Homeowners Insurance Valuation Course

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When it comes time to purchase a homeowners' insurance policy, those involved in the insuring process should have an idea of the home's replacement cost. Part of calculating the insurance premium is knowing the replacement cost of a home. The California Department of Insurance has implemented new regulations in "Standards and Training for Estimating Replacement Value on Homeowners' Insurance." The regulations establish new levels of care for agents and insurers as follows;

- Resident fire and casualty broker-agents and personal lines broker-agents are to satisfactorily complete a three-hour course on homeowners' insurance valuation prior to estimating the replacement value of structures in connection with, or explaining the various levels of coverage under, a homeowners' insurance policy;
- Insurers, agents and brokers that provide replacement cost estimates to applicants and insureds must document who created the estimate and the sources or methods used to create the replacement cost estimate.
- All replacement cost estimates communicated to applicants or insureds must be complete, based upon specifically enumerated standards set forth in the regulations.

In order to successfully meet the requirements of Section 1749.85 (a) of the California Insurance Code and Section 2188.65 of the California Code of Regulations, a Property and Casualty Broker-Agent, and Personal Lines Broker-Agent must have significant knowledge in the proper methods of estimating the replacement value of structures. Specifically, the Property and Casualty Broker-Agent or the Personal Lines Broker-Agent that transacts, negotiates or sells homeowners' insurance would be required to complete a minimum of three hours of homeowners' insurance valuation training. With this training these agents will be able to explain various levels of coverage under a homeowners' insurance policy, have an understanding of the elements that comprise the value of a dwelling and convey this to the insured and make recommendations of the appropriate levels of coverage.

The Department and the California Legislature received a significant number of complaints by homeowners who lost their residences in past wildfires. Survivors complained about problems including their experience that after the fire they learned that the replacement value estimates made in setting coverage limits for their homes was too low, causing underinsurance issues to arise during efforts to rebuild or replace their residences.

The significance of the replacement value being accurate is particularly important given that other than a limited number of homeowners who qualify for guaranteed replacement coverage offered by only a small number of insurers, the vast majority of homeowners have one of three kinds of insurance coverage on their home;

- **Limited Replacement Cost Coverage With an Additional Percentage-** This pays replacement costs up to a specified amount above the policy limit.
- **Limited Replacement Cost Coverage With No Additional Percentage-** This pays replacement costs up to policy limit only.
- **Actual Cash Value Coverage-** This pays the fair market value of the dwelling at the time of the loss, or the cost to repair, rebuild, or replace the damaged or destroyed dwelling with like kind and quality construction up to the policy limit.

It is important to have an accurately estimated, periodically updated replacement value. The seeds of underinsurance are sown through the failure to adequately consider the components of replacement value.

I. Differences Between Homeowners' and Dwelling Property Policies

Dwelling Policy Up to Four Units

A **dwelling policy** is designed for a residence that is owned but not lived in by the owner. A Dwelling policy covers residential property of up to four units, whether occupied by the insured or not. An insured purchases individual coverages on an *a la carte* basis. That is, fire perils separately from extended coverage perils, and coverage for buildings separately from outbuildings and contents. The dwelling policy doesn't automatically include coverage for belongings/personal property; that must be purchased separately. The home itself will also have less coverage on a dwelling fire policy. A dwelling policy is suited more for rental properties, seasonal properties and vacant properties.

Homeowner's Policy- Owner Occupied

A **homeowner's policy** is for an owner-occupied residence. This type of policy is designed for a residence lived in by the owner. Homeowners' policies are less expensive and provide broader coverage than dwelling policies. These policies are designed to cover contents, liability, and medical claims. However, even if it is an individual's primary residence, older and poorly-maintained homes may not qualify for a homeowner's policy. Buyers of classic "fixer-uppers" who are in the market for a homeowner's policy would be wise to upgrade outdated electrical and plumbing systems before launching other extensive repairs to the home. The condition of these systems could be one of the reasons why a company would refuse to issue anything other than dwelling coverage.

Thorough Property Coverage

The homeowners' policy contains two sections. Section I provides property coverages (A, B, C and D) while Section II provides liability coverages (E and F):

Section I
- Coverage A - Dwelling
- Coverage B - Other Structures
- Coverage C - Personal Property
- Coverage D - Loss of Use

Section II
- Coverage E - Personal Liability
- Coverage F - Medical Payments to Others

This course deals with property coverages and insurance valuation so a brief review of Section I coverages follows. There are differences in the property coverage that may necessitate differences in coverage levels. Various coverage options are available.

Coverage A - Dwelling
Coverage A provides major property coverage that protects the house and attached structures if damaged by a covered peril.
Coverage B - Other Structures
This coverage provides protections to other structures on the residence premises that are not attached to the dwelling. Items covered include detached garages, tool sheds, etc. Coverage B is normally limited to 10% of the coverage A limit. However, the homeowner may purchase more coverage for an additional premium.
Coverage C - Personal Property
This coverage provides protection for the contents of a home and other personal belongings owned by the insured and other family members who reside in the home. Coverage C is limited to a percentage (perhaps 50%) of coverage A or is subject to an established amount agreed upon by the insured and the insurance company. Coverage is limited on certain types of property that are especially susceptible to loss, such as:

- Jewelry
- Furs
- Fine Arts
- Silverware
- Antiques
- Collectibles
- Firearms
- Money

Additional amounts of insurance may be purchased. It may be prudent to schedule these items separately. An insurance professional can provide specifics.
Coverage D - Loss of Use
This coverage will help with additional living expenses if the home is damaged by a peril insured against to the extent that the insured cannot live in the home. These expenses include, but are not limited to, housing, meals and warehouse storage. Coverage D is normally limited to 20 % of Coverage A.

II. Basic Concepts of Property Valuations

Loss Settlement Provisions

Simply put, this is the application of policy provisions to the casualty. A loss settlement provision refers to the method used to determine how much is paid for a covered loss. On a replacement cost value or actual cash value basis is how this provision usually requires the payment of claims be handled.

How It Applies

An insurance policy contemplates two types of claim settlements: (1) the actual cash value and (2) replacement cost. The policy may expressly permit, at the option of the insured, a claim for ACV with no mandate that the insured actually repair the property.

Here is example verbiage for losses on the home or other structures on the property. For Coverage A, two loss settlement provisions may be offered;

Example A

Covered loss to Buildings under Coverage A and B will be settled at replacement cost without deduction for depreciation, subject to the following methods:

1.) Settlement under replacement cost will not be more than the smallest of the following:

a. the replacement cost of that part of the building damaged for equivalent construction and use on the same premises.

b. the amount actually and necessarily spent to repair or replace the building intended for the same occupancy and use.

2.) When the cost to repair or replace is more than $1,000 or more than 5% of the limit of insurance in this policy on the damaged or destroyed building, whichever is less, we will pay no more than the actual cash value of the damage until repair or replacement is completed.

3.) At your option, you may make a claim under policy on an actual cash value basis for loss or damage to buildings. Within 180 days after loss you may make a claim for any additional amount on a replacement cost basis if the property has been repaired or replaced.

Example B

Dwelling

1. Replacement Cost Loss Settlement- Similar Construction: Pays the cost to repair or replace with similar construction materials. Until the actual repair or replacement is completed, there may be a deduction for depreciation.
2. Replacement Cost Loss Settlement- Common Construction: Pays the cost to repair or replace damaged property, including obsolete, antique, and custom-built property, with construction techniques and materials commonly used by the building trades in standard new construction. Until the actual repair or replacement is completed, there may be a deduction for depreciation.

This provision specifies that an insurer’s limit of liability for losses covered under terms of the policy (or endorsements) is the maximum amount the insurer will pay for the sum of all losses.

The Effect of Underinsurance on Settlement

Underinsurance is a condition in which not enough insurance is carried to cover the insurable value. It is related to the coinsurance clause, under which the insured shares in losses to the extent that he or she is underinsured at the time of loss. Coinsurance can be described as a property insurance provision that imposes a penalty on an insured's loss recovery if the limit of insurance purchased is not at least equal to a specified percentage of the value of the insured property. The purpose of coinsurance is to avoid inequity and to encourage insureds to carry a reasonable amount of insurance in relation to the replacement value (or actual cash value, depending on which basis the policy is written) of their property. Consequently, coinsurance provisions typically are incorporated into property insurance policies.

Example

Coinsurance. If a coinsurance percentage is shown in the Declarations, the following condition applies:

We will not pay the full amount of any loss if the value of covered property at the time of loss times the coinsurance percentage shown for it in the Declarations is greater than the limit of liability for the property. Instead, we will determine the most we will pay using the following steps:

a. Multiply the value of covered property at the time of loss by the coinsurance percentage;

b. Divide the limit of liability of the property by the figure determined in step a;

c. Multiply the total amount of loss, before the application of any deductible, by the figure determined in step b.; and

d. Subtract the deductible from the figure determined in step c.

We will pay the amount determined in step d. or the limit of liability, whichever is less. For the remainder, you will either have to rely on other insurance or absorb the loss yourself.

In applying this coinsurance clause we will disregard the value of foundations of buildings which are below the surface of the lowest basement floor or, where there is no basement, which are below the surface of the ground. We will not consider the cost of removal of debris in the determination of actual cash value when applying the coinsurance clause.

If the insured purchases insurance at least equal to the coinsurance percentage (80 percent, for example), the insurer pays the full value of any loss (either replacement cost or actual cash value, depending on what the insured has purchased), less the deductible, up to the limit of insurance. If the insured does not meet the coinsurance requirement, he or she will be penalized in the event of a loss and will become a coinsurer.

To further illustrate

Underinsurance:

When:
The value of the property is $250,000
The coinsurance percentage for it is 80%
The limit of liability for it is $100,000
The deductible is $250
The amount of loss is $40,000
Step (1) $250,000 x 80% = $200,000 (the minimum amount of insurance to meet your coinsurance requirements)
Step (2) $100,000 ÷ $200,000 = .50
Step (3) $ 40,000 x .50 = $20,000
Step (4) $ 20,000 - $250 = $19,750
Insurer pays no more than $19,750. The remaining $20,250 is not covered.

Adequate insurance

When:
The value of the property is $250,000
The coinsurance percentage for it is 80%
The limit of liability for it is $200,000
The deductible is $250
The amount of loss is $40,000
Step (1) $250,000 x 80% = $200,000 (the minimum amount of insurance to meet your coinsurance requirements)
Step (2) $200,000 ÷ $200,000 = 1.00
Step (3) $ 40,000 x 1.00 = $40,000
Step (4) $ 40,000 - $250 = $39,750
Insurer pays $39,750 of the loss. No penalty applies.

The formula used to determine the amount payable when a coinsurance provision applies is;

$$\frac{\text{Insurance Carried}}{\text{Insurance Required}} \times \text{Loss} = \text{Amount Recoverable}$$

(Insurance carried, divided by insurance required, multiplied by the loss, equals the amount recoverable.)

Actual Cash Value

Actual cash value (ACV) is described in the California Insurance Code (CIC) in the following way (CIC 2051);
Under an open policy with an actual cash value settlement option, payment is as follows;

- In case of total loss, the policy limit or the fair market value, whichever is less.
- In case of a partial loss, the amount it would cost the insured to repair, rebuild, or replace the loss less a fair and reasonable deduction for physical depreciation based upon its condition at the time of loss
  -Or-
  the policy limit, whichever is less.
- In case of a partial loss, deduction for physical depreciation shall apply only to components of a structure that are normally subject to repair and replacement during the useful life of that structure.

An open policy is one in which the value of the thing insured is not agreed upon, but is left to be ascertained in case of loss.

So, it is an amount equivalent to the replacement cost of lost or damaged property at the time of the loss, less depreciation. Actual Case Value Coverage pays the fair market value of the residence up to an identified policy limit. Fair market value is determined by way of an appraisal based on comparisons to other similarly situated structures, less the value of the land.

Coverage for actual value policies are limited to a specific amount, regardless of whether the value of the house increases. For example, a $70,000 actual cash value policy would cover only $70,000 in damages, even if the value of the house rises to $100,000. This type of coverage could end up costing the insured out-of-pocket more than they expected. Therefore, increases in limits to keep up with inflation are more important with these types of policies.

Replacement Cost Value

Replacement cost value is described in the California Insurance Code (CIC) in the following way;

Under an open policy, indemnity is the expense to the insured of replacing the loss in its condition at the time of the loss. Its value is computed at the time of the loss (CIC 2051). An open policy is one in which the value of the thing insured is not agreed upon, but is left to be ascertained in case of loss.

With an open policy requiring replacement cost, there is no deduction for physical depreciation, so the measure of indemnity is replacement cost (the amount to repair, rebuild, or replace) or the policy limit, whichever is less. If the policy requires the insured to replace in order to collect the full replacement cost, the actual cash value is initially paid. Once the property is replaced, the insurer pays the difference, up to the policy limits. At least 12 months must be allowed for replacement, with additional six month extensions out to 24 months. Additional time beyond that can be allowed.

Rebuilding or replacement of the total loss at a location other than the insured premises is permitted. In such a case, the measure of indemnity is based on the replacement cost of the insured property and not on the cost to repair, rebuild, or replace at a location other than the insured premises (CIC 2051.5).

Concerning guaranteed replacement cost, policies cannot be issued as such if they contain any sort of maximum limitation of coverage based on any set dollar limits, percentage amounts, construction cost limits, indexing, or any other preset maximum limitation for covered damage to the insured residence. This proscription does not restrict endorsements covering additional risks to the insurer's dwelling structure coverage.

Coverage provided for building code upgrades by an insurance policy residential property insurance shall be applicable only to the extent that they do not impose stricter standards on the property on the basis of the level of insurance coverage applicable to the property (CIC 10102).

New for Old

The replacement cost policy is relatively new to insurance, dating from the mid-20th Century. Limiting recovery to actual cash value was a mechanism used to make this insurance coverage a policy of indemnity; a sum paid as compensation for a particular loss. The intent of a deduction for depreciation was to be certain that an insured did not derive betterment from the loss. That is, exchanged new for old. In general, replacement involves a substitution of a new asset for an old asset which, for what ever reason, has been demolished, destroyed, or otherwise rendered unusable.

Superior Coverage

Replacement value of a home can be perceived as superior coverage. Any type of depreciated coverage requires that many of the insureds that have to replace their property must obtain additional funds to pay for property replacement. Full coverage has advantages to both parties to the insurance contract; the entire loss is funded, loss adjustment is easier, and the well-being of the insured. To reduce moral hazard the following general restrictions can be found in replacement cost coverage;

- Coinsurance is required, usually 80%
- The claim is not ‘fully’ payable until replacement by the insured has been made (more on that follows).
- Loss is based on replacement cost of property with identical materials, for the same purpose, and normally on the same site, and the amount actually spent on replacement.

Replacements can also be distinguished by the type of substitution made. Substitution in kind, for example, of a new house identical except in age and condition, is a replacement but not an improvement. Substitution of a superior new house for an old one is a replacement not in kind, and also an improvement.

