

FULLY DISCLOSED:
NATURAL HAZARD DISCLOSURE IN REAL ESTATE TRANSACTIONS

By

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Introduction

Cairo, Istanbul, and Baghdad have been important and populous cities for over a thousand years. Kaifeng, China, Nishapur, Persia, and Córdoba, Spain, important and prosperous in 1000 AD, are now relatively obscure (Klein, et al. 2003). Cities and their residents have suffered through fires, floods, famines, disease, war, and earthquakes and yet between 1100 and 1800 only 42 cities world-wide have been abandoned (Allenby, et al. 2005). While there are many factors that play into a city's ability to survive and prosper through external shocks, resiliency plays an important role (Klein, et al. 2003). Governments are interested in ways of increasing their jurisdictions' resiliency.

“Resilience” was first coined by C. S. Holling in 1973 to refer to an ecosystem's “ability to absorb change and disturbance and still maintain the same relationships between populations or state variables” (Holling 1973; Klein, et al. 2003). When resiliency refers to human societies or systems, an additional dimension is added to the definition: “the human capacity for anticipation and learning” (Klein, et al. 2003). A social system or institution can only be considered to be resilient or have resilient characteristics if the system, controlled by human minds, can consciously change and adapt to new or stressful situations.

“Resilience” can be applied to many levels and systems of society. Institutions, government organizations, businesses, communities, individuals, and households all play key roles in resiliency. Resiliency is dependent upon the responses of individuals and communities both before and after the disaster occurs. How resilient a community or individual is depends on the social, economic, and political conditions prior to an event and to the post-disaster responses, relief efforts, and mitigation efforts after the event as well as the strength and nature of the disaster (Tobin, et al. 2002).

Individual households and people can increase their own resiliency to natural disasters by educating themselves and by taking precautions. For example, a household can increase its resiliency by storing duplicate documents or files of important information at a separate location or by installing smoke alarms. Household level resilience can also include disaster preparation such as having an emergency kit on hand, creating a family evacuation plan and meeting area, and being insured against potential hazards. Another method of increasing household resiliency is the knowledge of whether one's home is located in a hazard prone area and if so, preparing for it.

Governments also implement strategies and techniques to increase their jurisdiction's resiliency to natural hazards. One legislative method of mitigating natural hazards is to require the disclosure of potential natural hazards during real estate sales. Natural hazard disclosure informs the buyers whether the property is located in one or more specified natural hazard zones, such as flood zones, tsunami inundation zones, or areas with a high risk of forest fire. With this information, the purchaser is able to make a more informed assessment of the potential risks of the property. This paper provides preliminary background research into real estate disclosure, in particular, disclosure of natural hazards.

Purpose

A subcommittee of Oregon's Interagency Hazard Mitigation Team (IHMT) is interested in improving Oregonians' resilience to natural hazards. They are interested in assessing the utility and viability of a mandatory natural hazard disclosure program for real estate transactions in Oregon. The IHMT consists of representatives from 19 Oregon state agencies that play a role in the state's natural hazard related policies and mitigation. The team was convened by the then Governor Kitzhaber in 1997 as a result of the devastating floods Oregon experienced in 1996. IHMT monitors local mitigation policies, programs, and capabilities. Members of the subcommittee include employees from Oregon Emergency Management, Oregon Department of Forestry, the Department of Geology and Mineral Industries, University of Oregon's Natural Hazards Workgroup, and the Department of Land Conservation and Development.

I am working with the subcommittee to:

- Investigate stakeholder opinions regarding natural hazard disclosure, and
- Provide background research on real estate disclosure in Oregon and other states.

In particular, this project is an attempt to discover what challenges and opportunities exist in the creation and implementation of a natural hazard disclosure program in Oregon. In order to answer this question, I: conducted interviews with representatives of stakeholder organizations, surveyed the real estate disclosure requirements of seven states including Oregon, and researched natural hazard related legislation in Oregon. This project discusses what I learned and, based on this information, presents recommendations of how to proceed with the creation of a natural hazard disclosure program for Oregon.

Organization of this Document

As can be seen from the table of contents, this document is organized into six chapters:

- **Chapter 1: Literature Review.** This chapter is an exploration of past research written about real estate disclosure. It includes the history and development of disclosure regulation and its purpose and effectiveness.
- **Chapter 2: Methodology.** This chapter describes the interview process and the other techniques used to obtain information. It also provides the reasons for the methods used.
- **Chapter 3: Oregon.** This chapter describes Oregon's experience with natural hazards and the legislation employed to lessen their potential effects. It also describes the seller disclosure form currently being used during real estate transactions.
- **Chapter 4: Disclosure Requirements.** This chapter examines the disclosure requirements of Alaska, California, Florida, Idaho, Hawaii, and Washington. California's disclosure requirements are

fundamentally different from the other states requirements and are therefore given a special focus.

- **Chapter 5: Stakeholder Interviews.** This chapter is a description of what was learned from the interviews with representatives of stakeholder organizations.
- **Chapter 6: Recommendations.** This final chapter considers the legislative and political considerations encountered in the previous chapters and recommends a process for the development of a natural hazard disclosure program.

Two Appendices follow the main text.

- **Appendix A** provides a list of websites for the disclosure forms and statutes of the various states.
- **Appendix B** provides a copy of the survey instruments used during the stakeholder interview process.

Chapter 1

Literature Review

This literature review is a discussion of real estate disclosure including its development and background, purpose, effectiveness, and timing. Much of the literature I found was a general review of current disclosure requirements. Because of the general nature of this chapter and the structure of this paper, I have chosen to place a discussion and review of California's natural hazard disclosure law in the California section of Chapter 4.

Real Estate Disclosure

Disclosure, according to the third edition of *The American Heritage Dictionary* is “the act or process of revealing or uncovering.” As it relates to real estate, disclosure is a state or local requirement where the seller of real estate must reveal property defects (Jenkins-Smith 2002). Natural hazard disclosure takes it to a further degree of specificity requiring the seller to inform potential purchasers of real estate if the property is located in one or more specified natural hazard zones, such as flood, tsunami, landslide, or wildfire zones.

Much of the literature available on real estate disclosure is written by lawyers or for law journals. In these articles, the authors tend to focus on legal issues, terms used in disclosure, or issues the disclosure should or should not disclose. Examples include: examining the legal requirements of seller's duties, who or what should be exempt from completing the form, the meaning of phrases such as “reasonably available,” and comparisons between requirements in the author's state and requirements in other states (Hendricks 2002; Rosenthal 1996). There seems to be less focus on the effectiveness of the disclosure; however, there are a few articles that examine different issues. In the rest of this chapter, I will explore the purpose, development, and technical issues of real estate disclosure.

Development and Purpose of Disclosure Requirements

While what a seller of real estate must or should tell a buyer has been evolving over the past century and a half, the most changes have occurred within the last 50 years. But it was not until the early 1990's that seller disclosure began to become more prevalent (Lefcoe 2004). The driving factor behind much of this change was decisions that arose out of court cases.

Before mandatory disclosure requirements, sellers were protected from lawsuits by the “mantra,” *caveat emptor* which meant, “buyer beware.” This is a distillation of the entire phrase, *caveat emptor, qui ignorare non debuit quod jus alienum emit*, or “let a purchaser, who ought not to be ignorant of the amount and nature of the interest which he is about to buy, exercise proper caution (p. 198).” The logic behind *caveat emptor* is that while the seller might know more about the property's problems, the buyer should be more knowledgeable about what would satisfy the buyer's needs better than the seller who might have different standards. However, “strict adherence” to *caveat emptor* put buyers in a very vulnerable position with

regards to hidden defects in the property. Without a full investigation, they have no way to learn the real condition of the property (Lefcoe 2004).

In 1850, lawyers in San Francisco tried to persuade the California state legislature to approve an implied warranty, or “pro-consumer stance” towards real estate which were the norm in civil law states. The legislature preferred *caveat emptor* because they considered warranties “as unmanly because [they] coddled complaining buyers.” Also, they considered *caveat emptor* as “one of the glories of the common law, in contrast to the flabby solicitude of civil law” (Lefcoe 2004).

Caveat emptor remained a standard practice in real estate long after its abandonment in other sectors. Beginning around 1900, courts in the United States were rejecting *caveat emptor* in favor of implied warranties for goods that were “sold by description and not inspected before sale (p. 210).” Car manufacturers were one of the first sectors to switch to warranties due in large part to court cases (Lefcoe).

Even as late as the 1950’s, sellers of real estate has not requirement to tell buyers about defects to the property. Sellers could be held accountable for “latent concealment” only if the seller physically attempted to cover up a defect such as placing a mattress over a hole to conceal dry rot or painting over watermarks to hide a leaky roof. They were not accountable if they simply kept their mouths closed.

Beginning in the mid-1960’s, this situation began to change. The courts began to add a condition to *caveat emptor*. Sellers were required to disclose known material defects that were not apparent or known to the buyer. Courts defined “known material latent defects” or similar phrases over time.

It was not until the early 1990’s that seller disclosure requirements became common. The driving force behind disclosure, politically, was the National Association of Realtors. Beginning in the early 1990’s, the National Association of Realtors “revved up its campaign for the use of property condition disclosure laws (p. 213).” The campaign was in response to unhappy buyers who were able to target the real estate agent along with the seller when litigating. By requiring full disclosure it was hoped that the amount of litigation regarding property defects would be reduced. Now some form of property defect disclosure is available in about two-thirds of the states and real estate agents across the country practice some form of it (Lefcoe 2004).

There were three other advantages of disclosure to realtors. Full disclosure requirements provided realtors with marketing advantages. Instead of “having to confess to embarrassing defects” some sellers decided to make improvements to their properties before selling. This makes the properties more attractive and the asking price can be set higher. This is advantageous to realtors since they usually receive a set percentage of the selling price and the more the house sells for the more money the agent receives. The second advantage was that, if the defects noted by home inspectors were described from the outset, the buyer was less likely to “bolt” from the deals. Obviously, agents do not want to lose a buyer from a potential sale. The third advantage is the potential for increased buyer satisfaction if the buyer felt that the agent told the truth about the property. Satisfied customers are more likely to use the agent again or refer their friends (Lefcoe 2004).

