacities. Each individual and entity executing this Agreement hereby represents and warrants that he, she or it has the capacity set forth on the signature pages hereof with full power and authority to bind the party on whose behalf he, she or it is executing this Agreement to the terms hereof.

11.2 Binding on Successors. The terms, covenants, and conditions herein contained shall be binding upon and inure to the benefit of the successors and assigns of the parties hereto. Buyer shall have the right to assign this Agreement to a newly formed limited liability company, corporation or partnership in which Buyer, holds a controlling interest ("**Permitted Assignee**").

11.3 Entire Agreement. This Agreement including all exhibits hereto contains all of the covenants, conditions, and agreements between the parties and shall supersede all prior correspondence, agreements, and understandings both verbal and written. No addition or modification of any term or provision shall be effective unless set forth in writing and signed by both Seller and Buyer.

11.4 Attorney's Fees. In the event either party to this Agreement institutes an action to interpret or enforce the terms hereof, or to obtain money damages the prevailing party shall be entitled to recover from the other, in addition to costs and judgment as awarded by the court, its attorney's fees incurred therein. The prevailing party shall include, without limitation, a party who dismisses an action or proceeding for recovery hereunder in exchange for consideration substantially equal to the relief sought in the action or proceeding.

11.5 Brokers' Commission. Seller and Buyer each represent and warrant to the other that with the exception of Cushman and Wakefield, representing Seller ("**Seller's Broker**"), and Harbor Bay Realty Company representing Buyer ("**Buyer's Broker**") neither party

has dealt with any other real estate brokers or finders with respect to the transaction contemplated hereby. Each party agrees to indemnify and hold harmless the other from any claim or claims, and costs and expenses, including attorneys' fees, incurred by the indemnified party in conjunction with any claim or claims of any other broker or brokers to a commission in connection with this transaction as a result of the actions of the indemnifying party. Seller shall pay any commission owing to Seller's Broker in connection with this transaction. Pursuant to a separate written agreement Seller's Broker shall be responsible for any fee or commission payable to Buyer's Broker.

11.6 Governing Law. This Agreement shall be governed by, and construed in accordance with the laws of the State of California.

11.7 Captions. All captions and headings in this Agreement are for the purposes of reference and convenience and shall not limit or expand the provisions of this Agreement.

11.8 Time. Time is of essence of every provision herein contained in this Agreement.

11.9 Counterparts. This Agreement may be executed in counterparts, each of which shall be deemed an original, but all counterparts shall constitute one instrument. The parties agree that this Agreement may be deemed executed by the delivery of signatures of the parties by facsimile, pdf files or other forms of electronic transmission.

11.10 Notices. All notices, requests or other communications required or permitted to be given in connection with this Agreement shall be in writing and shall be personally delivered (with prompt confirmation by registered or certified mail, postage prepaid), or by commercial courier service, or by registered or certified mail, postage pre-paid, or transmitted by electronic mail addressed to the party whom it is directed at the following addresses, or at such other addresses as may be designated by notice from such party in the manner provided herein:

To Seller: Successor Agency
 Alameda City Hall
 2263 Santa Clara Ave.
 Alameda, CA 94501
 Tel: (510) 748-4509
 Attn: City Manager

To Buyer: Loisos + Ubbelohde
 1917 Clement Ave.
 Building 10A
 Hayward, CA 94501

Notices which are delivered by hand, deposited in the United States Mail in accordance with the terms of this Section or delivered by a commercial courier service shall be deemed received upon actual receipt (unless receipt occurs on a weekend or holiday, in which case notice will be deemed given on the next-succeeding business day) or refusal of receipt during normal business hours. Notices which are delivered by electronic mail shall be deemed to have been delivered on the date sent if sent by 5:00 P.M. Pacific time on any business day, with delivery made after such hours to be deemed delivered on the following business day,

provided that the sender does not receive any failure of delivery notice. The foregoing addresses may be changed by notice to the other party as herein provided. Notice given by a party's attorney shall constitute notice by such party.

11.11 Escrow Instructions. The parties agree to execute such instructions to Escrow Holder and such other instruments and do such other and further acts as may be reasonably necessary to carry out any of the provisions of this Agreement.

11.12 Construction. The language in all parts of this Agreement shall in all cases be construed simply according to its fair meaning and not strictly for or against any of the parties hereto. Section headings of this Agreement are solely for convenience of reference and shall not govern the interpretation of any of the provisions of this Agreement. References to "sections" are the Sections of this Agreement, unless otherwise specifically provided.

11.13 Laws, Ordinances and Regulations. Buyer shall take title to the Property subject to all laws, ordinances, rules, regulations and codes of all city, county, state and federal authorities relating thereto.

11.14 Authority. Buyer and Seller represent that the person executing this Agreement on their behalf is fully authorized to do so and to bind the respective party to the terms herein.

11.15 Time References. Time is of the essence. Unless otherwise expressly provided in this Agreement, any reference in this Agreement to time for performance of obligations or to elapsed time shall mean Pacific Standard Time and time periods shall mean consecutive calendar days, months or years, as applicable. If the date ("**Performance Date**") on which any action is to be taken, any obligation is to be performed, or any notice is to be given under this Agreement falls on a Saturday, Sunday or federal holiday, such Performance Date shall be automatically extended to the next business day. As used in this Agreement, "business day" means any calendar day that is not a Saturday, Sunday or federal holiday. The time for performance on any Performance Date shall be no later than 5:00 p.m., unless otherwise provided in this Agreement.

11.16 Recitals. Buyer and Seller agree that the Recitals are true and correct and are hereby incorporated herein by this reference as though fully set forth herein.

11.17 Incorporation of Exhibits. Exhibit A, attached hereto, is incorporated herein by this reference.

11.18 Counterparts. This Agreement may be executed in counterparts, each of which shall be deemed an original, but all of which, together, shall constitute one and the same instrument. The parties agree that this Agreement may be deemed executed by the delivery of signatures of the parties by electronic transmission.

IN WITNESS WHEREOF, Seller and Buyer have duly executed this Agreement as of the Effective Date set forth above.

[Signatures on following page]

SELLER:

SUCCESSOR AGENCY to the COMMUNITY IMPROVEMENT COMMISSION of the CITY OF ALAMEDA,

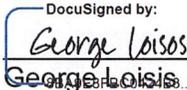
By: _____
David L. Rudat
Interim City Manager

Approved as to Form

By:  _____
Lisa Maxwell
Assistant City Attorney

BUYER:

LOISOS + UBBELOHDE
a sole proprietorship

By:  _____
Date: 12/5/2018

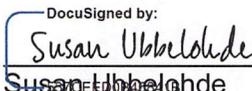
By:  _____
Date: 12/5/2018

EXHIBIT A

Due Diligence Documents

1. Preliminary Title Report
2. Five Year Review, Alameda Point and Industrial Supply Center Oakland, Alameda Facility (Alameda Annex Alameda CA, September 2011, Prepared by CHZM Hill Kleinfelder
3. Fact Sheet, Remedial Action at OU – 5/IR-OZ Former Naval Air Station Alameda and FISCA
4. Natural Hazard Disclosure Statement Combined Report Package
5. Property Disclosure Summary



First American Title Insurance Company
National Commercial Services
1850 Mt. Diablo Blvd., Suite 300
Walnut Creek, CA 94596

Cushman & Wakefield
555 12th St Ste 1400
Oakland , CA 94607
Phone: (510)465-8000

Customer Reference: 2350 5th Street

Escrow Officer: Neil Sitzman
Phone: (925)927-2100
Email: NSitzman@firstam.com

Title Officer: Paul Donahue
Phone: (925)927-2184
Email: pdonahue@firstam.com

Buyer: LOISOS + UBBELOHDE

Owner: The Community Improvement Commission of the City of Alameda, a public body corpo

Property: 2350 5th Street, Alameda, CA

PRELIMINARY REPORT

In response to the above referenced application for a policy of title insurance, this company hereby reports that it is prepared to issue, or cause to be issued, as of the date hereof, a Policy or Policies of Title Insurance describing the land and the estate or interest therein hereinafter set forth, insuring against loss which may be sustained by reason of any defect, lien or encumbrance not shown or referred to as an Exception below or not excluded from coverage pursuant to the printed Schedules, Conditions and Stipulations of said Policy forms.

The printed Exceptions and Exclusions from the coverage and Limitations on Covered Risks of said policy or policies are set forth in Exhibit A attached. *The policy to be issued may contain an arbitration clause. When the Amount of Insurance is less than that set forth in the arbitration clause, all arbitrable matters shall be arbitrated at the option of either the Company or the Insured as the exclusive remedy of the parties.* Limitations on Covered Risks applicable to the CLTA and ALTA Homeowner's Policies of Title

Insurance which establish a Deductible Amount and a Maximum Dollar Limit of Liability for certain coverages are also set forth in Exhibit A. Copies of the policy forms should be read. They are available from the office which issued this report.

Please read the exceptions shown or referred to below and the exceptions and exclusions set forth in Exhibit A of this report carefully. The exceptions and exclusions are meant to provide you with notice of matters which are not covered under the terms of the title insurance policy and should be carefully considered.

It is important to note that this preliminary report is not a written representation as to the condition of title and may not list all liens, defects, and encumbrances affecting title to the land.

This report (and any supplements or amendments hereto) is issued solely for the purpose of facilitating the issuance of a policy of title insurance and no liability is assumed hereby. If it is desired that liability be assumed prior to the issuance of a policy of title insurance, a Binder or Commitment should be requested.

Dated as of December 17, 2018 at 7:30 A.M.

The form of Policy of title insurance contemplated by this report is:

ALTA Standard Owner's Policy 2006 with Western Regional Exceptions (6-17-06)

ALTA Loan Policy 1056.6 (6-17-06)

A specific request should be made if another form or additional coverage is desired.

Title to said estate or interest at the date hereof is vested in:

The Community Improvement Commission of the City of Alameda, a public body corporate and politic

The estate or interest in the land hereinafter described or referred to covered by this Report is:

Fee Simple

The Land referred to herein is described as follows:

(See attached Legal Description)

At the date hereof exceptions to coverage in addition to the printed Exceptions and Exclusions in said policy form would be as follows:

1. General and special taxes and assessments for the fiscal year 2018-2019 are exempt. If the exempt status is terminated an additional tax may be levied. A.P. No.: 074-1356-023.
2. The lien of special tax assessed pursuant to Chapter 2.5 commencing with Section 53311 of the California Government Code for Community Facilities District No. 03-1, as disclosed by Notice of Special Tax Lien recorded November 13, 2003 as Instrument No. 2003675105 of Official Records.
3. The lien of supplemental taxes, if any, assessed pursuant to Chapter 3.5 commencing with Section 75 of the California Revenue and Taxation Code.
4. Terms and Conditions of that certain City of Alameda Ordinance No. 2559 N.S., approving and adopting the Community Improvement Plan for the Business and Waterfront Improvement Project, recorded June 21, 1991, Instrument No. 91-161219, Official Records.

Notice of Adoption of an Amendment to the Community Improvement Plan for the Business and Waterfront Improvement Project recorded July 3, 2000, Instrument No. 2000199587, Official Records.

Notice of Adoption of an Amendment to the Community Improvement Plan for the Business and Waterfront Improvement Project recorded April 23, 2001, Instrument No. 2001134567, Official Records.

5. Notice of Adoption of Community Improvement Plan for the Alameda Point Improvement Project recorded March 10, 1998, Instrument No. 98-82584, Official Records and recorded March 16, 1998, Instrument No. 98-88922, Official Records.

Notice of Adoption of Amendment to the Community Improvement Plan for the Alameda Point Improvement Project recorded April 15, 2003, Instrument No. 2003220042.

6. Facts, rights, interests, or other matters disclosed by "Interim Covenant to Restrict Use of Property Environmental Restriction (Re: Fleet and Industrial Supply Center - Alameda Annex)", "Quitclaim Deed and Environmental Restrictions Pursuant to California Civil Code Section 1471 for FISC Alameda," and "Covenant to Restrict Use of Property (Environmental Restriction)"

Recorded: July 20, 2000, Instrument Numbers 2000215932, 2000215933 and 2000215936

Document(s) declaring modifications thereof recorded October 06, 2006 as Instrument No. 2006378689 of Official Records.

7. The terms and provisions contained in the document entitled "Disposition and Development Agreement" recorded July 21, 2000 as Instrument No. 2000216842 of Official Records.

Document(s) declaring modifications thereof recorded April 25, 2003 as Instrument No. 2003242611 of Official Records.

Document(s) declaring modifications thereof recorded April 25, 2003 as Instrument No. 2003242612 of Official Records.

Document(s) declaring modifications thereof recorded December 12, 2003 as Instrument No. 2003701894 of Official Records.

Document(s) declaring modifications thereof recorded August 29, 2005 as Instrument No. 2005370085 of Official Records.

Document(s) declaring modifications thereof recorded July 24, 2007 as Instrument No. 2007275737 of Official Records.

8. The terms and provisions contained in the document entitled "Development Agreement" recorded July 21, 2000 as Instrument No. 2000216843 of Official Records.

Document(s) declaring modifications thereof recorded May 20, 2004 as Instrument No. 2004224473 of Official Records.

Document(s) declaring modifications thereof recorded May 20, 2004 as Instrument No. 2004224476 of Official Records.

Document(s) declaring modifications thereof recorded July 24, 2007 as Instrument No. 2007275738 of Official Records.

9. The terms and provisions contained in the document entitled "Quitclaim Deed to Community Improvement Commission of the City of Alameda for the Fleet Industrial supply center, Alameda California" recorded August 02, 2001 as Instrument No. 2001280973 of Official Records. by and between the City of Alameda a municipal corporation of the State of California, and the Community Improvement Commission of the City of Alameda, a public body corporate and politic
10. The terms and provisions contained in the document entitled "Memorandum of Subdivision Improvement Agreement" recorded July 15, 2004 as Instrument No. 2004323570 of Official Records. by and between The City of Alameda, a municipal corporation, and Cateltus Residential Group, Inc., a California corporation

Document(s) declaring modifications thereof recorded May 26, 2005 as Instrument No. 2005217101 of Official Records.

11. An easement for public utilities and incidental purposes, recorded July 28, 2004 as Instrument No. 2004346082 of Official Records.
In Favor of: Peralta Community College District
Affects: As described therein
12. Rights of parties in possession.

INFORMATIONAL NOTES

ALERT - CA Senate Bill 2 imposes an additional fee of \$75 up to \$225 at the time of recording on certain transactions effective January 1, 2018. Please contact your First American Title representative for more information on how this may affect your closing.

1. The property covered by this report is vacant land.
2. According to the public records, there has been no conveyance of the land within a period of twenty-four months prior to the date of this report, except as follows:

None
3. This preliminary report/commitment was prepared based upon an application for a policy of title insurance that identified land by street address or assessor's parcel number only. It is the responsibility of the applicant to determine whether the land referred to herein is in fact the land that is to be described in the policy or policies to be issued.
4. Should this report be used to facilitate your transaction, we must be provided with the following prior to the issuance of the policy:
 - A. WITH RESPECT TO A CORPORATION:
 1. A certificate of good standing of recent date issued by the Secretary of State of the corporation's state of domicile.
 2. A certificate copy of a resolution of the Board of Directors authorizing the contemplated transaction and designating which corporate officers shall have the power to execute on behalf of the corporation.
 3. A certificate of revivor and a certificate of relief from contract voidability issued by the Franchise Tax Board of the State of California.
 4. Requirements which the Company may impose following its review of the above material and other information which the Company may require.
 - B. WITH RESPECT TO A CALIFORNIA LIMITED PARTNERSHIP:
 1. A certified copy of the certificate of limited partnership (form LP-1) and any amendments thereto (form LP-2) to be recorded in the public records;
 2. A full copy of the partnership agreement and any amendments;
 3. Satisfactory evidence of the consent of a majority in interest of the limited partners to the contemplated transaction;
 4. A certificate of revivor and a certificate of relief from contract voidability issued by the Franchise Tax Board of the State of California.
 5. Requirements which the Company may impose following its review of the above material and other information which the Company may require.
 - C. WITH RESPECT TO A FOREIGN LIMITED PARTNERSHIP:
 1. A certified copy of the application for registration, foreign limited partnership (form LP-5) and any amendments thereto (form LP-6) to be recorded in the public records;
 2. A full copy of the partnership agreement and any amendment;
 3. Satisfactory evidence of the consent of a majority in interest of the limited partners to the contemplated transaction;

4. A certificate of revivor and a certificate of relief from contract voidability issued by the Franchise Tax Board of the State of California.
 5. Requirements which the Company may impose following its review of the above material and other information which the Company may require.
- D. WITH RESPECT TO A GENERAL PARTNERSHIP:
1. A certified copy of a statement of partnership authority pursuant to Section 16303 of the California Corporation Code (form GP-I), executed by at least two partners, and a certified copy of any amendments to such statement (form GP-7), to be recorded in the public records;
 2. A full copy of the partnership agreement and any amendments;
 3. Requirements which the Company may impose following its review of the above material required herein and other information which the Company may require.
- E. WITH RESPECT TO A LIMITED LIABILITY COMPANY:
1. A copy of its operating agreement and any amendments thereto;
 2. If it is a California limited liability company, a certified copy of its articles of organization (LLC-1) and any certificate of correction (LLC-11), certificate of amendment (LLC-2), or restatement of articles of organization (LLC-10) to be recorded in the public records;
 3. If it is a foreign limited liability company, a certified copy of its application for registration (LLC-5) to be recorded in the public records;
 4. With respect to any deed, deed of trust, lease, subordination agreement or other document or instrument executed by such limited liability company and presented for recordation by the Company or upon which the Company is asked to rely, such document or instrument must be executed in accordance with one of the following, as appropriate:
 - (i) If the limited liability company properly operates through officers appointed or elected pursuant to the terms of a written operating agreement, such documents must be executed by at least two duly elected or appointed officers, as follows: the chairman of the board, the president or any vice president, and any secretary, assistant secretary, the chief financial officer or any assistant treasurer;
 - (ii) If the limited liability company properly operates through a manager or managers identified in the articles of organization and/or duly elected pursuant to the terms of a written operating agreement, such document must be executed by at least two such managers or by one manager if the limited liability company properly operates with the existence of only one manager.
 5. A certificate of revivor and a certificate of relief from contract voidability issued by the Franchise Tax Board of the State of California.
 6. Requirements which the Company may impose following its review of the above material and other information which the Company may require.
- F. WITH RESPECT TO A TRUST:
1. A certification pursuant to Section 18100.5 of the California Probate Code in a form satisfactory to the Company.
 2. Copies of those excerpts from the original trust documents and amendments thereto which designate the trustee and confer upon the trustee the power to act in the pending transaction.
 3. Other requirements which the Company may impose following its review of the material require herein and other information which the Company may require.
- G. WITH RESPECT TO INDIVIDUALS:
1. A statement of information.

The map attached, if any, may or may not be a survey of the land depicted hereon. First American Title Insurance Company expressly disclaims any liability for loss or damage which may result from reliance on this map except to the extent coverage for such loss or damage is expressly provided by the terms and provisions of the title insurance policy, if any, to which this map is attached.

LEGAL DESCRIPTION

Real property in the City of Alameda, County of Alameda, State of California, described as follows:

LOT DD AS SHOWN ON THE MAP ENTITLED "MAP OF TRACT 7511-BAYPORT", FILED JULY 09, 2004, IN MAP BOOK 277, PAGES 1 THROUGH 19, INCLUSIVE, ALAMEDA COUNTY RECORDS.

APN: 074-1356-023

NOTICE I

Section 12413.1 of the California Insurance Code, effective January 1, 1990, requires that any title insurance company, underwritten title company, or controlled escrow company handling funds in an escrow or sub-escrow capacity, wait a specified number of days after depositing funds, before recording any documents in connection with the transaction or disbursing funds. This statute allows for funds deposited by wire transfer to be disbursed the same day as deposit. In the case of cashier's checks or certified checks, funds may be disbursed the next day after deposit. In order to avoid unnecessary delays of three to seven days, or more, please use wire transfer, cashier's checks, or certified checks whenever possible.

If you have any questions about the effect of this new law, please contact your local First American Office for more details.

NOTICE II

As of January 1, 1991, if the transaction which is the subject of this report will be a sale, you as a party to the transaction, may have certain tax reporting and withholding obligations pursuant to the state law referred to below:

In accordance with Sections 18662 and 18668 of the Revenue and Taxation Code, a buyer may be required to withhold an amount equal to three and one-third percent of the sales price in the case of the disposition of California real property interest by either:

1. A seller who is an individual with a last known street address outside of California or when the disbursement instructions authorize the proceeds be sent to a financial intermediary of the seller, OR
2. A corporate seller which has no permanent place of business in California.

The buyer may become subject to penalty for failure to withhold an amount equal to the greater of 10 percent of the amount required to be withheld or five hundred dollars (\$500).

However, notwithstanding any other provision included in the California statutes referenced above, no buyer will be required to withhold any amount or be subject to penalty for failure to withhold if:

1. The sales price of the California real property conveyed does not exceed one hundred thousand dollars (\$100,000), OR
2. The seller executes a written certificate, under the penalty of perjury, certifying that the seller is a resident of California, or if a corporation, has a permanent place of business in California, OR
3. The seller, who is an individual, executes a written certificate, under the penalty of perjury, that the California real property being conveyed is the seller's principal residence (as defined in Section 1034 of the Internal Revenue Code).

The seller is subject to penalty for knowingly filing a fraudulent certificate for the purpose of avoiding the withholding requirement.

The California statutes referenced above include provisions which authorize the Franchise Tax Board to grant reduced withholding and waivers from withholding on a case-by-case basis.

The parties to this transaction should seek an attorney's, accountant's, or other tax specialist's opinion concerning the effect of this law on this transaction and should not act on any statements made or omitted by the escrow or closing officer.

The Seller May Request a Waiver by Contacting:
Franchise Tax Board
Withhold at Source Unit
P.O. Box 651
Sacramento, CA 95812-0651
(916) 845-4900

Privacy Policy

We Are Committed to Safeguarding Customer Information

In order to better serve your needs now and in the future, we may ask you to provide us with certain information. We understand that you may be concerned about what we will do with such information - particularly any personal or financial information. We agree that you have a right to know how we will utilize the personal information you provide to us. Therefore, together with our parent company, The First American Corporation, we have adopted this Privacy Policy to govern the use and handling of your personal information.

Applicability

This Privacy Policy governs our use of the information which you provide to us. It does not govern the manner in which we may use information we have obtained from any other source, such as information obtained from a public record or from another person or entity. First American has also adopted broader guidelines that govern our use of personal information regardless of its source. First American calls these guidelines its *Fair Information Values*, a copy of which can be found on our website at www.firstam.com.

Types of Information

Depending upon which of our services you are utilizing, the types of nonpublic personal information that we may collect include:

- Information we receive from you on applications, forms and in other communications to us, whether in writing, in person, by telephone or any other means;
- Information about your transactions with us, our affiliated companies, or others; and
- Information we receive from a consumer reporting agency.

Use of Information

We request information from you for our own legitimate business purposes and not for the benefit of any nonaffiliated party. Therefore, we will not release your information to nonaffiliated parties except: (1) as necessary for us to provide the product or service you have requested of us; or (2) as permitted by law. We may, however, store such information indefinitely, including the period after which any customer relationship has ceased. Such information may be used for any internal purpose, such as quality control efforts or customer analysis. We may also provide all of the types of nonpublic personal information listed above to one or more of our affiliated companies. Such affiliated companies include financial service providers, such as title insurers, property and casualty insurers, and trust and investment advisory companies, or companies involved in real estate services, such as appraisal companies, home warranty companies, and escrow companies. Furthermore, we may also provide all the information we collect, as described above, to companies that perform marketing services on our behalf, on behalf of our affiliated companies, or to other financial institutions with whom we or our affiliated companies have joint marketing agreements.

Former Customers

Even if you are no longer our customer, our Privacy Policy will continue to apply to you.

Confidentiality and Security

We will use our best efforts to ensure that no unauthorized parties have access to any of your information. We restrict access to nonpublic personal information about you to those individuals and entities who need to know that information to provide products or services to you. We will use our best efforts to train and oversee our employees and agents to ensure that your information will be handled responsibly and in accordance with this Privacy Policy and First American's *Fair Information Values*. We currently maintain physical, electronic, and procedural safeguards that comply with federal regulations to guard your nonpublic personal information.

**CLTA/ALTA HOMEOWNER'S POLICY OF TITLE INSURANCE (02-03-10)
EXCLUSIONS**

In addition to the Exceptions in Schedule B, You are not insured against loss, costs, attorneys' fees, and expenses resulting from:

1. Governmental police power, and the existence or violation of those portions of any law or government regulation concerning:
 - (a) building;
 - (b) zoning;
 - (c) land use;
 - (d) improvements on the Land;
 - (e) land division; and
 - (f) environmental protection.This Exclusion does not limit the coverage described in Covered Risk 8.a., 14, 15, 16, 18, 19, 20, 23 or 27.
2. The failure of Your existing structures, or any part of them, to be constructed in accordance with applicable building codes. This Exclusion does not limit the coverage described in Covered Risk 14 or 15.
3. The right to take the Land by condemning it. This Exclusion does not limit the coverage described in Covered Risk 17.
4. Risks:
 - (a) that are created, allowed, or agreed to by You, whether or not they are recorded in the Public Records;
 - (b) that are Known to You at the Policy Date, but not to Us, unless they are recorded in the Public Records at the Policy Date;
 - (c) that result in no loss to You; or
 - (d) that first occur after the Policy Date - this does not limit the coverage described in Covered Risk 7, 8.e., 25, 26, 27 or 28.
5. Failure to pay value for Your Title.
6. Lack of a right:
 - (a) to any land outside the area specifically described and referred to in paragraph 3 of Schedule A; and
 - (b) in streets, alleys, or waterways that touch the Land.This Exclusion does not limit the coverage described in Covered Risk 11 or 21.
7. The transfer of the Title to You is invalid as a preferential transfer or as a fraudulent transfer or conveyance under federal bankruptcy, state insolvency, or similar creditors' rights laws.

LIMITATIONS ON COVERED RISKS

Your insurance for the following Covered Risks is limited on the Owner's Coverage Statement as follows: For Covered Risk 16, 18, 19, and 21 Your Deductible Amount and Our Maximum Dollar Limit of Liability shown in Schedule A.

Your Deductible Amount	<u>Our Maximum Dollar Limit of Liability</u>
Covered Risk 16: 1% of Policy Amount or \$2,500.00 (whichever is less)	\$10,000.00
Covered Risk 18: 1% of Policy Amount or \$5,000.00 (whichever is less)	\$25,000.00
Covered Risk 19: 1% of Policy Amount or \$5,000.00 (whichever is less)	\$25,000.00
Covered Risk 21: 1% of Policy Amount or \$2,500.00 (whichever is less)	\$5,000.00

**ALTA RESIDENTIAL TITLE INSURANCE POLICY (6-1-87)
EXCLUSIONS**

In addition to the Exceptions in Schedule B, you are not insured against loss, costs, attorneys' fees, and expenses resulting from:

1. Governmental police power, and the existence or violation of any law or government regulation. This includes building and zoning ordinances and also laws and regulations concerning:
 - (a) and use
 - (b) improvements on the land
 - (c) and division
 - (d) environmental protectionThis exclusion does not apply to violations or the enforcement of these matters which appear in the public records at Policy Date. This exclusion does not limit the zoning coverage described in Items 12 and 13 of Covered Title Risks.
2. The right to take the land by condemning it, unless:
 - (a) a notice of exercising the right appears in the public records on the Policy Date
 - (b) the taking happened prior to the Policy Date and is binding on you if you bought the land without knowing of the taking
3. Title Risks:

- (a) that are created, allowed, or agreed to by you
 - (b) that are known to you, but not to us, on the Policy Date -- unless they appeared in the public records
 - (c) that result in no loss to you
 - (d) that first affect your title after the Policy Date -- this does not limit the labor and material lien coverage in Item 8 of Covered Title Risks
4. Failure to pay value for your title.
5. Lack of a right:
- (a) to any land outside the area specifically described and referred to in Item 3 of Schedule A OR
 - (b) in streets, alleys, or waterways that touch your land
- This exclusion does not limit the access coverage in Item 5 of Covered Title Risks.

**2006 ALTA LOAN POLICY (06-17-06)
EXCLUSIONS FROM COVERAGE**

The following matters are expressly excluded from the coverage of this policy, and the Company will not pay loss or damage, costs, attorneys' fees, or expenses that arise by reason of:

1. a. Any law, ordinance, permit, or governmental regulation (including those relating to building and zoning) restricting, regulating, prohibiting, or relating to
- i. the occupancy, use, or enjoyment of the Land;
 - ii. the character, dimensions, or location of any improvement erected on the Land;
 - iii. the subdivision of land; or
 - iv. environmental protection;
- or the effect of any violation of these laws, ordinances, or governmental regulations. This Exclusion 1(a) does not modify or limit the coverage provided under Covered Risk 5.
- b. Any governmental police power. This Exclusion 1(b) does not modify or limit the coverage provided under Covered Risk 6.
2. Rights of eminent domain. This Exclusion does not modify or limit the coverage provided under Covered Risk 7 or 8.
3. Defects, liens, encumbrances, adverse claims, or other matters
- a. created, suffered, assumed, or agreed to by the Insured Claimant;
 - b. not Known to the Company, not recorded in the Public Records at Date of Policy, but Known to the Insured Claimant and not disclosed in writing to the Company by the Insured Claimant prior to the date the Insured Claimant became an Insured under this policy;
 - c. resulting in no loss or damage to the Insured Claimant;
 - d. attaching or created subsequent to Date of Policy (however, this does not modify or limit the coverage provided under Covered Risk 11, 13, or 14); or
 - e. resulting in loss or damage that would not have been sustained if the Insured Claimant had paid value for the Insured Mortgage.
4. Unenforceability of the lien of the Insured Mortgage because of the inability or failure of an Insured to comply with applicable doing-business laws of the state where the Land is situated.
5. Invalidity or unenforceability in whole or in part of the lien of the Insured Mortgage that arises out of the transaction evidenced by the Insured Mortgage and is based upon usury or any consumer credit protection or truth-in-lending law.
6. Any claim, by reason of the operation of federal bankruptcy, state insolvency, or similar creditors' rights laws, that the transaction creating the lien of the Insured Mortgage, is
- a. a fraudulent conveyance or fraudulent transfer, or
 - b. a preferential transfer for any reason not stated in Covered Risk 13(b) of this policy.
7. Any lien on the Title for real estate taxes or assessments imposed by governmental authority and created or attaching between Date of Policy and the date of recording of the Insured Mortgage in the Public Records. This Exclusion does not modify or limit the coverage provided under Covered Risk 11(b).

The above policy form may be issued to afford either Standard Coverage or Extended Coverage. In addition to the above Exclusions from Coverage, the Exceptions from Coverage in a Standard Coverage policy will also include the following Exceptions from Coverage:

EXCEPTIONS FROM COVERAGE

This policy does not insure against loss or damage (and the Company will not pay costs, attorneys' fees or expenses) that arise by reason of:

- 1. (a) Taxes or assessments that are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the Public Records; (b) proceedings by a public agency that may result in taxes or assessments, or notices of such proceedings, whether or not shown by the records of such agency or by the Public Records.
- 2. Any facts, rights, interests, or claims that are not shown by the Public Records but that could be ascertained by an inspection of the Land or that may be asserted by persons in possession of the Land.
- 3. Easements, liens or encumbrances, or claims thereof, not shown by the Public Records.
- 4. Any encroachment, encumbrance, violation, variation, or adverse circumstance affecting the Title that would be disclosed by an

accurate and complete land survey of the Land and not shown by the Public Records.

5. (a) Unpatented mining claims; (b) reservations or exceptions in patents or in Acts authorizing the issuance thereof; (c) water rights, claims or title to water, whether or not the matters excepted under (a), (b), or (c) are shown by the Public Records.
6. Any lien or right to a lien for services, labor or material not shown by the public records.

**2006 ALTA OWNER'S POLICY (06-17-06)
EXCLUSIONS FROM COVERAGE**

The following matters are expressly excluded from the coverage of this policy, and the Company will not pay loss or damage, costs, attorneys' fees, or expenses that arise by reason of:

1. a. Any law, ordinance, permit, or governmental regulation (including those relating to building and zoning) restricting, regulating, prohibiting, or relating to
 - i. the occupancy, use, or enjoyment of the Land;
 - ii. the character, dimensions, or location of any improvement erected on the Land;
 - iii. the subdivision of land; or
 - iv. environmental protection;or the effect of any violation of these laws, ordinances, or governmental regulations. This Exclusion 1(a) does not modify or limit the coverage provided under Covered Risk 5.
- b. Any governmental police power. This Exclusion 1(b) does not modify or limit the coverage provided under Covered Risk 6.
2. Rights of eminent domain. This Exclusion does not modify or limit the coverage provided under Covered Risk 7 or 8.
3. Defects, liens, encumbrances, adverse claims, or other matters
 - a. created, suffered, assumed, or agreed to by the Insured Claimant;
 - b. not Known to the Company, not recorded in the Public Records at Date of Policy, but known to the Insured Claimant and not disclosed in writing to the Company by the Insured Claimant prior to the date the Insured Claimant became an Insured under this policy;
 - c. resulting in no loss or damage to the Insured Claimant;
 - d. attaching or created subsequent to Date of Policy (however, this does not modify or limit the coverage provided under Covered Risk 9 and 10); or
 - e. resulting in loss or damage that would not have been sustained if the Insured Claimant had paid value for the Title.
4. Any claim, by reason of the operation of federal bankruptcy, state insolvency, or similar creditors' rights laws, that the transaction vesting the Title as shown in Schedule A, is
 - a. a fraudulent conveyance or fraudulent transfer; or
 - b. a preferential transfer for any reason not stated in Covered Risk 9 of this policy.
5. Any lien on the Title for real estate taxes or assessments imposed by governmental authority and created or attaching between Date of Policy and the date of recording of the deed or other instrument of transfer in the Public Records that vests Title as shown in Schedule A.

The above policy form may be issued to afford either Standard Coverage or Extended Coverage. In addition to the above Exclusions from Coverage, the Exceptions from Coverage in a Standard Coverage policy will also include the following Exceptions from Coverage:

EXCEPTIONS FROM COVERAGE

This policy does not insure against loss or damage (and the Company will not pay costs, attorneys' fees or expenses) that arise by reason of:

1. (a) Taxes or assessments that are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the Public Records; (b) proceedings by a public agency that may result in taxes or assessments, or notices of such proceedings, whether or not shown by the records of such agency or by the Public Records.
2. Any facts, rights, interests, or claims that are not shown by the Public Records but that could be ascertained by an inspection of the Land or that may be asserted by persons in possession of the Land.
3. Easements, liens or encumbrances, or claims thereof, not shown by the Public Records.
4. Any encroachment, encumbrance, violation, variation, or adverse circumstance affecting the Title that would be disclosed by an accurate and complete land survey of the Land and not shown by the Public Records.
5. (a) Unpatented mining claims; (b) reservations or exceptions in patents or in Acts authorizing the issuance thereof; (c) water rights, claims or title to water, whether or not the matters excepted under (a), (b), or (c) are shown by the Public Records.
6. Any lien or right to a lien for services, labor or material not shown by the public records.

**ALTA EXPANDED COVERAGE RESIDENTIAL LOAN POLICY (07-26-10)
EXCLUSIONS FROM COVERAGE**

The following matters are expressly excluded from the coverage of this policy, and the Company will not pay loss or damage, costs, attorneys' fees, or expenses that arise by reason of:

1. a. Any law, ordinance, permit, or governmental regulation (including those relating to building and zoning) restricting, regulating, prohibiting, or relating to
 - i. the occupancy, use, or enjoyment of the Land;
 - ii. the character, dimensions, or location of any improvement erected on the Land;
 - iii. the subdivision of land; or
 - iv. environmental protection;or the effect of any violation of these laws, ordinances, or governmental regulations. This Exclusion 1(a) does not modify or limit the coverage provided under Covered Risk 5, 6, 13(c), 13(d), 14 or 16.
- b. Any governmental police power. This Exclusion 1(b) does not modify or limit the coverage provided under Covered Risk 5, 6, 13(c), 13(d), 14 or 16.
2. Rights of eminent domain. This Exclusion does not modify or limit the coverage provided under Covered Risk 7 or 8.
3. Defects, liens, encumbrances, adverse claims, or other matters
 - a. created, suffered, assumed, or agreed to by the Insured Claimant;
 - b. not Known to the Company, not recorded in the Public Records at Date of Policy, but Known to the Insured Claimant and not disclosed in writing to the Company by the Insured Claimant prior to the date the Insured Claimant became an Insured under this policy;
 - c. resulting in no loss or damage to the Insured Claimant;
 - d. attaching or created subsequent to Date of Policy (however, this does not modify or limit the coverage provided under Covered Risk 11, 16, 17, 18, 19, 20, 21, 22, 23, 24, 27 or 28); or
 - e. resulting in loss or damage that would not have been sustained if the Insured Claimant had paid value for the Insured Mortgage.
4. Unenforceability of the lien of the Insured Mortgage because of the inability or failure of an Insured to comply with applicable doing-business laws of the state where the Land is situated.
5. Invalidity or unenforceability in whole or in part of the lien of the Insured Mortgage that arises out of the transaction evidenced by the Insured Mortgage and is based upon usury or any consumer credit protection or truth-in-lending law. This Exclusion does not modify or limit the coverage provided in Covered Risk 26.
6. Any claim of invalidity, unenforceability or lack of priority of the lien of the Insured Mortgage as to Advances or modifications made after the Insured has Knowledge that the vestee shown in Schedule A is no longer the owner of the estate or interest covered by this policy. This Exclusion does not modify or limit the coverage provided in Covered Risk 11.
7. Any lien on the Title for real estate taxes or assessments imposed by governmental authority and created or attaching subsequent to Date of Policy. This Exclusion does not modify or limit the coverage provided in Covered Risk 11(b) or 25.
8. The failure of the residential structure, or any portion of it, to have been constructed before, on or after Date of Policy in accordance with applicable building codes. This Exclusion does not modify or limit the coverage provided in Covered Risk 5 or 6.
9. Any claim, by reason of the operation of federal bankruptcy, state insolvency, or similar creditors' rights laws, that the transaction creating the lien of the Insured Mortgage, is
 - a. a fraudulent conveyance or fraudulent transfer, or
 - b. a preferential transfer for any reason not stated in Covered Risk 27(b) of this policy.

Final

FIVE YEAR REVIEW

Alameda Point and Fleet and Industrial Supply Center
Oakland, Alameda Facility /Alameda Annex,
Alameda, California

NAVFAC Southwest CLEAN IV Program

Contract Number: N62473-09-D-2622

Contract Task Order Number: 0021

Document Control Number: KCH-2622-0021-0007

Prepared for

United States Department of the Navy (Navy)
Base Realignment and Closure (BRAC)
Program Management Office West



September 2011

Prepared by



CH2M HILL Kleinfelder,
A Joint Venture (KCH)

REVIEW AND APPROVAL

A handwritten signature in black ink, appearing to read "Derek Robinson".

Derek Robinson
BRAC Environmental Coordinator
Alameda Point and FISCA

SEP. 28, 2011

Date

TABLE G-2
Site Chronology
Alameda Point OU-5/FISCA IR Site 02 Groundwater, 2011 Five-Year Review
Alameda, California

Site ID	Event Month	Event Year	Event	Event Comments
Alameda Point OU-5/ FISCA IR Site 02	--	1998	Preliminary Assessment Report, Naval Supply Center, Alameda Annex and Facility	Identified sites that posed risks to human health and the environment and identified areas where hazardous metals were stored, transferred, processed and disposed. Volatile organic compounds (VOCs) identified in groundwater.
Alameda Point OU-5/ FISCA IR Site 02	--	2001	Environmental Baseline Survey, Zone 16: Housing Zone, Parcels 178-184	Parcel by parcel inventory of property identified known or suspected releases associated with previous activities. Between 1994 and 1995, soil, soil gas and groundwater samples were collected as part of the Environmental Baseline Survey for the Site 25 parcels. VOCs were detected in soil gas, soil, and groundwater samples. Additional soil and groundwater sampling was recommended.
Alameda Point OU-5/ FISCA IR Site 02	--	2002	OU-5 Remedial Investigation	Characterized the nature and extent of contamination. Potential sources of groundwater contamination were identified. Vertical stratification of benzene in groundwater was also indicated.
Alameda Point OU-5/ FISCA IR Site 02	--	2001, 2002	TCRA for USCG North Housing and Estuary Park in IR Site 25	Addressed health risk from polycyclic aromatic hydrocarbon (PAH)-impacted soil by removing upper 2 feet of soil in areas with highest PAH concentrations. Soil was excavated in selected areas without hardscape to a depth of 2 feet below surface, orange plastic fencing was placed, and the soil was replaced with clean fill. A total of 38 trees were removed.
Alameda Point OU-5/ FISCA IR Site 02	--	1996, 1998	Two Removal Actions at IR Site 02	(1) Addressed lead and polychlorinated biphenyls (PCBs) in surface soil; and (2) addressed PCBs in subsurface soil near a sump. This was done by (1) excavating 80 cubic yards (cy) of PCB-impacted and 245 cy lead-impacted surface soil; and (2) excavating 84 cy of PCB-impacted soil near the sump.
Alameda Point OU-5/ FISCA IR Site 02	--	2001	Remedial Action for IR Site 02	Removed and disposed of off-site shallow soil contaminated with PCBs and cadmium to residential standards on the western one-third of the site, and to industrial standards on the eastern portion of the site. Approximately 16,000 tons of soil was excavated to depths ranging from 6 inches to 2 feet and disposed of off-site. Results of confirmation samples from excavations were below cleanup criteria.
Alameda Point OU-5/ FISCA IR Site 02	--	2004	Groundwater RI/FS, IR Site 25/ FISCA IR Site 02	Performed HHRA, identified ARARs, developed and evaluated remedial alternatives. HHRA indicated potential unacceptable risk from hypothetical groundwater ingestion pathway. Alternative analysis indicated Alternative 4 was most favorable.
Alameda Point OU-5/ FISCA IR Site 02	--	2004	TCRA at IR Site 30	Reduced exposure to shallow soil at school and child center areas. Excavated 5 foot by 5 foot area and installed cover materials (pavement, synthetic turf, liners) in uncovered areas.

TABLE G-2
 Site Chronology
 Alameda Point OU-5/FISCA IR Site 02 Groundwater, 2011 Five-Year Review
 Alameda, California

Site ID	Event Month	Event Year	Event	Event Comments
Alameda Point OU-5/ FISCA IR Site 02	--	2004	IR Site 30 Soil Remedial Investigation	Evaluated soil and verified that contamination in the groundwater beneath IR Site 30 is consistent with the OU-5/IR Site 02 plume. Verified that contamination in the groundwater beneath IR Site 30 was consistent with the OU-5/IR Site 02 groundwater plume.
Alameda Point OU-5/ FISCA IR Site 02	--	2005	IR Site 31 Soil Remedial Investigation	Evaluated soil and evaluated if groundwater beneath IR Site 31 had characteristics consistent with the known contaminants of the OU-5/IR Site 02 groundwater plume; or if the data indicated a site-specific release has occurred and contributed unique contaminants to groundwater which are related specifically to previous IR Site 31 activities. Verified groundwater beneath IR Site 31 had characteristics consistent with the known contaminants of the OU-5/IR Site 02 groundwater plume.
Alameda Point OU-5/ FISCA IR Site 02	--	2002-2007	Basewide Groundwater Monitoring	Conducted groundwater sampling and analysis to (1) monitor the status of contaminant plumes in groundwater, (2) determine the potential for natural degradation, (3) determine the groundwater flow direction and gradients, and (4) identify locations where additional wells are needed and locations where existing wells can be abandoned. Select wells were identified for groundwater monitoring
Alameda Point OU-5/ FISCA IR Site 02	September	2007	ROD	The ROD established a cleanup goal of 1.0 µg/L for benzene in groundwater and 100 µg/L for naphthalene in groundwater. It also declared the selected remedial action to be biosparging with soil vapor extraction, nutrients/microorganism enhancement (as required), monitored natural attenuation, and institutional controls. After the cleanup goals are met, institutional controls can be terminated.

Note:
 -- = No information available.

TABLE H-2
Site Chronology
FISCA IR Site 02 Soil, 2011 Five-Year Review
Alameda, California

Event Date	Event	Event Comments
Prior to 1920s	Site Development	The property occupied by Fleet & Industrial Supply Center Oakland Alameda Facility/Annex (FISCA), which includes IR Site 02, and surrounding area is undeveloped marshlands and tidal flats along the fringe of San Francisco Bay.
1925 to 1927	Site Development	The marshlands are covered with fill comprising sands and clays of unknown origin.
1920 to 1941	Site Development	The developed area is used as a commercial airport.
1941 to 1966	Site Development	U.S. Government purchases the property for use as a depot: 1941 -- Alameda Facility 1966 -- Alameda Annex
1964	Site Development	Command of Alameda Facility property transferred to Naval Supply Center (NSC) Oakland.
1980	Site Development	Alameda Annex property transferred to NSC Oakland.
Until 1998	Site Operations	The Defense Reutilization and Marketing Office (DRMO), in conjunction with NSC Oakland, operates a screening lot and temporary equipment storage area on the western portion of area known today as IR Site 02, and a scrap yard for temporary storage of discarded automobiles, stockpiling of scrap metal, and storage of surplus equipment on the eastern portion of IR Site 02.
April 14, 1987	Site investigation	A Site Investigation is conducted by the Navy at the area known as IR Site 02. The Site Investigation (SI) included review of aerial photographs, and collection and laboratory analyses of shallow soil samples from depths of 18 to 30 inches bgs. PCBs and cadmium were detected in soil samples. The SI identified four areas on the site as potential sources of contamination; these areas appeared to be associated with then-ongoing DRMO activities.
April 1, 1988	Preliminary Assessment (PA)	A PA is conducted at the area today known as IR Site 02. The PA did not collect or analyze soil samples, but reviewed available records, and included a site visit, and interviews with employees. The PA found that activities at this site may have impacted the environment, and recommended additional investigations.
December 1, 1992	Resource Facility Assessment (RFA)	The California Environmental Protection Agency (Cal/EPA), DTSC conducts a Resource Conservation and Recovery Act (RCRA) RFA at FISCA. The RFA identified four solid waste management units (SWMUs). The screening lot and scrap yard area used by DRMO was designated as SWMU 1 (today known as IR Site 02), and was recommended for additional investigation.

TABLE H-2
Site Chronology
FISCA IR Site 02 Soil, 2011 Five-Year Review
Alameda, California

Event Date	Event	Event Comments
January 1, 1996	Final Remedial Investigation (RI)	Final RI report for FISCA is issued. The RI reported that site-use related soil contamination had been limited in general to the upper one foot of soil, and designated three specific areas within SWMU 1 (IR Site 02) as candidates for interim remedial action. The shallow soils within SWMU 1 appeared to have been impacted by the screening lot and scrap yard activities, and included PCBs and cadmium. The RI recommended that SWMU 1 be further considered in a Feasibility Study (FS) with respect to soil contamination and potential remedial action alternatives because of potential human health concerns associated with the source and extent of the chemicals identified in shallow site soils, and because of the need for further evaluation of potential human health and ecological risk concerns that may be posed by these chemicals. The Water Board and the DTSC identified interim cleanup goals for PCBs in soil as one milligram per kilogram (mg/kg).
June 20, 1996	Removal Action	First Removal Action – Involved removal of surface soils near Building 366, that was once located on the eastern portions of IR Site 02. About 80 cubic yards of surface soils with PCB concentrations up to 140 mg/kg were removed from an area west of Building 366 and disposed off-site, achieving the interim cleanup goal for PCB.
June 6, 1998	Removal Action	Second Removal Action – About 84 cubic yards of surface soils with PCB concentrations up to 29 mg/kg were removed from an area in the south-central portions of IR Site 02 next to a railroad track, and disposed offsite, achieving the interim cleanup goal for PCB.
September 30, 1998	Site Closure	FISCA is closed under the Base Realignment And Closure (BRAC) Act of 1990.
January 22, 1999	FS	Final FS Report for FISCA is issued. The FS developed, screened and evaluated potential remedial actions that could be implemented at IR Site 02 as a means for reducing human health risks that may be posed by the chemicals of concern that the RI identified in IR Site 02 shallow soils. At the request of the regulatory agencies, the FS recalculated risks for some of the chemicals of concern in IR Site 02 shallow soils on account of receiving new data since the original human health risk assessment (HHRA). PCBs and cadmium in shallow soils of IR Site 02 were retained as the chemicals of concern and targeted for remediation.
January 31, 1999	Remedial Design	Design basis report for removal of contaminated surface soils at IR Site 02 is issued. The report presented the design basis for remedial action, and presented alternative methods for defining the limits of contaminated shallow soils that exceed the cleanup goals and as such that would be removed under the remedial action.
July 17, 2000	Environmental Restrictions in place.	Navy and the City of Alameda execute a "Quitclaim Deed and Environmental Restrictions Pursuant to California Civil Code Section 1471 for FISC Alameda" wherein the Navy transfers the FISCA, which includes IR Site 02, to the City of Alameda. Interim restrictions for IR Site 02 state that the site shall not be used for residential purpose and construction activities shall not begin until the Navy and the DTSC have been properly remediated and that the Navy has recorded a release terminating these Interim Restrictions.

TABLE H-2
Site Chronology
FISCA IR Site 02 Soil, 2011 Five-Year Review
Alameda, California

Event Date	Event	Event Comments
July 17, 2000	Interim Covenant to Restrict Use of Property execution	Navy and DTSC execute an "Interim Covenant to Restrict Use of Property (Environmental Restriction)" for the Fleet and Industrial Supply Center, Alameda Annex, which includes IR Site 02, wherein the use of IR Site 02 is restricted on an interim basis to protect human health and the environment. The Covenant anticipates that some or all of its Interim Restrictions may become unnecessary after adequate investigation and remediation of IR Site 02.
April 2, 2001	Proposed Plan (PP) for Site Remediation	Navy issues its PP for remediating PCB and cadmium impacted shallow soil at IR Site 02 and invites public input into selection of the final remedy. The PP presented six potential remedial action alternatives and identified the preferred remedy as Alternative 4 – Excavation and Offsite Disposal and Land Use Controls (LUCs).
May 9, 2001	Remedial Design (RD)	Final RD for removal of PCB and cadmium impacted shallow soil at IR Site 02 based on the conclusions of the design basis report is issued.
May 14, 2001- May 22, 2001	Remedial Action Activities	Final remedial activities begin at IR Site 02 – the site is surveyed and divided into grid squares, surface soil is sampled as defined in the FSP/QAPP. Soil sampling is completed.
June 25, 2001	Remedial Action Plan/ Record of Decision (RAP/ROD)	The Navy and the State of California (DTSC and Water Board) sign the RAP/ROD. The RAP/ROD states that consistent with and supported by the Final FS of January 1999 for IR Site 02 soil, the Navy and the DTSC, with the concurrence of the Water Board, have selected excavation of IR Site 02 shallow soil containing PCBs and cadmium in concentrations exceeding cleanup goals, and disposal of the excavated soil in a permitted offsite landfill. According to the RAP/ROD, the western approximately one-third of IR Site 02 would be developed for residential use and the eastern approximately two-thirds of IR Site 02 would be developed for industrial and commercial use. Selected residential use cleanup goal for PCBs is one part per million (ppm), and for cadmium it is 12 ppm. Selected industrial use cleanup goal for PCBs is two ppm, and for cadmium it is 450 ppm. The RAP/ROD states that upon completion of the remedial action, the Interim Restrictions prohibiting residential use of IR Site 02 established in the Quitclaim Deed for FISCA dated July 17, 2000 shall be released for the western one-third of IR Site 02, which is the planned residential portion of IR Site 02, but will be retained for the eastern two-thirds of IR Site 02. The RAP/ROD further states that the Interim Covenant executed with the DTSC, dated July 17, 2000, shall release its restrictions for the western one-third of the IR Site 02 which is the residential portion of IR Site 02. The Covenant restrictions shall continue to be in effect for the eastern two-thirds of Site IR-02 which is the industrial and commercial portion of IR Site 02.
July 5, 2001- November 5, 2001	Remedial activities	Remedial soil removal activities begin.
April 23, 2002	Site Management Plan (SMP)	SMP for IR Site 02 is issued by Catellus Development Corporation, the developer of the former FISCA. The SMP provides guidelines and the means for redevelopments of IR Site 02 in a manner protective of the health and safety of site workers, future site residents, nearby residents, and the environment. Regulatory oversight of implementing this SMP would be provided by the DTSC and the City of Alameda.

TABLE H-2
Site Chronology
FISCA IR Site 02 Soil, 2011 Five-Year Review
Alameda, California

Event Date	Event	Event Comments
February 27, 2004	Site Management	DTSC accepts that the remedies selected for PCB and cadmium impacts shallow soils of IR Site 02 have been suitably implemented.
May 10, 2005	Five-Year Review	First Five-Year Review begins.
May 10, 2005 - June 24, 2005	Site Inspection	Site inspection for first five-year review conducted.
May 10, 2005 - June 24, 2005	Five-Year Review interviews	Interviews for first Five-Year Review took place.
July 10, 2006	Five-Year Review	Final Five-Year Review report for PCB and cadmium impacted shallow soils of IR Site 02 is issued.
April - May 2006	Five-Year Review Fact Sheet	Fact sheet for the first Five-Year Review report for PCB and cadmium impacted shallow soils of IR Site 02 is issued.
April - May 2006	Five-Year Review Public Notice	Public Notice for the first five-year review report for PCB and cadmium impacted shallow soils of IR Site 02 is issued.
April 2008	LUCs	Draft LUC RD being prepared. This LUC RD document pertains to the former FISCA IR Site 02 in Alameda, California. This LUC RD identifies and describes the institutional controls (ICs) in effect at FISCA IR Site 02 and the responsibilities of the stakeholders (the Navy, the City of Alameda, regulatory agencies, developers, and ultimately the transferees) in LUC implementation actions such as enforcement, inspections, and reporting. The institutional control remedy is associated with soils containing PCBs and cadmium in the eastern portion of FISCA IR Site 02.