Replacement cost and actual cash value differ from **market value,** the price for which something would sell under current market conditions. Fair market value (FMV) is an estimate of the market of a property, based on what a knowledgeable, willing, and unpressured buyer would probably pay to a knowledgeable, willing, and unpressured seller in the real estate market. Market value is not used by insurers as a valuation method.

Different Types of Structures

Replacement cost will differ for antique, historic, and purpose-built homes. Older homes, especially historic homes, can be very costly to replace and the cost of rebuilding can be significantly higher than an appraised value. Housing developers offer functional living space on basic lots made affordable by simple yet all-inclusive home designs that take advantage of the concept of ‘stock built’ residential construction. Rather than complex assembly and craftsmanship of an earlier era, mass produced housing requires less skill and time to assemble and complete. Part of the difference comes from the term “aesthetics.” The loss settlement provision makes no mention of this term. Because while “appearance” issues have nothing to do with the loss terms, they have everything to do with what the owner of an historic/antique home is going to consider as “replacement cost.”

The loss settlement language in the policy states that if the co-insurance requirement is met, “we will pay the cost to repair or replace, after application of deductible and without deduction for depreciation, but not more than the least of the following amounts: (a) The limit of liability under this policy that applies to the building; (b) The replacement cost of that part of the building damaged for like construction and use on the same premises; or (c) The necessary amount actually spent to repair or replace the damaged building.” So it could be that the form gives the insurer the option to repair or replace, as long as it’s with “like” property. Does the work “like” mean “the same form, kind, character” or “similar” or “having the same function?” It could be argued that *replacement cost* is the cost of replacing the subject with one that has equivalent utility but is built with modern materials and to current standards of design and function. *Reproduction cost* is the cost of building a replica. When the objects in question are one-hundred-year-old engraved brass hinges or transom components, this can mean a balancing of costs and aesthetics when addressing replacement cost in an historic/antique home.

California Residential Property Disclosure

On November 30, 2010, The California Insurance Commissioner issued a Notice to all California Residential Property Insurers attaching the revised California Residential Property Disclosure Form and Bill of Rights. Pursuant to AB 2022 California insurers implemented the new notice and revised bill of rights on July 1, 2011.

Prior to AB 2022, existing law required that residential property insurance policies do not become effective unless the named insured is provided with a copy of the California

Residential Property Insurance Disclosure which describes types of coverage and related coverages. It also required insureds be provided a copy of the California Residential Property Insurance Bill of Rights. AB 2022 revised the mandatory language of the California Residential Property Insurance Disclosure to simplify and rearrange the description of types of coverage, and to include additional information concerning insurance limits. It also revised the California Residential Property Insurance Bill of Rights.

The disclosure required by Section 10101 shall be in no less than 10-point typeface

It shall be provided prior to or concurrent with, the application for a policy of residential property insurance. If an application is made by other means, insurers must mail [transmit] a copy of the disclosure within three business days.

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CALIFORNIA RESIDENTIAL PROPERTY INSURANCE DISCLOSURE
This disclosure is required by California law (Section 10102 of the Insurance Code). It describes the principal forms of insurance coverage in California for residential dwellings. It also identifies the form of dwelling coverage you have purchased or selected. This disclosure form contains only a general description of coverages and is not part of your residential property insurance policy. Only the specific provisions of your policy will determine whether a particular loss is covered and, if so, the amount payable. Regardless of which type of coverage you purchase, your policy may exclude or limit certain risks.

READ YOUR POLICY CAREFULLY. If you do not understand any part of it or have questions about what it covers, contact your insurance agent or company. You may also call the California Department of Insurance consumer information line at: 1-800-927-4357.

The cost to rebuild your home may be very different from the market value of your home since reconstruction is based primarily on the cost of labor and materials. Many factors can affect the cost to rebuild your home, including the size of your home, the type of construction, and any unique features. Please review the following coverages carefully. If you have questions regarding the level of coverage in your policy, please contact your insurance agent or company. Additional coverage may be available for an additional premium.

FORMS OF COVERAGE FOR DWELLINGS	Dwelling Coverage selected or purchased
GUARANTEED REPLACEMENT COST COVERAGE WITH FULL BUILDING CODE UPGRADE PAYS REPLACEMENT COSTS WITHOUT REGARD TO POLICY LIMITS, AND INCLUDES COSTS RESULTING FROM CODE CHANGES. In the event of any covered loss to your home, the insurance company will pay the full amount needed to repair or replace the damaged or destroyed dwelling with like or equivalent construction regardless of policy limits. Your policy will specify whether you must actually repair or replace the damaged or destroyed dwelling in order to recover guaranteed	

replacement cost. The amount of recovery will be reduced by any deductible you have agreed to pay. This coverage includes all additional costs of repairing or replacing your damaged or destroyed dwelling to comply with any new building standards (such as building codes or zoning laws) required by government agencies and in effect at the time of rebuilding. To be eligible to recover full guaranteed replacement costs with building code upgrade, you must insure the dwelling to its full replacement cost at the time the policy is issued, with possible periodic increases in the amount of coverage to adjust for inflation and increases in building costs; you must permit inspections of the dwelling by the insurance company; and you must notify the insurance company about any alterations that increase the value of the insured dwelling by a certain amount (see your policy for that amount).	
GUARANTEED REPLACEMENT COST COVERAGE WITH LIMITED OR NO BUILDING CODE UPGRADE PAYS REPLACEMENT COSTS WITHOUT REGARD TO POLICY LIMITS BUT LIMITS OR EXCLUDES COSTS RESULTING FROM CODE CHANGES. In the event of any covered loss to your home, the insurance company will pay the full amount needed to repair or replace the damaged or destroyed dwelling with like or equivalent construction regardless of policy limits. Your policy will specify whether you must actually repair or replace the damaged or destroyed dwelling in order to recover guaranteed replacement cost. The amount of recovery will be reduced by any deductible you have agreed to pay. This coverage does not include all additional costs of repairing or replacing your damaged or destroyed dwelling to comply with any new building standards (such as building codes or zoning laws) required by government agencies and in effect at the time of rebuilding. Consult your policy for the applicable exclusions or limits with respect to these costs. To be eligible to recover full guaranteed replacement cost with limited or no building code upgrade, you must insure the dwelling to its full replacement cost at the time the policy is issued, with possible periodic increases in the amount of coverage to adjust for inflation and increases in building costs; you must permit an inspection of the dwelling by the insurance company; and you must notify the insurance company about any alterations that increase the value of the insured dwelling by a certain amount (see your policy for that amount).	
LIMITED REPLACEMENT COST COVERAGE WITH AN ADDITIONAL PERCENTAGE PAYS REPLACEMENT COSTS UP TO A SPECIFIED AMOUNT ABOVE THE POLICY LIMIT. In the event of any covered loss to your home, the insurance company will pay to repair or replace the damaged or destroyed dwelling with like or equivalent construction up to a specified percentage over the policy's limits. See the declarations page of your policy for the limit that applies to your dwelling. Your policy will specify whether you must actually repair or replace the damaged or destroyed dwelling in order to recover this benefit. The amount of recovery will be reduced by any deductible you have agreed to pay. To be eligible for this coverage, you must insure the dwelling to its full replacement cost at the time the policy is issued, with possible periodic increases in the amount of coverage to adjust for inflation; you must permit an inspection of the dwelling by the insurance company; and you must notify the insurance company about any alterations that increase the value of the insured dwelling by a certain amount (see your policy for that amount). Read your declaration page to determine whether your policy includes coverage for building code upgrades.	
LIMITED REPLACEMENT COST COVERAGE WITH NO ADDITIONAL PERCENTAGE PAYS REPLACEMENT COSTS UP TO POLICY LIMITS ONLY. In the event of any covered loss to your home, the insurance company will pay to repair or	

replace the damaged or destroyed dwelling with like or equivalent construction only up to the policy's limit. See the declarations page of your policy for the limit that applies to your dwelling. Your policy will specify whether you must actually repair or replace the damaged or destroyed dwelling in order to recover this benefit. The amount of recovery will be reduced by any deductible you have agreed to pay. To be eligible to recover this benefit, you must insure the dwelling to [company shall denote percentage] [ ] percent of its replacement cost at the time of loss. Read your declaration page to determine whether your policy includes coverage for building code upgrades.	
ACTUAL CASH VALUE COVERAGE PAYS THE FAIR MARKET VALUE OF THE DWELLING AT THE TIME OF THE LOSS, OR THE COST TO REPAIR, REBUILD, OR REPLACE THE DAMAGED OR DESTROYED DWELLING WITH LIKE KIND AND QUALITY CONSTRUCTION, UP TO THE POLICY LIMIT. In the event of any covered loss to your home, the insurance company will pay either the fair market value of the damaged or destroyed dwelling (excluding the value of land) at the time of the loss or the cost to repair, rebuild, or replace the damaged or destroyed dwelling with like kind and quality construction up to the policy limit, with possible consideration of physical depreciation. The amount of recovery will be reduced by any deductible you have agreed to pay. Read your declaration page to determine whether your policy includes coverage for building code upgrades.	
BUILDING CODE UPGRADE - ORDINANCE AND LAW COVERAGE PAYS, UP TO LIMITS SPECIFIED IN YOUR POLICY, ADDITIONAL COSTS REQUIRED TO BRING THE DWELLING "UP TO CODE." In the event of any covered loss, the insurance company will pay any additional costs, up to the stated limits, of repairing or replacing a damaged or destroyed dwelling to conform with any building standards such as building codes or zoning laws required by government agencies and in effect at the time of the loss or rebuilding (see your policy).	

The agent or insurer indicates on the disclosure form which category of coverage the applicant or insured has selected. If not in conflict, the disclosure statement may contain additional provisions. Following issuance of the insurance policy, the insurer provides the disclosure statement to the insured biennially (CIC 10102).

The disclosure required by Section 10101 shall be

in no less than 10-point typeface

It is provided prior or with application or mailed if application is not face-to-face. The disclosure must contain the following language.

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"NOTICE TO CONSUMERS — CALIFORNIA RESIDENTIAL INSURANCE DISCLOSURE
This disclosure is required by Section 10102 of the California Insurance Code. This form provides general information related to residential property insurance and is not part of your residential property insurance policy. Only the specific provisions of your policy will determine whether a particular loss is covered and the amount payable. The information provided does not preempt existing California law.

PRIMARY FORMS OF RESIDENTIAL DWELLING COVERAGE

You have purchased the coverage(s) checked below. NOTE: Actual Cash Value Coverage is the most limited level of coverage listed. Guaranteed Replacement Cost is the broadest level of coverage.

ACTUAL CASH VALUE COVERAGE pays the costs to repair the damaged dwelling minus a deduction for physical depreciation. If the dwelling is completely destroyed, this coverage pays the fair market value of the dwelling at time of loss. In either case, coverage only pays for costs up to the limits specified in your policy.

REPLACEMENT COST COVERAGE is intended to provide for the cost to repair or replace the damaged or destroyed dwelling, without a deduction for physical depreciation. Many policies pay only the dwelling's actual cash value until the insured has actually begun or completed repairs or reconstruction on the dwelling. Coverage only pays for replacement costs up to the limits specified in your policy.

EXTENDED REPLACEMENT COST COVERAGE is intended to provide for the cost to repair or replace the damaged or destroyed dwelling without a deduction for physical depreciation. Many policies pay only the dwelling's actual cash value until the insured has actually begun or completed repairs or reconstruction on the dwelling. Extended Replacement Cost provides additional coverage above the dwelling limits up to a stated percentage or specific dollar amount. See your policy for the additional coverage that applies.

GUARANTEED REPLACEMENT COST COVERAGE covers the full cost to repair or replace the damaged or destroyed dwelling for a covered peril regardless of the dwelling limits shown on the policy declarations page.

BUILDING CODE UPGRADE COVERAGE, also called Ordinance and Law coverage, is an important option that covers additional costs to repair or replace a dwelling to comply with the building codes and zoning laws in effect at the time of loss or rebuilding. These costs may otherwise be excluded by your policy. Meeting current building code requirements can add significant costs to rebuilding your home. Refer to your policy or endorsement for the specific coverage provided and coverage limits that apply.

READ YOUR POLICY AND POLICY DECLARATIONS PAGE CAREFULLY: The policy declarations page shows the specific coverage limits you have purchased for your dwelling, personal property, separate structures such as detached garages, and additional living expenses. The actual policy and endorsements provide the details on extensions of coverage, limitations of coverage, and coverage conditions and exclusions. The amount of any claim payment made to you will be reduced by any applicable deductibles shown on your policy declarations page. It is important to take the time to consider whether the limits and limitations of your policy meet your needs. Contact your agent, broker, or insurance company if you have questions about what is covered or if you want to discuss your coverage options.

INFORMATION YOU SHOULD KNOW ABOUT RESIDENTIAL DWELLING INSURANCE

AVOID BEING UNDERINSURED: Insuring your home for less than its replacement cost may result in your having to pay thousands of dollars out of your own pocket to rebuild your home if it is completely destroyed. Contact your agent, broker, or insurance company immediately if you believe your policy limits may be inadequate.

THE RESIDENTIAL DWELLING COVERAGE LIMIT: The coverage limit on the dwelling structure should be high enough so you can rebuild your home if it is completely destroyed.
Please note:

- The cost to rebuild your home is almost always different from the market value.
- Dwelling coverage limits do not cover the value of your land.
- The estimate to rebuild your home should be based on construction costs in your area and should be adjusted to account for the features of your home. These features include but are not limited to the square footage, type of foundation, number of stories, and the quality of the materials used for items such as flooring, countertops, windows, cabinetry, lighting and plumbing.
- The cost to rebuild your home should be adjusted each year to account for inflation.
- Coverage limits for contents, separate structures, additional living expenses and debris removal are usually based on a percentage of the limit for the dwelling. If your dwelling limit is too low, these coverage limits may also be too low.

You are encouraged to obtain a current estimate of the cost to rebuild your home from your insurance agent, broker, or insurance company or an independent appraisal from a local contractor, architect, or real estate appraiser. If you do obtain an estimate of replacement value, and wish to change your policy

limits, contact your insurance company. While not a guarantee, a current estimate can help protect you against being underinsured.

DEMAND SURGE: After a widespread disaster, the cost of construction can increase dramatically as a result of the unusually high demand for contractors, building supplies and construction labor. This effect is known as demand surge. Demand surge can increase the cost of rebuilding your home. Consider increasing your coverage limits or purchasing Extended Replacement Cost coverage to prepare for this possibility.

CHANGES TO PROPERTY: Changes to your property may increase its replacement cost. These changes may include the building of additions, customizing your kitchen or bathrooms, or otherwise remodeling your home. Failure to advise your insurance company of any significant changes to your property may result in your home being underinsured.

EXCLUSIONS: Not all causes of damage are covered by common homeowners or residential fire policies. You need to read your policy to see what causes of loss or perils are not covered. Coverage for landslide is typically excluded. Some excluded perils such as earthquake or flood can be purchased as an endorsement to your policy or as a separate policy. Contact your agent, broker, or insurance company if you have a concern about any of the exclusions in your policy.