Stephanie Stern (2005) has a different view of the purpose of seller disclosure. While the primary purpose of disclosure from a realtor's perspective is protection against litigation, Stern states that its purpose is to "reduce informational asymmetries, create better matches between buyers and sellers, and increase the fairness of transactions (p. 6 of 43)." In other words, the benefit of disclosure is to reduce the information gap between the seller and the buyer. Stern's view is focused on benefiting the buyer rather than that of the agent.

Disclosure Timing Issues and Buyer Psychology

Consumer protection legislation, such as disclosure, is based on the assumptions that humans are "risk-adverse" and generally make rational decisions using the knowledge the person has about the issue and its alternatives (Palm 1981b). According to these assumptions, if a buyer presented with a disclosure form he or she will choose to buy if it is the option with the least risk and best-sounding argument. In terms of natural hazard disclosure, if this is true, a buyer would attempt to avoid buying property in a hazard area or take actions to lessen the potential hazard. In spite of this logical theory, some studies have suggested that people may prefer risks rather than avoid them (Palm 1981b).

If the assumption that providing additional information about the location of a hazard zone allows a buyer to make a rational choice, the buyer should respond by choosing not to buy property within the zone or by taking mitigation measures if the property is purchased. However, in a study about the impact of earthquake disclosure requirements on home buying choices in California, it was found that disclosure legislation did not have much impact on buyer behavior (Palm 1981b).

There were a number of factors that played into the ineffectiveness of the legislation. In this study, it was found that the primary factor in choosing to buy a property was its potential for resale value. The property was considered an economic investment rather than a family home. Also, if probability of a hazard occurring is low, people tend to treat it as if it did not exist. The role of the agent and his or her perceived credibility played a role in the effectiveness of information transmission. Many buyers are suspicious of certain types of information presented by salespeople. A fourth complication was the lack of specificity within the law itself. It did not provide a standard procedure for disclosure. Finally, the presentation of the information was frequently timed to produce the least impact on the buyer (Palm 1981b).

The overall effectiveness of the disclosure is strongly influenced by the timing of the delivery of the disclosure (Palm 1981b; Stern 2005). Psychological studies have shown that the later disclosure happens during a transaction, the less likely the buyer will back out of the situation or place a high value on the information. The buyers tend to be "vulnerable to information biases" from late disclosures and "tend to inadequately adjust their pricing to compensate for defects, and persist in transactions despite information that counsels for withdrawal" (Stern 2005, p. 3 of 43.) Buyers who receive the disclosure in the "eleventh hour" are less likely to stop the transaction. This does not mean that the buyers "ignore market information, personal preferences, and the magnitude of the defect; rather they undervalue these considerations in the face of latecoming negative information" (p. 3 of 43). If disclosure is made early in the process, before the potential buyer has made a verbal or written commitment, the buyer is more likely to value the disclosed information in better proportion to its import.

According to Stern, there are three types of psychological dynamics that affect the ability of the buyer to withdraw from a transaction, process information, and make commitments. “Behavioral commitment” is the phrase used to describe a person’s continuing persistence with an action. It occurs when a person takes an overt position or action either verbally or written. Sellers take advantage of this phenomenon when they use “bait and switch” selling techniques. In this situation, the seller presents a price to the buyer. After the buyer agrees to purchase, the seller finds a reason to increase the price or add additional conditions to the sale. Because of “behavioral commitment” many buyers continue the transaction even when the costs become greatly increased or the initial benefits of the situation disappear (Stern 2005).

The second psychological dynamic that is in play during a sale is the “sunk cost effect.” This refers to “the tendency to continue an endeavor once an investment in money, effort, or time has been made” (p. 10 of 43). This effect becomes stronger the closer to completion the project comes.

The third effect is “anchoring.” In regards to home buying, the buyer overemphasizes the listing price or other values made initially after the disclosure is made. Studies have demonstrated that buyers and even real estate professionals latch on to the “listing price anchor” and fail to adjust their prices accordingly. When disclosure comes late in the process, buyers are more likely to fail to negotiate discounts to the price (Stern 2005).

States require disclosure at differing times during the home buying cycle. About one-quarter of the states with real estate disclosure requires that the disclosure occur prior to the buyer’s offer to purchase. Alaska is an example of one of these states. In about half of the states disclosure can occur after the offer but before the acceptance of the offer by the seller. Oregon is an example of a state with this timing of disclosure. A third timing requirement occurs in the final quarter of the states. In these states, the disclosure can occur after the acceptance of the contract. Washington, Hawaii, California, and Idaho are examples of this disclosure timing. California is at the extreme end of the timing continuum requiring that the disclosure be made “as soon as practicable” before the title transfer. No state requires the disclosure to be made when the buyer views the property. This is important because the seller’s disclosure is the only source of information about defects that has the potential to be accessed early in the transaction (Stern 2005).

Stern discusses two early timing models of disclosure that states could adopt. The first option is to have the state’s statute require disclosure prior to the offer. Eight states currently follow this model and the more successful states include some kind of mechanism for enforcing the disclosure is provided. In Rhode Island, an agent cannot give the seller the buyer’s offer until the buyer has received the disclosure. This “pre-offer” timing reduces the psychological dynamics that can affect the buyers decisions (Stern 2005).

The second model is more extreme and therefore more controversial. In this model, the disclosure is given at the “buyer’s initial point of contact or search” (p. 16 of 43). In other words, disclosure takes place when the buyer first views the property. Stern compares this model of disclosure to the timing and delivery of food and tobacco labels on products in the store.

Environmental disclosures tend to have a different effect on the buyer. Environmental disclosures cover conditions in or near the home such as radon, asbestos, or environmental contamination in the neighborhood. The combination of the buyer's perception of the risk, the "social amplification" of the risk due to the media, and the level of knowledge the buyer has about the subject, buyers may react strongly to the disclosure of environmental hazards even when the disclosure occurs late in the transaction. Stern poses the question "of whether structuring disclosure late in a transaction can mitigate or correct for public overvaluation of environmental risk, and if so, whether it is ethically or socially acceptable to consciously promote late disclosure for certain categories of hazards" (p. 19 of 43). She also states that, "to date, there is insufficient research on the relationship between the timing of information and risk perception for individual contaminants to draw any definite conclusions about timing" (p. 19 of 43).

Technical Terms

Every field has its jargon, legal terms, and other specialized phrases. Disclosure and real estate is not an exception. Many of the terms have been defined over years of court cases. It is beyond the scope of this paper to begin to describe all the legal and commonly used words and phrases that appear in real property transactions. Here are a few I have chosen to include. These words are commonly seen on disclosure forms or in the text of the supporting statute and are sometimes argued about in court cases (Lefcoe 2004).

There are four words used in seller disclosure that express the scope of what the seller must do to complete the form: known, material, latent, and reliance. A seller's liability for improper or incomplete disclosure is based on how well he or she complied with the requirements for completing the form. These words also influence the buyer's ability to sue in response to undisclosed problems with the property.

When a state requires the seller disclose only "known" defects, the seller is only responsible for disclosing defects within his or her knowledge. If the seller has no knowledge about an item, there is no requirement for the seller to learn more about it (Lefcoe 2004).

"Material" usually refers to physical items or problems. However there is no "definite standard" that determines what is material in any particular court case; it is up to each case to figure out the meaning. Generally, the issue in the court cases handling "material facts" is determining "whether the fact is so material that it affects the value or desirability of the property" (Rosenthal 1996). "Material" usually covers structural defects, building code violations, and soil problems including fill, prior slides, or water seepage. In fact, there have been "a plethora" of court cases in California that involved soil issues (Rosenthal 1996). The boundaries of what "material" can include was defined in court case where the buyer discovered later that the house she had purchased had been the scene of a murder. She tried to prove that the murder depressed the house's value. One result of this case was that afterwards many states enacted legislation stating that psychological impacts are not material facts (Lefcoe 2004).

Under "latent" disclosure rules, the seller is required to disclose only hidden defects; it is assumed the buyer will notice the obvious defects. "Reliance" means that a buyer must be able to rely on statements of facts produced by the buyer or

real estate agent but not on statements of opinions. Statements of opinions include “sales puffing” by the broker or seller in order to interest a buyer (Lefcoe 2004).

Chapter Summary

Disclosure in real estate transactions provides the buyer with an opportunity to learn additional information about a property for sale. It also provides the seller with protection from some litigation. Disclosure is a relatively recent development in real estate. The maxim, *caveat emptor* or “buyer beware,” was the standard procedure before disclosure became common. Realtor Associations were the driving force behind many states’ seller disclosure legislation. The disclosure helps to decrease an agent’s responsibility if a seller provides incorrect information.

Disclosure requirements are a form of consumer protection. Consumer protection legislation assumes that a buyer will make rational decisions based on available knowledge and will choose the least-risky options. However, this is not always the case. Consumers’ choices are based on many influences, including, personal values, likelihood of a hazard event occurring, and timing of the disclosure.

Real estate disclosure, like any field, has its own terms and jargon that should be understood in order to know what is required. Important terms in disclosure include: latent, material, known, and reliance.

Chapter 2

Methodology

Background

The purpose of this project is to discover what the challenges and opportunities would exist in the creation of a natural hazard disclosure program in Oregon. The IHMT subcommittee on real estate disclosure is interested in increasing Oregon's resilience to natural hazards and wants to create a program that would increase public awareness of natural hazards and provide them with information that would allow them to make informed decisions when buying property. The subcommittee is interested in determining the challenges and opportunities associated with developing a natural hazard disclosure program.

This project originated from the need of the subcommittee to learn more about natural hazard disclosure. In this project I wanted to understand what challenges and opportunities would arise from the creation and implementation of a natural hazard disclosure program. In order to answer this question I looked at:

- how other states handle natural hazard disclosure,
- what Oregon stakeholders perceive to be the key issues of natural hazard disclosure, and
- how natural hazard disclosure would fit into Oregon's natural hazard and legislative situation.

A review of these three topics provided me with the materials to begin to understand the situation in Oregon. The application of a logic model and its analysis allowed me to present recommendations based on the review of these topics.

The rest of this chapter is divided into two primary sections. It discusses the data collection and analysis methods I used for this project. The methods used for data collection included:

- A review of Oregon's past and current situation including the current seller disclosure requirement, the Forestland-Urban Interface Fire Protection Act (also known as Senate Bill 360), seismic assessment requirements (Senate Bills 2-5), rapidly moving landslide risk reduction requirements (Senate Bill 12), Statewide Planning Goal 7 requirements, and natural hazard concerns in the state.
- Description of other states' disclosure requirements and established process and development, if available, and
- Interviews with statewide, stakeholder organization representatives.

