Attention zipForm® 6 Users:

Note that due to file size constraints, you will need to access and email all 5 of the following EPUBD forms separately as listed below:

- 1 HAZARDS -Residential Environmental Hazards
- 2 LEAD -Protect Your Family from Lead in Your Home
- 3_HERS -Home Energy Rating Pamphlet
- 4 EARTHQUAKE -Homeowner's Guide to Earthquake Safety
- 5_SIG PAGE -Signature Page -PRINT (includes signature page for HERS, Environmental Hazards and Earthquake Safety, Federal Lead and Toxic Mold.)

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 ubstances 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 eduction Act of 1992. The 2005 edition incorporates the Federal "Protect Your Family from Lead" pamphlet. The 2011 update was developed by the 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

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

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.

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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

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- 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/abestos/abestos/abestos.htm.

Hotlines:

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Page 7 of 48 January 2011 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

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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.

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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

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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 ($\mu g/m3$) 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.

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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/cpscpub/pubs/466.html

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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 ($\mu g/m3$).

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 $\mu g/m3$) in conventional homes and 37 ppb (45 $\mu g/m3$) in manufactured homes. Formaldehyde concentrations have been measured at levels greater than 200 ppb (246 $\mu g/m3$) 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?

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Page 13 of 48 January 2011 Plywood, particleboard, and oriented strandboard are composite wood products that arebound 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 $\mu g/m3$).

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Is there a safe level of formaldehyde?

Most people experience eye and throat irritation when exposed to formaldehyde at levels above 100 ppb (123 $\mu g/m3$). 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 ug/m3, or 44 ppb, one-hour average) and chronic (9 ug/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, <u>www.arb.ca.gov/research/indoor/guidelines.htm</u>

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, <u>www.arb.ca.gov/research/apr/past/indoor.htm</u>, click on Toxic Air Contaminants, scroll down.

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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.

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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.

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Page 17 of 48 January 2011 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

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Page 18 of 48 January 2011 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

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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?

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Page 21 of 48 January 2011 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

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Page 22 of 48 January 2011 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.

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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.

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Page 24 of 48 January 2011 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 Kandu 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 (<u>Title 17, CCR § 35001-35050 and § 36000-36100</u>). A CDPH-certified inspector/assessor

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Page 25 of 48 January 2011 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.

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Page 26 of 48 January 2011 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.

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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 regulationsabout lead in drinking water, contact the U.S. EPA Safe Drinking Water Hotline in

Washington, D.C. at:

Telephone: (800) 426-4791

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Page 28 of 48 January 2011 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:

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Page 29 of 48 January 2011 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/iag/

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.

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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.

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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

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Page 32 of 48 January 2011 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.

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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

<u>www.cdph.ca.gov/programs/IAQ/Documents/MIMH_2006-06_2009-03rev6p.doc</u> 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.

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Page 34 of 48 January 2011 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.

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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.

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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 (<u>DrHomeAir</u>) to provide this service. The test kit can be ordered on-line at <u>www.drhomeair.com/</u>. 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.

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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 picocures 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.

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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/iag/

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)

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Page 39 of 48 January 2011 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 | 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

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Page 40 of 48 January 2011 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

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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

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Page 42 of 48 January 2011 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

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Page 43 of 48 January 2011 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

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Page 44 of 48 January 2011 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.

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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.

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Page 46 of 48 January 2011 **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.

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Protect Your Family From Lead in Your Home





United States Environmental Protection Agency



United States Consumer Product Safety Commission



United States Department of Housing and Urban Development

September 2013

Are You Planning to Buy or Rent a Home Built Before 1978?

Did you know that many homes built before 1978 have **lead-based** paint? Lead from paint, chips, and dust can pose serious health hazards.

Read this entire brochure to learn:

- How lead gets into the body
- About health effects of lead
- What you can do to protect your family
- Where to go for more information

Before renting or buying a pre-1978 home or apartment, federal law requires:

- Sellers must disclose known information on lead-based paint or leadbased paint hazards before selling a house.
- Real estate sales contracts must include a specific warning statement about lead-based paint. Buyers have up to 10 days to check for lead.
- Landlords must disclose known information on lead-based paint and lead-based paint hazards before leases take effect. Leases must include a specific warning statement about lead-based paint.

If undertaking renovations, repairs, or painting (RRP) projects in your pre-1978 home or apartment:

 Read EPA's pamphlet, The Lead-Safe Certified Guide to Renovate Right, to learn about the lead-safe work practices that contractors are required to follow when working in your home (see page 12).



Simple Steps to Protect Your Family from Lead Hazards

If you think your home has lead-based paint:

- Don't try to remove lead-based paint yourself.
- Always keep painted surfaces in good condition to minimize deterioration.
- Get your home checked for lead hazards. Find a certified inspector or risk assessor at epa.gov/lead.
- Talk to your landlord about fixing surfaces with peeling or chipping paint.
- Regularly clean floors, window sills, and other surfaces.
- Take precautions to avoid exposure to lead dust when remodeling.
- When renovating, repairing, or painting, hire only EPA- or stateapproved Lead-Safe certified renovation firms.
- Before buying, renting, or renovating your home, have it checked for lead-based paint.
- Consult your health care provider about testing your children for lead. Your pediatrician can check for lead with a simple blood test.
- Wash children's hands, bottles, pacifiers, and toys often.
- Make sure children avoid fatty(or high fat) foods and eat nutritious meals high in iron and calcium.
- Remove shoes or wipe soil off shoes before entering your house.

Lead Gets into the Body in Many Ways

Adults and children can get lead into their bodies if they:

- Breathe in lead dust (especially during activities such as renovations, repairs, or painting that disturb painted surfaces).
- Swallow lead dust that has settled on food, food preparation surfaces, and other places.
- Eat paint chips or soil that contains lead.

Lead is especially 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.



Women of childbearing age should know that lead is dangerous to a developing fetus.

 Women with a high lead level in their system before or during pregnancy risk exposing the fetus to lead through the placenta during fetal development.

Health Effects of Lead

Lead affects the body in many ways. It is important to know that even exposure to low levels of lead can severely harm children.

In children, exposure to 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 amounts of lead can have devastating effects on children, including seizures, unconsciousness, and, in some cases, death.

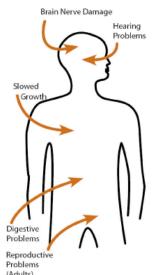
Although children are especially susceptible to lead exposure, lead can be dangerous for adults, too.

In adults, exposure to lead can cause:

- Harm to a developing fetus
- Increased chance of high blood pressure during pregnancy
- Fertility problems (in men and women)
- High blood pressure
- Digestive problems
- Nerve disorders

3

- Memory and concentration problems
- Muscle and joint pain



Check Your Family for Lead

Get your children and home tested if you think your home has lead.

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 lead. Blood lead 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.

Where Lead-Based Paint Is Found

In general, the older your home or childcare facility, the more likely it has lead-based paint.¹

Many homes, including private, federally-assisted, federally-owned housing, and childcare facilities built before 1978 have lead-based paint. In 1978, the federal government banned consumer uses of lead-containing paint. ²

Learn how to determine if paint is lead-based paint on page 7.

Lead can be found:

- In homes and childcare facilities in the city, country, or suburbs,
- In private and public single-family homes and apartments,
- On surfaces inside and outside of the house, and
- 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.)

Learn more about where lead is found at epa.gov/lead.

Identifying Lead-Based Paint and Lead-Based Paint Hazards

Deteriorating lead-based paint (peeling, chipping, chalking, cracking, or damaged paint) is a hazard and needs immediate attention. Lead-based paint may also be a hazard when found on surfaces that children can chew or that get a lot of wear and tear, such as:

- On windows and window sills
- Doors and door frames
- Stairs, railings, banisters, and porches

Lead-based paint is usually not a hazard if it is in good condition and if it is not on an impact or friction surface like a window.

Lead dust can form when lead-based paint is scraped, sanded, or heated. Lead dust also forms when painted surfaces containing lead bump or rub together. Lead paint chips and dust can get on surfaces and objects that people touch. Settled lead dust can reenter the air when the home is vacuumed or swept, or when people walk through it. EPA currently defines the following levels of lead in dust as hazardous:

- 40 micrograms per square foot (µg/ft²) and higher for floors, including carpeted floors
- 250 μg/ft² 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. EPA currently defines the following levels of lead in soil as hazardous:

- 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

Remember, lead from paint chips - which you can see - and lead dust - which you may not be able to see - both can be hazards.

The only way to find out if paint, dust, or soil lead hazards exist is to test for them. The next page describes how to do this.

¹ "Lead-based paint" is currently defined by the federal government as paint with lead levels greater than or equal to 1.0 milligram per square centimeter (mg/cm), or more than 0.5% by weight.

² "Lead-containing paint" is currently defined by the federal government as lead in new dried paint in excess of 90 parts per million (ppm) by weight.

Checking Your Home for Lead

You can get your home tested for lead in several different ways:

- A lead-based paint inspection tells you if your home has leadbased paint and where it is located. It won't tell you whether your home currently has lead hazards. A trained and certified testing professional, called a lead-based paint inspector, will conduct a paint inspection using methods, such as:
 - Portable x-ray fluorescence (XRF) machine
 - · Lab tests of paint samples
- 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 trained and certified testing professional, called a risk assessor, will:



- Sample paint that is deteriorated on doors, windows, floors, stairs, and walls
- Sample dust near painted surfaces and sample bare soil in the yard
- Get lab tests of paint, dust, and soil samples
- A combination inspection and risk assessment tells you if your home has any lead-based paint and if your home has any lead hazards, and where both are located.

Be sure to read the report provided to you after your inspection or risk assessment is completed, and ask questions about anything you do not understand.

Checking Your Home for Lead, continued

In preparing for renovation, repair, or painting work in a pre-1978 home, Lead-Safe Certified renovators (see page 12) may:

- Take paint chip samples to determine if lead-based paint is present in the area planned for renovation and send them to an EPA-recognized lead lab for analysis. In housing receiving federal assistance, the person collecting these samples must be a certified lead-based paint inspector or risk assessor
- Use EPA-recognized tests kits to determine if lead-based paint is absent (but not in housing receiving federal assistance)
- Presume that lead-based paint is present and use lead-safe work practices

There are state and federal programs in place to ensure that testing is done safely, reliably, and effectively. Contact your state or local agency for more information, visit epa.gov/lead, or call **1-800-424-LEAD** (5323) for a list of contacts in your area. ³

³ Hearing- or speech-challenged individuals may access this number through TTY by calling the Federal Relay Service at 1-800-877-8399.

What You Can Do Now to Protect Your Family

If you suspect that your house has lead-based paint hazards, you can take some immediate steps to reduce your family's risk:

- If you rent, notify your landlord of peeling or chipping paint.
- Keep painted surfaces clean and free of dust. Clean floors, window frames, window sills, and other surfaces weekly. Use a mop or sponge with warm water and a general all-purpose cleaner. (Remember: never mix ammonia and bleach products together because they can form a dangerous gas.)
- Carefully clean up paint chips immediately without creating dust.
- Thoroughly rinse sponges and mop heads often during cleaning of dirty or dusty areas, and again afterward.
- Wash your hands and your 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, or eating soil.
- When renovating, repairing, or painting, hire only EPA- or stateapproved Lead-Safe Certified renovation firms (see page 12).
- Clean or remove shoes before entering your home to avoid tracking in lead from soil.
- Make sure children avoid fatty (or high fat) foods and eat nutritious meals high in iron and calcium. Children with good diets absorb less lead.

Reducing Lead Hazards

Disturbing lead-based paint or removing lead improperly can increase the hazard to your family by spreading even more lead dust around the house.

- In addition to day-to-day cleaning and good nutrition, you can temporarily reduce lead-based paint hazards by taking actions, such as repairing damaged painted surfaces and planting grass to cover leadcontaminated soil. These actions are not permanent solutions and will need ongoing attention.
- You can minimize exposure to lead when renovating, repairing, or painting by hiring an EPA- or statecertified renovator who is trained in the use of lead-safe work practices. If you are a do-it-yourselfer, learn how to use lead-safe work practices in your home.
- To remove lead hazards permanently, 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 control.

Always use a certified contractor who is trained to address lead hazards safely.

- Hire a Lead-Safe Certified firm (see page 12) to perform renovation, repair, or painting (RRP) projects that disturb painted surfaces.
- To correct lead hazards permanently, hire a certified lead abatement professional. This will ensure your contractor knows how to 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.

Reducing Lead Hazards, continued

If your home has had lead abatement work done or if the housing is receiving federal assistance, once the work is completed, dust cleanup activities must be conducted until clearance testing indicates that lead dust levels are below the following levels:

- 40 micrograms per square foot (µg/ft₂) for floors, including carpeted floors
- 250 μg/ft₂ for interior windows sills
- 400 μg/ft₂ for window troughs

For help in locating certified lead abatement professionals in your area, call your state or local agency (see pages 14 and 15), or visit epa.gov/lead, or call 1-800-424-LEAD.

Renovating, Remodeling, or Repairing (RRP) a Home with Lead-Based Paint

If you hire a contractor to conduct renovation, repair, or painting (RRP) projects in your pre-1978 home or childcare facility (such as pre-school and kindergarten), your contractor must:

- Be a Lead-Safe Certified firm approved by EPA or an EPA-authorized state program
- Use qualified trained individuals (Lead-Safe Certified renovators) who follow specific lead-safe work practices to prevent lead contamination
- Provide a copy of EPA's lead hazard information document, *The Lead-Safe Certified Guide to Renovate Right*

THE LEAD-SAFE CERTIFIED CUIDETO RENOVATE RIGHT

RRP contractors working in pre-1978 homes and childcare facilities must follow lead-safe work practices that:

- Contain the work area. The area must be contained so that dust and debris do not escape from the work area. Warning signs must be put up, and plastic or other impermeable material and tape must be used.
- Avoid renovation methods that generate large amounts of lead-contaminated dust. Some methods generate so much leadcontaminated dust that their use is prohibited. They are:
 - Open-flame burning or torching
 - Sanding, grinding, planing, needle gunning, or blasting with power tools and equipment not equipped with a shroud and HEPA vacuum attachment and
 - Using a heat gun at temperatures greater than 1100°F
- Clean up thoroughly. The work area should be cleaned up daily.
 When all the work is done, the area must be cleaned up using special cleaning methods.
- Dispose of waste properly. Collect and seal waste in a heavy duty bag or sheeting. When transported, ensure that waste is contained to prevent release of dust and debris.

To learn more about EPA's requirements for RRP projects visit epa.gov/getleadsafe, or read The *Lead-Safe Certified Guide to Renovate Right*.

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. You cannot see, smell, or taste lead, and boiling your water will not get rid of lead. If you think your plumbing might contain lead:
 - 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.

Call your local health department or water supplier to find out about testing your water, or visit epa.gov/lead for EPA's lead in drinking water information.

- Lead smelters or other industries that release lead into the air.
- Your job. If you work with lead, you could bring it home on your body or clothes. Shower and change clothes before coming home. Launder your work clothes separately from the rest of your family's clothes.
- Hobbies that use lead, such as making pottery or stained glass, or refinishing furniture. Call your local health department for information about hobbies that may use lead.
- Old toys and furniture may have been painted with lead-containing paint. Older toys and other children's products may have parts that contain lead.*
- Food and liquids cooked or stored in lead crystal or lead-glazed pottery or porcelain may contain lead.
- Folk remedies, such as "greta" and "azarcon," used to treat an upset stomach.

* In 1978, the federal government banned toys, other children's products, and furniture with lead-containing paint (16 CFR 1303). In 2008, the federal government banned lead in most children's products. The federal government currently bans lead in excess of 100 ppm by weight in most children's products (76 FR 44463).

For More Information

The National Lead Information Center

Learn how to protect children from lead poisoning and get other information about lead hazards on the Web at epa.gov/lead and hud.gov/lead, or call **1-800-424-LEAD** (5323).

EPA's Safe Drinking Water Hotline

For information about lead in drinking water, call **1-800-426-4791**, or visit epa.gov/lead for information about lead in drinking water.

Consumer Product Safety Commission (CPSC) Hotline

For information on lead in toys and other consumer products, or to report an unsafe consumer product or a product-related injury, call **1-800-638-2772**, or visit CPSC's website at cpsc.gov or saferproducts.gov.

State and Local Health and Environmental Agencies

Some states, tribes, and cities have their own rules related to lead-based paint. 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 state or local contacts on the Web at epa.gov/lead, or contact the National Lead Information Center at **1-800-424-LEAD**.

Hearing- or speech-challenged individuals may access any of the phone numbers in this brochure through TTY by calling the toll-free Federal Relay Service at 1-800-877-8339.

U. S. Environmental Protection Agency (EPA) Regional Offices

The mission of EPA is to protect human health and the environment. Your Regional EPA Office can provide further information regarding regulations and lead protection programs.

Region 1 (Connecticut, Massachusetts, Maine, New Hampshire, Rhode Island, Vermont)

Regional Lead Contact U.S. EPA Region 1 5 Post Office Square, Suite 100, OES 05-4 Boston, MA 02109-3912 (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 205, Mail Stop 225 Edison, NJ 08837-3679 (732) 321-6671

Region 3 (Delaware, Maryland, Pennsylvania, Virginia, DC, West Virginia)

Regional Lead Contact U.S. EPA Region 3 1650 Arch Street Philadelphia, PA 19103 (215) 814-2088

Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee)

Regional Lead Contact U.S. EPA Region 4 AFC Tower, 12th Floor, Air, Pesticides & Toxics 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) 886-7836 **Region 6** (Arkansas, Louisiana, New Mexico, Oklahoma, Texas, and 66 Tribes)

Regional Lead Contact U.S. EPA Region 6 1445 Ross Avenue, 12th Floor Dallas, TX 75202-2733 (214) 665-2704

Region 7 (Iowa, Kansas, Missouri, Nebraska)

Regional Lead Contact U.S. EPA Region 7 11201 Renner Blvd. WWPD/TOPE Lenexa, KS 66219 (800) 223-0425

Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming)

Regional Lead Contact U.S. EPA Region 8 1595 Wynkoop St. Denver, CO 80202 (303) 312-6966

Region 9 (Arizona, California, Hawaii, Nevada)

Regional Lead Contact U.S. EPA Region 9 (CMD-4-2) 75 Hawthorne Street San Francisco, CA 94105 (415) 947-4280

Region 10 (Alaska, Idaho, Oregon, Washington)

Regional Lead Contact U.S. EPA Region 10 Solid Waste & Toxics Unit (WCM-128) 1200 Sixth Avenue, Suite 900 Seattle, WA 98101 (206) 553-1200

Consumer Product Safety Commission (CPSC)

The CPSC protects the public against unreasonable risk of injury from consumer products through education, safety standards activities, and enforcement. Contact CPSC for further information regarding consumer product safety and regulations.

CPSC

4330 East West Highway Bethesda, MD 20814-4421 1-800-638-2772 cpsc.gov or saferproducts.gov

U. S. Department of Housing and Urban Development (HUD)

HUD's mission is to create strong, sustainable, inclusive communities and quality affordable homes for all. Contact HUD's Office of Healthy Homes and Lead Hazard Control for further information regarding the Lead Safe Housing Rule, which protects families in pre-1978 assisted housing, and for the lead hazard control and research grant programs.

HUD

451 Seventh Street, SW, Room 8236 Washington, DC 20410-3000 (202) 402-7698 hud.gov/offices/lead/

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U. S. EPA Washington DC 20460 U. S. CPSC Bethesda MD 20814

U. S. HUD Washington DC 20410

EPA-747-K-12-001 September 2013

16

IMPORTANT!

Lead From Paint, Dust, and Soil in and Around Your Home Can Be Dangerous if Not Managed Properly

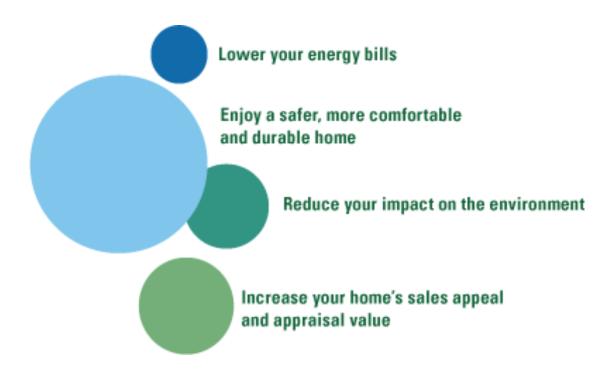
- Children under 6 years old are most at risk for lead poisoning in your home.
- Lead exposure can harm young children and babies even before they are born.
- Homes, schools, and child care facilities built before 1978 are likely to contain lead-based paint.
- Even children who seem healthy may have dangerous levels of lead in their bodies.
- Disturbing surfaces with lead-based paint or removing lead-based paint improperly can increase the danger to your family.
- People can get lead into their bodies by breathing or swallowing lead dust, or by eating soil or paint chips containing lead.
- People have many options for reducing lead hazards.
 Generally, lead-based paint that is in good condition is not a hazard (see page 10).