CONTENTS (PERSONAL PROPERTY) COVERAGE DISCLOSURE:
This disclosure form does not explain the types of contents coverage provided by your policy for items such as your furniture or clothing. Contents may be covered on either an actual cash value or replacement cost basis depending on the contract. Almost all policies include specific dollar limitations on certain property that is particularly valuable, such as jewelry, art, or silverware. Contact your agent, broker or insurance company if you have any questions about your contents coverage. You should create a list of all personal property in and around your home. Pictures and video recordings also help you document your property. The list, photos, and video should be stored away from your home.

CONSUMER ASSISTANCE
If you have any concerns or questions, contact your agent, broker, or insurance company. You are also encouraged to contact the California Department of Insurance consumer information line at (800) 927-HELP (4357) or at www.insurance.ca.gov for free insurance assistance."

Depreciation (Holdback) for Claims

One of the basic principles of replacement cost insurance requires that the insured not receive the expanded indemnification until the property is actually repaired and/or replaced. As a result, the insured first collects their depreciated or actual cash value loss, and when the property is repaired or replaced in accordance with the conditions of the policy, is paid the difference between the actual cash value loss and the replacement cost loss. The money withheld is customarily referred to as a "holdback."

Some companies will treat the 'recoverable depreciation' differently. At the time of settlement it's also common for the insured to sign - in addition to the proof of loss - a 'Statement as to Full Cost for Repair or Replacement' spelling out the amount and including wording such as "for use on the same premises."

Initial Payment

The California Insurance Code states that, with an open policy requiring replacement cost, there is no deduction for physical depreciation, so the measure of indemnity is replacement cost (the amount to repair, rebuild, or replace) or the policy limit, whichever is less. If the policy requires the insured to replace in order to collect the full replacement cost, the actual cash value is initially paid. Once the property is replaced,

the insurer pays the difference, up to the policy limits. Rebuilding or replacement of the total loss at a location other than the insured premises is permitted. In such a case, the measure of indemnity is based on the replacement cost of the insured property and not on the cost to repair, rebuild, or replace at a location other than the insured premises (CIC 2051.5).

Market Values and Insurable Amount

Market value is not used as a factor in determining replacement cost. **Market value** is the price paid for a house. **Replacement cost** is the price or cost it will take to rebuild the house in the same spot, same size and same quality of construction, at today's costs. Insurance companies use replacement cost, not market value. These can be two different numbers. The price of the land, or lot, is not included in the amount to be paid by the insurer in case of loss.

The concept of replacement cost less depreciation for age, wear and tear is easier stated than put into practice. Depreciation takes into account the age of the property at the time of loss, the extent of its use and, possibly, the degree of its obsolescence. No insurance policy will define depreciation, however. In tax law depreciation is calculated by reference to schedules that have little relationship with a property's useful life. In insurance, the calculation of depreciation does not occur by reference to rigid schedules.

III. Components of a Structure Necessary to Estimate Replacement Cost

Standards for Estimates of Replacement Value.

The California Code of Regulations (CCR 2695.183) states that when a licensee conveys an estimate of replacement cost to the insurance-buying public, certain standards must be met. The estimate of replacement cost must include the expenses that would reasonably be incurred to rebuild the insured structure(s) in its entirety. Consideration of components and features of the insured structure should including at least the following:

- Type of foundation;
- Type of frame;
- Roofing materials and type of roof;
- Siding materials and type of siding;
- Whether the structure is located on a slope;
- Building code upgrades
- Size of the entire structure and square footage of the living space;
- Geographic location of property;
- Number of stories and any nonstandard wall heights;
- Materials used in, and generic types of, interior features and finishes, such as, where applicable, the type of heating and air conditioning system, walls, flooring, ceiling, fireplaces, kitchen, and bath(s);
- Age of the structure or the year it was built; and
- Size and type of attached garage.
- Additional costs associated with building a single or custom home

The estimate of replacement cost shall not be based upon the resale value of the land, or upon the amount or outstanding balance of any loan, nor on a deduction for physical depreciation. There follows a brief description of the above-mentioned categories.

Type of Foundation

When estimating replacement cost, it is necessary for broker-agents to consider the type of foundation because the cost to repair, replace or rebuild a structure is dependent upon an accurate description of the type of foundation. There can be extreme differences between the costs of replacing one kind of foundation as compared to a different type of foundation. In this regard, when estimating replacement cost, it is necessary to consider the foundation component generally, and to account for the type of foundation as well, so as to accurately estimate the cost.

A foundation is a part of a building that transfers load (weight) to the earth. The foundation of a house is a somewhat invisible and sometimes ignored component of the building. Attention to good foundation design and construction has significant benefits to the homeowner. There are three basic types of foundations- full basement, crawl space, and slab-on-grade. Actual houses may include combinations of these types. There are several construction systems from which to choose for each foundation type. The most common systems, cast-in-place concrete and concrete block foundation walls, can be used for all basic foundation types. Other systems include pressure-preservative-treated wood foundations, precast concrete foundation walls, masonry or concrete piers, cast-in-place concrete sandwich panels, and various masonry systems. A slab-on-grade construction with an integral concrete grade beam at the slab edge is common in climates with a shallow frost depth. In colder climates, deeper cast-in-place concrete walls and concrete block walls are more common. The foundation type and construction system are chosen in part because of appearance factors. Although it is not usually a major aesthetic element, the foundation at the base of a building can be raised above the ground plane, so the foundation wall materials can affect the overall appearance. The preference of foundation type varies with climatic region, although examples of most types can generally be found in any given region. One of the principal factors behind foundation preference is the impact of frost depth on foundation design. The impact of frost depth basically arises from the need to place foundations at greater depths in colder climates. For example, a footing in Minnesota must be at least 42 inches below the surface, while in states along the Gulf Coast; footings need not extend below the surface at all in order to avoid structural damage from frost heave. Because a foundation wall extending to a substantial depth is required in northern climates, the incremental cost of creating basement space is much less, since it is necessary to build approximately half the basement wall anyway. In a southern climate the incremental first cost of creating a basement is greater when compared with a slab-on-grade with no significant required footing depth.

Type of Frame

When estimating replacement cost, it is necessary for broker-agents to consider the type of frame because the cost to repair, replace or rebuild the structure is dependent upon an accurate description of the type of framing. There can be extreme differences between the cost of replacing one kind of framing as compared to a different type of framing. In this regard, when estimating replacement cost, it is necessary to consider the framing component generally, and to account for the type of framing as well, so as to accurately estimate the cost.

2x4- The most versatile wall construction method is the 2x4 stud wall. The 2x4 wall construction method is usually the most cost-effective. It offers sufficient strength for most areas, and is normally suitable for most areas in the United States. In certain parts of the United States, a 2x4 wall may not allow enough space for insulation, and as such, a 2x6 wall may be utilized. In the 2x6 wall construction, the additional 2 inches of wall cavity space can be filled with additional insulation which can add an additional level of interior comfort for the homeowner. Also it should be noted that, although a 2x6 house wall construction will be more expensive initially, the additional insulation and space can save a significant amount in future heating and cooling costs.
Block-The concrete block construction component is a large rectangular brick used in buildings. Concrete blocks are made from cement, sand and fine gravel for high-density blocks. Lower density blocks may use industrial wastes as an aggregate. Those that use cinders (fly ash) are called cinder blocks. Concrete block, when reinforced with concrete columns and tie beams, is a common building material for the load-bearing walls of buildings, in what is termed "concrete block structure" (CBS) construction.
ICF- Another type of home wall construction type is ICF or Insulated Concrete Forms. ICF's are formwork for concrete that stays in place as permanent building insulation for energy-efficient, cast-in-place, reinforced concrete walls, floors, and roofs. The forms are interlocking modular units that are dry-stacked (without mortar) and filled with concrete. The forms lock together somewhat like Lego bricks and serve to create a form for the structural walls or floors of a building. Concrete is pumped into the cavity to form the structural element of the walls. Usually reinforcing steel (rebar) is added before concrete placement to give the concrete strength, similar to bridges and high-rise buildings made of concrete.
Steel- Bridges, railroads, automobiles, and even homes all contain some steel. Builders have the option of using cold-formed steel in homebuilding to frame floors, walls, and roofs. Cold-formed steel framing is not new. It is a field-proven material in both the commercial and residential construction industries. Steel can be consistently produced to very specific strengths, shapes, and sizes within small tolerances. These and other factors have rendered steel a viable framing material to meet the demands of the residential construction industry. In addition to its cost effectiveness and consistent quality, steel has many more advantages which make it appealing to builders and homebuyers.

Roofing Material and Type of Roof

When estimating replacement cost, it is necessary that broker-agents to consider the roofing materials and type of roof because the cost to repair, replace or rebuild a structure is dependent upon an accurate description of the type of roof. There can be extreme differences between the costs of replacing one kind of roof as compared to a different type of roof. In this regard, when estimating replacement cost, it is necessary to consider the roof component generally, and to account for the type of roof as well, so as to accurately estimate the cost.

Roofing materials include the following;

- Composition asphalt shingle; these range from low-cost 3-tab shingle to architectural shingles with extra durability and style. There are many colors and styles, making them suitable for most residential applications. The shingles are easy to repair and are fire resistant.

- Wood shingles or shakes; A natural look is offered and they to provide some insulation. Long lasting, they are easy to repair or replace and blend in with the environment. However, they are expensive, can be high maintenance, and the fire danger has caused wood shake roofs to be banned in many jurisdictions.
- Metal (sheet aluminum, tin, or copper); Many different looks and colors are available, from standing seam to replication of slate and shakes. They are lightweight, durable and boast a long life span. They are expensive to install or repair.
- Concrete or clay tile; this roof is attractive, fireproof, easy to maintain and very durable. Tiles can be adapted to many architectural designs. The tiles are expensive and heavy. Used in new construction as such roofs require beefed-up structural elements.
- Slate; the beautiful, distinctive slate roof is fireproof, low maintenance, and offers a long life span. However, they are very expensive, heavy, fragile and require specialized installation.
- Concrete; Fiber reinforced concrete can be had in many colors and styles. It is relatively lightweight while fire and insect resistant. Such roofs are low maintenance and extremely durable. They can be expensive
- Hot mopped flat roof; these roofs are suitable for a flat or slightly inclined roof surface. They are inexpensive to install and simple to repair; a good thing, as they are prone to leaking.

Types or styles of roofs include gable, hip, mansard, saltbox, gambrel, flat, shed, pyramid hip, and combinations of these styles. Roof styles and materials can be modified to suit the taste and budget of the homeowner. The interested reader can search the internet for illustrations of the various types.

Siding Materials and Types of Siding

When estimating replacement cost, it is necessary for broker-agents to consider the type of siding materials and type of siding because the cost to repair, replace or rebuild the structure is dependent upon an accurate description of the type of siding materials and siding. There can be extreme differences between the costs of replacing one kind of siding as compared to a different type of siding. In this regard, when estimating replacement cost, it is necessary to consider the type of siding, and the siding materials as well, so as to accurately estimate the cost.

There are numerous types of siding available for today's homes offering different advantages and/or disadvantages. Certain types of siding are more popular in some areas of the country than others, influenced largely by climate and availability of product. Price also influences the type of siding chosen by a builder or a home owner.

- **Aluminum or Vinyl Siding** These siding options are available on new homes as well as often put on over older types of siding. The biggest advantage of this type of siding is that they do not require painting. The disadvantage is that aluminum siding dents and vinyl siding cracks. Vinyl siding has improved over time as the quality of vinyl improves.
- **Masonite Siding or Hardi Plank** These siding options have a similar appearance but offer very different results. Masonite siding deteriorates over time and requires painting, caulking and routine upkeep. Hardi Plank (a brand name) is a similar looking product but is made of cement and therefore does not rot. It is growing in popularity and is an alternative to Masonite.

- **Brick or Stone** Both of these products provide an excellent siding option. They are virtually indestructible as well as attractive. They do not require the routine maintenance that other types of siding require. The biggest drawback is price.
- **Stucco** Traditional stucco is made with cement and offers a solid, lasting, moisture proof siding. It is seen a great deal in Florida where the climate would require constant upkeep on other types of siding and the solid cement siding keeps the houses cooler than traditional siding.
- **Cedar Shakes** This is an alternative to Masonite siding as it requires less maintenance. When treated with stain it does not rot or peel.
- **Veneer & Synthetic Siding** These siding alternatives give the appearance of other types such as stucco or brick, but do not give the quality or longevity.
- **Clapboard Siding** It is made from solid wood and is more costly than other types of siding but lasts longer and looks better than manufactured sidings such as Masonite. Wood siding lends itself well to stain and therefore will not peel as with siding that is painted.
- **Steel and Vinyl Coatings** They are expensive but are nearly indestructible thus requiring little maintenance. Vinyl Coatings are applied like paint but are much thicker. This is a relatively new product and it is important that it be applied correctly.

Building on a slope

When estimating replacement cost, it is necessary for broker-agents to consider whether the structure is located on a slope because the cost to repair, replace or rebuild a structure on a slope is a function of the whether the structure is located on a slope. There can be extreme differences between the costs of replacing a structure on a slope as compared to replacing a structure that is not located on a slope. In this regard, it is necessary for this component to be considered when estimating replacement cost.

Some residential lots are not very flat. Building a slab house on this sloping ground can create extra work and expense. Building on a slope is about creating a stable, flat foundation, either dug into the slope or supported above the ground level, on which the house can be built. Building on a sloping lot can be much more expensive and time consuming than building on a flat lot.

Building Code Upgrades

Also known as ordinance or law coverage, it provides coverage for the additional costs required to bring a damaged residence up to current building code requirements. Without this coverage, a policy would pay only the amount needed to repair or replace the damaged home to restore it to the condition it was in prior to the loss, and would not cover any additional costs due to changes required by current building codes. Building code upgrades may be required in categories including wiring, plumbing, foundation, and roof. If a house needs even partial rebuilding the owner may be required to install a sprinkler system, build retaining walls or raise the building above flood plain, install fire-code roofing, or modify the building for handicapped access.

Size and Square Footage

Consider the size of the entire structure and, separately, the square footage of the living space. When estimating replacement cost, it is necessary for broker-agents to determine accurately the size of the entire structure and separately the square footage

of the living space because the cost to repair, replace or rebuild a structure is dependent upon the size of structure and square footage of living space.

The inaccurate reporting of square footage in real estate is an area of concern. “Square footage” of a building may include enclosed porches and covered decks as well as the area of an attached garage. A more conventional view of “square footage” of a house involves its living area or “conditioned space.” The floor area of enclosed conditioned spaces on all floors measured from the interior surfaces of exterior partitions for nonresidential buildings and from the exterior surfaces of exterior partitions for residential buildings (See California Code of Regulations, Title 24, Section 2-5302).