These sources provided information about what disclosure can accomplish in its most basic form, potential issues and concerns stakeholders might have with it, and how it relates to the current legislative situation in Oregon.

My analysis of the data consists of recommendations regarding the insights and concerns of the stakeholder organizations and how a natural hazard disclosure program would fit into Oregon's current legislative situation. I created a logic model in order to present my recommendations in a clear and orderly fashion. The following analysis provides a detailed explanation of the logic model.

Data Collection

The Oregon Situation

Beginning after a series of devastating floods and landslides in 1996, the idea using natural hazard disclosure as a resiliency tool began to appear in state and local plans as one method of increasing resiliency. Even though disclosure was mentioned in several recommendations sections of various government reports it never proceeded to a stage beyond a recommendation. In 2006 the IHMT subcommittee was formed in order to learn about natural hazard disclosure and, if feasible, create a natural hazard program for Oregon.

In order to understand how natural hazard disclosure program would fit into the current situation it is necessary to examine current natural hazard-related legislation in Oregon. Oregon has several pieces of relevant legislation ranging from fires in the forestland-urban interface (Senate Bill 360) to rapidly moving landslides (Senate Bill 12) to seismic assessment of public buildings (Senate Bills 2-5) to Statewide Planning Goal 7 about natural hazards. Conducting a review of existing programs and evaluating the benefits and obstacles of establishing such a program in Oregon provided a means of gathering together and organizing important information into a cohesive package.

Description of Other States' Disclosure Requirements

Oregon is obviously not the only state to experience natural disasters and take actions to reduce risk. Examination of what other states have or have not done in regards to natural hazard disclosure provides insight into what may or may not work in Oregon. In order to learn how other states use natural hazard disclosure as a mitigation tool, I examined the natural hazard disclosure requirements and process in Alaska, California, Florida, Hawaii, Idaho, and Washington. Of these states, all except Idaho and Florida have some form of natural hazard disclosure that goes beyond the federally mandated floodplain requirement. The states were chosen due to their proximity to Oregon, the similarity of land use legislation, and/or the quantity of natural hazards types known to affect the state.

The examination of the states consisted of a search of the state's statutes and of the state's Realtor Association. I was interested in learning: which natural hazards were included, who was responsible for completing the form, the timing of the form, the types of responses permitted on the form, and what or who was the source of the information.

California was given special focus due to the fundamentally different nature of its natural hazard disclosure requirements and to the availability of research related to

California natural hazard disclosure and other information regarding the legislative history and process behind the disclosure. In addition to gathering similar information as the states listed above, California has a completely separate natural hazard disclosure form that is mandatory for most real property transactions. In the context of California, I was able to examine natural hazard disclosure's affects on property prices, how well it disseminated information, and its influence on minority groups.

Stakeholder Interviews

If the IHMT subcommittee decides to pursue natural hazard disclosure, it cannot work in a political vacuum and must collaborate with other stakeholder organizations. Therefore, I conducted eight phone interviews and one email interview with representatives of state-wide professional organizations in order to learn the opinions and values of potential stakeholder organizations and to learn which organizations would have a greater stake in the issue. The subcommittee selected organizations based on their perceptions of organizations they thought would be impacted or concerned by the implementation of natural hazard disclosure. Because the nature of this project was to obtain a general, over-arching view of natural hazard disclosure and its possibilities in Oregon, the selection was also limited to state-level organizations. The interview was deliberately designed to ask broad, general questions. The purpose of the interviews was not to test the respondents' knowledge on the subject but to learn about perceived issues, concerns, and benefits. The information gained from the interviews will also allow the subcommittee select and encourage specific organizations to work with them.

As the purpose of the interviews was to ascertain the general opinions of stakeholder organizations and not the specific opinions of individuals, I contacted people who were in the position to speak as a representative of the organization. Therefore all the interviewees held positions within their respective organizations that allowed them to speak for organizations. Titles held by the representatives included:

- President
- Board Member
- Director
- Lawyer
- Chief Executive Officer.

The IHMT Subcommittee wanted to learn the opinions of organizations that work in real estate, land use planning, and construction and development. In the end, the people interviewed represented the following organizations (in no particular order):

- Oregon Homebuilders Association
- Oregon Association of Realtors

- Northwest Insurance Council
- Oregon Association of Mortgage Professionals
- Association of Oregon Counties
- League of Oregon Cities
- Oregon State Building Codes Division
- Oregon Chapter of the American Planning Association
- Oregon Emergency Management Association (OEMA).

The selection process was informal and flexible. The IHMT subcommittee originally recommended to me a list of representatives and/or their organizations. Some of the people I then contacted, recommended other people to contact in their place. For example, my original contact at the Oregon Association of Mortgage Professionals works as a broker. He explained to me that a lender, who deals with the monetary aspect of a mortgage, would be more impacted by natural hazard disclosure than a broker. He gave me the name of a lender to contact. Only one person excused himself citing his lack of knowledge on the subject and did not recommend anyone else.

The representatives were initially contacted by email. I emailed them a cover letter explaining who I was, the intent and process of the interview, and the interview questions. (The complete text of the cover letter and the interview script is available in Appendix B.) I followed up with phone calls to ask if they were willing to participate and, if willing, to schedule a time for the interview. Some people were interviewed during this initial phone call; others were interviewed at a later, pre-arranged time. The OEMA representative was the only exception to this general procedure. My original OEMA contact disqualified herself citing lack of knowledge; however she connected me with an alternate contact within the organization. The new representative emailed me responses to the questions instead of being interviewed over the phone.

The intent of the interviews was to understand the general opinions of the professional, stakeholder organizations. Because of this, the questions were designed receive answers relating to basic attitudes, concerns, opinions, and interest levels to natural hazard disclosure. The questions were not designed to test the knowledge of the participants.

Four questions were asked of each representative:

1. What does your organization identify as strengths of natural hazard disclosure?
2. What does your organization identify as weaknesses of natural hazard disclosure?
3. What does your organization identify as opportunities presented by natural hazard disclosure?

4. What does your organization identify to be challenges of natural hazard disclosure?

After each interview, I wrote out a summary of the responses. From this, I was able to pull out key and reoccurring themes in the responses. The summary and key themes of the interviews are located in Chapter 5, “Stakeholder Interviews.”

Analysis

Logic Model

In order to present my final recommendations in a clear and understandable format, I have chosen to use a logic model. A logic model displays the recommendations in a clear, cohesive, and easy-to-understand format. A logic model is a chart that presents information in a visual format, showing the process of how inputs reach the desired outcomes.

My logic model (in Chapter 6 “Recommendations”) has four primary components. The first component, at the top of the chart, lists the goals or purpose of disclosure. The second component shows the assumptions of what effect disclosure will have. The third section illustrates the process and the tools or inputs will be used in order to accomplish the goals. André Leduc, my project supervisor, describes the third section as the motor that drives the process or the meat grinder into which inputs are placed, ground up, and come out as outputs, the fourth component of the logic model. The output section shows what should be the results of the process. Ideally, the outputs should match the assumptions.

Logic Model Analysis

The logic model only provides the bare bones of the process of developing a natural hazard disclosure program. An analysis of the logic model fleshes out the ideas presented in the model and explains the logic behind its creation. It ties together concepts, legislation, and potential political issues that were presented throughout the document.

Chapter 3

Oregon

Oregon's Natural Hazards

Oregon has experienced many natural disasters. The Federal Emergency Management Agency (FEMA) has declared 22 major disasters in Oregon since 1955; eight of them occurring within the past ten years (FEMA website). Most of these disasters have been the result of floods, winds, and winter storms, but in 1993 Oregon experienced two separate earthquake related disasters.

Disasters in Oregon can be divided into two categories: catastrophic disasters and chronic hazards. Catastrophic disasters are large, single, wide-scale events. Subduction zone earthquakes, locally generated tsunamis, and volcanic eruptions are the three most potentially devastating catastrophic events that could occur in Oregon. Chronic hazards occur relatively frequently and tend to have more localized impacts. Every year Oregon experiences windstorms, winter storms, wildfires, landslides, and flooding (ONHW 2004).

Different regions in Oregon experience different types of natural disasters. For example, Southwest and Central Oregon are more prone to wildfire than other areas. Lightening strikes in southwestern Oregon and northwestern California set off devastating wildfires in 2002. Collectively called the Biscuit Fire, almost 500,000 acres of mostly forestland was burned and, in the end, cost about \$153 million to suppress (Wilderness Society 2003). Tillamook County, on the other hand, is very vulnerable to floods. It experienced a series of devastating floods in the past decade. Between 1996 and 2000 flood loss to homes, businesses, and infrastructure cost the county over \$60 million (Tillamook County website).

This chapter will first explore Oregonians' perceptions of the risks of natural hazards. Next is a discussion of Oregon's State Planning Goal 7 and state legislation regarding natural hazards. Following that is a section about the City of Salem's Landslide Hazard ordinance. The final section describes Oregon's current real estate seller disclosure requirements.

Oregonian's Perceptions of Natural Hazard Risks

Oregon Natural Hazards Workgroup (ONHW) at the University of Oregon's Community Service Center in conjunction with Partners for Disaster Resistance and Resilience is surveying Oregon regions and counties about natural hazards. The intent of these surveys is to learn about the respondents' perceptions of natural hazard risks and what they have done, plan to do, or are willing to do to mitigate future risks. ONHW is currently distributing and analyzing these surveys. To date surveys have been completed for Hillsboro, Tillamook County, Clackamas County, and Douglas County, the northeastern Oregon region including Union, Wallowa, Baker, and Grant Counties, as well as a state-wide survey. This document is only concerned with the questions regarding Oregonians' perceptions of natural hazard risk.

The survey begins by asking whether the respondent or someone else in the household had experienced a natural disaster within the past five years. The Oregon survey indicated that 32% of the respondents marked “yes” to this question. For the most part, this is reflected in the regional surveys as well. In Douglas County 27.2% said yes, Clackamas County 32.8% yes, Hillsboro 35.2% yes, and in Northeast Oregon 29.1% marked yes. Tillamook County had an even higher positive response rate with 59.4% of respondents checking “yes.” Tillamook County is one of the most flood prone regions in the state and this high percentage of positive response reflects this (ONHW 2004).