Notes:

-- = No information available.

TABLE I-2
Site Chronology
Marsh Crust, 2011 Five-Year Review
Alameda, California

Site ID	Event Date	Event	Event Comments
Marsh Crust	Prior to 1920s	--	The properties occupied by FISCA, Alameda Point, and surrounding area exist as undeveloped marshlands and tidal flats along the fringe of San Francisco Bay.
Marsh Crust	1920s - 1930s	--	The marshlands are covered with sand and clay fill of undocumented origin.
Marsh Crust	1920s - 1940s	--	The developed Alameda Facility area is used as a commercial airport.
Marsh Crust	1930	--	The Army acquires the western tip of Alameda Island from the City of Alameda and begins construction.
Marsh Crust	1936	--	The Navy acquires title to the land from the Army and begins building Naval Air Station (NAS) Alameda in response to the military buildup in Europe before World War II. This construction involves filling the natural tidelands, marshes, and sloughs between the Oakland Inner Harbor and the western tip of Alameda Island.
Marsh Crust	1941	--	The Navy acquires more land west of the installation after the U.S. enters World War II.
Marsh Crust	1941 (Alameda Facility)	--	US Government purchases the Alameda Facility property for use as a depot.
Marsh Crust	1945	--	After the end of World War II, the NAS Alameda continued its primary mission of providing facilities and support for fleet aviation activities. While it operated as an active naval base, the installation provided berthing for Pacific Fleet ships and was a major center of naval aviation.
Marsh Crust	1964	--	Command of Alameda Facility property transferred to Naval Supply Center (NSC) Oakland.
Marsh Crust	1966 (Alameda Annex)	--	US Government purchases the Alameda Facility property for use as a depot.
Marsh Crust	1980	--	Alameda Annex property transferred to NSC Oakland.
Marsh Crust	1980's	--	Navy begins investigating sites under the Installation Restoration (IR) Program.
Marsh Crust	April 14, 1987	A Site Investigation is conducted for Alameda Annex.	--

TABLE I-2
 Site Chronology
 Marsh Crust, 2011 Five-Year Review
 Alameda, California

Site ID	Event Date	Event	Event Comments
Marsh Crust	April 1, 1988	A Preliminary Assessment (PA) is conducted for Alameda Annex.	--
Marsh Crust	1993	--	NAS Alameda is identified for closure under BRAC.
Marsh Crust	January 1, 1996	Final Remedial Investigation report for FISCA is issued.	Soil samples were collected during the RI from the Marsh Crust in and around FISCA IR Site 02.
Marsh Crust	June 1, 1996	--	NAS Alameda issues a History & Geology Fact Sheet.
Marsh Crust	April 30, 1997	--	NAS Alameda ceases all naval operations, in preparation for returning the land to the City of Alameda.
Marsh Crust	September 30, 1998	--	FISCA is closed under the BRAC Act of 1990.
Marsh Crust	December 1, 1999	Draft Finding of Suitability for Early Transfer (FOSET)	The FOSET of FISCA to the City of Alameda is issued. The FOSET states that the property transfer will include several interim measures to prevent unacceptable exposure to risks identified for the property, including requiring contractors excavating Marsh Crust soil to prepare soil management plan which describe how excavated soil will be stored, tested, and disposed.
Marsh Crust	March 23, 1999; June 28, 1999; August 9, 1999	RI	RI Reports are issued for Alameda Point Operable Unit (OU)-1, OU-2, and OU-3, which overly the Marsh Crust.
Marsh Crust	February 15, 2000	Marsh Crust Ordinance	The City of Alameda issues its Marsh Crust Ordinance No. 2824, providing standards and procedures to be followed for excavation and pile driving in the Marsh Crust area.
Marsh Crust	March 31, 2000	Final Feasibility Study	FS report for the 'Marsh Crust at Alameda Annex and Alameda Point' is issued.
Marsh Crust	May 25, 2000	Removal Action Work Plan	DTSC approved a Removal Action Work Plan for Marsh Crust at East Housing Area.

TABLE I-2
Site Chronology
Marsh Crust, 2011 Five-Year Review
Alameda, California

Site ID	Event Date	Event	Event Comments
Marsh Crust	June 1, 2000	Proposed Plan (PP)	Navy issues PP for the Marsh Crust at 'Alameda Annex and Alameda Point'. The Navy states in the PP that its preferred remedial alternative is LUCs that would require that proper procedures are followed to excavate soil that would reach the underlying Marsh Crust. The PP also states that the Navy would conduct a review after five years of implementing this remedy to ensure (a) compliance with the LUCs, as required by CERCLA and (b) that the land underlain by the Marsh Crust could be available for residential or industrial use after this remedy is implemented.
Marsh Crust	June 6, 2000	--	The Navy and the ARRA enter into a 'Lease in Furtherance of Conveyance (LIFOC) for Former Naval Air Station Alameda.' The LIFOC addresses Economic Development Conveyance (EDC) parcels, Public Benefit Conveyance (PBC) parcels, federal parcels, and three non-EDC, -PBC, or -federal parcels. Potential digging restrictions subject to negotiation with the ARRA, ICs, and/or land use restrictions are placed on most of the parcels.
Marsh Crust	July 17, 2000	--	The Navy and the City of Alameda execute a 'Quitclaim Deed and Environmental Restrictions Pursuant to California Civil Code Section 1471 for FISC Alameda' wherein the Navy transfers FISCA to the City of Alameda with environmental restrictions placed on the use of the property. The City of Alameda agrees that it will comply with the Marsh Crust Ordinance No. 2824 regarding excavation into the Marsh Crust at the former Alameda Point, and the Alameda Annex.
Marsh Crust	July 17, 2000	--	The Navy and ARRA execute a 'Quitclaim Deed and Environmental Restrictions Pursuant to California Civil Code Section 1471 for East Housing Portion of NAS Alameda,' wherein the Navy transfers Alameda Point property to the ARRA with environmental restrictions placed on use of the property. The ARRA agrees that it will comply with the Marsh Crust Ordinance No. 2824 regarding excavation into the Marsh Crust.

TABLE I-2
 Site Chronology
 Marsh Crust, 2011 Five-Year Review
 Alameda, California

Site ID	Event Date	Event	Event Comments
Marsh Crust	July 17, 2000	--	The ARRA and DTSC execute a 'Covenant to Restrict Use of Property (Environmental Restrictions), FISCA, and Alameda Point East Housing, Alameda, California.' Use of the property is restricted to protect human health and the environment. Covenant requires that its restrictions be incorporated into each and all deeds, leases, and subleases of any portion of the property.
Marsh Crust	September - November 2000	--	The Navy issues its Quarterly Report for Alameda Facility and Alameda Annex. The report provides the activities completed for the property in connection with the Marsh Crust investigations.
Marsh Crust	November 9, 2000	--	The Navy issues the Draft Final SMP for FISCA, describing the Marsh Crust and related issues.
Marsh Crust	February 2, 2001	Remedial Action Plan/Record of Decision	The Navy and the State of California sign the Marsh Crust and former subtidal area RAP/ROD. The RAP/ROD states that based on the results of the remedial investigations conducted, the Navy and DTSC, with the concurrence of USEPA and Water Board, have selected LUCs for the Marsh Crust. According to the RAP/ROD, the selected remedy addresses principal threats by restricting future use occupants from excavating into the Marsh Crust and deposits from the former subtidal area. Proper procedures would be required to be used to ensure that workers are not exposed and that the contaminated materials brought to the surface are properly disposed of. The RAP/ROD further states that the remedy of ICs consists of three tiers of LUCs: Environmental Restrictions in Deed with the City of Alameda (July 17, 2000); Covenant to Restrict Use of Property between DTSC and the City of Alameda (July 17, 2000); and the Marsh Crust Ordinance enacted by the City of Alameda (February 15, 2000).
Marsh Crust	February 13, 2001	--	USEPA issues its letter to the Navy agreeing with the selection of LUCs as the established remedy for Marsh Crust.
Marsh Crust	April 23, 2002	--	An SMP is issued by Catellus Development Corporation, the developer of FISCA and the Alameda Point East Housing Area. The Catellus SMP, issued under Marsh Crust Ordinance No. 2824, provides guidelines and the means for redevelopment of these sites in

TABLE I-2
Site Chronology
Marsh Crust, 2011 Five-Year Review
Alameda, California

Site ID	Event Date	Event	Event Comments
			a manner protective of the health and safety of site workers, future site residents, nearby residents, and the environment. Ordinance No. 2824 regulates excavations into the Marsh Crust and handling of materials excavated from below the Marsh Crust threshold depths. Regulatory oversight of implementing this SMP would be provided by DTSC and the City of Alameda.
Marsh Crust	January 1, 2005	--	Navy issues its 'Final Site Management Plan Update for Alameda Annex'. It states that the final RAP/ROD for the Marsh Crust at Alameda Annex and Alameda Point was signed in February 2001, and that the remedy is LUCs including environmental deed restrictions, a covenant to restrict use of the property and Marsh Crust Ordinance 2824 that requires excavation permits and soil management plans for excavations to depths beyond the threshold depths identified in the ordinance.
Marsh Crust	May 2005 - April 2006	First Five-Year Review	Concluded remedy in place was protective.

Notes:

-- = no information available.

FACT SHEET



Remedial Action at OU-5/IR-02 Former Naval Air Station Alameda and FISCA

Alameda, California

October 2008

INTRODUCTION

The Navy is proceeding with the selected remedial action (cleanup) for groundwater at Operable Unit (OU)-5/Installation Restoration (IR) Site-02, Alameda Point and Fleet and Industrial Supply Center Oakland, Alameda Facility/Alameda Annex (FISCA), Alameda, California. Treatment systems will be installed in portions of Marina Village Housing, Shinsei Gardens,

PROJECT CONTACTS

If you have any questions or concerns about environmental activities, please feel free to contact any of the project representatives:

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(510) 622-2438

North Village Housing, and the area to the east of Island High School. This fact sheet describes the scope of the groundwater remediation being conducted to reduce the benzene and naphthalene in site groundwater.

The site is safe for children, residents, and others. There are no drinking water wells in this area, and water service to the homes and other buildings is provided by the East Bay Municipal Utility District. The groundwater remediation will address potential long-term risks, including if the groundwater were to be used in the future.

The site will be secured and control measures implemented so that public safety is maintained throughout the construction of the groundwater treatment system. Because North Village Housing is vacant, some roads, such as Kollman Circle, will be closed to traffic in the remediation area. Construction activities will begin in mid-October 2008 and are scheduled to continue until approximately July 2009.

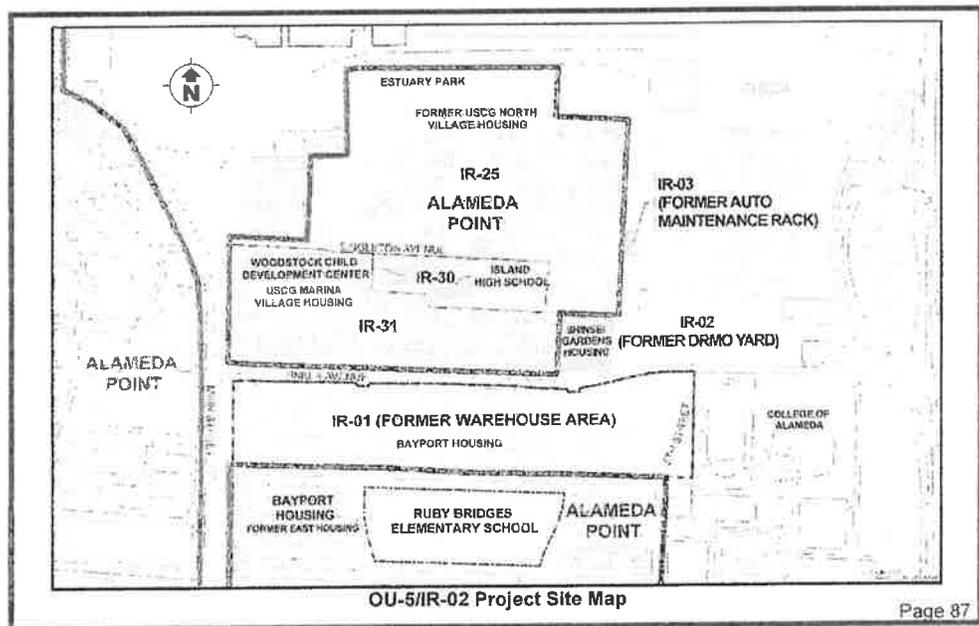
The Navy is conducting environmental actions at OU-5 on Alameda Point and IR-02 on FISCA in accordance with the Comprehensive Environmental Response, Compensation, and Liability Act. After completing a remedial investigation, the Navy conducted a feasibility study in 2004 to evaluate remedial alternatives for OU-5/IR-02. The Proposed Plan described the preferred alternative and solicited public

Regulatory Agencies Concur on ROD

The Navy and its cleanup partners, the U.S. Environmental Protection Agency, the California Department of Toxic Substances Control, and the San Francisco Bay Regional Water Quality Control Board, concurred with the selected remedy presented in the Record of Decision, which was finalized in August 2007.

comments in the remedy selection process. Comments from the public and regulatory agencies were incorporated into the Record of Decision (ROD), which describes the selected remedy.

The selected remedy consists of biosparging with soil vapor extraction (SVE), as required, monitored natural attenuation, and land use restrictions. Biosparging is the injection of air into groundwater to promote degradation of contaminants by microorganisms. SVE is removal of soil vapors by applying a vacuum to the subsurface using a series of wells. These technologies are safe for the residents and public. Monitored natural attenuation consists of monitoring (sampling) the groundwater to track the natural attenuation (breakdown) of contaminants in the groundwater because of the naturally occurring microorganisms.



OU-5/IR-02 Project Site Map

SITE HISTORY

Naval Air Station Alameda was an active military installation from the 1930s to the 1990s providing facilities and support for fleet aviation activities. OU-5/IR-02 is located in the northeastern portion of Alameda Point, to the east of Main Street.

OU-5/IR-02 includes an area of benzene- and naphthalene-impacted groundwater within Alameda Point and FISCA. As shown on the project site map, OU-5/IR-02 is composed of a portion of IR-25 (former United States Coast Guard [USCG] North Village housing, Estuary Park); IR-30 (Island High School and the Woodstock Child Development Center); IR-31 (USCG Marina Village residential housing); FISCA IR-01 former warehouse area (current Bayport housing); FISCA IR-02 former screening lot, scrap yard, and equipment storage area (western portion currently being developed as Shinsei Gardens housing); and FISCA IR-03 (former automotive drive-up maintenance rack).

INVESTIGATION RESULTS

Pre-design sampling conducted in 2007 provided information for the design and better defined the boundary of the area of groundwater contamination, referred to as the groundwater plume. The groundwater plume is approximately 2,900 by 800 feet, as shown on the groundwater plume map. The remediation will address potential long-term risks, including if the groundwater were to be used in the future.

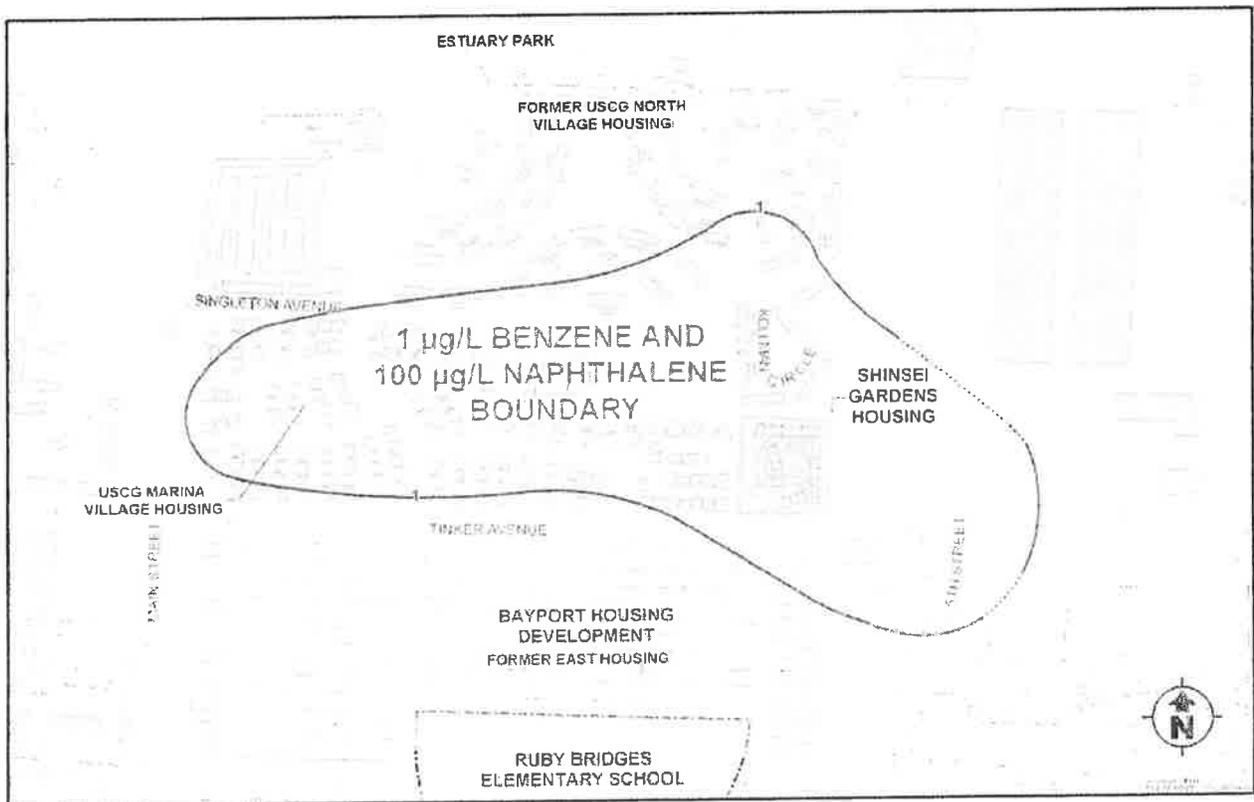
CLEANUP ACTION

The selected remedy consists of biosparging with SVE, as required, monitored natural attenuation, and land use restrictions to limit exposure of future landowner(s) and/or user(s) of the property

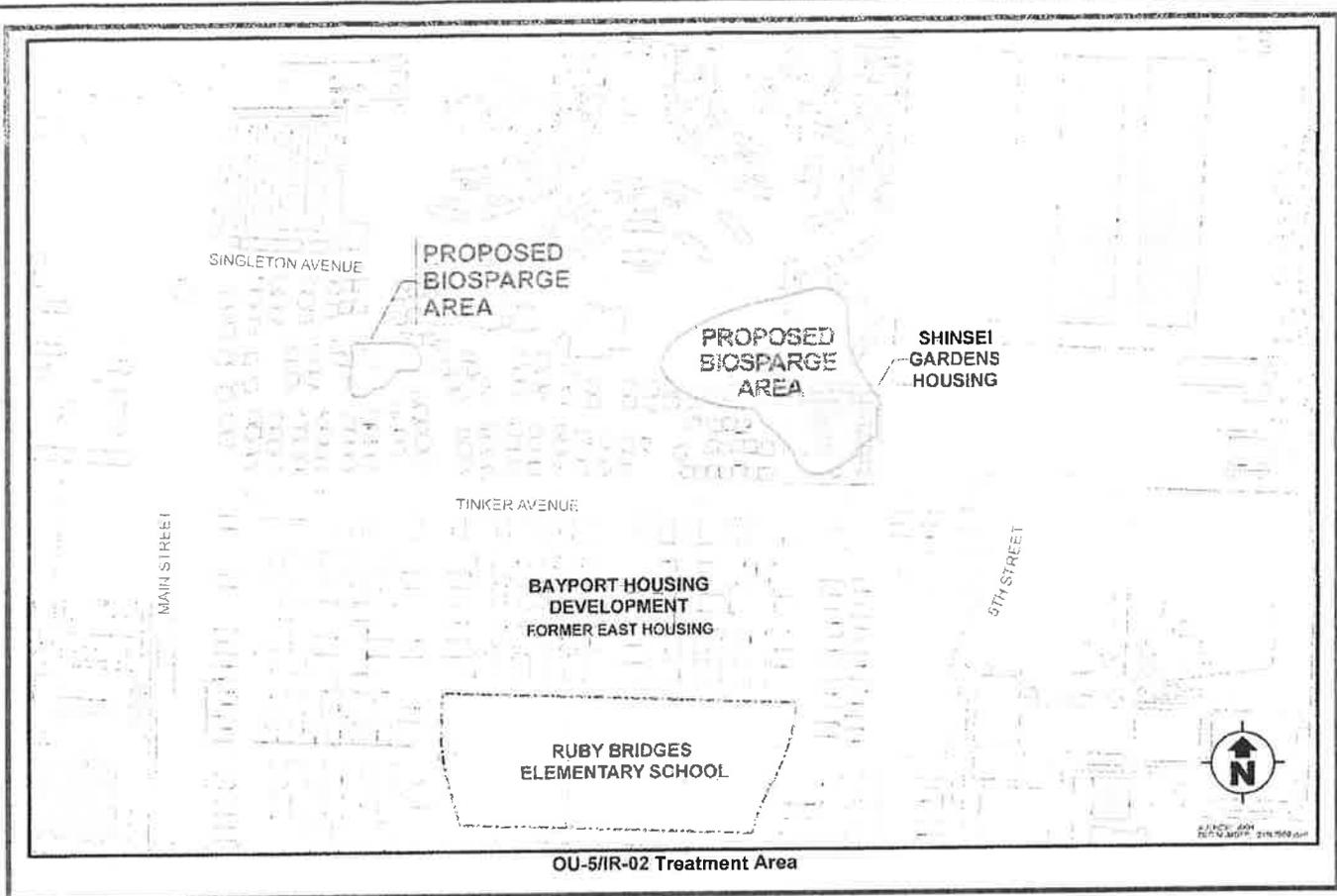
to contaminated groundwater and to maintain the integrity of the remedial action until remediation is complete. The goal of the selected remedy is to reduce benzene and naphthalene to the risk-based remedial goals of 1 and 100 parts per billion, respectively.

Biosparging increases dissolved oxygen in groundwater to enable naturally occurring microorganisms to break down benzene and naphthalene. SVE wells will help capture vapors potentially generated during biosparging, as necessary. Monitored natural attenuation, where naturally occurring organisms break down the contaminants, also is a component of the selected remedy. Historical data indicate that natural attenuation is occurring. Land use restrictions will be implemented and will remain in place until remediation is complete.

Treatment systems will be installed in the two areas within the groundwater plume that have the highest benzene and naphthalene concentrations to maximize removal of the contaminants. The full-scale biosparge/SVE treatment system will cover approximately 6 acres as shown on the Treatment Area figure. This area includes portions of Marina Village Housing, Shinsei Gardens, North Village Housing, and an area to the east of Island High School. The construction will include drilling, installation of wells, trenching, and installation of piping and other equipment. The full-scale system will consist of over 300 biosparge wells on approximately 20-foot centers, 15 SVE wells, and 6 new monitoring wells. The remediation system in Marina Village Housing and Shinsei Gardens will be installed underground, so residents will not be inconvenienced. During the installation of the treatment system, site security and traffic control measures will be implemented to ensure health and safety in the work areas.



OU-5/IR-02 Groundwater Plume



OU-5/IR-02 Treatment Area

TRAFFIC IMPACTS

The most significant traffic impact will occur during system installation in the Marina Village Housing Area (smaller of the two treatment areas). Well and piping installation (trenching across streets, driveways, and sidewalks) will require temporary lane and sidewalk closures. A traffic control plan will be in effect during system installation to safeguard the public and to minimize the temporary traffic impacts. Traffic impacts are not anticipated during system installation east of Island High School (the larger of the two treatment areas). North Village Housing is vacant, and some of the roads will be closed to traffic in the remediation area. The Shinsei Gardens housing will be under construction during system installation in this area. Measures will be implemented so that public safety is maintained throughout the construction for the groundwater treatment system. Once system installation is complete, operation of the treatment system will not have an impact on traffic.

PROJECT SCHEDULE

The treatment system construction will begin in mid-October 2008 and is scheduled to continue until approximately July 2009. The treatment system is planned to be operated for at least 2 years.

Qualifications of Timothy P. Runde, MAI, LEED AP
California Certified General Real Estate Appraiser No. AG011358**EXPERIENCE & EDUCATION**

Tim Runde, MAI, LEED AP, is the President of Runde & Partners, Inc., a full-service real estate appraisal and consulting company headquartered in San Francisco, California. Prior to forming Runde & Partners, Tim was a Partner with Carnegie and Partners, Inc. in the San Francisco office.

Tim has over 25 years of commercial real estate appraisal experience encompassing a wide range of property types, including commercial office, industrial, retail and multi-family assignments. In addition, he has developed expertise in advanced practice areas including condemnation, intangibles, leaseholds, and sustainable, green and high-performance buildings. He regularly provides litigation support and has served as an expert witness in a variety of settings including California Superior Court, U.S. Bankruptcy Court, arbitration, mediation and ad valorem tax appeal proceedings.

Tim received a Master of Science in Real Estate Appraisal and Investment Analysis degree from the University of Wisconsin under the direction of Dr. James Graaskamp. While studying there, he was awarded a Hollander Fellowship with the Wisconsin Housing and Economic Development Authority and worked as a project manager with a national real estate developer.

PUBLICATIONS

Real Property Insights, Volume 22, No. 2, 2015, *Linking Sustainable Improvements to Retail Real Estate Value*

The Appraisal Journal, Spring 2015, *Net Zero Energy Buildings: An Introduction for Valuation Professionals*

The Journal of Sustainable Real Estate (JOSRE), Volume 2, No. 1, 2010, *Integrating Sustainability and Green Building into the Appraisal Process*

TEACHING

Appraisal Institute Instructor
Appraisal Institute Course Reviewer

SPEAKING

Appraisal Institute - National

- **Appraisal Institute National Conference**
 - July 2015, Dallas, *Green Features – Coming Soon to a Building Near You*
 - August 2014, Austin, *Valuing Net Zero Energy Buildings*
 - August 2012, San Diego, *Cracking the Code on Green Building Rating Systems*
- **Appraisal Institute Webinar**
 - October 2015, *Benchmarking Building Performance*
 - February 2015, *Valuing Net Zero Energy Buildings*

Appraisal Institute - NorCal Chapter

- **Fall Conference**; October 2015, San Francisco, *Developing Green*
- **Fall Conference**; September 2014, San Francisco, *Green Building: Risks & Opportunities*
- **Spring Conference**; March 2014, Modesto, *Green Residential Issues*
- **Fall Conference**; November 2013, San Francisco, *NZE Buildings: Fantasy or Reality?*
- **Fall Conference**; November 2012, San Francisco, *New Building Trends and Technologies*
- **Fall Conference**; November 2012, San Francisco, *New Building Trends/Technologies*
- **Fall Conference**; October 2011, San Francisco, *Case Studies in Green Valuation; Appraising Green Residential Properties*
- **Fall Conference**; October 2010, San Francisco, *Sustainability – Beyond Green Building; Case Studies in Green Building Valuation*
- **Webinar**; December 2010, *Is Green the New Brown for Appraisers? 5 Lessons from the Field*
- **Quarterly Workshop**; November 2010, *Green Building Valuation*
- **GGBC Seminar**; April 2010, San Francisco, *Integrating LEED into the Appraisal Process*

Institute for Professionals in Taxation (IPT)

- **Healthcare Property and Sales Tax Seminar**: April 2012, Nashville,
 - *Case Studies in Highest and Best Use Analysis of Health Care Properties*
 - *Fundamentals of Highest and Best Use, Economic Life and Depreciation for Health Care Properties*

United States Green Building Council (USGBC)

- **Greenbuild International Conference;** November 2015, Washington DC, *An Insider's Guide to Optimizing the Value of NZE Properties*
- **Greenbuild International Conference;** November 2012, San Francisco, *Valuing LEED Buildings: Making the Most of What Matters*
- **USGBC Los Angeles Chapter Webinar;** April 2011, *Valuing Green Real Estate*

International Right of Way Association (IRWA)

- **IRWA Chapter 42 Spring Conference;** April 2016, San Jose, *Eminent Domain Issues for High-Performance Properties*

International Living Future Institute (ILFI)

- **Living Future 2015 Conference;** April 2015, Seattle, *Real Estate Finance and Appraisal*

Buildings New York

- **BuildingsNY Conference;** March 2011, New York City, *Effectively Valuing and Marketing Green Real Estate*
- **BuildingsNY Conference;** June 2010, New York City, *What We See When You Say Green*

PROFESSIONAL OUTREACH

Board Member – Appraisal Institute Northern California Chapter, 2016 – 2017

Conference Chair – **Appraisal Institute Fall Conference**, Northern California Chapter of the Appraisal Institute. 2014

Planning Committee Member – **Appraisal Institute Fall Conference**, Northern California Chapter of the Appraisal Institute. Served 2009 - 2015

Task Force Member, Residential Energy Conservation Ordinance, City of San Francisco Department of the Environment, 2014 -2015

Mentoring, University of Wisconsin-Madison - Wisconsin Real Estate Mentorship Program, 2013 – 2014

Article Peer Reviewer – *The Appraisal Journal* and *International Journal of Strategic Property Management*, 2013 – present

Subject Matter Expert: Valuation of Green Buildings – Background Competence, The Appraisal Foundation. Served 2012 – 2013

Expert Panelist, Department of Energy, Building America Experts Meeting – San Francisco, June 2011

Committee Member – Green the MLS, Build It Green, Served 2010

PROFESSIONAL AFFILIATIONS & STATE CERTIFICATION

MAI Designation: No. 10770, Appraisal Institute

State of California Certified General Real Estate Appraiser No. AG011358

LEED Accredited Professional – BD&C, United States Green Building Council (USGBC)

Appraisal Institute Professional Development Programs

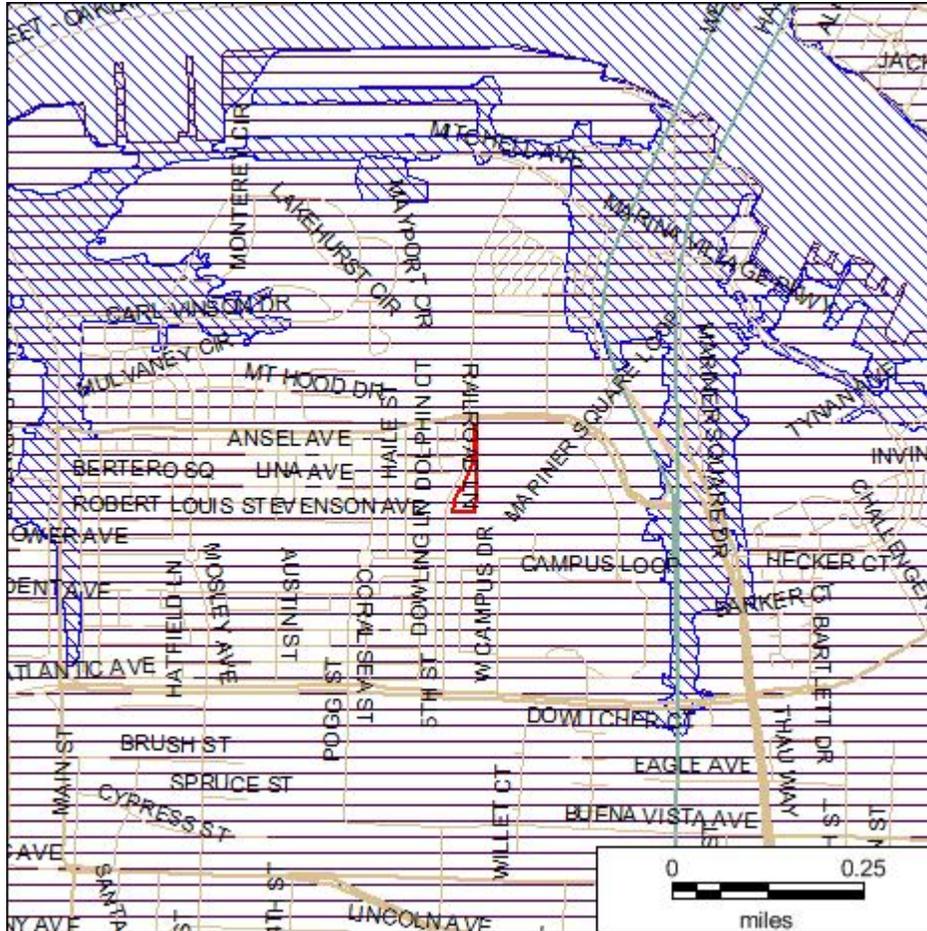
- *Valuation of the Components of a Business Enterprise*
- *Valuation of Sustainable Buildings*

**Map of Statutory Natural Hazards
For ALAMEDA County**

Property Address: 2350 5TH ST
ALAMEDA, ALAMEDA COUNTY, CA 94501
("Property")

APN: 074-1356-023
Report Date: 12/27/2018
Report Number: 2406752

Map of Statutory Natural Hazard Zones



Subject Property

	Special Flood Hazard Area
	Area of Potential Flooding, Dam Failure
	Very High Fire Hazard Severity Zone
	Wildland Area, Substantial Forest Fire Risk
	Earthquake Fault Zone
	Seismic Hazard Zone, Landslide
	Seismic Hazard Zone, Liquefaction



This map is provided for convenience only to show the approximate location of the Property and is not based on a field survey.

**JCP-LGS Residential Property Disclosure Reports
Natural Hazard Disclosure (NHD) Report
For ALAMEDA County**

Property Address: 2350 5TH ST
ALAMEDA, ALAMEDA COUNTY, CA 94501
("Property")

APN: 074-1356-023
Report Date: 12/27/2018
Report Number: 2406752

**Statutory Natural Hazard Disclosure ("NHD") Statement
and Acknowledgment of Receipt**

The transferor and his or her agent(s) or a third-party consultant disclose the following information with the knowledge that even though this is not a warranty, prospective transferees may rely on this information in deciding whether and on what terms to purchase the Property. Transferor hereby authorizes any agent(s) representing any principal(s) in this action to provide a copy of this statement to any person or entity in connection with any actual or anticipated sale of the Property.

The following are representations made by the transferor and his or her agent(s) based on their knowledge and maps drawn by the State. This information is a disclosure and is not intended to be part of any contract between the transferee and the transferor. THIS REAL PROPERTY LIES WITHIN THE FOLLOWING HAZARDOUS AREA(S):

A SPECIAL FLOOD HAZARD AREA (Any type Zone "A" or "V") designated by the Federal Emergency Management Agency

Yes ___ No **X** Do not know and information not available from local jurisdiction ___

AN AREA OF POTENTIAL FLOODING shown on a dam failure inundation map pursuant to Section 8589.5 of the Government Code.

Yes ___ No **X** Do not know and information not available from local jurisdiction ___

A VERY HIGH FIRE HAZARD SEVERITY ZONE pursuant to Section 51178 or 51179 of the Government Code. The owner of this Property is subject to the maintenance requirements of Section 51182 of the Government Code.

Yes ___ No **X**

A WILDLAND AREA THAT MAY CONTAIN SUBSTANTIAL FOREST FIRE RISK AND HAZARDS pursuant to Section 4125 of the Public Resources Code. The owner of this Property is subject to the maintenance requirements of Section 4291 of the Public Resources Code. Additionally, it is not the state's responsibility to provide fire protection services to any building or structure located within the wildlands unless the Department of Forestry and Fire Protection has entered into a cooperative agreement with a local agency for those purposes pursuant to Section 4142 of the Public Resources Code.

Yes ___ No **X**

AN EARTHQUAKE FAULT ZONE pursuant to Section 2622 of the Public Resources Code.

Yes ___ No **X**

A SEISMIC HAZARD ZONE pursuant to Section 2696 of the Public Resources Code.

Yes (Landslide Zone) ___ Yes (Liquefaction Zone) **X**

No ___ Map not yet released by state ___

THESE HAZARDS MAY LIMIT YOUR ABILITY TO DEVELOP THE REAL PROPERTY, TO OBTAIN INSURANCE, OR TO RECEIVE ASSISTANCE AFTER A DISASTER. THE MAPS ON WHICH THESE DISCLOSURES ARE BASED ESTIMATE WHERE NATURAL HAZARDS EXIST. THEY ARE NOT DEFINITIVE INDICATORS OF WHETHER OR NOT A PROPERTY WILL BE AFFECTED BY A NATURAL DISASTER. TRANSFEREE(S) AND TRANSFEROR(S) MAY WISH TO OBTAIN PROFESSIONAL ADVICE REGARDING THOSE HAZARDS AND OTHER HAZARDS THAT MAY AFFECT THE PROPERTY.

Signature of Transferor(s) _____ Date _____ Signature of Transferor(s) _____ Date _____

Signature of Agent _____ Date _____ Signature of Agent _____ Date _____

Transferor(s) and their agent(s) represent that the information herein is true and correct to the best of their knowledge as of the date signed by the transferor(s) and agent(s).

Transferor(s) and their agent(s) acknowledge that they have exercised good faith in the selection of a third-party report provider as required in Civil Code Section 1103.7, and that the representations made in this Natural Hazard Disclosure Statement are based upon information provided by the independent third-party disclosure provider as a substituted disclosure pursuant to Civil Code Section 1103.4. Neither transferor(s) nor their agent(s) (1) has independently verified the information contained in this statement and Report or (2) is personally aware of any errors or inaccuracies in the information contained on the statement. This statement was prepared by the provider below:

Third-Party Disclosure Provider(s) FIRST AMERICAN PROFESSIONAL REAL ESTATE SERVICES, INC. OPERATING THROUGH ITS JCP-LGS DIVISION.
Date 27 December 2018

Transferee represents that he or she has read and understands this document. Pursuant to Civil Code Section 1103.8, the representations in this Natural Hazard Disclosure Statement do not constitute all of the transferor's or agent's disclosure obligations in this transaction.

Signature of Transferee(s) _____ Date _____ Signature of Transferee(s) _____ Date _____

TRANSFEREE(S) REPRESENTS ABOVE HE/SHE HAS RECEIVED, READ AND UNDERSTANDS THE COMPLETE JCP-LGS DISCLOSURE REPORT DELIVERED WITH THIS SUMMARY:

- A. Additional Property-specific Statutory Disclosures: Former Military Ordnance Site, Commercial/Industrial Use Zone, Airport Influence Area, Airport Noise, San Francisco Bay Conservation and Development District Jurisdiction (in S.F. Bay counties only), California Energy Commission Duct Sealing Requirement, Notice of Statewide Right to Farm, Notice of Mining Operations, Sex Offender Database (Megan's Law), Gas and Hazardous Liquid Transmission Pipeline Database.
- B. Additional County and City Regulatory Determinations as applicable: Airports, Avalanche, Blow Sand, Coastal Zone, Dam/Levee Failure Inundation, Debris Flow, Erosion, Flood, Fault Zone, Fire, Groundwater, Landslide, Liquefaction, Methane Gas, Mines, Naturally Occurring Asbestos, Redevelopment Area, Right to Farm, Runoff Area, Seiche, Seismic Shaking, Seismic Ground Failure, Slope Stability, Soil Stability, Subsidence, TRPA, Tsunami.
- C. General advisories: Methamphetamine Contamination, Mold, Radon, Endangered Species Act, Abandoned Mines, Oil & Gas Wells, Tsunami Maps (coastal only), Wood-burning fireplaces.
- D. Additional Reports - Enclosed if ordered: (1) PROPERTY TAX REPORT (includes state-required Notices of Mello-Roos and 1915 Bond Act Assessments, and Notice of Supplemental Property Tax Bill, (2) ENVIRONMENTAL SCREENING REPORT (discloses Transmission Pipelines, Contaminated Sites, and Oil & Gas Wells). Enclosed if applicable: Local Addenda.
- E. Government Guides in Combined Booklet with Report. Refer to Booklet: (1) ENVIRONMENTAL HAZARDS: "A Guide for Homeowners, Buyers, Landlords and Tenants"; (2) EARTHQUAKE SAFETY: "The Homeowners Guide To Earthquake Safety" and included "RESIDENTIAL EARTHQUAKE HAZARDS REPORT FORM"; (3) LEAD-BASED PAINT: "Protect Your Family From Lead In Your Home"; (4) BRIEF GUIDE TO MOLD, MOISTURE AND YOUR HOME; (5) WHAT IS YOUR HOME ENERGY RATING? Government Guides are also available on the Company's "Electronic Bookshelf" at <http://www.disclosures.com/>.

Contents
For ALAMEDA County

Property Address: 2350 5TH ST
ALAMEDA, ALAMEDA COUNTY, CA 94501
("Property")

APN: 074-1356-023
Report Date: 12/27/2018
Report Number: 2406752

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JCP-LGS Residential Property Disclosure Reports
Summary of Disclosure Determinations
For ALAMEDA County

Property Address: 2350 5TH ST
ALAMEDA, ALAMEDA COUNTY, CA 94501
("Property")

APN: 074-1356-023
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PROPERTY DISCLOSURE SUMMARY - READ FULL REPORT

Statutory NHD Determinations	IN	NOT IN	Map N/A*	Property is:	NHD Report page:
Flood		X		NOT IN a Special Flood Hazard Area. The Property is IN a FEMA-designated Flood Zone(s) X, X500.	6
Dam		X		NOT IN an area of potential dam inundation.	6
Very High Fire Hazard Severity		X		NOT IN a very high fire hazard severity zone.	7
Wildland Fire Area		X		Not in a wildland-state responsibility area.	7
Fault		X		NOT IN an earthquake fault zone designated pursuant to the Alquist-Priolo Act.	8
Landslide		X		NOT IN an area of earthquake-induced land sliding designated pursuant to the Seismic Hazard Mapping Act.	8
Liquefaction	X			IN an area of potential liquefaction designated pursuant to the Seismic Hazard Mapping Act.	8

County-level NHD Determinations	IN	NOT IN	Map N/A*	Property is:	NHD Report page:
Fault		X		NOT WITHIN one-eighth of one mile (660 feet) of a mapped Fault that is not bounded by a regulatory fault zone.	10
Landslide		X		NOT IN a mapped Landslide deposit larger than 200 feet.	10
Fire		X		NOT IN a mapped Fire Hazard Severity Zone in SRA rated Very High, High, or Moderate.	11
Liquefaction	X			IN a mapped area with a Very High Liquefaction Susceptibility rating.	10
Tsunami	X			IN a mapped Tsunami Inundation Area.	11

Additional Statutory Disclosures	IN	NOT IN	Map N/A*	Property is:	NHD Report page:
Former Military Ordnance		X		NOT WITHIN one mile of a formerly used ordnance site.	14
Commercial or Industrial	X			WITHIN one mile of a property zoned to allow commercial or industrial use.	14
Airport Influence Area		X		NOT IN an airport influence area.	15
Airport Noise Area for 65 Decibel		X		NOT IN a delineated 65 dB CNEL or greater aviation noise zone.	16
Bay Conservation and Development Commission		X		NOT IN an area that is within the jurisdiction of the San Francisco Bay Conservation and Development Commission.	17
California Energy Commission	X			IN a climate zone where properties are usually subject to duct sealing and testing requirements	18
Right to Farm Act		X		NOT IN a one mile radius of designated Important Farmland.	19
Notice of Mining Operations		X		NOT IN a one mile radius of a mapped mining operation that requires a statutory "Notice of Mining Operation" be provided in this Report:	20

General Advisories	Description	NHD Report page:
Registered Sex Offender Data Base (Megan's Law) Notice	Provides an advisory required pursuant to Section 290.46 of the Penal Code. Information about specified registered sex offenders is made available to the public.	21
Gas and Hazardous Liquid Transmission Pipeline Database Notice	Provides a notice required pursuant to Section 2079.10.5(a) of the Civil Code. Information about transmission pipeline location maps is made available to the public.	22
Methamphetamine Contamination	Provides an advisory that a disclosure may be required pursuant to the "Methamphetamine Contaminated Property Cleanup Act of 2005".	23
Mold	Provides an advisory that all prospective purchasers of residential and commercial property should thoroughly inspect the subject property for mold and sources for additional information on the origins of and the damage caused by mold.	24

JCP-LGS Residential Property Disclosure Reports

Summary of Disclosure Determinations For ALAMEDA County

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General Advisories	Description	NHD Report page:
Radon	Provides an advisory on the risk associated with Radon gas concentrations.	25
Endangered Species	Provides an advisory on resources to educate the public on locales of endangered or threatened species.	25
Abandoned Mines	Provides an advisory on resources to educate the public on the hazards posed by, and some of the general locales of, abandoned mines.	26
Oil and Gas Wells	Provides an advisory on the potential existence of oil and gas wells and sources for additional general and/or specific information.	26
Tsunami Map Advisory	Provides an advisory about maximum tsunami inundation maps issued for jurisdictional emergency planning.	27
Residential Fireplace Disclosure	Provides disclosure of restrictions on the use of wood-burning fireplaces imposed by the Bay Area Air Quality Management District.	28

Local Addendums	Description	NHD Report page:
Underground Utility District	Provides an advisory on presence within an Underground Utility District and potential impact on property owners in such Districts.	42

Property Tax Determinations	IS	IS NOT	Property is:	Tax Report page:
Mello-Roos Districts	X		NOT SUBJECT TO a Mello-Roos Community Facilities District.	30
1915 Bond Act Districts		X	NOT SUBJECT TO a 1915 Bond Act District.	30
Other Direct Assessments		X	NOT SUBJECT TO other direct assessments.	31
SRA Fire Prevention Fee		X	NOT SUBJECT TO the State Responsibility Area Fire Prevention Fee (SRA Fee is suspended until 2031 by Assembly Bill 398 of 2017).	35

Determined by First American Professional Real Estate Services, Inc.

For more detailed information as to the foregoing determinations, please read this entire Report.

JCP-LGS Residential Property Disclosure Reports
Natural Hazard Disclosure (NHD) Report
For ALAMEDA County

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Natural Hazard Disclosure Report

Part 1. State Defined Natural Hazard Zones

Statutory Natural Hazard Disclosures

Section 1103 of the California Civil Code mandates the disclosure of six (6) natural hazard zones if the Property is located within any such zone. Those six "statutory" hazard zones, disclosed on the **Natural Hazard Disclosure Statement** ("NHDS") on Page one of this Report, are explained below. Note that the NHDS does not provide for informing buyers if a property is only partially within any of the delineated zones or provide additional flood zone information which could be very important to the process. The following summary is intended to give buyers additional information they may need to help them in the decision-making process and to place the information in perspective.

SPECIAL FLOOD HAZARD AREA

DISCUSSION: Property in a Special Flood Hazard Area (any type of Zone "A" or "V" as designated by the Federal Emergency Management Agency ("FEMA")) is subject to flooding in a "100-year rainstorm." Federally connected lenders require homeowners to maintain flood insurance for buildings in these zones. A 100-year flood occurs on average once every 100 years, but may not occur in 1,000 years or may occur in successive years. According to FEMA, a home located within a SFHA has a 26% chance of suffering flood damage during the term of a 30-year mortgage. Other types of flooding, such as dam failure, are not considered in developing these zones. Flood insurance for properties in Zones B, C, D, X, X500, and X500_Levee is available but is not required.

Zones A, AO, AE, AH, AR, A1-A30: Area of "100-year" flooding - a 1% or greater chance of annual flooding.

Zone A99: An "adequate progress" determination for flood control system construction projects that, once completed, may significantly limit the area of a community that will be included in the Special Flood Hazard Area (SFHA). Such projects reduce but do not eliminate, the risk of flooding to people and structures in "levee-impacted" areas, and allow mandatory flood insurance to be available at a lower cost.

Zones V, V1-V30: Area of "100-year" flooding in coastal (shore front) areas subject to wave action.

Zone B: Area of moderate flood risk. These are areas between the "100" and "500" year flood-risk levels.

Zones C, D: NOT IN an area of "100-year" flooding. Area of minimal (Zone C) or undetermined (Zone D) flood hazard.

Zones X: An area of minimal flood risk. These are areas outside the "500" year flood-risk level.

Zone X500: An area of moderate flood risk. These are areas between the "100" and "500" year flood-risk levels.

Zone X500_LEVEE: An area of moderate flood risk that is protected from "100-year flood" by levee and that is subject to revision to high risk (Zone A) if levee is decertified by FEMA.

Zone N: Area Not Included, no flood zone designation has been assigned or not participating in the National Flood Insurance Program.

Notice: The Company is not always able to determine if the Property is subject to a FEMA Letter of Map Revision ("LOMR") or other FEMA letters of map change. If Seller is aware that the Property is subject to a LOMR or other letters of map change, the Seller shall disclose the map change and attach a copy of the FEMA letter(s) to the Report. Contact FEMA at <http://msc.fema.gov> for additional information.

For more information about flood zones, visit:

http://www.floodsmart.gov/floodsmart/pages/flooding_flood_risks/defining_flood_risks.jsp

PUBLIC RECORD: Official Flood Insurance Rate Maps ("FIRM") compiled and issued by the Federal Emergency Management Agency ("FEMA") pursuant to 42 United States Code §4001, et seq.

AREA OF POTENTIAL FLOODING (DAM FAILURE)

DISCUSSION: Local governmental agencies, utilities, and owners of certain dams are required to prepare and submit inundation maps for review and approval by the California Office of Emergency Services ("OES"). A property within an Area of Potential Flooding Caused by Dam Failure is subject to potential flooding in the event of a sudden and total dam failure with a full reservoir. Such a failure could result in property damage and/or personal injury. However, dams rarely fail instantaneously and reservoirs are not always filled to capacity. Please note that not all dams (such as federally controlled dams) located within the state have been included within these dam inundation zones. Also these maps do not identify areas of potential flooding resulting from storms or other causes.

PUBLIC RECORD: Official dam inundation maps or digital data thereof made publicly available by the State of California Office of Emergency Services ("OES") pursuant to California Government Code §8589.5.

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Report Number: 2406752

VERY HIGH FIRE HAZARD SEVERITY ZONE (VHFHSZ)

DISCUSSION: VHFHSZs can be defined by the California Department of Forestry and Fire Protection ("Calfire") as well as by local fire authorities within "Local Responsibility Areas" where fire suppression is the responsibility of a local fire department. Properties located within VHFHS Zones may have a higher risk for fire damage and, therefore, may be subject to (i) additional construction requirements such as a "Class A" roof for new construction or replacement of existing roofs; and (ii) additional maintenance responsibilities such as adequate vegetation clearance near the structure, spark screens on chimneys and stovepipes, leaf removal from roofs, and other basic fire-safety practices. Contact the local fire department for a complete list of requirements and exceptions.

PUBLIC RECORD: Maps issued by Calfire pursuant to California Government Code § 51178 recommending VHFHSZs to be adopted by the local jurisdiction within its Local Responsibility Area, or VHFHSZs adopted by the local jurisdiction within the statutory 120-day period defined in California Government Code § 51179.

WILDLAND FIRE AREA (STATE RESPONSIBILITY AREA)

DISCUSSION: The State Board of Forestry classifies all lands within the State of California based on various factors such as ground cover, beneficial use of water from watersheds, probable damage from erosion, and fire risks. Fire prevention and suppression in all areas which are not within a Wildland - State Responsibility Area ("WSRA") is primarily the responsibility of the local or federal agencies, as applicable.

For property located within a WSRA, please note that (1) there may be substantial forest fire risks and hazards; (2) except for property located within a county which has assumed responsibility for prevention and suppression of all fires, it is NOT the state's responsibility to provide fire protection services to any building or structure located within a WSRA unless the Department has entered into a cooperative agreement with a local agency; and (3) the property owner may be is subject to (i) additional construction requirements such as a "Class A" roof for new construction or replacement of existing roofs; and (ii) additional maintenance responsibilities such as adequate vegetation clearance near the structure, spark screens on chimneys and stovepipes, leaf removal from roofs, and other basic fire-safety practices.

The existence of local agreements for fire service is not available in the Public Record and, therefore, is not included in this disclosure. For very isolated properties with no local fire services or only seasonal fire services there may be significant fire risk. If the Property is located within a WSRA, please contact the local fire department for more detailed information.

PUBLIC RECORD: Official maps issued by the California Department of Forestry and Fire Protection ("Calfire") pursuant to California Public Resources Code § 4125.

SRA Fire Prevention Benefit Fee Advisory

In 2011, the California Legislature and Governor enacted a "Fire Prevention Fee" on habitable structures in the State's wildland fire responsibility area. The yearly fee, levied on property owners, paid for various activities to prevent and suppress wildfires in the SRA, and was most recently at the rate of \$152.33 per habitable structure on the property.

Effective July 1, 2017, as authorized by Assembly Bill 398 and signed by the Governor, that fire prevention fee is suspended until 2031.

For more information, please refer to "Part 6. State Responsibility Area Fire Prevention Fee" in the JCP-LGS Property Tax Report.

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For ALAMEDA County

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("Property")

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EARTHQUAKE FAULT ZONE

DISCUSSION: Earthquake Fault Zones are delineated and adopted by California as part of the Alquist-Priolo Earthquake Fault Zone Act of 1972. Property in an Earthquake Fault Zone ("EF Zone") does not necessarily have a fault trace existing on the site. EF Zones are areas or bands delineated on both sides of known active earthquake faults. EF Zones vary in width but average one-quarter (1/4) mile in width with the "typical" zone boundaries set back approximately 660 feet on either side of the fault trace. The potential for "fault rupture" damage (ground cracking along the fault trace) is relatively high only if a structure is located directly on a fault trace. If a structure is not on a fault trace, shaking will be the primary effect of an earthquake. During a major earthquake, shaking will be strong in the vicinity of the fault and may be strong at some distance from the fault depending on soil and bedrock conditions. It is generally accepted that properly constructed wood-frame houses are resistant to shaking damage.

PUBLIC RECORD: Official earthquake fault zone or special study zone maps approved by the State Geologist and issued by the California Department of Conservation, California Geological Survey pursuant to California Public Resources Code §2622.