Geographic Location of Property

Building supplies and construction labor have different costs based upon the location of the property. There can be extreme differences between the cost of replacing a structure in one geographic location as compared to another. In this regard, it is necessary for this component to be considered when estimating replacement cost.

The old saw is that the value of real estate revolves around three factors; location, location, location. When determining the value of a home, the quality of the neighborhood in which a home is located is a big factor. In support of this point, both government assessors and private appraisers utilize the "comparable sales approach" to determine the value of a property. However, this study is not about market value of a house, it is about replacement cost. Geographic location in this context refers to expediting, locating, and delivering materials and manpower for rebuilding according to local code. Such an issue would have to be addressed on a case-by-case basis. For its own set of reasons, a house to be rebuilt in a neighborhood of winding streets with many children present would pose a logistical challenge equivalent to the house located in a remote canyon. For their own reasons, some geographic locations are more challenging than others.

Number of Stories and Heights

When estimating replacement cost, it is necessary that broker-agents consider the number of stories and nonstandard interior wall heights because the cost to repair, replace or rebuild to a certain number of stories, and or to replace nonstandard wall heights, is dependent on an accurate description of these components. There can be extreme differences between the costs of replacing a structure depending on these components and it is necessary for them to be considered when estimating replacement cost.

The cost per square foot is often higher for a small home than that of a larger home. When building a larger home, the cost of expensive items (such as a furnace or kitchen) is spread over more square footage. Consequently, a larger home may have a lower square footage cost than a smaller home. Also, it usually costs less to build a two-story home when compared to a one-story home that has the same square footage. This is because a two-story home will have a smaller roof and foundation. Plumbing and ventilation are more compact in two-story homes. Non standard floor to ceiling heights, non square corners, and vaulted areas are examples of features that will add cost to home construction.

Features and Finishes

When estimating replacement cost, it is necessary that broker-agents consider the materials used and the types of interior features and finishes, because the cost to repair, replace or rebuild the structure is a function of the materials used to construct the dwelling and the types of interior features and finishes. There can be an extreme difference in the cost of replacing a structure with one kind of materials used in construction and the types of interior finishes as compared to a structure which does not make use of those materials and interior features and finishes. In this regard, it is necessary for theses components to be considered when estimating replacement cost.

Interior features and finishes are a function of cost and quality. The approximate costs and value of an interior finish is subjective and contains many variables. A rule of thumb is to use higher estimates for larger metropolitan areas and the lower estimates where home prices are below the national average. Adjust costs for substitutions or refinements in a category-by-category basis; paint, countertops, wallpaper, light and plumbing fixtures, etc. For size differences, scale total costs in direct proportion to the size of the project. The adjusted costs can then be used as a basis for setting a material budget and for comparing contractor bids.

Cost of Demolition and Debris Removal

When estimating replacement cost, it is necessary that broker-agents consider the cost of demolition and debris removal because in the event of a total loss the cost to repair, replace or rebuild the structure will necessarily include costs associated with demolition and debris removal.

The cost of demolition and debris removal, within reasonable limits, must be covered and paid in addition to the rebuilding cost. Care must be taken to allow for disposal cost of any hazardous materials

Architect, Engineer, Permits

When estimating replacement cost, it is necessary that broker-agents consider that the cost to repair, replace or rebuild the structure will include costs associated with architect’s plans, engineering reports and or permits. These costs can and do occur on partial losses, but do not result in underinsurance (if omitted) on a partial loss, as the coverage limits will be sufficient.

These are the costs associated with the design and preconstruction phase of home building. These costs may not be included in the construction contract and will be billed directly by the architect or engineer associated with the replacement home construction. In most instances, the cost of stock plans is a set dollar amount.

Age or Year Built

When estimating replacement cost, it is necessary that broker-agents consider the age of the structure and the year it was built. This may have an impact on the cost to repair, replace or rebuild the structure including factors such as code upgrade requirements and availability of materials.

The age of the structure goes back to the argument of ‘replace’ vs. ‘reproduce.’ Postwar houses, built with economies of scale in mind, may be replaced and with a structure that satisfies current code. Antique/historic homes require a different outlook. These homeowners generally want replacement and restoration with historically accurate materials. Those cost more, and so do the craftsmen who install them. It costs more rebuilding a pre-1945 home using historically accurate materials than rebuilding a similar-sized newer home using modern materials. A homes size and period details influence the cost to restore it.

Attached Garage

An attached garage protects vehicles and yard equipment. It can also raise the resale value of a home. Figuring prices, need and location is important. A one-car garage may be all that is needed, but a two-car is better; two-car with a work/utility area even better. Before the construction process it is necessary to determine if such an addition will be permitted by the local government. The homeowner must verify that the job can be done legally before taking any further steps.

Additional Costs Building a Single or Custom Home

Tract homes utilized the mass production philosophy that maximizes economies of scale. Economies of scale dictate that the average cost of producing a commodity fall as output of the commodity rises. It is faster to build 40 homes using the same material and similar floor plan than it is to build a custom home. The estimate of replacement cost shall be based on an estimate of the cost to rebuild or replace the structure taking into account the cost to reconstruct the single property being evaluated, as compared to the cost to build multiple, or tract, properties. This is necessary because in tract housing labor costs are reduced because the home-builders need not be skilled craftsmen and material costs are reduced because the builder is buying and transporting materials in bulk amounts. The repetitive nature of the plans, and the large number of units produced, are the most significant factors in reducing the cost of these houses.

IV. Effects of Catastrophes on Replacement Cost

A catastrophe is an extremely large-scale disaster. The frequency and severity of natural and man-made catastrophes have increased significantly in recent years. Natural catastrophes include events such as hurricanes, earthquakes, floods, and tsunamis; and man-made disasters include oil platform explosions, aviation disasters, and terrorism.

Demand Surge

“Demand surge” is a phenomenon characterized by a substantial increase in the cost of construction due to unusually high demand for contractors, building supplies and construction labor. A replacement cost estimate, or construction cost estimate, generated by or on behalf of a licensee, shall not include consideration for demand surge. Demand surge typically occurs after a disaster such as a wildfire, earthquake, or other natural disaster, in which large numbers of structures are destroyed within a

specific geographic area. The licensee shall disclose this fact to the applicant or insured in the notice or report per Section 2695.183 (i).

The disclosure to the applicant or insured is necessary as every one of the other factors required to be considered in estimating replacement cost or a construction cost may be related to a premium cost, but while the other factors are knowable and have some relation to the individual structure being evaluated, the extent of any disaster and thus the degree of demand surge is unknowable and bears no logical correlation to the structure. The purpose is to assure that the replacement cost shall be calculated to rebuild or replace a home in a situation where there is no demand surge, and that the additional percentage available in a replacement cost policy would provide coverage in the event the loss was related to a disaster, where demand surge elements might exist.

Hurricanes, earthquakes and wildfires can damage or destroy property quickly. With home building occurring in more areas, housing developments and thickly settled areas are akin to bowling pins waiting for disaster to strike. Demand surge refers to price inflation for scarce construction materials, labor and services following a significant disaster. The more widespread the damage is, the greater the price for the rebuilding resources. Demand surge costs are influenced by the inability to have resources simultaneously available when damage is widespread. The Actuarial Standards Board defines Demand Surge as:

> ***"A sudden and usually temporary increase in the cost of materials, services, and labor due to the increased demand for them following a catastrophe."***

The usage of the term "demand surge" is similar to its definition. The limited sense of demand surge, as an increase in material and labor costs, is often the first and primary description of increased losses after catastrophes, and additional explanations quickly follow to complete the general definition of demand surge. Observers offer increasing material and labor costs first to explain larger losses in catastrophes and then provide additional explanations, respectively: insurers are unable to verify a large volume of claims, and they face political pressure to quickly pay claims; the decisions of regulators and insurers expand coverage beyond the stated language of insurance policies.

Demand surge is an important issue for individuals and institutions that sustain losses in natural disasters, particularly for property insurers and governments that finance reconstruction. Estimates of demand surge following large-scale natural disasters have quantified a general increase of costs ranging from 10–40% following Hurricane Katrina (Guy Carpenter, 2005) The aggregate of higher repair costs at each damaged property results in a greater loss for an insurer that indemnifies many properties in an affected area. For a single insurer, the additional loss caused by demand surge may mean the difference between survival and ruin. For example, 20th Century Insurance, based in the Los Angeles area, was nearly bankrupted by claims following the 1994 Northridge Earthquake, a disaster that produced a reported 20% demand surge.

Primary insurers must anticipate their future losses in order to establish cash reserves, secure reinsurance, and set premiums for their policyholders. Future losses are inherently uncertain. Employing the best available hazard and risk information should reduce this uncertainty and improve the accuracy of predictions. In this context, better knowledge of demand surge can assist insurers in their business decisions. Demand surge also bedevils consumers and consumer advocates. Skeptical insurance consumers and their advocates have an *ipso facto* license to question the validity of

demand surge models. An insurance company may counter that, to be economically viable, it must use the best available model to anticipate any demand surge costs and reflect these costs in policy premiums. Any such extra premiums would become a source of serious conflict between insurers and policyholders, as well as consumer advocates.

Concentration of Risk

Allowing that the demand surge exists and claims are to be paid; who will pay? The demand surge could be expressed as a concentration in property catastrophe rates via a “concentration charge.” That is, an additional charge on top of the manual rate which varies based on the insurer’s exposure level in the area where the potential insured is located. Insurers might think such a charge (if feasible) might be justified. Regulators probably would not like it. In a perfectly functioning economy, with plentiful reinsurance and capital market capacity, insurers would be able to diversify away exposure concentration problems. Insurers would collect the additional money for their concentration problems, and then diversify those problems away, presumably for less cost than they collected in concentration charges. Competitive markets would not allow such an arbitrage engine to exist for long. The situation is unfortunately not as simple as that. Diversification of exposure concentration means geographical balancing amongst capacity providers- insurers, reinsurers, or capital market participants. But how to diversify those exposures is still unsettled. Efforts to this point have focused on balancing the exposures which have already been written by insurers - via catastrophe reinsurance (regular or securitized), several proposed catastrophe indices, even direct exposure exchanges.

Services Added

Several general definitions or usages of “demand surge” add “services” to the short list of labor and materials to explain higher costs after catastrophes, but the reference to services is unclear. Services might refer to expenditures by insurers to claims adjusting firms, or by insurers to construction contracting firms, or by construction contracting firms to businesses that serve them while they mobilize, market their services, do the repairs, etc. Since insurance claims include additional living expenses and other time-element losses, services in this context could mean virtually any expenditure paid to businesses at any distance from the catastrophe by any insured entity during the life of any time-element claim. Examples of items affected by demand surge appear in the sub headings below.

Construction Labor Shortages

Market forces generally ensure that the availability of labor in any particular geographical area is sufficient to accommodate a normal level of demand without affecting price. However, when demand increases sharply and unexpectedly- as after a catastrophe event -consequent pressure on resources can cause prices to inflate. The relative scarcity of resources in such a situation can also result in increases in the time required to repair and rebuild damaged property. Also, there often are add-on costs associated with post-catastrophe rebuilding efforts, such as for the transportation and lodging of workers who cannot stay in the most devastated areas. When there is an increased supply of labor because of high unemployment, it is possible that it may take

longer for available resources to be exhausted due to slack in the regional labor market, any given industry loss will produce a lower demand surge factor (inflationary effect). On the other hand, it is also possible that a recessionary environment could lead to a decline in the number of capable, trained construction workers. It is difficult to say *a priori* which effect would dominate.

Building Supply Shortages

When large losses are produced by natural hazards, reconstruction can be hampered by the availability of materials and/or labor. These shortages lead to post-event inflation. Demand surge is usually expected to add 10% to 20% to the loss. The California Earthquake Authority testified that insurers estimated a 20% impact for demand surge following the January 17, 1994 Northridge earthquake. The actual inflation rate for labor and materials in some cases (such as Hurricane Katrina) can go higher, given the scope and the timing of the loss. Following a major natural disaster, increases in demand for construction material can result in increased claims settlement costs. Settlement costs may also rise from large events such as hurricanes or earthquakes due to the demands upon insurers to settle thousands of claims in a short time. Based on actuarial principles, it is reasonable to include these additional costs in establishing the appropriate rate. However, determining a demand surge factor is difficult since limited data are available to measure the impact of this phenomenon on claims costs.

Fuel Shortages

Direct losses from a catastrophe may be amplified by spatial propagation of the catastrophe ‘shock’ into different sectors of the economic system; this includes fuel supplies over both the short and long term. This can be found in the inflation caused by disruptions in the supply and demand equilibrium as well as increased demand and by technical constraints that slow down the reconstruction effort or increase its recovery cost. Basic fossil fuel delivery systems are disrupted in the event of a catastrophe. Due to the volatile nature of these substances, governments are loathe to allow them to be distributed in the disaster zone in a haphazard fashion. Standard delivery channels of gasoline, diesel, and natural gas are stymied. Market forces are negated as the government seeks to restore order. Fuel must be trucked in by the entities engaged in first rescue, then recovery, then repair of damages.

Transportation Issues

The region affected by a disaster may be similarly misleading. The “remoteness” of an area has been suggested to explain some past demand surge events. Isolated populations, such as those in Darwin, Australia, or on Kaua’I Island in Hawaii, may pay significantly more for reconstruction following disasters. However, geographic remoteness may not be a fundamental concern. In terms of demand surge, the ability to supply an affected area determines its “remoteness.” In Hurricanes Andrew and Katrina, contractors and materials were also brought into the affected region. The relevant question then is not how far away, but more immediately, at what cost the materials, labor, equipment, and financing can be brought or ‘transported’ to the affected area. Thus, information on the capacity and costs of transportation and of temporary housing for workers seems more fundamental than distance. The particular region may also inform an assessment of the pertinent socioeconomic issues for demand surge.

After a "normal" catastrophe, such as the four hurricanes of 2004, insurers reached a 90% settlement rate after four months. Traditionally, insurers send adjusters to the worst hit areas first, and then work out to areas that were not as severely impacted. After Katrina, adjusters and others were banned from the heavily damaged areas, such as parts of New Orleans, so they had to start in the outer areas and work their way in. A settled claim, however, doesn't mean it's closed. A claim can be open for many months because the homeowner is rebuilding the home. Insurers do not just write a check for $200,000 and walk away, the payout process parallels the rebuilding. Still, the claims have been effectively settled. They have been adjusted, and insurers and policyholders have come to an agreement on the sum.

Permit Restrictions Can Result in Increased Costs

Although the demanded materials, labor, equipment, and financing may be available and readily transported, local authorities may restrict the free movement of supplies and prices. Authorities may choose to set prices or place ceilings through anti-price gouging laws. The migration of labor from outside an affected area may be restricted or entirely prohibited. Thus, demand surge may vary by region, not because of physical geography, but rather because of the fundamental questions of physically supplying an area and any restrictions on the flow of those supplies.
Delay in repairs drives up the cost of repairs. Delays can result from infrastructure damage, delay in building permit process, or a shortage of building inspectors.