The people who marked “yes” were then supposed to mark which natural disasters they had experienced. The top three chosen disasters for each survey showed some definite regional characteristics. Northeast Oregon was the only survey group to list drought as one of the top three disasters experienced. Flood was the most frequently experienced disaster experienced in Tillamook County. Windstorm ranked within the top three of all regions surveyed and was the most frequently cited disaster on the Oregon survey. Flood, earthquake, wildfire, and winter storm all made the top three lists of at least two survey regions. These four disasters were also the top-ranked disasters experienced by respondents to the Oregon survey.

The following question asked how concerned the respondent was about drought, dust storm, earthquake, flood, landslide / debris flow, wildfire, household fire, tsunami, volcanic eruption, wind storm, coastal erosion, and severe winter storm. The biggest concern in the Oregon survey was household fires. This is reflected in many of the regional surveys as well where concern for household fires was ranked at or near the top of the list of concerns. One reason for its consistent high ranking is its potential to affect every respondent surveyed. Other disasters are more dependent on the location of the respondent. For example, someone living in eastern Oregon has a low probability of experiencing a tsunami (ONHW 2002).

Even though approximately one third of the respondents experienced at least one natural disaster, concern for future disasters was relatively low. The Oregon survey showed that even for the highest ranked hazards, which include household fires, earthquake, and wildfire, Oregonians are for the most part only slightly concerned. This could be an indication that people are generally not very aware of the impact natural hazards have on the state (ONHW 2002). If this is the situation, public education and awareness should be part of any natural hazard related program.

Statewide Planning Goal 7

Oregon has 19 Statewide Planning Goals that articulate the state’s policies regarding land use and related areas. They were first adopted in 1973 and have grown to encompass the current 19 Goals that range from citizen participation and air, water, and land resources quality to energy conservation and land use planning (Oregon DLCDC website). The Goals oversee the use of the land in Oregon and require governments to consider all relevant Goals when making decisions. The planning program is administered by the Department of Land Conservation and Development (DLCDC).

The purpose of Oregon's Statewide Planning Goal 7, "Areas Subject to Natural Hazards," is "to protect people and property from natural hazards" (Oregon DLCD website). Goal 7 mandates that local governments must implement comprehensive plans (including inventories, policies, and measures for implementation) to reduce natural hazard risks to people and property. As a result, state and local agencies have an interest in learning about and creating effective methods of risk reduction.

The text of Goal 7 provides protocols for dissemination of new hazard information. These protocols were added during the 2001 amendments to the Goal. In this new amendment, DLCD is responsible for reviewing new information provided by federal and state agencies. If it is found that the new information is relevant and requires a local response, DLCD informs the relevant local jurisdictions of the new information. The local governments have 36 months to respond to the new information.

There are several steps that the local government must follow when it receives notice of the new information. It must evaluate the risks it presents to its population and property, it must allow residents the opportunity to review and comment on the new information, and then it must change plan policies and implementation measures as necessary.

Legislation

Senate Bill 360

Senate Bill 360, otherwise known as the Oregon Forestland-Urban Interface Fire Protection Act of 1997 (ORS 477.015 – 4 77.061), addresses fires that occur in areas where developed land and wild lands meet or, in other words, where buildings are surrounded by or adjacent to areas of natural vegetation that are prone to fire. As Oregon's population grows, the interface between forestland and developed land grows, which in turn increases the risk of fire in these areas. The purpose of Senate Bill 360 is to provide a "forestland-urban interface fire protection system" that keeps costs and risk-level low while providing efficient and effective protection of what we value. This legislation involves property owners, all levels of government, and the private sector in long term solutions (ORS 477.17(3)(a)).

The State Board of Forestry is mandated to take a lead role in the coordination of the process. The Board is also responsible for establishing a system for classifying the interface lands. The classification system must be structured so that differences in level of fire hazards across the state are recognized (ORS 477.023(3); ORS 477.025; ORS 477.027).

The Act is currently being integrated into the counties on a priority basis. When the Act is integrated into a county, a committee of local representatives is formed. This committee is responsible for investigating and classifying the interface areas in the county. The committee is then responsible for notifying impacted property owners and holding a public hearing. Property owners have up to two years to take actions to minimize or mitigate the fire hazard on their property. The owners obtain certification when the actions taken meet minimum compliance standards. If the property owners fail to take action or are not certified, they become liable for

the costs of a fire up to \$100,000 if a fire starts on their property (ORS 477.059; Oregon Natural Hazards Mitigation Plan, 2003).

Senate Bills 2-5

Senate Bills 2, 3, 4, and 5 are working in conjunction to create a statewide, seismic assessment of public buildings and methods for funding seismic rehabilitation. The Bills were passed in 2005 to help improve earthquake safety in public schools and emergency facilities (DOGAMI website). Senate Bill 2 (ORS 455.400) charges DOGAMI with the task of performing statewide assessments of all public schools, community colleges and education service districts that have building capacities of at least 250 people. DOGAMI must also assess all hospital with acute inpatient care facilities, fire stations, and police stations, sheriff offices and other building used by municipal law enforcement agencies.

In order to perform these assessments DOGAMI is using a technique known as rapid visual screening (RVS) using the standards provided by FEMA. The RVS results will be combined with other information about the buildings, such as, the types of soil and rock the building is located on. With this information, the buildings will be ranked into risk categories which are based on need. DOGAMI expects that the assessments will be performed from 2005 through 2007 (DOGAMI website).

Senate Bill 3, beginning in 2007, mandates the development of a grant program for local communities to use to improve their most vulnerable schools and emergency buildings. The funding for the grants will come from state general obligation bonds. Voters approved this use in 2002. The Oregon Office of Emergency Management will be responsible for creating and overseeing the grant program (DOGAMI website).

Senate Bills 4 and 5 direct the Department of Treasury to issue state bond funds in 2007. The bonds have already been approved by the voters. The funds from the bond of Senate Bill 4 will go towards financing seismic rehabilitation of public school buildings; Senate Bill 5 will fund emergency services buildings (Burns 2006; DOGAMI website).

Senate Bill 12

Oregon experienced serious flooding and landslides in the winter of 1996-97. After this disastrous season, the legislature passed Senate Bill 1211 to reduce the risk from future landslides in forested areas. In order to accomplish this, the Bill authorized the State Forester to prohibit forest operations in certain landslide-prone areas. In addition, the Bill created a task force whose goal was to find a practical, comprehensive, and equitable solution to the risks associated with landslides. The recommendations from the task force led the way to Senate Bill 12 (DOGAMI 2000; "State of Oregon Natural Hazards Mitigation Plan" 2006).

The purpose of Senate Bill 12 (ORS 195.250-195.260) is to reduce the risk to people of rapidly moving landslides. A rapidly moving landslide is defined as "a landslide that is difficult for people to outrun or escape" (ORS 195.250(3)). The Bill assigns responsibilities to local governments, state governments, and people who own property in landslide hazard areas. Among the list duties required, the local governments must amend its land use regulations to regulate development in

areas of “substantial risk” of rapidly moving landslides (ORS 195.260(1)(c)). The local government is also allowed to deny requests to issue building permits if, after a geotechnical report, all or most of the property is found to have high risk from rapidly moving landslides (ORS 195.260(1)(d)). In addition, if a landowner is issued a building permit, he or she must record with the county clerk that he or she will take no action against an adjacent landowners regarding rapidly moving landslides (ORS 195.260(2)(a)).

Several state agencies are also given responsibilities under the Bill. Most notably, the State Department of Geology and Mineral Industries (DOGAMI) was charged with mapping areas of the state. The quality and usefulness of some of the maps have been questioned by various organizations, including the Oregon Association of Realtors. DOGAMI is also charged with providing public education about landslides (ORS 195.260(4)(a)). The Forestry Department is responsible for regulating forest activities so that the risk of bodily injury or death from rapidly moving landslides is reduced. The Department must also assist local governments with the siting of permanent dwellings that are located on or near forestlands (ORS 195.260(4)(b)).

Salem’s Landslide Hazards

DOGAMI presented the City of Salem with the “Western Oregon Debris Flow Hazard Report” in March 2003. This report was created in response to the DOGAMI’s directive laid out in Senate Bill 12. The document identified approximately 42 potential rapidly moving landslides areas within Salem. The City already had a landslide ordinance that had been in effect since the end of 2000. However, this new information prompted city staff to update and revise the City’s maps and landslide ordinance (City of Salem website). The result is a point based system, in which property development requirements are based on a preliminary, map screening system. The following is a description of the system they created.

In Chapter 69, “Landslide Hazards,” of the Salem Revised Code (SRC), the City lays out a system to: review development applications for properties within landslide zones, assess the risk the development would have on slide susceptibility on the area, establish land use standards and requirements for land within slide zones, and mitigate risk in the landslide zones. In order to accomplish this, the city council adopted Landslide Hazard Susceptibility Maps which show the “general location of areas of low, moderate, and high susceptibility to landslides, and areas of known slide hazards” (SRC 69.050). All properties within a landslide hazard zone must receive a permit or permission before beginning such activities as: excavation, filling, construction of an accessory building over 500 square feet, or removing a tree on a slope of greater than 60% (SRC 69.030).

Salem has created a set of criteria, or a rating system, to assist public works staff in determining the level of site investigation necessary for the proposed project. In this system, the “slope and physiographic conditions at the site are evaluated in relationship to a proposed activity” (SRC 69.060). The evaluation uses a point system and the higher the number of points a proposed project receives in combination with physical values shown on the map, the more stringent the site investigation will be. The number of points is calculated by completing a “Graduated Response Table” as shown in Table 69-1 in the Code and below. The

first section of the table evaluates the “earthquake-induced landslide susceptibility” of the property and surroundings. The second section evaluates the “water-induced landslide susceptibility.” The third section assigns points for each type of activity proposed on the site. In the fourth part, the points assigned from each section get added together and the fifth section determines the risk and tells which level of site investigation must be completed before a permit might be issued.