The California ENERGY COMMISSION



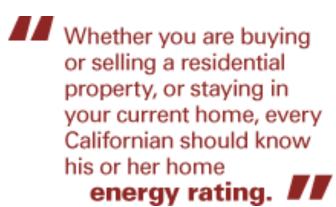


know before you buy or sell



UPDATED FOR 2011







The California

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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 grandchildren nothing less.

As you consider the sale or purchase of your home, this booklet asks that 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.

Your energy efficiency actions help make California a better, more environmentally sustainable place to raise your families.

hether 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.



During a real estate transaction, a California HERS Rating is a great way to disclose facts about the energy efficiency of a home.



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.

Buying?

- Use a HERS rating to shop and compare the energy efficiency of homes you are considering.
- Learn about the most costeffective 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/

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.



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.

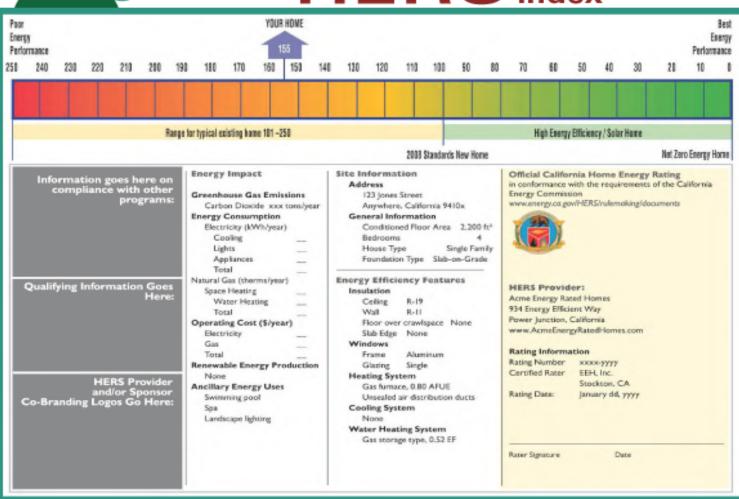
Rating costs vary depending on factors such as the size and features of your home and the extent of rater services needed. Ask your real estate agent for names of certified HERS Raters in your area or find an Energy Commission-approved HERS Provider at: www.energy.ca.gov/HERS/index.html or call the Energy Hotline at (800) 772-3300.

Your HERS Rating Certificate will:

- Display an official HERS Index efficiency rating on a 0 to 250-point scale.
- Itemize the home's major energy-efficiency features as determined by the HERS Rater.
- Estimate the home's annual energy use, operating cost, and greenhouse gas emissions.
- Calculate the amount of solar or other onsite renewable energy that the home may produce.



Understanding your HERS index



What is your Home Energy Rating? How low can it go?

A lower HERS Index indicates a more energy efficient home. A home with a HERS Index of:

- "250" or more is likely to have very high energy bills, and many opportunities for efficiency improvements.
- "100" uses the same energy as a new home that meets California's 2008 Building Energy Efficiency Standards.
- "0" is a super-efficient "Net Zero Energy Home" that consumes no more energy than it produces with solar or other
 onsite renewable sources.

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:

ecommen

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



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).

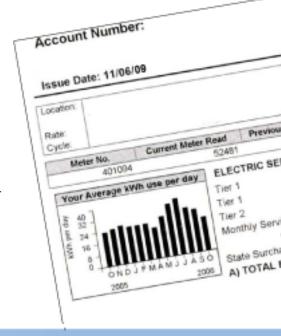
Utility Bills & RATINGS

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.



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.

+ **E**nergy

+ Insurance

Principal

+ Interest

+ Taxes

True cost of owning your home 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 re-bates, 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.





Efficiency

ADDS VALU

It's no secret; energy efficiency features may make your home more valuable and sell faster.

Federal tax credits now available include:

10 percent of the cost, up to \$500 or a specific amount from \$50-\$300, through 2011 (existing homes only) for:

- · Windows and Doors
- Biomass Stoves
- Insulation
- Roofs
- HVAC
- Water Heaters

30 percent of the cost, with no upper limit through 2016 (existing homes and new construction) for:

- Geothermal Heat Pumps
- Small Wind Turbines (Residential)
- Solar Energy Systems

For more news on 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 upgrades 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).





Once you have made all appropriate energy efficiency improvements, you may also want to consider solar electric generation.

If you have already decided on the size of solar electric system, investing in energy efficiency measures first will allow your solar system to power more of your home's electricity need. Plan ahead and don't oversize your new solar electric system to power an energy-inefficient house. Your HERS Rater will show you how.

California has set a goal to generate 3,000 megawatts of new, solar-produced electricity by 2017 - moving the state toward a cleaner energy future and lowering the cost of solar systems for all consumers. The California Solar Initiative offers incentives up to 30 percent off the installed cost of a solar system for a typical home. This discount may be combined with any federal tax credits or other incentives available.

Visit www.gosolarcalifornia.ca.gov for details.



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



ADVISORY COMMITTEE

Arlene Baxter REALTOR®, Berkeley, CA

Mike Bachand CalCERTS, Inc.

Elizabeth Gavric California Association of REALTORS®. Government

Affairs

Office of Real Estate Appraisers **Greg Harding**

ConSol, Inc. **Shery Hoellwarth**

Paula B. Howell **Energy Documentation Services**

William Jansen **Broker Risk Management**

Jana Maddux **CHEERS®**

Scott Muldavin Green Building Finance Consortium; The Mauldavin

Company

William Neece Green Key Real Estate

California Department of Real Estate Chris Neri

William Poulton California Real Estate Inspection Association

Randal Riedel California Building Performance Contractors Association

Pacific Gas & Electric Company Charles Segerstrom

Bernie Stephan Broker, Marin County

PROJECT CONSULTANTS

Tom Conlon GeoPraxis, Inc.

Charles Eley Architectural Energy Corporation Margaret Kapranos REALTOR®, Greenbrae, CA Dan Suveyasu **Architectural Energy Corporation**

Andrew Waegel GeoPraxis. Inc.

ADDITIONAL CONTRIBUTORS

Rashid Mir California Energy Commission California Energy Commission Betty LaFranchi California Energy Commission Vanessa Byrd Bruce Maeda California Energy Commission **Beverly Duffy** California Energy Commission Parker Scott California Energy Commission

Lance DeLaura **SEMPRA** Governor Jerry Brown

Chairman

Robert Weisenmiller, Ph.D.

Vice Chairman James D. Boyd Commissioners Karen Douglas Carla Peterman **Anthony Eggert**

Executive Director Robert Oglesby

Deputy Director

Efficiency and Renewable

Energy Division Panama Bartholomy

Office Manager

High Performance Buildings and

Standards Development

Bill Pennington

Project Manager Helen Lam

California Energy Commission 1516 Ninth Street, MS-37 Sacramento, CA 95814-5512

Need Help? Call the Energy Hotline

(800) 772-3300 or (916) 654-5106

CEC-400-2009-008-BR-REV1 June 2011

Prepared by:

Architectural Energy Corporation San Francisco, California Contract No. 400-05-020

Photo on page 4 courtesy of The Energy Conservatory.

Photos on page 7 courtesy of: National

Renewable Energy

Laboratory, CertainTeed, and Carrier.

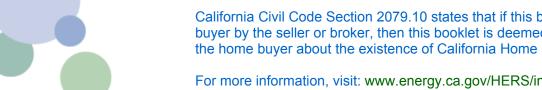
The California
ENERGYCOMMISSION

Property Address:	ENERGYCO
5455 Ball Drive	
Soquel, CA 95073	

I have received a copy of the **WHAT IS YOUR HOME ENERGY RATING?** booklet (CEC-400-2009-008-BR-REV1)

Buyer's Signature	Printed Name	Date
Buyer's Signature	Printed Name	Date
Buyer's Agent Signature	Printed Name	Date
	Broker's Name	
Pury L. Wight Selfassignature	Perry A. Wiget Printed Name	2/23/2018 Date
Enster M. Wight Sellatissing ture	Kristen M. Wiget Printed Name	<u>2/23/2018</u> Date
Bn Clumed Listing Agas Has Signature	Bri Chmel Printed Name	2/23/2018 Date
	The Turtlestone Group Broker's Name	

ALL SIGNERS SHOULD RETAIN A COPY OF THIS PAGE FOR THEIR RECORDS



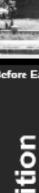
California Civil Code Section 2079.10 states that if this booklet is provided to the buyer by the seller or broker, then this booklet is deemed to be adequate to inform the home buyer about the existence of California Home Energy Rating Program.

Attention zipForm® 6 Users:

Note that due to file size constraints, you will need to **access** and **email** all 5 of the following EPUBD forms separately as listed below:

- 1 HAZARDS Residential Environmental Hazards
- 2_LEAD Protect Your Family from Lead in Your Home
- 3_HERS Home Energy Rating Pamphlet
- 4_EARTHQUAKE Homeowner's Guide to Earthquake Safety
- **5_SIG PAGE Signature Page PRINT** (includes signature page for HERS, Environmental Hazards and Earthquake Safety, Federal Lead and Toxic Mold.)

Fax:



Homeowner's Guide to Earthquake Safety

Before Earthquake

2005 Edition



Damage from magnitude 6.7 earthquake

Published by The California Seismic Safety Commission

State of California Arnold Schwarzenegger, Governor

88C No. 06-01



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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ACKNOWLEDGMENTS

Seismic Safety Commission

Lucille M. Jones, Ph.D., Chair, Seismology Hon. Richard Alarcon, State Senate (Chris Modrzeiewski)

Hon. Carol Liu, State Assembly (Donald Manning)

Lawrence T. Klein, Utilities

Mark Church, Local Government

Linden Nishinaga, P.E., City Government

Celestine Palmer, Insurance

Andrew A. Adelman, P.E., Cities/Building Official

Stan Moy, A.I.A., Architecture and Planning Daniel Shapiro, S.E., Structural Engineering

Vacant, Mechanical Engineering

Bruce R. Clark, Ph.D., Geology

Vacant, County Government

Vacant, Emergency Services

Donald R. Parker, Vice Chairman, Fire Protection

Jimmie R. Yee, Social Services Vacant, Soils Engineering

Seismic Safety Commission Staff

Richard McCarthy, Executive Director Robert Anderson Karen Cogan Henry Reves Henry Sepulveda Fred Turner, Project Coordinator Sue Celli

Rebecca Romo

Collaborative for Disaster Mitigation Staff

Guna Selvaduray, Ph.D., Executive Director Patrick Chong, Webmaster Crystal Carrera, Administrative Assistant

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Retrofit Professions

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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 homeweaknesses (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 homeis 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 givethe 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 weak-nesses 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 structural of 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 <u>not</u> 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



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.



Figure 2 - Loma Prieta Earthquake, Oct. 17, 1989 Home moved off of its foundation and was considered a total loss.



Figure 3 - Northridge Earthquake, Jan. 17, 1994 Single family residence damaged due to failure of multiple elements.



Figure 4 -Northridge Earthquake, Jan. 17, 1994 Chimney Collapse - common type of damage to unreinforced masonry.



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.

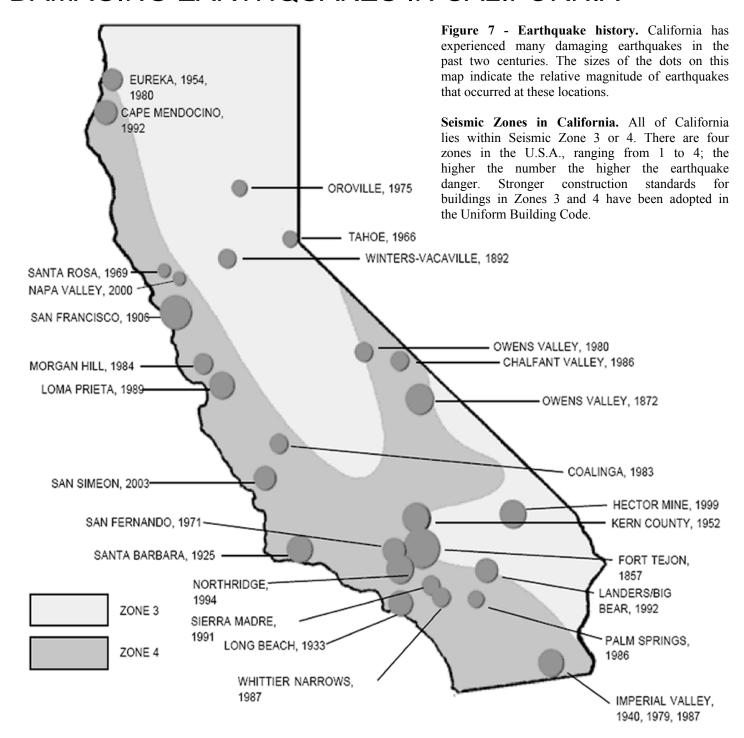


Figure 6 - San Simeon Earthquake, Dec. 22, 2003 The collapsed porch was not adequately attached to this single family residence.

5455 Ball Drive

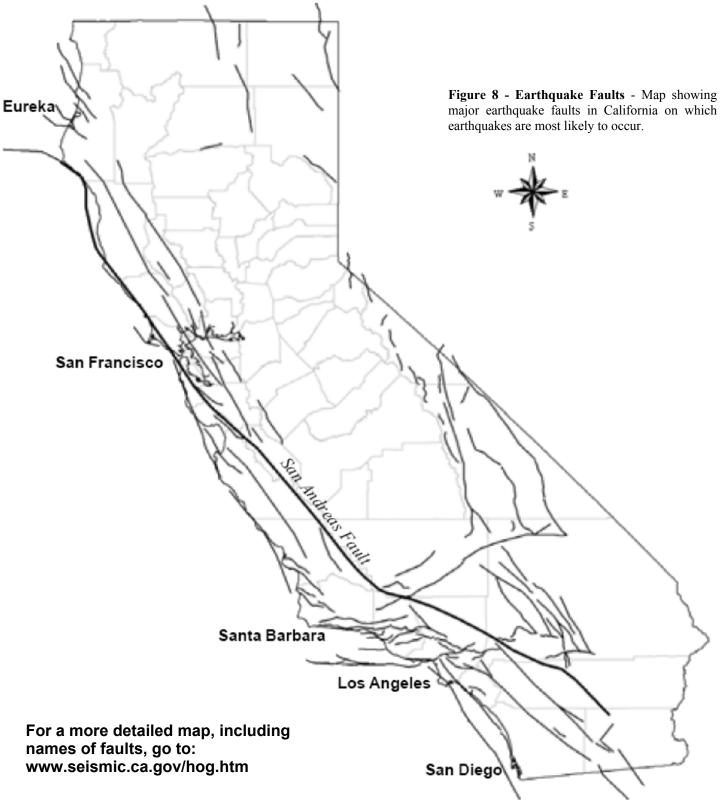
EARTHQUAKE MAPS OF CALIFORNIA

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

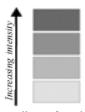


Figure 9 -Earthquake Shaking Potential Map - This map shows the relative intensity of ground shaking and damage in California from anticipated future earthquakes.

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.

Regions near major, active faults. These will on average experience stronger earthquake shaking more frequently.



Regions distant from known, active faults. These will experience lower levels of shaking less frequently.

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.

IDENTIFY WEAKNESSES

Unbraced Water Heaters

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)



Figure 10 - The unbraced water heater in this home fell during an earthquake; the resulting fire destroyed the home.

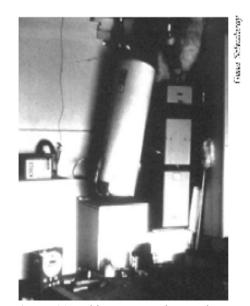


Figure 11 - This unstrapped water heater tipped over during the 1984 Morgan Hill Earthquake. Fortunately gas and water lines were not ruptured

Brace Water Heaters

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 bythe 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 and washers 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.

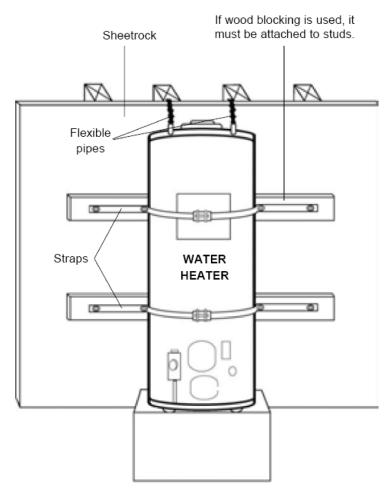


Figure 12: One Method of Water Heater Bracing. Straps and screws visible with water heater in a garage installation. You may need to add wood blocking.

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).

IDENTIFY WEAKNESSES

Home Not Anchored to Foundation

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)

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.

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.

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.

Anchor Foundation

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.

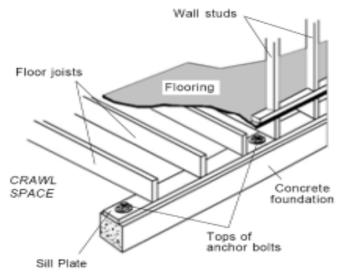
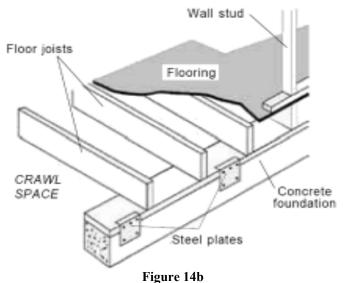


Figure 14a



riguit 110

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 <u>International Existing</u> <u>Building Code</u>, 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).

Weak Cripple Walls

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



Figure 15 - Damage to home due to cripple wall failure.

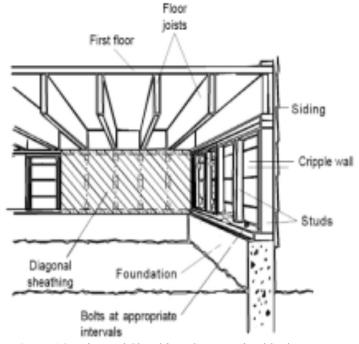


Figure 16 - Diagonal Sheathing. Common in older homes.

Strengthen Cripple Walls

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.

How-to Resources

- Detailed information for do-it-yourselfers or engineers can be found in the <u>International</u> <u>Existing Building Code</u>, 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.

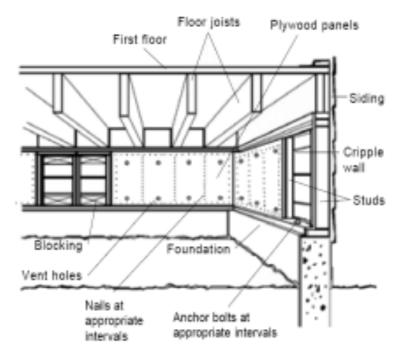
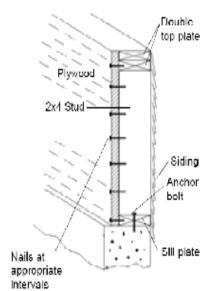


Figure 17 - Plywood or diagonal sheathing strengthens weak cripple walls. If your home has a cripple wall between the foundation and the first floor, and the wall is not braced with plywood or diagonal sheathing, the house may fall or shift off its foundation during an earthquake.



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).

Pier-and-Post Foundations

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, or only 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.





Figure 18 - The pier-and-post foundation under this home shifted during a recent earthquake.

Strengthen Pier-and-Post Foundations

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 <u>International Existing Building Code</u>, 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).

IDENTIFY WEAKNESSES

Unreinforced Masonry Foundations

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.



Figure 19 - This is an unreinforced stone foundation. They typically fail during earthquakes.



Figure 20 - Note the bricks exposed in this unreinforced masonry foundation.

Retrofit Masonry Foundations

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 <u>International Existing Building Code</u>, 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).

5455 Ball Drive

IDENTIFY WEAKNESSES

Homes Built on Steep Hillsides

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.