Katrina highlights the unknown as well as underestimated exposures from extreme events. The sheer volume of homes needing adjusting, debris/damage removal and then building permits over-taxed the local government system. Political pressures, lawsuits, and coverage disputes tend to increase ultimate losses.

Like the peril and region, the year of an event may not be fundamental to demand surge. Rather, the year may be a proxy for issues such as materials supply and the capacities of transportation systems. For example, materials suppliers may now rely on just-in-time-supply chains, rather than inventories. Thus, the reconstruction after recent disasters may be more vulnerable to materials shortages than after disasters of twenty or fifty years ago. In regions with recently well-developed transportation systems, however, the ease of moving materials may offset the problem of smaller inventories. Again, the year *per se* may not provide fundamental information about demand surge.

The sequence, or timing, of events may also not directly affect demand surge. A single event, isolated in time and location from another event, might be seen as a standard disaster to which other disasters can be compared. Thus, it can be used in comparisons with the more unusual catastrophe-following-catastrophes or clustered events.

V. Enhancements and Endorsements to the Policy

An endorsement or rider is a written modification that either adds to or deletes one or more provisions of the general policy to serve particular needs. Insurance policies are written for the broadest market possible. To keep premiums affordable, only the coverage required by most people is included in the standard homeowners' insurance

policy. For instance, the standard policy does not include coverage for a home business, because most people don't have a home business.

Broker-agents must be familiar with policy enhancements and endorsements. It is necessary that broker-agents be well versed in this area so that they can communicate options to insureds and applicants. The purpose is that broker-agents, and in turn, insureds and applicants, will have an understanding of how these insurance coverage and policy options are available to help protect against underinsurance. This decision regarding which policy level to purchase is often the most important one an insured or applicant will make in determining how best to insure the structure. The replacement cost levels are significantly different from one another, and some may be available to a particular insured or applicant and some might not be, depending on a number of factors including whether a specific carrier offers the coverage and whether the property to be insured so qualifies.

Review of Significant Endorsements

Inclusion of the gamut of specific coverages in the standard policy would increase premiums even for people who do not have a need for that coverage type. There are more than 100 endorsements for the standard homeowner's policy. A list of common endorsements is presented here.

Blanket Endorsement

This is used in place of a scheduled personal endorsement. It covers multiple types of property without itemizing. The Blanket Endorsement covers what the standard policy does not cover such as jewelry, coins, etc...

Business Pursuits Endorsement

This endorsement extends liability coverage if an at-home sales business or other small franchise-type venture is operated from the home.

Credit Card Forgery and Depositors Forgery Coverage Endorsement covers

This covers the loss, theft or unauthorized use of credit cards. It also covers forgery of any check, draft, promissory note, etc... This endorsement has certain exceptions. No deductible applies.

Earthquake Insurance Endorsement

This is provided by the California Earthquake Authority and is available through most insurance companies. It is regarded as catastrophic coverage and usually has a deductible of 10% of the home's value.

Guaranteed Dwelling Endorsement

This covers the market value of the home. Often the market value is higher than the replacement cost.

Guaranteed Contents Endorsement

Covers the cost to replace a personal item even though the homeowner might have owned it for a number of years and contents have depreciated in value.

Home Business Endorsement

This endorsement extends liability coverage in the home if the homeowner owns and operates a business in the home.

Home Daycare Endorsement

Covers any liability claims if a daycare is operated from the home.

Income Property Endorsement

Extends liability coverage to areas of the home or premises that are rented.

Increased Limits on Money and Securities

Increases the coverage on money, bank notes, securities, deeds, etc...

Inflation Guard Endorsement

Allows the insurance company to automatically change the policy limit. This is done to cover the replacement cost of a home that is increasing with inflation to maintain the coverage at 80% of replacement cost. Not all companies offer this endorsement.

Ordinance and Law Endorsement

Extends coverage for additional costs of reconstructing the home under current codes. This usually applies to older homes.

Other Structures Endorsement

Covers larger more elaborate structures (gazebos, guest house etc.) that would exceed the standard 10% limit.

Personal Injury Endorsement

Extends liability coverage to the homeowner if he or she is sued for libel, slander, and defamation of character. This is covered in umbrella policies and may not be needed.

Sewer and Drains Endorsement

Covers damage to the finished or storage basement in the event of faulty sewer lines or drains. This is not covered by standard policies.

Scheduled Personal Endorsement

Sometimes called a "personal article floater" covers possessions such as jewelry, furs, stamps, coins, guns, computers, antiques, and other items that may exceed normal limits in a standard policy. Each item is valued, itemized and described. Excluded perils are listed. There is usually no deductible applied to this coverage.

Secondary Residence Premises Endorsement

Applies to a secondary residence.

Theft Coverage Protection Endorsement

Extends theft protection to the contents of the motor vehicle, trailer or watercraft without proof of forced entry.

Watercraft Endorsement

Extends personal liability and medical payments on small sailboats and outboard motor boats.

Flood Insurance

Required by the lender if the home is located in a flood plain. Depending on where the home is located it may qualify for flood insurance through the National Flood Insurance Program (NFIP). Flood insurance covers direct physical damage to the main home and its foundation and erosion damage. It does not cover structures extended over water and structures other than buildings such as pools and gazebos.

Catastrophe Coverages and Types of Replacement Cost

As discussed in a previous section, shortages occurring as a result of the demand surge phenomenon can be costly. The surge manifests itself as an increase in the cost of repair or replacement of damaged property that may occur following a large-scale disaster when many individuals and organizations vie for a limited supply of labor and materials needed for repair.

After a large disaster, construction material and labor can temporarily be in short supply, so construction costs are inflated. Demand-pull inflation is asserted to arise when aggregate demand in an economy outpaces aggregate supply. This is commonly described as "*too much money chasing too few goods*". More accurately, it should be described as involving "*too much money **spent** chasing too few goods*", since only

money that is spent on goods and services can cause inflation. This would not be expected to persist over time due to increases in supply. The term demand-pull inflation is mostly associated with Keynesian economics. The larger the impact of the event on the local economy is, the larger the effect of demand surge will be. For example, an event that causes a $5 billion insurance industry loss might cause demand surge to increase construction costs by 5%, while an event that causes a $40 billion insurance industry loss might cause demand surge to increase construction costs by 25%.

Building Ordinance Coverage Requirements

Building Code Upgrade

In certain circumstances the cost to repair, rebuild or replace will be impacted by costs associated with building code requirements. This occurs when building codes may have changed between the time the structure was first constructed and the time after a loss when the structure is to be repaired, rebuilt or replaced. It is necessary that broker-agents understand the availability of this coverage, what is covered under the upgrade and what is not, so that the information can be made known to insureds and applicants.

Ordinance and Law protects the insured when the undamaged portion of a house is not up to the current codes, ordinances, and laws of the political subdivision in which it is located. When a house damaged by fire, flood or other peril is to be rebuilt, all the electrical, pluming and air conditioning must meet current codes and standards. Ordinance and Law will cover the extra cost of updating these items without worrying about going over the total amount available for repairs. If a home is getting older (not just an antique/historic home), the homeowner is wise to seek this coverage.

Coverage provided for building code upgrades by a policy of residential property insurance shall be applicable to building codes, ordinances, standards, or laws only to the extent that those codes, ordinances, standards, or laws do not impose stricter standards on the property on the basis of the level of insurance coverage applicable to the property. (CIC 10102)

Types of Replacement Cost coverage

The levels of coverage for replacement cost policies are:

- Guaranteed Replacement Cost Coverage with Full Building Code Upgrade;
- Guaranteed Replacement Cost Coverage with Limited or No Building Code Upgrade pays replacement costs without regard to policy limits but limits or excludes costs resulting from code changes;
- Limited Replacement Cost Coverage With an Additional Percentage which pays replacement costs up to a specified amount above the policy limit;
- Limited Replacement Cost Coverage With No Additional Percentage which pays replacement costs up to policy limit only.

The coverages are shown in chart form in Section II. Being well-versed in the coverages available enables broker-agents to communicate effectively to insureds and applicants the features of each policy level and the kind of protection afforded. This will assist insureds and applicants in making an informed choice.

Replacement Cost Coverages and Limits

ACTUAL CASH VALUE COVERAGE pays the costs to repair the damaged dwelling minus a deduction for physical depreciation. If the dwelling is completely destroyed, this coverage pays the fair market value of the dwelling at time of loss. In either case, coverage only pays for costs up to the limits specified in the policy.

REPLACEMENT COST COVERAGE is intended to provide for the cost to repair or replace the damaged or destroyed dwelling, without a deduction for physical depreciation. Many policies pay only the dwelling's actual cash value until the insured has actually begun or completed repairs or reconstruction on the dwelling. Coverage only pays for replacement costs up to the limits specified in the policy.

EXTENDED REPLACEMENT COST COVERAGE is intended to provide for the cost to repair or replace the damaged or destroyed dwelling without a deduction for physical depreciation. Many policies pay only the dwelling's actual cash value until the insured has actually begun or completed repairs or reconstruction on the dwelling. Extended Replacement Cost provides additional coverage above the dwelling limits up to a stated percentage or specific dollar amount. Insured should read the policy for the additional coverage that applies.

GUARANTEED REPLACEMENT COST COVERAGE covers the full cost to repair or replace the damaged or destroyed dwelling for a covered peril regardless of the dwelling limits shown on the policy declarations page.

BUILDING CODE UPGRADE COVERAGE, also called Ordinance and Law coverage, is an important option that covers additional costs to repair or replace a dwelling to comply with the building codes and zoning laws in effect at the time of loss or rebuilding. These costs may otherwise be excluded by the policy. Meeting current building code requirements can add significant costs to rebuilding a home. Refer to the policy or endorsement for the specific coverage provided and coverage limits that apply.

Exclusions

Not all causes of damage are covered by common homeowners or residential fire policies. The homeowner must read the policy to see what causes of loss or perils are not covered. Coverage for landslide is typically excluded. Some excluded perils such as earthquake or flood can be purchased as an endorsement to the policy or as a separate policy. Homeowners should be encouraged to make contact with the agent, broker, or insurance company if there is any concern about any of the exclusions in the policy. Other items frequently ***not*** included in replacement cost coverage are, professional fees for architects and engineers, cost of permits, builder’s overhead and profit, interim financing charges, and mortgage payments while the home is being fixed.

Misuse of Extended Replacement Cost

Agents need to know that failure to insure the full value of the risk and relying on the “replacement cost” endorsement to make up the difference is inappropriate. This course of action harms the policyholder.

VI Basic Fire Policy

The basic fire policy can be found in California Insurance Code Sec. 2070.

All California fire policies are to be on the standard form, with no additions. No part of the standard form can be omitted except that any policy providing coverage against the peril of fire only, or in combination with coverage against other perils, need not comply with the provisions of the standard form of fire insurance policy; provided, that coverage with respect to the peril of fire, when viewed in its entirety, is substantially equivalent to or more favorable to the insured than that contained in such standard form fire insurance policy. (CIC 2070)

Regulations of interest regarding the basic fire policy include the following;

- It is not required to be used for reinsurance between insurers.
- It shall be plainly printed, no smaller than eight-point Century, with subheads in larger type
- Either the blanks in the form or those in an attached endorsement attached thereto shall be appropriately filled.
- It may show the term in any form which clearly states the period during which the insurance is to continue. The period shall begin and end on specified dates at 12:01 a.m. standard time, at the location of the property involved.
- By special agreement the provisions regarding appraisement or apportionment of loss may be waived and valuations may be agreed upon in advance of loss.
- The insurer may add any matter relating to its financial condition, directors, officers, shareholders and history, and the address of its home office and principal office in the United States.
- The insurer may add to the standard form, in red ink, any provisions required or permitted in its policies respecting limitation of liability of the insurer.
- There may be added to the standard form clauses providing for and defining the rights, duties and obligations of mortgagees, assignees and other parties having or acquiring an interest in the insured subject matter.
- Clauses may be added (a) Covering subject matter and risks not otherwise covered (b) Assuming greater liability than is otherwise imposed on the insurer (c) Granting insured permits and privileges not otherwise provided (d) Waiving any of the matters which may be waived and which avoid the policy or suspend the insurance (e) Waiving any of the requirements imposed on the insured after loss.
- Except as otherwise provided in the CIC articles, clauses imposing obligations on the insured and limiting the liability of the insurer may be attached to the standard form.
- Whenever a clause is inserted, or rider attached, affecting the standard form liability of the insurer for loss or damage by fire occasioned either directly or indirectly by hurricane, volcanic action or other disturbance of nature, the clause or rider shall be printed in red ink in type larger than small pica and at the head of the policy there shall be printed in red ink and in large boldfaced type the words, "This policy contains limitations of liability not permitted in the California standard form."
- After a covered loss insurer shall provide a free copy of his or her policy within 30 calendar days of receipt of a request from the insured. Insured is also entitled to a free copy of the policy on an annual basis.

(CIC 2072-2084)

ACV and RCV Differences

Replacement Cost is the amount it would take to replace or rebuild a home or repair damages with materials of similar kind and quality, without deducting for depreciation. Depreciation is the decrease in home or property value since the time it was built or purchased because of age or wear and tear. Many insurers require homeowners to insure their homes for at least 80% of the replacement cost. If the homeowner fails to insure for at least that, a penalty is applied to partial losses.

Under an open policy, indemnity is the expense to the insured of replacing the loss in its condition at the time of the loss. Its value is computed at the time of the loss (CIC 2051). An open policy is one in which the value of the thing insured is not agreed upon, but is left to be ascertained in case of loss.

With an open policy requiring replacement cost, there is no deduction for physical depreciation, so the measure of indemnity is replacement cost (the amount to repair, rebuild, or replace) or the policy limit, whichever is less. If the policy requires the insured to replace in order to collect the full replacement cost, the actual cash value is initially paid. Once the property is replaced, the insurer pays the difference, up to the policy limits. At least 12 months must be allowed for replacement, with additional six month extensions out to 24 months. Additional time beyond that can be allowed.

Rebuilding or replacement of the total loss at a location other than the insured premises is permitted. In such a case, the measure of indemnity is based on the replacement cost of the insured property and not on the cost to repair, rebuild, or replace at a location other than the insured premises (CIC 2051.5).

Actual Cash Value is the amount it would take to repair or replace damage to a home after depreciation. The cost to replace the insured item with an item of similar kind and quality with depreciation of the insured item deducted from the amount. Most standard home insurance policies cover home contents on an actual cash value basis.

Actual cash value (ACV) is described in the California Insurance Code (CIC) in the following way (CIC 2051);
Under an open policy with an actual cash value settlement option, payment is as follows;

- In case of total loss, the policy limit or the fair market value, whichever is less.
- In case of a partial loss, the amount it would cost the insured to repair, rebuild, or replace the loss less a fair and reasonable deduction for physical depreciation based upon its condition at the time of loss
  -Or-
  the policy limit, whichever is less.
- In case of a partial loss, deduction for physical depreciation shall apply only to components of a structure that are normally subject to repair and replacement during the useful life of that structure.