SEISMIC HAZARD MAPPING ACT ZONE

DISCUSSION: Official Seismic Hazard Zone ("SH Zone") maps delineate Areas of Potential Liquefaction and Areas of Earthquake-Induced Landsliding. A property that lies partially or entirely within a designated SH Zone may be subject to requirements for site-specific geologic studies and mitigation before any new or additional construction may take place.

Earthquake-Induced Landslide Hazard Zones are areas where the potential for earthquake-induced landslides is relatively high. Areas most susceptible to these landslides are steep slopes in poorly cemented or highly fractured rocks, areas underlain by loose, weak soils, and areas on or adjacent to existing landslide deposits. The CGS cautions these maps do not capture all potential earthquake-induced landslide hazards and that earthquake-induced ground failures are not addressed by these maps. Furthermore, no effort has been made to map potential run-out areas of triggered landslides. It is possible that such run-out areas may extend beyond the zone boundaries. An earthquake capable of causing liquefaction or triggering a landslide may not uniformly affect all areas within a SH Zone.

Liquefaction Hazard Zones are areas where there is a potential for, or an historic occurrence of liquefaction. Liquefaction is a soil phenomenon that can occur when loose, water saturated granular sediment within 40 feet of the ground surface, are shaken in a significant earthquake. The soil temporarily becomes liquid-like and structures may settle unevenly. The Public Record is intended to identify areas with a relatively high potential for liquefaction but not to predict the amount or direction of liquefaction-related ground displacement, nor the amount of damage caused by liquefaction. The many factors that control ground failure resulting from liquefaction must be evaluated on a site specific basis.

PUBLIC RECORD: Official seismic hazard maps or digital data thereof approved by the State Geologist and issued by the California Department of Conservation, California Geological Survey pursuant to California Public Resources Code §2696.

STATUTORY NATURAL HAZARD DISCLOSURE REPORTING STANDARD: "IN" shall be reported if any portion of the Property is located within any of the above zones as delineated in the Public Record. "NOT IN" shall be reported if no portion of the Property is located within any of the above zones as delineated in the Public Record. Map Not Available shall be reported in areas not yet evaluated by the governing agency according to the Public Record. Please note that "MAP NOT AVAILABLE" will be applicable to most portions of the state. Official Seismic Hazard Zone ("SH Zone") maps delineate Areas of Potential Liquefaction and Areas of Earthquake-Induced Landsliding.

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Part 2. County and City Defined Natural Hazard Zones

HAZARD MAPS IN THE LOCAL GENERAL PLAN

General Plan regulates property development. There are currently over 530 incorporated cities and counties in California. The state Government Code (Sections 65000 et seq.) requires each of those jurisdictions to adopt a comprehensive, long-term "General Plan" for its physical development. That General Plan regulates land uses within the local jurisdiction in order to protect the public from hazards in the environment and conserve local natural resources. The General Plan is the official city or county policy regarding the location of housing, business, industry, roads, parks, and other land uses.

Municipal hazard zones can affect the cost of ownership. Each county and city adopts its own distinct General Plan according to that jurisdiction's unique vegetation, landscape, terrain, and other geographic and geologic conditions. The "Safety Element" (or Seismic Safety Element) of that General Plan identifies the constraints of earthquake fault, landslide, flood, fire and other natural hazards on local land use, and it delineates hazard zones within which private property improvements may be regulated through the building-permit approval process, which can affect the future cost of ownership. Those locally regulated hazard zones are in addition to the federal and state defined hazard zones associated with statutory disclosures in the preceding section.

City and/or County natural hazard zones explained below. Unless otherwise specified, only those officially adopted Safety Element or Seismic Safety Element maps (or digital data thereof) which are publicly available, are of a scale, resolution, and quality that readily enable parcel-specific hazard determinations, and are consistent in character with those statutory federal or state disclosures will be considered for eligible for use as the basis for county- or city-level disclosures set forth in this Report. Please also note:

- If an officially adopted Safety Element or Seismic Safety Element map relies on data which is redundant of that used for state-level disclosures, this Report will indicate so and advise Report recipients to refer to the state-level hazard discussion section for more information.
- If an officially adopted Safety Element or Seismic Safety Element cites underlying maps created by another agency, those maps may be regarded as incorporated by reference and may be used as the basis for parcel-specific determinations if those maps meet the criteria set forth in this section.
- Because county- and city-level maps are developed independently and do not necessarily define or delineate a given hazard the same way, the boundaries for the "same" hazard may be different.

If one or more maps contained in the Safety Element and/or Seismic Safety Element of an officially adopted General Plan are used as the basis for local disclosure, those maps will appear under the "Public Record(s) Searched" for that county or city.

REPORTING STANDARDS

A good faith effort has been made to disclose all hazard features on pertinent Safety Element and Seismic Safety Element maps with well-defined boundaries; however, those hazards with boundaries that are not delineated will be deemed not suitable for parcel-specific hazard determinations. Some map features, such as lines drawn to represent the location of a fault trace, may be buffered to create a zone to facilitate disclosure. Those map features which can not be readily distinguished from those representing hazards may be included to prevent an omission of a hazard feature. If the width of a hazard zone boundary is in question, "IN" will be reported if that boundary impacts any portion of a property. Further explanations concerning specific map features peculiar to a given county or city will appear under the "Reporting Standards" for that jurisdiction.

PUBLIC RECORDS VS. ON-SITE EVALUATIONS

Mapped hazard zones represent evaluations of generalized hazard information. Any specific site within a mapped zone could be at less or more relative risk than is indicated by the zone designation. A site-specific evaluation conducted by a geotechnical consultant or other qualified professional may provide more detailed and definitive information about the Property and any conditions which may or do affect it.

PROPERTY USE AND PERMITTING

No maps beyond those identified as "Public Record(s)" have been consulted for the purpose of these local disclosures. These disclosures are intended solely to make Report recipient(s) aware of the presence of mapped hazards. For this reason -- and because local authorities may use on these or additional maps or data differently to determine property-specific land use and permitting approvals -- Report recipients are advised to contact the appropriate local agency, usually Community Development, Planning, and/or Building, prior to the transaction to ascertain if these or any other conditions or related regulations may impact the Property use or improvement.

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ALAMEDA COUNTY GEOLOGIC DISCUSSION

PUBLIC RECORD(S) SEARCHED: The following Public Records, contained in the Safety Element of the Alameda County General Plan as officially adopted in January 2013, are used for the county-level disclosure(s) below: "S-1: Faults"; "S-2: Liquefaction Risk"; "S-3: Tsunami Risks"; "S-4: Landslide Risks"; and "S-5: Fire Hazards". Important Note: Maps contained in the Safety Element only depict specified hazards within unincorporated portions of Alameda County; however, the cited source data specified in each Safety Element exhibit depicts the location of these same hazards in both incorporated and unincorporated areas of Alameda County. As such, the hazard as depicted in the underlying source data for each hazard depicted in the Public Record shall be used for reporting purposes.

FAULT

Alameda County has been subject to numerous seismic events, originating both on faults within and beyond the County. Six major Bay Area earthquakes have occurred since 1800 that have affected the County, and at least two of the faults that produced them run through or into the County. These earthquakes and the originating faults include the 1836 and 1868 earthquakes on the Hayward-Rogers Creek fault, and the 1861 earthquake on the Calaveras fault. Three earthquakes, in 1838, 1906 and 1989 originated on the San Andreas fault, west of the County near San Francisco or to the south. The Working Group of California Earthquake Probabilities has determined that earthquakes of equally destructive forces are a certainty within the region. According to their findings, the Hayward-Rodgers Creek fault system is estimated to have a probability of 31% of producing an earthquake of a magnitude of 6.7 or higher within the next 30 years, this probability is the highest of the Bay Area faults. Faults that have been active during the Holocene period, approximately the last 11,000 years, are considered to be active faults, and those faults that have been active during the Quaternary period, approximately the last 1.8 million years, are considered to be potentially active faults. This serves to differentiate faults for which sufficient evidence of recent activity has been noted to explicitly include them as known geologic hazards, distinct from those faults for which recent displacement is known or suspected, and whose latest activity has not been determined, but may have been within approximately the last 11,000 years. In addition to faults that have been classified as active or potentially active, there are others whose activity has not been clearly established by presently available information. The Public Record identifies the location of active and potentially active faults within the County. Other active faults within the unincorporated areas include the Calaveras, Greenville, and Las Positas faults, as well as several potentially active faults and unnamed secondary faults adjacent to these faults. There are few or no studies pertaining to these additional secondary faults; therefore it is unknown if these faults may or may not experience secondary ground rupture during a large earthquake.

Reporting Standards: California's Alquist-Priolo Fault Zone Act (1972) established a standard for the width of a regulatory fault zone -- one-eighth of one mile on both sides of an active fault trace. For county-level reporting purposes, "WITHIN" shall be reported if any portion of the Property is within one-eighth of one mile (660 feet) of a "Fault" as delineated in the Public Record that is not bounded by a regulatory fault zone. "NOT WITHIN" shall be reported if no portion of the Property is situated within one-eighth of one mile of a "Fault" delineated in the Public Record.

LANDSLIDE

Landslides and slope instability are generally caused by earthquakes, weak materials, stream and coastal erosion, and heavy rainfall. The rate of landsliding is affected by the type and extent of vegetation, the slope angle, the degree of water saturation, the strength of the rocks, and the mass and thickness of the deposit. Certain human activities also tend to make earth materials less stable and increase the chance of ground failure. Activities contributing to instability include extensive irrigation, poor drainage or ground-water withdrawal, removal of stabilizing vegetation and over-steepening of slopes by undercutting them or overloading them with artificial fill. The causes of failure, which normally produce landslides and differential settlement, are augmented during earthquakes. As a result of these potential risks, construction on slopes steeper than about 15 percent typically requires special grading, special foundation design, or site modification to mitigate slope ground conditions and reduce the potential for slope instability. Threats to structures would be greatest in areas that are close to natural channels or are situated on potentially unstable slopes. The Public Record depicts "landslide deposits larger than 200 feet" as well as "landslide deposits larger than 200 feet (identification uncertain)". According to the Safety Element, site-specific geologic hazard assessments, conducted by a licensed geologist, shall be completed prior to development approval in areas with landslide hazards as indicated in the Public Record.

Reporting Standards: For county-level reporting purposes, "IN" shall be reported if any portion of the Property is located within an area mapped as a "landslide deposit larger than 200 feet" or a "landslide deposit larger than 200 feet (identification uncertain)" as delineated in the Public Record. "NOT IN" shall be reported if no portion of the Property is located within an area mapped as a "landslide deposit larger than 200 feet" or a "landslide deposit larger than 200 feet (identification uncertain)" as delineated in the Public Record.

LIQUEFACTION

Liquefaction is the rapid transformation of saturated, loose, fine-grained sediment to a fluidlike state and is typically caused by strong ground shaking during an earthquake. Liquefaction can result in substantial loss of life, injury, and damage to property. In addition, liquefaction increases the hazard of fires because of explosions induced when underground gas lines break, and because the breakage of water mains substantially reduces fire suppression capability. The potential for liquefaction to occur depends on both the susceptibility of near-surface deposits to liquefaction, and the likelihood that ground motions will exceed

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a specified threshold level. Because many portions of the Planning Area are situated in the vicinity of an active fault, the immediate area surrounding the earthquake epicenter will be exposed to strong ground shaking should a large earthquake occur. Areas most susceptible to liquefaction are underlain by loose granular sediments and low-lying lands adjacent to creeks and estuaries. According to the Safety Element, site-specific geologic hazard assessments, conducted by a licensed geologist, shall be completed prior to development approval in areas with liquefaction hazards as indicated in the Public Record.

Reporting Standards: For county-level reporting purposes, "IN" shall be reported as will the more/most severe "Liquefaction" rating ("Very High", "High", "Moderate", "Low" or "Very Low") affecting any portion of the Property as delineated in the Public Record.

TSUNAMI

A major hazard associated with earthquakes is water inundation resulting from a tsunami or seiche. Tsunamis are a series of waves typically produced by an offshore earthquake, volcanic eruption, or landslide. A tsunami with a wave height of 20 feet at the Golden Gate Bridge, which is likely to occur approximately once every 200 years, would result in a runup of less than 10 feet above sea level on lands surrounding the San Francisco Bay. Some areas of San Lorenzo may be subject to flooding if a tsunami were to occur.

Reporting Standards: For county-level reporting purposes, "IN" shall be reported if any portion of the Property is located within a mapped "Tsunami Inundation Area" as delineated in the Public Record. "NOT IN" shall be reported if no portion of the Property is located within a mapped "Tsunami Inundation Area" as delineated in the Public Record.

FIRE

Fire hazards exist in both developed and undeveloped areas. Those occurring in developed areas typically include buildings, rubbish, automobiles, and grass fires on vacant lots. Those in undeveloped areas often include large brush and grass fires. Alameda County is subject to the threat from urban fires, and especially wildland fires, due to its hilly terrain, weather conditions, and the nature of its plant coverage. Due to the intensity of development, the number of the potentially affected populations, and the difficulties of containment, the County must also devote major resources to controlling potential fire hazards in its urban areas. In order to quantify this potential risk, California Department of Forestry (CDF) has developed a Fire Hazard Severity Scale which utilizes three criteria in order to evaluate and designate potential fire hazards in wildland areas. The criteria are fuel loading (vegetation), fire weather (winds, temperatures, humidity levels and fuel moisture contents) and topography (degree of slope).

Reporting Standards: For county-level reporting purposes, "IN" shall be reported as will the more/most severe "Fire Hazard Severity Zones in SRA" rating ("Very High", "High", or "Moderate") affecting any portion of the Property as delineated in the Public Record. "NOT IN" shall be reported if no portion of the Property is located within one or more of the "Fire Hazard Severity Zones in SRA" as delineated in the Public Record.

OTHER HAZARDS

The "Fire Hazard Severity Zones in LRA" depicted in "S-5: Fire Hazards" are redundant of, or less extensive than, the those current as of the adoption date of the County General Plan and are already subject to statutory disclosure. For more information please refer to the state-level discussion Very High Fire Hazard Severity Zones in the preceding section of this Report. The "Flood Plains" depicted in "S-6: Flood Hazards" are redundant of FEMA DFIRM data effective August 3, 2009 but do not include subsequent updates. For the most current FEMA Flood zone information subject to statutory disclosure please refer to the state-level discussion Special Flood Hazard Areas in the preceding section of this Report. The "Dam Failure Inundation Areas" depicted in "S-7: Dam Inundation" has inundation boundaries redundant of those already subject to statutory disclosure based on maps issued by the California Emergency Management Agency/Office of Emergency Services. For more information please refer to the state-level discussion Area of Potential Flooding (Dam Inundation) in the preceding section of this Report.

The following natural hazards are discussed at length but not mapped in the County Safety Element:

GROUND SHAKING

Ground shaking is the source of the most widespread earthquake damage. An earthquake produces seismic waves that emanate in all directions from the fault rupture surface. The seismic waves cause strong ground shaking, which typically is strongest near the fault and diminishes as the waves move through the earth away from the fault. The severity of ground shaking at a particular site is controlled by the interaction of several factors, including the distance from the earthquake source; earthquake magnitude; the directivity (focusing of earthquake energy along the fault axis rather than perpendicular to the fault); and condition of underlying geologic materials (bedrock, sediment, soils, and man-made fill). Research occurring after the 1989 Loma Prieta earthquake has shown that areas underlain by unconsolidated, or man-made fill may amplify the strength and duration of strong ground motions, increasing the risk of damage. These findings are consistent with earlier evidence suggesting that structures placed on man-made fill are especially susceptible to earthquake hazards. Strong ground shaking caused by fault movement during an earthquake has the potential to result in significant loss of life and property damage throughout the Planning Area. Maximum ground shaking would be expected to result from a large earthquake on one of the nearby active faults, although strong ground shaking may also occur as a result of moderate or large earthquakes on other faults in the San Francisco Bay region.

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Reporting Standards: No determination is reported because the Public Record does not include a map which delineates the boundaries for this hazard within Alameda County.

SURFACE RUPTURE

Surface fault rupture occurs when a movement on a fault deep within the earth breaks through the surface causing ground displacement. Ground rupture occurs along fault lines, and is normally limited to a fairly narrow zone along the trend of the primary fault, and to a lesser degree along secondary faults. The Alquist-Priolo Fault Zoning Act was developed by the State of California to regulate development occurring near active faults and to mitigate the risks associated with surface rupture.

Reporting Standards: No determination is reported because the Public Record does not include a map which delineates the boundaries for this hazard within Alameda County.

SEICHE

A seiche is a long wave set up on an enclosed body of water such as a lake or reservoir that can travel back and forth at regular periods determined by the depth and size of the water body and which can cause shoreline inundation. Seiches are usually caused by unusual tides, winds or currents, but may also be triggered by earthquake ground motion. The largest seiche wave ever measured in the San Francisco Bay, following the 1906 earthquake, was four inches high. Despite this occurrence, the Bay Area has not been adversely affected by seiches during its history within this seismically active region of California. While damage caused by a seiche has not been reported since the 1906 earthquake, the various lakes and reservoirs within the unincorporated areas may be at risk of a seiche in the event of an earthquake.

Reporting Standards: No determination is reported because the Public Record does not include a map which delineates the boundaries for this hazard within Alameda County.

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CITY-LEVEL GEOLOGIC AND SEISMIC ZONES DISCUSSION

This Report reviews the officially adopted geologic hazard maps in the Safety Element that each city in California is required to include in its General Plan. The city the subject Property is located in has either not officially adopted hazard zonation maps in its General Plan at an appropriate scale to delineate where hazards may exist on a single parcel basis or will not make such maps available outside city offices. However, all Parties should be California is "earthquake country." Faults that may exist in this city or in neighboring regions could cause earthquake shaking or other fault related-phenomena on the Property. Other geologic hazards such as, but not limited to liquefaction (a type of soil settling that can occur when loose, water-saturated sediments are shaken significantly in an earthquake) may occur in certain valley floor areas and landslides are a possibility in any hillside area. Such potential natural hazards may exist and be delineated on other sources used by the city in its Planning, Engineering, or Building Departments. Such potential sources are not reviewed in this Report.

END OF LOCAL AREA DISCLOSURES AND DISCUSSIONS SECTION

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Part 3. Additional Property Specific Disclosures

FORMER MILITARY ORDNANCE SITE DISCLOSURE

DISCUSSION: Former Military Ordnance (FUD) sites can include sites with common industrial waste (such as fuels), ordnance or other warfare materiel, unsafe structures to be demolished, or debris for removal. California Civil Code Section 1102 requires disclosure of those sites containing unexploded ordnance. "Military ordnance" is any kind of munitions, explosive device/material or chemical agent used in military weapons. Unexploded ordnance are munitions that did not detonate. NOTE: **MOST** FUD sites do not contain unexploded ordnance. Only those FUD sites that the U.S. Army Corps of Engineers (USACE) has identified to contain Military Ordnance or have mitigation projects planned for them are disclosed in this Report. Additional sites may be added as military installations are released under the Federal Base Realignment and Closure (BRAC) Act. Active military sites are NOT included on the FUD site list.

PUBLIC RECORD: Data contained in Inventory Project Reports, Archives Search Reports, and related materials produced for, and made publicly available in conjunction with, the Defense Environmental Restoration Program for Formerly Used Defense Sites by the U.S. Army Corps of Engineers. Sites for which no map has been made publicly available shall not be disclosed.

REPORTING STANDARD: If one or more facility identified in the Public Record is situated within a one (1) mile radius of the Property, "**WITHIN**" shall be reported. The name of that facility or facilities shall also be reported.

COMMERCIAL OR INDUSTRIAL ZONING DISCLOSURE

DISCUSSION: The seller of real property who has actual knowledge that the property is affected by or zoned to allow commercial or industrial use described in Section 731a of the Code of Civil Procedure shall give written notice of that knowledge to purchasers as soon as practicable before transfer of title (California Civil Code Section 1102.17). The Code of Civil Procedure Section 731a defines industrial use as areas in which a city and/or county has established zones or districts under authority of law wherein certain manufacturing or commercial or airport uses are expressly permitted. The "Zoning Disclosure" made in this Report DOES NOT purport to determine whether the subject property is or is not affected by a commercial or industrial zone. As stated above, that determination is based solely upon ACTUAL KNOWLEDGE of the seller of the subject property.

In an effort to help determine areas where this may be applicable, this disclosure identifies if a property exists within one mile of the seller's property that is zoned to allow for commercial or industrial use. Very commonly, a home will have in its vicinity one or more properties that are zoned for commercial or industrial use such as restaurants, gasoline stations, convenience stores, golf courses, country club etc.

PUBLIC RECORD: Based on publicly-available hardcopy and/or digital zoning and land use records for California cities and counties.

REPORTING STANDARD: If one or more property identified in the Public Record as "commercial," "industrial," or "mixed use" is situated within a one (1) mile radius of the Property, "**WITHIN**" shall be reported. Please note that an airport facility that may be classified as public use facility in the Public Record will be reported as "commercial/industrial" in this disclosure.

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AIRPORT INFLUENCE AREA DISCLOSURE

DISCUSSION:

Certain airports are not disclosed in this Report. JCP-LGS has made a good faith effort to identify the airports covered under Section 1102.6a. Sources consulted include official land use maps and/or digital data made available by a governing Airport Land Use Commission (ALUC) or other designated government body. Most facilities for which an Airport Influence Area has been designated are included on the "California Airports List" maintained by the California Department of Transportation's Division of Aeronautics. Not disclosed in this Report are public use airports that are not in the "California Airports List", airports that are physically located outside California, heliports and seaplane bases that do not have regularly scheduled commercial service, and private airports or military air facilities unless specifically identified in the "California Airports List". **If the seller has actual knowledge of an airport in the vicinity of the subject property that is not disclosed in this Report, and that is material to the transaction, the seller should disclose this actual knowledge in writing to the buyer.**

Most facilities for which an Airport Influence Area has been designated are included on the "California Airports List" maintained by the California Department of Transportation's Division of Aeronautics. The inclusion of military and private airports varies by County, and heliports and seaplane bases are not included, therefore, airports in these categories may or may not be included in this disclosure.

NOTE: Proximity to an airport does not necessarily mean that the property is exposed to significant aviation noise levels. Alternatively, there may be properties exposed to aviation noise that are greater than two miles from an airport. Factors that affect the level of aviation noise include weather, aircraft type and size, frequency of aircraft operations, airport layout, flight patterns or nighttime operations. Buyer should be aware that aviation noise levels can vary seasonally or change if airport usage changes.

PUBLIC RECORD: Based on officially adopted land use maps and/or digital data made publicly available by the governing ALUC or other designated government body. If the ALUC or other designated government body has not made publicly available a current officially adopted airport influence area map, then California law states that "a written disclosure of an airport within two (2) statute miles shall be deemed to satisfy any city or county requirements for the disclosure of airports in connection with transfers of real property."

REPORTING STANDARD: "IN" shall be reported along with the facility name(s) and the "Notice of Airport in Vicinity" if any portion of the Property is situated within either (a) an Airport Influence Area as designated on officially adopted maps or digital data or (b) a two (2) mile radius of a qualifying facility for which an official Airport Influence Area map or digital data has not been made publicly available by the ALUC or other designated governing body. "NOT IN" shall be reported if no portion of the Property is within either area.

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AIRPORT NOISE DISCLOSURE

DISCUSSION: California Civil Code §1102.17 requires the seller(s) of residential real property who has/have actual knowledge that the property in the transaction is affected by airport use must give written notice of that knowledge, as soon as practicable, before transfer of title.

Under the Federal Aviation Administration's *Airport Noise Compatibility Planning Program Part 150*, certain 65 decibel (dB) Community Noise Equivalent Level (CNEL) contour maps have been produced for some airports. Not all airports have produced noise exposure maps. A property may be near or at some distance from an airport and not be within a delineated noise exposure area, but still experience aviation noise. Unless 65dB CNEL contour maps are published, helipads and military sites are not included in this section of the Report.

The *Airport Noise Compatibility Planning Program* is voluntary and not all airports have elected to participate. Furthermore, not all property in the vicinity of an airport is exposed to 65dB CNEL or greater average aviation noise levels. Conversely a property may be at some distance from an airport and still experience aviation noise. Buyer should be aware that aviation noise levels can vary seasonally or change if airport usage changes after a map is published or after the Report Date. JCP-LGS uses the most seasonally conservative noise exposures provided.

Federal funding may be available to help airports implement noise reduction programs. Such programs vary and may include purchasing properties, rezoning, and insulating homes for sound within 65dB areas delineated on CNEL maps. Airport owners have also cooperated by imposing airport use restrictions that include curfews, modifying flight paths, and aircraft limitations.

PUBLIC RECORD: Certain 65 decibel (dB) Community Noise Equivalent Level (CNEL) contour maps produced under the Federal Aviation Administration's *Airport Noise Compatibility Planning Program Part 150*.

REPORTING STANDARD: "IN" shall be reported if any portion of the Property is situated within a 65 decibel Community Noise Equivalent Level contour identified in the Public Record. "NOT IN" shall be reported if no portion of the Property is situated within a 65 decibel Community Noise Equivalent Level contour identified in the Public Record.

**JCP-LGS Residential Property Disclosure Reports
Natural Hazard Disclosure (NHD) Report
For ALAMEDA County**

Property Address: 2350 5TH ST
ALAMEDA, ALAMEDA COUNTY, CA 94501
("Property")

APN: 074-1356-023
Report Date: 12/27/2018
Report Number: 2406752

**SAN FRANCISCO BAY CONSERVATION AND DEVELOPMENT
COMMISSION DISCLOSURE**

DISCUSSION: As of July 1, 2005, Civil Code §1103.4 mandates disclosure to buyers of certain real estate if the boundary of the property is determined to be (1) within 100 feet of the San Francisco Bay shoreline as mapped in 1997 by the National Ocean Survey (NOS), an agency of the National Oceanographic and Atmospheric Administration (NOAA); or (2) within another mapped zone established by the Bay Conservation and Development Commission (BCDC). The BCDC has regulatory jurisdiction within 100 feet inland from the point of "mean higher high water" as mapped by the NOS, and within other zones the agency has defined along the San Francisco Bay margin (BCDC Memo entitled "Guidance on Determining Commission Jurisdiction Pursuant to Senate Bill 1568").

Notice is required to prevent unknowing violations of the law by new owners who were unaware that certain activities on the real property are subject to the BCDC's permit requirements. The BCDC notes that the Bay is a highly dynamic environment and the shoreline changes over time (see Discussion below). In addition, there is inherent uncertainty in the shoreline position as mapped by the NOS or any agency. The BCDC advises the buyer and other interested parties to contact its office if a more authoritative jurisdictional determination is desired. The BCDC office is located at 50 California Street, Suite 2600, San Francisco, California 94111, and can be reached at (415) 352-3600, or by email to info@bcdc.ca.gov

The BCDC has issued maps for some parts of its jurisdiction, including the San Francisco Bay Plan maps (California Code of Regulations, Title 14, Section 10121) and the Suisun Marsh Plan maps (Nejedly-Bagley-Z'berg Suisun Marsh Preservation Act of 1974). Official maps have not been issued for other parts of the BCDC jurisdiction (McAteer-Petris Act areas) because the Bay is a highly dynamic environment and the shoreline changes over time (in part because the sea level also changes over time). In those areas where official BCDC maps are not available or along the edges of the BCDC's mapped jurisdiction, to meet the disclosure requirements, this Report will indicate that the property "could be within" the BCDC's jurisdiction and that a location-specific jurisdictional determination should be made by consulting the BCDC. This determination of "could be within" the BCDC's jurisdiction was recommended by the BCDC in that certain Memo entitled "Guidance on Determining Commission Jurisdiction Pursuant to Senate Bill 1568" issued in February 2005 and posted on the BCDC website.

PUBLIC RECORDS: San Francisco Bay Plan maps (California Code of Regulations, Title 14, Section 10121) and the Suisun Marsh Plan maps (Nejedly-Bagley-Z'berg Suisun Marsh Preservation Act of 1974) made publicly available by BCDC and that certain Memo entitled "Guidance on Determining Commission Jurisdiction Pursuant to Senate Bill 1568" issued by BCDC in February 2005 and posted on the BCDC website ("BCDC Memo").

REPORTING STANDARD: "WITHIN" shall be reported if any portion of the Property is situated within an areas mapped by BCDC or is within the 100-foot shoreline band. "COULD BE WITHIN" shall be reported if any portion of the Property is situated within one-quarter (1/4) mile of either an area mapped by BCDC or the 100-foot shoreline band. "NOT WITHIN" shall be reported if no portion of the Property is situated within an area that would otherwise be reported as either "WITHIN" or "COULD BE WITHIN".

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CALIFORNIA ENERGY COMMISSION DUCT SEALING & TESTING REQUIREMENT

DISCUSSION: According to the California Energy Commission ("CEC") most California homes have improperly sealed central air conditioning and heating system ducts such that approximately 30 percent of the conditioned air actually leaks outside the home.

Effective July 1, 2014, in order to combat this waste of energy and money, the CEC updated its residential duct sealing and testing requirements in the 2013 Building Energy Efficiency Standards (Title 24). Previously, such duct sealing and testing was required only in certain CEC-designated climate zones when a central air conditioner or furnace is installed or replaced. **The revised standards now make duct sealing and testing mandatory in all California climate zones when such a system is installed or replaced.** Ducts found to leak more than 15 percent or more must be repaired. Once a contractor tests and fixes these ducts, you must have an approved third-party verifier determine that the ducts have been properly sealed. The CEC cautions homeowners that a contractor who fails to obtain a required building permit and fails to test and repair your ducts "is violating the law and exposing you to additional costs and liability." If you do not obtain a permit, you may be required to bring your home into compliance with code requirements for that work and may incur additional penalties and fines that have to be paid prior to selling your home. Remember that you have a duty to disclose whether you obtained required permits for work performed to prospective Buyers and appraisers. Local governments may mandate more stringent requirements.

Please note there are specific alternatives that allow high efficiency equipment and added duct insulation to be installed instead of fixing duct leaks. Please also be advised that there are separate regulations which govern duct insulation levels required by climate zone and HVAC system.

For more information please contact the California Energy Commission or visit the official CEC "2013 Building Energy Efficiency Standards" portal at: <http://www.energy.ca.gov/title24/2013standards/index.html>

PUBLIC RECORD: 2013 Building Energy Efficiency Standards (Title 24).

REPORTING STANDARD: "WITHIN" shall be reported regardless of CEC-designated climate zone pursuant to the revised Title 24 Standards.

COOLING AND HEATING ENERGY-EFFICIENCY ADVISORY

Effective January 1, 2015, new federal energy-efficiency standards apply to the repair and replacement of residential heating, ventilation and air conditioning ("HVAC") systems. The new standards raise the minimum efficiency requirements for air conditioning systems and certain types of heating systems. Energy efficiency is measured by the Seasonal Energy Efficiency Ratio ("SEER"), which compares the amount of cooling (or heating) output by an HVAC system to the amount of energy (electricity or gas) input over its operating season. The higher the system's SEER value, the more energy-efficient it is and the lower the unit cost of cooling (or heating) a home.

For the first time, federal minimum-efficiency standards will vary by region. Prior to 2015 one standard, called SEER 13, applied nationwide. Now, in California, Nevada, Arizona and New Mexico (the Southwestern Region), SEER 13 has been replaced by the more efficient SEER 14 standard. In the Southwestern Region the new rule allows repairs to existing SEER 13-compliant systems. However, in many cases a full system replacement (both the indoor and outdoor unit) will be necessary to make the system compatible, and replacement is allowed only with a SEER 14-compliant unit. The higher standard may increase the replacement cost to the property owner because the SEER 14 efficiency improvements require increased complexity of the new equipment, and the SEER 14 units may not fit in the existing space, requiring structural modifications at the owner's expense. In some cases the SEER 14 standard could double the cost of replacement over the earlier replacement cost. For applicable details and codes, see the California Energy Commission web page at: http://www.energy.ca.gov/title24/2013standards/residential_manual.html (The new federal standards go into effect on January 1, 2015, which is six months after the July 1, 2014, effective date of the 2013 Standards.)

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STATEWIDE RIGHT TO FARM DISCLOSURE

DISCUSSION:

California has a "Right to Farm Act" (Civil Code Section 3482.5) to protect farming operations. When agricultural land within the State's agricultural areas is bought and sold, the purchasers are often not made aware of the fact that there are right-to-farm laws. This has led to confusion and a misunderstanding of the actual uses of the land or uses of the surrounding agricultural lands.

In 2008 the State of California enacted Assembly Bill 2881 to limit the exposure of farmers to nuisance lawsuits by homeowners in neighboring developments. The mechanism of this bill is a formal notification of the Buyer, through a "Notice of Right to Farm" in an expert disclosure report that advises the Buyer if the subject property is within one mile of farmland as defined in the bill.

If the seller has actual knowledge of an agricultural operation in the vicinity of the subject property that is not disclosed in this Report, and that is material to the transaction, the seller should disclose this actual knowledge in writing to the Buyer.

PUBLIC RECORD: Based on the most current available version of the "Important Farmland Map" issued by the California Department of Conservation, Division of Land Resource Protection, utilizing solely the county-level GIS map data, if any, available on the Division's Farmland Mapping and Monitoring Program website, pursuant to Section 11010 of the Business and Professions Code, and Section 1103.4 of the California Civil Code.

REPORTING STANDARD: "IN" shall be reported and the "Notice of Right to Farm" provided if any portion of the Property is situated within, or within one mile of, a parcel of real property designated as "Prime Farmland," "Farmland of Statewide Importance," "Unique Farmland," "Farmland of Local Importance," or "Grazing Land" in the public record. "NOT IN" shall be reported if no portion of the Property is within that area.

Some counties, or parts thereof, are not included in the Public Record because they have not been mapped for farmland parcels under this State program. Typically, this is because the county area is public land and not planned for incorporation, or, in the case of San Francisco, the county is entirely incorporated. In those instances, we report "Map Not Available" above, or "Map N/A" in the table of summary determinations at the beginning of this Report.

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NOTICE OF MINING OPERATIONS DISCLOSURE

If the Property has been determined to be located within one (1) mile of a reported mining operation(s), the following notice is provided as mandated by California law:

NOTICE OF MINING OPERATIONS

This property is located within one mile of a mine operation for which the mine owner or operator has reported mine location data to the Department of Conservation pursuant to Section 2207 of the Public Resources Code. Accordingly, the property may be subject to inconveniences resulting from mining operations. You may wish to consider the impacts of these practices before you complete your transaction.

DISCUSSION: Historically mining operations have been located in remote areas. However, increasing urbanization has resulted in some residential projects being developed near existing mining operations.

California Public Resources Code §2207 requires owners and operators of mining operations to provide annually specific information to the California Department of Conservation ("DOC"), including but not limited to, (i) ownership and contact information, and (ii) the latitude, longitude, and approximate boundaries of the mining operation marked on a specific United States Geological Survey map. The Office of Mining Reclamation ("OMR") is a division of the DOC. Using the mandatory data specified above, OMR provides map coordinate data that can be used by GIS systems to create points representing mine locations ("OMR Maps"). For more information please visit OMR's Mines OnLine Map Viewer (<http://maps.conservation.ca.gov/mol/index.html>).

Effective January 1, 2012, California Civil Code §1103.4 requires the seller of residential property to disclose to a Buyer if the residential property is located with one (1) mile of mining operations as specified on OMR Maps.

Special Notes:

1. This statutory disclosure does not rely on the OMR's "AB 3098 List," a list of mines regulated under the Surface Mining and Reclamation Act of 1975 ("SMARA") that meet provisions set forth under California Public Resources Code §2717(b). The AB 3098 List does not include map coordinate data as required under California Public Resources Code §2207 and may not include all mining operations subject to the "Notice of Mining Operations" disclosure.

2. This "Notice of Mining Operations" disclosure is not satisfied by disclosing abandoned mines. An abandoned mine is NOT an operating mine. California Civil Code §1103.4 is satisfied only by disclosing based on OMR Maps.

PUBLIC RECORD: Mining operations as provided on OMR Maps made publicly available by DOC pursuant to California law.

REPORTING STANDARD: "IN" is reported if any portion of the Property is located within a one (1) mile radius of one or more mining operation(s) identified in the Public Record for which map coordinate data is provided. If "IN", the name of the mining operation(s) as it appears in the Public Record is also reported. "NOT IN" is reported if no portion of the Property is located within a one (1) mile radius of a mining operation specified on OMR Maps.

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Part 4. General Advisories

REGISTERED SEX OFFENDER DATABASE DISCLOSURE REQUIREMENT
("MEGAN'S LAW")

Notice: Pursuant to Section 290.46 of the Penal Code, information about specified registered sex offenders is made available to the public via an Internet Web site maintained by the Department of Justice at www.meganslaw.ca.gov. Depending on an offender's criminal history, this information will include either the address at which the offender resides or the community of residence and ZIP Code in which he or she resides.

DISCUSSION: California law (AB 488), signed by the Governor on September 24, 2004, provides the public with Internet access to detailed information on registered sex offenders. The Sex Offender Tracking Program of the California Department of Justice (DOJ) maintains the database of the locations of persons required to register pursuant to paragraph (1) of subdivision (a) of Section 290.46 of the Penal Code. The online database is updated with data provided by local sheriff and police agencies on an ongoing basis. It presents offender information in 13 languages; may be searched by a sex offender's specific name, zip code, or city/county; provides access to detailed personal profile information on each registrant; and includes a map of your neighborhood.

California Department of Justice Information Sources:

Megan's Law Sex Offender Locator Web Site: <http://www.meganslaw.ca.gov>

California Department of Justice Megan's Law Email Address: meganslaw@doj.ca.gov

Local Information Locations For The Property:

All sheriffs departments and every police department in jurisdictions with a population of 200,000 or more are required to make a CD-ROM available free to the public for viewing. Although not required, many other law enforcement departments in smaller jurisdictions make the CD-ROM available as well. Please call the local law enforcement department to investigate availability.

The following are the law enforcement departments in your county that are REQUIRED to make information available:

Alameda County Sheriff's Department	(510) 667-3190
Fremont Police Department	(510) 790-6860
Oakland Police Department	(510) 238-2188

Explanation and How to Obtain Information

For over 50 years, California has required certain sex offenders to register with their local law enforcement agencies. However, information on the whereabouts of the sex offenders was not available to the public until implementation of the Child Molester Identification Line in July 1995. The available information was expanded by California's "Megan's Law" in 1996 (Chapter 908, Stats. of 1996). Megan's Law provides certain information on the whereabouts of "serious" and "high-risk" sex offenders. The law specifically prohibits using the information to harass or commit any crime against the offender. The information on a registered sex offender includes: name and known aliases; age and sex; physical description, including scars, marks and tattoos; photograph, if available; crimes resulting in registration; county of residence; and zip code (from last registration). Accessing the online database requires agreement to the DOJ's terms of use on the web page.

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**GAS AND HAZARDOUS LIQUID TRANSMISSION PIPELINE
DATABASE DISCLOSURE REQUIREMENT**

DISCUSSION: Following a number of pipeline disasters in the U.S., such as the 2010 San Bruno explosion in Northern California, there is an increased awareness of the potential dangers associated with underground transmission pipelines. As a result, the California Legislature unanimously passed Assembly Bill 1511 (Bradford), signed by Governor Jerry Brown on July 13, 2012. This law, which becomes effective January 1, 2013, is chaptered as California Civil Code Section 2079.10.5 and mandates the disclosure of the following notice to Buyers:

**NOTICE REGARDING GAS AND HAZARDOUS LIQUID
TRANSMISSION PIPELINES**

This notice is being provided simply to inform you that information about the general location of gas and hazardous liquid transmission pipelines is available to the public via the National Pipeline Mapping System (NPMS) Internet Web site maintained by the United States Department of Transportation at <http://www.npms.phmsa.dot.gov/>. To seek further information about possible transmission pipelines near the property, you may contact your local gas utility or other pipeline operators in the area. Contact information for pipeline operators is searchable by ZIP Code and county on the NPMS Internet Web site. (California Civil Code Section 2079.10.5(a))

Civil Code Section 2079.10.5(c) adds, "Nothing in this section shall alter any existing duty under any other statute or decisional law imposed upon the seller or broker, including, but not limited to, the duties of a seller or broker under this article, or the duties of a seller or broker under Article 1.5 (commencing with Section 1102) of Chapter 2 of Title 4 of Part 4 of Division 2."

Such "existing duties" include the disclosure of actual knowledge about a potential hazard, such as may be created by the delivery of a letter from the local utility company informing the seller that a gas transmission pipeline exists within 2,000 feet of the Property.

Beginning on the law's January 1, 2013, effective date, except where such "existing duties" apply, "Upon delivery of the notice to the transferee of the real property, the seller or broker is not required to provide information in addition to that contained in the notice regarding gas and hazardous liquid transmission pipelines in subdivision (a). The information in the notice shall be deemed to be adequate to inform the transferee about the existence of a statewide database of the locations of gas and hazardous liquid transmission pipelines and information from the database regarding those locations." (California Civil Code Section 2079.10.5(b))

The disclosure of underground transmission pipelines helps the parties in a real estate transaction make an informed decision and is in the best interest of the public. Buyer should be aware that, according to the NPMS Internet Web site, gas and/or hazardous liquid transmission pipelines are known to exist in 49 of California's 58 counties, the exceptions being in rural mountainous parts of the state. Every home that utilizes natural gas is connected to a gas "distribution" pipeline, which is generally of smaller size and lower pressure than a transmission pipeline.

For More Information

To investigate whether any pipeline easement (right-of-way) exists on the Property, Buyer should review the Preliminary Title Report. Buyer should consult an attorney for interpretation of any law. This notice is for information purposes only and should not be construed as legal advice.

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METHAMPHETAMINE CONTAMINATED PROPERTY DISCLOSURE ADVISORY

DISCUSSION: According to the "Methamphetamine Contaminated Property Cleanup Act of 2005" a property owner must disclose in writing to a prospective buyer if local health officials have issued an order prohibiting the use or occupancy of a property contaminated by meth lab activity. The owner must also give a copy of the pending order to the buyer to acknowledge receipt in writing. Failure to comply with these requirements may subject an owner to, among other things, a civil penalty up to \$5,000. Aside from disclosure requirements, this new law also sets forth procedures for local authorities to deal with meth-contaminated properties, including the filing of a lien against a property until the owner cleans up the contamination or pays for the cleanup costs.

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MOLD ADVISORY

DISCUSSION: The Buyer is hereby advised that naturally occurring molds may exist both inside and outside of any home and may not be visible to casual inspection. Persons exposed to extensive mold levels can become sensitized and develop allergies to the mold or other health problems. Extensive mold growth can damage a structure and its contents. All prospective purchasers of residential and commercial property are advised to thoroughly inspect the Property for mold. Be sure to inspect the Property inside and out for sources of excess moisture, current water leaks and evidence of past water damage.

As part of a buyer's physical inspection of the condition of a property, the buyer should consider engaging an appropriate and qualified professional to inspect and test for the presence of harmful molds and to advise the buyer of any potential risk and options available. This advisory is not a disclosure of whether harmful mold conditions exist at a property or not. No testing or inspections of any kind have been performed by The Company. Any use of this form is acknowledgement and acceptance that The Company does not disclose, warrant or indemnify mold conditions at a property in any way and is not responsible in any way for mold conditions that may exist. Information is available from the California Department of Health Services Indoor Air Quality Section fact sheet entitled, "Mold in My Home: What Do I Do?" The fact sheet is available at <https://archive.cdph.ca.gov/programs/IAQ/Pages/IndoorMold.aspx> or by calling (510) 620-3620.

The Toxic Mold Protection Act of 2001 requires that information be developed regarding the potential issues surrounding naturally occurring molds within a home. Information was written by environmental authorities for inclusion in the *Residential Environmental Hazards: A Guide for Homeowners, Buyers, Landlords and Tenants* booklet developed by the California Environmental Protection Agency and the Department of Health Services. It is found in Chapter VII of that booklet, and includes references to sources for additional information.

For local assistance, contact your county or city Department of Health, Housing, or Environmental Health.

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RADON ADVISORY

DISCUSSION: For its Radon Advisory, JCP-LGS uses the updated assessment of radon exposure published in 1999 by the Lawrence Berkeley National Laboratory (LBNL) and Columbia University, under support from the U.S. Environmental Protection Agency (EPA), the National Science Foundation, and the US Department of Energy (published online at <http://www2.lbl.gov/Science-Articles/Archive/radon-risk-website.html>). Based on this recent assessment, JCP-LGS radon advisory is as follows:

All of California's 58 counties have a predicted median annual-average living-area concentration of radon below 2.0 pCi/L (picocuries per liter of indoor air) -- which is well below the EPA's guideline level of 4 pCi/L and equivalent to the lowest hazard zone (Zone 3) on the 1993 EPA Map of Radon Zones.

The "median concentration" means that half of the homes in a county are expected to be below this value and half to be above it. All houses contain some radon, and a few houses will contain much more than the median concentration. **The only way to accurately assess long-term exposure to radon in a specific house is through long-term testing (sampling the indoor air for a year or more). The EPA recommends that all homes be tested for radon.** Columbia University's "Radon Project" website offers help to homeowners in assessing the cost vs. benefit of testing a specific house for radon or modifying it for radon reduction (see <http://www.stat.columbia.edu/~radon/>).

NOTE: JCP-LGS does not use the EPA's 1993 map for advisory purposes because that map shows "short-term" radon exposure averaged by county. It was based on "screening measurements" that were intentionally designed to sample the worst-case conditions for indoor air in US homes--using spot checks (sampling for just a few days), in the poorest air quality (with sealed doors and windows), at the worst time of the year (winter), in the worst part of the house (the basement, if one was available). These short-term, winter, basement measurements are both biased and variable compared to long-term radon concentrations (averaged over a year) in the living area of a house. Long-term concentrations are a more accurate way to judge the long-term health risk from radon. For the above reasons, the EPA expressly disclaims the use of its 1993 map for determining whether any house should be tested for radon, and authorizes no other use of its map for property-specific purposes. For additional information about EPA guidelines and radon testing, see "Chapter VII--Radon", in the California Department of Real Estate's *Residential Environmental Hazards: A Guide for Homeowners, Homebuyers, Landlords and Tenants*.

ENDANGERED SPECIES ACT ADVISORY

DISCUSSION: The Federal Endangered Species Act of 1973 ("ESA"), as amended, requires that plant and animal species identified and classified ("listed") by the Federal government as "threatened" or "endangered" be protected under U.S. law. Areas of habitat considered essential to the conservation of a listed species may be designated as "critical habitat" and may require special management considerations or protection. All threatened and endangered species -- even if critical habitat is not designated for them -- are equally afforded the full range of protections available under the ESA.

In California alone, over 300 species of plants and animals have been designated under the ESA as threatened or endangered, and over 80 species have critical habitats designated for them. Most California counties are host to a dozen or more protected species and, in many cases, 10 or more species have designated critical habitats within a county.

ADVISORY: An awareness of threatened and endangered species and/or critical habitats is not reasonably expected to be within the actual knowledge of a seller.

No federal or state law or regulation requires a seller or seller's agent to disclose threatened or endangered species or critical habitats, or to otherwise investigate their possible existence on real property. Therefore, Buyer is advised that, prior to purchasing a vacant land parcel or other real property, Buyer should consider investigating the existence of threatened or endangered species, or designated critical habitats, on or in the vicinity of the Property which could affect the use of the Property or the success of any proposed (re)development.

FOR MORE INFORMATION: Complete and current information about the threatened and endangered species in California that are Federally listed in each county -- including all critical habitats designated there -- is available on the website of the U.S. Fish & Wildlife Service, the Federal authority which has enforcement responsibility for the ESA.

U.S. Fish & Wildlife Service Endangered Species Database (TESS)

http://ecos.fws.gov/tess_public/

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ABANDONED MINES ADVISORY

DISCUSSION: According to the California Department of Conservation, Office of Mine Reclamation, since the Gold Rush of 1849, tens of thousands of mines have been dug in California. Many were abandoned when they became unproductive or unprofitable. The result is that California's landscape contains many thousands of abandoned mines, which can pose health, safety, or environmental hazards on and around the mine property. Mines can present serious physical safety hazards, such as open shafts or adits (mine tunnel), and they may create the potential to contaminate surface water, groundwater, or air quality. Some abandoned mines are such massive problems as to earn a spot on the Federal Superfund environmental hazard list.

No California law requires the disclosure of abandoned mines in a real estate transaction, unless the existence of an abandoned mine is within the actual knowledge of the Seller and is deemed to be a fact material to the transaction.

The Office of Mine Reclamation (OMR) and the U.S. Geological Survey maintain a database of abandoned mines -- however, it is known to be incomplete and based on maps that are often decades out of date. Many mines are not mapped because they are on private land. The OMR warns that, **"Many old and abandoned mines are not recorded in electronic databases, and when they are, the information may not be detailed enough to accurately define, differentiate or locate the mine feature, such as a potentially hazardous vertical shaft or horizontal adit or mine waste."** (See reference below.)

Accordingly, this Report does not contain an abandoned mines disclosure from any government database or map or any other source, in order to protect the seller from liability for non-disclosure of unrecorded abandoned mines.

Parties concerned about the possible existence or impact of abandoned mines in the vicinity of the Property are advised to retain a State-licensed geotechnical consultant to study the site and issue a report. Other sources of information include, but are not limited to, the State Office of Mine Reclamation at (916) 323-9198 (website: <http://www.conservation.ca.gov/OMR>), and the Engineering, Planning or Building Departments in the subject City and County.

FOR MORE INFORMATION: For more information visit the State Office of Mine Reclamation's website at: http://www.conservation.ca.gov/omr/abandoned_mine_lands/Pages/index.aspx

OIL & GAS WELL ADVISORY

California is currently ranked fourth in the nation among oil producing states. Surface oil production is concentrated mainly in the Los Angeles Basin and Kern County, and in districts elsewhere in the state. In recent decades, real estate development has rapidly encroached into areas where oil production has occurred. Because the state's oil production has been in decline since the 1980's, thousands of oil and gas wells have been shut down or abandoned, and many of those wells are in areas where residential neighborhoods now exist.

According to the California Department of Conservation ("DOC"), to date, about 230,000 oil and gas wells have been drilled in California and around 105,000 are still in use. The majority of remaining wells have been sealed ("capped") under the supervision of the DOC's Division of Oil, Gas and Geothermal Resources. A smaller number have been abandoned and have no known responsible operator -- these are called "orphan" wells. The state has a special fund that pays the cost of safely capping orphan wells, however, that program is limited in its scope and progress.

Buyer should be aware that, while the DOC database is the most comprehensive source available for California oil and gas well information, the DOC makes no warranties that the database is absolutely complete, or that reported well locations are known with absolute accuracy.

For More Information

For a search of the state's databases of oil and gas wells and sites of known environmental contamination on or near the Property, please obtain the JCP-LGS Residential Environmental Report. For general information, visit the California Department of Conservation, Division of Oil, Gas, and Geothermal Resources at <http://www.consrv.ca.gov/dog>.

JCP-LGS Residential Property Disclosure Reports
Natural Hazard Disclosure (NHD) Report
For ALAMEDA County

Property Address: 2350 5TH ST
ALAMEDA, ALAMEDA COUNTY, CA 94501
("Property")

APN: 074-1356-023
Report Date: 12/27/2018
Report Number: 2406752

TSUNAMI MAP ADVISORY

DISCUSSION: The California Emergency Management Agency (CalEMA), the University of Southern California Tsunami Research Center (USC), and the California Geological Survey (CGS) have prepared maps that depict areas of maximum tsunami inundation for all populated areas at risk to tsunamis in California (20 coastal counties). The maps were publicly released in December 2009 with the stated purpose that the maps are to assist cities and counties in identifying their tsunami hazard and developing their coastal evacuation routes and emergency response plans only.

These maps specifically contain the following disclaimer:

Map Disclaimer: This tsunami inundation map was prepared to assist cities and counties in identifying their tsunami hazard. It is intended for local jurisdictional, coastal evacuation planning uses only. This map, and the information presented herein, **is not a legal document and does not meet disclosure requirements for real estate transactions nor for any other regulatory purpose.** The California Emergency Management Agency (CalEMA), the University of Southern California (USC), and the California Geological Survey (CGS) make no representation or warranties regarding the accuracy of this inundation map nor the data from which the map was derived. Neither the State of California nor USC shall be liable under any circumstances for any direct, indirect, special, incidental or consequential damages with respect to any claim by any user or any third party on account of or arising from the use of this map.

A tsunami is a series of ocean waves or surges most commonly caused by an earthquake beneath the sea floor. These maps show the maximum tsunami inundation line for each area expected from tsunamis generated by undersea earthquakes and landslides in the Pacific Ocean. Because tsunamis are rare events in the historical record, the maps provide no information about the probability of any tsunami affecting any area within a specific period of time.

Although these maps may not be used as a legal basis for real estate disclosure or any other regulatory purpose, the CGS has, however, provided diagrams of the maps online which the public can view. To see a maximum tsunami inundation map for a specific coastal community, or for additional information about the construction and/or intended use of the tsunami inundation maps, visit the websites below:

State of California Emergency Management Agency, Earthquake and Tsunami Program:
<http://myhazards.calema.ca.gov/>

University of Southern California -- Tsunami Research Center:
<http://www.usc.edu/dept/tsunamis/2005/index.php>

State of California Geological Survey Tsunami Information:
http://www.conservation.ca.gov/cgs/geologic_hazards/Tsunami/index.htm

National Oceanic and Atmospheric Agency Center for Tsunami Research (MOST model):
<http://nctr.pmel.noaa.gov/time/background/models.html>

**JCP-LGS Residential Property Disclosure Reports
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RESIDENTIAL FIREPLACE DISCLOSURE

Residential wood burning is the leading source of wintertime air pollution in the Bay Area and studies have confirmed there are significant health impacts from exposure to fine particulate matter found in wood smoke. The Bay Area Air Quality Management District ("BAAQMD") established the Wood Burning Devices (Wood Smoke Rule), Regulation 6, Rule 3 to reduce wintertime smoke pollution and protect public health. The Wood Smoke Rule requires anyone selling, renting or leasing a property in the Bay Area to disclose the potential health impacts from air pollution caused from burning wood. Fine particulate matter, also known as PM2.5, can travel deep into the respiratory system, bypass the lungs and enter the blood stream. Exposure may cause short term and long term health effects, including eye, nose and throat irritation, reduced lung function, asthma, heart attacks, chronic bronchitis, cancer and premature deaths. Exposure to fine particulates can worsen existing respiratory conditions. High PM2.5 levels are associated with increased respiratory and cardiovascular hospital admissions, emergency department visits, and even deaths. Children, the elderly and those with pre-existing respiratory or heart conditions are most at risk from negative health effects of PM2.5 exposure. The Buyer should consult with a licensed professional to inspect, properly maintain, and operate a wood burning stove or fireplace insert according to manufacturer's specifications to help reduce wood smoke pollution. The Air District encourages the use of cleaner and more efficient, non-wood burning heating options such as gas-fueled or electric fireplace inserts to help reduce emissions and exposure to fine particulates.