Figure 22 - This hillside home was built on an unbraced tall wall that failed.



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.

Strengthen Homes on Steep Hillside

The Solution

Consult a licensed architect or engineer, and a licensed contractor, to fix this problem.

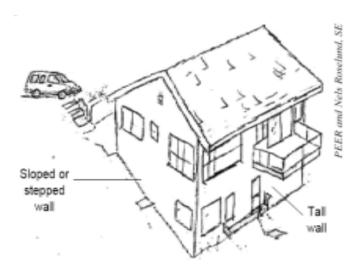


Figure 24 - Hillside homes with sloped and tall walls or posts require special engineering.

How-to Resources

- Detailed information can be found in the <u>International Existing Building Code</u>, 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).

IDENTIFY WEAKNESSES

Unreinforced Masonry Walls

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.

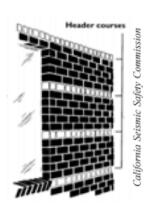
You will then need:

The house's plans, which may be on file with the Building Department, or



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.



 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.

Strengthen Unreinforced Masonry 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.



Figure 27 - Unreinforced masonry wall strengthened by installing a steel frame inside.



Figure 28 - Bolting of unreinforced masonry wall to steel frame on the inside.

Comparison of Cost: Preventing vs. Repairing Earthquake Damage	
Project Cost	Cost to Repair after an Earthquake
Project and Repair costs can vary widely.	

How-to Resource

Detailed information can be found in the <u>International Existing Building Code</u>, published by the International Code Council.

Rooms over Garages

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 ofthe 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.



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

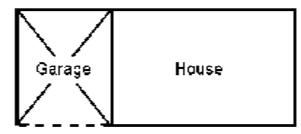
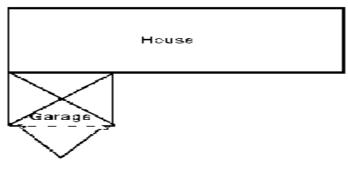


Figure 30 - If the wall of the main house is in line with the wall containing the door of a garage with a room over it, the adjoining wall may help brace the garage.

HOUSE VIEWED FROM ABOVE



Wall may need bracing

Figure 31 - Additional bracing. Home configuration where there is no in-line wall. Additional bracing may be appropriate in this situation.

Garage with room above

Strengthen Rooms over Garages

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.

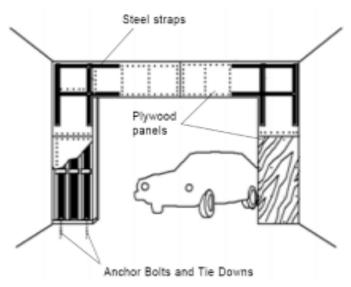


Figure 32 - Bracing garage walls. If your house has a room over the garage, the garage walls may not be strong enough to hold up during an earthquake unless they are braced with plywood panels and steel straps.

How-to Resource

Detailed information can be found in the <u>International Existing Building Code</u>, 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.



Figure 33 - This unreinforced chimney fell during a recent earthquake.



Figure 34 - Morgan Hill Earthquake. Broken chimney fell on roof.

OTHER CONCERNS

Strengthen Masonry Chimneys

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.



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).

OTHER CONCERNS

Foundations

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.

OTHER CONCERNS

Homes with Unique Designs

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.

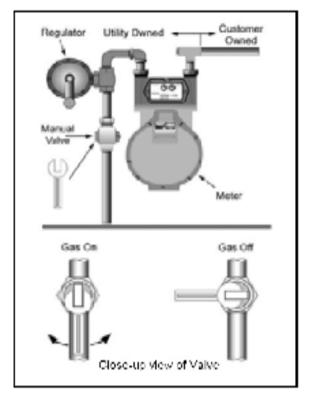


Figure 36-Manual Shutoff Valve Location

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.

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.

- 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.

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!



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.

<u>DO:</u>

- 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
 - \$1000

whichever 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.



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.



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 lowlying 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

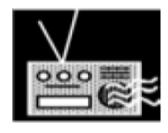












- 1. IF YOU ARE INDOORS-STAY THERE! "DROP, COVER AND HOLD ON." Get under a sturdy desk or table and hang on to it, or move into a hallway or get against an inside wall. Stay clear of windows, fireplaces, and heavy furniture or appliances. Get out of the kitchen, which is a dangerous place in earthquakes 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. IFYOUAREONORNEARA 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.
- 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.
- 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.
- 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 suppliesfood, liquids, and comfortable shoes, for exampleat 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

Check for Hazards

- 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.
- 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

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.

- 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.

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 equipmentincluding telephonesor 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.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.usqs.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.

Residential Earthquake Hazards Report (2005 Edition)

Kristen M. Wiget	037-055-39-0	
STREET ADDRESS	YEAR BUILT	
5455 Ball Drive		
CITY AND COUNTY Soquel Santa Cruz	ZIP CODE 950	73
nswer these questions to the best of your knowledge. If you do not have actual knownswer "Don't Know." If your house does not have the feature, answer "Doesn't Apply." dicate where in this guide you can find information on each of these features.		
	Doesn't	Don't
	Yes No Apply	Know Page
Is the water heater braced, strapped, or anchored to resist falling during an earthquake?		12
Is the house anchored or bolted to the foundation?		14
If the house has cripple walls:		
Are the exterior cripple walls braced?		16
• If the exterior foundation consists of unconnected concrete piers and posts, have		
they been strengthened?		18
If the exterior foundation, or part of it, is made of unreinforced masonry, has it been		
strengthened?		20
If the house is built on a hillside:		
Are the exterior tall foundation walls braced?		22
Were the tall posts or columns either built to resist earthquakes or have they been		
·		
strengthened?		22
If the exterior walls of the house, or part of them, are made of unreinforced masonry,		
have they been strengthened?		24
If the house has a living area over the garage, was the wall around the garage door		
opening either built to resist earthquakes or has it been strengthened?		26
Is the house outside an Alquist-Priolo Earthquake Fault Zone (zones immediately		
surrounding known earthquake faults)?	To be reported on the	36
Is the house outside a Seismic Hazard Zone (zone identified as susceptible to	Natural Hazards Disclosu	re
liquefaction or landsliding)?	Report	36
any of the questions are answered "No," the house is likely to have an earthquake weak dicate a need for further evaluation. If you corrected one or more of these weaknesses, described the property described herein, I have answered the questions above to the billy any potential earthquake weaknesses it may have. **ECUTED BY**	cribe the work on a separate	page.
eller) (Seller) erry A. Wiget Kristen M. Wiget		ate
acknowledge receipt of this form, completed and signed by the seller. I understand that if uestions, or if seller has indicated a lack of knowledge, there may be one or more earthquakens.		o" to one or more
	<u></u>	ate
	D	ate
nis earthquake disclosure is made in addition to the standard real estate transfer disc	losure statement also requi	ired by law.

BOE-64 (FRONT) REV. 4 (8-02)

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
☐ Approved
Reason for denial

SAMPLE FORM for Santa Clara County

PROPERTY DESCRIPTION
Parcel No.(s)
Address

STATEMENTS

- 1. 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.
- 2. 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.
- 3. 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 or 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.
- 4. 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 CHANGES 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.

	ety(with gas shut-off val	omeowner's Guide to Environmen ve update) which includes the Fed	tal Hazards and Earthquake eral Lead booklet and Toxic Mold
	Helpful Too detailed Not detailed enough	Clearly written Confusing	n
	I have strengthened I plan to fix my hon	me to locate earthquake weaknessemy home to resist earthquakes. ne's earthquake weaknesses. me find out that my home did not h	
 	The year my home was	built was	
 	Comments:		
¦ L	We Want To Hear Fro	m You! California Seismic Safety Com 1900 K Street, Suite 100 Sacramento, California 95814-	
gas shut-of Rating boo	f valve update)which klet.		nmental Hazards and Earthquake Safety(with let and Toxic Mold Update, and Home Energy
Date	 Time	(Buyer's signature)	(printed name)
Date		(Buyer's signature)	(printed name)
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	f valve update)which		onmental Hazards and Earthquake Safety(with let and Toxic Mold Update, and Home Energy
Property Ad	ddress: <u>5455 Ball Driv</u>	/e, Soquel, CA 95073	
Date2/23/2	018 Time	Docusigned by: Pury I. Wiget	Perry A. Wiget
Date _{2/23/}	₂₀₁₈ Time	(Selvers & SHABBANS ASE Wiget	(printed name) Kristen M. Wiget
Date _{2/23/}	DocuSigned	Bri Chmel	(printed name) The Turtlestone Group (Broker's name)

NOTE: For applicable transactions, it is also necessary to complete C.A.R. Standard form FLD-11 (Lead-based paint and Lead-based paint Hazards Addendum, Disclosure and Acknowledgement.)

ALL SIGNERS SHOULD RETAIN A COPYOF THIS PAGE FOR THEIR RECORDS

California Civil Code Section 2079.10 states that if the HERS 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.

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Property Ad	dress: <u>5455 Ball Driv</u>	e, Soquel, CA 95073	
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Fax:



AGENT VISUAL INSPECTION DISCLOSURE (CALIFORNIA CIVIL CODE § 2079 ET SEQ.)

ASSOCIATION
OF REALTORS®
For use by an agent when a transfer disclosure statement is required or when a seller is exempt from completing a TDS
(C.A.R. Form AVID. Revised 11/13)

•	(C.A.R. Form AVIL), Revised 11/13)		
This inspection disclosure concerns Santa Cruz	the residential property situated, State of California, describe			County of ("Property").
This Property is a duplex, triplex, units. Inspection Performed By (Real Esta			Additional AVID forms	
California law requires, with limited competent and diligent visual inspective purchase disclose to the prospective purchase duty applies regardless of whom the units, and manufactured homes (in subdivision or a planned developm option to purchase, a ground lease of the competition of the competit	ed exceptions, that a real estate lection of reasonably and normally ser material facts affecting the valuat Agent represents. The duty applies fent) or to an attached dwelling serial exceptions.	broker or salespersor y accessible areas of lue or desirability of t pplies to residential ro to a stand-alone deta uch as a condominiu	f certain properties offered hat property that the inspersal properties containing of ached dwelling (whether of m. The duty also applies	I for sale and then ection reveals. The one-to-four dwelling or not located in a
 California law does not require th Areas that are not reasonably an Areas off site of the property Public records or permits Common areas of planned devel 	nd normally accessible	ooperatives and the lik	ke.	
Agent Inspection Limitations: Bed of reasonably and normally accessil do. What follows is a non-exclusive	ble areas of only the Property bei list of examples of limitations on t	ng offered for sale, th	ere are several things that	
Roof and Attic: Agent will not co Interior: Agent will not move o chimneys or into cabinets, or op	r look under or behind furniture,	pictures, wall hanging	gs or floor coverings. Age	nt will not look up
Exterior: Agent will not inspect	beneath a house or other structure other vegetation or fences, walls or		nb up or down a hillside, m	ove or look behind
spa, heating, cooling, septic, spr	ent will not operate appliances or rinkler, communication, entertainm	nent, well or water) to	determine their functionalit	ty.
lines, easements or encroachme				ŕ
or any other hazardous substan	will not determine if the Property ce or analyze soil or geologic cond	dition.		
or zoning, identify proposed con	atute, Agent is not obligated to pu struction or development or chang	ges or proximity to trai	nsportation, schools, or lav	v enforcement.
Analysis of Agent Disclosures an analysis of or determine the o	: For any items disclosed as a rescause or source of the disclosed n	sult of Agent's visual in natter, nor determine	nspection, or by others, Ag the cost of any possible re	ent will not provide pair.
What this means to you: An Agent a full and complete disclosure by a California Law specifies that a buye which are known to or within the dill or not the Property meets their need SHOULD: (1) REVIEW ANY DISCITHE PROPERTY FROM OTHE PROFESSIONALS WITH THE PERSADVICE OF BROKER.	seller. Regardless of what the April has a duty to exercise reasonal igent attention and observation of eds and intended uses, as well as LOSURES OBTAINED FROM SIER APPROPRIATE PROFESSI	gent's inspection reve ble care to protect hin the buyer. Therefore, s the cost to remedy ELLER; (2) OBTAIN IONALS; AND (3)	als, or what disclosures ar nself or herself. This duty in order to determine for t any disclosed or discover ADVICE ABOUT, AND II REVIEW ANY FINDIN	re made by sellers, encompasses facts hemselves whether red defect, BUYER NSPECTIONS OF, IGS OF THOSE
Buyer's Initials () () The copyright laws of the United States (Title of reproduction of this form, or any portion thereof means, including facsimile or computerized for CALIFORNIA ASSOCIATION OF REALTORS	of, by photocopy machine or any other mats. Copyright © 2007-2013,	Reviewed by	Seller's Initials (PUU	2 (FWI)
AVID REVISED 11/13 (PAGE 1 OF 3)				FDUAL HOUSIAN

AGENT VISUAL INSPECTION DISCLOSURE (AVID PAGE 1 OF 3)

Property Address: S	455 Ball Drive loquel, CA 95073	Dat	e: 12-29-	17
If this Property is	a duplex, triplex, or fourplex, this AVID is for unit #		2 2 01	0
Inspection Date/ I	med By (Real Estate Broker Firm Name) 1041	estone Group-	-Bn'Chnu	1
Other persons pre	esent: ACL ESTES S NED, BASED ON A REASONABLY COMPETENT A CACCESSIBLE AREAS OF THE PROPERTY, STAT	ND DILIGENT VISUAL INSF	ECTION OF THE REASC	NABLY
Entry (excluding	common areas): N/A - nothing			
Living Room:	NA-nothing			
Dining Room:	NA-nothing	4		
Kitchen:	NA - nothing			
Other Room:	In Pi	roces	3 S	
Hall/Stairs (exclu	iding common areas):			
Bedroom # :	NA - nothing		3	
1	0			
Bedroom # 2:	NA - nothing	W 1		
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down Bath#:	NA - nothing			
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Bath#:				
Other Room:	NA-nothing		DS DS	
Buyer's Initials (Copyright © 2013, CAI AVID REVISED 11/) ())))	Seller's	s Initials (PUW) (EM	/
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Property Address:	5455 Ball Drive Soquel, CA 95073		Date: 12-29-17
	a duplex, triplex, or fourplex, this AVID is for ur	nit #	
Other: Ballyard	not landscaped, cracks	in retaining w	all. cement sits in ya
Other: Side yard	Retaining wall leaning		
Other:			
Garage/Parking	(excluding common areas): Stains On	garage floor.	craeks in drivewa
Exterior Buildin	ng and Yard -Front/Sides/Back:		
Other Observed	d or Known Conditions Not Specified Above:		SS
Reminder: Not testing of any s	e is based on a reasonably competent and operty on the date specified above. (Firm who performed the Inspection) (Signature of Associate Incensee or Broke all defects are observable by a real estate liesystem or component. Real Estate Licensees AND INSPECTIONS OF THE PROPERTY FE	censee conducting an inspection of the conducting and inspectors or conducting an inspector or co	Date 12 - 29 - 17
200 D • 100	ցագրան հայտ have read, understand and rece		
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BUYER			Date
Real Estate Brol	ser (Firm Representing Seller) <u>Twww</u>	stone Group	Date 12-29-17
-/	(Associate Licensee or B	roker Signature)	
Real Estate Brok	ker (Firm Representing Buyer)		
			Date
including facsimile or THIS FORM HAS BE ADEQUACY OF AN TRANSACTIONS. IF This form is available which may be used of	(Associate Licensee or B fithe United States (Title 17 U.S. Code) forbid the unauthorize computerized formats. Copyright ©2007, CALIFORNIA ASSIGN APPROVED BY THE CALIFORNIA ASSOCIATION OF FIY PROVISION IN ANY SPECIFIC TRANSACTION. A REYOU DESIRE LEGAL OR TAX ADVICE, CONSULT AN APFE for use by the entire real estate industry. It is not intended to only by members of the NATIONAL ASSOCIATION OF REAL and Distributed by:	d reproduction of this form, or any portion of COIATION OF REALTORS®, INC. ALL REALTORS® (C.A.R.). NO REPRESENTA EAL ESTATE BROKER IS THE PERSOPRIATE PROFESSIONAL. To identify the user as a REALTOR®. REAL	IGHTS RESERVED. ITION IS MADE AS TO THE LEGAL VALIDITY OR ON QUALIFIED TO ADVISE ON REAL ESTATE LTOR® is a registered collective membership mark
REAL ESTA	ATE BUSINESS SERVICES, INC. of the CALIFORNIA ASSOCIATION OF REALTORS®		
	/irgil Avenue, Los Angeles, California 90020	Reviewed by	Date

AVID REVISED 11/13 (PAGE 3 OF 3)



County of Santa Cruz

SEAN SALDAVIA, ASSESSOR

701 OCEAN ST., Rm. 130, SANTA CRUZ, CA 95060 831) 454-2002 FAX: (831) 454-2495 www.co.santa-cruz.ca.us/asr Sheri Thomas
Chief Deputy-Valuation
Claudia Cunha
Chief Deputy-Administration

AUTHORIZATION TO ACCESS CONFIDENTIAL FILES

I, Perry A. Wiget and Kristen M. Wiget	, hereby authorize the Santa Cruz County
	Access to any and all records in to obtain copies of any such documents, pertaining to the and/or personal, as follows: (identify by Assessor parcel number,
5455 Ball Dr, Soquel CA 95073	
more California statutes. Such documents real estate or business acquisitions and operights of confidentiality under Sections 40	my file(s) may be classified as confidential or secret by one or may contain personal financial information regarding financing of erations as well as income from investments. I hereby waive my 8, 451 and 481 of the Revenue and Taxation Code, as well as any law. <i>Authorization is only valid for 30 days from the date of the</i>
Pocusigned by: Perry d. Wight Docusigned by:	> 1/14/2018 1/14/2018
Signature of Owner 9AEF63E17FB84E7.	
Perry A. Wiget and Kristen M. Wiget	(831) 818-0829
Name (print)	Daytime phone
422 35th, Santa Cruz CA 95062	
Address	



MARKET CONDITIONS ADVISORY

(C.A.R. Form MCA, Revised 11/11)

1. MARKET CONDITIONS: Real estate markets are cyclical and can change over time. It is impossible to predict future market conditions with accuracy. In a competitive or "hot" real estate market, there are generally more Buyers than Sellers. This will often lead to multiple buyers competing for the same property. As a result, in order to make their offers more attractive, some Buyers may offer more than originally planned or eliminate certain contingencies in their offers. In a less competitive or "cool" market there are generally more Sellers than Buyers, often causing real estate prices to level off or drop, sometimes precipitously. The sales price of homes being sold as foreclosures and short sales is difficult to anticipate and can affect the value of other homes in the area. Brokers, appraisers, Sellers and Buyers take these "distressed" property sales and listings into consideration when valuing property. In light of the real estate market's cyclical nature it is important that Buyers understand the potential for little or no appreciation in value, or an actual loss in value, of the property they purchase. This Advisory discusses some of the potential risks inherent in changing market conditions.

2. BUYER CONSIDERATIONS:

- A. OFFERING PRICE: AS A BUYER, YOU ARE RESPONSIBLE FOR DETERMINING THE PRICE YOU WANT TO OFFER FOR A PROPERTY. Although Brokers may provide you with comparable sales data, generally from information published in the local multiple listing service, you should know that the reporting of this data is often delayed and prices may change, up or down, faster than reported sales indicate. All buyers should be sure they are comfortable with the price they are offering or the price they are accepting in a counter offer. You should be aware of and think about the following: (i) If your offer is accepted, the property's value may not increase and may even decrease. (ii) If your offer is accepted, you may have "Buyer's remorse" that you paid too much. (iii) If your offer is rejected there can be no guarantee that you will find a similar property at the same price. (iv) If your offer is rejected, you may not be satisfied that the amount you offered was right for you. Only you can determine that your offer was reasonable and prudent in light of the property and your circumstances.
- **B. NON-CONTINGENT OFFERS:** Most residential purchase agreements contain contingencies allowing a Buyer within a specified period of time to cancel a purchase if: (i) the Buyer cannot obtain a loan; (ii) is dissatisfied with the property's condition after an inspection; or (iii) if the property does not appraise at a certain value. To make their offers more attractive, Buyers will sometimes write offers with few or no contingencies or offer to remove contingencies within a short period of time. In a "hot" market, sellers will sometimes insist that Buyers write offers with no contingencies. Broker recommends that Buyers do not write non-contingent offers and if you do so, you are acting against Broker's advice. However, if you do write a non-contingent offer these are some of the contractual rights you may be giving up:
 - (1)LOAN CONTINGENCY: If you give up your loan contingency, and you cannot obtain a loan, whether through your fault or the fault of your lender, and as a result, you do not or cannot purchase the property, you may legally be in default under the contract and required to pay damages or forfeit your deposit to the seller.
 - (2)APPRAISAL CONTINGENCY: If your lender's (or your own) appraiser does not believe the property is worth what you have agreed to pay for it, your lender may not loan the full amount needed for the purchase or may not loan any amount at all because of a low appraisal. As a result, if you do not purchase the property, and you have removed your appraisal contingency, you may legally be in default under the contract and could be required to pay damages to, or forfeit your deposit to, the Seller. The Seller is not obligated to reduce the purchase price to match the appraised value.