Figure 1. Salem’s Landslide Susceptibility Table

TABLE 69-1 GRADUATED RESPONSE TABLE

Directions:

Step 1. Select one assigned point value from PART I and Proceed to PART II.

| PART I. References: Interpretive Map Series (IMS-17), Interpretive Map Series (IMS-18) | Earthquake-Induced Landslide Susceptibility Ratings |
|---|--|
| Physiographic and Geologic Categories | Assigned Point Value |
| Property identified under Very Low or Low Categories on IMS-17 or IMS-18. | 0 Points |
| Property identified under a Moderate Category on IMS-17 or IMS-18. | 2 Points |
| Property identified under a High Category on IMS-17 or IMS-18. | 3 Points |

Step 2. Select one assigned point value from PART II and Proceed to PART III.

| PART II. References: Interpretive Map Series (IMS-5), Interpretive Map Series (IMS-6), Interpretive Map Series (IMS-17), Interpretive Map Series (IMS-18), Interpretive Map Series (IMS-22 and Slope Contour Map | Water-Induced Landslide Susceptibility Ratings |
|---|---|
| Physiographic and Geologic Categories | Assigned Point Value |
| Property identified under Category 1 on IMS-5 & IMS-6 Reports. | 0 Points |
| Property identified under Categories 2 or 3 on IMS-5 or IMS-6 Reports. | 2 Points |
| Property outside the boundaries of IMS-5, IMS-6, IMS-17, IMS-18, and IMS-22 and between 15% - 25 % slopes, including 25%. | 2 Points |
| Property identified under Categories 4, 5a, 5b, or 6 on IMS-5 or IMS-6 Reports. | 3 Points |
| Property identified in IMS-22 Report. | 3 points |
| Property outside the boundaries of IMS-5, IMS-6, IMS-17, IMS-18, and IMS-22 and over 25% slopes. | 3 Points |

Step 3. Select one assigned point value from PART III and Proceed to PART IV.

| PART III. | Activity Ratings For Potential Site Impact |
|---|--|
| Type of Activity | Assigned Point Value |
| Installation or construction of any structure greater than 500 square feet | 1 Point |
| Duplex, Single Family, Manufactured Dwelling Building Permit (including Structural Expansion and Additions) | 1 Point |
| Multiple Family Building Permit (including Structural Expansion and Additions) | 2 Points |
| Partition | 2 Points |
| Grading (as an Independent Activity) | 3 Points |
| Subdivision, Planned Unit Development, Manufactured Dwelling Park | 3 Points |
| Schools, Hospital and Public Building Permits (including Structural Expansion and Additions) | 3 Points |
| Commercial and Industrial Building Permits (including Structural Expansion and Additions) | 3 Points |
| Tree removal on regulated slopes greater than 60% (as an Independent Activity) | 3 Points |

Step 4. Add Sub-totals From PARTS I, II, and III. Proceed to PART V.

| PART IV. Cumulative Score | | |
|---|---|--|
| Part I. Earthquake-Induced Landslide Susceptibility Ratings _____ Points | Part II. Water-Induced Landslide Susceptibility Ratings _____ Points | Part III. Type of Activity _____ Points |

Step 5. Determine Landslide Hazard Risk

| PART V. | Total Risk Assessment Policy Provision | |
|--|--|--|
| Category A - Low Landslide Risk (4 or less point value) | Category B - Moderate Landslide Risk (5 - 8 point value) | Category C - High Landslide Risk (9 or greater point value) |
| No Requirements. | Geologic Assessment * * If the Geologic Assessment indicates landslide hazards on the site, the director of public works or Building Official shall specify the requirements of a High Landslide Risk Assessment. | Geotechnical Report |

Source: SRC Chapter 69

As is shown on the table above, there are three risk categories a project can be assigned. The first category, Category A, has no additional requirements in the Landslides Hazards chapter of the Code. If the assessment places the project and property into Category B, a geologic assessment is required. If the project and property is considered to have high risk, the project is placed in Category C and a geotechnical report is required before the project can advance further.

A geologic assessment is an overview of the site's geologic conditions. Salem also considers it necessary to examine the geologic conditions of adjacent sites both for the effect the project might have on them as well as what affects the adjacent properties might have on the site in question. After the site investigation the investigator must: create a site map at a scale of 1:400 or larger that shows geologic conditions and the location of the proposed development, discuss unusual geologic processes on the site, identify any areas where human-occupied structures should not be placed, and discuss any recommendations, mitigation measures, follow-up studies that might be necessary, and geologic feasibility of the site for the proposed development. The geologic assessment requires the signature, certification number, and stamp of a registered geologist (City of Salem website).

A geotechnical report is more rigorous than a geologic assessment. It requires everything stated above plus more intensive site visits such as soil sampling and classification, identification of groundwater conditions, and the bearing capacity and/or shear strength of the areas where the foundation of the building is proposed. In addition, recommends for foundation design criteria must also be included. The site investigators must also supply an opinion as to the suitability of the site for the proposed development. It also requires the stamps from both a certified engineering geologist and a geotechnical engineer (City of Salem website).

Oregon Seller Disclosure Statements

Seller Disclosure Background

The original statute containing the seller disclosure statement was enacted in 1993. Its text and adoption was supported by the Oregon Association of Realtors. The purpose of the statute was to provide the buyer with a means of learning about the condition of the property from the seller. Interestingly, Hendricks (2002) calls Oregon's real estate disclosure form "arguably the most comprehensive" developed by any state because it covers "nearly every aspect of the condition and use of the property, ranging from whether it is subject to a life estate to whether it has ever been used as an illegal drug-manufacturing site (p. 112)."

The original statute allowed the seller to choose between completing a "disclaimer" or a "disclosure." A disclaimer in this situation is also known as *caveat emptor*. If the seller disclaimed, the buyer had seven days to revoke the offer if desired. If the seller chose to complete the disclosure form, the buyer had five days to revoke the offer. Lawyers recommended sellers complete the disclaimer (Farmer 2003). Real estate agents tended to prefer disclosure because of its use as a marketing tool to obtain the buyers confidence in the property. Realtors also thought that buyers reacted negatively to disclaimers, considering them a sign that there was something seriously wrong with the property (Lefcoe 2004). However, the "widespread" use of disclaimers defeated the purpose of having a disclosure statute (Farmer 2003).

In 2003, the Oregon Association of Realtors proposed changes to the statute in Senate Bill 515. The primary purpose of Senate Bill 515 was to remove the disclaimer option from the statute. The seller would be required to disclose the condition of the property or the buyer could revoke the offer any time until closing (Farmer 2003).

Senate Bill 515 also included other changes to the statute. It eliminated an exclusion of sellers who had never lived on the property from completing the disclosure. It added “unknown” and “not applicable” as possible answers to the questions. The form was also changed in order to increase readability and update or clarify some of the questions. The present edition of the seller disclosure form is the result of changes made by the Senate Bill (Farmer 2003).

Seller Disclosure Statement

The State of Oregon under Oregon Revised Statute (ORS) 105.462-105.490 requires sellers of real property to complete a property disclosure statement (located in ORS 105.464) to any buyer who makes a written offer to purchase the property. This statute applies to sellers of:

1. real property with one to four dwelling units,
2. condominiums,
3. timeshare properties, and
4. manufactured dwellings.

The Oregon disclosure statement’s content is similar to Washington’s disclosure form which is described in the next chapter. It begins with instructions to the seller. If the seller refuses to complete the form, the buyer has the right to revoke the offer anytime before the sale closes. Then the form lists those who can claim an exclusion from ORS 105.462-105.490. There are four categories for exclusion:

1. The property is being sold for the first time and has never been lived in,
2. The property is being sold by a financial institution,
3. The seller is a court appointed receiver, personal representative, trustee, conservator or guardian, or,
4. The property is being sold by a government agency.

After the list of exclusions, the buyer is told that the disclosures are made by the seller and based on the seller’s “actual knowledge” of the property. The statements do not represent the knowledge or opinions of involved financial institutions or real estate agents. The buyer has five days after receiving the disclosure statement to revoke his or her offer. The buyer can also waive the right to receive the disclosure statement. Additionally, the seller has the option to not complete the disclosure. If the seller chooses this option, the buyer has the right to revoke the transaction any time before the transaction closes (ORS 105.464).

The seller marks “yes,” “no,” “unknown,” or “NA” (not-applicable) to the questions in the disclosure. An explanation must be provided for any “yes” answer to a question marked with an asterisk. The majority of the questions are marked with asterisks.

The disclosure statement has nine sections. The first section asks questions about the title to the property, potential zoning violations and other irregularities, and special taxes. The second section is about the household water supply and system. The third section is about the property’s sewage system. A question comes next about the dwelling’s insulation. The fifth section relates to structural problems and concerns. Sixth is “Common Interest” and, as in Washington, is about homeowner’s associations. The eighth section, titled “General,” is what is relevant to this report. The first five of the eight questions in the section are about natural hazards or are related. Most are very similar to the questions in the Washington disclosure document:

- “Are there problems with settling, soil, standing water or drainage on the property or in the immediate area?”
- “Does the property contain fill?”
- “Is there any material damage to the property or any of the structure(s) from fire, wind, floods, beach movements, earthquake, expansive soils or landslides?”
- “Is the property in a designated floodplain?”
- “Is the property in a designated slide or other geologic hazard zone?” (ORS 105.464).

The final section of the disclosure asks if there are any other defects that the prospective buyer should know about. The document ends with signatures of the seller and the buyer.

Changes Recommended by the Coastal Natural Hazards Policy Working Group

In 1994, the Coastal Natural Hazards Policy Working Group recommended changes to the seller disclosure requirement. The Group felt that the natural hazard-related questions on the disclosure were not comprehensive enough for the buyer to make an informed decision and recommended revising the disclosure form to require the seller to disclose all known or potential natural hazards that affected or could affect the property. They also recommended the existing hazard questions located in the eighth section, “General,” be deleted and in their place create a new category called “Geotechnical” containing five new questions. The questions recommended by the Group were written as follows:

1. “Is the property or any portion of it within a designated hazard area or zone, including floodway, floodplain, land slide or slump area, groundwater or drainage hazard area, erosion or accretion hazard area, dune hazard area, or earthquake-related hazard area (amplified ground

shaking, soil liquefaction, fault zone, landslide potential, tsunami inundation)?”

2. “Is the property or a portion of it subject to special zoning or other land use requirements for development that are related to the above hazards (for example, hazard overlay ordinance or geotechnical report requirements prior to site development)?”
3. “Are all structures on the property built to current earthquake building code standards (zone 3)? If not, to what seismic zone standards are they constructed and in what year did the construction occur?”
4. “To your knowledge, has there ever been a geotechnical report prepared for this property to address the hazards listed in [the first question] above?”
5. “To your knowledge, is there a record of any past hazard-related damage to the land or improvements caused by the hazards in [question one] above or by wind or rain” (Coastal Natural Hazards Policy Working Group 1994)?”