When the BAAQMD issues a Winter Spare the Air Alert during the winter season from November 1 through the end of February, it is illegal to burn wood, manufactured fire logs, pellets or any solid fuels in fireplaces, wood stoves or outdoor fire pits. To check when a Winter Spare the Air Alert is issued and it is illegal to burn wood, please call 1-877-4NO-BURN or visit www.baaqmd.gov or www.sparetheair.org.

END OF NATURAL HAZARD DISCLOSURE REPORT SECTION
See Terms and Conditions at end of this Report.

**Property Tax Disclosure Report
For ALAMEDA County**

Property Address: 2350 5TH ST
ALAMEDA, ALAMEDA COUNTY, CA 94501
("Property")

APN: 074-1356-023
Report Date: 12/27/2018
Report Number: 2406752

California Property Tax Disclosure Report

The parties for whom this Report was prepared are the owner ("Seller") of the Residential Property ("Property") on the Report Date, the buyer ("Buyer") of the Residential Property from Seller as of the Report Date, and their respective licensed real estate agents ("Agents"). Seller, Buyer and the Agents are sometimes referred to herein as "Party" or "Parties."

Part 1. Introduction and Summary

This Tax Report section discusses the results of an electronic search of specified government lists ("Databases") containing real property tax information and geographic data concerning the Residential Property. To understand the information provided, please read this entire Report.

Summary of Property Tax Determinations

The Residential Property:	IS	IS NOT	
A.		X	NOT SUBJECT TO a Mello-Roos Community Facilities District. 30
B.		X	NOT SUBJECT TO a 1915 Bond Act District. 30
C.		X	NOT SUBJECT TO other direct assessments. 31
D.		X	NOT SUBJECT TO the State Responsibility Area Fire Prevention Fee (SRA Fee is suspended until 2031 by Assembly Bill 398 of 2017). 35

Determined by First American Professional Real Estate Services, Inc.

THIS IS A DATABASE REPORT ONLY: The tax information in this Report only provides data derived from County Tax Assessor's and Treasure's Databases ("Databases") identified in this Report. While JCP-LGS has made good faith efforts to report from the Databases as accurately as possible, the quality, accuracy, and currency ("Database Date") of the information contained in these Databases can vary greatly. For more information regarding a specific Database, please read Part 2 of this Report. By use of this Report, transferee agrees this is a Report product and not an insurance policy and is subject to the Terms and Conditions attached hereto and incorporated herein.

This Report satisfies Seller's obligations to disclose (a) Mello-Roos and 1915 Act Bond Assessments applicable to the Residential Property as required by California Civil Code Section 1102.6b, and (b) Supplemental Taxes as required by California Civil Code Section 1102.6c.

**Property Tax Disclosure Report
For ALAMEDA County**

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Part 2. NOTICE OF SPECIAL TAX/ASSESSMENT

Special assessments, also referred to as direct or fixed assessments, are charges that are not based on the value of the property. These charges are levied to provide funding for services or improvements that directly benefit the property. Mello Roos Community Facility Districts and 1915 Bond Districts are also classified as special assessments. Certain special assessments may be subject to accelerated foreclosure if allowed to go delinquent.

TO THE PROSPECTIVE PURCHASER OF THE RESIDENTIAL PROPERTY AT THE ADDRESS REFERENCED ABOVE: THIS IS A NOTIFICATION TO BUYER PRIOR TO PURCHASING THE RESIDENTIAL PROPERTY.

A. Mello-Roos Community Facilities Districts

This Residential Property is NOT SUBJECT to Mello-Roos Community Facilities Districts.

Database Date: FY 2018-2019

B. 1915 Bond Act Assessment Districts

This Residential Property is NOT SUBJECT to 1915 Bond Assessment Districts.

Database Date: FY 2018-2019

C. Accelerated Foreclosure Information

Certain assessment or bond issues may contain accelerated foreclosure liens which have priority over other real property taxes and are a legal right included as part of the security for the obligation. The issuers of such bonds are often contractually required to monitor and collect delinquent assessments quickly. Accordingly these assessments are not subject to the five (5) year waiting period applicable to ad valorem real property taxes. If the real property is subject to such an assessment and the taxes are not paid promptly, the real property may be foreclosed upon and sold at public auction on an expedited basis. **Therefore, it is extremely important that the real property tax bill be paid on time to prevent the accelerated foreclosure.**

D. Notice of Property Assessed Clean Energy (PACE) Program

Property assessed clean energy (PACE) programs allow property owners to finance energy efficiency, water efficiency and renewable energy projects on residential and commercial structures through a voluntary special tax assessment on the property. PACE programs are offered by many city, county and regional planning agencies, and have repayment periods ranging from 5 to 20 years however some may be longer.

WHAT THIS MEANS: If a property owner voluntarily enters into a PACE program, a contractual assessment lien is placed on the property. The lien is repaid through installments collected on the property owner's secured county property tax bill. In certain situations the program administrator may bill the property owner directly. If the property is sold and the contractual assessment is not repaid in full, the new owner may be responsible for future assessments contributing towards repayment of the PACE contract.

DISCLOSURES AT RESALE: A PACE lien runs with the land. This means that the responsibility to repay the PACE lien may fall to the new owner upon transfer of the property unless the lien is paid off before closing. This fact may be material to a buyer's decision to purchase or price offered for the property. In addition, the buyer's lender may require the lien to be paid in full before closing (for certain federally backed mortgages, for example). Therefore, the property seller and his or her real estate agent may have a duty to disclose the existence of a PACE lien on the sale property.

The Property IS NOT SUBJECT to a PACE Program Contract documented in the county's Fiscal Year 2018-2019 property tax roll. To discover a PACE lien on the Property executed more recently, the buyer should read the preliminary title report and obtain and read all exceptions listed therein. Note that, in the title report, lien exceptions are named as recorded with the county; therefore, a PACE lien may be listed under a name that is not obvious.

E. Approved Assessment Districts Which Have Been Formed and Authorized But Are Not Yet Funded

Certain assessment districts may have been formed and authorized but have not yet been funded. Accordingly no assessment lien will appear in the County Assessor records. However, the information regarding such districts may appear on your preliminary report issued by a title company. If the assessment district has not been formed or funded, the improvements have also not been constructed. If the district is subsequently formed, the assessments may then appear on the property tax bill.

**Property Tax Disclosure Report
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Part 3. Current Property Tax Bill Summary

A. Summary of 2018-2019 Property Tax Bill

The following is a summary of Database information obtained from the ALAMEDA COUNTY Secured Property Tax Roll for Tax Year 2018-2019 ("Database Date"). This summary is provided for informational purposes only. The summary includes Ad Valorem taxes which are based on the property's Assessed Value as well as other Non- Ad Valorem Direct or Special Assessments. Upon transfer of ownership, the Assessed Value may be reset to the Current Market Value or Sale Price which may result in a substantial change in the Ad Valorem taxes assessed. Please see Parts 4 and 5 of this Report for more information regarding Ad Valorem taxes and Supplemental taxes.

Total Assessed Value: \$.01

Property is currently assessed as Unimproved Land. Additional Direct or Special Assessments may apply if developed.

1st Installment Due 11/01/2018 \$.00

2nd Installment Due 02/01/2019 \$.00

Total Annual Tax Liability \$.00

General Ad Valorem Taxes

AGENCY	DESCRIPTION	AMOUNT	CONTACT PHONE
ALAMEDA COUNTY	GENERAL AD VALOREM TAX (NO SECURE BILL DUE FOR FY 2018/2019)	\$0.00	(510) 272-6800
	TOTAL AD VALOREM TAXES	\$.00	

Direct and/or Special Assessments

AGENCY	DESCRIPTION	AMOUNT	CONTACT PHONE
	TOTAL DIRECT ASSESSMENTS	\$0.00	

B. Available Senior Citizen Exemptions

Certain districts that levy special taxes or assessments may offer exemptions to Senior Citizens. These exemptions can result in substantial savings to qualified tax payers. The filing of an application along with annual renewal may be required. Below is the contact information for requesting details on filing exemptions for districts that may offer a Senior Citizen Exemption. Additional Direct Assessment Districts may offer exemptions. Therefore you may want to contact the districts to determine their policy on Senior Citizen Exemptions.

No Senior Citizen Exemptions listed as of the most recent update from the County.
See Part 4B for additional information on other exemptions that may be available to Buyer.

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Part 4. Estimating Property Taxes After the Sale

Instantly calculate estimated property taxes and supplemental taxes on our website (or manually calculate them below):
<https://orderform.fanhd.com/Order/TaxCalcForm?guid=E532833B648240F99B20D3621D63A978>

A. Calculating Property Taxes After Sale (ESTIMATE ONLY)

PROPERTY TAX ESTIMATOR

The following calculation method is provided to assist Buyer in estimating the approximate amount of property tax charges that the Residential Property may be subject to for the upcoming tax year based on the assessed valuation being equal to the sales price. The amount derived is only an estimate and is not a substitute for a tax bill from the County, nor does it anticipate new property tax charges, fees or other changes in the property tax rates for future tax years.

1	Estimated Sales Price.....	• 1	\$	_____
2	Estimated Ad Valorem Tax Rate.....	• 2		0.0117000
3	Multiply line 1 by line 2. This is your Estimated Ad Valorem Tax.....	• 3	\$	_____
4	Direct Assessments including Mello Roos Special Taxes and 1915 Bond Act Assessments if applicable.....	• 4	\$	0.00
5	Add lines 3 and 4. Total Estimated Annual Tax Amount After Sale.....	• 5	\$	_____

The information in this subparagraph A is an estimate only. The purpose of this "ESTIMATOR" is to assist Buyer in planning for property taxes which will be applicable after the Sale Date. This "ESTIMATOR" requires the Buyer's projection of the purchase price of the Residential Property. Please note that potential exemptions and exclusions are not reflected in this estimate. Additionally, undeveloped or recently developed properties may be subject to additional Direct Assessments not included in this estimate. JCP-LGS is not responsible or liable for any losses, liabilities or damages resulting from use of this Property Tax Estimator.

B. Exemptions & Exclusions to Ad Valorem Taxes

California law provides certain exemptions from reassessments. The following is a list of common exemptions which may be available:

- Homeowner exemption (California Constitution Art XIII, §3 & R&T Code §218)
- Honorably discharged veterans (California Constitution Art XIII, §3 & R&T Code §205)
- Disabled veterans (California Constitution Art XIII, §4 & R&T Code §205)

California law also provides certain exclusions from reassessment. The following is a list of common exclusions which may be available:

- Persons over 55 years of age (R&T Code § 69.5)
- Severely and permanently disable persons (R&T Code § 69.5(a))
- Transfers between parents and children and grandparents and grandchildren (R&T Code § 63.1)
- Transfers into revocable trusts (R&T Code § 62)
- Interspousal transfers (R&T Code § 63)
- Improvements for seismic retrofitting (R&T Code § 74.5)
- Improvements for disabled access (R&T Code § 74.3)
- Replacement of property damaged or destroyed by disaster (R&T Code § 69)

In order to determine if Buyer may qualify for any exemptions or exclusions or to obtain a comprehensive list of available exemptions and exclusions, please contact the county tax assessor's office (510-272-3787) or visit the county website at <http://www.acgov.org/assessor/>. Additional information is also available on the website for the California Board of Equalization at www.boe.ca.gov

**Property Tax Disclosure Report
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Part 5. Supplemental Property Tax Information

A. General Information Regarding Supplemental Taxes

California law mandates the county assessor to reappraise real property upon a change in ownership or completion of new construction. The assessor's office issues a supplemental assessment which reflects the difference between the prior assessed value and the new assessment. This value is prorated based on the number of months remaining in the fiscal tax year which ends June 30.

Notices of the supplemental assessment are mailed out to the property owners prior to the issuance of the supplemental tax bill or refund if the value is reduced. The taxes or refund based on the supplemental assessment are in addition to the regular annual tax bill.

The supplemental tax will be due from the current owner in addition to the regular tax assessment. Accordingly for the first year of ownership, Buyer should plan for this additional payment.

B. Supplemental Property Tax Disclosure

The following notice is mandated by California Civil Code Section 1102.6c:

NOTICE OF YOUR "SUPPLEMENTAL" PROPERTY TAX BILL

"California property tax law requires the Assessor to revalue real property at the time the ownership of the property changes. Because of this law, you may receive one or two supplemental tax bills, depending on when your loan closes.

The supplemental tax bills are not mailed to your lender. If you have arranged for your property tax payments to be paid through an impound account, the supplemental tax bills will not be paid by your lender. It is your responsibility to pay these supplemental bills directly to the Tax Collector.

If you have any question concerning this matter, please call your local Tax Assessor or Collector's Office."

ALAMEDA County Assessor

Phone: 510-272-3787

Website: <http://www.acgov.org/assessor/>

**Property Tax Disclosure Report
For ALAMEDA County**

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C. Calculating Supplemental Taxes After Sale (ESTIMATE ONLY)

Instantly calculate estimated property taxes and supplemental taxes on our website (or manually calculate them below):
<https://orderform.fanhd.com/Order/TaxCalcForm?guid=E532833B648240F99B20D3621D63A978>.

SUPPLEMENTAL TAX ESTIMATOR

The following schedule is provided to estimate the potential amount of the supplemental taxes on a given property and does NOT include the amount of the regular annual ad valorem property tax. The following calculation provides an estimate of the supplemental property taxes that can be expected during the first year of ownership, and should be used for planning purposes only.

- 1 Estimated Sales Price..... • 1 \$ _____
- 2 Estimated Current Assessed Value..... • 2 \$ _____ .01
- 3 Subtract line 2 from line 1.
Estimated Supplemental Assessed Value..... • 3 \$ _____
- 4 Multiply line 3 by 0.0117000 (the Estimated Ad Valorem Tax Rate for the Residential
Property).
Estimated Full-Year **Supplemental** Tax Obligation..... • 4 \$ _____

If the Sale Date for the Residential Property falls during the months of January through May, Buyer will receive TWO supplemental tax bills: (a) one for the current partial tax year; and (b) one for the next full tax year. The supplemental taxes can be estimated by completing lines 5 through 8 below:

- 5 Enter the Month-of-Sale Factor from **TABLE 1** below..... • 5 _____
- 6 Multiply line 4 by line 5.
Estimated Supplemental Tax Bill # 1..... • 6 \$ _____
- 7 Enter the amount on line 4.
Estimated Supplemental Tax Bill # 2..... • 7 \$ _____
- 8 Add lines 6 and 7. Total estimated Supplemental Tax Bill..... • 8 \$ _____

If the Sale Date for the Residential Property falls during the months of June through December, Buyer will receive ONE supplemental tax bill. The supplemental tax can be estimated by completing lines 9 and 10 below:

- 9 Enter the Month-of-Sale Factor from **TABLE 2** below..... • 9 _____
- 10 Multiply line 4 by line 9. Total estimated Supplemental Tax Bill..... • 10 \$ _____

TABLE 1. Month-of-Sale Factor

Jan	0.4167
Feb	0.3333
Mar	0.2500
Apr	0.1667
May	0.0833

TABLE 2. Month-of-Sale Factor

Jun	1.0000
Jul	0.9167
Aug	0.8333
Sept	0.7500
Oct	0.6667
Nov	0.5833
Dec	0.5000

The information in this subparagraph C is an estimate only. The purpose of this "ESTIMATOR" is to assist Buyer in planning for the supplemental taxes. The estimated supplemental tax is not a substitute for the supplemental bill and may not be relied upon as such. This "ESTIMATOR" requires the Buyer's projection of the purchase price of the Residential Property as well as month in which the transaction will be consummated. Please note that potential exemptions and exclusions are not reflected in these estimations JCP-LGS is not responsible or liable for any losses, liabilities or damages resulting from use of this Supplemental Tax Estimator.

**Property Tax Disclosure Report
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Part 6. State Responsibility Area Fire Prevention Fee

In 2011, the California Legislature and Governor enacted a "Fire Prevention Fee" on habitable structures in the State's wildland fire responsibility area ("SRA"). The yearly fee, levied on property owners, paid for various activities to prevent and suppress wildfires in the SRA, and was most recently at the rate of \$152.33 per habitable structure on the property.

Effective July 1, 2017, as authorized by Assembly Bill 398 and signed by the Governor, that fire prevention fee is suspended until 2031.

The fire prevention activities supported by the fee will continue, but instead will be funded through a different State program – one aimed at curbing industrial emissions of carbon dioxide (also known as California's "cap-and-trade" program). For more information, please refer to the text of the Assembly bill at the following link:
http://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201720180AB398

**Property Tax Disclosure Report
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Part 7. Private Transfer Fee Advisory

Private Transfer Fee. This is a fee imposed by a private entity such as a property developer, home builder, or homeowner association, when a property within a certain type of subdivision is sold or transferred. (It is commonly known as a "Private Transfer Tax".) It is NOT the same as a city or county Documentary Transfer Tax. A Private Transfer Fee may apply in addition to government Documentary Transfer Taxes that are due upon sale or transfer of the Property.

Transfer Fee Defined. California Civil Code Section 1098 defines a "Transfer Fee".

Effective January 1, 2008, if the payment of any Transfer Fee is required in the sale or transfer of the Property, Civil Code Section 1102.6e requires Seller to notify Buyer of the existence of the fee and to disclose certain specific information about the fee.

How to Determine the Existence of a Transfer Fee. If a Transfer Fee does exist affecting the Property, the document creating the fee may be on file with the County Recorder as a notice recorded against the Property and should be disclosed in the preliminary (title) report on the Property. However, the preliminary (title) report will merely disclose the existence of the documents affecting title, not the content of the documents. The title of a document may also not be sufficient to disclose that a Transfer Fee is included in its terms. Accordingly Seller should (a) request the title company which issued the preliminary (title) report to provide copies of the documents shown as "exceptions," and (b) review each document to determine if it contains a Transfer Fee.

Parties are advised that documents regarding any Transfer Fee should be obtained early in the sale process in order to avoid delays in the transaction process and to ensure full disclosure as required by law.

To determine if the Property is subject to a Transfer Fee, OBTAIN COPIES OF ALL OF THE EXCEPTIONS LISTED ON THE PRELIMINARY (TITLE) REPORT FROM THE TITLE COMPANY AND READ THEM TO DETERMINE IF ANY TRANSFER FEES ARE APPLICABLE.

**END OF TAX DISCLOSURE REPORT SECTION
See Terms and Conditions at end of this Report.**

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TERMS and CONDITIONS

ACCEPTANCE OR USE OF THE WEBSITE, CUSTOMER SERVICE, OR ANY REPORT CONSTITUTES APPROVAL AND ACCEPTANCE OF THESE TERMS AND CONDITIONS AS STATED HEREIN.

The Website (defined below), Customer Service (defined below) and any Report (defined below) are subject to each of the following Terms and Conditions. Any User (defined below) accessing, using, or reviewing the Website, Customer Service, or any Report, including any portion thereof, agrees that the Website, Customer Service and Reports are subject to the following Terms and Conditions, and such User agrees to be bound by these Terms and Conditions, regardless of whether the User ordered a Report on the Website or over the telephone through Customer Service, and regardless of whether the User paid for the Report. Use of any kind of the Website or a Report by any User constitutes acceptance of these Terms and Conditions, which are incorporated by this reference into every Report.

A Report is not an insurance policy.

A Report is made for the Property (defined below) and solely for the transaction for which it was originally purchased ("Transaction"). The Property shall not include any property beyond the boundaries of the real property described in a Report. The Property shall not include any structures (whether located on the Property, or not), easements, or any right, title, interest, estate, or easement in any abutting streets, roads, alleys, lanes, ways, or waterways.

IMPORTANT NOTICE: Transferor(s) and transferee(s) shall read a complete Report in its entirety before the close of escrow. A "Signature Page" or "Summary Pages" document may be included in the electronic delivery of the Report. Those documents do not replace the complete Report or remove the need to read a complete Report, and do not remove the requirement to disclose. The Signature Page and Summary Pages documents are subject to these Terms and Conditions.

1. Definitions.

- a. **"Company"** shall mean First American Professional Real Estate Services, Inc., a California corporation, operating through its Natural Hazard Disclosure division, "JCP-LGS."
- b. **"Company Content"** shall mean all editorial content, graphics, data, and information contained in the Report or on the Website, any portion thereof, including the selection, coordination, and arrangement of the editorial content, graphics, data, and information on the Website, and the hierarchy of the Website.
- c. **"Customer Service"** shall mean Company's customer service telephone service department or representatives.
- d. **"User"** shall mean any person or entity.
- e. **"Property"** shall mean the real property specifically described in a Report.
- f. **"Report"** shall mean any residential disclosure report prepared by the Company, including but not limited to a JCP-LGS Residential Property Disclosure Report, available through the Website or Customer Service.
- g. **"Website"** shall mean the www.fanhd.com website, the www.disclosures.com website, the www.reodisclosure.com website, and any other individual sites as may be added to, or available through, the foregoing or any other Company website, including, without limitation, the data and computer code, underlying, contained on, or transmitted from the Website, a Report, and the Company Content. Any reference herein to the Website shall be to each individual item and also to the Website as a whole.

2. **No Third Party Reliance on Any Report.** Only the transferor(s) and transferee(s), and their agents/brokers, if any, involved in the Transaction (collectively, the "Recipients") may use and rely on a Report and only after they have paid in full for the Report. While disclosures made on the Natural Hazard Disclosure Statement in a Report may indicate certain risks to the Property, the disclosures are only "...between the transferor, the transferor's agents, and the transferee, and shall not be used by any other party, including, but not limited to, insurance companies, lenders, or governmental agencies, for any purpose." Cal. Civil Code section 1103.2, subdivision (g).

3. **Seller and Seller's Agent's Responsibility of Full Disclosure.** Recipients are obligated to make disclosures, and always disclose material facts, that are within their actual knowledge.

4. **Scope of Any Report.** A Report is limited to determining whether the Property is located in those specified natural hazard zones and property tax districts, and in proximity to those specified environmental sites (depending on the report product ordered), as defined in the Report. The Report is not a geologic report or a land survey, and no site inspection has been made in producing the Report. Company makes no determination, expresses no opinion or view, and assumes no responsibility in any Report concerning the right, entitlement, or ability to develop or improve the Property. Company has no information concerning whether the Property can be developed or improved. No determination is made, and no opinion is expressed or intended by any Report concerning structures or soils on or outside of the Property, including, without limitation, habitability of structures or the Property, suitability of the Property for construction or improvement, potential for soil settlement, drainage, soil subsidence, or other soil or site conditions. The Recipient(s) is advised to consult the local Planning Department to determine whether factors beyond the scope of any Report may limit the transferee(s) ability to use or improve the Property.

The Report is not a title report, and no determination is made and no opinion is expressed, or intended, by the Report as to title to the Property or liens against the Property, recorded or otherwise, or whether the Property is comprised of legal lots in conformance with the California Subdivision Map Act or local ordinances. The Report is not a property inspection report, and no determination is made and no opinion is expressed, or intended, by the Report concerning architectural, structural, mechanical, engineering, or legal matters, or the marketability or value of the Property. Company has not conducted any testing or physical or visual examination or inspection of the Property, nor is the Report a substitute for any such testing, physical or visual examination, or inspection.

5. **Tax and Environmental Disclosures (if included in Report).** No determination is made and no opinion is expressed, or intended, by a Report concerning the existence of property tax liabilities, or the existence of hazardous or toxic materials or substances, or any other defects, on, under, or in proximity to the Property, unless specifically described in the Report. Company's total liability for any error or omission in its disclosures relating to taxes and/or environmental matters shall be limited to actual proven damages not to exceed \$10,000.

Property Address: 2350 5TH ST
ALAMEDA, ALAMEDA COUNTY, CA 94501
("Property")

APN: 074-1356-023
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6. **Company Database Updates.** To the extent databases are used in preparing a Report, each database is updated by the responsible agency at various intervals. Updates for a database are determined by the responsible agency and may be made at any time and without notice. The Company maintains an update schedule and makes reasonable efforts to use updated information. For these reasons, the Company reports information as of the date when the database was last updated by the Company. That date is specified as the "Database Date" for each database. The Tax Report discloses PACE assessments documented in the county's Fiscal Year 2018-2019 annual secured property tax roll. The Report may disclose PACE contracts where PACE taxes were first assessed or liens were recorded after the Fiscal Year 2018-2019 secured property tax roll, where recordation data is available to JCP-LGS. To discover a PACE lien on the Property executed more recently, the buyer should read the preliminary title report and obtain and read all exceptions listed therein. Note that, in the title report, lien exceptions are named as recorded with the county; therefore, a PACE lien may be listed under a name that is not obvious.
7. **Statutory and Additional Disclosures, Advisories, and Local Addenda (if included in Report).** No determination is made and no opinion is expressed, or intended, by a Report concerning the need to purchase earthquake or flood insurance for the Property. In preparing the Report, Company accurately reported on information contained in public maps and databases ("Government Records"). Company reviewed and relied upon those Government Records specifically identified and described in the Report. Company has not reviewed or relied upon any Government Records that are not specifically identified in the Report. Company also has not reviewed any plat maps, survey maps, surveyor maps, assessor maps, assessor parcel maps, developer maps, or engineering maps, whether or not such maps have been recorded. No determination is made and no opinion is expressed, or intended, by the Report concerning any matters identified in Government Records that were not reviewed by Company. Local Addenda, where applicable, are included "AS IS" as an accommodation to the local real estate board that provided the content; Company assumes no responsibility for the accuracy of any information included in the Local Addenda.
8. **FEMA Flood Determination Certificate (if accompanying the Report).** No determination is made, and no opinion is expressed or intended by a Report concerning the requirement for or cost of flood insurance on the Property. Recipient(s) understands that a lender may require flood insurance to secure its loan collateral independent of whether FEMA may require flood insurance under the National Flood Insurance Program on a federally backed mortgage. The FEMA Flood Determination Certificate ("Flood Certificate") that may accompany the Report, is produced by a third-party expert certified by FEMA to provide Flood Certificates. Company assumes no liability for errors in that third-party flood determination.
9. **Changes to Government Record after Report Date.** A Report is issued as of the Report Date identified in the Report. Company shall have no obligation to advise any Recipient of any information learned or obtained after the Report Date even if such information would modify or otherwise affect the Report. Subsequent to Company's acquisition of Government Records, changes may be made to said Government Records, and Company is not responsible for advising Recipients of any changes. Company will update the Report upon request and at no charge during the transaction process for which the Report was issued, but not to exceed one year from the date of the Report. Likewise, Company is not liable for any impact on the Property that any change to the Government Records may have.
10. **Government Record Sources.** Company relies upon the Government Records specifically identified in a Report without conducting an independent investigation of their accuracy. Company assumes no responsibility for the accuracy of the Government Records identified in the Report. Company makes no warranty or representation of any kind, express or implied, with respect to the Report. Company expressly disclaims and excludes any and all other express and implied warranties, including, without limitation, warranties of merchantability or fitness for a particular purpose. The Company Report is "AS IS."

11. Not for Credit Purposes.

The Company Content available in any Report has not been collected for credit purposes and is not intended to be indicative of any consumer's credit worthiness, credit standing, credit capacity, or other characteristics listed in Section 1681(a) of the Fair Credit Reporting Act, 15 U.S.C. § 1681 et seq. The Report shall not be used:

- a. as a factor in establishing an individual's eligibility for credit or insurance,
- b. in connection with underwriting individual insurance,
- c. in evaluating an individual for employment purposes,
- d. in connection with a determination of an individual's eligibility for a license or other benefit granted by a governmental authority,
- e. in any way that would cause the Report to constitute a "consumer report" under the Fair Credit Reporting Act, 15 U.S.C. § 1681 et seq., or
- f. in any other manner that would cause such use of the Report to be construed as a consumer report by any pertinent governmental authority.

12. Limitation of Company's Liability

- a. Company is not responsible for:
 - Any inaccuracies or incompleteness of the information in the Public Records.
 - Inaccurate address information provided for the Property.
 - Any other information not contained in the Public Records as of the Report Date.
 - Any information which would be disclosed by a physical inspection of the Property.
 - Any information known by you, a Recipient, a User, the transferor or transferee, or their agents/brokers.
 - The health or risk to humans or animals that may be associated with any of the disclosed hazards.
 - The costs of investigating or remediating any of the disclosed hazards.
- b. In no event shall Company or its data suppliers be liable for any damages resulting from the inability or failure to access or interface with the Website or Customer Service.
- c. Except as otherwise expressly set forth in these Terms and Conditions, Company's total liability and responsibility to all Users accessing the Website, Customer Service, or any Report collectively for any and all liabilities, causes of action, claim or claims, including, but not limited to, claims for breach of contract or negligence, shall be for actual proven damages only caused directly by Company's error. In no event shall Company's total liability exceed the difference between the amount actually paid for the Property and the fair market value on the date of the disclosure, as measured by a retrospective appraisal performed by a licensed professional appraiser under the Uniform Standards of Professional Appraisal Practice. Company expressly disclaims any liability for Recipients' or Users' indirect, incidental and/or consequential damages, including, without limitation, lost profits, even if such damages are foreseeable, and you, User and Recipients hereby waive and release any right to assert a claim against Company for such amounts. The Parties, and each of them, expressly waive the benefits of California Civil Code Section 2778 and 1542 and any other similar provisions. Section 1542 provides that "A general release does not

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extend to claims which the creditor does not know or suspect to exist in his or her favor at the time of executing the release, which if known by him or her must have materially affected his or her settlement with the debtor.

- d. **Product and Service Claims.** User shall provide prompt notice to Company, and a reasonable opportunity to cure, any known error, omission or mistake that may result in a claim on products or services provided under these Terms and Conditions, prior to making a claim against the Company. In addition, User shall use their best efforts to mitigate any losses resulting from any products or services provided pursuant to these Terms and Conditions. If User does not perform according to the requirements of this section, Company will not be liable. User also must provide sufficient documentation, as deemed appropriate by Company, to evidence any out-of-pocket, actual monetary loss.
- e. **Links.** Where Company provides hypertext links to other Internet websites on the Website, or in any Report, the Company does so for informational purposes only, and such links are not endorsements by Company of any products or services on such sites. Company shall not accept, and shall not incur, any liability for such products or services and makes no endorsement or approval of the same.

13. **Reporting of Risk Elements for Condominium Projects, Planned Unit Developments, and Other Properties with Common or Undivided Interests.** Because California's Residential Natural Hazard Disclosure Law requires disclosure if any portion of the Property is located within a specified natural hazard area/zone, a Report must indicate that the subject Property falls within the area/zone if any portion of such a condominium project, planned unit development, or common area is located within a specified hazard area/zone.

14. **User Account and Information.**

- a. To obtain and use a Report, User must order the Report through the Website or over the telephone through Customer Service or by email. To order the Report online, User must register for an account on the Website and provide information required in the Website registration form. As part of that registration, User agrees to accurately furnish all contact and other information requested by Company and notify Company immediately of any change in the information.
- b. Company reserves the right to refuse or reject any request to create an account for any or no reason at Company's sole discretion. User solely is responsible for their account, contact information and other information made available through User's account or otherwise via the Website. User shall use reasonable care to protect the confidentiality of their account log-in information and will not share it with any other person or entity. User will be entirely responsible for the conduct of any person using their account information to access the Website, Customer Service, or any Report.
- c. User only shall access the Website using a password or other security mechanism to prevent unauthorized access. Sharing of User access is prohibited, and any automation of accessing information is strictly prohibited unless expressly authorized in writing by Company. It is User's sole responsibility to maintain the confidentiality of all usernames and passwords, and User shall be responsible for all charges relating to the use of said usernames and passwords whether or not authorized by User. In no event shall User use the Website, Customer Service, or any Report for illegal purposes or in any manner that is defamatory, libelous, unlawfully threatening or unlawfully harassing, or that otherwise violates any federal, state or local statute, law or regulation, for debt collection, skip tracing, or electronic telephone directory assistance or otherwise breaches or violates these Terms and Conditions.

15. **Confidentiality.** User acknowledges that the Website and any Report contain valuable commercial products, the development of which has involved the expenditure of substantial time and money. User shall take appropriate measures and shall initiate strict security measures to prevent the accidental or otherwise unauthorized use or release of any and all proprietary and confidential information of the Company and any third parties associated with the Report or provided through the Website or Customer Service.

16. **License to Use Website, Customer Service, and Any Report.** Subject to User's compliance with these Terms and Conditions, Company grants User a limited, non-exclusive, revocable, non-assignable, personal and non-transferable license to access and make use of the Website, Customer Service, and any Report solely for the purposes specified in these Terms and Conditions, and not for any other purpose whatsoever. The foregoing license does not include any resale or commercial use of the Website, Customer Service, Report, or Company Content obtained from the Website, Customer Service, or any Report. The Website, Report, and the Company Content therein, and any portion thereof, may not be reproduced, duplicated, copied, sold, resold, visited, or otherwise exploited for any commercial purposes without Company's express written consent. This license does not include any derivative use of this Website or the Report, or any Company Content therein nor any use of data mining, robots, or similar data gathering and extraction tools. User may not frame or utilize framing techniques to enclose any trademark, logo, or other proprietary information (including images, text, page layout, or form) of the Website, the Report or the Company Content without express written consent of the Company. User may not use any meta tags or any other "hidden text" or trademarks without the express written consent of the Company. Any unauthorized use terminates the permission or license granted by the Company.

17. **Use of the Website, Customer Service, and Report.** User acknowledges and agrees that their use of and access to the Website, Customer Service, and any Report may be logged and monitored. User agrees that Company controls the terms of all access to, and use of, the Website (including any upgrades, modifications or updates thereto), Customer Service, and all products, services, and materials contained therein that are delivered by means of the Website, including the Reports, and all third-party products and information and data that may be included therein. The Company reserves the right to revise or alter the Website, Customer Service, the Reports, and the provisions of these Terms and Conditions at any time, in its sole discretion. By accessing or using the Website, Customer Service, or a Report, User agrees not to use the Website, Customer Service, or Report in any way that:

- is unlawful, fraudulent, tortious, or in any other manner Company deems in its sole discretion to be inappropriate or impermissible;
- may harm Company, any Recipient, or any other person or entity;
- violates or infringes the rights of the Company or any third party;
- gains or tries to gain unauthorized access to the Website, Customer Service, Company's computers and networks, any Report, or the Company's data, or that otherwise modifies or interferes with the permitted use or operation of the Website or Customer Service, or the permitted use of the Report;
- imposes an unreasonable or disproportionately large load on Company's infrastructure, including but not limited to transmitting spam or using other unsolicited communications or techniques;
- repurposes, copies, excerpts, disassembles, decompiles, manipulates, alters, damages, or deletes any Company Content or removes or modifies any copyright or other intellectual property notices that appear on the Website or any Report;
- contains computer viruses or other disruptive, damaging or harmful files or programs; or
- otherwise violates these Terms and Conditions, or any other terms, guidelines, or policies provided by Company.

In addition, User represents and warrants that:

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- the information and other content that User provides using the Website, Customer Service, or Report does not infringe, violate, misappropriate or otherwise conflict with the rights of the Company or any third party; complies with all applicable local, state, national, and other laws, rules and regulations; and does not violate these Terms and Conditions;
- User will use their true legal name, address, electronic mail address, and only provide true, accurate and complete information on the Website;
- User will not impersonate another party or misrepresent or falsify their affiliation with another person, such as by using another user name, password or other account information or another name, likeness, image or photograph, or using fictitious personal or address information;
- User is at least 18 years of age, or the legal age of majority where User resides;
- User has all requisite rights and authority to use the Website, Customer Service, and Report, and to enter into these Terms and Conditions; and
- the performance of User's obligations under these Terms and Conditions will not violate, conflict with, or result in a default under any other agreement, including confidentiality agreements between User and third parties.

18. User Content. User hereby represents and warrants that any content that they upload to the Website, if permitted, or content that User uses in connection with any Report shall not be used in any manner that is defamatory, libelous, unlawfully threatening or unlawfully harassing, and does not and shall not infringe upon or misappropriate any rights, including, without limitation, intellectual property rights, proprietary rights or confidentiality rights, or rights of publicity or privacy of any third parties or the Company, and that such content is free of worms, viruses, Trojan Horses and other disabling code. For the avoidance of doubt, "content" as used in this section in connection with the User shall be construed broadly so as to include, but not be limited to, all materials, documents, data, information or other materials that User may upload to the Website or use in connection with any Report.

19. Intellectual Property.

- Unless otherwise provided, Company owns the copyrights, trademarks, service marks, and trade dress rights to all materials and content displayed on and from the Website and any Report (including visual interfaces, interactive features, graphics, designs, databases and their data, computer code, products, software and all other elements and components of the Website and Report). User may not reproduce, repurpose, modify, excerpt, create derivative works, display, frame, perform, publish, distribute, sell, disseminate, transmit, broadcast, sell, or circulate any such materials or content, including, without limitation, the Report or Website, or the contents thereof, to any third party (including displaying or distributing the material using a third-party website) without Company's prior written consent.
- Copyrights. The Website and any Report are owned and copyrighted by Company. No ownership rights are being granted to User by these Terms and Conditions. Subject to the limited license provided in these Terms and Conditions, Company reserves all rights in and to Website and any Report, including, but not limited to, the exclusive rights under copyright and other intellectual property and the right to grant further licenses. User shall only use the Website as specifically stated herein. Company and its licensors reserve and retain all copyright, intellectual property and other proprietary rights in and to Company Content, including without limitation, all rights in any public information that may have been gathered, including as a compilation. All Company Content is protected by U.S. and/or international copyright laws, international treaties and/or other applicable laws. Unauthorized use of the Website or the Company Content is strictly prohibited and may subject User to prosecution. User acknowledges that all information accessed through the Website and any Report are proprietary information of Company, including any third-party suppliers (including, without limitation, real property ownership information) under copyright, and have been furnished to User in trust. Any revision, republication and re-use of Company Content or the Website for any purpose are strictly prohibited in whole or in part. Except as expressly permitted herein, the materials from the Website including, but not limited to, Company Content may be used solely for limited non-commercial informational purposes only as necessary to do business with the Company or for evaluating or purchasing Company's products and services. Except for downloading as may be expressly authorized by Company within specific portions of the Website, the Company Content may not be reproduced, licensed, copied, displayed, published, sold, modified, transmitted or distributed without the Company's prior written permission which may be withheld in Company's sole discretion. Linking to and/or framing the Website is strictly prohibited unless Company expressly consents in writing to such a link or frame, and User enters into a further agreement for such linking to and/or framings. Any person or entity wishing to establish a link to the Website, frame the Website, or request the Company's consent to other uses of the Website or Company Content, may send their request by e-mail to the Company Webmaster. All other uses of the Website and/or Company Content not expressly addressed in these Terms and Conditions are strictly prohibited.
- Trademarks. Company and/or its parent company, subsidiaries or affiliates own several trademarks and service marks that are used in connection with, among other things, the Website and any Report, including, but not limited to, First American, JCP-LGS, the Eagle logo ® ("Company Marks"). Any use of the Company Marks requires prior approval in writing by the Company which may be withheld in Company's sole discretion. The "look and feel" of the Website and any Report, and the contents thereof, including, without limitation, the Company Content, such as the color combinations, buttons, layout, and other graphical elements are protected by applicable U.S. and international intellectual property laws, including, without limitation, trademark, copyright and trade dress laws. Nothing contained herein shall constitute a license (either express or implied) for User to use any of the Company Marks or trade dress, including the elements that constitute the "look and feel" of the Website and any Report.
- Company retains all rights that are not otherwise expressly granted in these Terms and Conditions.
- At Company's request, User shall return or delete any and all Website or Report content or portion thereof in their possession.

20. In the event of a dispute involving a violation of Paragraphs 15, 16, 17, 18, or 19 of these Terms and Conditions, such dispute shall not be subject to the Small Claims or Arbitration provisions set forth in Paragraph 23 below. In any litigation to stop a violation of those Paragraphs, the prevailing party shall be entitled to recover its reasonable attorneys' fees, expert fees and costs.

21. Pricings/Billing and Payment Processing. Company reserves the right to change any Report pricing, including whether a Report is billed for, at any time without notice. To the extent applicable, charges or fees for any Report will be accumulated under the licensee account number and will be invoiced either through escrow or directly to licensee, depending upon how licensee sets up their account.

In the event that any credit card payments are processed by a third-party card processing company, such third-party card processing company will be contractually required by Company to use commercially adequate security and confidentiality measures. That agreement requires the card processing company to use adequate security and confidentiality measures to protect User's payment information. All payment information that User provides through the Website will be transmitted directly to the card processing company over a secure connection. Company will not record User's credit card number, expiration date, or CVV number. However, this information may be stored by the card processing company in the normal course of its business, or as required or authorized by law, statute, regulation, or Payment Card Industry standard.

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22. **Governing Law.** These Terms and Conditions, and a User's use of the Website, Customer Service, or any Report shall be governed by, and construed in accordance with, the laws of the State of California.

23. **Small Claims or Arbitration.** This provision constitutes an agreement to arbitrate disputes on an individual basis. Any party may bring an individual action in small claims court instead of pursuing arbitration. All disputes and claims arising out of or relating to the Website, Customer Service, or any Report, except for those covered by Paragraph 20 above, must be resolved by binding arbitration. This agreement to arbitrate includes, but is not limited to, all disputes and claims between Company, transferor(s) and transferee(s) and claims that arose prior to purchase of the Report, but it excludes disputes and claims covered by Paragraph 20 above. This agreement to arbitrate applies to transferor(s) and transferee(s) successors in interest, assigns, heirs, spouses, and children. As noted above, a party may elect to bring an individual action in small claims court instead of arbitration, so long as the dispute falls within the jurisdictional requirements of small claims court.

Any arbitration must take place on an individual basis. Company, transferor(s) and transferee(s) agree that they are waiving any right to a jury trial and to bring or participate in a class, representative, or private attorney general action, and further agree that the arbitrator lacks the power to grant relief affecting anyone other than the individual claimant. If a court decides that any of the provisions of this paragraph are invalid or unenforceable because the provisions would prevent the exercise of a non-waivable right to pursue public injunctive relief, then any dispute regarding the entitlement to such relief (and only that relief) must be severed from the arbitration and may be litigated in court.

The arbitration is governed by the Consumer Arbitration Rules (the "AAA Rules") of the American Arbitration Association ("AAA"), as modified by this Agreement, and will be administered by the AAA. Company will pay all AAA filing, administration and arbitrator fees for any arbitration it initiates and for any arbitration initiated by another party for which the value of the claims is \$75,000 or less, unless an arbitrator determines that the claims have been brought in bad faith or for an improper purpose, in which case the payment of AAA fees will be governed by the AAA Rules. **A COPY OF THESE RULES IS AVAILABLE FROM THE AAA'S WEB SITE AT WWW.ADR.ORG OR ON REQUEST FROM THE COMPANY. THE ARBITRATION AWARD MAY INCLUDE ATTORNEY'S FEES IF ALLOWED BY FEDERAL, STATE, OR OTHER APPLICABLE LAW AND MAY BE ENTERED AS A JUDGMENT IN ANY COURT OF PROPER JURISDICTION.**

The arbitration will take place in the same county in which the property covered by the Report is located. The Federal Arbitration Act will govern the interpretation, applicability and enforcement of this arbitration agreement. This arbitration agreement will survive the termination of the Report.

24. **Term; Termination.** The application of these Terms and Conditions will commence upon User's acceptance of the provisions of these Terms and Conditions by clicking "I Accept," calling Customer Service, or in any way accessing any Report or portion thereof and shall continue in perpetuity, unless sooner terminated pursuant to the terms hereof (the "Term"). Notwithstanding the foregoing, upon written notice to User, the Company may immediately terminate these Terms and Conditions, and terminate User's access to and use of the Website, Customer Service, and all Reports, for any reason at any time.

25. **Notices.** Any notice or other communication required or permitted under these Terms and Conditions shall be sufficiently given if delivered in person or sent by one of the following methods:

- a. Registered U.S. mail, return receipt requested (postage prepaid);
- b. Certified U.S. mail, return receipt requested (postage prepaid); or
- c. Commercially recognized overnight service with tracking capabilities.

Notices to the Company shall be sent to 4 First American Way, Santa Ana, California 92707, with a copy to the Company's counsel at the same address marked Attention: Legal Department. Notices to User shall be sent to the address entered by User in the Website. Notices or communications shall be deemed properly delivered as of the date personally delivered or sent by mail or overnight service.

26. **Severability.** Except as otherwise provided above, if any provision of these Terms and Conditions is determined to be invalid or unenforceable for any reason, then such provision shall be treated as severed from the remainder of the Terms and Conditions, and shall not affect the validity and enforceability of all of the other provisions of the Terms and Conditions.

27. **Other Agreements.** These Terms and Conditions constitute the entire, integrated agreement between Company and any User using, possessing, or accessing the Website and/or Report, and supersede and replace all prior statements, representations, negotiations, and agreements.

END OF REPORT

ADDENDUM CITY OF ALAMEDA UNDERGROUND UTILITY DISTRICT

The property located at: 2350 5TH ST, Alameda, CA **IS NOT IN AN UNDERGROUND UTILITY DISTRICT** as determined by the Alameda City Council as per Alameda Municipal Code Sec. 19-4. These districts are areas where utility poles and overhead wiring will be removed and all property owners must be ready to receive underground service. The schedule for the implementation of these improvements is determined by the City and is anticipated to be completed by 2020. The following list is for informational purposes only. JCP-LGS makes every effort to update and maintain the accuracy of the list but will not be held liable for any inaccuracies in the list or the map used in making this determination.

Properties that are not located in one of these Underground Utility Districts may have already had work completed, or are not scheduled for this project. **FOR FURTHER INFORMATION PLEASE CALL EDRIC KWAN OF THE ALAMEDA PUBLIC WORKS DEPARTMENT AT (510)749-5856.**

Property owners in a "YET-TO-BE-COMPLETED" Underground Utility District will likely incur an expense related to this project. The expense is a requirement on the part of the homeowner to pay for under-grounding of the utility hook-up between their house and the street. The cost will vary depending on the distance from the street to the house and the location of the access points at both ends of the run.

The street districts which will benefit from this improvement are listed below according to Phase and current priority of implementation:

Note: District boundary and priority may be subject to change.

Underground Phase Number	Underground Utility District Number	Priority Number	Project Location
PHASE 3	16	In-Progress	WESTLINE, NORTH OF OTIS TO SHORE POINT COURT
PHASE 4	21	In-Progress	FRANCISCAN WAY, BETWEEN WILLOW STREET AND GRAND STREET
	23	5	LINCOLN PARK OVERHEAD LINE FROM FERNSIDE BLVD.
	24	12	SHERMAN STREET-BUENA VISTA TO ATLANTIC AVENUE
	26	5	CENTRAL AVE.-WILLOW TO OAK STREET
	27	4	SANTA CLARA AVE.-WILLOW TO OAK STREET
	28	9	OTIS DRIVE-PARK TO WILLOW STREET
PHASE 5	29	Completed	LINCOLN AVE.- OAK TO PARK STREET
PHASE 6	30	In-Progress	BAY STREET - SOUTH OF CENTRAL AVENUE ST. CHARLES - SOUTH OF CENTRAL AVENUE SAN ANTONIO AVENUE
	31	2	WEBSTER ST. ALL CROSSINGS - CENTRAL TO PACIFIC AVENUE
	32	3	BURBANK ST. AND PORTOLA AVE. UNION ST.- SOUTH OF CLINTON AVE.
	33	6	PARK AVE - CENTRAL TO ENCINAL AVE./ NOBLE AVENUE
	34	7	OTIS DRIVE - PARK ST. TO BROADWAY AND STREET SOUTH OF OTIS DRIVE INCLUDING PARK AVE., ROOSEVELT DRIVE, REGENT ST. AND DELMAR AVE.
	35	8	SHERMAN ST. - SOUTH OF CENTRAL AVE. SAN ANTONIO AVENUE
	36	10	WATERTON ST. - SOUTH OF BROADWAY/ EAGLE AVE. - WEST OF CONSTITUTION WAY
	37	11	EIGHTH ST. - LINCOLN AVENUE TO CENTRAL AVENUE

**JCP-LGS Residential Property Disclosure Reports
Disclosure Report Signature Page
For ALAMEDA County**

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**Statutory Natural Hazard Disclosure ("NHD") Statement
and Acknowledgment of Receipt**

DISCLAIMER: This NHD Summary (a) is not valid unless delivered with the complete JCP-LGS Disclosure Report which transferee must read and acknowledge before close of escrow, and (b) is subject to the Terms and Conditions contained in that complete Disclosure Report.

The transferor and his or her agent(s) or a third-party consultant disclose the following information with the knowledge that even though this is not a warranty, prospective transferees may rely on this information in deciding whether and on what terms to purchase the Property. Transferor hereby authorizes any agent(s) representing any principal(s) in this action to provide a copy of this statement to any person or entity in connection with any actual or anticipated sale of the Property.

The following are representations made by the transferor and his or her agent(s) based on their knowledge and maps drawn by the State. This information is a disclosure and is not intended to be part of any contract between the transferee and the transferor. THIS REAL PROPERTY LIES WITHIN THE FOLLOWING HAZARDOUS AREA(S):

A SPECIAL FLOOD HAZARD AREA (Any type Zone "A" or "V") designated by the Federal Emergency Management Agency
Yes ___ No **X** Do not know and information not available from local jurisdiction ___

AN AREA OF POTENTIAL FLOODING shown on a dam failure inundation map pursuant to Section 8589.5 of the Government Code.
Yes ___ No **X** Do not know and information not available from local jurisdiction ___

A VERY HIGH FIRE HAZARD SEVERITY ZONE pursuant to Section 51178 or 51179 of the Government Code. The owner of this Property is subject to the maintenance requirements of Section 51182 of the Government Code.
Yes ___ No **X**

A WILDLAND AREA THAT MAY CONTAIN SUBSTANTIAL FOREST FIRE RISK AND HAZARDS pursuant to Section 4125 of the Public Resources Code. The owner of this Property is subject to the maintenance requirements of Section 4291 of the Public Resources Code. Additionally, it is not the state's responsibility to provide fire protection services to any building or structure located within the wildlands unless the Department of Forestry and Fire Protection has entered into a cooperative agreement with a local agency for those purposes pursuant to Section 4142 of the Public Resources Code.
Yes ___ No **X**

AN EARTHQUAKE FAULT ZONE pursuant to Section 2622 of the Public Resources Code.
Yes ___ No **X**

A SEISMIC HAZARD ZONE pursuant to Section 2696 of the Public Resources Code.
Yes (Landslide Zone) ___ Yes (Liquefaction Zone) **X**
No ___ Map not yet released by state ___

THESE HAZARDS MAY LIMIT YOUR ABILITY TO DEVELOP THE REAL PROPERTY, TO OBTAIN INSURANCE, OR TO RECEIVE ASSISTANCE AFTER A DISASTER. THE MAPS ON WHICH THESE DISCLOSURES ARE BASED ESTIMATE WHERE NATURAL HAZARDS EXIST. THEY ARE NOT DEFINITIVE INDICATORS OF WHETHER OR NOT A PROPERTY WILL BE AFFECTED BY A NATURAL DISASTER. TRANSFEREE(S) AND TRANSFEROR(S) MAY WISH TO OBTAIN PROFESSIONAL ADVICE REGARDING THOSE HAZARDS AND OTHER HAZARDS THAT MAY AFFECT THE PROPERTY.

Signature of Transferor(s) _____	Date _____	Signature of Transferor(s) _____	Date _____
Signature of Agent _____	Date _____	Signature of Agent _____	Date _____

- Transferor(s) and their agent(s) represent that the information herein is true and correct to the best of their knowledge as of the date signed by the transferor(s) and agent(s).
- Transferor(s) and their agent(s) acknowledge that they have exercised good faith in the selection of a third-party report provider as required in Civil Code Section 1103.7, and that the representations made in this Natural Hazard Disclosure Statement are based upon information provided by the independent third-party disclosure provider as a substituted disclosure pursuant to Civil Code Section 1103.4. Neither transferor(s) nor their agent(s) (1) has independently verified the information contained in this statement and Report or (2) is personally aware of any errors or inaccuracies in the information contained on the statement. This statement was prepared by the provider below:

Third-Party Disclosure Provider(s) FIRST AMERICAN PROFESSIONAL REAL ESTATE SERVICES, INC. OPERATING THROUGH ITS JCP-LGS DIVISION.
Date 27 December 2018

Transferee represents that he or she has read and understands this document. Pursuant to Civil Code Section 1103.8, the representations in this Natural Hazard Disclosure Statement do not constitute all of the transferor's or agent's disclosure obligations in this transaction.