Buyer's Initials ()()		Seller's Initials (((((((((((((((((((((
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ADEQUACY OF ANY PR	ROVISION IN ANY	SPECIFIC TRANSAG	CTION. A REAL ESTATE	BROKER IS THE PERSON QUA	LIFIED TO ADVISI	E ON REAL ESTATE
TRANSACTIONS. IF YOU	DESIRE LEGAL O	R TAX ADVICE, CONS	SULT AN APPROPRIATE PI	ROFESSIONAL.		

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Reviewed by _____ Date ____



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MARKET CONDITIONS ADVISORY (MCA PAGE 1 OF 2)

Property Address: 5455 Ball Drive, Soquel, CA 95073 Date: 1/15/2018

3. INSPECTION CONTINGENCY: If you disapprove of the condition of the property and as a result, you do not purchase the property, you may legally be in default under the contract and required to pay damages to, or forfeit your deposit to, the Seller if you have removed your inspection contingency. However, even if you make an offer without an inspection contingency or you remove that contingency, the Seller may still be obligated to disclose to you material facts about the property. In some cases, once you receive that information the law gives you an independent right to cancel for a limited period of time.

There is inherent risk in writing a non-contingent offer. Only you, after careful consultation and deliberation with your attorney, accountant, or financial advisor can decide how much risk you are willing to take. IT IS YOUR DECISION ALONE AND CANNOT BE MADE BY YOUR BROKER OR REAL ESTATE AGENT.

- **C. BROKER RECOMMENDATIONS.** Broker recommends that you do not write a non-contingent offer, even if you are planning on paying all cash for the property. If you intend to write a non-contingent offer, Broker recommends that, prior to writing the offer, you: (i) review all available Seller reports, disclosures, information and documents; (ii) have an appropriate professional inspect the property (even if it is being sold "as is" in its present condition); and (iii) carefully assess your financial position and risk with your attorney, accountant or financial advisor.
- **D. MULTIPLE OFFERS:** At times Buyers may write offers on more than one property even though the Buyer intends to purchase only one. This may occur in a short sale when the approval process can take a considerable amount of time. While it is not illegal to make offers on multiple properties with intent to purchase only one, the Buyer can be obligated to many Sellers if more than one accepts the Buyer's offers. If the Buyer has not disclosed that the Buyer is writing multiple offers with the intent to purchase only one and the Buyer subsequently cancels without using a contingency, the Seller may claim the Buyer is in breach of contract because the Buyer fraudulently induced the Seller to enter into a contract.

3. SELLER CONSIDERATIONS:

As a Seller, you are responsible for determining the asking price for your property. Although Brokers may provide you with comparable sales data, generally from information published in the local multiple listing service, you should know that the reporting of this data is often delayed and prices may change, up or down, faster than reported sales indicate. All Sellers should be sure they are comfortable with the asking price they are setting and the price they are accepting. There is not, and cannot be, any guarantee that the price you decide to ask for your property, or the price at which you agree to sell your property is the highest available price obtainable for the property. It is solely your decision as to how much to ask for your property and at which price to sell your property.

Buyer/Seller acknowledges each has read, understands and has received a copy of this Market Conditions Advisory.

Buyer		Date
Buyer		Date
Seller	Pury A. Wiget	Date _2/23/2018
Seller	Eristen M. Winet	Date _ 2/23/2018
	Kristen M. Wiget	

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MEGAN'S LAW DATA BASE DISCLOSURE

Regarding Registered Sex Offenders (C.A.R. Form DBD, Revised 11/08)

-	and conditions are hereby incorporated in and made a part	_
	tial Lease or Month-to-Month Rental Agreement, ☐ other	, on property
	5455 Ball Drive, Soquel, CA	
	, ,	
and	Perry A. Wiget, Kristen M. Wiget	is referred to as Seller/Landlord.
public via an Internet	ction 290.46 of the Penal Code, information about specified reg Web site maintained by the Department of Justice at www.me formation will include either the address at which the offender re	eganslaw.ca.gov. Depending on an offender's
Code in which he or she	e resides.	
obtain information from	kers are required to check this website. If Buyer wants furthe this website during Buyer's inspection contingency period. Broker	rs do not have expertise in this area.)
Buyer/Tenant		Date
Seller/Landlord Perry	Docusigned by: Wy L. Wight ADD 18065F649E	Date <u>2/23/2018</u>
Seller/Landlord Kiste	Docusigned by: Wistum M. Wiget 9AEF63E17FB84E7	Date <u>2/23/2018</u>

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DBD REVISED 11/08 (PAGE 1 OF 1)

MEGAN'S LAW DATA BASE DISCLOSURE (DBD PAGE 1 OF 1)



STATEWIDE BUYER AND SELLER ADVISORY

(This Form Does Not Replace Local Condition Disclosures. Additional Addenda May Be Attached to This Advisory) (C.A.R. Form SBSA, Revised 1/16)

5455 Ball Drive
Property Address Soquel, CA 95073

Date <u>1/15/2018</u>

BUYER RIGHTS AND DUTIES:

- The physical condition of the land and improvements being purchased are not guaranteed by Seller or Brokers.
- You should conduct thorough investigations of the Property both personally and with appropriate professionals.
- If professionals recommend further inspections, you should contact qualified experts to conduct such inspections.
- You should retain your own professional even if Seller or Broker has provided you with existing reports.
- You should read all written reports given to you and discuss those reports with the persons who prepared them.
- You have the right to request that the Seller make repairs or corrections or take other actions based on inspections or disclosures, but the Seller is not obligated to make any such repairs, corrections or other requested actions.
- If the Seller is unwilling or unable to satisfy your requests, and you act within certain time periods, you may have the right to cancel the Agreement (the Purchase Agreement and any Counter Offer and Addenda together are the "Agreement"). If you cancel outside of these periods, you may be in breach of the Agreement and your deposit might be at risk.
- The terms of the purchase agreement and any counter offers and addenda establish your rights and responsibilities.

YOU ARE STRONGLY ADVISED TO INVESTIGATE THE CONDITION AND SUITABILITY OF ALL ASPECTS OF THE PROPERTY. IF YOU DO NOT DO SO, YOU ARE ACTING AGAINST THE ADVICE OF BROKERS.

SELLER RIGHTS AND DUTIES:

- You have a duty to disclose material facts known to you that affect the value or desirability of the Property.
- You are obligated to make the Property available to the Buyer and have utilities on for inspections as allowed by the Agreement.
- This form is not a substitute for completing a Real Estate Transfer Disclosure Statement, if required, and any other property-specific questionnaires or disclosures.
- The terms of the Agreement establish your rights and responsibilities.

BROKER RIGHTS AND DUTIES:

- Brokers do not have expertise in all areas and matters affecting the Property or your evaluation of it.
- For most sales of residential properties with no more than four units, Brokers have a duty to make a reasonably
 competent and diligent visual inspection of the accessible areas of the Property and disclose to you material facts or
 defects that the inspection reveals.
- Many defects and conditions may not be discoverable by a Broker's visual inspection.
- If Brokers give a referral to another professional, Brokers do not guarantee that person's performance. You may select any professional of your own choosing.
- Any written agreement between a Broker and either Buyer or Seller or both establishes the rights and responsibilities
 of those parties.
- 1. INSPECTIONS: Buyer and Seller are advised that Buyer has the right to obtain various inspections of the Property under most residential purchase agreements. Buyer is advised to have the Property inspected by a professional property inspection service within Buyer's inspection contingency period. A licensed building contractor or other professional may perform these services. The inspector generally does not look behind walls or under carpets, or take equipment apart. Certain items on the Property, such as chimneys and spark arresters, plumbing, heating, air conditioning, electrical wiring, pool and spa, septic system, well, roof, foundation and structural items may need to be inspected by another professional, such as a chimney sweep, plumber, electrician, pool and spa service, septic or well company or roofer. A general physical inspection typically will not test for mold, wood destroying pests, lead-based paint, radon, asbestos and other environmental hazards, geologic conditions, age, remaining useful life or water-tightness of roof, cracks, leaks or operational problems associated with a pool or spa or connection of the Property to a sewer system. If Buyer wants further information on any aspect of the Property, Broker recommends that Buyer have a discussion with the professional property inspector and that Buyer hire an appropriate professional for the area of concern to Buyer. Brokers do not have expertise in these areas. Brokers do not verify the results of any such inspection or guarantee the performance of any such inspector or service. Any election by Buyer to waive the right to a physical inspection of the Property or to rely on somebody other than an appropriate professional is against the advice of Brokers. Not all inspectors are licensed and licenses are not available for all types of inspection activities.

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- 2. SQUARE FOOTAGE, LOT SIZE, BOUNDARIES AND SURVEYS: Buyer and Seller are advised that only an appraiser or land surveyor, as applicable, can reliably confirm square footage, lot size, Property corners and exact boundaries of the Property. Representations regarding these items that are made in a Multiple Listing Service, advertisements, and from property tax assessor records are often approximations, or based upon inaccurate or incomplete records. Fences, hedges, walls or other barriers may not represent actual boundary lines. Unless otherwise specified by Broker in writing, Brokers have not verified any such boundary lines or any representations made by Seller or others. Brokers do not have expertise in this area. Standard title insurance does not insure the boundaries of the Property. If Buyer wants information about the exact square footage, lot size or location of Property corners or boundaries, Broker recommends that Buyer hire an appraiser or licensed surveyor to investigate these matters or to prepare a survey of the property during Buyer's inspection contingency period.
- **3. SOIL AND GEOLOGIC CONDITIONS:** Buyer and Seller are advised that real estate in California is subject to settling, slippage, contraction, expansion erosion, subsidence, earthquakes and other land movement. The Property may be constructed on fill or improperly compacted soil and may have inadequate drainage capability. Any of these matters can cause structural problems to improvements on the Property. Civil or geo-technical engineers are best suited to evaluate soil stability, grading, drainage and other soil conditions. Additionally, the Property may contain known or unknown mines, mills, caves or wells. Brokers do not have expertise in this area. If Buyer wants further information, Broker recommends that Buyer hire an appropriate professional. Not all inspectors are licensed and licenses are not available for all types of inspections.
- 4. GEOLOGIC HAZARDS: Buyer and Seller are advised that California has experienced earthquakes in the past, and there is always a potential of future earthquakes. Damage caused by an earthquake may not be discoverable by a visual inspection of Buyer(s) or Broker(s). Inspection by a licensed, qualified professional is strongly recommended to determine the structural integrity and safety of all structures and improvements on the Property. If the Property is a condominium, or located in a planned unit development or in a common interest subdivision, Buyer is advised to contact the homeowners association about earthquake repairs and retrofit work and the possibility of an increased or special assessment to defray the costs of earthquake repairs or retrofit work. Buyer is encouraged to obtain and read the booklet entitled, "The Homeowner's Guide to Earthquake Safety." In most cases a questionnaire within the booklet must be completed by Seller and the entire booklet given to the Buyer if the Property was built prior to 1960. If the Property was built before 1975, and contains structures constructed of masonry or precast (tilt up) concrete walls, with wood frame floors or roof, or if the building has unreinforced masonry walls, then Seller must provide Buyer a pamphlet entitled "The Commercial Property Owner's Guide to Earthquake Safety." Many areas have a wide range of geologic problems and numerous studies have been made of these conditions. Some of this information is available for public review at city and county planning departments. Buyer is encouraged to review the public maps and reports and/or obtain a geologist's inspection report. Brokers do not have expertise in this area. Buyer may be able to obtain earthquake insurance to protect their interest in the Property. Sellers who agree to provide financing should also consider requiring Buyers to obtain such insurance naming Seller(s) as insured lien holder(s).
- **5. ENVIRONMENTAL HAZARDS:** Buyer and Seller are advised that the presence of certain kinds of organisms, toxins and contaminants, including, but not limited to, mold (airborne, toxic or otherwise), fungi, mildew, lead-based paint and other lead contamination, asbestos, formaldehyde, radon, pcb's, methane, other gases, fuel oil or chemical storage tanks, contaminated soil or water, hazardous waste, waste disposal sites, electromagnetic fields, nuclear sources, urea formaldehyde, or other materials may adversely affect the Property and the health of individuals who live on or work at the property as well as pets. If Buyer wants further information, Buyer is advised, and Broker(s) recommends, that Buyer have the Property inspected for the existence of such conditions and organisms, and conditions that may lead to their formation. Not all inspectors are licensed and licenses are not available for all types of inspection activities. Buyer is also advised to consult with appropriate experts regarding this topic during Buyer's inspection contingency period. Brokers do not have expertise in this area. Broker recommends that Buyer and Seller read the booklets titled, "Residential Environmental Hazards: A Guide for Homeowners, Homebuyers, Landlords and Tenants," and "Protect Your Family From Lead In Your Home."
- **6. EPA's LEAD-BASED PAINT RENOVATION, REPAIR AND PAINTING RULE:** The new rule requires that contractors and maintenance professionals working in pre-1978 housing, child care facilities, and schools with lead-based paint be certified; that their employees be trained; and that they follow protective work practice standards. The rule applies to renovation, repair, or painting activities affecting more than six square feet of lead-based paint in a room or more than 20 square feet of lead-based paint on the exterior. Enforcement of the rule begins October 1, 2010. See the EPA website at www.epa.gov/lead for more information. Buyer and Seller are advised to consult an appropriate professional.
- **7. FORMALDEHYDE:** Formaldehyde is a substance known to the State of California to cause cancer. Exposure to formaldehyde may be caused by materials used in the construction of homes. The United States Environmental Protection Agency, the California Air Resources Board, and other agencies have measured the presence of formaldehyde



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in the indoor air of select homes in California. Levels of formaldehyde that present a significant cancer risk have been measured in most homes that were tested. Formaldehyde is present in the air because it is emitted by a variety of building materials and home products used in construction. The materials include carpeting, pressed wood products, insulation, plastics, and glues. Most homes that have been tested elsewhere do contain formaldehyde, although the concentrations vary from home to home with no obvious explanation for the differences. One of the problems is that many suppliers of building materials and home products do not provide information on chemical ingredients to builders. Buyers may have further questions about these issues. Buyer is advised to consult with appropriate experts regarding this topic during Buyer's inspection contingency period. Brokers do not have expertise in this area. Broker(s) recommend that Buyer and Seller read the booklet titled "Residential Environmental Hazards: A Guide for Homeowners, Homebuyers, Landlords and Tenants."

- 8. MOLD: Buyer and Seller are advised that the presence of certain kinds of mold, fungi, mildew and other organisms, sometimes referred to as "toxic mold" (collectively "Mold"), may adversely affect the Property and the health of individuals who live on or work at the Property as well as pets. Mold does not affect all people the same way, and may not affect some people at all. Mold may be caused by water leaks or other sources of moisture such as, but not limited to, flooding, and leaks in windows, pipes and roof. Seller is advised to disclose the existence of any such conditions of which he or she is aware. Buyer should carefully review all of Seller's disclosures for any indication that any of these conditions exist. It is, however, possible that Mold may be hidden and that Seller is completely unaware of its existence. In addition, Mold is often undetectable from a visual inspection, a professional general property inspection and even a structural pest control inspection. Brokers do not have expertise in this area. If Buyer wants further information, Broker recommends that Buyer have the Property tested for Mold by an environmental hygienist or other appropriate professional during Buyer's inspection contingency period. Not all inspectors are licensed and licenses are not available for all types of inspection activities.
- **9. WATER INTRUSION:** Buyer and Seller are advised that many homes suffer from water intrusion or leakage. The causes of water intrusion are varied, and can include defective construction, faulty grading, deterioration of building materials and absence of waterproof barriers. Water intrusion can cause serious damage to the Property. This damage can consist of wood rot, mold, mildew and even damage to the structural integrity of the Property. The cost of repairing and remediating water intrusion damage and its causes can be very significant. The existence and cause of water intrusion is often difficult to detect. Because you, your Broker or a general home inspector cannot visually observe any effects of water intrusion, Buyer and Seller should not assume that such intrusion does not exist. Broker recommends that Buyer have the Property inspected for water intrusion by an appropriate professional. Brokers do not have expertise in this area.
- 10. SEPTIC SYSTEMS: Buyer and Seller are advised that a property may be served by one or more septic systems even though adjoining properties are connected to a sewer line. Buver and Seller are also advised that some septic tanks and systems may have been abandoned or have leaked into ground water sources. Buyer is advised to contact the appropriate government agency to verify that the Property is connected to a sewer or served by a septic system. If the Property is served by a septic system, it may consist of a septic tank, cesspool, pits, leach lines or a combination of such mechanisms ("collectively, System"). No representation or warranty is made by Seller or Broker concerning the condition, operability, size, capacity or future expansion of a System, nor whether a System is adequate for use by the intended occupants of the Property. A change in the number of occupants or the quantity, composition or methods of depositing waste may affect the efficiency of the System. In addition, the amount of rainfall and ground water table may also affect the efficiency of the System. Many factors including, but not limited to, natural forces, age, deterioration of materials and the load imposed on a System can cause the System to fail at any time. Broker recommends that Buyer obtain an independent evaluation of any System by a qualified sanitation professional during Buyer's inspection contingency period. Brokers do not have expertise in this area. Buyer should consult with their sanitation professional to determine if their report includes the tank only, or other additional components of the System such as pits and leach fields. Not all inspectors are licensed and licenses are not available for all types of inspection activities. In some cases, Buyer's lender as well as local government agencies may require System inspection. System-related maintenance costs may include, but not be limited to, locating. pumping or providing outlets to ground level. Brokers are unable to advise Buyer or Seller regarding System-related issues or associated costs, which may be significant. If Buyer and Seller agree to obtain a System inspection, Buyer and Seller are cautioned that the inspection cost may include, but not be limited to, the costs of locating, pumping or providing outlets to ground level.
- 11. WELL AND WATER SYSTEM(S): Buyer and Seller are advised that the Property may be served by one or more water wells, springs, or private community or public water systems. Any of these private or public water systems may contain bacteria, chemicals, minerals and metals, such as chromium. Well(s) may have been abandoned on the Property. Buyer is advised to have both the quality and the quantity of water evaluated, and to obtain an analysis of the quality of any domestic and agricultural water in use, or to be used at the Property, from whatever source. Water quality tests can include not only tests for bacteria, such as coliform, but also tests for organic and inorganic chemicals, metals, mineral content and gross alpha testing for radioactivity. Broker recommends that Buyer consult with a licensed,



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qualified well and pump company and local government agency to determine whether any well/spring or water system will adequately serve Buyer's intended use and that Buyer have a well consultant perform an extended well output test for this purpose. Water well or spring capacity, quantity output and quality may change at any time. There are no guarantees as to the future water quality, quantity or duration of any well or spring. If Buyer wants further information, Broker(s) recommend that Buyer obtain an inspection of the condition, age, adequacy and performance of all components of the well/spring and any water system during Buyer's inspection contingency period. Brokers do not have expertise in this area.