While the authors of these questions had good intentions, I feel that the questions are too detailed and too technical for the average seller to answer accurately. Also, I feel that the knowledge of the property and hazards necessary to be able to answer the questions correctly would be outside the scope of many sellers’ abilities.

Chapter Summary

Oregon has a history of devastating natural disasters. Nearly one-third of the population experienced some type of natural disaster within the past five years. In spite of this, Oregonians tend to have a relatively low level of concern for future events.

Oregon has many statewide policies and legislature to try and increase Oregonians’ resiliency to natural hazards. Planning Goal 7 is a statewide policy with the intent of protecting people and property from natural hazards. There have also been several natural hazard-related Bills that have been or are being integrated into the state’s laws. Senate Bill 360 is an attempt to reduce the impact and frequency of fires in the forestland-urban interface. Senate Bills 2-5 created a program for the seismic assessment of school buildings and emergency facilities and methods of funding seismic rehabilitation in local jurisdictions. Senate Bill 12 is trying to reduce the public’s risk of loss in rapidly moving landslides. Salem’s “Landslide Hazard” ordinance is a program based on information provided under Senate Bill 12. It attempts to reduce the risk of landslides to people and property within the city.

Oregon also has a seller disclosure statement that was created and amended by the Oregon Association of Realtors. The seller completes the form to the best of his or her knowledge. The form contains five questions relating to natural hazards. These are: flooding, fill materials, damage to the structure from natural forces, and geologic hazards.

Chapter 4

Disclosure Requirements

Overview

In this chapter I will examine the seller disclosure statements and requirements for real estate sales in Alaska, Florida, Hawaii, Idaho, Washington, and California, in that order. I chose these states because of their proximity to Oregon, natural hazard concerns, or, in the case of Florida, land use regulations similar to Oregon's. In this chapter, I will provide a description of what each state requires to be disclosed, including:

- A description of the disclosure form, if available,
- Eligibility and exemptions from completion of a disclosure statement,
- Timing of the disclosure,
- Who prepares the disclosure,
- The source of the disclosure information, and
- Examples of the natural hazard related questions.

California's hazard disclosure requirements are fundamentally different from the other states mentioned. California, unlike the other states, has an entirely separate natural hazard disclosure form. In Alaska or Washington, for instance, disclosure questions regarding natural hazards are in the same document as questions about the property's plumbing system and title. In these states the seller is only required to complete the form to the best of his or her knowledge and ability (with the exception of Hawaii that requires the seller review government information for certain specific questions). In California, the natural hazard statement is completed entirely with the use of specially provided government documents. Because of this and because of the availability of previous research into various aspects of the California disclosure, the second half of this chapter will focus on California. In addition to the information given above, the California section will also include background on the history of the legislation and its effectiveness. At the end of this chapter is a discussion of all the states.

Figure 2 presents a quick glance at the similarities and differences between the states. Appendix A includes the web address of the disclosure forms, state statutes, or other relevant links.

Figure 2. Seller Disclosure Requirements for Six Selected States

| | Alaska | California | Florida | Hawaii | Idaho | Oregon | Washington |
|---|--|---|---------|--|--------------------|--|--|
| Disclosure Requirements have Natural Hazard Related Questions? | Yes | Yes | No | Yes | No | Yes | Yes |
| Separate Natural Hazard Disclosure Form? | No | Yes | No | No | No | No | No |
| Natural Hazard Types | *In a avalanche zone and/or flood plain? | *In special flood hazard area (any type Zone "A" or "V") designated by FEMA? | *None | *Within special flood hazard area as designated on Flood Insurance Administration maps? | *None | *Problems with settling, soil, standing water or drainage? | *Drainage problems on property? |
| | *Damage from flood, landslide, avalanche, high winds, fire, earthquake, or other natural causes? | *In area of potential flooding as shown on dam failure inundation map? | | *Within anticipated inundation areas designated on dept. of defense's civil defense tsunami inundation maps? | | *Material damage from fire, winds, floods, beach movements, earthquake, expansive soils or landslides? | *Material damage from fire, winds, floods, beach movements, earthquake, expansive soils or landslides? |
| | *Filed an insurance claim for environmental damage? | *In a wildland area that may contain substantial forest fire risks and hazards? | | | | *Does property contain fill? | *Does property contain fill materials? |
| | *Grading, excavation or filling on property? | *In a very high fire hazard severity zone? | | | | *Property in designated flood plain? | *Property in designated flood plain? |
| | *Permafrost or other soil problems causing settling, slippage, sliding, or heaving? | *In an earthquake fault zone? | | | | *Property in designated slide or other geologic hazard zone? | |
| | *Flooding, drainage, or grading problems affecting property? | *In a seismic hazard zone? (Landslide and/or liquefaction zone.) | | | | | |
| Source of Information | Seller's Knowledge | Government Information and Seller's Knowledge | | Seller's Knowledge and Government Information | Seller's Knowledge | Seller's Knowledge | Seller's Knowledge |
| Party allowed to complete form | Seller | Seller or third party consultant | | Seller | Seller | Seller | Seller |

| | Alaska | California | Florida | Hawaii | Idaho | Oregon | Washington |
|--|--|---|----------------|--|---|--|---|
| Types of Properties included | *Any single family dwelling | *1-4 dwelling units on a single property | | *1-4 dwelling units on a single property | *1-4 dwelling units on a single property | *1-4 dwelling units on a single property | *1-4 dwelling units on a single property |
| | *Two single family dwellings under one roof. | *Manufactured dwelling | | *Residential Condominium | | *Condominium unit | *Residential Condominium |
| | *Individual unit in a multi-unit structure | | | | | *Timeshare property | *Residential Timeshare |
| | | | | | | *Manufactured dwelling | |
| Exemptions/ exclusions to completing disclosure | *Initial sale of a real property that has never been lived in. | *Sale due to court order. Examples: foreclosure, eminent domain, bankruptcy | | *Sale to a co-owner | *Initial sale of newly constructed residence only requires questions 1-3. | *First sale of a dwelling never occupied | *If it is 1st sale of never occupied dwelling then Items 4 and 5 do not need to be completed. |
| | | *Sale due to default on mortgage, etc. | | *Sale to spouse, parent, or child of seller | | *Sale is by a financial institution | *Foreclosure or deed-in-lieu of foreclosure. |
| | | *Sale by a fiduciary in the course of the administration of a decedent's estate, guardianship, conservator-ship, or trust | | *Sale by devise, descent, or court order | | *seller is a court appointed receiver, personal representative, trustee, conservator or guardian | *Gift or transfer from parent to child or spouse to spouse. |
| | | *Sale from one co-owner to one or more other co-owners | | *Sale by operation of law. Examples: foreclosure, bankruptcy | | *sale or transfer is by a governmental agency | *Sale by representative of estate of decedent or by trustee in bankruptcy. |
| | | *Sale to spouse or other family member | | *Sale by lessor to lessee | | | *Transfer of interest other than fee simple. |
| | | *Sale or exchange to or from any governmental entity | | *Initial sale of new residential property | | | |
| | | | | *Sale of condominium apartments | | | |
| | | | | *Sale of time share interests | | | |

| | Alaska | California | Florida | Hawaii | Idaho | Oregon | Washington |
|---|---|---|--|--|--|--------|--|
| Can the Buyer Waive the Right to Disclosure? | Yes | No | Unknown | Yes | Unknown | Yes | Yes |
| Time by Which Seller Must Make the Disclosure | | As soon as practicable before transfer of title. | Before the contract for the sale is executed. | Up to 6 months before or by 10 days after acceptance of real estate purchase contract by buyer | Within 10 days of accepting buyer's offer. | | Within 5 business days of accepting buyer's offer. |
| Length of time buyer has after receiving disclosure to rescind offer | 3 days if disclosure is delivered in person or 6 days if it is delivered by mail. | If seller fails to provide disclosure before offer, buyer has 3 to 5 days depending on whether disclosure is delivered in person or mailed. | Within 3 days of receipt of disclosure or prior to closing, whichever comes first. | 15 calendar days | 3 business days | 5 days | 3 business days |

Alaska

The State of Alaska, in compliance with Alaska Statute (AS) 34.70.010 – 34.70.200, requires the completion of the “Residential Real Property Transfer Disclosure Statement” for all residential real property purchases. The seller is required to complete the disclosure statement before the buyer makes a written offer for the property. If the seller fails to provide the disclosure statement before the buyer makes a written offer, the buyer may terminate the offer within three days by delivering in person a written notice of termination, or within six days if the notice is mailed. The buyer can waive the right to disclosure. The disclosure statement provides a form called, “Waiver by Agreement” for this purpose.

The primary disclosure statement is six pages long. All disclosures are “to be made in good faith.” Searches of public records and professional inspections are not required for compliance with, or completion of, the disclosure statement. Following the primary statement form is an additional form to provide clarification and/or more details to items mentioned in the primary disclosure section and to make amendments or changes to the previous section. Following the addendum/amendment form is the “Exemption for First Sale” form. Under AS 34.70.120, a seller of a property that has never been occupied is exempt from completing the disclosure form. The final form is “Waiver by Agreement.” AS 34.70.110 states that completion of the hazard disclosure form can be waived if both the buyer and seller agree in writing.

The primary disclosure form covers more than natural hazards. It begins with descriptions of the property, including date of construction, building and foundation materials, type of building (single family, condominium, etc.), features of the property (cooktop, sauna, trash compactor, smoke detectors, etc.). The seller is required to check the boxes corresponding to the features the property has and circle the checked items that have known defects or malfunctions. The malfunctions/defects are then to be described on the addendum/amendment form. The next section is about available documentation for the property. The seller must check the boxes of the documents the seller has available for review including: current engineer/property inspection report(s) completed within the last 24 months, energy rating certificates, and deed restrictions.

The next section of the disclosure covers other property information, including: roof composition and whether it has leaked, the heating system, the water supply, the sewer system, average annual utility costs, issues with the title and setbacks or restrictions that might affect the property. This section also includes “environmental concerns” and “soil stability.” These are the sections that directly relate to natural hazards. Some of the questions in these sections require the seller to check yes or no to the following questions.