Signature of Transferee(s) _____	Date _____	Signature of Transferee(s) _____	Date _____
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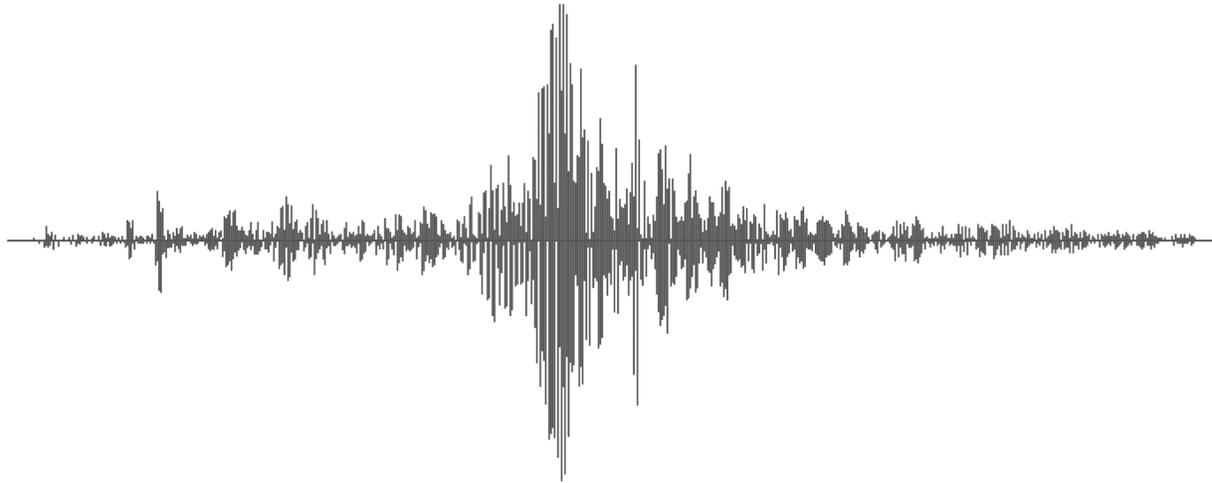
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- A. Additional Property-specific Statutory Disclosures: Former Military Ordnance Site, Commercial/Industrial Use Zone, Airport Influence Area, Airport Noise, San Francisco Bay Conservation and Development District Jurisdiction (in S.F. Bay counties only), California Energy Commission Duct Sealing Requirement, Notice of Statewide Right to Farm, Notice of Mining Operations, Sex Offender Database (Megan's Law), Gas and Hazardous Liquid Transmission Pipeline Database.
- B. Additional County and City Regulatory Determinations as applicable: Airports, Avalanche, Blow Sand, Coastal Zone, Dam/Levee Failure Inundation, Debris Flow, Erosion, Flood, Fault Zone, Fire, Groundwater, Landslide, Liquefaction, Methane Gas, Mines, Naturally Occurring Asbestos, Redevelopment Area, Right to Farm, Runoff Area, Seiche, Seismic Shaking, Seismic Ground Failure, Slope Stability, Soil Stability, Subsidence, TRPA, Tsunami.
- C. General advisories: Methamphetamine Contamination, Mold, Radon, Endangered Species Act, Abandoned Mines, Oil & Gas Wells, Tsunami Maps (coastal only), Wood-burning fireplaces.
- D. Additional Reports - Enclosed if ordered: (1) PROPERTY TAX REPORT (includes state-required Notices of Mello-Roos and 1915 Bond Act Assessments, and Notice of Supplemental Property Tax Bill, (2) ENVIRONMENTAL SCREENING REPORT (discloses Transmission Pipelines, Contaminated Sites, and Oil & Gas Wells). Enclosed if applicable: Local Addenda.
- E. Government Guides in Combined Booklet with Report. Refer to Booklet: (1) ENVIRONMENTAL HAZARDS: "A Guide for Homeowners, Buyers, Landlords and Tenants"; (2) EARTHQUAKE SAFETY: "The Homeowners Guide To Earthquake Safety" and included "RESIDENTIAL EARTHQUAKE HAZARDS REPORT FORM"; (3) LEAD-BASED PAINT: "Protect Your Family From Lead In Your Home"; (4) BRIEF GUIDE TO MOLD, MOISTURE AND YOUR HOME; (5) WHAT IS YOUR HOME ENERGY RATING? Government Guides are also available on the Company's "Electronic Bookshelf" at <http://www.disclosures.com/>.

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CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY

RESIDENTIAL ENVIRONMENTAL HAZARDS: *A Guide For Homeowners, Homebuyers, Landlords and Tenants* 2011

This guide was originally developed by M. B. Gilbert Associates, under contract with the California Department of Real Estate in cooperation with the California Department of Health Services. The 2005 edition was prepared by the California Department of Toxic Substances Control, in cooperation with the California Air Resources Board and the California Department of Health Services, and meets all State and Federal guidelines and lead disclosure requirements pursuant to the Residential Lead-Based Paint Hazard Reduction Act of 1992. The 2005 edition incorporates the Federal "Protect Your Family from Lead" pamphlet. The 2011 update was developed California Department of Toxic Substances Control. This booklet is offered for information purposes only, not as a reflection of the position of the administration of the State of California.

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Introduction

The California Departments of Real Estate and Health Services originally prepared this booklet in response to the California legislative mandate (Chapter 969, Statutes of 1989, AB 983, Bane) to inform the homeowner and prospective homeowner about environmental hazards located on and affecting residential property.

The 2005 edition was prepared by the California Department of Toxic Substances Control, in cooperation with the California Air Resources Board and the California Department of Health Services' Childhood Lead Poisoning Prevention Program, Radon Program, and Division of Drinking Water and Environmental Management, in response to a 1994 legislative mandate (Chapter 264, Statutes of 1994, AB 2753, Sher). The 1994 legislation also requires this booklet to consolidate the California disclosure requirements (Ch. 969, Statutes of 1989) and the federal disclosure requirements (The Residential Lead-Based Paint Hazard Reduction Act of 1992).

The information contained in this booklet is an overview of some environmental hazards which may be found on or in residential property and which may affect residential real estate. Since this booklet is not meant to be all inclusive, it should be used only for general guidance. Although law requires the disclosure of known hazards, an environmental survey may be conducted to obtain further information. Homeowners, tenants, and prospective homeowners may wish to obtain other literature for additional information on hazards of concern.

In California, sellers are required to disclose the presence of any known environmental hazard. A statement that the homeowner is unaware of environmental hazards is not a guarantee that the property is free of such hazards. It is in the homeowner's and prospective homeowner's interest to know what hazards are common, where they are found, and how they might be mitigated. This booklet will provide homeowners and prospective homeowners with the information and additional resources needed to make an informed decision about environmental hazards that may be present on a property.

Because of the contribution of household hazardous wastes to the problem of hazardous waste disposal, a section on proper storage and disposal of household hazardous products is included. In discussing health impacts of hazardous substances, lifetime exposure to low levels is emphasized because the resident is more likely to encounter this type of exposure than exposure to high levels of hazards for a short time. Sources of additional information and a list of government agencies are provided for further information.

Pursuant to AB 983, if this environmental hazards booklet is made available to homeowners or prospective homeowners, real estate licensees and home sellers are not required to provide additional information on such hazards. However, delivery of this publication to homeowners or prospective homeowners does not relieve home sellers

and real estate licensees of the responsibility to disclose the existence of environmental hazards when such hazards are known to them.

The material is presented with the understanding that the publisher is not engaged in offering legal or other professional advice. If legal or other expert assistance is required, the services of a skilled professional should be obtained.

CHAPTER I ASBESTOS

What is Asbestos?

Asbestos is the name given to a number of naturally occurring fibrous silicate minerals that have been mined for their useful properties such as thermal insulation, chemical and thermal stability, and high tensile strength. The three common types of asbestos are chrysotile, amosite, and crocidolite. Chrysotile, also known as white asbestos and a member of the serpentine mineral group, is the most common. Asbestos can only be identified under a microscope.

Where is asbestos found in the home?

Asbestos has been used in many products found in the home that provide insulation, strength, and fire protection. In 1989, the U.S. Environmental Protection Agency (U.S. EPA) announced a phased ban of asbestos products to be completed by 1996. However, in 1991, the U.S. Fifth Circuit Court of Appeals overturned and remanded the asbestos ban and phase-out rule to EPA. Today, most asbestos products can still be legally manufactured, although production of asbestos containing materials has decreased dramatically since the late 1970s. The most common items in the home that may contain asbestos are:

- Vinyl flooring
- Duct wrapping on heating and air conditioning systems
- Insulation on hot water pipes and boilers
- Some roofing shingles, and siding
- Vermiculite attic insulation
- Ceiling and wall insulation
- Sheet rock taping compounds and some ceiling materials

Asbestos that has been sprayed on ceilings often has a spongy, “cottage cheese” appearance with irregular soft surfaces. Asbestos troweled on walls has a textured, firm appearance. Vermiculite attic insulation, found both in the attic between trusses and in-between walls, also has the potential to contain asbestos. Vermiculite attic insulation is a pebble-like, pour-in product and is usually light-brown or gold in color.

Manufacturers can provide information on the asbestos content of home products. A certified asbestos consultant can be hired to test building material and determine whether or not asbestos is present and to give advice about how to take care of it safely. Current asbestos bulk testing methods may be insufficient to determine the presence of asbestos in vermiculite attic insulation. For more information on vermiculite, see U.S. EPA’s Protect Your Family from Asbestos-Contaminated Vermiculite at www.epa.gov/asbestos/pubs/verm_questions.html.

How is asbestos harmful?

Intact or sealed (painted or taped over) asbestos is not harmful unless it becomes damaged and friable. Friable means the material can be easily crushed or pulverized to a powder by hand pressure. Friable materials have a higher potential to release fibers. Asbestos fibers that are released into the air and inhaled can accumulate in the lungs and pose a health risk. This risk can be divided into two general categories: risk of asbestosis (lung scarring); and increased risk of cancer.

The U.S. EPA classifies asbestos as a known human carcinogen. If asbestos fibers are inhaled, the chance of contracting lung cancer or mesothelioma (cancer of the lining of the chest or abdomen) increases. The more asbestos is inhaled, the greater risk of developing cancer. Smokers who are exposed to high levels of asbestos have a much greater risk of developing lung cancer than nonsmokers exposed to the same level. Symptoms of cancer may not develop until 10-40 years after the first exposure to asbestos.

Is there a safe level of asbestos?

There is no safe level of asbestos exposure. The more asbestos fibers you inhale, the greater your risk of developing lung cancer and asbestos-related disease. Exposure to asbestos should always be avoided.

How can asbestos content in materials be determined?

When you suspect asbestos is present in building materials, it is important to have the materials tested by a qualified laboratory. Visual inspection alone is not enough to identify the presence of asbestos. It is recommended that you contact a certified asbestos consultant to take samples of potential asbestos containing materials and have them tested by a qualified laboratory. A list of asbestos consultants who have been certified by the California Department of Industrial Relations, Division of Occupational Safety and Health (Cal/OSHA) for evaluating building materials and recommending a course of action may be obtained on the Internet at www.dir.ca.gov/Databases/doshacru/acruList.asp or by calling 510-286-7362 .

How should the homeowner repair or remove asbestos?

Repair or removal of asbestos by the homeowner may be unwise if the damage is severe, since it may result in unnecessary exposure to airborne fibers. In cases where planned remodeling projects are expected to damage asbestos-containing materials, it is wise to hire a qualified contractor to remove the material. The homeowner should use the following guidelines in choosing a qualified contractor:

- Check to see if the contractor is licensed by the California Contractors State License Board and registered with the California Department of Industrial

Relations, Division of Occupational Safety and Health (Cal/OSHA) for doing asbestos work.

- Be aware that some contractors may remove material incorrectly and still charge a substantial fee.
- Require references from the contractor and check them to see if the contractor's work is satisfactory.
- Require the contractor to specify his safety procedures in writing.

The homeowner can expect to pay three times as much for a small removal job than a large one as it is expensive for a contractor to set up all the necessary safety equipment. You should consider hiring a certified asbestos consultant to review safety procedures and oversee the performance of the contractor.

Does the law require asbestos mitigation?

Asbestos mitigation is at the discretion of the homeowner. Even if material contains asbestos, the homeowner may choose to leave it alone or, if necessary, repair it. If the home owner chooses to do his or her own repairs, the home owner must comply with the law. The free Department of Toxic Substances Control fact sheet "Managing Asbestos Waste" is available on the DTSC Web site at www.dtsc.ca.gov/PublicationsForms/upload/OAD_FS_Asbestos1.pdf

What about naturally occurring asbestos that is found near the home?

Naturally Occurring Asbestos (NOA) includes six regulated naturally occurring minerals (actinolite, amosite, anthophyllite, chrysotile, crocidolite, and tremolite) and is commonly found in California within serpentine and other ultramafic rocks and soils of the Coastal Ranges, Klamath Mountains, and the Sierra Nevada Mountains. The California Geological Survey has produced a map that identifies areas more likely to contain NOA in California. The map may be found online at www.consrv.ca.gov/cgs/minerals/hazardous_minerals/asbestos/index.htm.

Asbestos fibers may be released into the air as a result of activities which disturb NOA-containing rock or soils. Development construction activities in areas that contain NOA may release asbestos. Also, driving on roads or driveways surfaced with asbestos containing gravel, such as serpentine, may release asbestos. The California Air Resources Board (ARB) has established Asbestos Airborne Toxic Control Measures (ATCMs) to regulate the surfacing of roads with asbestos-containing gravels and construction and grading activities in areas potentially containing asbestos. For more information about naturally occurring asbestos, go to www.arb.ca.gov/toxics/asbestos/asbestos.htm.

Hotlines:

For information on the identification and abatement of asbestos hazards in the home, and other information about asbestos visit the U.S. EPA Asbestos Web site at www.epa.gov/asbestos .

For technical assistance and information about:

- Toxic Substances Control Act (TSCA);
- Regulations and programs administered under TSCA, including asbestos, lead-based paint, and PCB's; and
- EPA's 33/60 voluntary pollution prevention program;

Contact the Toxic Substances Control Act Assistance Information Service (T.A.I.S.), Washington, D.C. at:

Telephone: (202) 554-1404
Fax: (202) 554-560
E-mail: tsca-hotline@epa.gov

Publications:

Indoor Air Quality Infosheet - Asbestos

This free publication is available from:

American Lung Association
Environmental Health Department
909 12th Street
Sacramento, CA 95814
Telephone: (800) LUNG-USA [(800) 586-4872]

***The Inside Story - A Guide to Indoor Air Quality
Asbestos in Your Home***

These free publications are available from:

U.S. EPA Indoor Air Quality Information Clearinghouse
P.O. Box 37133
Washington, D.C. 20013-7133
Telephone: (800) 438-4318
FAX: (202) 484-1510
E-mail: iaqinfo@aol.com
Web: www.epa.gov/iaq

Asbestos in the Home and Workplace

This list is available on the Internet from:
California Department of Health Services
Indoor Air Quality Program

http://www.cdph.ca.gov/programs/IAQ/Documents/IAQ_Asbestos_2000-03.pdf

List of Certified Asbestos Consultants

This list is available on the Internet or by mail for \$8.00 from:

California Department of Industrial Relations
Division of Occupational Safety and Health (Cal/OSHA)
Asbestos Consultant Certification Unit
2211 Park Towne Circle, Suite 1
Sacramento, CA 95825
Telephone: (916) 574-2993
Web: www.dir.ca.gov

List of Asbestos Abatement Contractors

This list is available for \$25.00 from:

California Department of Industrial Relations
Division of Occupational Safety and Health (Cal/OSHA)
Asbestos Contractor Registration Unit
455 Golden Gate Avenue, 10th Floor
San Francisco, CA 94102
Telephone: (415) 703-5190
Web: www.dir.ca.gov

What You Should Know Before You Hire a Contractor

This free publication is available from:

California Contractors State License Board
9835 Goethe Road
P.O. Box 26000
Sacramento, CA 95827
Telephone: (800) 321-2752 (To receive the publication, leave your name and address on message phone.)

Note: Telephone numbers and prices were correct at the date of publication of this booklet, but are subject to change.

CHAPTER II CARBON MONOXIDE

What is carbon monoxide?

Carbon Monoxide (CO) is an odorless, colorless and tasteless gas. It is highly toxic to humans and animals in higher quantities.

Because it is impossible to see, taste or smell, breathing CO can incapacitate or kill you before you are aware it is present in your home. At lower concentrations, CO may produce flu-like symptoms, including headache, dizziness, disorientation, nausea and fatigue.

What are the sources of carbon monoxide in the home?

CO is the result of incomplete combustion of carbon fuels and is produced from both man-made and natural sources. Typical sources of CO in the home are:

- Unvented kerosene and gas space heaters
- Gas water heaters
- Improperly adjusted or maintained furnaces or boilers
- Wood stoves and fireplaces
- Gas stoves and ovens
- Gasoline powered equipment, such as generators
- Automobile exhaust
- Tobacco smoke

How is carbon monoxide harmful?

Following inhalation, CO combines with hemoglobin in the blood producing carboxyhemoglobin, which is ineffective in delivering oxygen to the body tissues. Carbon monoxide binds to other molecules such as myoglobin and mitochondrial cytochrome oxidase and may cause significant damage to the heart and central nervous system.

At low concentrations, CO exposure may result in fatigue in healthy individuals and chest pain in people with heart disease. At higher concentrations, CO may result in headache, nausea, dizziness, confusion, impaired vision, angina and reduced brain function, depending upon the concentration in air and length of exposure. Exposure to very high concentrations of CO can be fatal.

Breathing high levels of CO during pregnancy may result in miscarriage. Breathing moderate levels of CO during pregnancy can result in slower than normal mental development of your child. In animal studies, exposure to CO during pregnancy had

effects on birth weight, the heart, the central nervous system and development. Children with asthma may be more susceptible to respiratory effects following exposure to CO.

What levels of carbon monoxide are found in the home?

Typical levels in homes with no gas appliances range from 0.5 to 5 parts per million (ppm). Levels measured near properly adjusted gas appliances were between 5 and 15 ppm, while levels near poorly adjusted appliances can be 30 ppm or higher.

Is there a safe level of carbon monoxide?

No standards for CO have been adopted for indoor air. The National Ambient Air Quality Standards for outdoor air are 9 ppm for eight hours and 35 ppm for one hour. The State of California Air Resources Board (ARB) air quality standards for CO are 9 ppm for eight hours and 20 ppm for one hour. The State of California, Office of Environmental Health Hazard Assessment (OEHHA) established an acute, one hour exposure level of 23,000 micrograms per cubic meter of air ($\mu\text{g}/\text{m}^3$) or 20 ppm for CO. This exposure level was based on heart toxicity.

Can carbon monoxide be detected and measured?

California Senate Bill 183 (SB 183) will require owners of single family homes that have a fossil-fuel burning appliance, fireplace or attached garage to install a CO alarm(s) by July 1, 2011. CO detectors trigger an alarm based on accumulation of CO over time or continuous detection of CO.

What can be done to reduce exposure to carbon monoxide?

Always make sure that gas appliances are maintained and properly installed. Here are some common tips to reduce potential CO levels in your home:

- Make sure appliances that burn natural gas, kerosene or other fuels are properly installed and vented.
- Have all appliances maintained on a regular basis.
- Always follow the manufacturer's recommendations and instructions for installation of these devices.
- Do not use portable gas heaters in enclosed indoor settings.
- Do not let your car idle for long periods of time inside the garage.
- Install and use an exhaust fan vented to the outside over gas stoves.
- Make sure the flue is open when using your fireplace.
- Use properly sized wood stoves certified to meet emission standards.
- Most importantly, install carbon monoxide detectors throughout the home.

Links to Additional Information on Carbon Monoxide:

U.S. EPA, An Introduction to Indoor Air Quality (IAQ), Basic Information on Pollutants and Sources of Indoor Air Pollution, Carbon Monoxide,
www.epa.gov/iaq/co.html

OEHHA, Impacts of Criteria Air Pollutants on the Respiratory Health of Children
www.oehha.ca.gov/public_info/public/kids/pdf/balmes.pdf

USFA, DHS, Exposing an Invisible Killer: The Dangers of Carbon Monoxide
www.usfa.dhs.gov/citizens/co/fswy17.shtm

Centers for Disease Control and Prevention (CDC), Carbon Monoxide Poisoning Fact Sheet
www.cdc.gov/co/faqs.htm

Agency for Toxic Substances Disease Registry, CDC, ToxFAQs for Carbon Monoxide
www.atsdr.cdc.gov/toxfaqs/tf.asp?id=1163&tid=25

American Lung Association, Carbon Monoxide Indoors
www.lungusa.org/healthy-air/home/resources/carbon-monoxide-indoors.html

US Consumer Product Safety Commission (CPSC), Carbon Monoxide Questions and Answers
www.cpsc.gov/cpsc/pub/pubs/466.html

CHAPTER III FORMALDEHYDE

What is formaldehyde?

Formaldehyde is a colorless, pungent gas that is soluble in water and most organic solvents. It is used as a raw material in the manufacture of building materials, many consumer products, and some fabrics. Formaldehyde is found in the outdoor air at an average concentration of approximately 3 parts per billion (ppb) or 3.7 micrograms per cubic meter of air ($\mu\text{g}/\text{m}^3$).

How is formaldehyde harmful?

The Office of Environmental Health Hazard Assessment (OEHHA) has concluded that exposures to formaldehyde can cause cancer in humans. In 2004, the International Agency for Cancer Research upgraded formaldehyde to a Group I (known human) carcinogen, based on human epidemiology studies of nasopharyngeal cancer. Exposure to airborne formaldehyde may also cause other illnesses, such as irritation to the eyes, skin, and respiratory tract; coughing; sore or burning throat; nausea; and headaches. Formaldehyde may also worsen asthma or allergy symptoms in those with such pre-existing sensitivities. Reducing exposures to formaldehyde will reduce these health risks.

What levels of formaldehyde are found in the home?

The average formaldehyde concentration inside California homes is about 14 ppb ($17 \mu\text{g}/\text{m}^3$) in conventional homes and 37 ppb ($45 \mu\text{g}/\text{m}^3$) in manufactured homes. Formaldehyde concentrations have been measured at levels greater than 200 ppb ($246 \mu\text{g}/\text{m}^3$) in both manufactured and new conventional homes. However, concentrations inside manufactured homes are generally higher than those in conventional homes due to the increased use of composite wood products.

What are the sources of formaldehyde in the home?

Indoor sources are the major cause of exposures to formaldehyde because people spend most of their time indoors, and there are many indoor sources of formaldehyde that typically produce concentrations several times higher than outdoor levels. Composite wood products are probably the greatest source of formaldehyde in the home. Other sources include other building materials such as some paints, coatings, and wallpaper; some consumer products such as fingernail products; permanent pressed fabric such as clothing and draperies; and combustion sources such as cigarettes and gas appliances.

What are composite wood products?

Plywood, particleboard, and oriented strandboard are composite wood products that are bound together with formaldehyde-containing resins. The two most commonly used resins are urea-formaldehyde and phenol-formaldehyde. Composite wood products used within the home include:

- Particleboard - used for cabinetry, subflooring, shelving, and furniture
- Hardwood plywood - used in paneling, furniture, and as a wall covering
- Medium density fiberboard - used in cabinets, doors, table tops, furniture, and shelving
- Oriented strandboard and softwood plywood - used for exterior use and subflooring, which are manufactured using low-emitting phenol-formaldehyde resins

Why is formaldehyde emitted from these products?

In the production of the resins, not all formaldehyde is bound tightly. Unbound or free formaldehyde can be released later as a gas from composite wood products. Formaldehyde emissions are highest from products made with urea-formaldehyde resins and new products. Emissions ordinarily decrease to low levels over time, as the product ages and off-gasses. If properly manufactured, composite wood products that incorporate phenol-formaldehyde resins do not release significant amounts of formaldehyde.

Is urea-formaldehyde foam a significant source of formaldehyde in homes?

Urea-formaldehyde foam insulation (UFFI) was installed in the wall cavities of some homes during the 1970s and has been used in the manufacture of mobile homes. The Consumer Product Safety Commission banned the use of UFFI in homes and schools in 1982. Although a Federal Court subsequently removed this ban for procedural reasons, UFFI is not currently being installed in homes in California because it does not meet the insulation standards of the California Energy Commission. In homes where UFFI was installed prior to 1982, formaldehyde concentrations have declined with time to levels that are generally comparable to those in homes without UFFI.

How can formaldehyde be detected and measured?

Levels of formaldehyde can be measured by chemical analysis of air samples collected indoors. In general, ambient air monitoring of formaldehyde is done on a 24-hour or several day basis using standard analytical techniques and methods established by federal and state agencies. A useful indicator of the presence of indoor formaldehyde is knowledge of the formaldehyde content or emissions of products. This information can usually be obtained from the manufacturer. In general, you do not need to measure formaldehyde levels if there are few or no materials in the building known to emit high levels of formaldehyde, because levels would then be expected to approach the lower outdoor levels. However, if known or suspected sources are extensively present and cannot be readily removed, it is wise to measure the levels of formaldehyde, to assure that levels are no greater than 7 ppb ($9 \mu\text{g}/\text{m}^3$).

Is there a safe level of formaldehyde?

Most people experience eye and throat irritation when exposed to formaldehyde at levels above 100 ppb (123 µg/m³). Because people differ in their sensitivity to toxic effects, it is difficult to precisely define a concentration of formaldehyde that would be harmless to all people under all circumstances.

Levels in the outdoor air may be considered as the lowest levels that can practicably be achieved in the home. OEHHA has established acute (55 µg/m³, or 44 ppb, one-hour average) and chronic (9 µg/m³, or 7 ppb, long-term average) exposure levels to identify the levels at which sensitive individuals might experience adverse non-cancer health effects. For indoor environments, OEHHA has also identified 7 ppb as the eight hour average level that is protective against non-cancer effects for sensitive individuals. Because formaldehyde may cause cancer, and there is no known level that is absolutely risk free, the California Air Resources Board (ARB) recommends that indoor formaldehyde levels be reduced as much as possible.

What can be done to reduce indoor formaldehyde levels?

Immediate measures include opening windows to increase ventilation and reducing the number of new composite wood products in a home. Where possible, replace composite wood products such as bookcases with products made from solid wood or non-wood materials. Formaldehyde emissions increase with increasing humidity and temperature. Therefore, reducing the temperature and humidity in the home will reduce formaldehyde levels.

Where the source of formaldehyde is wood paneling or extensive cabinetry, these measures may not be adequate. In those cases, removal of the paneling or coating, or replacement of cabinets may be necessary. Local trade organizations and builders' associations may be helpful in finding a contractor to do this work. You can find additional suggestions for reducing indoor formaldehyde levels in the publications listed below.

Publications:

Formaldehyde in the Home-Indoor Air Quality Guideline #1, updated August 2004, www.arb.ca.gov/research/indoor/guidelines.htm

OEHHA, Appendix D. Individual Acute, 8-Hour, and Chronic Reference Exposure Level Summaries, December 2008, www.oehha.ca.gov/air/hot_spots/2008/AppendixD1_final.pdf#page=128

Determination of Formaldehyde and Toluene Diisocyanate Emissions from Indoor Residential Sources, www.arb.ca.gov/research/apr/past/indoor.htm , click on Toxic Air Contaminants, scroll down.

Final Report on the Identification of Formaldehyde as a Toxic Air Contaminant - 1992.

These free publications are available from:
California Air Resources Board, Research Division, Indoor Exposure Assessment
Section
P.O. Box 2815
Sacramento, CA 95812
Telephone: (916) 322-8282 (For first two publications listed)
Telephone: (916) 322-7072 (For third publication listed)
Web: www.arb.ca.gov

***The Inside Story - A Guide to Indoor Air Quality
An Update on Formaldehyde***

These free publications are available from:
Indoor Air Quality Information Clearinghouse
P.O. Box 37133
Washington, D.C. 20013-7133
Telephone: (800) 438-4318
FAX: (202) 484-1510
E-mail: iaqinfo@aol.com
Web: www.epa.gov/iaq/

***A Consumers Guide to Manufactured Housing
Manufactured Housing for Families***

These free publications are available from:
California Department of Housing and Community Development
Division of Administration
P.O. Box 31
Sacramento, CA 95812-0031
Telephone: (916) 445-3338
Web: www.hcd.ca.gov

Note: Telephone numbers and prices were correct at the date of publication of this booklet, but are subject to change.

CHAPTER IV HAZARDOUS WASTE

What is hazardous waste?

Hazardous waste is anything left over from a manufacturing process, chemical laboratory, or a commercial product that is dangerous and could hurt people, animals, or the environment. Many industries, such as oil and gas, petrochemical, electronics, dry cleaners, and print shops, generate hazardous waste.

When hazardous waste is properly managed it is shipped to special facilities for treatment, storage, disposal, or recycling. Hazardous waste that is not properly managed may escape into the environment and contaminate the soil, surface and ground water, or pollute the air. Some causes of hazardous waste releases are leaking underground storage tanks, poorly contained landfills or ponds, hazardous waste spills, or illegal dumping directly on land or water.

What is California doing to locate and clean up hazardous waste sites?

The U.S. EPA has targeted about 1,200 sites nationwide for federal cleanup under the federal Superfund Program. Almost 100 of those sites are in California. California is overseeing the cleanup of hundreds of other sites under a state Superfund administered by the California Department of Toxic Substances Control (DTSC). DTSC works jointly with U.S. EPA and other state agencies, such as the California Regional Water Quality Control Boards and local health departments, to manage hazardous waste problems. The primary purpose of site cleanup and mitigation activities at hazardous waste sites is to reduce or eliminate the risks the sites pose to public health or the environment.

How can the prospective homeowner determine if a home is affected by a hazardous waste site?

State law requires certain written disclosures to be made to prospective homeowners. The seller is required to disclose whether he or she is aware that the property has any environmental hazards such as asbestos, formaldehyde, radon, lead-based paint, fuel or chemical storage tanks, or contaminated soil or water. You can find additional information on real estate disclosure "Disclosures in Real Property Transactions" available from the California Department of Real Estate. See Appendix A in this document for information on how to contact them.

A prospective homeowner may also get information about hazardous waste sites near a home by consulting the "Hazardous Waste and Substances Sites List" which is maintained by the California Environmental Protection Agency (CalEPA). The list is a comprehensive inventory of hazardous waste sites in California, including contaminated wells, leaking underground storage tanks, and sanitary landfills from which there is a known migration of hazardous waste. It also lists active federal and state hazardous waste sites scheduled for cleanup as well as potential hazardous waste sites.

Information on how you can get a copy of this list is at the end of this chapter. The addresses of federal and state agencies that manage hazardous waste programs are listed in Appendix A.

A homeowner or prospective homeowner may choose to hire a registered environmental assessor to investigate a known or suspected environmental hazard at a property. To obtain a list of registered environmental assessors, contact the Registered Environmental Assessor Program at:

P.O. Box 806
Sacramento, CA 95812-0806
Telephone: (916) 324-6881
FAX (916) 324-1379
Web: www.dtsc.ca.gov/rea/

Internet Resources:

You can learn more about the role of the Department of Toxic Substances Control in protecting Californians from hazardous waste by visiting its Web site at

www.dtsc.ca.gov .

Department of Toxic Substances Control Envirostor Database can be accessed at <http://www.envirostor.dtsc.ca.gov/public/>.

The Federal database of potentially contaminated sites is available at www.epa.gov/superfund/sites/index.htm.

The Hazardous Waste and Substances Sites List (Cortese List) on the locations of hazardous materials release sites is at

www.dtsc.ca.gov/database/Calsites/Cortese_List.cfm .

The List of Leaking Underground Storage Tanks is available on the Web at www.geotracker.waterboards.ca.gov.

Hotlines:

For information on the federal Superfund program and the National Priorities List (NPL), contact the U.S. EPA RCRA, Superfund, EPCRA hotline at:

Telephone: (800) 424-9346

Publications:

Disclosures in Real Property Transactions

This publication is available for \$2.00 plus tax from:

California Department of Real Estate Book Orders

P.O. Box 187006

Sacramento, CA 95818-7006 (Mail orders only; a self-addressed envelope is required.)

Web: http://www.dre.ca.gov/pdf_docs/re6.pdf

List of Registered Environmental Assessors

This list is free if you are hiring a registered environmental assessor. If you wish to use it as a mailing list, it is available on CD for \$6.25 and as a hard-copy printout for \$35.00. It's also available free on our Web site at:

www.dtsc.ca.gov/rea

Department of Toxic Substances Control
Registered Environmental Assessor Program
P.O. Box 806
Sacramento, CA 95812-0806
Telephone: (916) 324-6881

The Toxics Directory: References and Resources on the Health Effects of Toxic Substances

This publication is available for \$9.90 from:

California Department of General Services
Documents and Publications
P.O. Box 1015

North Highlands, CA 95660

(Send written request with your name and street address. Make your check out to *Procurement Publications*.)

Ensuring Safe Drinking Water (600M91012)

This free publication is available from:

U.S. Environmental Protection Agency
Public Information Center
1200 Pennsylvania Ave, N.W.
Washington, D.C. 20460
Telephone: (800) 490-9198

Consumer's Guide to California Drinking Water

This publication is available for \$4.00 (plus 5% shipping charge and tax) from:

Local Government Commission
1414 K Street, Suite #600
Sacramento, CA 95814
Telephone: (916) 448-1198 x307
Web: www.lgc.org

Is Your Drinking Water Safe? (PB94-203387)

This publication is available for \$19.50 plus \$4.00 shipping from:

National Technical Information Service
5285 Port Royal Road
Springfield, VA 22161
Telephone: (800) 553-6847
Web: www.ntis.gov

Note: Telephone numbers and prices were correct at the date of publication of this booklet, but are subject to change.

CHAPTER V HOUSEHOLD HAZARDOUS WASTE

What is household hazardous waste?

Although hazardous waste is usually associated with industrial or manufacturing processes, each year Californians discard tons of hazardous wastes in trash cans or down the drain. To determine whether a product is hazardous, ask yourself these questions:

- Is it poisonous when swallowed, touched, or inhaled?
- Does it catch fire easily?
- Is it corrosive? Can it eat through certain containers?
- Is it reactive? Could it explode if it is improperly stored, spilled, or mixed with other products?

If you answer yes to any these questions, then the product is hazardous. Information about whether a product is hazardous usually can be found on the container label. The words “caustic,” “flammable,” “toxic,” and “ignitable” mean that the product is hazardous.

Some products are hazardous on their own, but can become even more dangerous when they are mixed with other household products. For example, most people know that bleach is poisonous, but when it is mixed with ammonia-based cleaners it releases chlorine and hydrazine gases, both of which are extremely poisonous.

Some other hazardous household products are:

- Cleaning products containing ammonia
- Chlorine bleach and cleaning products containing it
- Drain cleaners
- Carpet cleaning products
- Oven cleaners
- Metal polishes
- Garden supplies such as weed and insect killers, rat poison, and fertilizer
- Charcoal lighter fluid, and kerosene
- Automotive supplies such as antifreeze, motor oil, gasoline, batteries and brake fluid
- Paint, varnish, paint removers, glues, and waxes
- Electronic products such as cathode ray tubes, televisions, computers, cell phones
- Universal wastes such as fluorescent lights, small batteries, and products containing mercury

How should hazardous household products be stored?

Hazardous products should be stored in a cool, dry, secure location. They should be stored in locked cupboards, locked drawers, or on a high shelf out of the reach of children and pets. To prevent hazardous products from spilling during an earthquake, shelves should be firmly secured to the wall and have a restraining bar along the side.

The following guidelines will help you properly store household hazardous products:

- Store poisonous products apart from other products.
- Sort products into hazardous waste categories of poisonous, flammable, corrosive, and reactive and store them separately. For example, flammable products such as charcoal lighter and waste oil should be stored apart from corrosive products such as drain cleaner and acid batteries. It is important to store reactive products in a separate location.
- Store bleach and ammonia-based cleaners in separate cupboards, so that if there is a spill the products won't get mixed and release poisonous gas.
- Store products in their original containers.
- Make sure labels can be read and won't come off the container.
- Tightly seal containers and check them often to make sure they are not breaking down. If you notice a container is rusting or leaking, put it inside a larger container and label it clearly.

What is the best way to dispose of household hazardous waste?

The best way to dispose of household hazardous waste is to take it to a community household hazardous waste collection center in your area.

You should never pour unused hazardous household products down the drain. That is illegal in California. It is also illegal to pour used oil and paints on land, down drains, including the storm drains, or to burn them. Waste motor oil, oil filters, antifreeze, and used batteries can be recycled. You should take them to a recycling center or a household hazardous waste collection center. For information about recycling specific products or about household hazardous waste collection programs in your community, call 1-800-CLEANUP or visit the

Department of Resources Recycling and Recovery (CalRecycle) Web site at <http://www.calrecycle.ca.gov/>. You can get additional information on household hazardous waste at www.earth911.org.

Hotlines:

For information on household hazardous waste and used oil collection and recycling centers, information on buying recycled products, the 3 R's - Reduce, Reuse and Recycle, and other environmental tips and events, contact the California Environmental Hotline at:

Telephone: 1-800-CLEANUP (1-800-253-2687)

Web Site: www.1800cleanup.org

*For information on recycling and collection centers and referrals for county and city agencies, call the California Integrated Waste Management Board at:
Telephone: (800) 553-2962*

*To report hazardous waste violations, call the California Department of Toxic Substances Control Waste Alert hotline at:
Telephone: (800)-69TOXIC [(800) 698-6942]*

*For general information on hazardous wastes, call the California Department of Toxic Substances Control at:
Telephone: (800) 61TOXIC [(800) 618-6942]*

Publications:

Household Products Management Wheel

This product is available for \$4.95 from:
Environmental Hazards Management
Institute 10 New Market Road
P.O. Box 932
Durham, NH 03824
Telephone: (603) 868-1496
FAX: (603) 868-1547

Note: Telephone numbers and prices were correct at the date of publication of this booklet, but are subject to change.

CHAPTER VI LEAD

How is lead harmful?

Lead is a common environmental toxin that has been used extensively in consumer products such as paint and gasoline. Much of that lead remains in the California environment where people may be exposed to it. Children under the age of six years are particularly at risk. They typically are exposed to lead through the normal hand-to-mouth behavior that occurs as they explore their environment. Crawling or playing on the floor, and putting their fingers, toys, and other items in their mouths can expose a child to lead. Lead poisoning, which is often unrecognized, can result in health effects that are often irreversible, including brain damage, mental retardation, convulsions, and even death. If lead poisoning goes undetected, it may result in behavior problems, reduced intelligence, anemia, and serious liver or kidney damage.

Lead is also harmful to adults. Lead poisoning can cause reproductive problems in both men and women, high blood pressure, kidney disease, digestive problems, nerve disorders, memory and concentration problems, and muscle and joint pain. Adult lead poisoning is most often the result of occupational exposure, or exposure following unsafe home renovation. If a pregnant woman is lead poisoned, the lead can pass into her baby's blood and poison the baby.

How can I find out if my family has lead poisoning?

The most important step you can take to protect your children is to prevent them from being exposed to lead. Most lead poisoning does not cause acute symptoms, so the only way to know if a person is lead poisoned is by testing the level of lead in his or her blood.

There are many ways a child can be exposed to lead. The law assumes that, at minimum, children are at risk if they are on publicly funded programs for low-income children or if they live in, or spend a lot of time in, a place built before 1978 that has peeling or chipped paint, or that has been recently renovated. These children must be tested for lead at age one and two years. Children below the age of six years, who were not tested at ages one or two, should receive make-up testing as soon as possible. If you have a job or a hobby where you may be exposed to lead, you should be tested regularly. If you are pregnant, ask your doctor about a lead test.

A physician can order this simple test. Some doctors and healthcare centers can perform the test in their offices. Under California law, it must be covered by health insurance plans. Children from families with modest incomes can be tested at no cost through the Child Health and Disability Prevention Program (CHDP). The test is a required part of well-child checkups. For more information on CHDP and to locate an office in your area visit their Web site at www.dhs.ca.gov/pcfh/cms/chdp.

Because lead poisoning is the result of contact with lead, the primary treatment is to identify the source of lead, and remove or isolate it. Further medical management may be necessary, depending on factors such as the severity and duration of exposure. Adults and children who become lead poisoned will need regular testing to monitor levels of lead in the body.

Where is lead found in the home?

Many houses and apartments built before 1978 have paint that contains lead. In 1978, the Consumer Product Safety Commission banned paint containing high levels of lead for residential use. If your home or apartment was built before 1978, you should assume it has lead paint.

Lead-based paint that is peeling, chipping, chalking, or cracking is a hazard and needs immediate attention. Lead-based paint may also pose a hazard on surfaces children can chew or in areas with heavy wear. These areas include windows, windowsills, doors and doorframes, stairs, railings, banisters, porches, and fences. When painted surfaces bump or rub together, they generate lead dust. Likewise, dry-scraping, sanding, or heating lead paint during repainting or remodeling also creates large amounts of lead dust. This dust can poison your family.

Soil may be contaminated with lead from leaded gasoline emissions and from deteriorating exterior paint. Lead in soil can be a hazard to children who play in the bare soil. It can also contaminate the home and floor dust when people track soil into the house on their shoes.

Other Sources: Lead can be found in jobs such as battery repair or recycling, radiator repair, painting or remodeling, and lead smelting. Lead from the workplace poses a hazard for workers' families. Workers can bring lead into their homes on their work clothes, shoes, and bodies without knowing it. Some hobbies also use lead. These include ceramics, stained glass, fishing weights, and bullet casting or firing. Lead can leach into food cooked, stored, or served in some imported dishes or handmade pottery. Some traditional remedies such as Azarcon, Greta, Pay-loo-ah, Surma, Kohl, and Kandou contain large amounts of lead and present a serious danger. Imported candy, especially chili or tamarind candy or its packaging, is frequently lead contaminated. Lead has been found in painted toys and inexpensive costume jewelry, particularly imported items. Older water systems may have pipes containing lead or pipes with lead solder.

How can I check my home for lead hazards?

To inspect your home for lead hazards, hire an individual who has been certified by the California Department of Public Health (CDPH). CDPH certification is now required for all those doing lead hazard evaluations, lead abatement plan preparation, lead abatement work and lead clearance inspections for residential and public buildings in California ([Title 17, CCR § 35001-35050 and § 36000-36100](#)). A CDPH-certified

inspector/assessor can determine the lead content of painted surfaces in your home and identify sources of lead exposure such as peeling paint, lead contaminated soil, or lead-contaminated dust. The assessment should outline the actions to take to address these hazards.

A CDPH-certified inspector/assessor may use a variety of methods to assess lead hazards in your home. These include visual inspection of paint condition; laboratory tests of paint, dust and soil samples; and a portable x-ray fluorescence lead testing (XRF) machine.

You may have seen home lead test kits in your local hardware store. Recent studies suggest, however, that they are not accurate for testing paint, soil, or dust. They may be used, however, to test pottery and ceramics for the presence of lead.

How can I reduce lead hazards safely?

If your house has lead hazards, you can take action to reduce your family's risk. Most importantly, if you have young children, be sure they receive a blood lead test. This is particularly critical if you live in a unit that has been recently renovated or have remodeled your home.

Second, keep your home as clean and free of dust and deteriorated paint chips as possible. Clean floors, window frames, windowsills, and other horizontal surfaces weekly. Use a mop, sponge, or disposable cloths with a solution of water and an all-purpose cleaner. Rinse out mops and sponges thoroughly after use. Use doormats or remove shoes before entering your home to avoid tracking in lead from bare soil. Have children play in grassy or landscaped areas instead of bare soil.

Wash children's hands often, especially before meals and bedtime. Keep play areas clean. Wash bottles, pacifiers, toys, and stuffed animals regularly. Feed your children nutritious meals that include foods high in iron and calcium. Give children regular meals and snacks. Children with full stomachs and nutritious diets tend to absorb less lead.

How can I significantly reduce lead hazards?

In addition to regular cleaning and good nutrition, you can **temporarily** reduce lead hazards by repairing damaged painted surfaces and planting grass or using landscaping materials to cover soil with high lead levels. These actions are not permanent solutions and need ongoing attention.

To **permanently** remove lead hazards, you should hire a lead abatement contractor. Abatement methods include removing, sealing, or enclosing lead-based paint with special materials. Simply painting over lead-based paint with regular paint is not a permanent solution. Hire an individual who has been certified by the CDPH as a Supervisor. CDPH-certified Supervisors and Workers have the proper training to do this

work safely. They have the proper equipment to clean up thoroughly. They will also follow strict safety rules set by the state and federal governments.

What precautions should I take when remodeling my home?

Before you begin any remodeling or renovations that will disturb painted surfaces, (such as scraping or sanding paint, or tearing out walls) test the area for lead-based paint. To fully protect your family from unsafe renovation hazards, hire a CDPH-certified Supervisor.

Never use a dry scraper, belt-sander, propane torch, or heat gun to remove lead-based paint. These actions create large amounts of poisonous lead dust and fumes. This lead dust can remain in your home long after the work is done, and can make your family very sick. It is important to move your family (especially children and pregnant women) out of the home until the work is completed and the area has been properly cleaned.

You can find out about other safety measures by calling (800) 424-LEAD [(800) 424-5323]. Ask for the brochure "Reducing Lead Hazards when Remodeling Your Home." This brochure explains what to do before, during, and after renovations.

What is the source of lead in water?

The source of lead in water is most likely to be lead in water pipes, lead solder used on copper pipes, and some brass plumbing fixtures. Lead pipes are generally found only in homes built before 1930. The use of lead-based solder in plumbing applications in homes and buildings was banned in 1988. However, many homes built prior to 1988 may contain plumbing systems that use lead solder. The levels of lead in water from these homes are likely to be highest during the first five years after construction. After five years there can be sufficient mineral deposit, except where the water is soft, to form a coating inside the pipe; this coating prevents the lead from dissolving. However, recently, new chemical agents being used in some water systems have been associated with increased corrosion and have resulted in increased levels of lead in water.

How can lead levels in water be determined?

If you suspect lead contamination in drinking water, you may submit water samples to a laboratory certified by the CDPH. For a list of certified laboratories, see Publications at the end of this chapter. Consult with the laboratory on the proper procedures for sample taking. Information on the possibility of lead contamination in your municipal water supply may be obtained from the water utility serving your area.

How can levels of lead in water be reduced?

Lead levels in water can be reduced by removing lead piping or lead solder, by installing a home treatment system certified by the CDPH, or regularly flushing each tap before consuming the water. Another alternative for homeowners is to purchase bottled water. A detailed discussion of home treatment systems is presented in, "Consumers Guide to California Drinking Water" (see Publications).

Where there are elevated lead levels in water, homeowners who choose not to install a treatment system, or use bottled drinking water, should flush each tap before the water is consumed. Water which has been standing in the water pipes for more than six hours should be flushed from the tap until the temperature changes, and then, for about 15 seconds more. Because lead is more soluble in hot water, the homeowner should not drink or prepare food using hot water from the tap. The flushed water should be saved and used for other purposes, such as washing clothes or watering plants.

What are my responsibilities if I am selling, renting, or remodeling a home built before 1978?

If you are planning to buy, rent, or renovate a home built before 1978, federal law requires sellers, landlords, and remodelers to disclose certain information prior to finalizing contracts.

Landlords must:

- Disclose known information on lead-based paint hazards.
- Give you a lead hazard pamphlet before leases take effect. Leases must also include a federal form about lead-based paint.

Sellers must:

- Disclose known information on lead-based paint hazards.
- Give you a lead hazard pamphlet before selling a house. Sales contracts must also include a federal form about lead-based paint. Buyers have up to 10 days to check for lead hazards.

Renovators must:

- Give you a lead hazard pamphlet before starting to work.

If you want more information on these requirements, call the National Lead Information Clearinghouse at (800) 424-LEAD [(800) 424-5323].

Hotlines:

*For more information on lead in drinking water and information on federal regulations about lead in drinking water, contact the U.S. EPA Safe Drinking Water Hotline in Washington, D.C. at:
Telephone: (800) 426-4791*

For information on how to protect children from lead poisoning, contact The National Lead Information Center at:

Telephone: (800) Lead-FYI [(800) 532-3394]

For other information on lead hazards, call The National Lead Information Center Clearinghouse at:

Telephone: (800) 424-LEAD [(800) 424-5323]

To request information on lead in consumer products, or to report an unsafe consumer product or a product-related injury, contact the Consumer Product Safety Commission at:

Telephone: (800) 638-2772

To request local lists of CDPH-certified inspectors or abatement workers, contact the Lead-related Construction Hotline at:

Telephone: (800) 597-LEAD [(800) 597-5323] or visit the CDPH Web site at www.cdph.ca.gov

To obtain additional information on lead poisoning, or a list of local county lead programs, contact the CDPH Childhood Lead Poisoning Prevention Branch at:

Telephone: (510) 620-5600 or visit the CDPH Web site at www.cdph.ca.gov/programs/CLPPB.

Publications:

List of Certified Laboratories to Perform Hazardous Waste Analysis

This free list is available from:

California Department of Health Services
Environmental Laboratory Accreditation Program
850 Marina Bay Parkway, Ste. G365/EHL
Richmond, CA 94804

Telephone: (510) 620-2800

Web: www.cdph.ca.gov/certlic/labs/Documents/ELAPLablist.xls

Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing

This publication is available for \$45.00 from:

Department of Housing and Urban Development (HUD)
Information Services, HUD User
P.O. Box 6091

Rockville, MD 20849

Telephone: (800) 245-2691

Web: www.huduser.org

Lead in your Drinking Water

This publication is available from:

U.S. Environmental Protection Agency
Public Information Center
1200 Pennsylvania Ave., N.W.
Washington, D.C. 20460
Telephone: (202) 272-0167

The Inside Story - A Guide to Indoor Air Quality

This free publication is available from:
Indoor Air Quality Information Clearinghouse
P.O. Box 37133
Washington, D.C. 20013-7133
Telephone: (800) 438-4318
Web: www.epa.gov/iaq/

Consumers Guide to California Drinking Water

This publication is available for \$4.00 (plus 5 percent shipping charge, and tax) from:
Local Government Commission
1414 K Street, Suite #250
Sacramento, CA 95814
Telephone: (916) 448-1198 x 307
Web: www.lgc.org

Lead Poisoning Prevention Wheel

This publication is available for \$3.95 from:
Environmental Hazards Management Institute
10 New Market Road
P.O. Box 932
Durham, NH 03824
Telephone: (603) 868-1496

Note: Telephone numbers and prices were correct at the date of publication of this booklet, but are subject to change.

CHAPTER VII MOLD

What are molds?

Molds are simple, microscopic organisms present virtually everywhere, indoors and outdoors. Molds, along with mushrooms and yeasts, are fungi and are needed to break down dead material and recycle nutrients in the environment.

For molds to grow and reproduce, they need only a food source – any organic material, such as leaves, wood, paper, or dirt – and moisture. Because molds grow by digesting organic material, they gradually destroy whatever they grow on. Sometimes, new molds grow on old mold colonies. Mold growth on surfaces can often be seen in the form of discoloration, frequently green, gray, brown, or black but also white and other colors. Molds release countless tiny, lightweight spores, which travel easily through the air.

How am I exposed to indoor molds?

Everyone is exposed to some mold on a daily basis without evident harm. There are usually mold spores in the air inside homes. Most indoor mold spores come from outdoors by blowing through open windows or being tracked into homes as dust on shoes. Mold spores primarily cause health problems when they are present in large numbers and people inhale high concentrations of spores in air. This can occur when there is active mold growth in a home, office, or school where people live or work. People can also be exposed to mold by touching moldy materials and by eating contaminated foods. Molds will grow and multiply whenever conditions are right, that is when sufficient moisture is available and organic material is present. The most important factor allowing mold to grow is dampness or moisture accumulation in the home. The following are common sources of indoor moisture that may lead to mold problems:

- Flooding
- Leaky roofs
- Sprinkler spray hitting the house
- Plumbing leaks
- Overflow from sinks, showers, bathtubs, or sewers
- Damp basement or crawl space
- Steam from bathing, doing laundry, or cooking
- Humidifier use
- Wet clothes drying indoors or clothes dryers exhausting hot, humid air indoors

Warping floors and discoloration of walls and ceilings can be indications of moisture problems. Condensation on windows or walls is also an important indication, but it can sometimes be caused by an indoor combustion problem. Have fuel-burning appliances routinely inspected by your local utility or a professional heating contractor.

Should I be concerned about mold in my home?

Yes, if indoor mold growth is extensive, it can cause very high and persistent airborne spore exposures. Persons exposed to high spore levels can become sensitized and develop allergies to the mold or other health problems. Mold growth can also damage your furnishings, such as carpets, sofas, and cabinets. Clothes and shoes in damp closets can become soiled. In time, unchecked mold growth can cause serious damage to the structure of your home.

What symptoms are commonly seen with mold exposure?

Exposure to large amounts of mold can cause health effects through inflammation, allergic response, or, rarely, infection. Allergic reactions, often referred to as hay fever, are the most common health problems reported following mold exposure. Typical symptoms that mold-exposed persons report, alone or in combination, include:

- Breathing problems, such as wheezing, difficulty breathing, and shortness of breath
- Nose or sinus congestion (stuffy feeling, sinus headache)
- Eye irritation (burning, watery, or reddened eyes)
- Dry, hacking cough
- Nose or throat irritation (runny nose, sneezing, sore throat)
- Skin rashes or red, itchy skin

Headaches, memory problems, mood swings, nosebleeds, body aches and pains, and fevers are occasionally reported in mold cases, but their cause is not understood.

How much mold can make me sick?

For some people, encountering even a relatively small number of mold spores can trigger an asthma attack or lead to other health problems. For other persons, symptoms may occur only when exposure levels are much higher. Nonetheless, indoor mold growth is unsanitary and undesirable. Basically, if you can see or smell mold inside your home, take steps to identify and eliminate the excess moisture and to cleanup and remove the mold.

Are some molds more hazardous than others?

Allergic persons have different levels of sensitivity to molds, both as to the amount and the types that cause them to feel ill. In addition to being able to cause allergies, certain types of molds, such as *Stachybotrys chartarum*, may produce compounds that have toxic properties, which are called mycotoxins. Mycotoxins are not always produced, and whether a mold produces mycotoxins while growing in a building depends on what the mold is growing on as well as environmental conditions such as temperature, humidity, and other unknown factors. When mycotoxins are present, they occur in both living and

dead mold spores and may be present in materials into which mold has grown. While *Stachybotrys chartarum* and some other types of molds are growing, a wet slime layer covers the spores, preventing them from becoming airborne. However, when the mold dies and dries up, air currents or physical handling can cause spores to become airborne.