- **12. WOOD DESTROYING PESTS:** Buyer and Seller are advised that the presence of, or conditions likely to lead to the presence of infestation or infection of wood destroying pests and organisms may adversely affect the Property. Inspection reports covering these items can be separated into two sections: Section 1 identifies areas where infestation or infection is evident. Section 2 identifies areas where there are conditions likely to lead to infestation or infection. Brokers do not have expertise in this area. If Buyer wants further information, Buyer is advised and Broker recommends that Buyer have the Property inspected for the existence of such conditions and organisms, and conditions that may lead to their formation, by a registered structural pest control company during Buyer's inspection contingency period.
- 13. EASEMENTS, ACCESS AND ENCROACHMENTS: Buyer and Seller are advised that confirming the exact location of easements, shared or private driveways or roadways, and encroachments on or to the Property may be possible only by conducting a survey. There may be unrecorded easements, access rights, encroachments and other agreements affecting the Property that may not be disclosed by a survey. Representations regarding these items that are made in a Multiple Listing Service or advertisements, or plotted by a title company are often approximations, or based upon inaccurate or incomplete records. Unless otherwise specified by Broker in writing, Brokers have not verified any such matters or any representations made by Seller(s) or others. If Buyer wants further information, Buyer is advised and Broker(s) recommend that Buyer hire a licensed surveyor during Buyer's inspection contingency period. Brokers do not have expertise in this area.
- 14. EARTHQUAKE FAULT ZONES AND SEISMIC HAZARD ZONES: Buyer and Seller are advised that California Public Resources Code Sections 2622 and 2696 require the delineation and mapping of "Earthquake Fault Zones" along known active faults and "Seismic Hazard Zones" in California. Affected cities and counties must regulate certain development projects within these zones. Construction or development on affected properties may be subject to the findings of a geological report prepared by a registered California geologist. Generally, Seller must disclose if the Property is in such a zone and can use a research company to aid in the process. If Buyer wants further information, Broker recommends that, during Buyer's inspection contingency period, Buyer make independent inquiries with such research companies or with appropriate government agencies concerning the use and improvement of the Property. Brokers do not have expertise in this area. Buyer is advised that there is a potential for earthquakes and seismic hazards even outside designated zones.
- 15. FIRE HAZARDS: Buyer and Seller are advised that fires annually cause the destruction of thousands of homes. Due to varied climate and topography, certain areas have higher risks of fires than others. Certain types of materials used in home construction create a greater risk of fire than others. If the Property is located within a State Fire Responsibility Area or a Very High Fire Hazard Zone, generally Seller must disclose that fact to Buyer under California Public Resources Code Section 4136 and California Government Code Sections 51178 and 51183.5, and may use a research company to aid in the process. Owners of property may be assessed a fire prevention fee on each structure on each parcel in such zones. The fee may be adjusted annually commencing July1, 2013. If Buyer wants further information, Broker recommends that, during Buyer's inspection contingency period, Buyer contact the local fire department and Buyer's insurance agent regarding the risk of fire. Brokers do not have expertise in this area. Buyer is advised that there is a potential for fires even outside designated zones.
- **16. FLOOD HAZARDS:** Buyer and Seller are advised that if the Property is located within a Special Flood Hazard Area, as designated by the Federal Emergency Management Agency (FEMA), or an area of Potential Flooding pursuant to California Government Code Section 8589.3, generally Seller must disclose this fact to Buyer and <u>may</u> use a research company to aid in the process. The National Flood Insurance Program was established to identify all flood plain areas and establish flood-risk zones within those areas. The program mandates flood insurance for properties within high-risk zones if loans are obtained from a federally-regulated financial institution or are insured by any agency of the United States Government. The extent of coverage and costs may vary. If Buyer wants further information, Broker(s) recommend that Buyer consult his or her lender and/or insurance agent during Buyer's inspection contingency period. Brokers do not have expertise in this area. Buyer is advised that there is a potential for flooding even outside designated zones.
- 17. ZONE MAPS MAY CHANGE: Maps that designate, among other things, Earthquake Fault Zones, Seismic Hazard Zones, State Fire Responsibility Areas, Very High Fire Hazard Zones, Special Flood Hazard Areas, and Potential Flooding Areas are occasionally redrawn by the applicable Government Agency. Properties that are currently designated in a specified zone or area could be removed and properties that are not now designated in a specified zone or area could be placed in one or more such zones or areas in the future. A property owner may dispute a FEMA flood hazard location by submitting an application to FEMA.

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Date: <u>1/15/2018</u> Property Address: 5455 Ball Drive, Soquel, CA 95073

- 18. BUILDING PERMITS, ZONING AND CODE COMPLIANCE: Buyer and Seller are advised that any structure on the Property, including the original structure and any addition, modification, remodel or improvement may have been built without permits, not according to building codes, or in violation of zoning laws. Further, even if such structure was built according to the then-existing code or zoning requirement, it may not be in compliance with current building standards or local zoning. It is also possible that local law may not permit structures that now exist to be rebuilt in the event of damage or destruction. Buyer is advised to check with appropriate government agencies or third party professionals to verify permits and legal requirements and the effect of such requirements on current and future use of the Property, its development and size. If Buyer wants further information, Broker(s) recommend that Buyer discuss the issue with an appropriate professional during Buyer's inspection contingency period. Brokers do not have expertise in this area.
- 19. VIEWS: Buyer and Seller are advised that present views from the Property may be affected by future development or growth of trees and vegetation on adjacent properties and any other property within the line of sight of the Property. Brokers make no representation regarding the preservation of existing views. If Buyer wants further information, Broker(s) recommend that Buyer review covenants, conditions and restrictions, if any, and contact neighboring property owners, government agencies and homeowner associations, if any, during Buyer's inspection contingency period. Brokers do not have expertise in this area.
- 20. FUTURE REPAIRS, REPLACEMENTS AND REMODELS: Buyer and Seller are advised that replacement or repairs of certain systems or rebuilding or remodeling of all or a portion of the Property may trigger requirements that homeowners comply with laws and regulations that either come into effect after Close of Escrow or are not required to be complied with until the replacement, repair, rebuild or remodel has occurred. Permit or code requirements or building standards may change after Close of Escrow, resulting in increasing costs to repair existing features. In particular, changes to state and federal energy efficiency regulations impact the installation, replacement and some repairs of heating and air conditioning units (HVAC). Federal regulations now require manufacturers of HVAC units to produce only units meeting a new higher Seasonal Energy Efficiency Rating (SEER). This will likely impact repairs and replacements of existing HVAC units. State regulations now require that when installing or replacing HVAC units, with some exceptions, duct work must be tested for leaks. Duct work leaking more than 15 percent must be repaired to reduce leaks. The average existing duct work typically leaks 30 percent. More information is available at the California Energy Commission's website http://www.energy.ca.gov/title24/changeout. Home warranty policies may not cover such inspections or repairs. The phase out of the use of R-22 Freon will have an impact on repairs and replacement of existing air conditioning units and heat pumps. More information is available from the Environmental Protection Agency at http://www.epa.gov/ozone/title6/phaseout/22phaseout.html. New efficiency standards are also in place for water heaters. As a consequence, replacement water heaters will generally be larger than existing units and may not fit in the existing space. Additional venting and other modifications may be required as well. More information is available from the U.S. Department of Energy at http://www1.eere.energy.gov/buildings/appliance standards/product.aspx/productid/27. If Buyer wants further information, Broker recommends that Buyer discuss the issue with an appropriate professional during Buyer's inspection contingency period. Brokers do not have expertise in this area.
- 21. GOLF COURSE DISCLOSURES: Buyer and Seller are advised that if the Property is located adjacent to or near a golf course the following may apply: (i) Stray golf balls - Any residence near a golf course may be affected by errant golf balls, resulting in personal injury or destruction to property. Golfers may attempt to trespass on adjacent property to retrieve golf balls even though the project restrictions may expressly prohibit such retrieval. (ii) Noise and lighting - The noise of lawn mowers irrigation systems and utility vehicles may create disturbances to homeowners. Maintenance operations may occur in the early morning hours. Residents living near the clubhouse may be affected by extra lighting, noise, and traffic. (iii) Pesticides and fertilizer use - A golf course may be heavily fertilized, as well as subjected to other chemicals during certain periods of the year. (iv) Irrigation system -Golf course sprinkler systems may cause water overspray upon adjacent property and structures. Also the irrigation system of a golf course may use reclaimed and retreated wastewater. (v) Golf carts - Certain lots may be affected more than others by the use of golf carts. Lots adjacent to a tee or putting green may be subject to noise disturbances and loss of privacy. (vi) Access to golf course from residences - It is likely that most residences will not have direct access from their lots to the golf course. The project restrictions may disclaim any right of access or other easements from a resident's lot onto the golf course. (vii) View obstruction - Residents living near a golf course may have their views over the golf course impacted by maturing trees and landscaping or by changes to the course's configuration. (viii) Water restrictions - As some municipalities face water shortages, the continued availability of water to the golf course may be restricted or otherwise reduced by the local water agency. If Buyer wants further information, Broker(s) recommend that Buyer contact the local water agency regarding this matter.
- 22. SCHOOLS: Buyer and Seller are advised that children living in the Property may not, for numerous reasons, be permitted to attend the school nearest the Property. Various factors including, but not limited to, open enrollment policies, busing, overcrowding and class size reductions may affect which public school serves the Property. School district boundaries are subject to change. Buyer is advised to verify whether the Property is now, and at the Close of Escrow will be, in the school district Buyer understands it to be in and whether residing in the Property entitles a person to attend any specific school in which that Buyer is interested. Broker(s) recommend that Buyer contact the local school or school district for additional information during Buyer's inspection contingency period. Brokers do not have expertise in this area.

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- 23. NEIGHBORHOOD NOISE SOURCES: Buyer and Seller are advised that even if the Property is not in an identified airport noise influence area, the Property may still be subject to noise and air disturbances resulting from airplanes and other aircraft, commercial or military or both, flying overhead. Other common sources of noise include nearby commercial districts, schools, traffic on streets, highways and freeways, trains and general neighborhood noise from people, dogs and other animals. Noise levels and types of noise that bother one person may be acceptable to others. Buyer is advised to satisfy him/herself with regard to any sources of and amounts of noise at different times of day and night. Brokers do not have expertise in this area.
- **24. PETS AND ANIMALS:** Buyer and Seller are advised that the current or previous owner(s)may have had domesticated or other pets and animals at the Property. Odors from animal urine or other contamination may be dormant for long periods of time and then become active because of heat, humidity or other factors and might not be eliminated by cleaning or replacing carpets or other cleaning methods. Pet urine and feces can also damage hardwood floors and other floor coverings. Additionally, an animal may have had fleas, ticks and other pests that remain on the Property after the animal has been removed. If Buyer wants further information, Broker(s) recommend that Buyer discuss the issue with an appropriate professional during Buyer's inspection contingency period. Brokers do not have expertise in this area.
- **25. SWIMMING POOL, SECURITY AND SAFETY:** Buyer and Seller are advised that state and local Law may require the installation of barriers, anti-entrapment grates, access alarms, self-latching mechanisms and/or other measures to decrease the risk to children and other persons of existing swimming pools and hot tubs, as well as various fire safety and other measures concerning other features of the Property. Compliance requirements differ from city to city and county to county. Unless specifically agreed, the Property may not be in compliance with these requirements. Brokers do not have expertise in this area. If Buyer wants further information, Broker(s) recommend that Buyer contact local government agencies about these restrictions and other requirements.
- **26. RETROFIT, BUILDING REQUIREMENTS, AND POINT OF SALE REQUIREMENTS:** Buyer and Seller are advised that state and local Law may require (i) the installation of operable smoke detectors, (ii) bracing or strapping of water heaters, and (iii) upon sale completion of a corresponding written statement of compliance that is delivered to Buyer. Although not a point of sale or retrofit obligation, state law may require the property to have operable carbon monoxide detection devices. Additionally, some city and county governments may impose additional retrofit standards at time of sale including, but not limited to, installing low-flow toilets and showerheads, gas shut-off valves, and tempered glass. Brokers do not have expertise in this area. Broker(s) recommend that Buyer and Seller consult with the appropriate government agencies, inspectors, and other professionals to determine the retrofit standards for the Property, the extent to which the Property complies with such standards, and the costs, if any, of compliance.
- 27. WATER SHORTAGES AND CONSERVATION: Buyer and Seller are advised that the Property may be located in an area that could experience water shortages. The policies of local water districts and the city or county in which the Property is located can result in the occurrence of any or all of the following: (i) limitations on the amount of water available to the Property, (ii) restrictions on the use of water, and (iii) an increasingly graduated cost per unit of water use, including, but not limited to, penalties for excess usage. For further information, Broker recommends that Buyer contact the supplier of water to the Property regarding the supplier's current or anticipated policies on water usage and to determine the extent to which those policies may affect Buyer's intended use of the Property. If the Property is serviced by a private well, Buyer is advised that drought conditions and/or a low water table may make it necessary to arrange, through a private supplier, for delivery of water to the Property. Buyers should contact water truck companies for the costs involved. Brokers do not have expertise in this area.
- 28. NEIGHBORHOOD, AREA, PERSONAL FACTORS, HIGH SPEED RAILS, AND SMOKING RESTRICTIONS: Buyer and Seller are advised that the following may affect the Property or Buyer's intended use of it; neighborhood or area conditions, including schools, proximity and adequacy of law enforcement, crime, fire protection, other government services, availability, adequacy and cost of any speed-wired, wireless internet connections or other telecommunications or other technology services and installations, proximity to medical marijuana growing or distribution locations, cell phone towers, manufacturing, commercial, industrial, airport or agricultural activities or military ordnance locations, existing and proposed transportation, construction, and development, any other source that may affect noise, view, traffic, or odor, wild and domestic animals, susceptibility to tsunami and adequacy of tsunami warnings, other nuisances, hazards, or circumstances, protected species, wetland properties, botanical diseases, historic or other governmentally-protected sites or improvements, cemeteries, conditions and influences of significance to certain cultures and/or religions, and personal needs, requirements and preferences of Buyer. California is potentially moving toward high speed rail service between Northern and Southern California. This rail line could have an impact on the Property if it is located nearby. More information on the timing of the project and routes is available from the California High-Speed Rail Authority at http://cahighspeedrail.ca.gov. The State of California has long-standing no smoking laws in place restricting smoking in most business and some public spaces. Local jurisdictions may enact laws that are more restrictive than state law. Many California cities have enacted restrictions on smoking in parks, public sidewalks, beaches and shopping areas. Some jurisdictions have restrictions entirely banning smoking inside privately owned apartments and condominiums as well as in the common areas of such structures, or limiting smoking to certain designated areas. If Buyer wants further information, Broker(s) recommend that Buyer contact local government agencies about these restrictions.

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- **29. UNDERGROUND PIPELINES AND UTILITIES:** Throughout California underground pipelines transport natural gas, liquid fuel and other potentially hazardous materials. These pipelines may or may not provide utility services to the Property. Information about the location of some of the pipelines may be available from a company that also provides disclosures of natural and other hazards or from other sources of public maps or records. Proximity to underground pipelines, in and of itself, does not affirmatively establish the risk or safety of the property. If Buyer wants further information about these underground pipelines and utilities, Buyer is advised to consult with appropriate experts during Buyer's inspection contingency period. Brokers do not have expertise in this area.
- 30. MARIJUANA AND METHAMPHETAMINE LABS: Buyer and Seller are advised that California law permits individual patients to cultivate, possess and use marijuana for medical purposes. Furthermore, California law permits primary caregivers, lawfully organized cooperatives, and collectives to cultivate, distribute and possess marijuana for medicinal purposes. California's medical marijuana law is in direct conflict with federal law which recognizes no lawful use for marijuana and has no exemptions for medical use. Federal criminal penalties, some of which mandate prison time, remain in effect for the possession, cultivation and distribution of marijuana. Buyer and Seller are strongly advised to seek legal counsel as to the legal risks and issues surrounding owning or purchasing a property where medical or any other marijuana activity is taking place. Marijuana storage, cultivation and processing carry the risk of causing mold, fungus or moisture damage to a property, additionally, some properties where marijuana has been cultivated have had alterations to the structure or the electrical system which may not have been done to code or with permits and may affect the safety of the structure or the safe operation of the electrical system. Buyer is strongly advised to retain an environmental hygienist contractor and other appropriate professionals to inspect a property where medical or any other marijuana activity has taken place. Broker recommends that Buyer and Seller involved with a property where there is medical marijuana activity or where it may take place review the California Attorney General's Guidelines for the "Security and Non-Diversion of Marijuana Grown for Medical Use" (http://ag.ca.gov/cms attachments/press/pdfs/n1601 medicalmarijuanaguidelines.pdf) and the U.S. Department of Justice memo regarding marijuana prosecutions at http://www. justice.gov.opa/documents/medical-marijuana.pdf. Brokers do not have expertise in this area. While no state law permits the private production of methamphetamine, some properties have been the site of an illegal methamphetamine laboratory. State law imposes an obligation to notify occupants, a ban on occupying the property and clean up requirements when authorities identify a property as being contaminated by methamphetamine. Buyer is advised that a property where methamphetamine has been produced may pose a very serious health risk to occupants. Buver is strongly advised to retain an environmental hygienist contractor or other appropriate professionals to inspect the property if methamphetamine production is suspected to have taken place. Brokers do not have expertise in this area.
- 31. INSURANCE AND TITLE INSURANCE AFTER FORECLOSURE: Buver and Seller are advised that Buver may have difficulty obtaining insurance regarding the Property if there has been a prior insurance claim affecting the Property or made by Buyer but unrelated to the Property. Seller is required by C.A.R. Form RPA to disclose known insurance claims made during the past five years (C.A.R. Form SPQ or SSD). Sellers may not be aware of claims prior to their ownership. If Buyer wants further information, Broker(s) recommend that, during Buyer's inspection contingency period, Buyer conduct his or her own investigation for past claims. Buyer may need to obtain Seller's consent in order to have access to certain investigation reports. If the Property is a condominium, or is located in a planned unit development or other common interest subdivision, Buyer and Seller are advised to determine if the individual unit is covered by the Homeowner Association Insurance. Broker(s) recommend that Buyer consult Buyer's insurance agents during Buyer's inspection contingency period to determine the need, availability and possibility of securing any and all forms of other insurance or coverage or any conditions imposed by insurer as a requirement of issuing insurance. If Buyer does any repairs to the property during the escrow period or Buyer takes possession prior to Close of Escrow or Seller remains in possession after Close of Escrow, whether for a limited or extended period of time, Broker(s) recommend that Buyer and Seller each consult with their own insurance agent regarding insurance or coverage that could protect them in the transaction (including but not limited to: personal property, flood, earthquake, umbrella and renter's). Buyer and Seller are advised that traditional title insurance generally protects Buyer's title acquired through the sale of the property. While all title insurance policies, as do all insurance policies, contain some exclusions, some title insurance policies contain exclusions for any liability arising from a previous foreclosure. This can occur when a short sale has occurred but the lender mistakenly has also proceeded with a foreclosure. Buyer is strongly advised to consult with a title insurer to satisfy themselves that the policy to be provided adequately protects their title to the property against other possible claimants. Brokers do not have expertise in this area.
- **32. OWNER'S TITLE INSURANCE:** The Truth in Lending/RESPA integrated disclosure (TRID) established by the Consumer Financial Protection Bureau (CFPB) requires that lenders must tell borrowers that title insurance is "optional." While obtaining an owner's policy of title insurance may be "optional", it may be a contractual requirement as between Buyer and Seller. Furthermore, California Civil Code § 1057.6 requires that escrows provide the following notice to borrowers:

"IMPORTANT: IN A PURCHASE OR EXCHANGE OF REAL PROPERTY, IT MAY BE ADVISABLE TO OBTAIN TITLE INSURANCE IN CONNECTION WITH THE CLOSE OF ESCROW SINCE THERE MAY BE PRIOR RECORDED LIENS AND ENCUMBRANCES WHICH AFFECT YOUR INTEREST IN THE PROPERTY BEING ACQUIRED. A NEW POLICY OF TITLE INSURANCE SHOULD BE OBTAINED IN ORDER TO ENSURE YOUR INTEREST IN THE PROPERTY THAT YOU ARE ACQUIRING."

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Additionally, even the CFPB on its "ask CFPB" "What is owner's title insurance?" page advises "You may want to buy an owner's title insurance policy, which can help protect your financial interest in the home." Moreover, not obtaining an owner's policy may increase the cost of the lender's policy (required by most lenders), possibly require the separate purchase of a preliminary title report, and may have an impact on the sale of the Property in the future.

Buyers who decide to opt out of obtaining an owner's title insurance policy are acting against the advice of Brokers as well as the advice provided in the California Civil Code and by the CFPB.