- “Are you aware if the property is in an avalanche zone and/or flood zone?”
- “Are you aware of any damage to the property or any of the structures from flood, landslide, avalanche, high winds, fire, earthquake, or other natural causes?”

- “Have you ever filed an insurance claim for any environmental damage to the property?”
- “Are you aware of any grading, excavation or filling on the property or any portion of the property?”
- Are you aware of any permafrost or other soil problems which have caused settling, slippage, sliding, or heaving?”
- Are you aware of any flooding, drainage, or grading problems that affect this property?”

The disclosure continues with questions about pests (ants, termites, vermin, etc.), remodels and improvements, pets and animals in the house, and potential noise disturbances from airplanes, dogs, traffic, neighbors, and so on.

It is interesting to note that the disclosure form is to be filled out to the best of the seller’s knowledge and professional assessment is not required (but encouraged.) The quality of the information on the form is highly dependent on the knowledge, education, and length of time the seller has owned the property. Also, the complete disclosure form is not required if the building has never been lived in. Just because a building has not been previously lived in does not mean that it is not subject to natural hazards.

Florida

Florida is an interesting state because the information I found regarding seller disclosure is conflicting and difficult to find. Some real estate websites mention mandatory seller disclosure requirements and list what must be disclosed while others comment on Florida’s lack of specificity (fundhomeinfo.com; Bay Area Real Estate Council website; Sarasota Florida Real Estate website). A search through the Florida Statutes does not help clarify matters.

According to Title XXXII, Regulation of Professions and Occupations, Chapter 475.278 of the Florida Statutes, real estate licensees are required to disclose their required duties to the person or people they will be representing. These duties include: being honest and fair, accounting of funds, keeping limited confidentiality, being diligent, and “disclosing all facts that materially affect the value of residential real property and are not readily observable to the buyer” (Florida Statute 475.278.(2)(c)4). There is no clarification of this statement.

Raymond J. Bowie, in an article written for the Naples News, discusses the confusion around Florida’s “new Disclosure Summary form” (Bowie 2003). He cites Florida Statute 689.26 which was subsequently changed to 720.401. 720.401 applies only to properties subject to homeowners associations. Bowie’s 689.26 applies to properties with homeowners associations, restrictive use covenants, a special tax assessment. Neither form mentions natural hazards or even the condition of the property. The focus of the document is to disclose the potential requirements and fees living with a home owners association demands.

Florida’s “required” seller disclosure seems to be based on two sources. The first is a 1986 Florida Supreme Court case that ruled that a seller cannot conceal any

material defects to a property. In the case, the buyer sued the seller to get his deposit back after it was discovered that the seller lied about the condition of the roof (“Seller Disclosure; Kovaleski 2006). Since then, sellers have been advised to disclose all the known defects to the property.

The second source of disclosure comes directly from real estate agents and brokers. The Sarasota Florida Real Estate website states that, “real estate brokers and agents in Florida have undertaken part of the responsibility of informing buyers about potential geologic hazards.” The geologic hazards subsequently described are flooding and potential landslide areas. In another article called “Disclosures” the real estate website discusses the difficulty of keeping up with “ever increasing mandatory disclosure obligations” and says that the “Natural Hazards Disclosure law requires the seller or seller’s agent to disclose whether a property is located in the following six zones.” The four zones that a subsequently listed are almost verbatim from the California natural hazard disclosure zone requirements (discussed later in the chapter) and include: flood hazard zones, inundation zones (due to dam failure), “very high fire hazard severity zones,” and “wildland fire areas” where the state has “responsibility for fire suppression.” California has six disclosure zones; the Florida real estate website merely deleted the two zones that relate to earthquakes and earthquake hazards.

Kovaleski (2006) states that due to the lack of specificity of Florida law it is best to consult a real estate attorney about what should be disclosed. He recommends disclosing any problems that stem from:

- “Malfunctions in the major systems of the home,”
- “Damage to property due to fire, floods, hurricanes and sink holes,”
- Environmental hazards,
- “Problems with termites or other critters” and,
- Work done without a permit.

It is possible to buy seller disclosure forms on the Florida Realtor Association website. These forms are created by the Association. As far as I can tell, these forms are for the benefit and convenience of the real estate agent and the seller to make sure the buyer has no cause for complaint at a later date.

The Florida model is reactionary. The disclosures are made so that the buyer will not be able to sue the seller at a later date. There is no discussion about the value of the information or what the seller could do with the knowledge.

Hawaii

The State of Hawaii, under Hawaii Revised Statute (HRS) 508D, requires a seller disclosure statement for the sale of residential real property. This includes property with one to four dwellings and a residential condominium or cooperative apartment. The seller must provide the disclosure to the buyer either up to six months before the acceptance of the contract or by ten days after contract acceptance. The buyer then has fifteen days in which he or she can rescind the

purchase contract. The buyer and seller can also agree to reduce or extend the time periods for delivery of disclosure and/or buyer examination periods. HRS 508D does not specify whether the buyer can waive the right to disclosure. Exemptions to the completion of a disclosure form include: sale to a co-owner, sale to a spouse, parent, or child, and sale as the result of the “operation of law” including bankruptcy and foreclosure.

In Hawaii under HRS 508D-9, the seller or the seller’s agent can complete the disclosure statement. The seller is required to use “good faith and due care” in the preparation of the disclosure statement. In order for the seller to complete the statement, he or she must use a combination of personal knowledge and information provided by government agencies or departments.

The State of Hawaii does not provide an actual disclosure form but it does specify what must be included on the statement. HRS 508D-11 states that the disclosure must contain statements telling the buyer that he or she may want to obtain professional advice, that the document is the representation of the seller and not the seller’s agent, and the buyer’s rescission rights. HRS 508D-15 is specific about four types of disclosures that must be made, two of which are natural hazard related. The other two are related to noise and military air zones. This section requires the seller to consult special hazard maps provided by the counties. The following natural hazard disclosures must be made when the property lies:

- “Within the boundaries of a special flood hazard area as officially designated on Flood Insurance Administration maps promulgated by the United States Department of Housing and Urban Development for the purposes of determining eligibility for emergency flood insurance programs,” and
- “Within the anticipated inundation areas designated on the department of defense’s civil defense tsunami inundation maps.”

Additionally, the seller must disclose any material facts about the property to the best of his or her knowledge and ability. Material facts are any condition that might affect the value of the property (HRS 508D-1).

While the State does not provide a disclosure form the Hawaii Association of Realtors does. They call it “Seller’s Real Property Disclosure Statement.” This form includes the elements required by the statute as well as other useful questions. It is interesting to note that the Realtor form states in large letters that the form must be completed by the seller only.

The Realtor disclosure form begins with questions about current or past defects or malfunctions of property features such as plumbing, appliances, or fences. Then there are a long series of “yes,” “no,” “not to my knowledge,” or “not applicable questions.” There are eight questions that relate to natural hazards. The questions themselves do not specify whether the seller is required to consult government information but in the instructions to the form the seller is told to answer to the best of his or her ability except where required by HRS 508D-15. These are the natural hazard questions:

- “Is there filled land on the Property?”

- “Has there ever been any settling or slippage, sliding, subsidence, or other soil problem?”
- “Has there ever been any drainage, water infiltration, seepage, flooding, or other grading problems?”
- “Is the Property located in a Special Management Area¹?”
- “Is Property located in a geothermal subzone or near a geothermal facility?”
- “Is the Property located in a tsunami (tidal wave) inundation area and/or flood zone?”
- “Is the Property located in a volcanic hazard Zone 1 or 2? (Only applicable to Island of Hawaii)”
- “Is there any existing or past damage to this Property or any of the structures from earthquake, fire, flooding, landslides, falling rocks, tsunami, volcanic activity, or wind?”

The form ends with questions about utilities, a blank space for written comments, and a few “condo specific” questions.

Idaho

The State of Idaho, under Idaho Statute (IS) Title 55 Chapter 25, requires sellers to disclose property condition when transferring residential real property. The seller is required to complete in “good faith” a seller property disclosure form located in IS 55-2508. Idaho does not require disclosure of any natural hazards that have or could affect the property.

The Idaho example is interesting because it begins by explaining the limitations of the information disclosed by the seller. This statement provides a more complete description of the limitations of the seller than any of the other states reviewed. The seller in Idaho, unless otherwise stated,

does not possess any expertise in construction, architectural, engineering or any other specific areas related to the construction or condition of the improvements on the property. Other than having lived at or owning the property, the Seller possesses no greater knowledge than that which could be obtained by careful inspection of the property by the potential buyer. Unless otherwise advised, the Seller has not conducted any inspection of generally inaccessible areas such as the foundation or roof (“Idaho Property Condition Disclosure Act” IS 55-2508).

The Idaho disclosure form is quite short and is primarily concerned with defects to the structure and condition of the property’s amenities.

¹ According to HRS 205A-22, “Special management area (SMA)’ means the land extending inland from the shoreline as delineated on the maps filed with the authority as of June 8, 1977, or as amended pursuant to section 205A-23.” SMA’s are areas where “significant attention” is paid to the potential impact of coastal development (Maui County website).

Washington

The State of Washington under Revised Code of Washington (RCW) 64.06 requires the seller of residential property to complete a “Seller Disclosure Statement.” The statement is located in RCW 64.06.020. The law was first enacted in 1995 and most recently revised during the 2003-2004 legislature (Washington Center for Real Estate Research 2004).

Completion of disclosure statements in Washington serves two functions: it is a “risk management tool” for the protection of sellers and “the real estate licensees who represent them” and serves as a vehicle for informing buyers of potential problems with the property (Washington Center for Real Estate Research 2004). It is required for “transfers of residential real property, including multi-family dwellings up to four units; new construction; condominiums not subject to a public offering statement, certain timeshares, and manufactured and mobile homes” (Seller Disclosure Statement). The buyer can waive the right to disclosure.

Disclosure is the responsibility of the seller, not the real estate agent or any other party. However, disclosure is required by law and real estate agents must be licensed by the State so they have “independent obligations of disclosure” (Washington Center for Real Estate Research 2004). While there is no specific state agency responsible for the enforcement of the law, the Department of Licensing oversees the real estate agents’ licenses. The seller has up to five business days (unless otherwise agreed) after a written purchase and sale agreement between the buyer and seller have been accepted. The buyer then has three days from the date of receiving the disclosure statement to rescind the agreement in writing if the buyer no longer wishes to purchase the property (Seller Disclosure Statement).