Exclusion and Limitations of Coverage

The ‘Basic’ or ‘Standard’ Fire Policy only covers the perils of fire, lightning and removal. It covers damage to the building and its contents. To get comprehensive coverage, the

property owner must seek endorsements that address his or her particular insurance needs.

The Standard Fire Policy has its wording standardized by law. As policy forms have evolved and been updated, the Standard Fire Policy is seen in some quarters as obsolete. However, it still holds a place of historical significance as the forerunner to many of the policy forms still used today. The Standard Fire Policy has four sections:
1) Declaration: Description and location of property, insured amount, name of insured;
2) Insuring agreements: Premium amount, obligations of the insured, actions the insured must take in the event of loss and resultant claim;
3) Conditions: Describes what suspend or restricts the coverage, such as an increase in the hazard with the knowledge of the insured;
4) Exclusions: Perils not covered under the policy, such as enemy attack, including action taken by military force in resisting actual or impending enemy attach.
SFP - COVERED PERILS: The SFP covered direct loss from the peril of fire, lightning and removal from premises (known simply as “removal”). Because the SFP was a named peril contract, it did not cover any other perils than those stated in the insuring agreement.
Fire: The peril of fire is defined as combustion sufficient to produce a spark, flame, or glow. Mere smoke, scorching, or charring is insufficient to establish the existence of a fire. The courts have distinguished between "friendly" and "hostile" fire. Friendly Fire: A friendly fire is one intentionally started and burns within the confines for which it was intended, such as a fire in a fireplace. A friendly fire is an event not covered by insurance, Hostile Fire: A fire becomes hostile when it was not started intentionally, or has escaped from the confines for which it was intended. A hostile fire is the only type of fire covered by insurance.
Lightning: The peril of lightning is defined as the natural discharge of electricity from the atmosphere and does not include artificially generated electricity such as from an electrical power surge. Lightning was one of the first perils added to fire insurance policies.
Removal: This provides insurance to property while it is removed from the residence premises to protect it from a covered peril. Property loss to undamaged property, while removed form the original specific premises to prevent further damage is insured for up to 30 days while removed.
SFP SETTLEMENT OPTIONS: As stated in the SFP contract, the insurer will not pay more than the least of the these four limits: 1) The amount of the policy; 2) The actual cash value; 3) The interest of the insured; or 4) The amount necessary to repair or restore the property (partial loss).
Insured's Obligations: 1) Provide immediate notice of the loss; 2) Protect property from further damage; 3) Separate damaged from undamaged property; 4) Inventory the loss; 5) Provide proof of loss within 60 days.

SFP Extensions of Coverage

Extended coverages can add the following seven perils to the SFP: 1) Windstorm; 2) Hail; 3) Aircraft; 4) Riot & Civil Commotion; 5) Vehicle; 6) Explosion 7) Smoke. The extended coverage perils can be easily remembered by using the acronym WHARVES.

Also in the SPF, the vandalism and malicious mischief endorsement covers willful and malicious damage to covered property with a 30-day limit, in the event the property is

vacant or unoccupied within a 30-day time limit. Vacant means that the building has no contents and no one currently inhabits the premises. Unoccupied means the building has some contents, but no one currently inhabits the premises.

Other structures can be on the same premises as the principal structure. A detached garage on dwelling premises is “appurtenant” to the dwelling. Some legal forms may refer to the “other structures” protected under the policy as “appurtenant structures.”

Standard Form Fire and FAIR Plan

The Standard Form Fire Policy is required in California. It includes information on the insurer, the structures to be insured, the policy effective dates, the coverage, and sections regarding concealment and fraud, uninsurable and excepted property, perils not included, other insurance, conditions suspending or restricting insurance, other perils or subjects, added provisions, waiver provisions, cancellation of policy, mortgagee interests and obligations, pro rata liability, requirements in case loss occurs, appraisal, adjusters, company’s options, abandonment, when loss payable, suit and subrogation. As broker-agents are selling this product, training is required so that they will have a full understanding of the policy and how it functions.

Insurance Code §2070, which requires fire insurance policies to provide coverage that, "with respect to the peril of fire, when viewed in its entirety, is substantially equivalent to or more favorable to the insured" than that contained in "standard form fire insurance policy" set forth in Insurance Code §2071. The §2071 standard fire policy does not contain an intentional acts exclusion, but Insurance Code §533 does. Section 533 states that "[a]n insurer is not liable for loss caused by the willful act of the insured . . ." The California Supreme Court has held that §533 is "an implied exclusionary clause which by statute is to be read into all insurance policies."

The FAIR Plan

The Fair Access to Insurance Requirements (FAIR) Plan is an association comprised of all insurers authorized to transact basic property insurance in California. Coverage is available to all California property owners, provided basic underwriting guidelines are met. The FAIR Plan issues insurance as a last resort, and should be used only after a diligent effort to obtain coverage in the voluntary market has been made. It is recommended that all FAIR Plan policyholders shop for a different insurer at least annually in order to search for coverage that is more comprehensive than that offered by the FAIR Plan. The California FAIR Plan does not estimate the cost to rebuild a home, or the cost of labor and materials in any area, or determine the appropriateness of the coverage requested. Instead, those are property owner responsibilities.

The purposes of the creation of the FAIR Plan are to do all of the following:
(a) To assure stability in the property insurance market for property located in the State of California.
(b) To assure the availability of basic property insurance as defined by the enabling chapter.
(c) To encourage maximum use, in obtaining basic property insurance, of the normal insurance market provided by admitted insurers and licensed surplus line brokers.

(d) To provide for the equitable distribution among admitted insurers of the responsibility for insuring qualified property for which basic property insurance cannot be obtained through the normal insurance market by the establishment of a FAIR Plan (fair access to insurance requirements), an industry placement facility and a joint reinsurance association. (CIC 10090)

Earthquake Coverage

The California Earthquake Authority (CEA) is a publicly managed, largely privately funded organization that provides catastrophic residential earthquake insurance and encourages Californians to reduce their risk of earthquake loss. In earthquake prone areas, the cost of this insurance is relatively high. In other areas, it is relatively inexpensive. The CEA uses the best science available to provide actuarially sound insurance coverage, while striving to make policies accessible and competitively priced. It offers a range of earthquake insurance coverage options available through participating insurance companies. The appropriate financial strength to meet its claims-paying obligations is maintained through the Authority's ability to issue debt. The CEA oversees and ensures claims are handled promptly, fairly and consistently. The potential for earthquake damage is minimized by the CEA's encouraging Californians to retrofit their homes and utilize other proven methods to mitigate loss from earthquake.

The enabling chapter of the California Insurance Code (CIC 10081) has the following to say about the availability of policies;

> No policy of residential property insurance may be issued or delivered or, with respect to policies in effect on the effective date of this chapter, initially renewed in this state by any insurer unless the named insured is offered coverage for loss or damage caused by the peril of earthquake as provided in this chapter. That coverage may be provided in the policy of residential property insurance itself, either by specific policy provision or endorsement, or in a separate policy or certificate of insurance which specifically provides coverage for loss or damage caused by the peril of earthquake alone or in combination with other perils.
>
> The offer required by the previous paragraph shall include coverage against risk of loss or damage from the peril of earthquake, in accordance with the minimum coverages required. The earthquake coverage shall be in accordance with the insurer's rules and rating plan, provided, however, that nothing contained in this chapter shall require an insurer to issue a policy of residential property insurance except in accordance with the insurer's usual underwriting standards. However, those standards shall not permit an insurer to provide a policy of residential property insurance unless the offer of coverage required [of earthquake insurance] is made (CIC 10081-10082)

VII Types of Basic Building Construction

Type of Construction

There are various methods used to estimate replacement cost. In this regard, it is necessary that broker-agents have an understanding of very basic types of building

construction. This will enable them to recognize the components, to ask the insureds and applicants the correct questions to ascertain the information necessary to factor into an estimated replacement cost. Replacement cost will differ depending upon the type of basic building construction. Basic building construction types are listed below;

Tilt-Up- A tilt-up building's walls are created horizontally in large slabs of concrete called panels. The panels are then lifted, or “tilted up”, into position around the building's foundation. In traditional forms of wall construction, the walls are made up of structural columns which are then faced with siding, brick, or stucco. Regardless which traditional approach is used, building the exterior walls is a time-consuming, multi-stepped process. This means the tilt-up structure's exterior wall is virtually finished when it is tilted into place.

Cinderblock- Concrete masonry unit (CMU) construction creates a structure that is economical, energy efficient, fire-resistant, and involves minimal maintenance. In addition, concrete masonry allows architectural freedom and versatility. The standard concrete block is a rectangular 8X8X16-inch unit (200X200X400 mm) made mainly of Portland cement, gravel, sand, and water and a pigment, if desired. The most common application of concrete masonry is walls for buildings. However, other uses for concrete masonry units include retaining walls, chimneys, fireplaces, and fire safe enclosures of stairwells, elevator shafts, and storage vaults.

Wood Frame- This is a building technique based around wooden structural members which provide a stable frame to which interior and exterior wall coverings are attached, and covered by a roof comprising horizontal ceiling joists and sloping rafters (together forming a truss structure or roof frame). The frame is covered by various sheathing materials to give weather resistance. Wood frame construction has become the dominant construction method in North America because of its economy. Use of minimal structural materials allows builders to enclose a large area with minimal cost, while achieving a wide variety of architectural styles.

Brick and Masonry- Masonry construction is the building of structures from individual units laid in and bound together by mortar; the term *masonry* can also refer to the units themselves. The common materials of masonry construction are brick, stone, and stucco. CMU construction was considered separately above. The materials used, the quality of the mortar and workmanship, and the pattern in which the units are assembled can significantly affect the durability of the overall masonry construction.

Metal Frame- Construction with a metal frame usually refers to a building technique with a "skeleton frame" of vertical steel columns and horizontal I-beams, constructed in a rectangular grid to support the floors, roof and walls of a building which are all attached to the frame. The development of this technique made the construction of the skyscraper possible. Steel studs can also be used for interior walls.

Combustibility Classifications

Building-construction classifications are based upon combustibility and fire resistance. The terminology used to define buildings has changed over the years, while the features of the construction methods have remained consistent. While building-design professionals may identify a building as a Type I, the fire service may refer to it as a fire-resistive building. Both terms correctly identify the building. National Fire Protection Association (NFPA) 220, *Standard on Types of Building Construction*, uses Type I, II, III, IV, or V to identify a particular type of building. The fire service typically has used other terms to identify a building, such as "wood frame" for a building that uses wood as its structural element or "ordinary" for a building constructed with noncombustible

exterior walls (usually masonry materials) and having a wood-frame interior. This type of construction also is often referred to as “Main Street, USA,” the type of construction that could be found on the main street of any small town.
Fire-resistance ratings for construction materials are established as a result of recognized and accepted testing methods. Standards such as those developed by the American Society for Testing and Materials (ASTM) are commonly used in building codes to test such items as fire walls, fire doors, and other fire-rated construction components. Agencies such as Underwriters Laboratories, Inc. (UL), Factory Mutual Global (FM), and other laboratories typically test construction materials and components in the form in which they will be used. As an example, a fire door would be tested with a fire-rated door frame as a total component. To use a fire-rated door with a lightweight wood frame around it would defeat the purpose, which is to stop a fire from spreading to the other side.

Limited combustible identifies structural materials that have about one-half the heat potential of wood (not to exceed 3,500 Btu/lb). As a point of comparison, Douglas fir equals 8,400 Btu/lb. Limited combustible also is used for materials that are essentially noncombustible but have a combustible coat, or cover, with a flame-spread rating below that of red oak (100). Limited combustible also is used where the entire structural member has a flame-spread rating below twenty-five, which is not changed by cutting through the material.
Treating material typically involves treating the exterior of the wood with a fire-retardant chemical, which will reduce the flame-spread rating to less than fifty. If the wood is sawed, it then has exposed portions without the fire-retardant treatment, thus negating the limited-combustible classification. Many building codes require structures, such as multiple-residence dwelling units, that may have exposed wooden joists to be painted with a fire-retardant paint. Some communities have required the use of fire-retardant paint in all areas that are painted, even when the building materials themselves are noncombustible. The New York City Housing Authority requires the emergency stairwells in highrise apartment buildings to be painted with fire-retardant paint instead of latex or enamel paints to eliminate the vertical spread of fire on the painted surface.
Noncombustible materials are those that will not ignite, burn, support combustion, or release flammable vapors when heated. While these materials cannot be ignited and will not support combustion, they may react to heat in a manner that could affect structural stability. As an example, unprotected steel is a noncombustible material, but it expands significantly when heated, which could either push a wall out or, if it is confined, twist and turn, with the possibility of structural members falling. In addition, at about 1,000°F (538°C), steel loses about fifty percent of its load-carrying capability.

Multiple Classifications or Interconnected Construction Types
Fire-protection considerations are generally based on the highest level of fire resistance or combustibility under fire conditions. As an example, if a wood-frame building is constructed next to a noncombustible structure with unprotected openings from the wood-frame building into the adjoining noncombustible building, then the fire service, for fire-suppression purposes, would consider the entire structure as a wood-frame building.

Buildings are classified according to five distinct kinds of construction, as listed below:

- Type I—Fire-resistive buildings
- Type II—Noncombustible buildings
- Type III—Ordinary-construction buildings

- Type IV—Heavy-timber buildings
- Type V—Wood-frame buildings

Type I—Fire-Resistive Buildings
Fire-resistive buildings may be used for many different occupancies, such as office buildings, shopping centers, or residential units. The critical structural requirement for Type I buildings is that all walls, floors, roofs, and supporting members must be made of noncombustible materials. In addition, any noncombustible material that is subject to stress from high temperatures (e.g., steel) must be protected from heat to avoid failure. Structural elements such as bearing walls, columns, beams, girders, trusses, and floors must be constructed in accordance with standards developed as a result of standardized fire-resistance testing. Fire-resistance ratings range from as little as two hours for interior bearing walls to four hours for beams, girders, and trusses. For fire-suppression operations, the advantage of Type I buildings is structural collapse is unlikely. In several instances, Type I buildings have burned well past the standard time for fire resistance but have not collapsed, even though the buildings suffered structural deterioration.

Type II—Noncombustible Buildings
Noncombustible buildings may be used for many different occupancies, such as office buildings, warehouses, and automobile repair shops. The critical structural requirement for Type II classification is that walls, floors, roofs, and supporting structural members must be made from noncombustible or limited-combustible materials. Structural elements may have from a zero- to two-hour fire-resistance rating. The concern for fire-suppression operations is that any unprotected steel structural elements, under fire conditions, could expand or relax, thus causing structural failure.