At present there is no readily available, inexpensive test to determine if a mold growing in a building is producing toxins. A limited number of specialized laboratories can test for mycotoxins in dust or building materials such as gypsum wallboard. These tests are very expensive and the results are not helpful in determining if there is an additional health risk from mycotoxins. There are also no blood or urine tests that a physician can use to determine if an individual has been exposed to the spores of a toxin-producing fungus or its mycotoxins.

How can I tell if I have mold in my house?

You may suspect that you have mold if you see discolored patches or cottony or speckled growth on walls or furniture or if you smell an earthy or musty odor. You also may suspect mold contamination if mold-allergic individuals experience some of the symptoms listed earlier when in the house. Evidence of past or ongoing water damage should also trigger a more thorough inspection. You may find mold growth underneath water-damaged surfaces or behind walls, floors, or ceilings.

Should I test my home for mold?

The California Department of Public Health (CDPH) does not recommend testing as a first step to determine if you have a mold problem. Reliable air testing for mold can be expensive and requires experience and equipment that is not available to most people. Owners of individual private homes and apartments generally will need to pay a contractor to do such testing, because insurance companies and public health agencies seldom provide this service. Mold inspection and cleanup is usually considered a housekeeping task that is the responsibility of the homeowner or landlord, as are roof and plumbing repairs, house cleaning, and yard maintenance.

Another reason the CDPH does not recommend testing for mold is that there are few available standards for judging what is an acceptable amount of mold. In all locations, there is some level of airborne mold outdoors. If air testing is carried out in a home, an outdoor air sample also must be collected at the same time, to allow comparison of indoor and outdoor spore types and numbers. Because some people are much more sensitive to mold spores than are other people, mold testing is at best a general guide. The simplest way to deal with a suspicion of mold contamination is, if you can see or smell mold, you likely have a problem and should take the steps outlined below. Mold growth is likely to recur unless the source of moisture that is allowing mold to grow is removed and the contaminated area is cleaned.

Assessing the Size of a Mold Contamination Problem

There will be a significant difference in the cleaning recommendations for a small mold problem – total area of visible mold growth is less than 10 square feet – and a large mold problem – more than 100 square feet. In the case of a relatively small area, the homeowner using personal protective equipment, such as a dust mask, safety goggles, and household gloves, can handle the cleanup. However, for larger areas, choose an experienced, professional contractor.

General Cleanup Procedures

- Find and remove sources of moisture
- Find and determine the extent and area of visible mold growth
- Clean and dry moldy areas – do not allow dust from the moldy areas to get into the rest of the home
- Bag and dispose of all material that may have moldy residues, such as rags, paper, leaves, and debris

Clean up should begin after the moisture source is fixed and excess water has been removed. Wear gloves when handling moldy materials. **Spores are more easily released when moldy materials dry out, so it is advisable to remove moldy items as soon as possible.** Detailed cleanup procedures are available in the California Department of Health Services Indoor Air Quality Section fact sheet entitled, “Mold in My Home: What Do I Do?” It is available on the Internet at www.cdph.ca.gov/programs/IAQ/Documents/MIMH_2006-06_2009-03rev6p.doc or by calling (510) 620-2874.

How can I prevent indoor mold problems in my home?

Inspect your home regularly for signs and sources of indoor moisture and mold. Take steps to eliminate sources of water as quickly as possible. If a leak or flooding occurs, it is essential to act quickly so that wet materials can dry within 48 hours:

- Stop the source of the leak or flooding.
- Remove excess water with mops or wet vacuum.
- Move wet items to a dry, well-ventilated area. Move rugs and pull up wet carpet as soon as possible.
- Open closet and cabinet doors and move furniture away from walls to increase circulation.
- Run portable fans to increase air circulation. Do NOT use the home’s central blower if flooding has occurred in it or in any of the ducts. Do NOT use fans if mold may have already started to grow, or if it has been more than 48 hours since the flooding.
- Run dehumidifiers and window air conditioners to lower humidity.
- Do NOT turn up the heat or use heaters in confined areas, as higher temperatures may increase the rate of mold growth.

- If water has soaked inside the walls, it may be necessary to open wall cavities by removing the baseboards and drilling a hole through the bottom of the wet wall, or by prying away wall paneling.

Publications:

Mold in My Home: What Do I Do?

This free document is available from:
California Department of Public Health
Indoor Air Quality Section
850 Marina Bay Parkway, G365 EHLB
Richmond, CA 94804
Telephone: (510) 620-2874

Web: www.cdph.ca.gov/programs/IAQ/Documents/MIMH_2006-06_2009-03rev6p.doc

Numerous mold-related articles

and documents are available from:

California Department of Public Health
Environmental Health Investigation Branch
850 Marina Bay Parkway
Building P, 3rd floor
Richmond, CA 94804-6403

Web: www.ehib.org/search.jsp?ss=mold&google=on

Mold Remediation in Schools and Commercial Buildings
A Brief Guide to Mold, Moisture, and Your Home

These free documents are available from:

U.S. Environmental Protection Agency
IAQ Information Clearinghouse
Telephone: (800) 438-4318

Web: www.epa.gov/mold/moldresources.html

Repairing Your Flooded Home

This free publication is available from:

American Red Cross
8928 Volunteer Lane, Sacramento, CA 95826
Telephone: (916) 368-3131

Web: www.redcross.org

For local assistance, contact your county or city Department of Health, Housing, or Environmental Health. Phone numbers for these agencies are located in the blue government pages at the front of your local telephone directory.

Note: Telephone numbers and prices were correct at the date of publication of this booklet, but are subject to change.

CHAPTER VIII RADON

What is radon?

Radon is a naturally occurring colorless, tasteless, and odorless radioactive gas that comes from the decay of uranium found in nearly all soils. It enters buildings from the ground through cracks and openings in concrete slabs, crawl spaces, floor drains, sumps, and the many tiny pores in hollow-wall concrete blocks. When the pressure within a home is lowered, more radon can be drawn from the soil and enter the home. Indoor air pressure may be lower during colder months when heated air rises from the floor level to the ceiling or second story level in the house. Indoor pressure may also be lowered in tightly sealed houses through use of exhaust fans such as those in many kitchens and bathrooms.

Once inside a building, radon can become trapped. Unless the building is properly ventilated to remove it, the gas can become a health hazard.

Where is radon found?

Radon is typically present in rocks containing uranium such as certain granites and shales. The amount of radon that can enter soils and groundwater depends on the concentrations of uranium in the underlying rock. Radon can also be found in the air at very low concentrations.

If radon is present in tap water, it can be released when water is used indoors for showering, washing dishes, or washing clothes. Radon is of most concern when water is obtained directly from a well that draws water from a source exposed to uranium and radium. Most of the radon in water obtained from a surface source, such as a reservoir or well water stored in an open tank, has been released before it reaches the home. Building materials are not a significant source of radon except where they incorporate rocks rich in radium or uranium such as granite and shales.

Why is radon harmful?

Long-term exposure to elevated levels of radon can increase your risk of getting lung cancer. Tobacco smokers are at an even greater risk. Radon levels vary throughout the country. The amount of radon entering homes varies from home to home. Because radon is colorless, odorless, and tasteless, testing is the only way to find out if you and your family are at risk from it.

Exposure to radon does not result in any immediate symptoms. For example, it does not result in acute respiratory effects such as colds or allergies. Any cancer resulting from inhaling radon is not likely to arise for at least 20-30 years after exposure begins, and both the level of exposure and duration of exposure are factors which determine the risk of developing lung cancer.

Where are the highest levels of radon in the home?

Generally, the living area closest to the soil surface has the highest level of radon. Upper stories have lower levels of radon. Consequently, radon is rarely a concern in high rise apartment buildings, other than at ground level.

Do adjacent houses have similar levels of radon?

Because the amount of uranium and radium in the soil varies, and because houses are constructed and used in different ways, houses in the same neighborhood will have different radon levels.

Is there a safe level of radon?

We know that the greater the exposure to radon, the greater the risk of developing lung cancer. But we do not know if there is a radon level that is harmless. Both the duration of exposure and the level of radon in the air are important in determining the risk of developing lung cancer. Smoking may be a large contributing factor to lung disease associated with radon exposure. Currently, the California Department of Public Health (CDPH) recommends that you take action to reduce radon levels in your house if the annual average indoor air concentration exceeds 4 picocuries per liter (pCi/L).

How can radon levels be measured?

Several types of passive radon detectors or active devices can measure the level of radon in a house. Passive detectors are devices left in place for a period of time that require no ongoing activity or power. To obtain accurate results, the homeowner should carefully follow the manufacturer's instructions. Although short-term measurements of radon levels are more convenient, health risk can be more accurately determined from measurements made over a year. Active devices require a source of power and are used by professional radon testers to monitor radon levels. These devices are usually used during real estate transactions.

Where can I get a radon detector?

The CDPH Radon Program is now offering short term test kits for \$7.00 for California residents. CDPH has contracted with Alpha Energy Laboratories ([DrHomeAir](http://DrHomeAir.com)) to provide this service. The test kit can be ordered on-line at www.drhomeair.com/ . The CDPH Radon Program maintains lists of currently certified testers, mitigators and laboratories at www.cdph.ca.gov/HealthInfo/environhealth/Pages/RadonServiceProviders.aspx This list of certified radon providers can also be obtained by calling the CDPH Radon Program Hotline at (800) 745-7236.

What must be done to reduce indoor radon levels?

The U.S. EPA and CDPH recommend that homeowners attempt to reduce radon levels in any home that has an annual average level of radon at or above 4 pCi/L. The mitigation method chosen will depend on the construction of the house, extent of radon reduction required, and cost. After installing a mitigation system, we recommend that radon levels be monitored at regular intervals to make sure the mitigation is working.

A qualified contractor should install the radon mitigation system unless the homeowner fully understands the principles of the mitigation system.

When should water be tested for radon?

When a test shows that indoor levels of radon are at or above 4 picocuries per liter, homeowners should also consider a water test. If the water comes from a water system, information about the source of the water and any radon tests done on it can be obtained from the company supplying the water. For information or assistance with interpreting test results, contact the CDPH Division of Drinking Water and Environmental Management (see Appendix A) at www.cdph.ca.gov/programs/Pages/DDWEM.aspx.

The radon concentration of water from a private well can be measured by having a sample analyzed at a laboratory certified to test for radon in water. Homeowners should consult the CDPH radon program at (916) 449-5674 for guidance on the type of water analysis appropriate to the area and well type. The method of sample collection is critical. To get a list of certified laboratories, call the CDPH at (800) 745-7236 or visit their website at www.cdph.ca.gov/HealthInfo/environhealth/Pages/RadonServiceProviders.aspx.

How can levels of radon in water be reduced?

Radon levels in water can be reduced by 99 percent by the installation of a granular activated carbon unit (GAC) on the water line entering the house. GAC units should be certified by the CDPH. As radon accumulates and decays in the GAC unit, the unit itself becomes radioactive. Therefore, these units must be shielded or located away from the house to protect occupants from radiation. The GAC filters also require special handling during replacement and disposal. Aeration may also remove radon from water. This technique may be more costly but avoids the problem of radiation build up. Selection of the proper water treatment technology depends primarily upon its removal efficiency (other contaminants in the water may adversely affect this), safety, initial costs, and operating and maintenance costs. Therefore, professional guidance is strongly advised.

Does the law require mitigation?

Mitigation of radon is not required by law and is at the discretion of the homeowner.

Hotlines:

For information on how to purchase a radon detector, how to find someone to test your home, or for informational publications on radon, call the CDPH Radon Program Hotline at: (800) 745-7236 or visit their website at www.cdph.ca.gov/HealthInfo/environhealth/Pages/Radon.aspx

For specific assistance, call the CDPH Radon Program at: (916) 449-5674

Publications:

List of Certified Providers of Radon Services

This publication is available by calling CDPH Radon Program Hotline at (800) 745-745-7236 or at www.cdph.ca.gov/HealthInfo/environhealth/Pages/RadonServiceProviders.aspx

California Department of Public Health

Indoor Radon Program

1616 Capitol Avenue, 2nd Floor

P.O. Box 997413

Sacramento, CA 95899-7413

Telephone: (800) 745-7236

Web: www.cdph.ca.gov/HealthInfo/environhealth/Pages/Radon.aspx

Radon in California

A Citizen's Guide to Radon

Homebuyers and Sellers Guide to Radon

The Inside Story - A Guide to Indoor Air Quality

How to Reduce Radon Levels in your Home

Model Standards for Radon in New Residential Buildings

These free publications are available from:

U.S. EPA Indoor Air Quality Information Clearinghouse

P.O. Box 37133

Washington, D.C. 20013-7133

Telephone: (800) 438-4318

Fax: (202) 484-1510

Email: iaqinfo@aol.com

Web: www.epa.gov/iaq/

Note: Telephone numbers and prices were correct at the date of publication of this booklet, but are subject to change.

Federal Agencies

**U.S. Department of Housing and Urban Development
(HUD)**

Office of Lead Hazard Control
451 7th Street S.W., Room B133
Washington, D.C. 20410
Telephone: (202) 755-1785
Web: www.hud.gov
HUD helps people build and maintain communities of opportunity.

U.S. Environmental Protection Agency (U.S. EPA)

Public Information Center
1200 Pennsylvania Ave., N.W.
Washington, D.C. 20460
Telephone: (202) 272-0167
Web: www.epa.gov
The U.S. EPA is a regulatory agency responsible for implementing federal laws designed to protect our air, water, and land from past and future environmental hazards.

State Agencies

California Air Resources Board

Research Division
Indoor Exposure Assessment Section
1001 I Street
P.O. Box 2815
Sacramento, CA 95814
Telephone: (916) 322-8282
Web: www.arb.ca.gov

California Contractor's State License Board

9821 Business Park Drive
P.O. Box 26000
Sacramento, CA 95827
Telephone: (800) 321-2752
Web: www.contractorslicense.com
This board is responsible for licensing contractors, including asbestos abatement.

California Department of Industrial Relations

Division of Occupational Safety and Health (Cal/OSHA)
Asbestos Consultant Certification Unit
2211 Park Towne Circle, #1
Sacramento, CA 95825
Telephone: (916) 574-2993
Web: www.dir.ca.gov
Cal/OSHA is the state equivalent to the Federal Occupational

Safety and Health Administration (OSHA) and regulates protection of workers.

California Department of Public Health

Call your local county health department listed in the front of the white pages or, on the Internet, visit www.cdph.ca.gov

California Department of Public Health

Environmental Management Branch, Radon Program

1616 Capital Avenue, 2nd Floor, MS 7405

P.O. Box 997413

Sacramento, CA 95899-7413

Telephone: (800) 745-7236

Web: www.cdph.ca.gov/HealthInfo/environhealth/Pages/Radon.aspx

This branch provides publications and information about radon hazards.

California Department of Public Health

Environmental Lab Accreditation Program

850 Marina Bay Parkway

Building P, Third Floor

Richmond, CA 94804-6403

Telephone: (510) 620-5600

APPENDIX A List of Federal and State Agencies

Contact information provided was correct as of the date of publication, but is subject to change.

This office may provide information about test procedures for analyzing environmental pollutants.

California Department of Public Health

Division of Drinking Water and Environmental Management

Drinking Water Technical Program Branch

Sacramento Headquarters

1616 Capital Avenue, MS 7400

P.O. Box 997413

Sacramento, CA 95899-7413

Telephone: (916) 449-5600

This division collects and evaluates water quality information on drinking water in California and supervises the activities of all public water systems. It also provides assistance to local health departments, water purveyors, and the general public on issues related to water quality, water supply, and water treatment:

Northern California Section

Sacramento District

8455 Jackson Road, Room 120

Sacramento, CA 95826

Telephone: (916) 229-3126

Lassen, Valley, Klamath & Shasta Districts

415 Knollcrest Drive, Suite 110

Redding, CA 96002

Telephone: (916) 224-4800

North Coastal Section

San Francisco & Santa Clara Districts

2151 Berkeley Way, Room 458

Berkeley, CA 94704

Telephone: (510) 540-2158

Mendocino & Sonoma Districts

50 D Street, Suite 200

Santa Rosa, CA 95404-4752

Telephone: (707) 576-2145
Monterey District
1 Lower Ragsdale, Bldg. 1, Suite 120
Monterey, CA 93940
Telephone: (831) 655-6939

Central California Section
Merced & Visalia Districts
1040 East Herndon Avenue, Suite 205
Fresno, CA 93720-3158
Telephone: (559) 447-3300

Stockton District
31 E. Channel Street, Room 270
Stockton, CA 95202
Telephone: (209) 948-7696

Tehachapi District
1200 Discovery Drive, Suite 100
Bakersfield, CA 993309
Telephone: (661) 335-7315

Southern California Section
Los Angeles District & Metropolitan Districts
1449 W. Temple Street, Room 202
Los Angeles, CA 90026
Telephone: (213) 580-5723

Santa Barbara District
1180 Eugenia Place, Suite 200
Carpinteria, CA 93013
Telephone: (805) 566-1326

South Coastal Section
San Bernardino District
464 West 4th Street, #437
San Bernardino, CA 92401
Telephone: (909) 383-4328

San Diego & Riverside Districts
1350 Front Street, Room 2050
San Diego, CA 92101
Telephone: (619) 525-4159

Santa Ana District
28 Civic Center Plaza, Room 325

Santa Ana, CA 92701
Telephone: (714) 558-4410California

**Department of Toxic Substances
Control**

1001 I Street
P.O. Box 806
Sacramento, CA 95812-0806
Telephone: (916) 324-1826
Web: www.dtsc.ca.gov
DTSC issues permits for treatment, storage, and disposal of hazardous wastes; inspects facilities; maintains a Superfund list; and has a site cleanup program.

Northern California Regional Offices

Sacramento Office
8800 Cal Center Drive
Sacramento, CA 95826-3268
Telephone: (916) 255-3618

Clovis Office
1515 Tollhouse Road
Clovis, CA 93611-0522
Telephone: (559) 297-3901

Berkeley Office
700 Heinz Avenue, Suite #200
Berkeley, CA 94710-2721
Telephone: (510) 540-2122

Southern California Regional Offices

Chatsworth Office
9211 Oakdale Avenue
Chatsworth, CA 91311-6505
Phone: (818) 717-6500

Cypress Office
5796 Corporate Avenue
Cypress, CA 90630-4732
Telephone: (714) 484-5300

San Diego Office
9174 Skypark Court, Suite 150
San Diego, CA 92123
Telephone: (858) 637-5531

**California Department of Housing and Community
Development**

Division of Administration - Manufactured Housing
1800 Third Street, Room 260

P.O. Box 31
Sacramento, CA 95814
Telephone: (916) 445-3338
Administration of codes and statutes relating to mobile homes. It also allocates grants and loans for low-income housing, house rehabilitation, and disaster relief.

California Department of Real Estate (DRE)

Fresno District Office
Department of Real Estate
2550 Mariposa, Room 3070
Fresno, CA 93721-2273
Telephone: (559) 445-6153

Oakland District Office
Department of Real Estate
1515 Clay Street, Room 702
Oakland, CA 94612-1462
Telephone: (510) 622-2552

Los Angeles Executive Office
Department of Real Estate
320 W. 4th Street, Suite 350
Los Angeles, CA 90013-1150
Telephone: (213) 620-2072

San Diego District Office
Department of Real Estate
1350 Front Street, Room 3064
San Diego, CA 92101-3687
Telephone: (619) 525-4375

Sacramento Principal Office
Department of Real Estate
2201 Broadway
P.O. Box 187000
Sacramento, CA 95818-7000
Telephone: (916) 227-0864
This unit provides information on lead toxicity and treatment of lead toxicity in children.

APPENDIX B Glossary

AERATION: A technique by which air is introduced into a liquid; bubbles and aerosols are generated and dissolved gases released. For example, water aerated by passing through a shower head will release dissolved radon gas.

ACTIVATED CARBON: A material made from burnt wood which is used to remove organic solutes, such as pesticides, and some inorganic solutes, such as chlorine, from water. Dissolved organic solutes are removed from the water by absorption onto the activated carbon. The activated carbon must be periodically replaced when it becomes saturated and unable to adsorb any more solute. Activated carbon is not effective in removing heavy metals, such as lead, and salts, which make water hard.

ANNUAL AVERAGE LEVEL: The average of measurements taken at different times over the period of one year or the level measured by a device left in place for a full year.

CARCINOGEN: A substance that causes cancer.

CATHODE RAY TUBE: The cathode ray tube, or CRT, is the display device used in most computer displays, video monitors, and televisions.

CERTIFIED LABORATORY: A laboratory that has demonstrated that it can meet the federal and state standards for accuracy and precision for a given analytical procedure.

DISTILLATION: As referenced in this booklet, distillation is a technique used to purify water by removal of inorganic contaminants such as salts through heating the solution and condensing the steam. The resultant distilled water has a reduced salt concentration. Distillation is not effective in removing pesticides and volatile organic contaminants such as chloroform and benzene.

EXPOSURE: Contact with an agent through inhalation, ingestion, or touching. For example, exposure to radon is primarily through inhalation; exposure to lead is primarily through ingestion.

FILTRATION: Purification of water by removing undissolved solids or sediment by passing the water through a filter or sieve. Filtration does not remove dissolved salts or organic contaminants.

FRIABLE: Easily crumbled, pulverized, or reduced to a powder by hand.

LEVEL: Another term for concentration; also, the amount of a substance in a given volume of air, liquid or solid.

LITER: Metric unit of volume equivalent to 1.057 quarts of liquid. One gallon is equivalent to about four liters.

MILLIGRAM: A unit of weight. There are 1,000 milligrams in one gram and about 28 grams in one ounce.

MITIGATION: Mitigation means any action taken to reduce or eliminate the risk to human health and the environment from hazardous waste.

PARTS PER MILLION: A unit of concentration. For example, air that contains 1 part per million formaldehyde contains 1.2 milligrams formaldehyde in 1 million milliliters air, i.e. 1,000 liters air. Also, water which contains 1 part per million lead contains 1 milligram lead in 1 million milligrams water, i.e., 1 kilogram water. One part per million can be compared to one cent in ten thousand dollars.

PASSIVE DETECTOR: A measuring device that functions without any energy input or ongoing attention from the user. For example, use of a passive radon detector to measure radon requires only that the detector be left in place for a specified time.

PICOCURIE: A unit of amount used in measurement of radioactive substances. For example, five picocuries of radon are five trillionths of a curie and are equivalent to 11 radioactive radon atoms decaying every minute.

RADIOACTIVE: A term used to describe atoms that are unstable and break down or decay to form another kind of atom. For example, radium breaks down to form radon. In the process of decay some high-energy particles are emitted. The detection of these particles by special instruments indicates that a substance is radioactive. The high-energy particles and gamma rays are called radiation.

REACTIVE: A solid waste that is normally unstable, reacts violently with water, or generates toxic gases when exposed to water or other materials.

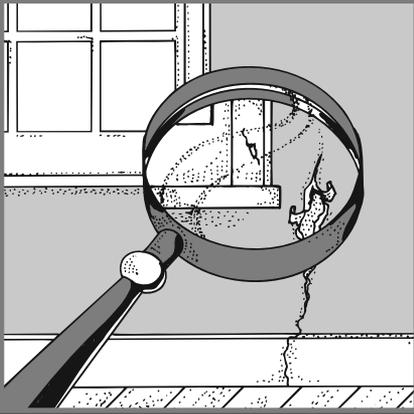
REVERSE OSMOSIS: A technology used to purify water by removing the salts from water. Osmosis involves the diffusion of water from a dilute to a concentrated solution across a semi-permeable membrane that allows only the passage of water. In reverse osmosis, water is forced through a semi-permeable membrane from a concentrated solution to a stream of purified water. For example, in the desalination of seawater, reverse osmosis is used to separate the salts from the water generating drinking water and a residue of salts.

RISK: In the context of this booklet, risk indicates the chance of developing a disease after exposure to an environmental hazard. Risk depends on the time period for which a person is exposed to a particular hazard and the level of the hazard.

SOFT WATER: Water that does not contain large amounts of dissolved minerals such as salts containing calcium or magnesium.

SOLDER: A metallic compound used to seal joints between pipes. Until recently, most solder contained about 50 percent lead. Lead solder is now banned for plumbing applications.

TOXICITY: The extent to which a material is toxic.



Protect Your Family From Lead In Your Home



 **EPA** United States
Environmental
Protection Agency



United States
Consumer Product
Safety Commission



United States
Department of Housing
and Urban Development

Are You Planning To Buy, Rent, or Renovate a Home Built Before 1978?

Many houses and apartments built before 1978 have paint that contains high levels of lead (called lead-based paint). Lead from paint, chips, and dust can pose serious health hazards if not taken care of properly.



OWNERS, BUYERS, and RENTERS are encouraged to check for lead (see page 6) before renting, buying or renovating pre-1978 housing.

Federal law requires that individuals receive certain information before renting, buying, or renovating pre-1978 housing:



LANDLORDS have to disclose known information on lead-based paint and lead-based paint hazards before leases take effect. Leases must include a disclosure about lead-based paint.



SELLERS have to disclose known information on lead-based paint and lead-based paint hazards before selling a house. Sales contracts must include a disclosure about lead-based paint. Buyers have up to 10 days to check for lead.



RENOVATORS disturbing more than 2 square feet of painted surfaces have to give you this pamphlet before starting work.

IMPORTANT!

Lead From Paint, Dust, and Soil Can Be Dangerous If Not Managed Properly

- FACT:** Lead exposure can harm young children and babies even before they are born.
- FACT:** Even children who seem healthy can have high levels of lead in their bodies.
- FACT:** People can get lead in their bodies by breathing or swallowing lead dust, or by eating soil or paint chips containing lead.
- FACT:** People have many options for reducing lead hazards. In most cases, lead-based paint that is in good condition is not a hazard.
- FACT:** Removing lead-based paint improperly can increase the danger to your family.

If you think your home might have lead hazards, read this pamphlet to learn some simple steps to protect your family.

Lead Gets in the Body in Many Ways

Childhood lead poisoning remains a major environmental health problem in the U.S.

Even children who appear healthy can have dangerous levels of lead in their bodies.

People can get lead in their body if they:

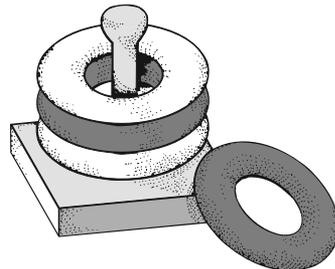
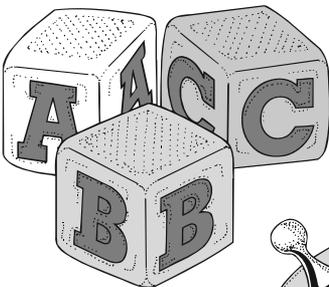
- ◆ Breathe in lead dust (especially during renovations that disturb painted surfaces).
- ◆ Put their hands or other objects covered with lead dust in their mouths.
- ◆ Eat paint chips or soil that contains lead.

Lead is even more dangerous to children under the age of 6:

- ◆ At this age children's brains and nervous systems are more sensitive to the damaging effects of lead.
- ◆ Children's growing bodies absorb more lead.
- ◆ Babies and young children often put their hands and other objects in their mouths. These objects can have lead dust on them.

Lead is also dangerous to women of childbearing age:

- ◆ Women with a high lead level in their system prior to pregnancy would expose a fetus to lead through the placenta during fetal development.



Lead's Effects

It is important to know that even exposure to low levels of lead can severely harm children.

In children, lead can cause:

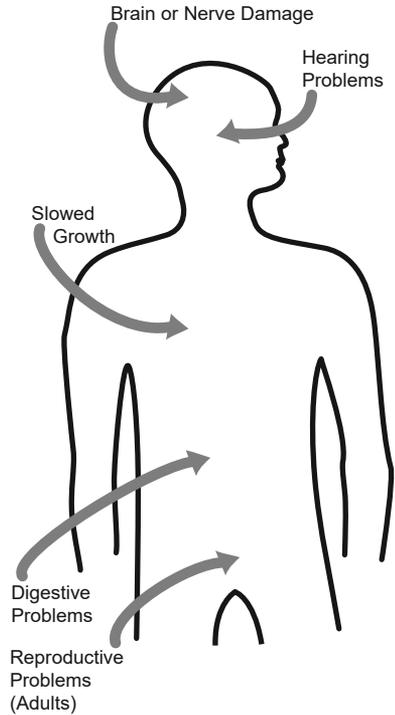
- ◆ Nervous system and kidney damage.
- ◆ Learning disabilities, attention deficit disorder, and decreased intelligence.
- ◆ Speech, language, and behavior problems.
- ◆ Poor muscle coordination.
- ◆ Decreased muscle and bone growth.
- ◆ Hearing damage.

While low-lead exposure is most common, exposure to high levels of lead can have devastating effects on children, including seizures, unconsciousness, and, in some cases, death.

Although children are especially susceptible to lead exposure, lead can be dangerous for adults too.

In adults, lead can cause:

- ◆ Increased chance of illness during pregnancy.
- ◆ Harm to a fetus, including brain damage or death.
- ◆ Fertility problems (in men and women).
- ◆ High blood pressure.
- ◆ Digestive problems.
- ◆ Nerve disorders.
- ◆ Memory and concentration problems.
- ◆ Muscle and joint pain.



**Lead affects
the body in
many ways.**

Where Lead-Based Paint Is Found

In general, the older your home, the more likely it has lead-based paint.

Many homes built before 1978 have lead-based paint. The federal government banned lead-based paint from housing in 1978. Some states stopped its use even earlier. Lead can be found:

- ◆ In homes in the city, country, or suburbs.
- ◆ In apartments, single-family homes, and both private and public housing.
- ◆ Inside and outside of the house.
- ◆ In soil around a home. (Soil can pick up lead from exterior paint or other sources such as past use of leaded gas in cars.)

Checking Your Family for Lead

Get your children and home tested if you think your home has high levels of lead.

To reduce your child's exposure to lead, get your child checked, have your home tested (especially if your home has paint in poor condition and was built before 1978), and fix any hazards you may have.

Children's blood lead levels tend to increase rapidly from 6 to 12 months of age, and tend to peak at 18 to 24 months of age.

Consult your doctor for advice on testing your children. A simple blood test can detect high levels of lead. Blood tests are usually recommended for:

- ◆ Children at ages 1 and 2.
- ◆ Children or other family members who have been exposed to high levels of lead.
- ◆ Children who should be tested under your state or local health screening plan.

Your doctor can explain what the test results mean and if more testing will be needed.

Identifying Lead Hazards

Lead-based paint is usually not a hazard if it is in good condition, and it is not on an impact or friction surface, like a window. It is defined by the federal government as paint with lead levels greater than or equal to 1.0 milligram per square centimeter, or more than 0.5% by weight.

Deteriorating lead-based paint (peeling, chipping, chalking, cracking or damaged) is a hazard and needs immediate attention. It may also be a hazard when found on surfaces that children can chew or that get a lot of wear-and-tear, such as:

- ◆ Windows and window sills.
- ◆ Doors and door frames.
- ◆ Stairs, railings, banisters, and porches.

Lead dust can form when lead-based paint is scraped, sanded, or heated. Dust also forms when painted surfaces bump or rub together. Lead chips and dust can get on surfaces and objects that people touch. Settled lead dust can re-enter the air when people vacuum, sweep, or walk through it. The following two federal standards have been set for lead hazards in dust:

- ◆ 40 micrograms per square foot ($\mu\text{g}/\text{ft}^2$) and higher for floors, including carpeted floors.
- ◆ 250 $\mu\text{g}/\text{ft}^2$ and higher for interior window sills.

Lead in soil can be a hazard when children play in bare soil or when people bring soil into the house on their shoes. The following two federal standards have been set for lead hazards in residential soil:

- ◆ 400 parts per million (ppm) and higher in play areas of bare soil.
- ◆ 1,200 ppm (average) and higher in bare soil in the remainder of the yard.

The only way to find out if paint, dust and soil lead hazards exist is to test for them. The next page describes the most common methods used.

Lead from paint chips, which you can see, and lead dust, which you can't always see, can both be serious hazards.

Checking Your Home for Lead

Just knowing that a home has lead-based paint may not tell you if there is a hazard.



You can get your home tested for lead in several different ways:

- ◆ A paint **inspection** tells you whether your home has lead-based paint and where it is located. It won't tell you whether or not your home currently has lead hazards.
- ◆ A **risk assessment** tells you if your home currently has any lead hazards from lead in paint, dust, or soil. It also tells you what actions to take to address any hazards.
- ◆ A combination risk assessment and inspection tells you if your home has any lead hazards and if your home has any lead-based paint, and where the lead-based paint is located.

Hire a trained and certified testing professional who will use a range of reliable methods when testing your home.

- ◆ Visual inspection of paint condition and location.
- ◆ A portable x-ray fluorescence (XRF) machine.
- ◆ Lab tests of paint, dust, and soil samples.

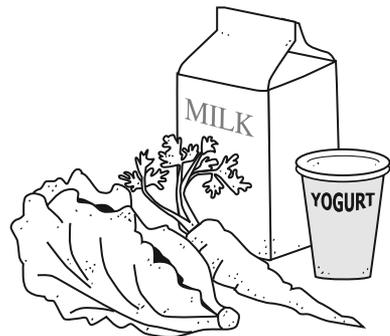
There are state and federal programs in place to ensure that testing is done safely, reliably, and effectively. Contact your state or local agency (see bottom of page 11) for more information, or call **1-800-424-LEAD (5323)** for a list of contacts in your area.

Home test kits for lead are available, but may not always be accurate. Consumers should not rely on these kits before doing renovations or to assure safety.

What You Can Do Now To Protect Your Family

If you suspect that your house has lead hazards, you can take some immediate steps to reduce your family's risk:

- ◆ If you rent, notify your landlord of peeling or chipping paint.
- ◆ Clean up paint chips immediately.
- ◆ Clean floors, window frames, window sills, and other surfaces weekly. Use a mop or sponge with warm water and a general all-purpose cleaner or a cleaner made specifically for lead. REMEMBER: NEVER MIX AMMONIA AND BLEACH PRODUCTS TOGETHER SINCE THEY CAN FORM A DANGEROUS GAS.
- ◆ Thoroughly rinse sponges and mop heads after cleaning dirty or dusty areas.
- ◆ Wash children's hands often, especially before they eat and before nap time and bed time.
- ◆ Keep play areas clean. Wash bottles, pacifiers, toys, and stuffed animals regularly.
- ◆ Keep children from chewing window sills or other painted surfaces.
- ◆ Clean or remove shoes before entering your home to avoid tracking in lead from soil.
- ◆ Make sure children eat nutritious, low-fat meals high in iron and calcium, such as spinach and dairy products. Children with good diets absorb less lead.



Reducing Lead Hazards In The Home

Removing lead improperly can increase the hazard to your family by spreading even more lead dust around the house.

Always use a professional who is trained to remove lead hazards safely.



In addition to day-to-day cleaning and good nutrition:

- ◆ You can **temporarily** reduce lead hazards by taking actions such as repairing damaged painted surfaces and planting grass to cover soil with high lead levels. These actions (called “interim controls”) are not permanent solutions and will need ongoing attention.
- ◆ To **permanently** remove lead hazards, you should hire a certified lead “abatement” contractor. Abatement (or permanent hazard elimination) methods include removing, sealing, or enclosing lead-based paint with special materials. Just painting over the hazard with regular paint is not permanent removal.

Always hire a person with special training for correcting lead problems—someone who knows how to do this work safely and has the proper equipment to clean up thoroughly. Certified contractors will employ qualified workers and follow strict safety rules as set by their state or by the federal government.

Once the work is completed, dust cleanup activities must be repeated until testing indicates that lead dust levels are below the following:

- ◆ 40 micrograms per square foot ($\mu\text{g}/\text{ft}^2$) for floors, including carpeted floors;
- ◆ 250 $\mu\text{g}/\text{ft}^2$ for interior windows sills; and
- ◆ 400 $\mu\text{g}/\text{ft}^2$ for window troughs.

Call your state or local agency (see bottom of page 11) for help in locating certified professionals in your area and to see if financial assistance is available.

Remodeling or Renovating a Home With Lead-Based Paint

Take precautions before your contractor or you begin remodeling or renovating anything that disturbs painted surfaces (such as scraping off paint or tearing out walls):

- ◆ **Have the area tested for lead-based paint.**
- ◆ **Do not use a belt-sander, propane torch, high temperature heat gun, dry scraper, or dry sandpaper** to remove lead-based paint. These actions create large amounts of lead dust and fumes. Lead dust can remain in your home long after the work is done.
- ◆ **Temporarily move your family** (especially children and pregnant women) out of the apartment or house until the work is done and the area is properly cleaned. If you can't move your family, at least completely seal off the work area.
- ◆ **Follow other safety measures to reduce lead hazards.** You can find out about other safety measures by calling 1-800-424-LEAD. Ask for the brochure "Reducing Lead Hazards When Remodeling Your Home." This brochure explains what to do before, during, and after renovations.

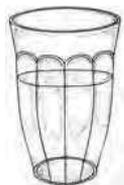
If you have already completed renovations or remodeling that could have released lead-based paint or dust, get your young children tested and follow the steps outlined on page 7 of this brochure.



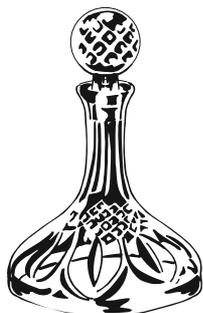
If not conducted properly, certain types of renovations can release lead from paint and dust into the air.



Other Sources of Lead



While paint, dust, and soil are the most common sources of lead, other lead sources also exist.



- ◆ **Drinking water.** Your home might have plumbing with lead or lead solder. Call your local health department or water supplier to find out about testing your water. You cannot see, smell, or taste lead, and boiling your water will not get rid of lead. If you think your plumbing might have lead in it:
 - Use only cold water for drinking and cooking.
 - Run water for 15 to 30 seconds before drinking it, especially if you have not used your water for a few hours.
- ◆ **The job.** If you work with lead, you could bring it home on your hands or clothes. Shower and change clothes before coming home. Launder your work clothes separately from the rest of your family's clothes.
- ◆ Old painted **toys** and **furniture**.
- ◆ Food and liquids stored in **lead crystal** or **lead-glazed pottery or porcelain**.
- ◆ **Lead smelters** or other industries that release lead into the air.
- ◆ **Hobbies** that use lead, such as making pottery or stained glass, or refinishing furniture.
- ◆ **Folk remedies** that contain lead, such as “greta” and “azarcon” used to treat an upset stomach.

For More Information

The National Lead Information Center

Call **1-800-424-LEAD (424-5323)** to learn how to protect children from lead poisoning and for other information on lead hazards. To access lead information via the web, visit **www.epa.gov/lead** and **www.hud.gov/offices/lead/**.

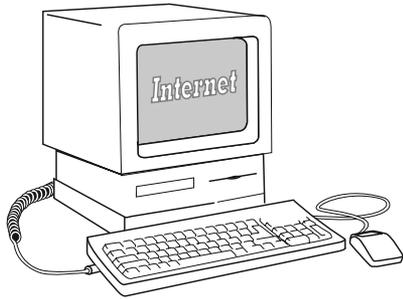


EPA's Safe Drinking Water Hotline

Call **1-800-426-4791** for information about lead in drinking water.

Consumer Product Safety Commission (CPSC) Hotline

To request information on lead in consumer products, or to report an unsafe consumer product or a product-related injury call **1-800-638-2772**, or visit CPSC's Web site at: **www.cpsc.gov**.



Health and Environmental Agencies

Some cities, states, and tribes have their own rules for lead-based paint activities. Check with your local agency to see which laws apply to you. Most agencies can also provide information on finding a lead abatement firm in your area, and on possible sources of financial aid for reducing lead hazards. Receive up-to-date address and phone information for your local contacts on the Internet at **www.epa.gov/lead** or contact the National Lead Information Center at **1-800-424-LEAD**.

For the hearing impaired, call the Federal Information Relay Service at **1-800-877-8339** to access any of the phone numbers in this brochure.

EPA Regional Offices

Your Regional EPA Office can provide further information regarding regulations and lead protection programs.

EPA Regional Offices

Region 1 (Connecticut, Massachusetts, Maine, New Hampshire, Rhode Island, Vermont)

Regional Lead Contact
U.S. EPA Region 1
Suite 1100 (CPT)
One Congress Street
Boston, MA 02114-2023
1 (888) 372-7341

Region 2 (New Jersey, New York, Puerto Rico, Virgin Islands)

Regional Lead Contact
U.S. EPA Region 2
2890 Woodbridge Avenue
Building 209, Mail Stop 225
Edison, NJ 08837-3679
(732) 321-6671

Region 3 (Delaware, Maryland, Pennsylvania, Virginia, Washington DC, West Virginia)

Regional Lead Contact
U.S. EPA Region 3 (3WC33)
1650 Arch Street
Philadelphia, PA 19103
(215) 814-5000

Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee)

Regional Lead Contact
U.S. EPA Region 4
61 Forsyth Street, SW
Atlanta, GA 30303
(404) 562-8998

Region 5 (Illinois, Indiana, Michigan, Minnesota, Ohio, Wisconsin)

Regional Lead Contact
U.S. EPA Region 5 (DT-8J)
77 West Jackson Boulevard
Chicago, IL 60604-3666
(312) 886-6003

Region 6 (Arkansas, Louisiana, New Mexico, Oklahoma, Texas)

Regional Lead Contact
U.S. EPA Region 6
1445 Ross Avenue, 12th Floor
Dallas, TX 75202-2733
(214) 665-7577

Region 7 (Iowa, Kansas, Missouri, Nebraska)

Regional Lead Contact
U.S. EPA Region 7
(ARTD-RALI)
901 N. 5th Street
Kansas City, KS 66101
(913) 551-7020

Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming)

Regional Lead Contact
U.S. EPA Region 8
999 18th Street, Suite 500
Denver, CO 80202-2466
(303) 312-6021

Region 9 (Arizona, California, Hawaii, Nevada)

Regional Lead Contact
U.S. Region 9
75 Hawthorne Street
San Francisco, CA 94105
(415) 947-4164

Region 10 (Alaska, Idaho, Oregon, Washington)

Regional Lead Contact
U.S. EPA Region 10
Toxics Section WCM-128
1200 Sixth Avenue
Seattle, WA 98101-1128
(206) 553-1985

CPSC Regional Offices

Your Regional CPSC Office can provide further information regarding regulations and consumer product safety.

Eastern Regional Center

Consumer Product Safety Commission
201 Varick Street, Room 903
New York, NY 10014
(212) 620-4120

Western Regional Center

Consumer Product Safety Commission
1301 Clay Street, Suite 610-N
Oakland, CA 94612
(510) 637-4050

Central Regional Center

Consumer Product Safety Commission
230 South Dearborn Street, Room 2944
Chicago, IL 60604
(312) 353-8260

HUD Lead Office

Please contact HUD's Office of Healthy Homes and Lead Hazard Control for information on lead regulations, outreach efforts, and lead hazard control and research grant programs.

U.S. Department of Housing and Urban Development

Office of Healthy Homes and Lead Hazard Control
451 Seventh Street, SW, P-3206
Washington, DC 20410
(202) 755-1785

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U.S. EPA Washington DC 20460
U.S. CPSC Washington DC 20207
U.S. HUD Washington DC 20410

EPA747-K-99-001
June 2003

Simple Steps To Protect Your Family From Lead Hazards

If you think your home has high levels of lead:

- ◆ Get your young children tested for lead, even if they seem healthy.
- ◆ Wash children's hands, bottles, pacifiers, and toys often.
- ◆ Make sure children eat healthy, low-fat foods.
- ◆ Get your home checked for lead hazards.
- ◆ Regularly clean floors, window sills, and other surfaces.
- ◆ Wipe soil off shoes before entering house.
- ◆ Talk to your landlord about fixing surfaces with peeling or chipping paint.
- ◆ Take precautions to avoid exposure to lead dust when remodeling or renovating (call 1-800-424-LEAD for guidelines).
- ◆ Don't use a belt-sander, propane torch, high temperature heat gun, scraper, or sandpaper on painted surfaces that may contain lead.
- ◆ Don't try to remove lead-based paint yourself.



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(minimum 50% postconsumer) process chlorine free.

What is your

**Home
ENERGY
RATING**



know before you buy or sell

Lower your energy bills

**Enjoy a safer, more comfortable
and durable home**

Reduce your impact on the environment

**Increase your home's sales appeal
and appraisal value**

What
is your

Home
**ENERGY
RATING**

// Whether you are buying or selling a residential property, or staying in your current home, every Californian should know his or her home **energy rating.** //

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What is your Home
**ENERGY
RATING**



Dear Californians,

California is a national leader in promoting energy efficiency. As a result, our energy use per person has remained stable for over 30 years while the national average has steadily increased. Despite this success, we must continue to reduce energy use in our homes. The benefits are highly valuable — reducing energy use not only lowers your energy bills, but helps our electricity system remain reliable, even during high peak-load periods, while also protecting our environment.

In 2006, California established aggressive goals to reduce greenhouse gases that cause global warming. These goals will cut today's carbon emissions by 25 percent, so we can return to 1990 levels by the year 2020. Efforts to accomplish this goal represent important first steps in addressing the threat of global warming. We owe our children and our grandchildren nothing less.

As you consider the sale or purchase of your home, this booklet helps you recognize what energy efficiency measures have been built into the home, or ways to make further improvements to save energy and reduce peak electricity demand. I hope it kindles your interest in saving energy, whether in your current home or the one being considered for purchase.

Thank you for your energy efficiency actions that help make California a better, more environmentally sustainable place to raise our families.

Sincerely,

Karen Douglas, Chairman
California Energy Commission

Whether you are buying or selling a residential property, or staying in your current home, every Californian should know his or her home energy rating. Wasted energy wastes more than just your money — it changes our climate. The scientific community agrees that we must act now or risk facing an uncertain future.

The California Home Energy Rating System (HERS) Program provides a reliable way to estimate and compare the energy efficiency of California homes and identify wise energy saving improvements. This booklet explains how the HERS program works and helps you find a qualified professional to rate your own home. Once you know your home energy rating, you will be able to choose smart energy upgrades and investments that will benefit your family now... and generations to come.



"I say the debate is over. We know the science. We see the threat. And we know the time for action is now."

— Governor Schwarzenegger

During a real estate transaction, a California HERS Rating is a great way to disclose facts about the energy efficiency of a home.

Know the
FACTS

Whether you are getting ready to sell your home – or preparing to buy one – knowing the energy efficiency facts about the property is a major consideration. As buyers become more aware of the benefits of an energy-efficient home, homes with a favorable home energy rating may be more attractive to buyers.

Selling?

A HERS rating will:

- Help determine facts about the energy efficiency of your home.
- Identify energy improvements that may make your home more attractive to buyers.
- Alert appraisers to add value for any energy improvements you may have made already.

Staying in your current home?

- Find out your HERS rating.
- Discover the best options for lowering your energy bills.
- Identify energy efficiency improvements that may also make your home more comfortable.
- Find resources to help finance your improvements.
- Improve your home's resale value.

Buying?

- Use a HERS rating to shop and compare the energy efficiency of homes you are considering.
- Learn about the most cost-effective options for lowering the energy bills in any home you are considering buying.
- Identify and qualify for energy efficiency financing.

Have you checked your ducts?

Heating and cooling ducts in an average California home leak almost 30 percent. That is why when heating or cooling equipment is replaced, testing the system's ducts for leaks is now required by building officials in many parts of the state.

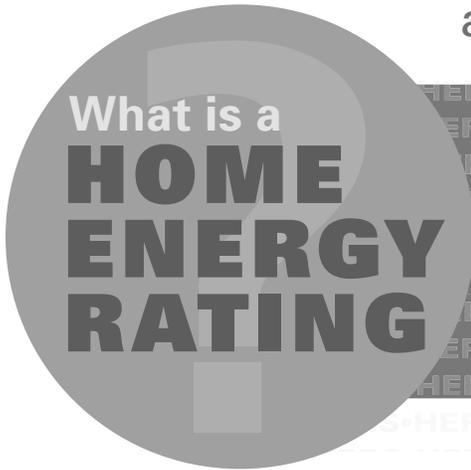
If you are selling your home and had upgrades made without the required permits or duct testing, be sure to disclose this on your Real Estate Transfer Disclosure Statement. If you are preparing to buy a home that had duct work performed after October 2005, ask to see the duct testing report, or an explanation as to why such testing was not required.

For more information, visit:

www.energy.ca.gov/title24/changeout/



You wouldn't buy a new car without knowing its "miles per gallon" rating. So why buy a home without a "home energy rating?"



A Whole-House Home Energy Rating is a comprehensive evaluation of the efficiency of the entire home. The homeowner receives a written report that includes a numeric score or "rating" of the home, plus recommendations for improvements that will reduce energy bills and make the home more comfortable. Knowing the energy rating of your home is similar to knowing the miles per gallon rating of your car.

The California Energy Commission has developed the California Home Energy Rating System (HERS) Program to cover almost every type of residence in California. This includes new and existing single-family homes and multifamily buildings of three stories or less. Energy Commission-approved HERS Providers train, certify, and oversee a new type of service professional known as a "California Whole-House Home Energy Rater."

Each California HERS Rater must follow standardized energy auditing procedures and use energy analysis software that meets the Energy Commission's technical requirements. The HERS Rater will inspect and assess all the major energy efficiency features of your home:

- Air leaks (sealed or unsealed)
- Cooling system
- Heating system
- Water heating system
- Heating and cooling ducts and/or pipes
- Insulation (attic, walls, floor)
- Windows
- Attached lighting fixtures
- Major appliances
- Solar electricity generating systems (if any)
- Other energy uses

Your HERS report will identify the most cost-effective and appropriate energy efficiency improvements for your home. Only a properly prepared HERS Report will receive an official California Home Energy Rating Certificate with the California Energy Commission's seal.

Rating costs vary depending on factors such as the size and features of your home and the extent of rater services needed. Ask your real estate agent for names of certified HERS Raters in your area or find an Energy Commission-approved HERS Provider at: www.energy.ca.gov/HERS/index.html or call the Energy Hotline at (800) 772-3300.

HERS Recommendations

Your HERS report will contain detailed recommendations so that you can learn about all the improvements that are cost-effective and appropriate for your particular home. Here are a few examples.

Test and seal air leaks in building envelope

A pressure test will show where the air is leaking out so you can make your home less drafty.



Increase attic insulation to R-38

Properly installed insulation makes your home quieter and more comfortable.



Test and seal air duct leaks

Almost every home in California has leaky ducts, typically wasting 30 percent or more.



Tune-up the heating and cooling system

Proper maintenance saves energy and improves comfort and safety.



Upgrade to a correctly sized ENERGY STAR® furnace

A new ENERGY STAR® furnace will run more quietly and keep you warm all winter for less money.



Hire a Professional

Don't trust just anyone to make your improvements. Trying to save a little can sometimes cost you more in the long run. Instead, find one or more licensed specialty contractors who have the knowledge, tools, and skills to do each job right. You may want to consider a "building performance" contractor who is a licensed general contractor and is specially trained and certified to help address all of the energy and comfort improvement opportunities in your home and make them work together as an efficient system. The Contractors State License Board website www.cslb.ca.gov provides more information on how to choose a qualified contractor.

Making WISE IMPROVEMENTS



Do It Yourself

Some improvements are so easy and inexpensive, you don't need a HERS rating to know they pay back quickly.

- Replace incandescent bulbs with ENERGY STAR® compact fluorescent lamps (CFLs).
- Replace all nightlights and holiday lights with light-emitting diodes (LEDs).
- Choose ENERGY STAR® appliances, computers, and televisions.
- Install low-flow showerheads and faucet aerators.
- Insulate the first 5 feet of pipes from the cold and hot water heater.
- Add or repair weather stripping on all doors and windows.
- Use caulk and spray foam to fill all visible air gaps.
- Clean or replace furnace air filters monthly.
- Plant shade trees.



Energy Wise HABITS

These no-cost tips will help reduce the energy consumption in your home.

- Turn off lights and computers when not in use.
- Use a power strip for televisions, DVD players, VCRs, and chargers, and turn off power to the strip when not in use.
- Recycle burned-out CFL bulbs, fluorescent tubes, televisions, computer monitors, and all other electronic waste.
- Unplug and recycle any inefficient old refrigerators and freezers.
- Use appliances efficiently. Use your dishwasher and clothes washer for full loads only. Use the cold water setting on your clothes washer when possible.
- Turn down the water heater to 120 degrees Fahrenheit.
- Use your drapes properly. In the summer, close your drapes during the day. In the winter, open your drapes during the day and close your drapes at night.
- Open your windows for natural ventilation on cool summer mornings and nights.

A \$100 per month reduction in your utility bills frees up enough cash to pay for a \$17,000 increase in your mortgage (assuming 6 percent interest over 30 years).

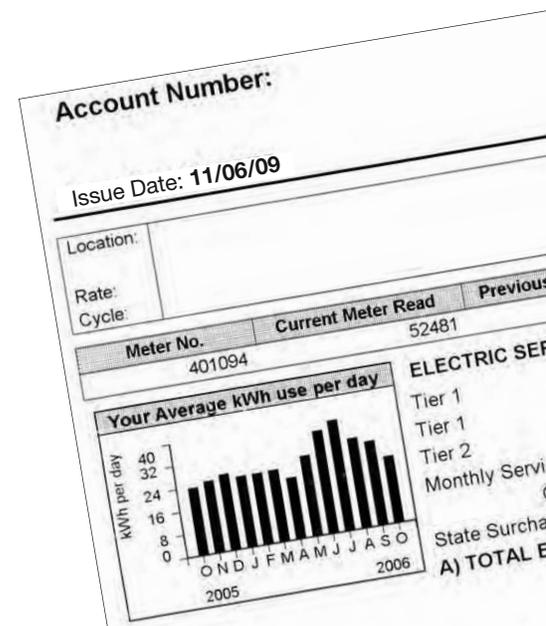
Utility Bills & RATINGS

Home energy efficiency ratings are designed to help you focus on the physical features of the house – not on other factors that can affect energy consumption like unusual weather or personal energy use habits.