- **33. CALIFORNIA FAIR PLAN:** Buyer and Seller are advised that insurance for certain hillside, oceanfront and brush properties may be available only from the California Fair Plan. This may increase the cost of insurance for such properties and coverage may be limited. Broker(s) recommend that Buyer consult with Buyer's own insurance agent during Buyer's inspection contingency period regarding the availability of coverage under the California Fair Plan and the length of time it may take for processing of a California Fair Plan application. Brokers do not have expertise in this area.
- **34.** HISTORICAL DESIGNATION, COASTAL COMMISSION, ARCHITECTURAL, LANDSCAPE, AGRICULTURAL OR OPEN SPACE AND OTHER RESTRICTIONS ON BUILDINGS OR IMPROVEMENTS: Buyer and Seller are advised that the Property may be: (i) designated as a historical landmark, (ii) protected by a historical conservancy, (iii) subject to an architectural or landscaping review process, (iv) within the jurisdiction of the California Coastal Commission or other government agency, or (v) subject to a contract preserving use of all or part of the Property for agriculture or open space. If the Property is so designated or within the jurisdiction of any such, or similar, government agency, then there may be restrictions on Buyer's ability to develop, remove or trim trees or other landscaping, remodel, make improvements to and build on or rebuild the Property. Broker(s) recommend that Buyer satisfy him/herself during Buyer's inspection contingency period if any of these issues are of concern to Buyer. Brokers do not have expertise in this area.
- **35. 1915 IMPROVEMENT BOND MELLO-ROOS COMMUNITY DISTRICT, AND OTHER ASSESSMENT DISTRICTS:** Buyer and Seller are advised that the Property may be subject to an improvement bond assessment under the Improvement Bond Act of 1915, a levy of a special tax pursuant to a Mello-Roos Community Facilities district, and/or a contractual assessment as provided in Section 5898.24 of the Streets And Highways Code or other assessment districts. Seller is generally required to make a good faith effort to obtain a disclosure notice from any local agency collecting such taxes and deliver such notice to Buyers. Brokers do not have expertise in this area.
- **36. PACE LOANS AND LIENS:** The acronym PACE stands for Property Assessed Clean Energy. PACE programs allow property owners to finance energy and water conservation improvements and pay for them through an assessment on the owner's property. PACE programs are available in most areas for both residential one to four unit properties and commercial properties. PACE programs may be referred to by different names such as HERO or SCEIP, among others. If a PACE project is approved, an assessment lien is placed on the property for the amount owed plus interest. The property owner repays the entity for the improvements as a special tax assessment on the property tax bill over a period of years. A PACE lien is similar to a property tax lien in that it has "super priority." Sellers are obligated to disclose, pursuant to the C.A.R. purchase agreement, whether any improvement is subject to a lien such as a PACE lien. Properties that are subject to PACE liens made on or after July 6, 2010 may not be eligible for financing. For more information, Buyer may request from Broker the C.A.R. Legal Q&A titled: "PACE Programs and Solar Leases". Brokers do not have expertise in this area.
- **37. SOLAR PANEL LEASES:** Solar panel or power systems may be owned or leased. Although leased systems are probably personal property, they are included in the sale by the C.A.R. purchase agreement which also obligates the Seller to make a disclosure to the Buyer and provide the Buyer with documentation concerning the lease and system. Leasing companies generally secure payments by filing a UCC-1 (a Uniform Commercial Code form giving notice of a creditor's security interest) against the property. Buyers are given a contingency right to investigate the solar related system and documentation and assume any lease. Should a solar panel or power system be on the Property, Buyers should determine if the system is leased or owned. For more information, Buyer may request from Broker the C.A.R. Legal Q&A titled: "PACE Programs and Solar Leases". Brokers do not have expertise in this area.
- 38. HOMEOWNER ASSOCIATIONS AND COVENANTS, CONDITIONS AND RESTRICTIONS ("CC&Rs"); CHARGING STATIONS; FHA/VA APPROVAL: Buyer and Seller are advised that if the Property is a condominium, or located in a planned unit development, or in a common interest subdivision, there are typically restrictions on use of the Property and rules that must be followed. Restrictions and rules are commonly found in Declarations and other governing documents. Further there is likely to be a homeowner association (HOA) that has the authority to affect the Property and its use. Whether or not there is a HOA, the Property may still be subject to CC&Rs restricting use of the Property. The HOA typically has the authority to enforce the rules of the association, assess monetary payments (both regular monthly dues and special assessments) to provide for the upkeep and maintenance of the common areas, and enforce the rules and assessment obligations. If you fail to abide by the rules or pay monies owed to the HOA, the HOA may put a lien against your Property. Additionally, if an electric vehicle charging station is installed in a common area or an exclusive use common area, each Seller whose parking space is on or near that charging station must disclose its existence and that the Buyer will have the responsibilities set forth in California Civil Code §4745.

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The law requires the Seller to provide the Buyer with the CC&Rs and other governing documents, as well as a copy of the HOA's current financial statement and operating budget, among other documents. Effective July 1, 2016, a Common Interest Development (CID) will be required to include in its annual budget report a separate statement describing the status of the CID as a Federal Housing Administration or Department of Veterans Affairs approved Development. While the purchase agreement and the law require that the annual budget be provided by Seller to Buyer, Brokers will not and cannot verify the accuracy of information provided by the CID. Buyer is advised to carefully review all HOA documents provided by Seller and the CC&Rs, if any, and satisfy him/herself regarding the use and restrictions of the Property, the amount of monthly dues and/or assessments, the adequacy of reserves, current and past insurance coverage and claims, and the possibility of any legal action that may be taken by or against the HOA. The HOA may not have insurance or may not cover personal property belonging to the owner of the unit in the condominium, common interest or planned unit development. For more information Buyer may request from Broker the C.A.R. Legal Q&A titled: "Homeowners' Associations: A Guide for REALTORS®". Brokers do not have expertise in this area.

- 39. LEGAL ACTION: Buyer and Seller are advised that if Seller or a previous owner was involved in a legal action (litigation or arbitration) affecting the Property, Buyer should obtain and review public and other available records regarding the legal action to determine: (i) whether the legal action or any resolution of it affects Buyer and the Property, (ii) if any rights against any parties involved in the legal action survive the legal action or have been terminated or waived as a result of the legal action, whether or not involving the same issue as in the legal action, and (iii) if any recommendations or requirements resulting from the legal action have been fulfilled and, if so, that Buyer is satisfied with any such action. Buyer should seek legal advice regarding these matters.
- 40. COMMUNITY ENHANCEMENT AND PRIVATE TRANSFER FEES: Buyer and Seller are advised that some areas or communities may have enhancement fees or user-type fees, or private transfer taxes and fees, over and above any stated fees. The Federal Housing Finance Agency has issued a rule that prohibits Fannie Mae and Freddie Mac from purchasing loans made on properties with private transfer fees if those fees were established on or after February 8, 2011. See title 12 Code of Federal Regulations Section 1228 for more information and exceptions. Private transfer fees: (i) may last for a fixed period of time or in perpetuity, (ii) are typically calculated as a percentage of the sales price, and (iii) may have private parties, charitable organizations or interest-based groups as their recipients who may use the funds for social issues unrelated to the property. Brokers do not have expertise in this area.
- 41. GENERAL RECALL/DEFECTIVE PRODUCT/CLASS ACTION INFORMATION: Buyer and Seller are advised that government entities and manufacturers may at any time issue recall notices and/or warnings about products that may be present in the Property, and that these notices or warnings can change. The following nonexclusive, non-exhaustive list contains examples of recalled/defective products/class action information: horizontal furnaces, Whirlpool Microwave Hood Combination; RE-ConBuilding products roof tiles; Central Sprinkler Company Fire Sprinklers; Robert Shaw Water Heater Gas Control Valves; Trex Decking; water heaters; aluminum wiring; galvanized, abs, polybutylene and copper pipe; and dry wall manufactured in China. There is no single, all-inclusive source of information on product recalls, defective products or class actions; however, the U.S. Consumer Product Safety Commission (CPSC) maintains a website that contains useful information. If Buyer wants further information regarding the items listed above, Broker(s) recommend that Buyer review the CPSC website at http://www.cpsc.gov during Buyer's inspection contingency period. Another source affiliated with the CPSC is Saferproducts.gov which allows a Buyer to search by product type or product name. Buyers may also search using the various search engines on the Internet for the specified product or products in question. Brokers recommend that Buyers satisfy themselves regarding recalled or defective products. Brokers do not have expertise in this area and Brokers will not determine if any aspect of the Property is subject to a recall or is affected by a class action lawsuit.
- 42. RENTAL PROPERTY RESTRICTIONS: Buyer and Seller are advised that some cities and counties impose restrictions that limit the rent that can be charged to a tenant, the maximum number of tenants who can occupy the property and the right of a landlord to terminate a tenancy and the costs to do so. If Buyer wants further information, Broker(s) recommend that Buyer investigate the issue with an appropriate government authority during Buyer's inspection contingency period. Brokers do not have expertise in this area.
- 43. LAND LEASE: Buyer and Seller are advised that certain developments are built on leased land. This means that: (i) Buyer does not own the land, (ii) the right to occupy the land will terminate at some point in time, (iii) the cost to lease the land may increase at some point in the future, and (iv) Buyer may not be able to obtain title insurance or may have to obtain a different type of title insurance. If Buyer wants further information, Broker recommends that Buyer discuss the issue with an attorney or other appropriate professional. Brokers do not have expertise in this area.
- 44. HOME WARRANTY: Buyer and Seller are advised that Buyer and Seller can purchase home warranty plans covering certain standard systems of the Property both before and after Close of Escrow. Seller can obtain coverage for the Property during the listing period. For an additional premium, an upgraded policy providing additional coverage for air conditioning, pool and spa and other features can be purchased. Home warranties do not cover every aspect of the Property and may not cover inspections or upgrades for repairs required by state or federal laws or pre-existing conditions. Broker(s) recommend that Buyer review the policy for details. Brokers do not have expertise in this area.

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- 45. INTERNET ADVERTISING; INTERNET BLOGS; SOCIAL MEDIA: Buyer and Seller are advised that Broker may employ a service to provide a "virtual tour" or Internet marketing of the Property, permitting potential buyers to view the Property over the Internet. Neither the service provider nor Brokers have control over who will obtain access to such services or what action such persons might take. Additionally, some Internet sites and other social media provide formats for comments or opinions of value of properties that are for sale. Information on the Property, or its owner, neighborhood, or any homeowner association having governance over the Property may be found on the internet on individual or commercial web sites, blogs, Facebook pages, or other social media. Any such information may be accurate, speculative, truthful or lies. Broker will not investigate any such sites, blogs, social media or other internet sites or the representations contained therein. Buyer is advised to make an independent search of electronic media and online sources prior to removing any investigation contingency. Buyer and Seller are advised that Brokers have no control over how long the information concerning the Property will be available on the Internet or through social media. Brokers do not have expertise in this area.
- 46. ESCROW FUNDS: Buyer and Seller are advised that California Insurance Code Section 12413.1 provides that escrow companies cannot disburse funds unless there are sufficient "good funds" to cover the disbursement. "Good funds" are defined as cash, wire transfers and cashiers' or certified checks drawn on California depositories. Escrow companies vary in their own definitions of "good funds." Broker(s) recommend that Buyer and Seller ask the escrow company regarding its treatment of "good funds." All samples and out-of-state checks are subject to waiting periods and do not constitute "good funds" until the money is physically transferred to and received by the escrow holder. Brokers do not have expertise in this area.
- 47. ONLINE OR WIRE FUNDS TRANSFERS: Instructions for the online or wire transfer of escrow deposits have been known to be intercepted by hackers who alter them so that Buyer's funds are actually wired to accounts controlled by criminals rather than the escrow company. Buyers should exercise extreme caution in making electronic funds transfers, verifying that the organization they are transferring funds to is, in fact, the escrow company and that their own bank account information is not being exposed.
- 48. NOTICE OF YOUR "SUPPLEMENTAL" PROPERTY TAX BILL: Buyer and Seller are advised that pursuant to Civil Code § 1102.6(c), Seller, or his or her agent, is required to provide the following "Notice of Your 'Supplemental' Property Tax Bill" to the Buyer:

"California property tax law requires the Assessor to revalue real property at the time the ownership of 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. Even 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 questions concerning this matter, please call your Tax Collector's Office."

Although the notice refers to loan closing as a trigger, it is actually the change of ownership which triggers this reassessment of property taxes. Therefore, the Property can be reassessed even if there is no loan involved in the purchase of the Property. The Purchase Agreement may allocate supplemental tax bills received after the Close of Escrow to the Buyer. If Buyer wants further information concerning these matters, Broker(s) recommend that Buyer discuss the issue with the County Assessor or Tax Collector or their own tax or legal advisor. Brokers do not have expertise in this area.

- 49. NON CONFIDENTIALITY OF OFFERS: Buyer is advised that Seller or Listing Agent may disclose the existence, terms, or conditions of Buyer's offer, unless all parties and their agent have signed a written confidentiality agreement (such as C.A.R. Form CND). Whether any such information is actually disclosed depends on many factors, such as current market conditions, the prevailing practice in the real estate community, the Listing Agent's marketing strategy and the instructions of the Seller.
- 50. FIRPTA/CALIFORNIA WITHHOLDING: Buyer and Seller are advised that: (i) Internal Revenue Code Section 1445, as of February 17, 2016, requires a Buyer to withhold and to remit to the Internal Revenue Service 15% of the purchase price of the property if the Seller is a non-resident alien, unless an express exemption applies. Only 10% needs to be withheld if the buyer acquires the property as Buyer's residence and the price paid does not exceed \$1,000,000. Seller may avoid withholding by providing Buyer a statement of non-foreign status. The statement must be signed by Seller under penalty of perjury and must include Seller's tax identification number. Buyer can also avoid having to withhold Federal taxes from Seller's Proceeds if the property price is \$300,000 or less, and the Buyer signs an affidavit stating Buver intends to occupy the property as a principal residence. (ii) California Revenue and Taxation Code Section 18662 requires that a Buyer withhold and remit to the California Franchise Tax Board 3 1/3% of the purchase price of the property unless the Seller signs an affidavit that the property was the Seller's (or the decedent's, if a trust or probate sale) principal residence or that the sales price is \$100,000 or less or another express exemption applies. Exemptions from withholding also apply to legal entities such as corporations, LLCs, and partnerships. Brokers cannot give tax or legal advice. Broker recommends that Buyer and Seller seek advice from a CPA, attorney or taxing authority. Brokers do not have expertise in this area.

SBSA REVISED 1/16 (PAGE 10 OF 12)

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Property Address: 5455 Ball Drive, Soquel, CA 95073 Date: 1/15/2018

- **51. LIQUIDATED DAMAGES:** Buyer and Seller are advised that a liquidated damages clause is a provision Buyer and Seller can use to agree in advance to the amount of damages that a seller will receive if a buyer breaches the Agreement. The clause usually provides that a seller will retain a buyer's initial deposit paid if a buyer breaches the agreement, and generally must be separately initialed by both parties and meet other statutory requirements to be enforceable. For any additional deposits to be covered by the liquidated damages clause, there generally must be another separately signed or initialed agreement (see C.A.R. Form RID). However, if the Property contains from 1 to 4 units, one of which a buyer intends to occupy, California Civil Code Section 1675 limits the amount of the deposit subject to liquidated damages to 3% of the purchase price. Even though both parties have agreed to a liquidated damages clause, an escrow company will usually require either a judge's or arbitrator's decision or instructions signed by both parties in order to release a buyer's deposit to a seller. Buyers and Sellers must decide on their own, or with the advice of legal counsel, whether to agree to a liquidated damages clause. Brokers do not have expertise in this area.
- **52. MEDIATION:** Buyer and Seller are advised that mediation is a process by which the parties hire a neutral person to facilitate discussion and negotiation between the parties with the goal of helping them reach a settlement of their dispute. The parties generally share in the cost of this confidential, non-binding negotiation. If no agreement is reached, either party can pursue further legal action. Under C.A.R. Form RPA-CA: (i) the parties must mediate any dispute arising out of their agreement (with a few limited exceptions, such as matters within the jurisdiction of a small claims court) before they resort to arbitration or court, and (ii) if a party proceeds to arbitration or court without having first attempted to mediate the dispute, that party risks losing the right to recover attorney fees and costs even if he or she prevails.
- **53. ARBITRATION:** Buyer and Seller are advised that arbitration is a process by which the disputing parties hire a neutral person to render a binding decision. Generally, arbitration is faster and less expensive than resolving disputes by litigating in court. The rules are usually less formal than in court, and it is a private process not a matter of public record. By agreeing to arbitration, the parties give up the right to a jury trial and to appeal the arbitrator's decision. Arbitration decisions have been upheld even when arbitrators have made a mistake as to the law or the facts. If the parties agree to arbitration, then after first attempting to settle the dispute through mediation, any dispute arising out of their agreement (with a few limited exceptions) must be submitted to binding arbitration. Buyer and Seller must weigh the benefits of a potentially quicker and less expensive arbitration against giving up the right to a jury trial and the right to appeal. Brokers cannot give legal advice regarding these matters. Buyers and Sellers must decide on their own, or with the advice of legal counsel, whether to agree to arbitration. Brokers do not have expertise in this area.
- **54. MEGAN'S LAW DATABASE DISCLOSURE:** Notice: Pursuant to Section 290.46 of the Penal Code, information about specific 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. (Neither Seller nor Brokers are required to check this website. If Buyer wants further information, Broker recommends that Buyer obtain information from this website during Buyer's inspection contingency period. Brokers do not have expertise in this area.)
- **55. DEATH ON THE PROPERTY:** California Civil Code Section 1710.2 protects a seller from: (i) failing to disclose a death on the property that occurred more than 3 years before a buyer has made an offer on a property; and (ii) failing to disclose if an occupant of a property was afflicted with HIV/AIDS, regardless of whether a death occurred or if so, when. Section 1710.2 does not protect a seller from making a misrepresentation in response to a direct inquiry. If the Buyer has any concerns about whether a death occurred on the Property or the manner, location, details or timing of a death, the buyer should direct any specific questions to the Seller in writing.
- **56. ELECTRONIC SIGNATURES:** The ability to use electronic signatures to sign legal documents is a great convenience, facilitating the ability to send and receive documents and reach agreement in a real estate transaction. However, Buyers and Sellers are cautioned to carefully read each provision. Arrows indicating "sign here" are merely there for the convenience of finding the next signature line. Only sign if you consent to the terms provided in the document. Brokers strongly advise Buyers and Sellers to read the entire document before signing even if they have reviewed an earlier draft. Do not just scroll through or skip to the next signature line. You are signing a legally binding agreement. Read it carefully. Ask your Broker, Agent or legal advisor if you have questions or do not understand a provision, and sign only if you agree to be bound by the terms.



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Intermediary Delivery Events	Status	Timestamp
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Envelope Sent	Hashed/Encrypted	2/23/2018 3:02:39 PM
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Signing Complete	Security Checked	2/23/2018 4:34:55 PM
Completed	Security Checked	2/23/2018 4:34:55 PM
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Electronic Record and Signature	Disclosure	

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From time to time, Live Love Santa Cruz (we, us or Company) may be required by law to provide to you certain written notices or disclosures. Described below are the terms and conditions for providing to you such notices and disclosures electronically through the DocuSign, Inc. (DocuSign) electronic signing system. Please read the information below carefully and thoroughly, and if you can access this information electronically to your satisfaction and agree to these terms and conditions, please confirm your agreement by clicking the 'I agree' button at the bottom of this document.

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At any time, you may request from us a paper copy of any record provided or made available electronically to you by us. You will have the ability to download and print documents we send to you through the DocuSign system during and immediately after signing session and, if you elect to create a DocuSign signer account, you may access them for a limited period of time (usually 30 days) after such documents are first sent to you. After such time, if you wish for us to send you paper copies of any such documents from our office to you, you will be charged a \$0.00 per-page fee. You may request delivery of such paper copies from us by following the procedure described below.

Withdrawing your consent

If you decide to receive notices and disclosures from us electronically, you may at any time change your mind and tell us that thereafter you want to receive required notices and disclosures only in paper format. How you must inform us of your decision to receive future notices and disclosure in paper format and withdraw your consent to receive notices and disclosures electronically is described below.

Consequences of changing your mind

If you elect to receive required notices and disclosures only in paper format, it will slow the speed at which we can complete certain steps in transactions with you and delivering services to you because we will need first to send the required notices or disclosures to you in paper format, and then wait until we receive back from you your acknowledgment of your receipt of such paper notices or disclosures. To indicate to us that you are changing your mind, you must withdraw your consent using the DocuSign 'Withdraw Consent' form on the signing page of a DocuSign envelope instead of signing it. This will indicate to us that you have withdrawn your consent to receive required notices and disclosures electronically from us and you will no longer be able to use the DocuSign system to receive required notices and consents electronically from us or to sign electronically documents from us.