Type III—Ordinary-Construction Buildings
An ordinary-construction building may be used for many different occupancies, such as office buildings, retail sales stores, or mixed occupancy, such as a retail sales store on the first floor with a dwelling unit on the second floor. This construction method is often referred to as “Main Street, USA,” since it is representative of building types on main streets in many American small towns. The critical structural requirement for Type III classification is that the exterior walls must be constructed of noncombustible materials, most commonly masonry or stone. Interior walls and supporting structural elements are typically made from wood, which may have a fire-resistance rating of up to one hour. Fire resistance may be rated from zero to as much as one hour for interior bearing walls, support columns, beams, girders, floors, and roofs.

Type IV—Heavy-Timber Buildings (Mill Construction)
A heavy-timber building is generally used for manufacturing, storage, or other similar purposes that require a structure to support very heavy floor loads. Today, many of these buildings have been converted for other occupancies, including retail sales stores and residential dwellings. This method of construction also may be called “mill construction,” reflecting the intended use for the earliest of these types of buildings. The critical structural requirements are that (1) the exterior walls are constructed from noncombustible materials, typically masonry or stone, and (2) the interior support materials are made from large wooden timbers. Supporting columns for floors must be a minimum of 8” wide and 8” deep. Other support members must be a minimum of 4” by 6”. Floors typically are constructed of heavy planks that are 3” thick covered with a finished floor. Roofs are constructed of splined or tongue-and-groove planks that are 2”

thick. The strengths of Type IV buildings are the noncombustible exterior walls and the large wooden interior support systems, which have fire-resistance ratings that range from one to two hours. Concerns for this building type are the possible void areas created during renovations (which are not allowed in this type of construction) and openings in the floors for items such as conveyor belts, freight elevators, and other power transfer systems, which can allow for rapid fire and smoke spread between floors.

Type V—Wood-Frame Buildings

A wood-frame building may be used for many different purposes, such as single-family dwellings, multiple-family dwellings, restaurants, or retail sales stores. There are five distinct methods of wood-frame construction: log, post-and-beam, balloon, platform, and plank-and-beam. The structural elements, as the name indicates, are made from wood. Some other materials may be used as well, such as steel for a center carrier beam to support the floor joists for the first floor. Fire resistance is generally limited, but it can be required to be up to one hour for certain applications.

VIII Methodology of Determining Value

In order to successfully meet the requirements of Section 1749.85 (a) of the California Insurance Code and Section 2188.65 of the California Code of Regulations, a Property and Casualty Broker-Agent, and Personal Lines Broker-Agent must have significant knowledge in the proper methods of estimating the replacement value of structures. Specifically, the Property and Casualty Broker-Agent or the Personal Lines Broker-Agent that transacts, negotiates or sells homeowners' (HO) insurance would be required to complete a minimum of three hours of homeowners' insurance valuation training. With this training these agents will be able to explain various levels of coverage under a homeowners' insurance policy, have an understanding of the elements that comprise the value of a dwelling and convey this to the insured and make recommendations of the appropriate levels of coverage.

Insurable Replacement Cost

"Insurable Replacement Value" represents the replacement or reproduction cost of the insurable improvements. It is not a "Value", but rather a Cost Estimate that makes no allowance for land value, depreciation, indirect costs, or developer's profits. As such, it is unrelated to Cash Value or Market Value. "Insurable Replacement Value" is normally defined as follows:

1) The value of the property that is recognized as insured under the provisions of the applicable insurance policy.

2) The value used by insurance companies as the basis for insurance. The replacement or reproduction cost of the property with materials of like kind and quality intended for the same use less deterioration and non-insurable items. This value is not market or cash value but rather it is entirely a cost concept.

Valuation Metrics

The need for accurate real estate valuation arises from the heterogeneous nature of property as an investment class: no two properties are identical, and all properties differ

from each other in their location- which is one of the most important determinants of their value. So there is no centralized bourse for the trading of property assets, as there exists for trade in corporate stock. The absence of a market-based pricing mechanism determines the need for an expert valuation of property. If the value is based on the market price, then it must also be based on the highest and best use of the real property. There are three general groups of methodologies for determining value. These are usually referred to as the "three approaches to value" which are generally independent of each other:

The sales comparison (market) approach- This approach compares a property's characteristics with those of comparable properties which have recently sold in similar transactions. The process uses one of several techniques to adjust the prices of the comparable transactions according to the presence, absence, or degree of characteristics which influence value. As such, all sales comparison approach methods are variations on utility valuation (hedonic) measurements, which determine the value of something as the sum of the value of the various components which contribute utility.

The income approach- While there are quite a few acceptable methods under the rubric of the income approach, most of these methods fall into three categories: direct capitalization, discounted cash flow, and gross income multiplier. These approaches do not apply to replacement cost valuation and are beyond the scope of this book.

The cost approach- The cost approach says that a buyer of real estate will not pay more for a property than it would cost to build an equivalent. The cost of construction minus depreciation, plus land, therefore is a limit, or at least a metric, of market value. There are some fairly large assumptions embedded here. One of the basics is that there is a sufficient supply of buildable land so that construction is a viable alternative to purchase of an existing property. In urban areas today there are areas which are either so fully developed or so restrictive in their planning approvals that new construction is not an option because of the scarcity of land. A related question is whether the building in question is anything that would actually be built again in that market. If the trend of development favors, say, high volume warehousing, would anyone consider building a multi-story manufacturing facility? If the trend is to high density condominium buildings, would anyone consider building a detached house? The cost of constructing an obsolete building isn't considered relevant to market value.

In between new and totally obsolete various negative elements related to age, fashion and change (depreciation) will accrue. These are lumped into physical (wear, tear and deterioration), functional (look, feel, form and style), and locational (the influence of factors outside the property itself).

There are other methodological issues which can be problematic. How does one estimate cost? Is it based on reproduction of an exact replica or something that is judged to be functionally equivalent? Can cost even be estimated in an exact manner? When a project is put up to bid, is there not usually a range of prices offered for the same plans and specifications? Is the final cost of a project equal to the original bid? How should profit be treated?

Some maintain that the cost approach will normally be the highest of the three approaches. At the same time it is a truism that a project is only feasible if its projected cost is less than its completed value.

A. Proprietary Valuation Tools

Marshall & Swift/Boeckh, a leading supplier of local building cost information, residential and commercial property valuation services for the property and casualty insurance sector in the United States. Marshall & Swift provides real estate and insurance companies with an industry building cost database. Per information at the company's website, Marshall & Swift's cost estimating manuals and computer software valuation programs are broadly accepted in the real estate and insurance business. As markets evolve and costs change throughout the year, the Marshall & Swift database and valuation programs are updated quarterly to assure that its users have the most current building cost data available. Building cost information is available for the U.S., U.S. Territories and Canada.

B. Real Estate Appraisals

Real estate appraisal is the practice of developing an opinion of the value of real property, usually its market value. "Market value" is defined as the estimated amount for which a property should exchange on the date of valuation between a willing buyer and a willing seller in an arms-length transaction after proper marketing wherein the parties had each acted knowledgeably, prudently, and without compulsion.

Real estate appraisals can be used to determine replacement cost if they use the 'Components of a Structure Necessary to Estimate Replacement Cost' method explained in Section III of this book. The California Code of Regulations (CCR 2695.183) states that when a licensee conveys an estimate of replacement cost to the insurance-buying public, certain standards must be met. The estimate of replacement cost must include the expenses that would reasonably be incurred to rebuild the insured structure(s) in its entirety.

C. Insurance Company Valuation Software

There are other software developers besides Marshall & Swift that specialize in providing real estate valuation software to assist real estate and insurance professionals in gathering and organizing data into a usable format. By analyzing comparable sales, and building costs; and finally assembling the results into clear and concise reports, one or more narrative sections, or full narrative appraisals can be produced. Report design is what makes the product valuable to the end user. Systems are built into the software to lead the operator through the inputs, to check for calculation errors and to prevent invalid assumptions. Such programs rely on cost accounting, which can be viewed as translating the supply chain (the series of events in the production process that, in concert, result in a product) into financial values.

D. Contractor and Expert Estimates

The building trades are ubiquitous across the United States. Contractors doing the work and paying for materials and labor are a good source of information on product pricing. Ask three different contractors and a range of pricing will be evident. Caution must be taken in that, due to the localized nature of an individual contractor's work, pricing will

not necessarily reflect regional trends. Architects and design firms are also good sources of information on home replacement costs.

E. Cost per Square Foot Estimates

Replacement cost is often quoted as the cost per square foot it takes to rebuild a home. Per square foot figures are good as ballpark estimates; a starting point which can vary widely based on location and features of the individual home. Keep in mind that such estimates no longer meet the terms of the component requirement that is necessary for replacement costs estimates.

F. Insured's Opinion

The term replacement cost or replacement value refers to the amount that an entity would have to pay to replace an asset at the present time. The insured will generally not have an accurate assessment of the replacement cost of an asset because of sentimental attachment, lack of objectivity in pricing, or unfamiliarity with the market. The new regulations, effective July, 2011 rendered the homeowner's lack of sophistication in pricing moot. New regulations will set out requirements applicable to replacement value and replacement cost estimates to create a more consistent, comprehensive and accurate replacement cost calculation.

IX. Fire Mitigation

A **wildfire** is any uncontrolled fire in combustible vegetation that occurs in the countryside or a wilderness area. The wildland urban interface (WUI) is the area where urban and suburban development meets native, natural vegetated areas. It can be a beautiful place to live, but with the benefits of being near nature come risks and responsibilities. The Department of Forestry and Fire Protection (CalFire) serves the people and protects the property and resources of California. The CalFire website is http://www.fire.ca.gov/index.php

A. The Fire Problem

In California, the state's diverse ecosystems significantly influence the threat of fire and its associated risks. Fire has played an integral in shaping the state's landscape and natural resources over the millennia. Understanding this past helps predict future fire behavior and assess threats to natural resources and urban improvements.

History of Fire in California

In terms of assessing the ecological role of fire, experts typically view the pre-settlement period (prior to 1700) as the time when the "natural" fire regime standard developed. During this period, both lightening and people were responsible for causing fires. As was common for indigenous peoples throughout the world, Indians in what was to become California historically set fires to alter plant and animal populations, facilitate the collection of desirable species, and protect their villages from uncontrolled fire. While broad climate changes are partially responsible for significant variations in fire

over time, Native Americans have been present in the state long enough to exert their own evolutionary force on fire patterns, supplementing and altering the long-term influences of lightning fires. Beginning first with Spanish missionaries, then with trappers and miners, and finally with westward expansion due to the railroads, the settlement period (after 1700) saw significant changes in land use. Livestock grazing, water and timber utilization, farming, mining, and other human activities altered vegetation and brought new fire sources. Changes in fire regimes greatly accelerated after the 1850s, as large influxes of settlers dramatically altered the landscape (Leiberg, 1902*).* Early photographs depicting settlement activities show the extent and nature of these changes (Gruell, 2001). Starting in the early 1900s and accelerating after the formation of the USFS and the State Division of Forestry, now the California Department of Forestry and Fire Protection, organized fire suppression came to define the modern era of fire management in California. Today, land use changes, population growth, development, fire suppression methods, and variations in climate continue to influence the nature and size of fires and how they interact with the natural environment.

Fire is an integral component of many of California's ecosystems. However, uncontrolled wildfires are costly, putting lives and property at risk and compromising watersheds, open space, timber, range, recreational opportunities, wildlife habitats, endangered species, historic and cultural assets, wild and scenic rivers, other scenic assets, and local economies. The challenge is how to manage fires across California's diverse ecosystems to reduce both costs and losses.

Whether state, federally or privately owned, much of California consists of forests, grasslands, and other vegetated lands. Over the years, underbrush has grown substantially on these lands. Drought conditions and disease infestation fuel large and intense wildfires. There has been an increase in the number and size of communities that border these areas in the wildland-urban interface. Suppressing wildfires that threaten these areas costs significantly more because protecting homes and other structures is costly.

Catastrophic wildfires not only compromise the forests' ability to sustain timber, outdoor recreation, clean water, and other uses but also pose hazards to human health, safety, and property. Because smoke from such fires contains substantial amounts of fine particulate matter and other hazardous pollutants, the fires can pose substantial health risks to people living in this interface. The growing number of large wildfires and acres burned (coupled with the increasing complexity of suppression in the wildland/urban interface) has greatly increased the costs of suppressing fires.

B. Risk and Hazard Problem

The four major natural causes of wildfire ignitions are lightning, volcanic eruption, sparks from rockfalls, and spontaneous combustion. Many wildfires are attributed to human sources such as arson, discarded cigarettes, sparks from equipment, and power line arcs.

Fuel Type

The spread of wildfires varies based on the flammable material present and its vertical arrangement. For example, fuels uphill from a fire are more readily dried and warmed by the fire than those downhill, yet burning logs can roll downhill from the fire to ignite other fuels. Fuel arrangement and density is governed in part by topography, as land shape

determines factors such as available sunlight and water for plant growth. Overall, fire types can be generally characterized by their fuels as follows:

- **Ground** fires are fed by subterranean roots and buried organic matter. This fuel type is especially susceptible to ignition due to spotting. Ground fires typically burn by smoldering, and can burn slowly for days to months, such as peat or coal fires.
- **Crawling** or **surface** fires are fueled by low-lying vegetation such as leaf and timber litter, debris, grass, and low-lying shrubbery.
- **Ladder** fires consume material between low-level vegetation and tree canopies, such as small trees, downed logs, and vines and other invasive plants that scale trees may also encourage ladder fires.
- **Crown**, **canopy**, or **aerial** fires burn suspended material at the canopy level, such as tall trees, vines, and mosses. The ignition of a crown fire, termed *crowning*, is dependent on the density of the suspended material, canopy height, canopy continuity, and sufficient surface and ladder fires in order to reach the tree crowns.

Wildfires occur when the necessary elements of a fire (oxygen, heat, and fuel) come together in a wooded area: an ignition source is brought into contact with a combustible material such as vegetation that is subjected to sufficient heat and has an adequate supply of oxygen from the ambient air. A high moisture content usually prevents ignition and slows propagation, because higher temperatures are required to evaporate any water within the material and heat the material to its fire point.

Effect of weather

Heat waves, droughts, cyclical climate changes such as El Nino, and regional weather patterns such as high-pressure ridges can increase the risk and alter the behavior of wildfires. Since the mid 1980s, earlier snowmelt and associated warming has also been associated with an increase in length and severity of the wildfire season in the Western United States. However, one individual element does not always cause an increase in wildfire activity. For example, wildfires will not occur during a drought unless accompanied by other factors, such as lightning (ignition source) and strong winds (mechanism for rapid spread).

C. Laws that Impact the Mitigation of Risk and Hazard

On September 20, 2005, the California Building Standards Commission approved the Office of the State Fire Marshal's emergency regulations amending the California Code of Regulations (CCR), Title 24, Part 2, known as the 2007 California Building Code (CBC).