Utility bills give a personal perspective: the history of how much energy the occupants of the home actually used over a period. Unless you consider a rating coupled with the utility bills, you may get only half of the story.

As a potential buyer, you should always ask to see the previous occupant's energy bills. While sellers are not obligated to share their utility bills, many will if asked.

If the old bills have not been saved, current occupants can access their records by calling the local utility or by setting up an account on the utility's website. Your HERS Rater can assist you in obtaining the bills and will consider them to establish a more complete picture of your home energy use to make the best recommendations for improvements. A Home Buyers' Energy Checklist that helps buyers ask questions related to the home's energy use is available at: www.energy.ca.gov/HERS/index.html.



Energy efficiency is different than energy consumption. Efficiency depends upon the physical features of the home and all the equipment it contains. Consumption is reduced through efficiency but also depends on the energy use behavior of the occupants. Wasteful habits, unusual weather, or malfunctioning equipment can drive up energy bills, even in the most energy-efficient house in the neighborhood.

After your mortgage payment, your energy bill is often the second largest monthly home ownership expense.



Financing your
IMPROVEMENTS

Principal
+ **I**nterest
+ **T**axes
+ **I**nsurance
+ **E**nergy

**True cost of owning
your home**

If you are buying or refinancing and looking for a way to finance your energy improvements, you should get advice from a knowledgeable real estate agent or lender about the many new options now available. The federal government, Fannie Mae/Freddie Mac, and many major lenders are introducing new products to help you fund your energy efficiency improvements. Some cities and counties also have programs that allow homeowners to finance efficiency improvements and solar installations over 20 years.

You may also be able to qualify for an Energy Efficient Mortgage (EEM). An EEM is a loan program that recognizes the importance of the energy efficiency of a home and allows for cost-effective energy upgrades to be financed in the mortgage. A HERS rating is required to qualify for an EEM. These loans provide borrowers the opportunity to make energy efficiency improvements to their homes and gain several desirable benefits including:

- Provide the ability to roll the cost of your efficiency improvements into a low mortgage rate.
- May stretch your debt-to-income qualifying ratio.
- Enjoy your improvements and energy savings right away.
- Earn a higher resale price when you sell.

Best of all, you get to enjoy all the benefits of your home improvements for the same total monthly cost (PITI+E)...or maybe even less.

EEM programs are available from:

- Federal Housing Authority (FHA)
- Veterans Administration (VA)
- Conventional lenders (Fannie Mae, Freddie Mac)
- Other home-buyer or refinancing programs

Combine an EEM with other programs and you may be able to borrow up to \$40,000 or more for efficiency improvements. Ask a knowledgeable lender if an EEM is right for you.

Another way to finance energy improvements is through an equity loan or equity line of credit. If your HERS rating is low enough, some lenders may offer a “green” mortgage or equity line of credit at a discount relative to their regular interest rates or points. Shop around to see if these products make sense for you. Utilities also offer financial incentives such as rebates, for energy smart improvements, such as:

- Added insulation
- ENERGY STAR® appliances
- Refrigerator recycling
- High-efficiency heating and air conditioning systems
- Compact fluorescent light fixtures
- Whole-house fans, cool roofs, swimming pool pump motors, and more

Contact your local utility for information on their program offerings. Manufacturers also offer discounts or rebates on efficient products so check their websites or with a retailer for possible offers.





It's no secret; energy efficiency features may make your home more valuable and sell faster.

Federal tax credits now available include:

30 percent of the cost, up to \$1,500, through 2010 (existing homes only) for:

- Windows and Doors
- Insulation
- Roofs
- HVAC
- Water Heaters

30 percent of the cost, with no upper limit through 2016 (existing homes and new construction) for:

- Solar electric generation
- Solar water heaters
- Other on-site renewable generation

For more news on federal energy efficiency tax credits, visit: www.energystar.gov/taxcredits

Did You Know?

- A study of energy-efficient homes in The Appraisal Journal showed that a \$1 reduction in annual energy bills resulted in more than \$10 increase in resale value.
- A past president of the California Association of Real Estate Appraisers recommends that appraisals account for any efficiency improvements because they "so contribute to the habitability, enjoyability and economic stability of the home."
- FHA authorizes the cost of energy efficiency measures to be added to the mortgage.
- Home builders find that homes with efficiency and solar electricity up grades sell faster and at higher prices than similar homes nearby.

Make sure your real estate agent knows about any efficiency improvements you have made, let buyers know your home is "Energy-Rated," and give the appraiser a copy of your HERS Report.

The energy used in the average home produces roughly twice as much greenhouse gas pollution as the average car (US EPA).

Property Address:



I have received a copy of the WHAT IS YOUR HOME ENERGY RATING? booklet (CEC-400-2009-008-BR)

Buyer's Signature

Printed Name

Date

Buyer's Signature

Printed Name

Date

Buyer's Agent Signature

Printed Name

Date

Broker's Name

Seller's Signature

Printed Name

Date

Seller's Signature

Printed Name

Date

Listing Agent's Signature

Printed Name

Date

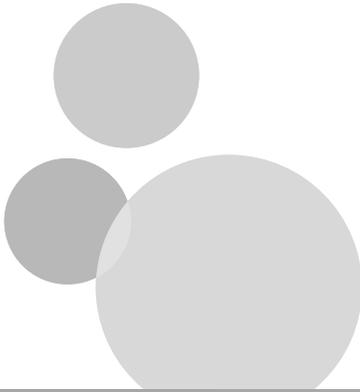
Broker's Name

ALL SIGNERS SHOULD RETAIN A COPY OF THIS PAGE FOR THEIR RECORDS

California Civil Code Section 2079.10 states that if this booklet is provided to the buyer by the seller or broker, then this booklet is deemed to be adequate to inform the home buyer about the existence of California Home Energy Rating Program.

For more information, visit: www.energy.ca.gov/HERS/index.html





The California Energy Commission does not endorse any product, supplier, manufacturer, builder or organization.

The text in this booklet is designed to be informational and not all-inclusive.

ACKNOWLEDGEMENTS



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ENERGY COMMISSION

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1516 Ninth Street, MS-37
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**Need Help? Call the Energy Hotline
(800) 772-3300 or (916) 654-5106**

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September 2010

Prepared by:
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San Francisco, California
Contract No. 400-05-020

Photo on page 3 courtesy of the Office of the Governor.
Photo on page 4 courtesy of The Energy Conservatory.
Photos on page 7 courtesy of: National Renewable Energy
Laboratory, CertainTeed, and Carrier

Homeowner's Guide to Earthquake Safety



Before Earthquake

2005 Edition



Published by
The California
Seismic Safety
Commission

State of
California
Arnold
Schwarzenegger,
Governor

SSC No. 05-01



Damage from magnitude 6.7 earthquake



Additional damage from aftershocks

This 2005 Edition of the Homeowner's Guide to Earthquake Safety replaces the 2002 Edition on July 1, 2005.



Publishing Information

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Legislation

This guide has been developed and adopted by the California Seismic Safety Commission as required by Assembly Bill 2959, authored by Assemblyman Johan Klehs (Chapter 1499, Statutes of 1990), and Assembly Bill 200, authored by Assemblyman Dominic Cortese (Chapter 699, Statutes of 1991).

Ordering Information

Copies of this booklet are available from the California Seismic Safety Commission, 1775 Creekside Oaks Drive, Suite 100, Sacramento, CA 95833. To order call (916) 263-5506 or download via our website at <http://www.seismic.ca.gov/sscpub.htm>

On the cover:

Taken in Coalinga, California, the pictures of this single family home show the destruction caused by the Coalinga Earthquake on May 2, 1983. The 6.7 magnitude earthquake inflicted severe damage to the unreinforced masonry porch, forcing the occupants to evacuate. Numerous aftershocks occurred within the next few days, causing portions of the already weakened structure to collapse.

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Disclaimer: The effects, descriptions, recommendations, and suggestions included in this document are intended to improve earthquake preparedness; however, they do not guarantee the safety of an individual or a structure. The Seismic Safety Commission takes responsibility for the inclusion of material in this document. The State of California, the Seismic Safety Commission, and all contributors to this document do not assume liability for any injury, death, property damage, loss of revenue, or any other effect of an earthquake.

INTRODUCTION

Earthquakes, especially major ones, are dangerous, inevitable, and a fact of life in California. Sooner or later another “big one” will occur.

Earthquakes:

- Occur without warning
- Can be deadly and extremely destructive
- Can occur at any time

As a current or potential owner of a home*, you should be very concerned about the potential danger to not only yourselves and your loved ones, but also to your property.

The major threats posed by earthquakes are bodily injuries and property damage, which can be considerable and even catastrophic.

Most of the property damage caused by earthquakes ends up being handled and paid for by the homeowner.

- Earthquakes have caused over \$55 billion in losses in California since 1971.
- Large earthquakes in or near major urban centers in California will disrupt the local economy and can disrupt the economy of the entire State.

However, proper earthquake preparation of your home can:

- Save lives
- Reduce injuries
- Reduce property damage

As a homeowner, you can **significantly reduce** damage to your home by fixing a number of known and common weaknesses.

This Booklet is designed to assist you in filling out the Residential Earthquake Hazards Report (See page 47) when you sell your home.

This booklet is also a good start to begin strengthening your home against earthquake damage.

It describes:

- Common weaknesses that can result in your home being damaged by earthquakes, and
- Steps you can take to correct these weaknesses.

There are no guarantees of safety during earthquakes, but properly constructed and strengthened homes are far less likely to collapse or be damaged during earthquakes. The California Seismic Safety Commission advises you to act on the suggestions outlined in this booklet and make yourself, your family, and your home safer.

*For the purpose of this document, “home” includes single family residences, duplexes, triplexes, and fourplexes.

YOUR HOME AND THE LAW

California State Law requires the seller to:

- Inform the buyer about known home weaknesses (*See Earthquake Weaknesses, beginning on page 11*).
- Strap the water heater, reducing the chance of it falling during an earthquake and possibly causing gas and water lines to break.
- Deliver a copy of this booklet to the buyer if the home was built before 1960 (*Your real estate agent is required to give the seller a copy of this booklet*).
- Deliver to buyers a Natural Hazards Disclosure form (*See page 4*). The disclosure will tell buyers whether the home is in an Earthquake Fault Zone or in a Seismic Hazard Zone (*See page 38*).
- Complete the *Residential Earthquake Hazards Report*, to be provided to the buyer (*See page 47*).

California State Law does not require the seller to:

- Hire someone to evaluate your home.
- Strengthen your home before selling it.

This Booklet:

- Describes the most common weaknesses that can cause damage to homes, in the event of an earthquake.
- Enables the seller to meet the State Law requiring this booklet be given to every buyer of homes built before 1960.
- Enables the seller to disclose to the buyer the typical earthquake weaknesses in homes built before 1960.
- Provides the homeowner with basic information about finding and fixing earthquake-related weaknesses in the home.
- Provides general information about earthquake risks and directions for finding more information on earthquake safety.

RECOMMENDATIONS...

If You Are Selling

Before you sell your house, the following steps are recommended:

- If you list your house for sale through a real estate broker or agent, give the agent the completed disclosure form (*See page 47*) as soon as practical. Your agent can give the booklet and the form to the buyer for you.
- You are not required to hire someone to answer the questions on the disclosure form.
- You are not required to remove siding, drywall, or plaster to answer the questions.
- You are not required to fix the weaknesses before you sell your home.
- However, if you wish, you may get assistance from a certified home inspector, or a licensed contractor, architect, or engineer.
- Keep a copy of the form, signed by the buyer, as evidence that you have complied with the earthquake disclosure requirement.

You may find that you will get a better price for your house if you strengthen earthquake weaknesses before you sell.

If You Are Buying

Before you agree to buy a house, consider the following recommendations:

- Have a certified home inspector, licensed building contractor, architect, or engineer inspect the house and give you an opinion regarding existing earthquake weaknesses and an estimate of costs to strengthen these weaknesses.
- Consider the location of the home: Is it in or near an Earthquake Fault Zone or in an area where it might be damaged by a landslide, liquefaction, or a tsunami? You may wish to hire a licensed geotechnical engineer and/or engineering geologist to check the stability of the land under the house.
- Negotiate the cost of strengthening, if any is required, with the seller. The law does not require either you or the seller to strengthen the home, but if these weaknesses are not fixed, you may find that repair costs after a damaging earthquake can amount to more than your equity in the house.





SUMMARY OF MAJOR CALIFORNIA LAWS RELATED TO SEISMIC SAFETY

Full wording of all California codes is available at: <http://www.leginfo.ca.gov>.

Delivering this guide

Sellers of homes built before 1960, with one to four units of conventional light-frame construction, must deliver to the buyer, “as soon as practicable before the transfer,” a copy of *The Homeowner’s Guide to Earthquake Safety* (this booklet) and disclose certain earthquake deficiencies according to *Government Code*, Section 8897.1 to 8897.4. The seller’s real estate agent must provide the seller with a copy of this booklet to give to the buyer. This is also specified in *Government Code*, Section 8897.5.

Water heater bracing

All water heaters are required to be anchored or strapped to resist falling during an earthquake. The seller must certify to the potential buyer that the water heater is properly braced in accordance with *Health and Safety Code*, Section 19211.

Disclosing weaknesses

Sellers of real property must disclose known defects and deficiencies in the property—including earthquake weaknesses and hazards—to prospective buyers in accordance with *Civil Code*, Section 1102 and following sections.

Disclosing natural hazards

Sellers of real property must disclose whether the property is within any of the seven mapped natural hazard areas, including the earthquake fault, potential landslide and potential liquefaction areas. The required Natural Hazards Disclosure Form can

be found in *Civil Code*, Section 1103 and following sections. When filled out, this statutory form will reveal whether the home is within a mapped geologic, flood or hazard area.

Earthquake faults

The Alquist-Priolo Earthquake Fault Zoning Act prohibits building for human occupancy astride active faults. *Public Resources Code*, Section 2621 and following sections, requires sellers of existing residences to disclose to potential buyers on a Natural Hazards Disclosure Form if the property is located in a designated fault zone.

Landslide and liquefaction

The Seismic Hazards Mapping Act requires the state to prepare maps of the zones in California most susceptible to landslide and liquefaction hazards during earthquakes. *Public Resources Code*, Section 2694 and following sections, states that sellers must disclose to buyers, on a Natural Hazards Disclosure Form, whether the property is in such a zone, after the map for that area has been issued officially.

Publishing this guide

The Seismic Safety Commission is required to develop, adopt, update, and publish *The Homeowner’s Guide to Earthquake Safety* containing information on geologic and seismic hazards, explanations of structural and nonstructural earthquake hazards, and recommendations for mitigating these hazards, as required by the *Business and Professions Code*, Section 10149.

PROPERTY TAX AND INSURANCE

Property Tax Reappraisal Exclusion

California law allows homeowners to strengthen their homes with approved seismic strengthening techniques without the improvement being included in reappraisals that usually raise the property value and the tax owed, according to the *Revenue and Tax Code*, Section 74.5.

If you make an addition, such as a swimming pool or a new den to your home, your property tax bill will increase. But a strengthening project to help your home resist earthquakes will not add to your property taxes.

To receive the exclusion you must file a claim form with your county assessor. The work must also be approved as appropriate seismic strengthening by your local building department.

A sample form from the County of Santa Clara is attached on page 49. This form may vary by county.

Earthquake Insurance

Earthquake insurance is typically not part of your homeowner insurance policy. All insurance companies that sell residential property insurance in California are required by law to offer earthquake insurance to homeowners when the policy is first sold and every two years afterward.

The cost of the earthquake policy you are offered is based on a number of factors, including your home's location, age, construction type, and value. One thing to consider would be to compare the expected damage versus the deductible that is applicable to your policy. You may wish to consult a licensed civil or structural engineer for more specific information on your potential for damage.

Each homeowner should consider his/her individual risk factors and then weigh the cost of earthquake coverage against the benefits. The California Earthquake Authority (CEA) website has an online calculator to help estimate your premium based on your ZIP Code, insured value, dwelling type, and desired coverage and deductible.

The California Earthquake Authority is required to provide, and the insurance companies are required to disclose the availability of, discounts on earthquake insurance premiums for older homes that have been strengthened to resist earthquake damage. For more information, contact your insurance agent, who can also help you locate an earthquake insurer and estimate your annual premium.

California Earthquake Authority:
www.EarthquakeAuthority.com

California Department of Insurance:
www.insurance.ca.gov

EXAMPLES OF DAMAGE TO SINGLE FAMILY HOMES



Pacific Fire Rating Bureau

Figure 1 - San Fernando Earthquake, Feb. 9, 1971 Severely damaged split level 1 and 2 story wood frame dwelling. The one story portion dropped about 3 feet.



FEMA News Photo

Figure 4 - Northridge Earthquake, Jan. 17, 1994 Chimney Collapse - common type of damage to unreinforced masonry.



Robert A. Eplett, OES

Figure 2 - Loma Prieta Earthquake, Oct. 17, 1989 Home moved off of its foundation and was considered a total loss.



Dane Golden, FEMA News Photo

Figure 5 - San Simeon Earthquake, Dec. 22, 2003 This home slid two feet off its foundation due to inadequate nailing of walls to its sill plates.



FEMA

Figure 3 - Northridge Earthquake, Jan. 17, 1994 Single family residence damaged due to failure of multiple elements.

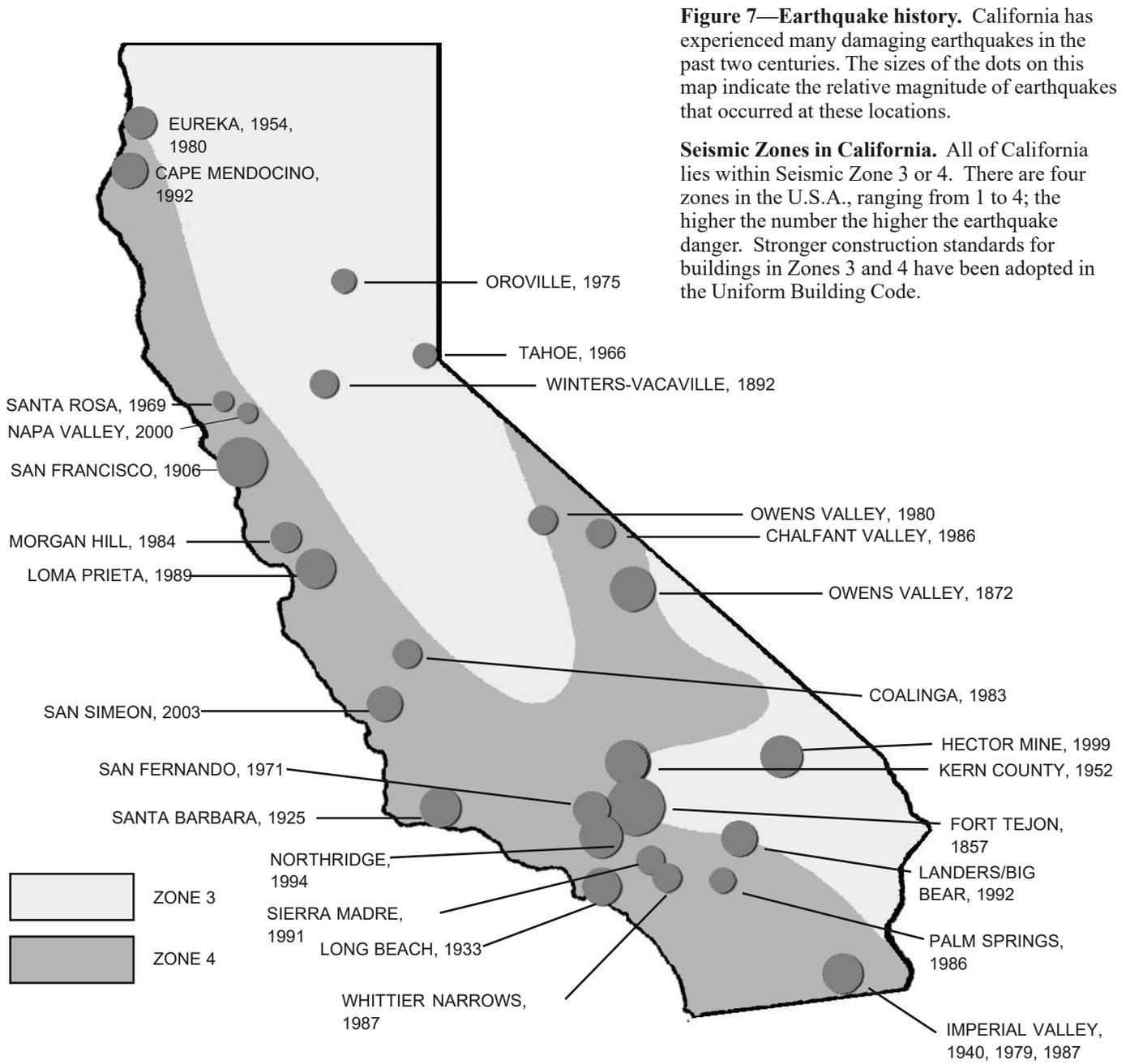


Gina Selvaduray

Figure 6 - San Simeon Earthquake, Dec. 22, 2003 The collapsed porch was not adequately attached to this single family residence.

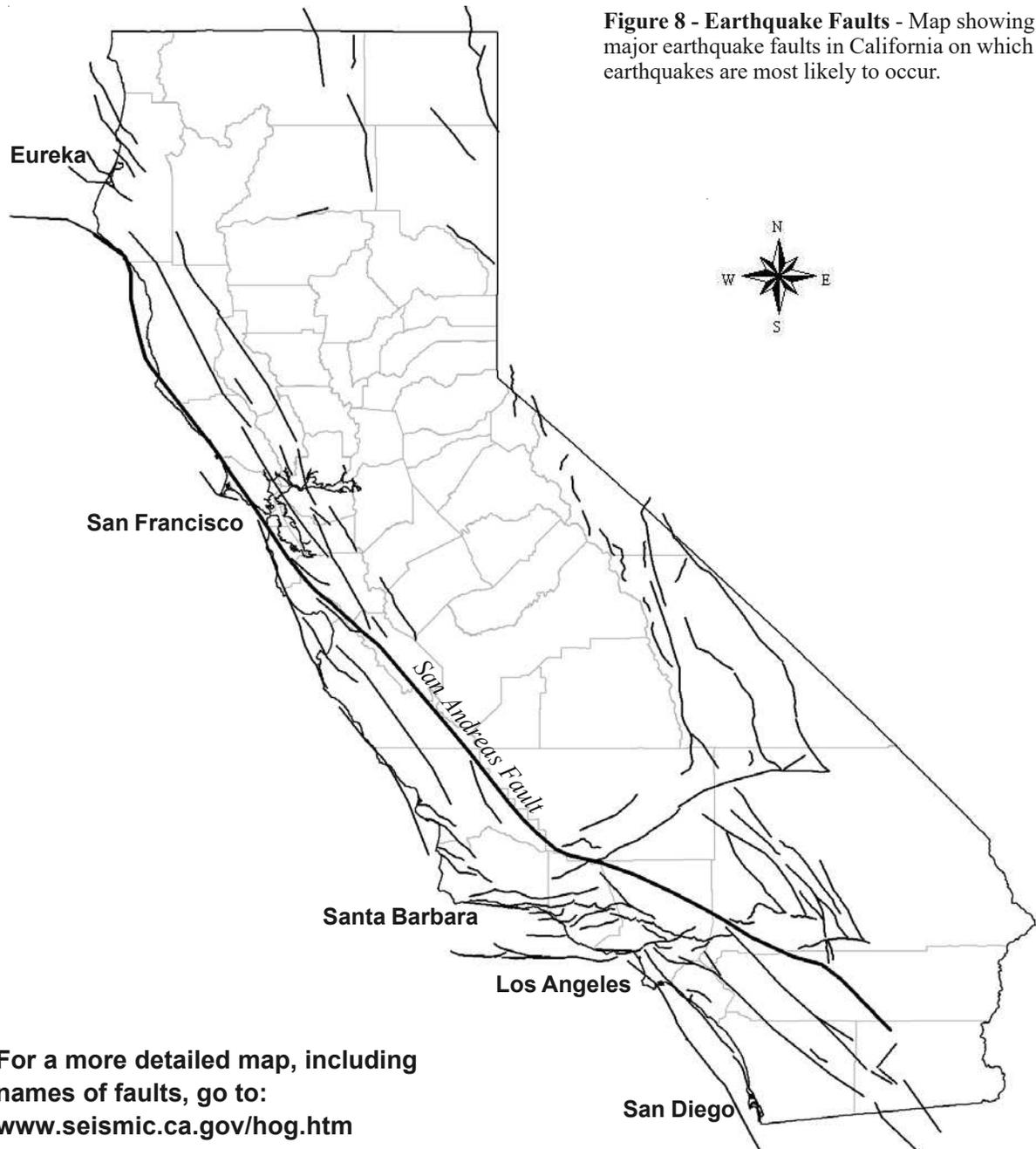
EARTHQUAKE MAPS OF CALIFORNIA

DAMAGING EARTHQUAKES IN CALIFORNIA



Source: California Geological Survey, 1986; Earthquake History of the U.S., U.S. Department of Commerce and Interior, 1982; Records of California Office of Emergency Services; compiled and revised by California Seismic Safety Commission, 2004; International Code Council, Uniform Building Code 1997 Edition.

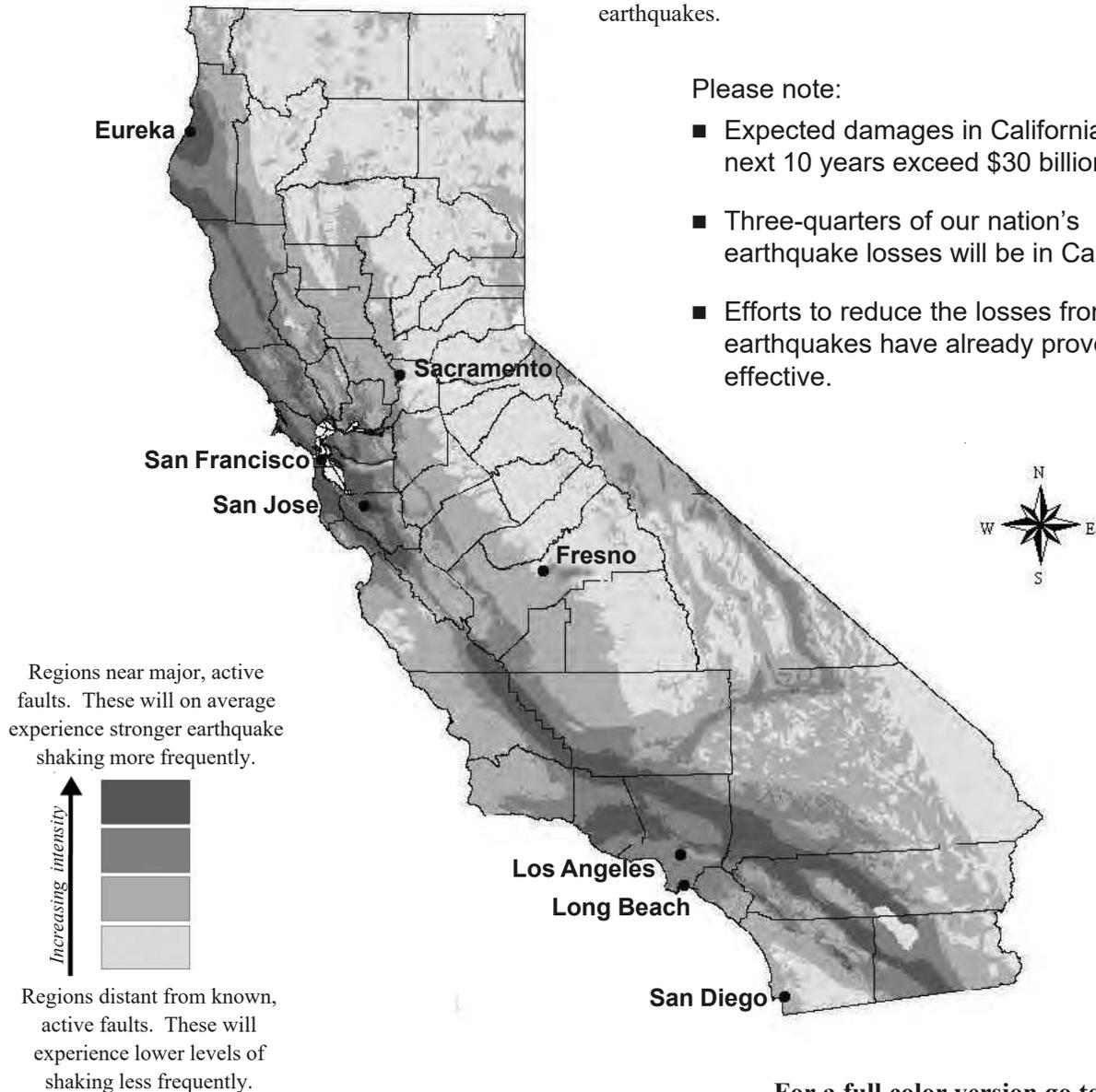
MAJOR EARTHQUAKE FAULTS IN CALIFORNIA



Map courtesy of California Geological Survey. Fault locations modified from seismic sources used in Revised 2002 California Probabilistic Seismic Hazard Maps.

SIMPLIFIED EARTHQUAKE SHAKING POTENTIAL MAP FOR CALIFORNIA

Figure 9 - Earthquake Shaking Potential Map - This map shows the relative intensity of ground shaking and damage in California from anticipated future earthquakes.



Please note:

- Expected damages in California in the next 10 years exceed \$30 billion.
- Three-quarters of our nation's earthquake losses will be in California.
- Efforts to reduce the losses from earthquakes have already proven effective.

For a full color version go to:
www.seismic.ca.gov/hog.htm

Data source: California Seismic Safety Commission, California Geological Survey, Governor's Office of Emergency Services, and United States Geological Survey, April, 2003, Earthquake Shaking Potential for California, California Seismic Safety Commission Publication No. 03-02.

ADDITIONAL RESOURCES

There are many additional resources available. Some are web sites and some are books or pamphlets.

- The California Seismic Safety Commission has created a webpage that provides links to other sites that are appropriate for homeowners interested in improving the earthquake safety of their homes.

Visit www.seismic.ca.gov/hog.htm

- FEMA also provides a wide variety of information suitable for the homeowner, including the availability of, and registration for, federal disaster aid programs after a damaging earthquake or other disasters.

Visit www.fema.gov

EARTHQUAKE WEAKNESSES

The earthquake weaknesses identified in this section, if not corrected, can result in one or more of the following:

- Injury to occupants
- Severe damage to your home
- Broken gas and utility lines
- Fires from broken gas lines
- Damage to floors, walls, and windows
- Damage to the contents in the house
- Damage to the foundations



Please remember that:

- Retrofitting before an earthquake is relatively cheap.
- Doing major structural repairs to your home after an earthquake is very expensive.
- Sometimes the damage is extensive enough to require the entire house to be demolished.
- After an earthquake, there is usually a shortage of available licensed contractors and engineers in the impacted area, because of the sudden high demand for their services.
- An appropriate seismic retrofit will reduce damage and save you money.

Please consult your local Building Department and/or a licensed architect or engineer for more detailed information.

The Problem

If water heaters are not properly braced, they can topple over during an earthquake causing:

- Broken gas lines and gas leaks
- Fires causing major damage to homes
- Broken water lines and flooding

How to Identify

- ✓ Is the water heater free-standing?
- ✓ Are there straps or other types of restraints securing the water heater?
- ✓ Are there straps or restraints bolted to the studs?
- ✓ Are there flexible pipes for water and gas connected to the water heater?

Remember

- Replacing a water heater after an earthquake can cost more than \$500.
- Repairing fire damage and flooding damage can cost several thousand dollars, including the entire cost of your home!
- There are many different ways of strapping a water heater. One example is shown on the next page. (See page 13)
- Check with your local Building Department for details of local requirements.
- Know where your main water valve is so that you can shut it off if you have a water leak.
- Know where your main gas valve is so that you can shut it off if you hear or smell a gas leak. (See page 32)

Water heater



Figure 10 - The unbraced water heater in this home fell during an earthquake; the resulting fire destroyed the home.

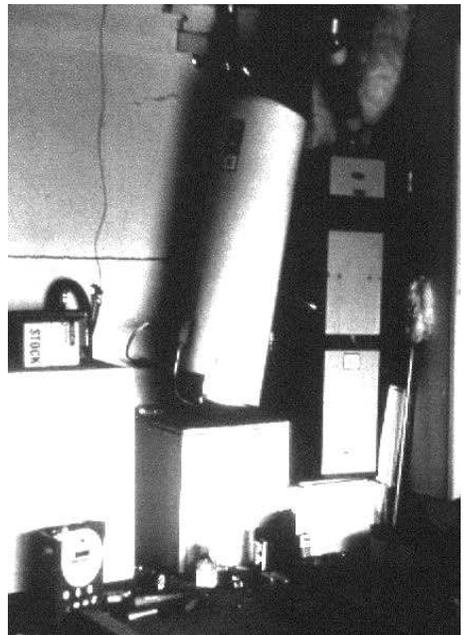


Figure 11 - This unstrapped water heater tipped over during the 1984 Morgan Hill Earthquake. Fortunately gas and water lines were not ruptured.

Water heaters must be braced (securely attached) to the studs in a wall. California law requires water heaters to be braced at the time of sale, or when a new water heater is installed.

The Solution

There are many solutions – all relatively inexpensive.

- Purchase and install a strap kit or bracing kit from your local hardware store. Be sure the kit is certified by the State Architect.

Other options include:

- Have a licensed plumber strap your water heater according to code.
- Use metal tubing or heavy metal strapping and lag screws to secure the water heater to the wall studs.

The gas and water lines should also have flexible pipes. These are safer than rigid pipes during an earthquake.

Be sure to check the straps once a year. They may come loose due to vibrations, or other causes.

How-to Resources

- Your local home improvement store
- [How to Brace Your Water Heater](#), City of Los Angeles, Department of Building & Safety, Information Bulletin #P/PC 2002-003, June 14, 1999.
- [Guidelines for Earthquake Bracing of Residential Water Heaters](#), Department of General Services, Division of State Architect, August 11, 2004.
- [How to Secure Your Water Heater](#), Governor’s Office of Emergency Services, 2003.

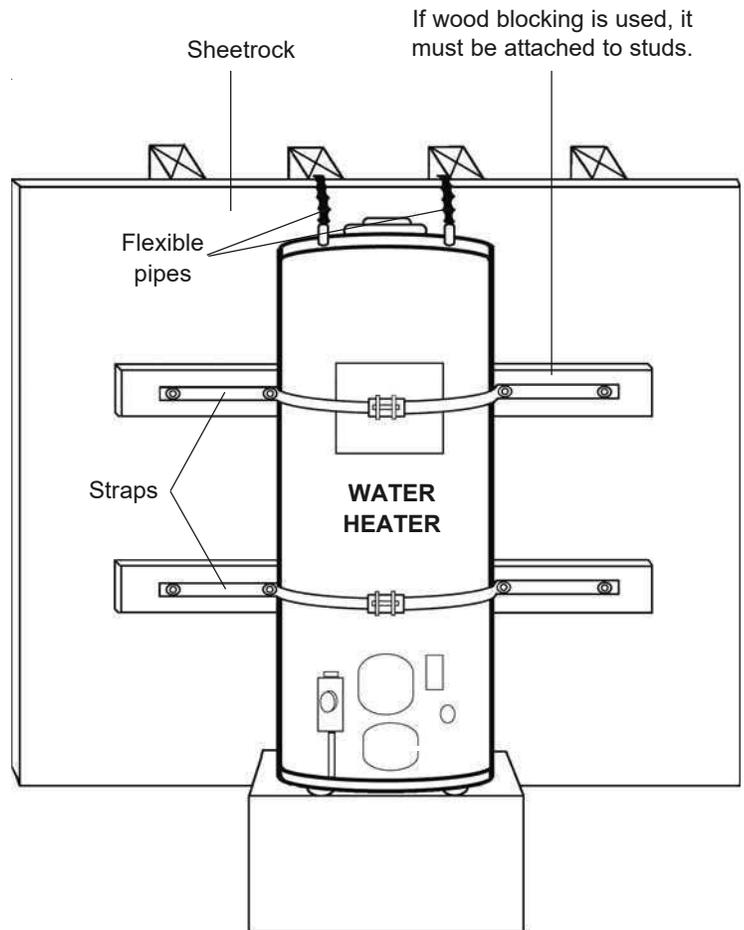


Figure 12: One Method of Water Heater Bracing. Straps and screws visible with water heater in a garage installation. You may need to add wood blocking.

Comparison of Cost: Preventing vs. Repairing Earthquake Damage	
Project Cost	Cost to Repair after an Earthquake
\$20 to \$200	\$500 to total value of home (if completely destroyed).

The Problem

Houses that are not bolted to the foundation can move off their foundations during earthquakes.

How to Identify

- ✓ Go down into the crawl space – the area between the first floor and the foundation – to find out if your house is bolted to its foundation.
- ✓ Look for the heads of anchor bolts that fasten the sill plate – the wooden board that sits directly on top of the foundation – securely to the foundation. (See *Figure 14a*, page 15)
- ✓ You should be able to see the large nuts, washers, and anchor bolts, installed at least every 4 to 6 feet along the sill plate. Steel plates are sometimes used instead of anchor bolts. (See *Figure 14b*, page 15)

Remember

- It is very expensive to lift a house, and place it back on its foundation.
- Homes moving off their foundations can cause gas lines to rupture, which in turn can result in fires.



Office of Emergency Services

Figure 13 - This home wasn't bolted and slid off its foundation. Sometimes the damage can be so bad that houses have to be demolished.

If your home has no foundation, or an old concrete foundation, see page 30.

Slab Foundations

Some homes are built directly on concrete slabs. These houses do not have crawl spaces and cripple walls.

Nearly all homes with slab foundations that were originally built to code will have anchor bolts or straps.

However, if the house is not bolted to the slab, you have an earthquake weakness.

Newer homes generally have anchor bolts or straps.

If you have an unfinished garage, you may be able to see the anchor bolts.

You are not required to remove siding, drywall or plaster to determine if your house has anchor bolts.

The Solution

Drill holes through the sill plate into the foundation and install anchor bolts. (See *Figure 14a*)

If there is not enough room to drill, you can attach steel plates to hold the sill plate to the foundation. (See *Figure 14b*)

Anchor bolts have to be installed properly for them to be effective.

You must obtain the proper permits from your local Building Department before beginning work.

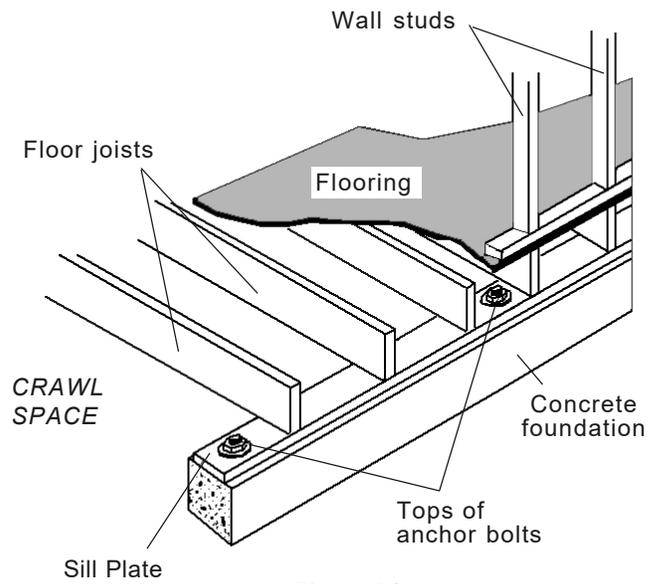


Figure 14a

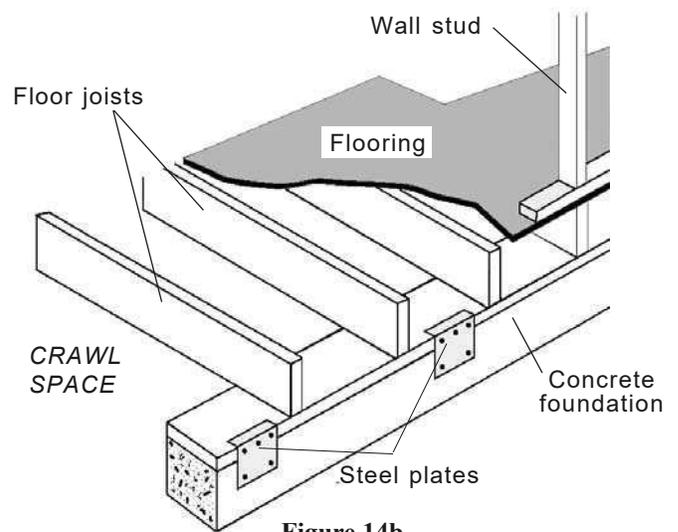


Figure 14b

Figure 14 —Anchor bolts or steel plates. A home’s crawl space may be formed by a cripple wall (see next page for description) between the foundation and the floor joists or the floor joists may rest directly on the sill plate. In either case, you should be able to see the heads of anchor bolts or steel plates installed at appropriate intervals. These fixtures fasten the sill plate to the foundation.

How-to Resources

- Detailed information for do-it-yourselfers or engineers can be found in the [International Existing Building Code](#), published by the International Code Council.
- Publication: [How You Can Strengthen Your Home for the Next Big Earthquake in the Los Angeles Area](#), City of Los Angeles, Department of Building & Safety, October 2001.

Comparison of Cost: Preventing vs. Repairing Earthquake Damage	
Project Cost	Cost to Repair after an Earthquake
\$250 to \$5,000	\$25,000 to total value of home (if completely destroyed).

The Problem

Wooden floors and stud walls are sometimes built on top of an exterior foundation to support a house and create a crawl space. (See Figure 17, page 17)

These are called cripple walls and they carry the weight of the house.

During an earthquake, these walls can collapse if they are not braced to resist horizontal movement.

If the cripple wall fails, the house may shift or fall.

How to Identify

- ✓ Go under the house through the crawl space, to see if there are any cripple walls.
- ✓ If there are cripple walls, check to see if they are braced.
- ✓ There should be plywood panels adequately nailed to the studs OR there should be diagonal wood sheathing. (See Figure 16)
- ✓ If you have neither of these, the cripple walls are probably insufficiently braced or unbraced.
- ✓ Horizontal or vertical wood siding is not strong enough to brace cripple walls.

Remember

- It is very expensive to lift a house, repair the cripple wall, and put it back on its foundation



Office of Emergency Services

Figure 15 - Damage to home due to cripple wall failure.

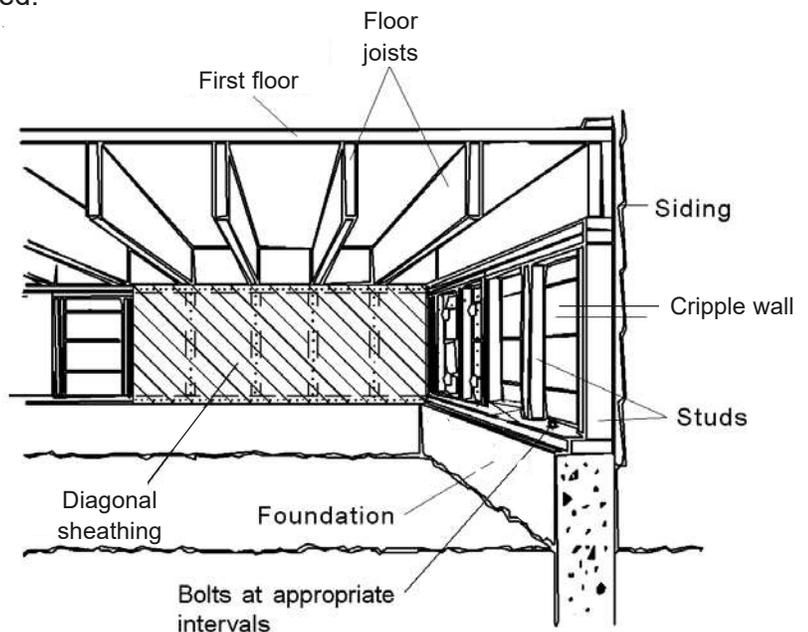


Figure 16 - Diagonal Sheathing. Common in older homes.

The Solution

Plywood, or other wood products allowed by code, should be nailed to the studs.

The following are important:

- Type of wood product used
- Plywood thickness
- Nail size and spacing
- Do not cover vents.

Consult your local Building Department for permit requirements before starting work.

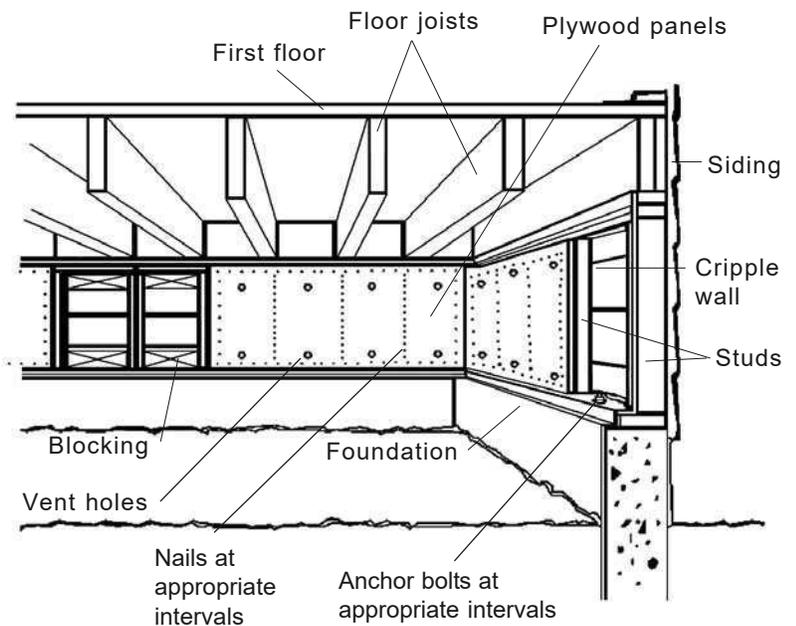
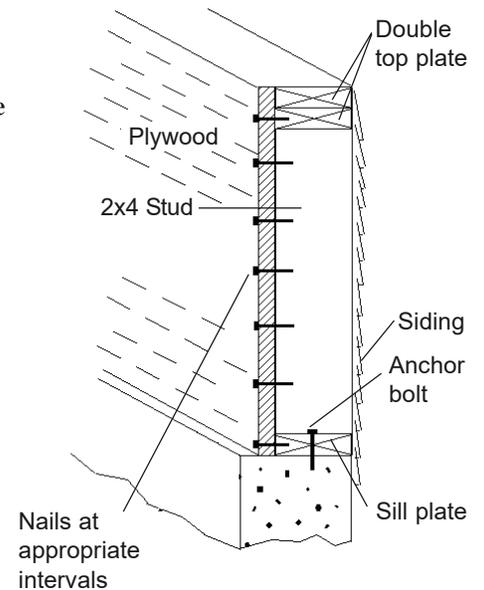


Figure 17—Plywood or diagonal sheathing strengthens weak cripple walls. If your home has a cripple wall between the foundation and the first floor, and the wall is not braced with plywood or diagonal sheathing, the house may fall or shift off its foundation during an earthquake.



How-to Resources

- Detailed information for do-it-yourselfers or engineers can be found in the International Existing Building Code, published by the International Code Council
- Publication: How You Can Strengthen Your Home for the Next Big Earthquake in the Los Angeles Area, City of Los Angeles, Department of Building & Safety, October 2001.

Comparison of Cost: Preventing vs. Repairing Earthquake Damage	
Project Cost	Cost to Repair after an Earthquake
\$500 to \$2,500	\$25,000 to total value of home (if completely destroyed).

The Problem

The outside of the house is supported by wood posts resting on unconnected concrete piers. Siding is often nailed to the outside of the posts, making them not easily visible.

During an earthquake these posts can fail, if they are not braced against swaying.

If the posts fail, the house may shift or fall.

How to Identify

- ✓ Go under the house to see if there is a continuous foundation under the outside walls.
- ✓ If you do not see a continuous foundation you may have an earthquake weakness.
- ✓ If you see only unconnected concrete piers and wood posts, supporting the outside walls, you have an earthquake weakness.

Remember

- Horizontal or vertical wood siding is not strong enough to brace pier-and-post foundations.
- Major structural repairs, like lifting an entire house to repair the posts and putting it back, are very expensive.



California Seismic Safety Commission



California Seismic Safety Commission

Figure 18 - The pier-and-post foundation under this home shifted during a recent earthquake.

The Solution

Consult a licensed architect or engineer, and a licensed building contractor who specializes in foundations, to fix this problem.

It may be possible to make the foundation safer by bracing the posts.

You might be better off to add a new foundation and plywood walls in the crawl space to make sure that the house will not shift or fall off its foundation during an earthquake.

How-to Resource

- Detailed information for engineers can be found in the [International Existing Building Code](#), published by the International Code Council.

Comparison of Cost: Preventing vs. Repairing Earthquake Damage	
Project Cost	Cost to Repair after an Earthquake
\$1,000 to \$25,000	\$20,000 to total value of home (if completely destroyed).

The Problem

Unreinforced masonry—brick, concrete block, or stone—foundations often cannot resist earthquake shaking. They may break apart, or be too weak to hold anchor bolts. Homes may shift off such foundations during earthquakes, damaging the walls, floors, utility lines, and home contents.

How to Identify

- ✓ If your home's foundation is brick or stone, and looks like one of the foundations shown in the photos here, it is probably unreinforced.
- ✓ If there is a space filled with grout between the inner and outer faces of a brick foundation (where anchor bolts and reinforcing steel could be installed), it may be reinforced.
- ✓ If the outside of the foundation is covered, you may have to look under the house to see the type of foundation you have.
- ✓ If you are not sure what to look for, seek the services of a licensed engineer to determine if your foundation is reinforced or not.

Remember

- It is cheaper to do this before an earthquake damages the house than after.



California Seismic Safety Commission

Figure 19 - This is an unreinforced stone foundation. They typically fail during earthquakes.



California Seismic Safety Commission

Figure 20 - Note the bricks exposed in this unreinforced masonry foundation.

The Solution

There are several ways to fix this problem.

The most common approach is to replace all or part of the existing foundation with a poured reinforced concrete foundation.

Another solution is strengthening the unreinforced brick or stone foundation, which is generally expensive.

Seek the help of a licensed architect or engineer, and a licensed foundation contractor or general contractor.

How-to Resource

- Detailed information for engineers can be found in the [International Existing Building Code](#), published by the International Code Council.

Comparison of Cost: Preventing vs. Repairing Earthquake Damage	
Project Cost	Cost to Repair after an Earthquake
\$15,000 to \$50,000	\$15,000 to total value of home (if completely destroyed).

The Problem

Houses built on the sides of steep hills are often set on exposed posts or columns, as shown in the photographs.

The potentially hazardous conditions that are unique to homes on steep hillsides are:

- Stilt-type posts with or without diagonal bracing
- Walls with very different heights or that are stepped or sloped down the hillsides.

If these posts or walls are not properly braced, they may collapse during an earthquake.

Sometimes, the supports on the downhill side will be hidden behind a tall wall that encloses a large unfinished space. (This is similar to, but taller than, a crawl space under a typical house built on flat ground.)

How to Identify

- ✓ Is the house located on a slope?
- ✓ Are the columns or walls supporting the home braced?
- ✓ If you are not sure if there is bracing or if the bracing is adequate, consult a licensed engineer.

Remember

- It is very expensive to lift a house, repair the posts, and put it back.



Office of Emergency Services

Figure 22 - This hillside home was built on an unbraced tall wall that failed.



Office of Emergency Services

Figure 23 - This photograph shows an interior detail of a home similar to the one above, showing substantial damage to a building with an unbraced tall wall.

The Solution

Consult a licensed architect or engineer, and a licensed contractor, to fix this problem.

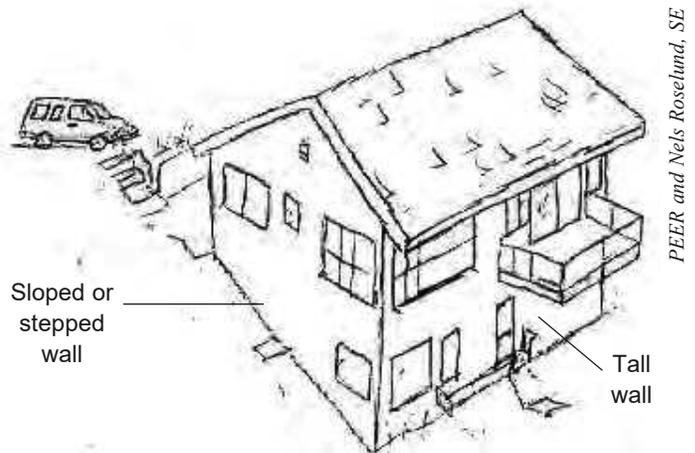


Figure 24 - Hillside homes with sloped and tall walls or posts require special engineering.

How-to Resources

- Detailed information can be found in the [International Existing Building Code](#), published by the International Code Council.
- [Voluntary Earthquake Hazard Reduction in Existing Hillside Buildings](#), City of Los Angeles Municipal Code, Chapter IX, Article 1, Division 94.

Comparison of Cost: Preventing vs. Repairing Earthquake Damage	
Project Cost	Cost to Repair after an Earthquake
\$1,000 to \$50,000	\$10,000 to total value of home (if completely destroyed).

The Problem

Houses built of unreinforced masonry – bricks, hollow clay tiles, stone, concrete blocks, or adobe – are very likely to be damaged during earthquakes.

The mortar holding the masonry together is generally not strong enough to resist earthquake forces.

Anchorage of walls to the floor and the roof is critical.

These houses are weak (brittle) and can break apart.

Walls may fall away or buckle, resulting in damage.