All notices and disclosures will be sent to you electronically

Unless you tell us otherwise in accordance with the procedures described herein, we will provide electronically to you through the DocuSign system all required notices, disclosures, authorizations, acknowledgements, and other documents that are required to be provided or made available to you during the course of our relationship with you. To reduce the chance of you inadvertently not receiving any notice or disclosure, we prefer to provide all of the required notices and disclosures to you by the same method and to the same address that you have given us. Thus, you can receive all the disclosures and notices electronically or in paper format through the paper mail delivery system. If you do not agree with this process, please let us know as described below. Please also see the paragraph immediately above that describes the consequences of your electing not to receive delivery of the notices and disclosures

electronically from us.

How to contact Live Love Santa Cruz:

You may contact us to let us know of your changes as to how we may contact you electronically, to request paper copies of certain information from us, and to withdraw your prior consent to receive notices and disclosures electronically as follows:

To contact us by email send messages to: bri@livelovesantacruz.com

To advise Live Love Santa Cruz of your new e-mail address

To let us know of a change in your e-mail address where we should send notices and disclosures electronically to you, you must send an email message to us at bri@livelovesantacruz.com and in the body of such request you must state: your previous e-mail address, your new e-mail address. We do not require any other information from you to change your email address..

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To request delivery from us of paper copies of the notices and disclosures previously provided by us to you electronically, you must send us an e-mail to bri@livelovesantacruz.com and in the body of such request you must state your e-mail address, full name, US Postal address, and telephone number. We will bill you for any fees at that time, if any.

To withdraw your consent with Live Love Santa Cruz

To inform us that you no longer want to receive future notices and disclosures in electronic format you may:

i. decline to sign a document from within your DocuSign session, and on the subsequent page, select the check-box indicating you wish to withdraw your consent, or you may; ii. send us an e-mail to bri@livelovesantacruz.com and in the body of such request you must state your e-mail, full name, US Postal Address, and telephone number. We do not need any other information from you to withdraw consent.. The consequences of your withdrawing consent for online documents will be that transactions may take a longer time to process..

Required hardware and software

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Operating Systems:	Windows® 2000, Windows® XP, Windows
	Vista®; Mac OS® X
Browsers:	Final release versions of Internet Explorer® 6.0
	or above (Windows only); Mozilla Firefox 2.0
	or above (Windows and Mac); Safari [™] 3.0 or
	above (Mac only)
PDF Reader:	Acrobat® or similar software may be required
	to view and print PDF files
Screen Resolution:	800 x 600 minimum
Enabled Security Settings:	Allow per session cookies
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^{**} These minimum requirements are subject to change. If these requirements change, you will be asked to re-accept the disclosure. Pre-release (e.g. beta) versions of operating systems and browsers are not supported.

Acknowledging your access and consent to receive materials electronically

To confirm to us that you can access this information electronically, which will be similar to other electronic notices and disclosures that we will provide to you, please verify that you were able to read this electronic disclosure and that you also were able to print on paper or electronically save this page for your future reference and access or that you were able to e-mail this disclosure and consent to an address where you will be able to print on paper or save it for your future reference and access. Further, if you consent to receiving notices and disclosures exclusively in electronic format on the terms and conditions described above, please let us know by clicking the 'I agree' button below.

By checking the 'I agree' box, I confirm that:

- I can access and read this Electronic CONSENT TO ELECTRONIC RECEIPT OF ELECTRONIC CONSUMER DISCLOSURES document; and
- I can print on paper the disclosure or save or send the disclosure to a place where I can print it, for future reference and access; and
- Until or unless I notify Live Love Santa Cruz as described above, I consent to receive from exclusively through electronic means all notices, disclosures, authorizations, acknowledgements, and other documents that are required to be provided or made available to me by Live Love Santa Cruz during the course of my relationship with you.



WATER-CONSERVING PLUMBING FIXTURES AND CARBON MONOXIDE DETECTOR NOTICE

(C.A.R. Form WCMD, 12/16)

Property Address: 5455 Ball Drive, Soquel, CA 95073

1. WATER-CONSERVING PLUMBING FIXTURES

A. INSTALLATION:

- (1) Requirements: (a) Single-Family Properties. California law (Civil Code §1101.4) requires all single-family residences built on or before January 1, 1994 to be equipped with water-conserving plumbing fixtures after January 1, 2017. (b) Multifamily and Commercial Properties. Civil Code §1101.5 requires all multifamily residential and commercial properties built on or before January 1, 1994 to be equipped with water-conserving plumbing fixtures after January 1, 2019. Additionally, on and after January 1, 2014, a multifamily residential and commercial property built on or before January 1, 1994 that is altered or improved is required to be equipped with water-conserving plumbing fixtures as a condition of final approval if the alteration or improvement increases floor area space by more than 10 percent, or has a cost greater than \$150,000, or for any room in a building which requires a building permit.
- (2) Exceptions: These requirements do not apply to (i) registered historical sites, (ii) real property for which a licensed plumber certified that, due to the age or configuration of the property or its plumbing, installation of water-conserving plumbing fixtures is not technically feasible, or (iii) a building for which water service is permanently disconnected. Additionally, there is a one-year exemption for any building slated for demolition, and any city or county that has adopted a retrofit requirement prior to 2009 is itself exempt. (Civil Code §§1101.6, 1101.7, and 1101.9.)
- **B.** Disclosure of Water-Conserving Plumbing Fixtures: Although the installation of water-conserving plumbing fixtures is not a point of sale requirement, California Civil Code §§1101.4 (single family properties beginning 2017) and 1101.5 (multifamily and commercial properties beginning 2019) require the seller to disclose to the buyer the requirements concerning water-conserving plumbing fixtures and whether the property contains any noncompliant water fixtures.
- C. Noncompliant Water Fixtures: Noncompliant water fixtures are any of the following: (i) any toilet manufactured to use more than 1.6 gallons of water per flush, (ii) any urinal manufactured to use more than one gallon of water per flush, (iii) any showerhead manufactured to have a flow capacity of more than 2.5 gallons of water per minute, (iv) any interior faucet that emits more than 2.2 gallons of water per minute. (Civil Code §1101.3.) Buyer and Seller are each advised to consult with their own home inspector or contractor to determine if any water fixture is noncompliant.

2. CARBON MONOXIDE DETECTORS:

A. INSTALLATION:

- (1). Requirements: California law (Health and Safety Code §§13260 to 13263 and 17296 to 17296.2) requires that as of July 1, 2011, all existing single-family dwellings have carbon monoxide detectors installed and that all other types of dwelling units intended for human occupancy have carbon monoxide detectors installed on or before January 1, 2013. The January 1, 2013 requirement applies to a duplex, lodging house, dormitory, hotel, condominium, time-share and apartment, among others.
- **(2).** Exceptions: The law does not apply to a dwelling unit which does not have any of the following: a fossil fuel burning heater or appliance, a fireplace, or an attached garage. The law does not apply to dwelling units owned or leased by the State of California, the Regents of the University of California or local government agencies. Aside from these three owner types, there are **no other owner exemptions** from the installation requirement; it applies to all owners of dwellings, be they individual banks, corporations, or other entities. There is no exemption for REO properties.
- **B. DISCLOSURE OF CARBON MONOXIDE DETECTORS:** The Health and Safety Code does not require a disclosure regarding the existence of carbon monoxide detectors in a dwelling. However, a seller of residential 1-4 property who is required to complete a Real Estate Transfer Disclosure Statement, (C.A.R. Form TDS) or a Manufactured Home and Mobile home Transfer Disclosure Statement (C.A.R. Form MHTDS) must use section II A of that form to disclose whether or not the dwelling unit has a carbon monoxide detector.

Buyer/Tenant Initials () ()	Seller/Landlord Initials ((PUW) (EMW,
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WCMD 12/16 (PAGE 1 OF 2)

Property Address: 5455 Ball Drive, Soquel, CA 95073

- C. COMPLIANCE WITH INSTALLATION REQUIREMENT: State building code requires at a minimum, placement of carbon monoxide detectors in applicable properties outside of each sleeping area, and on each floor in a multi-level dwelling but <u>additional or different requirements may apply</u> depending on local building standards and manufacturer instructions. An owner who fails to install a carbon monoxide detector when required by law and continues to fail to install the detector after being given notice by a governmental agency could be liable for a fine of up to \$200 for each violation. A transfer of a property where a seller, as an owner, has not installed carbon monoxide detectors, when required to do so by law, will not be invalidated, but the seller/owner could be subject to damages of up to \$100, plus court costs and attorney fees. Buyer and Seller are each advised to consult with their own home inspector, contractor or building department to determine the exact location for installation of carbon monoxide detectors. Buyer is advised to consult with a professional of Buyer's choosing to determine whether the property has carbon monoxide detector(s) installed as required by law, and if not to discuss with their counsel the potential consequences.
- 3. LOCAL REQUIREMENTS: Some localities maintain their own retrofit or point of sale requirements which may include the requirement that water-conserving plumbing fixtures and/or a carbon monoxide detector be installed prior to a transfer of property. Therefore, it is important to check the local city or county building and safety departments regarding point of sale or retrofit requirements when transferring property.

The undersigned hereby acknowledge(s) receipt of a copy of this Water-Conserving Plumbing Fixtures and Carbon Monoxide Detector Notice.

Seller/Landlord	Perry A. Wiget	Perry A. Wiget	Date _2/23/2018
Seller/Landlord	(Signature) 649E Docusigned by: Existen M. Wiget	(Print Name) Kristen M. Wiget	Date _ 2/23/2018
oonon zanaiora	(Signature) 84E7	(Print Name)	24.0 _2/23/2018
Buyer/Tenant _	(Signatura)	(Print Name)	Date
	(Signature)	(Fillit Name)	
Buyer/Tenant _	(Signature)	(Print Name)	Date

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525 South Virgil Avenue, Los Angeles, California 90020

Reviewed by _____





WIRE FRAUD AND ELECTRONIC FUNDS TRANSFER ADVISORY

(C.A.R. Form WFA, Revised 12/17)

Property Address: 5455 Ball Drive, Soquel, CA 95073 ("Property").

WIRE FRAUD AND ELECTRONIC FUNDS TRANSFERS ADVISORY:

The ability to communicate and conduct business electronically is a convenience and reality in nearly all parts of our lives. At the same time, it has provided hackers and scammers new opportunities for their criminal activity. Many businesses have been victimized and the real estate business is no exception.

While wiring or electronically transferring funds is a welcome convenience, we all need to exercise extreme caution. Emails attempting to induce fraudulent wire transfers have been received and have appeared to be legitimate. Reports indicate that some hackers have been able to intercept emailed transfer instructions, obtain account information and, by altering some of the data, redirect the funds to a different account. It also appears that some hackers were able to provide false phone numbers for verifying the wiring or funds transfer instructions. In those cases, the victim called the number provided to confirm the instructions, and then unwittingly authorized a transfer to somewhere or someone other than the intended recipient.

ACCORDINGLY, YOU ARE ADVISED:

- 1. Obtain phone numbers and account numbers only from Escrow Officers, Property Managers, or Landlords at the beginning of the transaction.
- 2. DO NOT EVER WIRE OR ELECTRONICALLY TRANSFER FUNDS PRIOR TO CALLING TO CONFIRM THE TRANSFER INSTRUCTIONS. ONLY USE A PHONE NUMBER YOU WERE PROVIDED PREVIOUSLY. Do not use any different phone number or account number included in any emailed transfer instructions.
- 3. Orally confirm the transfer instruction is legitimate and confirm the bank routing number, account numbers and other codes before taking steps to transfer the funds.
- 4. Avoid sending personal information in emails or texts. Provide such information in person or over the telephone directly to the Escrow Officer, Property Manager, or Landlord.
- 5. Take steps to secure the system you are using with your email account. These steps include creating strong passwords, using secure WiFi, and not using free services.

If you believe you have received questionable or suspicious wire or funds transfer instructions, immediately notify your bank, and the other party, and the Escrow Office, Landlord, or Property Manager. The sources below, as well as others, can also provide information:

Federal Bureau of Investigation: https://www.fbi.gov/; the FBI's IC3 at www.ic3.gov; or 310-477-6565

National White Collar Crime Center: http://www.nw3c.org/

On Guard Online: https://www.onguardonline.gov/

NOTE: There are existing alternatives to electronic and wired fund transfers such as cashier's checks. By signing below, the undersigned acknowledge that each has read, understands and has received a copy of this Wire Fraud and Electronic Funds Transfer Advisory.

Buyer/Tenant _		Date	
Buyer/Tenant	DocuSigned by:	Date	
Seller/Landlord	flokrigigbed bliget	Perry A. Wiget Date 2	2/23/2018
Seller/Landlord	Laristieso65Adege.Wige	Kristen M. Wiget Date	2/23/2018

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WFA REVISED 12/17 (PAGE 1 OF 1)

WIRE FRAUD AND ELECTRONIC FUNDS TRANSFER ADVISORY (WFA PAGE 1 OF 1)



SELLER PROPERTY QUESTIONNAIRE

(C.A.R. Form SPQ, Revised 12/16)

	s form is not a substitute for the Real Estate Transfer Disclosure Statement (TDS). It is used by the Seller to provide additional primation when a TDS is completed. If Seller is exempt from completing a TDS, Seller should complete an Exempt Seller Disclosure
	+ D F FCD) or may USA INIS IDITI HISIGAU.
1.	Seller makes the following discussions with real property of manufactured home described as
	chilated in Soquel , County of Santa Cruz California /"Dranach."
11	The following are representations made by the control and are not the representations of the Agent's if any This
n.	disclosure etatement is not a warranty of any kind by the Seller of any agents(s) and is not a substitute for any increase.
	or warranties the principal(s) may wish to obtain. This disclosure is not intended to be part of the contract between Buyer
	and Seller. Unless otherwise specified in writing, Broker and any real estate licensee or other person working with or
	through Broker has not verified information provided by Seller. A real estate broker is qualified to advise on real estate
	transactions. If Seller or Buyer desires legal advice, they should consult an attorney.
111	Note to Seller: PURPOSE: To tell the Buyer about known material or significant items affecting the value or desirability of the
ш.	Property and help to eliminate misunderstandings about the condition of the Property.
	Answer based on actual knowledge and recollection at this time.
	 Something that you do not consider material or significant may be perceived differently by a Buyer.
	Think about what you would want to know if you were buying the Property today.
	Read the questions carefully and take your time.
	If you do not understand how to answer a question, or what to disclose or how to make a disclosure in response to a question whether on this form or a TDS you should assemble a second to the control of the contr
	question, whether on this form or a TDS, you should consult a real estate attorney in California of your choosing. A broker
	cannot answer the questions for you or advise you or the legal sufficiency of any answers or disclosures you provide.
IV.	Note to Buyer: PURPOSE: To give you more information about known material or significant items affecting the value or
	desirability of the Property and help to eliminate misunderstandings about the condition of the Property.
	Something that may be material or significant to you may not be perceived the same way by the Seller. If comething is important to you have a seller.
	If something is important to you, be sure to put your concerns and questions in writing (C.A.R. form BMI). Sellers can only displace what they extra it has a few parts of the sure to put your concerns and questions in writing (C.A.R. form BMI).
	Sellers can only disclose what they actually know. Seller may not know about all material or significant items.
	Seller's disclosures are not a substitute for your own investigations, personal judgments or common sense. Seller's disclosures are not a substitute for your own investigations, personal judgments or common sense.
٧.	SELLER AWARENESS: For each statement below, answer the question "Are you (Seller) aware of" by checking either "Yes" or "No." Explain any "Yes" appropriately appropria
	"Yes" or "No." Explain any "Yes" answers in the space provided destion. Are you (Seller) aware of" by checking either a STATITORILY OR CONTRACTIVALLY REQUIRED OR DELETE.
	A. STATUTORILY OR CONTRACTUALLY REQUIRED OR RELATED: ARE YOU (SELLER) AWARE OF
	1. Within the last 3 years, the death of an occupant of the Property upon the Property
	2. An Order from a government health official identifying the Property as being contaminated by
	methamphetamine. (If ves. attach a copy of the Order)
	4. Whether the Property is located in or adjacent to an industrial use" zone
	5. Whether the Property is affected by a nuisance created by an "industrial uso" zono
	The area reports is located within 1 fille of a former federal of state ordinance location
	(iii goriotal, air area or toe used for military trail illig purposes that they contain notentially explosive munitions)
	7. Wriether the Property is a condominium or located in a planned unit development or other
	common interest subdivision.
	The state of the property within the past 5 years
	9. Matters affecting title of the Property 10. Material facts or defects affecting the Property and otherwise disclosed B
	The first indication in defects differing the Property had believed to know
	defined by Civil Code Section 1101.3
	Explanation, or [] (if checked) see attached;
	A
	/ /
	/ ///
Bu	yer's Initials () ()
-	Seller's Initials (1111)
02	2005-2016, California Association of REALTORS®, Inc
SF	PQ REVISED 12/16 (PAGE 1 OF 4)
	SELLER PROPERTY QUESTIONNAIRE (SPQ PAGE 1 OF 4)
Tur Bri	tlestene Group, 4196 Deuglas Bivd Suite 306 Granite Bay CA 95746 Phone. 8312006338 Pax 5455 Ball Drive Chinel Produced with zipForm® by zipLogix 18070 Fifteen Mile Road, Fraser, Michigan 48026 www.zipLogix.com
	www.ziprorme by ziprogus 10070 Pilitetis with Posts, Praser, Michigan 48026 www.ziprodus.com

	. Address San Sun	to Consul OA OFFICE	<u>_</u>	12-18
	y Address. <u>5455 Ball Dri</u> REPAIRS AND ALTERA		Date	12 18
σ.	1. Any alterations modified	frications; replacements, improvements, remodeling or material	ARE YOU (SEL	LER) AWARE OF
	repairs on the Proper	IV URGUDING MOSE RESUITING from Home Margarity at a con-		
				X Yes 1NO
	material repairs to the	Property done for the nurpose of energy as		
	improvement or renev	wable ellerdy?		[X]Yes[]No
	1 Any part of the Prope	sewer clean-out, tree or pest control service)		Yes X No
	If this is a new 4070	pantida within the past 12 months.		X Yes [] No
	of lead based paint au	decision (i.e., saliding, cutting, de	emolition)	7-
	Lead-Based Paint Re	provation Rule	Agency I/A	
Exp	anation: Med Din.	show Eachines No. 1111 5	7/17	[]Yes[]No
	lew Appliance	naces completed in compliance with the Environmental Protection Association Rule	New Poot	
٠.	Defects in any of the	MS AND APPLIANCES:	ARE VOLUSEI	LER) AWARE OF
	conditioning electrics	o following, (including past defects that have been repaired): he	eating air	LLIN) AWAILE OF
	waste disposal or con	II, plumbing (including past detects that have been repaired): he stic system, sump pumps, well roof, authorities the presence of polybutylene pipes), water	r. sewer	
	crawl space attic soi	it cystem, sump pumps, well, roof, gutters, chimney, fireplace, fo	oundation,	
	walls, ceilings floors	or appliances.	indows,	
:	. The leasing of any of the	or appliances the following on or serving the Property: solar system, water softened alarm system or propaga tank (a).		[] Yes [X] No
	water purifier system	alarm system or propose tests (a)	r system,	
,	. An alternative septic	System on or senting the Dranet		[]Yes [X] No
Exp	anation:	or serving the Property		[] Yes [X] No
1	NEACTED DELIES INC			
	Financial ratiof or and	SURANCE OR CIVIL SETTLEMENT:	ARE YOU (SEL	LER) AWARE OF
	local or private again	stance, insurance or settlement, sought or received, from any fede		
	or private agence	y, "ISUIDI DI DIIVALE DATTY DV DASI OF Present Owners of the Draned	the along the	
	and an aneged	Uditidue to the Figure and and anthorial for the		
	repairs	ect, whether or not any money received was actually used to	make	
Exp	anation:	to any money received was actually used to		[] Yes [X] No
= 1	VATER-RELATED AND	MOI D ICCUEO		
			ARE YOU (SEL	LER) AWARE OF
	in any appliance nine	any part of any physical structure on the Property; leaks e, slab or roof; standing water, drainage, flooding, underground v		
	moisture water-relate	ed soil settling or slippage, on or affecting the Property	water,	
	2. Any problem with or i	ed soil settling or slippage, on or affecting the Property		[] Yes [X] No
	affecting the Property	d channels underground enrings high water table. fleede as it de	1 01	t 11/2 11/2
	or affecting the Prope	erty or neighborhood		I IVer I VI Ne
Exp	lanation:			I Les [X] MO
F.	PETS, ANIMALS AND F	PESTS:	ARE YOU (SEL	LER) AWARE OF
-	1. Pets on or in the Pro	perty	100 (322	Yee I VIN
	2. Problems with livesto	perty perty cock, wildlife, insects or pests on or in the Property perty pe		Yes CINC
	v. rast of blesell oddi:	s. Unite reces discoloration status suois di dantage il tre Froi	Jentty	(a)
	due to any of the abo	ove	******	[]Yes[VINA
	the above	them of elacination of pests of outris, of repair of definings due to		[] Yes [] No
E	ii so, when and by w	110(11		7
EX	narration:			A
_				//
_				11
				//_
			/	111
			/A	
	Initials /		Seller's Initials	
ers	Initials () (Commer o minimos	(WC)
QF	EVISED 12/16 (PAGE 2	OF 4)		V
		SELLER PROPERTY QUESTIONNAIRE (SPQ PAGE 2 O	F 4) //	
	Produ	ged with approved by apLogix 18070 Fifteen Mile Road, Freser, Michigan 48026 WWW.apLog	ex.com	5456 Ball Drive