"701A.3.2 New Buildings Located in Any Fire Hazard Severity Zone. New buildings located in any Fire Hazard Severity Zone within State Responsibility Areas, any Local Agency Very-High Fire Hazard Severity Zone, or any Wildland-Urban Interface Fire Area designated by the enforcing agency for which an application for a building permit is submitted on or after January 1, 2008, shall comply with all sections of this chapter. New buildings located in any Fire Hazard Severity Zone shall comply with one of the following:

1. State Responsibility Areas.

New buildings located in any Fire Hazard Severity Zone within State Responsibility Areas, for which an application for a building permit is submitted on or after January 1, 2008, shall comply with all sections of this chapter.

2. Local Agency Very-High Fire Hazard Severity Zone.
New buildings located in any Local Agency Very High Fire Hazard Severity Zone for which an application for a building permit is submitted on or after July 1, 2008, shall comply with all sections of this chapter.
3. Wildland-Urban Interface Fire Area designated by the enforcing agency.
New buildings located in any Wildland-Urban Interface Fire Area designated by the enforcing agency for which an application for a building permit is submitted on or after January 1, 2008, shall comply with all sections of this chapter.

OBJECTIVE
The broad objective of the Wildland-Urban Interface Fire Area Building Standards is to establish minimum standards for materials and material assemblies and provide a reasonable level of exterior wildfire exposure protection for buildings in Wildland-Urban Interface Fire Areas. The use of ignition resistant materials and design to resist the intrusion of flame or burning embers projected by a vegetation fire (wildfire exposure) will prove to be the most prudent effort California has made to try and mitigate the losses resulting from our repeating cycle of interface fire disasters. The California Department of Forestry and Fire Protection (CAL FIRE) and the Office of the State Fire Marshal (OSFM) revised the mandatory effective date for those areas where local government has responsibility for wildland fire protection to July 1, 2008, to enable local government agencies more time to review and accept the fire hazard severity zone maps that will be presented to them formally after the new year.

FHSZ MAPS
The existing FHSZ maps are being updated pursuant to Public Resources Code Sections 4201 – 4204 and Government Code Sections 51175 – 51189. CAL FIRE completed the public hearings for the adoption of Fire Hazard Severity Zones (FHSZ) for those areas of California where the state has fiscal responsibility for wildland fire protection, known as State Responsibility Areas (SRA).

LOCAL VHFHSZ MAPS
CAL FIRE is preparing recommendations for Very High Fire Hazard Severity Zones (VHFHSZ) in those areas where local government agencies have Local Responsibility Areas (LRA) and will transmit those recommendations to local agencies in early 2008. During the fire hazard severity zone hearing for SRA, several local government officials asked for clarification of authorities and responsibilities associated with the adoption of these LRA VHFHSZ recommendations. Basic authorities and responsibilities for the LRA VHFHSZ are found in Government Code Sections 51175 – 51189. The purpose of this Government Code chapter is to classify lands in accordance with whether a very high fire hazard severity is present so that public officials are able to identify measures that will mitigate the rate of spread, and reduce the potential intensity of uncontrolled fires that threaten to destroy resources, life, or property, and to require that those measures be taken.

RESPONSIBILITIES
The Government Code chapter defines responsibilities for CAL FIRE and for the local agency. In summary, Section 51178 and 51181 defines the CAL FIRE Director's responsibility to identify very high fire hazard severity zones, transmit this information to local agencies, and to periodically review the recommendations. In part, Section 51178.5 and 51179 defines the local agency's responsibility to make the recommendation available for public review and to designate, by ordinance, very high

fire hazard severity zones in its jurisdiction. CAL FIRE is taking additional steps to ensure that the recommended very high fire hazard severity zones are as accurate as possible. Draft copies of the proposed VHFHSZ were under field review and validation after January, 2007. The ensuing update reflected the comments received during the SRA FHSZ public hearings that impact LRA zones.

LOCAL GOVERNMENT CONTACTS

Unit level CAL FIRE staff has been instructed to assist local agencies in the review of the draft map recommendations. In addition to the very high fire hazard severity maps, CAL FIRE has mapped high and moderate fire hazard severity areas. This additional information will be made available to local agencies as part of the draft data and then upon request subsequent to the Director's recommendation. The California Constitution grants basic authority for local agencies to adopt ordinances. This constitutional authority can be used to adopt high and/or moderate fire hazard severity areas or other wildland urban interface areas within the local jurisdiction. CAL FIRE Local Units also can address issues regarding the Chapter 7A standards. Health and Safety Code 13108.5 (c) and GC 51179 (b) provide insight on flexibility local agencies may have to modify fire protection building standards and defensible space requirements once VHFHSZs are adopted, based on local findings. While these sections of law do not provide exemptions for adopting the maps, they may provide authority to exclude fire protection requirements otherwise triggered by the map designations. The regulations contained in CBC Chapter 7A will be mandatory in SRA FHSZ. There will be a higher understanding that any new building constructed in a Wildland-Urban Interface Fire Area will be designed and constructed with the intent of lessening the vulnerability of a building to resist the intrusion of flames and burning embers projected during a conflagration or wildfire.

D. How to Provide Mitigation

Saving lives and protecting assets are two primary goals in defending property from wildland fires. Wildfire and human development have always been in conflict. Wildfire is a natural part of our environment and human development in wildlands is an accepted practice. This inherent conflict requires careful management in order to reduce or eliminate losses to life, property, and resources from wildfires. Some past management practices have failed to address the comprehensive nature of the human/wildfire conflict and have exacerbated conditions that can lead to more damaging fires. One example is wildfire suppression without aggressive management of hazardous fuels. Another is wildfire suppression without performance-based fire-resistant construction standards or fire-safe development requirements. Daily actions and decisions often fail to consider wildfire risks and the potential for resulting losses.

Mitigate the Risk and Hazard- Complete Fire Protection Approach

Managing the human/wildfire conflict requires a commitment of resources and a focused mitigation plan over the long term.

Managing the Human/Wildfire Conflict

The approach must be system-wide and include the following:

- An informed, educated public that takes responsibility for its own decisions relating to wildfire protection
- An effective wildfire suppression program

- An aggressive hazardous fuels management program
- Land use policies and standards that protect life, property, and resource protection
- Construction and property standards that provide defensible space

The University of California provides a 'Homeowner's Wildfire Mitigation Guide' with comprehensive instruction on wildfire preparedness. The guide can be found at-

http://groups.ucanr.org/HWMG/index.cfm

Mitigation imperatives

Included in the short list of mitigation imperatives;

i. Quick Fixes- Address vegetation close to the house. Removal of older, larger and dying plants, maintain plantings and eliminate plants (fuel) under windows, near decks, or at inside corners. Landscape with only 'fire-safe' plants (no junipers or cedars).
ii. Long-Term Actions- Homeowners should be familiar with their property layout. Firefighters must have access in order to defend the property; no rangy, random or scraggly growth. The roof structure and its composition are the greatest potential threat to the house. Wooden fences are great for screening and privacy but can readily ignite. Outbuildings often receive less/deferred maintenance when compared to a dwelling. They are a fuel source for wild fires and must be free of trash and debris. Wooden decks and porches are a fuel source; steps should be taken to reduce the risk of their ignition. Firewood storage should be far from the house. A long-term approach should be applied to landscaping; think carefully about grassy areas, replace monocots with deciduous trees. Windows and vents are potential entry points for fire- protective measures should be taken. Siding and soffit material must not be flammable or fire friendly. The ability of firefighters to protect a house is only effective if the equipment can be deployed. Homeowners should have the fire department inspect the property.

Fire Control

The standard and most common way to control a class-A fire (the combustion of a flammable material with oxygen and heat) is to remove heat by spraying the burning solid fuels with water from a fire-hose connected to a pump. Other methods of controlling a class-A fire would be to "smother" the fire with carbon dioxide, such as from a fire extinguisher, cutting off its oxygen.

In a wildfire, fire control includes various wildland fire-suppression techniques such as defensible space, opening the fuel ladder spacing, removing fuel in the fire's path with firebreaks and backfires, to minimize the brushfire from reaching new combustible fuel and spreading further.

Provide Mitigation

Protecting a building from wildfire takes a two-pronged approach:

- Remove flammable materials from around the building
- Construct the building of fire resistant material

The law (PRC Sec. 4291, CCR Sec. 1299) requires that homeowners do fuel modification to 100 feet (or the property line) around their buildings to create a defensible space for firefighters and to protect their homes from wildfires. Proper clearance to 100 feet dramatically increases the chance of the house surviving a wildfire. This defensible space also provides for firefighter safety when protecting homes

during a wildland fire. New building codes will protect buildings from being ignited by flying embers which can travel as much as a mile away from the wildfire. Ignition-resistant material standards are designed to prevent embers from igniting a building:

Building Materials Listings for Wildland Urban Interface Building Materials
The Office of the State Fire Marshal's (SFM) Building Materials Listing Program (BML) was originally created to mandate that all fire alarm systems and fire alarm devices be approved and listed by the State Fire Marshal prior to sale or marketing within the state. The program later was expanded to include many other materials such as: roof coverings, fire resistive wall and ceiling-floor assemblies, wall finish materials, fire and non-fire related hardware, insulating products, fire doors, fire dampers, electrical appliances and devices. Each product approval and listing is based upon an evaluation of test results that include an analysis of required product performance and reliability features. All manufacturers that want to list products in California must have those products tested and labeled by a SFM accredited laboratory. If a product does not qualify for listing but meets the standard of the “Materials and Construction Methods for Exterior Wildfire Exposure,” Chapter 7A of the California Building Code will be listed in the Wildland and Urban Interface (WUI) Product Handbook.

More Than One Tool

Each **tool in the toolbox** is chosen to support specific applications. A complete fire protection plan recognizes all of the elements discussed in this section to reduce the likelihood of fire in the urban-wildland interface. Complete fire protection as discussed in this section must become a way of life for those who choose to live in a wildland-urban interface. Sound engineering (building construction) and land use (defensible space and vegetation modifications) are foundations. These sometimes-inaccessible properties are prime candidates for

- Replacement cost coverage
- Ordinance and Law endorsement
- Additional Living Expenses; prudent to extend beyond twelve months if location warrants.

X. Broker-Agent Awareness of CCR 2695.182-.183

Documentation of Person Estimating Replacement Value

The California Code of Regulations Sec. 2695.182 states that when an estimate of replacement cost provided by an insurance professional in connection with a homeowner’s insurance policy, the licensee must document the following;

- Designation or status of the person permitted under Insurance Code Sec. 1749.85 to prepare the estimate. That is, the insurer underwriter or actuary or other person identified by the insurer; a broker-agent, a contractor, an architect, a real estate appraiser, or other person or entity permitted by code to make such an estimate
- For the person preparing the estimate the name, job title, address, telephone number, and license number (if applicable) is required

- The source or method used to make the estimate. This includes any replacement cost calculator, contractor's estimate, architectural report, real estate appraisal, or other source or method.
- A copy of inspections, reports, contractor's estimates, or other documents used to prepare the estimate of replacement value.

The licensee maintains records of the estimate for five years after coverage terminates. If the estimate of replacement cost is provided to an applicant to whom an insurance policy is never issued these provisions do not apply. The regulation imposes no duty upon a broker-agent to obtain from the insurer and maintain any information or document that in the absence of this regulation would not come into the possession of the broker-agent in the ordinary course of business.

Standards Used When a Licensee Estimates Replacement Cost

The California Code of Regulations (CCR 2695.183) states that when a licensee conveys an estimate of replacement cost to the insurance-buying public, certain standards must be met. The estimate of replacement cost must include the expenses that would reasonably be incurred to rebuild the insured structure(s) in its entirety. Methods used to determine replacement cost must use the ‘Components of a Structure Necessary to Estimate Replacement Cost’ method explained in Section III of this book.

An estimate to rebuild or replace the structure;

- Takes into account the cost to reconstruct the single property being evaluated, not the cost to build multiple, or tract, houses
- Is not based on the resale value of the land, or upon the amount or outstanding balance of any loan
- Does not include a deduction for physical depreciation

Estimates are to be created using current sources and methods. On at least an annual basis licensees will verify that the sources and methods used to generate the estimate of replacement cost are kept current to reflect changes in the costs of reconstruction and rebuilding

The California Department of Insurance recognizes that information, data or statistical methods used or relied upon by a licensee to estimate replacement cost may be obtained through a third-party source. Such information received by the Department will be treated as confidential information within the context of appropriate government code.

The licensee must provide a copy of the estimate of replacement cost to the applicant or insured. If the estimate is communicated by telephone, the estimate shall be mailed to the insured no later than three business days later. If no insurance coverage ensues, there is no obligation.

Estimates must itemize the projected cost for each element or construction component as specified in Section III of this book. Any underlying assumptions used in making the estimates must also be documented.

Revised or updated estimates of replacement cost are to be provided to the insured with any renewal offer. Inflation is not considered an element of revision and annual recalculations are not obligatory.

The information supplied to the applicant or insured shall be maintained for five years after the term of insurance expires. If no contract for insurance ensues the licensee maintains the file in accordance with his or her normal course of business.

Provision of an out-of-compliance replacement value estimate constitutes making a statement with respect to the business of insurance which is misleading and which by the exercise of reasonable care should be known to be misleading, pursuant to Insurance Code section 790.03 (unfair insurance practices).

When an insurer identifies one or more specific sources or tools that a broker-agent must use to create an estimate of replacement cost, then the insurer;

- prescribes complete written procedures to be followed
- provides the broker-agent with training and materials necessary to properly utilize the sources or tools according to the insurer's prescribed procedures
- is responsible for any noncompliance that results from the failure of the estimate to satisfy cost estimate requirements. The broker-agent is not the responsible party in such a case. If such noncompliance results from failure by the broker-agent to follow the insurer's prescribed written procedures when using the source or tool, then the broker-agent is responsible.

These requirements apply to communications by a licensee, verbal or written, with the sole exception of internal communications within an insurer, or confidential communications between an insurer and its contractor, that concern the insurer's underwriting decisions and that never come to the attention of an applicant or insured.

No provision of these requirements shall be construed as requiring a licensee to estimate replacement cost or to set or recommend a policy limit to an applicant or insured. The requirements do not obligate a licensee to advise the applicant or insured as to the sufficiency of an estimate of replacement cost.

The requirements do not limit or preclude a licensee from providing and explaining the California Residential Property Insurance Disclosure, explaining the various forms of replacement cost coverage available to an applicant or insured, or explaining how replacement cost basis policies operate to pay claims. Applicant or insureds are not barred from obtaining their own estimate of replacement cost from an entity permitted to make such an estimate.

In the context of this discussion the term "minimum amount of insurance" means the lowest amount of insurance that an insurer requires to be purchased in order for the insurer to underwrite coverage on a particular property.

An insurer may tell a homeowner that he or she must purchase a minimum amount of insurance that does not comport with replacement cost analysis. However, if such minimum amount of insurance is based in whole or in part on an estimate of replacement value, the estimate shall also be provided and shall comply with all applicable provisions of these requirements. The requirements shall limit or preclude an insurer from agreeing to provide coverage for a policy limit that is greater than or less than an estimate of replacement cost provided pursuant to the CIC guidelines