How to Identify

- ✓ Can bricks or stone be seen from the outside (unless the walls are covered with stucco)?
- ✓ Do the brick walls have “header courses” of bricks turned endways every five or six rows? (See Figure 26)
- ✓ Was the house built before 1940?

If you cannot tell from the outside, turn off the power and take the cover plate off one of the electrical outlet boxes on an outside wall and look for brick or other masonry.

If the wall is concrete or concrete block, it is very difficult to find out if reinforcing steel was added during construction.

You will then need:

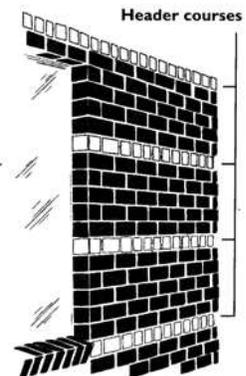
- The house’s plans, which may be on file with the Building Department, or



California Seismic Safety Commission

Figure 25 - The plaster-covered brick walls of this building collapsed during a recent earthquake.

Figure 26 - Header courses of bricks are usually placed endwise every six or so rows in unreinforced masonry walls to tie the outer layer of bricks to the layers inside the wall.



California Seismic Safety Commission

- To consult a licensed engineer to make the determination.

Remember

- It is very expensive to shore up a house, remove damaged walls, and put in new walls.

The Solution

Consult a licensed architect or engineer to fix this problem.

One solution may involve:

- Tying the walls to the floor and roof
- Installing a steel frame and bolting the wall to it.



Jessica Tran

Figure 27 - Unreinforced masonry wall strengthened by installing a steel frame inside.



Jessica Tran

Figure 28 - Bolting of unreinforced masonry wall to steel frame on the inside.

How-to Resource

- Detailed information can be found in the [International Existing Building Code](#), published by the International Code Council.

Comparison of Cost: Preventing vs. Repairing Earthquake Damage	
Project Cost	Cost to Repair after an Earthquake
Project and Repair costs can vary widely.	

The Problem

The large opening of a garage door and the weight of a second-story room built over the garage can result in the walls being too weak to withstand earthquake shaking.

When the narrow sections of the wall on each side of the opening are not reinforced or braced, the weakness is worse.

How to Identify

- ✓ Is the garage door opening in line with the rest of the house? (See Figure 30)
 - If this is the case, additional bracing **may not** be needed.
- ✓ Is the house shaped like Figure 31? If this is the case, are there braces or plywood panels around the garage door opening?
 - If there are no braces or plywood panels, strengthening may be needed.
- ✓ Consult a licensed architect or engineer to determine the strengthening required.

Remember

- Many homes with this weakness have been severely damaged in past earthquakes.



Office of Emergency Services

Figure 29 - This mountain home was built over a garage, and its walls were not strong enough to withstand an earthquake.

HOUSE VIEWED FROM ABOVE

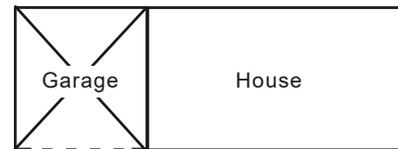


Figure 30 - If the wall of the main house is in line with the wall containing the door of a garage with a room over it, the adjoining wall may help brace the garage.

HOUSE VIEWED FROM ABOVE

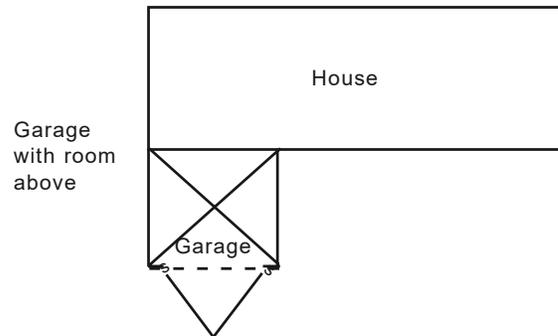


Figure 31—Additional bracing. Home configuration where there is no in-line wall. Additional bracing may be appropriate in this situation.

The Solution

Consult a licensed architect or engineer to design plywood paneling or a steel frame around the door opening (See Figure 32).

Have plans drawn.

Obtain a permit from your local Building Department.

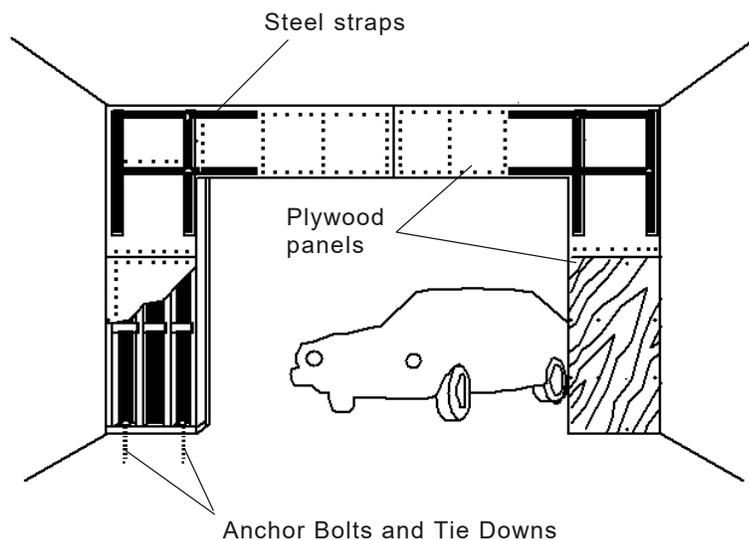


Figure 32—Bracing garage walls. If your house has a room over the garage, the garage walls may not be strong enough to hold up during an earthquake unless they are braced with plywood panels and steel straps.

How-to Resource

- Detailed information can be found in the International Existing Building Code, published by the International Code Council.

Comparison of Cost: Preventing vs. Repairing Earthquake Damage	
Project Cost	Cost to Repair after an Earthquake
\$5,000 to \$25,000	\$15,000 to total value of home (if completely destroyed).

OTHER EARTHQUAKE-RELATED CONCERNS

OTHER CONCERNS

Unreinforced Masonry Chimneys

The Problem

Many chimneys are built of unreinforced brick or stone. During an earthquake these can collapse or break and fall on the roof.

When the chimney fails, the falling stones and bricks can:

- Cause injuries
- Damage the house
- Damage cars

Tall slender chimneys are most vulnerable.

How to Identify

- ✓ Check the mortar between the bricks or stones with a screwdriver. If it crumbles when you pick at it, the chimney may be a hazard.
- ✓ Inspect the attic and floor spaces for metal ties that should be holding the chimney to the house.
- ✓ Determining whether a chimney is susceptible to earthquake damage is not always easy. When in doubt, consult a licensed engineer or contractor.

Remember

- Do not locate patios, children's play areas, or parking spaces near a questionable chimney.
- Tell family members to get away from chimneys and fireplaces during earthquakes.



Office of Emergency Services

Figure 33 - This unreinforced chimney fell during a recent earthquake.



Gina Selvaduray

Figure 34 - Morgan Hill Earthquake. Broken chimney fell on roof.

The Solution

Tear down the old or damaged chimney and replace with a newly constructed chimney.

Several steps can be taken to reduce the risk of damage from falling chimneys, depending upon the type of chimney you have. They include:

- Add plywood panels at the roof or above the ceiling joists to prevent the brick or stone from falling into the house.
 - This can be done by layering plywood above the ceiling, in the house’s attic, or nailing plywood under the shingles when reroofing.
- Replace the upper chimney with metal flues.
- Strengthen the existing chimney.
 - This can be a complicated process, depending upon the construction and height of the existing chimney.

Consult your local Building Department and obtain necessary permits first.

How-to Resource

- Reconstruction and Replacement of Earthquake Damaged Masonry Chimneys, City of Los Angeles, Department of Building & Safety, Information Bulletin #P/BC-2002-70.



California Seismic Safety Commission

Figure 35 - Photo showing damaged chimney removed. Note that the fireplace is now not functional.

Comparison of Cost: Preventing vs. Repairing Earthquake Damage	
Project Cost	Cost to Repair after an Earthquake
\$2,000 to \$12,000	\$15,000 to total value of home (if completely destroyed).

No Foundation

- The Problem** Some older houses were built on wood beams laid directly on the ground, without foundations. These houses may shift during earthquakes, causing structural damage and breaking utility lines.
- How to Identify** Look under the house. If you see no concrete or masonry around the outside walls, the house may lack a foundation.
- What Can Be Done** You may need to add a foundation to make the house earthquake resistant. Just as when strengthening or replacing an unreinforced masonry foundation, you will require the advice of a licensed architect, engineer, or foundation contractor.

Old Concrete Foundation

- The Problem** Some older concrete foundations were made with sand or stone that interacted chemically over time, and the concrete eventually crumbles and becomes too soft to withstand earthquake forces.
- How to Identify** Inspect the foundation for large cracks in the concrete, concrete crumbling off the foundation, or concrete crumbling when you pick at it with a screwdriver.
- What Can Be Done** You may need to replace some or all of the foundation. You should consult a licensed foundation contractor or an engineer.

- The Problem** The design and construction features of some homes make them vulnerable to earthquake damage, especially if these homes are not specifically designed and built to resist earthquakes. Homes at risk are those with irregular shapes, large windows (which can break in earthquakes and scatter shards of glass), more than two stories, irregular walls, or porches and overhangs.
- How to Identify** Many homes with these features are strong enough to withstand earthquakes and it is difficult to tell whether such homes need strengthening. If you have doubts about one or more of these features in your home, or in a home you are planning to buy, you should consult a licensed architect or engineer for an assessment.
- What Can Be Done** A professional can advise you on how to identify and fix earthquake weaknesses if necessary. For example, large windows can be made safer by applying plastic film on them.

NATURAL GAS SAFETY

The Problem

Natural gas piping and appliances can be damaged during earthquakes, causing gas leaks.

If ignited, this can result in fires which can burn part of, or, the entire house.

About one in four fires after an earthquake is related to natural gas leaks.

Gas leaks after an earthquake are more likely if:

- There are structural weaknesses
- Gas appliances are not anchored
- Flexible pipe connections are not used.

The primary concern is property loss from fire damage.

The potential for life loss is limited since most single family homes have several safe exits.

How to Identify

- ✓ Examine all natural gas appliances (water heaters, dryers, stoves, ovens, furnaces) to see if they are anchored to the floor or walls, and have flexible pipe connections.

Plan Ahead

Locate your gas meter outside your home.

Identify the exact location of the shutoff valve and make sure that you have access to it.

Make sure you have a wrench that is readily available to turn off the gas when needed.

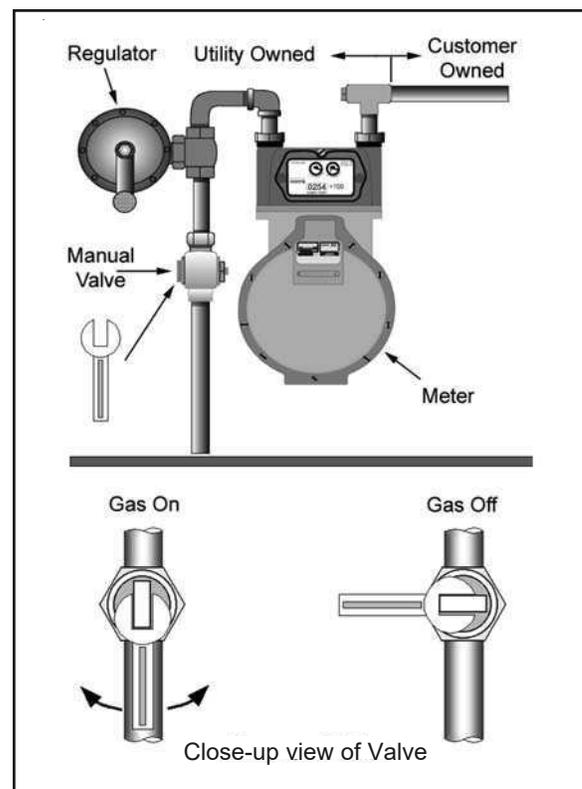


Figure 36—Manual Shutoff Valve Location

Manual Gas Shutoff

- The most cost-effective way to manage the risk from natural gas is to know how and when to manually shut off the gas.
- Use the wrench to turn off the manual valve located at the gas meter (*See Figure 36, page 32*).
- Shut off your gas only if you:
 - Smell gas
 - Hear gas escaping
 - Suspect a broken gas pipe, appliance, vent, or flue.

Remember

- Once the gas has been shutoff, service can be restored only by utility personnel or qualified plumbers.
- High demands for qualified personnel after an earthquake can lead to substantial delays in restoring natural gas service.

Resources

- Seismic Gas Shut-Off Valve Requirements in Los Angeles, City of Los Angeles, Department of Building & Safety, Information Bulletin #P/PC 2002-001, April 30, 2003.
- Improving Natural Gas Safety in Earthquakes, California Seismic Safety Commission, Publication #CSSC-02-03, July 2002.
- Gas Shutoff Valve Certification Program, Division of the State Architect.

Automatic Gas Shutoff Options

There are a variety of automatic gas shut-off valves available. These cost more than manual shutoff valves and may provide additional safety but may also have some disadvantages.

The types of valves available include:

- Earthquake shake-actuated valves
- Excess flow valves
- Methane detectors
- Hybrid systems
- Others.

These can be installed on the “customer owned” side of the gas meter.

Consult your local Building Department because:

- Some installations will require building permits.
- Some local jurisdictions have adopted ordinances requiring automatic gas shutoff devices at the time of sale or during significant renovations.

GETTING THE WORK DONE

PLANS, PERMITS, AND CONTRACTORS

- Decide which strengthening project or projects you are going to do.
- Get the necessary building permits first.
 - If you are “doing-it-yourself,” you still need the proper permits.
 - For more complex projects, have a licensed architect or engineer draw up the necessary plans and specifications.
 - ✓ Interview two or three architects or engineers.
 - ✓ Ask for references or former clients.
 - ✓ Talk to references or former clients.
 - ✓ Compare experience, ideas, and fees.
 - Submit the plans for approval to your local building department.
 - Remember: the building codes are designed for your safety.
- Select your licensed contractor.
 - First make sure the contractor is properly licensed.
 - Interview at least two or three contractors.
 - Ask your licensed architect or engineer for recommendations.
 - Ask for references or former clients.
 - Talk to references or former clients.
 - Compare experience, fees, and terms of contract.
 - Get at least three written bids for the construction work.
 - The lowest bid may not be the best bid.
- Keep all plans, permits, and other records of your strengthening project.
 - Provide future buyers of your home with these.

There are many publications that describe strengthening projects in detail.

Visit the California Seismic Safety Commission’s website at www.seismic.ca.gov, which provides many useful links.

- Get the documents that relate to your project and read them.
 - This will help you to better understand what the architect or engineer is doing, and also what the contractor is doing.
- The International Existing Building Code Appendix Chapter 3 contains the best current guidelines. Ask your local Building Department to review a copy.

If your home has been designated as “historical,” you also may need to comply with the *California Historical Building Code*.

- Contact your local Building Department for further help with this.

REMEMBER

Whether you do it yourself, or hire a contractor, **you need permits** from your local Building Department.

It costs far less to correct earthquake weaknesses before an earthquake than to repair the damage after an earthquake.

If your home is damaged in an earthquake, you will probably also have other costs such as lodging, medical, etc.

DON'T HESITATE - MITIGATE!



AFTER A DISASTER – *HIRE A LICENSED CONTRACTOR!*

The contents of this section have been adapted from “After a Disaster, Don’t Get Scammed” by the Contractors State License Board.

After a Disaster...

DO NOT:

- Rush into repairs, no matter how badly they are needed.
- Hire the first contractor who comes along.
- Accept verbal promises.

DO:

- Get proof that the person you are dealing with is a California licensed contractor appropriate for the work to be done.
- Get the contractor’s license number and verify that it is current and valid.
- Get a written contract that contains all the details of the job to be performed.
- Get at least three bids.
- Check references of other work the contractor has done, if possible, in your area.
- Develop a payment schedule with the contractor.
- Consider a completion bond on large projects.

Contractors must be licensed for any job which costs \$500 or more, including materials and labor.

Avoid Payment Pitfalls

- By law, a down payment on a home improvement contract cannot exceed:
 - 10% of the contract price, or
 - \$1000whichever is less!
- Withhold at least 10% of the total contract price until the project is complete
- Do not make final payment until:
 - The building department has signed off on it,
 - You are satisfied with the job, and
 - You take a final walk-through to make sure work is complete and done correctly.

Useful publications from the Contractor’s State License Board (www.cslb.ca.gov):

- **What You Should Know Before You Hire a Contractor** - Provides information about hiring and working with contractors.
- **Home Improvement Contracts: Putting the Pieces Together** - Provides answers about the legal requirements of home improvement contractors.

GEOLOGIC HAZARDS

Sellers of real estate in California are required to disclose to buyers certain information regarding natural hazards that can affect the property being sold. In addition to flood and fire hazard information, disclosure of seismic hazards is also required.

Earthquakes are common in California because of the many earthquake faults located throughout the state.

This section:

- Describes briefly the basic geology-related hazards, and
- Introduces the government mapping programs that define which areas are susceptible to those hazards.

Ground Shaking:

- Ground shaking causes 99% of the earthquake damage to California homes.
- Areas near large active faults are more likely to be shaken severely than areas in the rest of the state.

Landslide:

- Earthquakes can also trigger landslides.
- Earthquake shaking can cause the soil and rock to slide off a slope, ripping apart homes on the slope and/or crushing homes downhill (See Figure 37).

Fault Rupture:

- An actual crack forms and the ground is offset along the two sides of a fault during an earthquake (See Figure 38).
- A house built over an active fault can be torn apart if the ground ruptures beneath it.
- If the house is built over a “creeping” fault – one that moves slowly with no earthquakes or a series of very small earthquakes – the damage may not be noticed for some time.



Patricia Grossi and Augustin Rodriguez, EERI

Figure 37 - Landslide. San Simeon Earthquake, December 22, 2003 Landslides on San Gregorio Road in Atascadero, California, only a short distance away from where the homes with the most damage were located.



Robert A. Eppelt, OES, CA

Figure 38 - Fault Rupture. Landers Earthquake of June 28, 1992, produced a surface rupture of over 50 miles along faults in the Mojave Desert.

Lateral Spreading:

- Intense shaking during an earthquake can cause the soil to break into blocks which move apart from each other. This can cause damage to the foundation of a house (See Figure 39).

Liquefaction:

- During earthquakes, loose, wet sandy soil can become almost like quicksand, and lose its ability to support structures. This can cause the foundation of a house to sink, break, or tilt (See Figure 40).

Tsunami:

- A tsunami is a series of large sea waves caused by an underwater earthquake or landslide.
- Coastal areas are prone to tsunami damage.
- Tsunami waves can come from a great distance and can cause flooding or wash away houses in low-lying areas along the shore.

Dam Failure:

- Earthquake damage to a dam can cause sudden and devastating flooding of houses downstream.
- During the 1971 San Fernando Earthquake, the Lower San Fernando Dam above the San Fernando Valley was damaged. Had it failed, it would have flooded the homes below, causing many deaths and injuries. (See Figure 41). Risk of an aftershock forced residents in an 11-square mile area to evacuate for the next 3 days.
- California has some of the world's best standards for building and inspecting dams.

Recommendation:

If you live in a low-lying coastal area or a dam inundation zone, become familiar with evacuation routes to higher ground and be prepared to evacuate such areas immediately after an earthquake.



Figure 39 - Lateral Spreading. Loma Prieta Earthquake, October 17, 1989. Lateral spreading damage levee road along the San Lorenzo River.



Figure 40 - Loma Prieta Earthquake, October 17, 1989. Lateral spreading, liquefaction and sand boils caused extensive damage in the Marina District of San Francisco, about 60 miles away from the epicenter.



Figure 41 - Lower San Fernando Dam that was badly damaged by the 1971 San Fernando Earthquake.

Earthquake Hazard Mapping

Enormous progress has been made in understanding how, why, and where earthquakes occur. This has led to the creation of maps that highlight areas having the highest likelihood of damaging earthquakes.

Five mapping programs have been developed to help Californians lead safer lives in earthquake country.

National Seismic Zones

The U.S. is divided into four major zones, each having a different likelihood of strong ground shaking. The earthquake hazard potential for the U.S., determined through a national program, has been generalized into four seismic zones, numbered Zone 1 through Zone 4. Zone 1 has the lowest earthquake danger and Zone 4 has the highest earthquake danger. **Most of the densely populated parts of California are in Zone 4.** (See Figure 7, page 7)

The National Seismic Zone map is published by the International Code Council (ICC) in the California Building Code.

Earthquake Fault Zone Maps

These maps are also known as the *Alquist-Priolo Earthquake Fault Zone Maps*, named after the California legislators who initiated the legislation that mandated these maps. The maps show active earthquake faults prone to surface ruptures and identify a 1,000 ft. wide zone with the fault line at the center.

Seismic Hazard Zone Maps

These maps show areas where landslides and liquefaction are most likely to occur during earthquakes.

Tsunami Inundation and Evacuation Route Maps

Maps for the Pacific Coast show areas where low-lying regions are exposed to tsunami inundation. These maps are in various stages of preparation and availability.

Dam Inundation Maps

These maps show the areas below major dams that may be flooded in the event of their failure.

How are these Maps Used?

The zones defined by the maps are at greatest potential risk when a major earthquake occurs. This is particularly the case when the earthquake occurs during or shortly after a heavy rainfall, which increases the likelihood of liquefaction and landslides.

California law requires that the information from the Earthquake Fault Zone and Seismic Hazard Zone maps be incorporated into local general plans, and any land-use planning or permitting ordinances. Cities and counties must establish regulations governing development within these zones.

Special geotechnical studies are required before buildings can be built in Earthquake Fault Zones or Seismic Hazard Zones.

Your local building or planning department can show you the National Seismic Zone Map as well as the other maps if they are available for your community.

These maps, if they are available, may be accessed through www.seismic.ca.gov/hog.

The Seller of real estate within a hazard zone must disclose that the property lies within such a zone at the time of sale.

WHAT TO DO *DURING* AN EARTHQUAKE

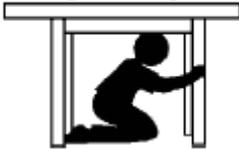
DROP!



COVER!



HOLD ON!



1. IF YOU ARE **INDOORS**—**STAY THERE!** “**DROP, COVER AND HOLD ON.**” Get under a sturdy desk or table and hang on to it, or move into a hallway or get against an inside wall. Stay clear of windows, fireplaces, and heavy furniture or appliances. Get out of the kitchen, which is a dangerous place in earthquakes since it’s full of things that can fall on you. Don’t run downstairs or rush outside while the building is shaking or while there is danger of falling and hurting yourself or being hit by falling glass or debris.
2. IF YOU ARE **OUTSIDE**—**GET INTO THE OPEN**, away from buildings, power lines, chimneys, and anything else that might fall on you.
3. IF YOU ARE **DRIVING**—**STOP**, but carefully. Move your car as far out of traffic as possible. Do not stop on or under a bridge or overpass or under trees, light posts, power lines, or signs. Stay inside your car until the shaking stops. When you resume driving, watch for breaks in the pavement, fallen rocks, and bumps in the road.
4. IF YOU ARE ON OR NEAR A **STEEP HILLSIDE**—**WATCH OUT FOR LANDSLIDES**, falling rock, trees, and other debris that could be loosened by earthquakes.

If You Feel a Strong Earthquake or Receive a Tsunami Warning When You are on the Coast

1. **DROP, COVER AND HOLD ON.** Watch for falling objects until the earthquake is over.
2. **MOVE TO HIGHER GROUND** or inland away from the coast immediately. A tsunami may be coming. Go on foot if possible. The first waves may reach the coast within minutes after the ground shaking stops. The first wave is almost never the largest. Later waves may be spaced tens of minutes apart and can continue arriving for many hours.
3. **THERE MAY BE NO TIME FOR AUTHORITIES TO ISSUE A WARNING.** If you do not hear an evacuation announcement but notice a sudden drop or rise in water level or hear a loud noise coming from the water, nature may be warning you of impending danger.
4. **STAY AWAY FROM THE COAST.** Do not return to the shore after the first wave. Waves may continue to arrive for hours.
5. **LISTEN TO A RADIO FOR AN “ALL CLEAR”** before returning to the shore.

WHAT TO DO *BEFORE* AN EARTHQUAKE

The information contained in this section does not represent weaknesses in the earthquake resistance of homes. It is valuable information to keep in mind to reduce risks to yourself, your family, and your home. These lists are only highlights of the actions you should take.

Gather Emergency Supplies

Be sure you have these basic supplies on hand:

- Fire extinguisher
- Adequate supplies of medications that you or family members are taking
- Crescent and pipe wrenches to turn off gas and water supplies
- First-aid kit and handbook
- Flashlights with extra bulbs and fresh batteries
- Portable battery-powered radio or television and extra fresh batteries
- Water for each family member for at least three days (allow at least one gallon per person per day) and purification tablets or chlorine bleach to purify drinking water from other sources
- Canned and packaged foods, enough for three days, and at least an additional four-day supply readily accessible for use if you are confined to home. Don't forget a mechanical can opener and extra pet food!
- Camp stove or barbecue to cook on outdoors (store fuel out of the reach of children)
- Waterproof, heavy-duty plastic bags for waste disposal
- Copies of personal identification, such as driver's licenses, passports, and work identification badges, and copies of medical prescriptions and credit cards
- An extra set of car keys and house keys
- Matches in waterproof container
- Map of the area marked with places you could go and their telephone numbers
- Cash and coins
- Special items, such as denture needs, contact lenses and supplies, extra eyeglasses, and hearing aid batteries
- Items for seniors, disabled persons, or anyone with serious allergies
- Items for infants, such as formula, diapers, bottles, pacifiers, powdered milk, and medications not requiring refrigeration

Plan Ahead



1. Create a family disaster plan; practice and maintain the plan.
2. Make and complete a checklist.
3. Plan home escape routes.
4. Conduct fire and emergency evacuation drills at least twice a year and include your pets in your evacuation and sheltering drills.
5. Test your smoke alarms once a month (daylight savings time or birthdays) and replace batteries at least once a year in battery-powered smoke alarms.
6. Make sure each member of your family knows what to do no matter where they are when earthquakes occur.
 - Establish two meeting places where you can all reunite afterward: one right outside your home, in case of a sudden emergency, and one outside your neighborhood in case you cannot return home or are asked to leave your neighborhood.
 - Find out about the earthquake plan developed by your children's school or day care.
 - Remember that since transportation may be disrupted, you may have to stay at your workplace for a day or two following a major earthquake. Keep some emergency supplies—food, liquids, and comfortable shoes, for example—at work.
 - Pick two out-of-town contacts:
 - A friend or relative who will be your household's **primary** contact,
 - A friend or relative who will be your household's **alternative** contact.
7. Know where your gas, electric, and water main shutoffs are and how to turn them off if there is a leak or electrical short; if in doubt, ask your utility companies. Make sure that all the older members of your family can shut off the utilities.
8. Locate your nearest fire and police stations and emergency medical facility. Remember that telephones may not work after an earthquake. If you can, use your land line rather than your cell phone to call 911, but only if you need emergency help.
9. Talk to your neighbors—how could they help you, or you help them, after an earthquake?
10. Take a Red Cross first aid and cardiopulmonary resuscitation (CPR) training course.
11. Make arrangements with friends or relatives to temporarily house **your pets** after disasters because emergency shelters will not accept pets.
12. If your home is located near a steep hillside, in an area near the shore of a body of water or below a dam, check with your local building or planning department to see if you are in a landslide, tsunami or dam inundation zone. Plan for how, when, and where your family should evacuate.

WHAT TO DO *AFTER* AN EARTHQUAKE

*Wear sturdy shoes to avoid injury from broken glass and debris.
Expect aftershocks.*

Check for Injuries

1. If a person is bleeding, put direct pressure on the wound. Use clean gauze or cloth, if available.
2. If a person is not breathing, administer rescue breathing. The front pages of many telephone books contain instructions on how to do it along with detailed instructions on other first-aid measures.
3. Do not attempt to move seriously injured persons unless they are in immediate danger of further injury.
4. Cover injured persons with blankets to keep them warm.
5. Seek medical help for serious injuries.

Check for Hazards

1. *Fire or fire hazards.* Put out fires in your home or neighborhood immediately. Call for help, but don't wait for the fire department.
2. *Gas leaks.* Shut off the main gas valve only if you suspect a leak because of broken pipes or the odor of natural gas. Don't turn it back on yourself—wait for the gas company to check for leaks.
3. *Damaged electrical wiring.* Shut off power at the control box if there is any damage to your house wiring.
4. *Downed or damaged utility lines.* Do not touch downed power lines or any objects in contact with them.
5. *Spills.* Clean up any spilled medicines, drugs, or other potentially harmful materials such as bleach, lye, and gasoline or other hazardous materials.
6. *Downed or damaged chimneys.* Approach chimneys with caution. They may be weakened and could topple during aftershocks. Don't use a fireplace with a damaged chimney—it could start a fire or let poisonous gases into your house.
7. *Fallen items.* Beware of items tumbling off shelves when you open the doors of closets and cupboards.

Check Your Food and Water Supplies

1. If power is off, plan meals to use up foods that will spoil quickly, or frozen foods. If you keep the door closed, food in your freezer should be good for at least a couple of days.
2. Don't light your kitchen stove if you suspect a gas leak.
3. Use barbecues or camp stoves, outdoors only, for emergency cooking.
4. If your water is off, you can drink supplies from water heaters, melted ice cubes, or canned vegetables. Try to avoid drinking water from swimming pools or, especially, spas—it may have too many chemicals in it to be safe.

Note: The information in these sections is reproduced in whole or in part with the permission of the copyright owner, SBC. The Survival Guide is available in the White Pages of SBC Directories © SBC 2004. This information was provided by medical and emergency service authorities and published as a public service. While every reasonable effort was made to ensure its accuracy, SBC is not responsible and assumes no liability for any action undertaken by any person in utilizing such information. Any person relying upon such information does so at his or her own risk.

Do Not . . .

- **Do not** eat or drink anything from open containers near shattered glass.
- **Do not** turn the gas on again if you turned it off; let the gas company do it.
- **Do not** use matches, lighters, camp stoves or barbecues, electrical equipment—including telephones—or appliances until you are sure there are no gas leaks. They may create sparks that could ignite leaking gas and cause an explosion and fire.
- **Do not** use your telephone, except for a medical or fire emergency. You could tie up lines needed for emergency response.
If you need help and the phone doesn't work, send someone for help.
- **Do not** expect firefighters, police, or paramedics to help you right away. They may not be available.

RESOURCE ORGANIZATIONS

Some of the organizations listed below have information to help you strengthen your home against earthquakes and help you and your family prepare a personal earthquake response plan. Other resources that can help you may be available in your community; check your local telephone directory.

Home Safety Information

Office of Emergency Services

Main Office

Information and Public Affairs
P.O. Box 419047
Rancho Cordova, CA 95741-9047
Telephone: (916) 845-8400
<http://www.oes.ca.gov>

Regional Offices:

Coastal Region

1300 Clay Street, Suite 408
Oakland, CA 94612
Telephone: (510) 286-0895

Inland Region

P.O. Box 419047
Rancho Cordova, CA 95741-9047
Telephone: (916) 845-8470

Inland Region South

2550 Mariposa Mall, Room 181
Fresno, CA 93721
Telephone: (559) 445-5672

Southern Region

4671 Liberty Avenue
Los Alamitos, CA 90720
Telephone: (562) 795-2900

California Seismic Safety Commission

1755 Creekside Oaks Drive, Ste. 100
Sacramento, CA 95833
Telephone: (916) 263-5506
www.seismic.ca.gov

California Earthquake Authority

801 K Street, Suite 1000
Sacramento, CA 95814
Telephone: (877) 797-4300
<http://www.earthquakeauthority.com>

Structural Safety Information

American Institute of Architects

Local chapters have referral lists of licensed architects; consult telephone directory listing for "American Institute of Architects."
<http://www.aia.org>

Structural Engineers Association of California

1730 I Street, Suite 240,
Sacramento, CA 95814-3017
Telephone: (916) 447-1198
<http://www.seaoc.org>

Local chapter organizations have referral list for licensed structural engineers as follows:

San Diego - <http://www.seaosd.org>
Southern California - <http://www.seaosc.org>
Northern California - <http://www.seaonc.org>
Central California - <http://www.seaocc.org>

American Society of Home Inspectors

932 Lee Street, Suite 101
Des Plaines, IL 60016
Telephone: (800) 743-2744
<http://www.ashi.com>
Referral list of licensed inspectors.

Building Education Center

812 Page Street
Berkeley, CA 94710
Telephone: (510) 525-7610
<http://www.bldgeductr.org>

California Real Estate Inspection Association

1445 N. Sunrise Way, Suite 101
Palm Springs, CA 92262
Telephone: (800) 848-7342 (information)
<http://www.creia.org/>

Call for pamphlet describing house inspection services offered by members and referrals to qualified members.

Consulting Engineers and Land Surveyors of California

1303 J Street, Suite 450
Sacramento, CA 95814
Telephone: (916) 441-7991
<http://www.celsoc.org/>
A referral list for licensed engineers is available.

International Code Council

5360 Workman Mill Road
Whittier, CA 90601-2298
Telephone: (800) 284-4406
<http://www.iccsafe.org>

Geologic Information

Association of Bay Area Governments

P.O. Box 2050
Oakland, CA 94604
Telephone: (510) 464-7900
<http://www.abag.ca.gov>
A consortium of local governments in the San Francisco Bay Area, offering a variety of information, including lists of local resources.

California Geological Survey

California Department of Conservation
801 K Street, MS 12-30
Sacramento, CA 95814
Telephone: (916) 445-1825
<http://www.consrv.ca.gov/cgs>
The CGS is the state agency responsible for geological research, mapping, and policy. It provides maps and other information to the general public.

Southern California Earthquake Center

University of Southern California
3651 Toursdale Parkway, Suite 169
Los Angeles, CA 90089-0742
Telephone: (213) 740-5843
<http://www.scec.org>

United States Geological Survey

Earth Science Information Center
345 Middlefield Road
Menlo Park, CA 94025
Telephone: (650) 853-8300
<http://www.usgs.gov>
This is the federal agency responsible for geological and earthquake hazard research, mapping, and policy. It provides maps and other information to the general public.

Cities and Counties

Consult your telephone directory under city or county government listings for the office of emergency services or disaster management, city or county building and planning department, and city or county government geologist.

Emergency Planning Information

Federal Emergency Management Agency

Region IX
1111 Broadway, Suite 1200
Oakland, CA 94607
Telephone: (510) 627-7100
<http://www.fema.gov>
FEMA offers a publications lists and referrals to preparedness organizations. FEMA also provides information on Federal Disaster Aid Programs that become available after Federal disasters.

American Red Cross

Consult your telephone directory for the address and phone number of your local chapter.
<http://www.redcross.org>



HOW TO FILL OUT THE DISCLOSURE FORM

When you sell a home that was built before 1960, you are required to fill out the form shown on the next page.

- Sellers must hand buyers a **completed** disclosure report.
- Sellers must answer the questions to the best of their knowledge.
- If a question on the form describes only part of your house—for example if part of your house is anchored to the foundation and the other part is not—sellers should answer the question with a “NO” because a portion of the house is not properly anchored.
- Sellers are not required to remove siding, drywall, or plaster in order to answer the questions.
- Sellers are not required to hire anyone to inspect their homes.
- Sellers are not required to fix the weaknesses before they sell their homes.

**CLAIM FOR SEISMIC SAFETY CONSTRUCTION
EXCLUSION FROM ASSESSMENT**
(Section 74.5 of the Revenue and Taxation Code)

This form must be filed with the Assessor prior to, or within 30 days of, completion of construction.

FOR ASSESSOR'S USE ONLY	
<input type="checkbox"/> Received _____	
<input type="checkbox"/> Approved _____	
<input type="checkbox"/> Denied _____	
Reason for denial _____	

SAMPLE FORM
for Santa Clara County

PROPERTY DESCRIPTION	
Parcel No.(s) _____	
Address _____	

STATEMENTS

- As the owner of the property described above, I completed, or will complete, construction on this property on _____, and therefore claim the construction exclusion from assessment provided by section 74.5 of the California Revenue and Taxation Code.
- I understand this exclusion from assessment is applicable only to seismic retrofitting improvements and improvements utilizing earthquake hazard mitigation technologies, to an existing building or structure and is not applicable to alterations, such as new plumbing, electrical, or other added finishing materials, made in addition to seismic-related work performed on an existing structure.
- I further understand this exclusion from assessment does not encompass the exclusion provided by Revenue and Taxation Code section 70(d) pertaining to the portion of reconstruction or improvement to a structure, constructed of unreinforced masonry bearing wall construction, necessary to comply with any local ordinance relating to seismic safety during the first 15 years following that reconstruction or improvement.
- The property owner, primary contractor, civil engineer, or architect has has not certified to the building department those portions of the project that are seismic retrofitting improvements or improvements utilizing earthquake hazard mitigation technologies.

THIS EXCLUSION EXPIRES UPON CHANGE IN OWNERSHIP OF THE PROPERTY

CERTIFICATION

I certify (or declare) under penalty of perjury under the laws of the State of California that the foregoing and all information hereon, including any accompanying statements or documents, is true, correct, and complete to the best of my knowledge and belief.

SIGNATURE _____	
DATE _____	DAYTIME PHONE NO. () _____

Only the owner or a co-owner of the above-described property (including a purchaser under contract of sale) or his or her legal representative may sign.

If you are buying this property under an unrecorded contract of sale and the Assessor does not have a copy of the contract, you must attach a copy to the claim.

SUPPORTING DOCUMENTS MUST BE FILED WITHIN SIX MONTHS OF COMPLETION OF THE PROJECT.

TO WHOM IT MAY CONCERN

I received a copy of the following booklet from the Broker(s) in this transaction: "Homeowner's Guide to Earthquake Safety & Environmental Hazards" -- a combination of "Residential Environmental Hazards: A Guide for Homeowners, Homebuyers, Landlords and Tenants, 2011" including toxic mold, "Protect Your Family From Lead In Your Home", "What is your Home Energy Rating (HERS)", and "The Homeowner's Guide to Earthquake Safety" including natural gas safety.

Property Address: _____

Date: _____

Time: _____

Buyer/Seller Signature: _____

Buyer/Seller Printed Name: _____

Selling Agent: _____

Listing Agent: _____

TO WHOM IT MAY CONCERN

I received a copy of the following booklet from the Broker(s) in this transaction: "Homeowner's Guide to Earthquake Safety & Environmental Hazards" -- a combination of "Residential Environmental Hazards: A Guide for Homeowners, Homebuyers, Landlords and Tenants, 2011" including toxic mold, "Protect Your Family From Lead In Your Home", "What is your Home Energy Rating (HERS)", and "The Homeowner's Guide to Earthquake Safety" including natural gas safety.

Property Address: _____

Date: _____

Time: _____

Buyer/Seller Signature: _____

Buyer/Seller Printed Name: _____

Selling Agent: _____

Listing Agent: _____



Compliments of

JCP-LGS Disclosures.com

Phone: 800.748.5233 | Fax: 800.329.9527

200 Commerce, Suite 100, Irvine, CA 92602



**First American
Property & Casualty
Insurance Agency, Inc.**

Quote #
Report # 2406752
Thursday, December 27, 2018

Homeowners Insurance Quote Offer

To the buyer of
2350 5TH ST
ALAMEDA, CA 94501

First American is privileged to be a part of your home buying process and we look forward to continuing to serve you as you complete the vital next step – attaining homeowners insurance. We have worked on your behalf to make the purchasing of your homeowners insurance as easy as possible. This means a convenient process with no credit check or home inspection prior to policy purchase.

There are many benefits of using First American for your settlement services. As a customer of Natural Hazard Disclosure division, we are pleased to offer you a 10% discount on First American homeowners insurance for your owner occupied residence. No signature is necessary; we can expedite the evidence of insurance to your lender within minutes. If flood insurance is required, we will be happy to provide assistance with that. We will work directly with your escrow officer and lender to ensure an overall smooth process.

At this time our database is missing key information to provide you a quote on homeowners insurance.

Give our office call at (866) 620-8850 or via email insurancequote@firstam.com referencing the quote number in the right corner to complete the quote. If you prefer you may go to www.fapcia.com and fill out a free no-obligation quote online and an insurance expert will contact you to discuss your options.

Common information for a quote:

- | | | |
|------------------------|---------------------------|--------------|
| ✓ Year of Construction | ✓ 1 or 2 Car Garage | ✓ Pool |
| ✓ Square Feet | ✓ Owner Occupied / Tenant | ✓ Wood Stove |

Contact First American Property & Casualty Insurance Agency to secure your rate today. To speak with your representative, please call (866) 620-8850 weekdays between 7:00 AM and 7:00 PM PST. You can also reach us by fax at (866) 863-4723 or email at insurancequote@firstam.com.

Thank you for choosing Natural Hazard Disclosure and congratulations on your home purchase.

P.S. Your pre-approved 10% discount is just one of the ways you can save with First American Call (866) 620-8850 to speak with your licensed First American insurance representative.

Disclosure Notice: First American Natural Hazard Disclosures (NHD) has a business relationship with First American Property & Casualty Insurance Agency (FAPCIA). Both NHD and FAPCIA are owned by First American Financial Corporation. Because of this relationship, this referral may provide NHD or its parent, a financial or other benefit.

4 First American Way, Santa Ana, CA 92707 | (866) 620-8850
insurancequote@firstam.com | www.fapcia.com | Lic# 0534607

**JCP-LGS Residential Property Disclosure Reports
Disclosure Report Summary Pages
For ALAMEDA County**

Property Address: 2350 5TH ST
ALAMEDA, ALAMEDA COUNTY, CA 94501
("Property")

APN: 074-1356-023
Report Date: 12/27/2018
Report Number: 2406752

**Statutory Natural Hazard Disclosure ("NHD") Statement
and Acknowledgment of Receipt**

DISCLAIMER: This NHD Summary (a) is not valid unless delivered with the complete JCP-LGS Disclosure Report which transferee must read and acknowledge before close of escrow, and (b) is subject to the Terms and Conditions contained in that complete Disclosure Report.

The transferor and his or her agent(s) or a third-party consultant disclose the following information with the knowledge that even though this is not a warranty, prospective transferees may rely on this information in deciding whether and on what terms to purchase the Property. Transferor hereby authorizes any agent(s) representing any principal(s) in this action to provide a copy of this statement to any person or entity in connection with any actual or anticipated sale of the Property.

The following are representations made by the transferor and his or her agent(s) based on their knowledge and maps drawn by the State. This information is a disclosure and is not intended to be part of any contract between the transferee and the transferor. THIS REAL PROPERTY LIES WITHIN THE FOLLOWING HAZARDOUS AREA(S):

A SPECIAL FLOOD HAZARD AREA (Any type Zone "A" or "V") designated by the Federal Emergency Management Agency

Yes ___ No **X** Do not know and information not available from local jurisdiction ___

AN AREA OF POTENTIAL FLOODING shown on a dam failure inundation map pursuant to Section 8589.5 of the Government Code.

Yes ___ No **X** Do not know and information not available from local jurisdiction ___

A VERY HIGH FIRE HAZARD SEVERITY ZONE pursuant to Section 51178 or 51179 of the Government Code. The owner of this Property is subject to the maintenance requirements of Section 51182 of the Government Code.

Yes ___ No **X**

A WILDLAND AREA THAT MAY CONTAIN SUBSTANTIAL FOREST FIRE RISK AND HAZARDS pursuant to Section 4125 of the Public Resources Code. The owner of this Property is subject to the maintenance requirements of Section 4291 of the Public Resources Code. Additionally, it is not the state's responsibility to provide fire protection services to any building or structure located within the wildlands unless the Department of Forestry and Fire Protection has entered into a cooperative agreement with a local agency for those purposes pursuant to Section 4142 of the Public Resources Code.

Yes ___ No **X**

AN EARTHQUAKE FAULT ZONE pursuant to Section 2622 of the Public Resources Code.

Yes ___ No **X**

A SEISMIC HAZARD ZONE pursuant to Section 2696 of the Public Resources Code.

Yes (Landslide Zone) ___ Yes (Liquefaction Zone) **X**

No ___ Map not yet released by state ___

THESE HAZARDS MAY LIMIT YOUR ABILITY TO DEVELOP THE REAL PROPERTY, TO OBTAIN INSURANCE, OR TO RECEIVE ASSISTANCE AFTER A DISASTER. THE MAPS ON WHICH THESE DISCLOSURES ARE BASED ESTIMATE WHERE NATURAL HAZARDS EXIST. THEY ARE NOT DEFINITIVE INDICATORS OF WHETHER OR NOT A PROPERTY WILL BE AFFECTED BY A NATURAL DISASTER. TRANSFEE(S) AND TRANSFEROR(S) MAY WISH TO OBTAIN PROFESSIONAL ADVICE REGARDING THOSE HAZARDS AND OTHER HAZARDS THAT MAY AFFECT THE PROPERTY.

Signature of Transferor(s) _____ Date _____ Signature of Transferor(s) _____ Date _____

Signature of Agent _____ Date _____ Signature of Agent _____ Date _____

Transferor(s) and their agent(s) represent that the information herein is true and correct to the best of their knowledge as of the date signed by the transferor(s) and agent(s).

Transferor(s) and their agent(s) acknowledge that they have exercised good faith in the selection of a third-party report provider as required in Civil Code Section 1103.7, and that the representations made in this Natural Hazard Disclosure Statement are based upon information provided by the independent third-party disclosure provider as a substituted disclosure pursuant to Civil Code Section 1103.4. Neither transferor(s) nor their agent(s) (1) has independently verified the information contained in this statement and Report or (2) is personally aware of any errors or inaccuracies in the information contained on the statement. This statement was prepared by the provider below:

Third-Party Disclosure Provider(s) FIRST AMERICAN PROFESSIONAL REAL ESTATE SERVICES, INC. OPERATING THROUGH ITS JCP-LGS DIVISION.
Date 27 December 2018

Transferee represents that he or she has read and understands this document. Pursuant to Civil Code Section 1103.8, the representations in this Natural Hazard Disclosure Statement do not constitute all of the transferor's or agent's disclosure obligations in this transaction.

Signature of Transferee(s) _____ Date _____ Signature of Transferee(s) _____ Date _____

TRANSFEE(S) REPRESENTS ABOVE HE/SHE HAS RECEIVED, READ AND UNDERSTANDS THE COMPLETE JCP-LGS DISCLOSURE REPORT DELIVERED WITH THIS SUMMARY:

- A. Additional Property-specific Statutory Disclosures: Former Military Ordnance Site, Commercial/Industrial Use Zone, Airport Influence Area, Airport Noise, San Francisco Bay Conservation and Development District Jurisdiction (in S.F. Bay counties only), California Energy Commission Duct Sealing Requirement, Notice of Statewide Right to Farm, Notice of Mining Operations, Sex Offender Database (Megan's Law), Gas and Hazardous Liquid Transmission Pipeline Database.
- B. Additional County and City Regulatory Determinations as applicable: Airports, Avalanche, Blow Sand, Coastal Zone, Dam/Levee Failure Inundation, Debris Flow, Erosion, Flood, Fault Zone, Fire, Groundwater, Landslide, Liquefaction, Methane Gas, Mines, Naturally Occurring Asbestos, Redevelopment Area, Right to Farm, Runoff Area, Seiche, Seismic Shaking, Seismic Ground Failure, Slope Stability, Soil Stability, Subsidence, TRPA, Tsunami.
- C. General advisories: Methamphetamine Contamination, Mold, Radon, Endangered Species Act, Abandoned Mines, Oil & Gas Wells, Tsunami Maps (coastal only), Wood-burning fireplaces.
- D. Additional Reports - Enclosed if ordered: (1) PROPERTY TAX REPORT (includes state-required Notices of Mello-Roos and 1915 Bond Act Assessments, and Notice of Supplemental Property Tax Bill, (2) ENVIRONMENTAL SCREENING REPORT (discloses Transmission Pipelines, Contaminated Sites, and Oil & Gas Wells). Enclosed if applicable: Local Addenda.
- E. Government Guides in Combined Booklet with Report. Refer to Booklet: (1) ENVIRONMENTAL HAZARDS: "A Guide for Homeowners, Buyers, Landlords and Tenants"; (2) EARTHQUAKE SAFETY: "The Homeowners Guide To Earthquake Safety" and included "RESIDENTIAL EARTHQUAKE HAZARDS REPORT FORM"; (3) LEAD-BASED PAINT: "Protect Your Family From Lead In Your Home"; (4) BRIEF GUIDE TO MOLD, MOISTURE AND YOUR HOME; (5) WHAT IS YOUR HOME ENERGY RATING? Government Guides are also available on the Company's "Electronic Bookshelf" at <http://www.disclosures.com/>.

**JCP-LGS Residential Property Disclosure Reports
Disclosure Report Summary Pages
For ALAMEDA County**

Property Address: 2350 5TH ST
ALAMEDA, ALAMEDA COUNTY, CA 94501
("Property")

APN: 074-1356-023
Report Date: 12/27/2018
Report Number: 2406752

PROPERTY DISCLOSURE SUMMARY - READ FULL REPORT

Statutory NHD Determinations	IN	NOT IN	Map N/A*	Property is:	NHD Report page:
Flood		X		NOT IN a Special Flood Hazard Area. The Property is IN a FEMA-designated Flood Zone(s) X, X500.	6
Dam		X		NOT IN an area of potential dam inundation.	6
Very High Fire Hazard Severity		X		NOT IN a very high fire hazard severity zone.	7
Wildland Fire Area		X		Not in a wildland-state responsibility area.	7
Fault		X		NOT IN an earthquake fault zone designated pursuant to the Alquist-Priolo Act.	8
Landslide		X		NOT IN an area of earthquake-induced land sliding designated pursuant to the Seismic Hazard Mapping Act.	8
Liquefaction	X			IN an area of potential liquefaction designated pursuant to the Seismic Hazard Mapping Act.	8

County-level NHD Determinations	IN	NOT IN	Map N/A*	Property is:	NHD Report page:
Fault		X		NOT WITHIN one-eighth of one mile (660 feet) of a mapped Fault that is not bounded by a regulatory fault zone.	10
Landslide		X		NOT IN a mapped Landslide deposit larger than 200 feet.	10
Liquefaction	X			IN a mapped area with a Very High Liquefaction Susceptibility rating.	10
Fire		X		NOT IN a mapped Fire Hazard Severity Zone in SRA rated Very High, High, or Moderate.	11
Tsunami	X			IN a mapped Tsunami Inundation Area.	11

Additional Statutory Disclosures	IN	NOT IN	Map N/A*	Property is:	NHD Report page:
Former Military Ordnance		X		NOT WITHIN one mile of a formerly used ordnance site.	14
Commercial or Industrial	X			WITHIN one mile of a property zoned to allow commercial or industrial use.	14
Airport Influence Area		X		NOT IN an airport influence area.	15
Airport Noise Area for 65 Decibel		X		NOT IN a delineated 65 dB CNEL or greater aviation noise zone.	16
Bay Conservation and Development Commission		X		NOT IN an area that is within the jurisdiction of the San Francisco Bay Conservation and Development Commission.	17
California Energy Commission	X			IN a climate zone where properties are usually subject to duct sealing and testing requirements	18
Right to Farm Act		X		NOT IN a one mile radius of designated Important Farmland.	19
Notice of Mining Operations		X		NOT IN a one mile radius of a mapped mining operation that requires a statutory "Notice of Mining Operation" be provided in this Report.	20

General Advisories	Description	NHD Report page:
Registered Sex Offender Data Base (Megan's Law) Notice	Provides an advisory required pursuant to Section 290.46 of the Penal Code. Information about specified registered sex offenders is made available to the public.	21
Gas and Hazardous Liquid Transmission Pipeline Database Notice	Provides a notice required pursuant to Section 2079.10.5(a) of the Civil Code. Information about transmission pipeline location maps is made available to the public.	22
Methamphetamine Contamination	Provides an advisory that a disclosure may be required pursuant to the "Methamphetamine Contaminated Property Cleanup Act of 2005".	23
Mold	Provides an advisory that all prospective purchasers of residential and commercial property should thoroughly inspect the subject property for mold and sources for additional information on the origins of and the damage caused by mold.	24

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**JCP-LGS Residential Property Disclosure Reports
Disclosure Report Summary Pages
For ALAMEDA County**

Property Address: 2350 5TH ST
ALAMEDA, ALAMEDA COUNTY, CA 94501
("Property")

APN: 074-1356-023
Report Date: 12/27/2018
Report Number: 2406752

General Advisories	Description	NHD Report page:
Radon	Provides an advisory on the risk associated with Radon gas concentrations.	25
Endangered Species	Provides an advisory on resources to educate the public on locales of endangered or threatened species.	25
Abandoned Mines	Provides an advisory on resources to educate the public on the hazards posed by, and some of the general locales of, abandoned mines.	26
Oil and Gas Wells	Provides an advisory on the potential existence of oil and gas wells and sources for additional general and/or specific information.	26
Tsunami Map Advisory	Provides an advisory about maximum tsunami inundation maps issued for jurisdictional emergency planning.	27
Residential Fireplace Disclosure	Provides disclosure of restrictions on the use of wood-burning fireplaces imposed by the Bay Area Air Quality Management District.	28

Local Addendums	Description	NHD Report page:
Underground Utility District	Provides an advisory on presence within an Underground Utility District and potential impact on property owners in such Districts.	42

Property Tax Determinations	IS	IS NOT	Property is:	Tax Report page:
Mello-Roos Districts		X	NOT SUBJECT TO a Mello-Roos Community Facilities District.	30
1915 Bond Act Districts		X	NOT SUBJECT TO a 1915 Bond Act District.	30
Other Direct Assessments		X	NOT SUBJECT TO other direct assessments.	31
SRA Fire Prevention Fee		X	NOT SUBJECT TO the State Responsibility Area Fire Prevention Fee (SRA Fee is suspended until 2031 by Assembly Bill 398 of 2017).	35

Determined by First American Professional Real Estate Services, Inc.

For more detailed information as to the foregoing determinations, please read this entire Report.

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