Property Address: 5455 Ball Drive, Soquel, CA 95073	Date:	5-55-16
G. BOUNDARIES, ACCESS AND PROPERTY USE BY OTHERS:		
1 Surveys easements encreachments or houndary disputes	ARE TOU (SE	1 1 You 1 Y 1 N
Use or access to the Property, or any part of it, by anyone other than without permission, for any purpose including but not limited to	VOIL with or	. [] ies[Vi.
		1 V221 V1
		[] Yes [] I
Explanation:		. [] Yes [X] I
H. LANDSCAPING, POOL AND SPA:		
1. Diseases or infestations affecting trees, plants as used to	ARE YOU (SE	ELLER) AWARE
 Diseases or infestations affecting trees, plants or vegetation on or near the Property. Operational sprinklers on the Property. If yes, are they [v] automatic or [] manually operated. 	erty	1 1Yes 1 X11
(a) If yes, are they [V] automatic or [] manually operated.	************	[NIYes] IN
(D) If yes, are there any areas with trops along		
(b) If yes, are there any areas with trees, plants or vegetation not covered by the 3. A pool heater on the Property	sprinkler system	[VYes[]]
If yes, is it operational?		[] Yes [] N
4. A spa heater on the Property		, 4
II Ves is it operational?		[]Yes[X11
waterfall, pond, stream, drainage or other problems with the sprinkle	rs, pool, spa,	
equipment including any ancill	arv	
equipment, including pumps, filters, heaters and cleaning systems, even if repaired Explanation:	ed	. [] Yes [> 1
Explanation: This new landscape is on Day systems.	(us	. 0.
CONDOMINIUMS COMMON INTERES		
. CONDOMINIUMS, COMMON INTEREST DEVELOPMENTS AND OTHER SUBDIVI	SIONS:	
1. Any pending or proposed dues increases, special assessments, rules changes, in	ARE YOU (SE	LLER) AWARE (
availability issues, or litigation by or against or fines or violations issued by a Hom	surance	
Association of Attimetimal Committee affecting the Dresset.		500
Association of restrictions or Architectural Committee affecting the Property. Any declaration of restrictions or Architectural Committee that has authority over in made on or to the Property.		[] Yes [X'] N
made on or to the Property	mprovements	1
made on or to the Property 3. Any improvements made on or to the Property without the required approval of an	A	[] Yes [X] N
Committee or inconsistent with any declaration of rectriction and additional of an	Architectural	
Committee requirement		
Explanation:		[]Yes[X]N
TITLE, OWNERSHIP LIENS, AND LEGAL CLAIMS:		
1 Any other person or online on title other than Calleria's signing this farm	ARE YOU (SE	LLER) AWARE
Any other person or entity on title other than Seller(s) signing this form		[] Yes [X] N
2. Leases, opuons of claims affecting of relating to title of use of the Property		[] Yes [X] N
• rast, present, pending or threatened lawsuits, settlements, mediations, arbitration	is, tax liens,	- , , .
mechanics' liens, notice of default, bankruptcy or other court filings, or governmen	it nearings	
affecting or relating to the Property, Homeowner Association or neighborhood		[] Yes [🔀] N
organizations, interest based groups or any other person or entity		[] Yes [] N
5. Any PACE lien (such as HERO or SCEIP) or other lien on your Property securing	a loan to pay	, V1,
for an alteration, modification, replacement, improvement, remodel or material rep	pair of the Property? .	[]Yes[VIN
repair of the Property being paid by an assessment on the Property tax bill?		[] Yes [\ \ \ \
Explanation:		X
		1
K. NEIGHBORHOOD:	ARE YOU (SE	LER) AWARE C
1. Neighborhood noise, nuisance or other problems from sources such as, but not li	mited to the	/
following: neighbors, traffic, parking congestion, airplanes, trains, light rail, sub	way, trucks(M6	he)
a manual ingris and adding the mental ingris and	//	
	11/11	/ (4)
r's Initials () ()	Seller's Initials	
	///	
REVISED 12/16 (PAGE 3 OF 4)	//	
SELLER PROPERTY QUESTIONNAIRE (SPQ PAGE 3		1
Commissed with vinEcomb by viril only, 18070 Filteen Mile Road, Fraser, Michigan 48026 WWW.zie	SLOGIK.com //	SARR BAR PALL SOL

Property	ty Address: 5455 Ball Drive, Soquel, CA 95073	Date	2	-22-
	freeways, buses, schools, parks, refuse storage or landfill processing, agbusiness, odor, recreational facilities, restaurants, entertainment comparades, sporting events, fairs, neighborhood parties, litter, construct equipment, air compressors, generators, pool equipment or appliances, upper lines, cell phone towers, high voltage transmission.	Pricultural operations, Inplexes or facilities, Ition, air conditioning		
Expla	pipelines, cell phone towers, high voltage transmission lines, or wildlife anation:		[] Yes [X] N
L. G	OVERNMENTAL:			
1.	Ongoing or contemplated eminent domain, condemnation, annexation or general plan that applies to or could affect the Property	ARE YOU (SELLE	R) AWARE O
2.	Existence or pendency of any root control		[] Yes [X] N
3.	Existing or contemplated building a spring to or could affect the Proper	rty	[] Yes [X] N
	restrictions or retrofit requirements that apply to or could affect the Proper Existing or contemplated building or use moratoria that apply to or could a Current or proposed bonds, assessments, or fees that do not appear on that apply to or could affect the Property	ile i lobelly lax bill	j] Yes [X] N
5.	Proposed construction, reconfiguration, or closure of nearby Government such as schools, parks, readways and to fi	facilities or amenities	[] Yes [X] N
6.	Existing or proposed Government requirements affecting the Property (i) to or other vegetation be cleared; (ii) that restrict tree (or other landscaping) cutting or (iii) that flammable materials be removed.	that tall grass, brush planting, removal or		
7.	Any protected habitat for plants, trees, animals or insects that apply to or or	could affect the]] Yes [X] N
8.	Whether the Property is historically designated or falls within an existing of Historic District	or proposed	[] Yes [X] N
	Historic District	ater supplier, agency or	[] Yes [X] N
xplan	nation:	9S	[] Yes [X] No
	studies, surveys or other documents, pertaining to (i) the condition or repa any improvement on this Property in the past, now or proposed;	or (ii) easements		
	encroachments or boundary disputes affecting the Property whether oral of whether or not provided to the Seller. (If yes, provide any such documents in your possession to Ruyer.)	or in writing and		
	(If yes, provide any such documents in your possession to Buyer.)		[] Yes [X] N
2.	Any occupant of the Property smoking on or in the Property Any past or present known material facts or other significant items affecting	on the value or	[] Yes [X] N
	desirability of the Property not otherwise disclosed to Buyer	- 	[] Yes [X] N
piaii	Mari .			
1 ()	F CHECKED ADDITIONAL COMMENTS: The attached addendum co	ontains an explanation or	additio	nal comma
onse t	to specific questions answered "yes" above. Refer to line and question num	nber in explanation.	additio	iiai comment
er rep	presents that Seller has provided the answers and, if any, explanation	s and comments on this	form a	nd any attac
enda a	and that/such information is true and correct to the best of Seller's ki	nowledge as of the date :	sianed	by Seller Se
nowie	dges (i) Seller's øbligation to disclose information requested by	this form is independent	ent fro	m any dut
to Se	e that a real estate licensee may have in this transaction; and (ii) not eller relieves Seller from his/her own duty of disclosure.	uning that any such real (state	icensee doe
£ /				
1	TXIN / ///M	Borns A Wisset Data	1-27	-18
er \ I.	1/1XVIXI / 1/1/14 Z	Perry A. Wiget Date	1-22	2-18
signin	ng below, Buyer acknowledges that Buyer has read, understands an	Kristen M. Wiget Date 2	-2	2-18
signin	1/1XVIXI / 1/1/14 Z	Kristen M. Wiget Date 2	-2	2-18
signin stioni er	ng below, Buyer acknowledges that Buyer has read, understands an	Kristen M. Wiget Date	-2	2-18
signin stion er er	ng below, Buyer acknowledges that Buyer has read, understands an naire form.	Kristen M. Wiget Date	of this	2-18 Seller Prop
signin estion er er 05-2016 RESENT	ng below, Buyer acknowledges that Buyer has read, understands at naire form. 3. California Association of REALTORS®, Inc. THIS FORM HAS BEEN APPROVED BY THE ATTION IS MADE AS TO THE LEGAL VALIDITY OR ACCURACY OF ANY PROVISION IN ANY	Mristen M. Wiget Date Date Date Date HE CALIFORNIA ASSOCIATION A RIVER SPECIFIC TRANSACTION A RIVER SPECIFICATION A	of this	Z-18 Seller Propo
er er er 005-2016 RESENT SON QUA	ng below, Buyer acknowledges that Buyer has read, understands ar naire form. 6. California Association of REALTORS®, Inc. THIS FORM HAS BEEN APPROVED BY THE TATION IS MADE AS TO THE LEGAL VALIDITY OR ACCURACY OF ANY PROVISION IN ANY IALIFIED TO ADVISE ON REAL ESTATE TRANSACTIONS. IF YOU DESIRE LEGAL OR TAX ADVICT DIshed and Distributed by:	Mristen M. Wiget Date Date Date Date HE CALIFORNIA ASSOCIATION A RIVER SPECIFIC TRANSACTION A RIVER SPECIFICATION A	of this	Z-18 Seller Propo
er er er 205-2016 RESENT SON QUA	ng below, Buyer acknowledges that Buyer has read, understands at naire form. 3. California Association of REALTORS®, Inc. THIS FORM HAS BEEN APPROVED BY THE TATION IS MADE AS TO THE LEGAL VALIDITY OR ACCURACY OF ANY PROVISION IN ANY PALIFIED TO ADVISE ON REAL ESTATE TRANSACTIONS. IF YOU DESIRE LEGAL OR TAX ADVICE.	Mristen M. Wiget Date Date Date Date HE CALIFORNIA ASSOCIATION A RIVER SPECIFIC TRANSACTION A RIVER SPECIFICATION A	of this	Z-18 Seller Propo

525 South Virgil Avenue, Los Angeles, California 90020 SPQ REVISED 12/16 (PAGE 4 OF 4)



Turtlestone Group, 4196 Douglas Blvd Suite 300 Granite Bay CA 95746

Bri Chmel

REAL ESTATE TRANSFER DISCLOSURE STATEMENT (CALIFORNIA CIVIL CODE §1102, ET SEQ.) (C.A.R. Form TDS, Revised 4/14)

THIS STATEMENT IS A DISCLOS COMPLIANCE WITH SECTION 1102 WARRANTY OF ANY KIND BY THE TRANSACTION, AND IS NOT A SUBSWISH TO OBTAIN. I. COOI This Real Estate Transfer Disclosure Statisclosures, depending upon the details of liens on residential property). Substituted Disclosures: The following disclosures that may include size at the control of the	URE OF THE CONDITION OF OF THE CIVIL CODE AS OF (da SELLER(S) OR ANY AGENT(S) RISTITUTE FOR ANY INSPECTIONS RDINATION WITH OTHER DISCLOpatement is made pursuant to Section the particular real estate transaction (for isclosures and other disclosures require annoyances, earthquake, fire, flood, onsfer, and are intended to satisfy the distance of the particular i	THE ABOVE DESCRIBED PROPERTY IN (ate) 2 8 . IT IS NOT A EPRESENTING ANY PRINCIPAL(S) IN THIS OR WARRANTIES THE PRINCIPAL(S) MAY SURE FORMS 1102 of the Civil Code. Other statutes require rexample: special study zone and purchase-money and by law, including the Natural Hazard Disclosure or special assessment information, have or will be sclosure obligations on this form, where the subject of the control of th
person or entity in connection with any a THE FOLLOWING ARE REPRESENT. OF THE AGENT(S), IF ANY. THIS INFORMACT BETWEEN THE BUYER A Seller is in some occurring the Home.	enting any principal(s) in this transact actual or anticipated sale of the propi ATIONS MADE BY THE SELLER(S ORMATION IS A DISCLOSURE AN AND SELLER.	en though this is not a warranty, prospective erms to purchase the subject property. Seller
A. The subject property has the items checke		
Range Voven Microwave Dishwasher Trash Compactor Carbage Disposal Washer/Dryer Hookups Rain Gutters Carbon Monoxide Device(s) Smoke Detector(s) Fire Alarm TV Antenna Satellite Dish Intercom Central Heating Central Air Conditioning Evaporator Cooler(s) Exhaust Fan(s) in Gas Starter Other:	Roof(s): Type: Composition	Quick Release Mechanism on Bedroom Windows Water-Conserving Plumbing Fixtures Fireplace(s) in
Are there, to the best of your (Seller's) knowledge additional sheets if necessary):	, any of the above that are not in operating	condition? Yes No. If yes, then describe. (Attach
auditorial streets if frecessary):		//
(*see note on page 2) Buyer's Initials () ()		Seller's Initials (
©1991 - 2014, California Association of REALTORS®, Inc TDS REVISED 4/14 (PAGE 1 OF 3)		Reviewed by Date SQLAR HOLDING
REAL ESTATE TR	ANSFER DISCLOSURE STATEME	INI (IDS PAGE 1 OF 3)

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Phone: 8312006338

5455 Ball Drive

Property Address: 5455 Ball Drive, Soquel, CA 95073	Date 2-22-18
Are you (Seller) aware of any significant defects/malfunctions is space(s) below.	in any of the following? Yes No. If yes, check appropriate
Clateries Welle Coilings Clare Clare	llation ☐ Roof(s) ☐ Windows ☐ Doors ☐ Foundation ☐ Slab(s) ms ☐ Plumbing/Sewers/Septics ☐ Other Structural Components
(Describe:	Other Structural Components
If any of the above is checked, explain. (Attach additional sheets if	Decessory I.
	iccessary.).
 10. Any zoning violations, nonconforming uses, violations of "sett 11. Neighborhood noise problems or other nuisances 12. CC&R's or other deed restrictions or obligations 13. Homeowners' Association which has any authority over the si 14. Any "common area" (facilities such as pools, tennis courts, was 	h Section 13260) of Part 2 of Division 12 of, automatic reversing of Part 3 of Division 13 of, or the pool safety standards of Article Division 104 of, the Health and Safety Code. Window security bars 1995 edition of the California Building Standards Code Section or before January 1, 1994, to be equipped with water-conserving anuary 1, 2014, a single-family residence built on or before January water-conserving plumbing fixtures as a condition of final approval ivil Code. International Hazard such as, but not limited to, asbestos, mical storage tanks, and contaminated soil or water downers, such as walls, fences, and driveways, eact on the subject property water or repairs made without necessary permits. Iffect your interest in the subject property was properly or repairs mot in compliance with building codes was properly claims for damages by the sting this real property, claims for breach of an enhanced or affecting this real property, including any lawsuits aging a defect or deficiency in this real property or ways, or other areas co-owned in undivided interest property or ways, or other areas co-owned in undivided interest property or ways, or other areas co-owned in undivided interest property or ways, or other areas co-owned in undivided interest property or ways, or other areas co-owned in undivided interest property or ways, or other areas co-owned in undivided interest property or ways, or other areas co-owned in undivided interest property or ways, or other areas co-owned in undivided interest property or ways, or other areas co-owned in undivided interest property or ways, or other areas co-owned in undivided interest property.
Marshal's regulations and applicable local standards.	approved, listed, and installed in accordance with the State Fire crow, will be in compliance with Section 19211 of the Health and
	11/11/
Buyer's Initials () ()	Seller's Initials (
TDS REVISED 4/14 (PAGE 2 OF 3)	Reviewed by Date

MASS BAN Drive Souther, CA 95073	
property Address 5455 Ball Drive Section, CA 95073 Seller certified that the information before in is true and correct to the best of the Seller's kn	Owledge 2 - 27 - 18
Seller All Many	Date 2 - 22 - 18
Seller	
Kristen M. Wiget	Date 2-22-18
III. AGENT'S INSPECTION DISCLOS	SURE
(To be completed only if the Seller is represented by an age	nt in this transaction.)
THE UNDERSIGNED, BASED ON THE ABOVE INQUIRY OF THE SEL PROPERTY AND BASED ON A REASONABLY COMPETENT AND ACCESSIBLE AREAS OF THE PROPERTY IN CONJUNCTION WITH THAT See attached Agent Visual Inspection Displacement (Marie Conduction With That	LER(S) AS TO THE CONDITION OF THE
See attached Agent Visual Inspection Displayers I'm CONJUNCTION WITH THA	TINOUIRY STATES THE TOTAL OF THE
Agent notes no items for disclosure. Agent notes the fells of the fel	THE FOLLOWING:
Agent notes the following items:	
	A 1
Agent (Broker Representing Seller) The Turtlestone Group (Please Brink) By	million D and
	Date 2-2218 Diate Licensee or Broker Signature)
IV ACENTIO	Bri Chmet
IV. AGENT'S INSPECTION DISCLOSE THE UNDERSIGNED, BASED ON A REASONABLY COMPETENT AND ACCESSIBLE ADDRESS.	SURE
THE UNDERSIGNED, BASED ON A REASONABLY COMPETENT AND ACCESSIBLE AREAS OF THE PROPERTY, STATES THE FOLLOWING:	ther than the agent above.)
	DILIGENT VISUAL INSPECTION OF THE
Agent notes no items for disclosure (AVID Form)	
Agent notes the following items:	
Agent (Broker Obtaining the Offer)	
(DI By	ciate Licensee or Broker Signature)
V. BUYER(S) AND SELLED(S) MAY MICH TO COTOM	Distributed of Bloker Signature)
V. BUYER(S) AND SELLER(S) MAY WISH TO OBTAIN PROFESSIONAL PROPERTY AND TO PROVIDE FOR APPROPRIATE PROVISIONS SELLER(S) WITH RESPECT TO ANY ADVICE/INSPECTIONS/DEFECT.	L ADVICE AND/OR INSPECTIONS OF THE
SELLER'S) WITH RESPECT TO ANY ADVICE/INSPECTIONS/DEFECT	IN A CONTRACT BETWEEN BUYER AND
I/WE ACKNOWLEDGE RECEIPT OF A COPY OF THIS STATEMENT	.
Seller Date Z/W/S Buyer	Date
Selle Date 7218 Buyer	
Kristeln M. Wiget	Date
Agent (Broker Representing Seller) The Turtlestone Group By	11 (My) = 7-77-10
	e Licensee or Broker Signature)
	Bri Chmel
Agent (Broker Obtaining the Offer)By	Date
	e Licensee or Broker Signature)
SECTION 1102.3 OF THE CIVIL CODE PROVIDES A BUYER WITH	THE RIGHT TO RESCIND A PURCHASE
CONTRACT FOR AT LEAST THREE DAYS AFTER THE DELIVERY OF	THIS DISCLOSURE IF DELIVERY OCCURS
AFTER THE SIGNING OF AN OFFER TO PURCHASE. IF YOU WISH T ACT WITHIN THE PRESCRIBED PERIOD.	O RESCIND THE CONTRACT, YOU MUST
A REAL ESTATE BROKER IS QUALIFIED TO ADVISE ON REAL ES	STATE, IF YOU DESIRE LEGAL ADVICE
CONSULT YOUR ATTORNEY.	TOO DEGINE ELOAL ADVICE,
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Reviewed by

Date