The Washington Seller Disclosure Statement is five pages. The seller is required to check yes, no, or don’t know boxes. If the question does not apply, the seller must write NA next to the question. If the seller marks yes next to questions with an asterisk, he or she must explain the answer and attach appropriate documents if available and not publicly recorded. Almost every question has an asterisk.

The disclosure statement begins by asking questions about the title of the property. Then it moves on to the water supply, irrigation, and sprinkler systems. The third item is about sewer or on-site sewage systems. The fourth and fifth items are about structural issues and systems and fixtures within the house. These include electrical systems, cooling systems, and appliances. If the property in question is a new construction, items four and five are not required. The sixth item is about “common interests.” This includes home owner’s associations or the equivalent associated with the property.

The seventh item is called “general” and contains four natural hazard related questions. These are:

- “Have there been any drainage problems on the property?”
- Does the property contain fill material?

- “Is there any material damage to the property from fire, wind, floods, beach movements, earthquake, expansive soils, or landslides?”
- “Is the property in a designated flood plain?”

The rest of item seven asks about hazardous materials, underground storage tanks, illegal drug manufacturing, and radio towers interfering with telephone reception. Item eight is about manufactured and mobile homes. The ninth item asks if there is anything else the seller should disclose. After the ninth item is a statement about where the buyer can obtain information about registered sex offenders.

Again like Alaska, the Washington disclosure form is completed by the seller and its quality could be affected by the length of ownership of the seller as well as the seller’s knowledge about and education level on the questions asked in the statement. However, the disclosure statement is intended to be a guide for the buyer. In Washington it is not part of any written agreement between buyer and seller nor is it to “be construed as a warranty of any kind by the seller or any real estate licensee involved in the transaction” (Seller Disclosure Statement).

Focus on California

California has a long history of a variety of natural disasters ranging from flood to fires to - what the state is well know for – earthquakes. The state has implemented various legislative measures in an attempt to mitigate for and reduce the severity of the disasters on human lives and property. In this section I will discuss the California disclosure situation and requirements. California has both a “regular” real estate transfer disclosure statement as well as a disclosure statement specific to natural hazards. The former statement is similar in content and form as most of the other state already discussed. It requires the seller to complete the form to the best of his or her knowledge and covers the condition of the amenities, appliances, and building condition of the property. The latter statement is fundamentally different from the other disclosures discussed. Because this natural hazard statement is so different from other disclosure statements, it has received some study and review by scholars and other interested parties. The history and reasoning behind its creation and development was documented and easily accessible. As a result of this comparative wealth of information, I have created a special focus section on California.

In this section, I will examine California natural hazard disclosure legislation. I will begin with a brief discussion of earthquake legislation from the 1970’s and a 1981 study of its effectiveness. Next I will discuss California Civil Code (CCC) 1103 which contains the mandatory natural hazard disclosure statements for real estate purchases. Then I will discuss the more standard real estate transfer disclosure requirements located in CCC 1102. Finally, I will end this section with constraints and opportunities of natural hazard disclosure in California.

California Earthquake Legislation

Alquist-Priolo Earthquake Fault Zoning Act

In February 1971, California experienced a 6.6 magnitude earthquake in the San Fernando region. Sixty-five people were killed and over 2,000 were injured. It also caused \$505 million in losses (“Significant California Earthquakes”). As a

result of this earthquake, California passed the Alquist-Priolo Special Studies Zone Act in March 1972. This act required the creation of zones a maximum of ¼ mile on either side of faults in the state. Approval from the city or county was necessary in order to construct new buildings in the zones.

According to Rita Palm, the purpose of the Act was to increase homebuyer awareness of potential earthquake damage to their property and to decrease or prevent new development located near or on faults (Palm 1981a). In her book, Palm presented photos of earthquake damage to homes and streets including cracked plaster and misaligned streets and sidewalks. The California Geologic Survey said on its website that its purpose is “to prevent the construction of buildings used for human occupancy on the surface trace of active faults” and that it only refers to surface fault rupture. Liquefaction, landslides due to earthquakes, and other non-surface fault rupture consequences are not addressed by this Act (California Geologic Survey website).

In 1975 an amendment to the bill was passed. This amendment required the location of the zone to be disclosed when a buyer was considering purchasing property in an earthquake zone. This amendment passed “virtually unopposed” by the California real estate lobby in spite of “the strength of the real estate lobby” (Palm 1981a). This happened for a couple reasons. The first was because of a change in the name of the zones. The zones were originally called “geologic hazard zones.” In the 1975 amendment, the zone name was changed to “special studies zones” (Palm 1981a). The second primary reason for the support (or lack of opposition) to the amendment was the exemption of mobile homes, condominium conversions, certain alterations and or additions to existing buildings, and new, single-family, frame homes that were not part of a “large development” from the geologic reports (Palm 1981a). In 1994 the zone name was changed again, this time to “earthquake fault zones.” Currently, wood or steel frame single-family homes up to two stories high in developments of four or fewer dwelling are exempt (California Geologic Survey website).

In order to study the effectiveness of the Alquist-Priolo Act, Palm conducted interviews with 207 homebuyers who purchased property within a fault zone, 77 people who purchased a home outside a zone but within 3 miles of one, and 74 real estate agents who had assisted these homebuyers. The properties and real estate agents’ offices were all located in Berkeley and Contra Costa County in California. The interviews took place between August 1978 and January 1979.

Palm discovered that not everyone who purchased property within a fault zone were aware that they had done so. Of those who were aware, 19 said that knowledge of the zone initially made a difference to their decision but then 14 of the 19 said that they reconsidered their decisions later. Three people tried to avoid buying in the zones and one person tried to use the location inside a zone as a bargaining chip. Palm also learned that for the property owners outside the zones “the existence of special studies zones had made no difference in the location decision” for the most part (p. 63).

Palm also made interesting discoveries regarding risk perception and earthquakes. Length of stay in California had the opposite effect of what one might guess. “In general, the longer the respondent had lived in the Bay area, the *less* likely he or she was to consider distance from a fault as a significant variable in the selection

of a residence” (p. 48). She continued to say that “those with earthquake experience were no more likely to believe that people living in special studies zones were more susceptible to losses” (p. 53). The respondents thought of large-scale destruction where location inside or outside a zone would make little difference. Palm, in her photographs shows more subtle damage to structures such as cracked plaster and misalignment of curbs. Subtle damage resulting from slow earth shifts along the fault lines is not what is usually thought of when earthquakes are mentioned.

Palm also interviewed some of the real estate agents who assisted the interviewed homebuyers. Of the 74 agents interviewed, 64 associated “special studies zones” with earthquakes. Nine agents thought the zones had something to do with flooding or “special studies” relating to transportation surveys. The agents also tended to make the disclosure during times when it would have the least impact such as “when the purchase contract was signed” (Palm 1981a).

The Act is still in effect today. Timing and method of disclosure has subsequently become standardized and regulated. Disclosure is required either in the natural hazard disclosure statement, discussed next, or in a local option real estate transfer disclosure statement. The disclosure must be made before the transfer of the title (California Geologic Survey website).

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act of 1990 (in Sections 2690-2699 of the Public Resource Code) mandates that the California Department of Conservation identify and map the state’s earthquake hazards including, ground shaking, liquefaction, landslides, and other seismic hazards. The maps are then distributed to the appropriate cities, counties, and state agencies. The maps only identify potential earthquake hazard areas so before approval of any project located within a seismic hazard zone, a geotechnical report must also be obtained. The Act also requires that the seller of real property within a seismic hazard to disclose this during the transfer of property. This requirement is now part of California’s Natural Hazard Disclosure Statement. The state is also required to provide technical assistance to local governments (“Seismic Hazards Mapping Act”).

The maps are prepared by geologists in the Department of Conservation. The maps cover about 60 square miles each. The methods for assessing and evaluating seismic hazard potential were standardized and applied to all maps. The maps are produced at a scale of 1:24,000 (California Geological Survey website). Over 160 communities have been zoned to date (Real 2006).

In 2003 the Department surveyed all the local jurisdictions they had mapped in order to learn about the influence the Act had on building projects and the effectiveness of the maps the Department had produced, among other things. They received 74 responses, giving them a 45% response rate. However, these responses represented 75% of the areas with larger quantities of new construction (Real Interview 2006).

In general, the Seismic Hazards Mapping Act had a positive effect on new building construction and site evaluation. Fifty-one percent of respondents thought that the Act greatly or moderately improved the safety of new buildings while 27% thought that there was only a slight improvement or no improvement. Also, the majority of

respondents, 66%, stated that the Act caused sites of proposed development to be more thoroughly evaluated for liquefaction and earthquake induced landslides. Half of the respondents agreed that the quality of the geotechnical project site investigation reports has greatly or moderately improved subsequent to the Act. Thirty-six percent said there was slight or no change.

The survey asked questions about cost effectiveness of mitigation measures and change in permit fees subsequent to the implementation of the Act. Twenty percent said that the hazard mitigation of approved projects had become very or moderately more effective after the Act's implementation. Thirty-nine percent said that there was a slight effect or no effect. In addition, only 8% said that fees for construction permits in zones of required investigation were higher than outside the zones. Eighty-one percent said the fees were not higher.

The Department was also interested in staff training and education about seismic hazards since the passing of the Act. The survey revealed that 43% of staff had received additional seismic training compared to 46% who had not. Thirty-nine percent said that the staff of the planning and/or building departments was better educated on seismic hazard while 55% said there was no or slight change. In addition, 30% said that the standards for practice of geotechnical and/or geologic practitioners in their communities had greatly or moderately increased. Thirty-nine percent said there was slight or no change in their standards of practice.

The maps are an important part of the Act. The Department was interested in the effectiveness of the maps in determining which new projects are included in a zone. Forty-one percent said that the maps were very effective and 31% said they were moderately effective. Only one quarter of respondents said that the maps were only slightly effective or not effective.

The Act has also influenced construction plans of projects. In answering the question, "where have construction project plans changed as a result of the site investigation findings," 24% marked structural design, 38% marked foundation design, and 23% marked site remediation.

The jurisdictions have used the seismic hazard zones in a variety of ways. Fourteen percent adopted the map(s) and text into their Safety Elements (discussed later in this chapter), 28% adopted the information into their building permitting process, and 45% said that an investigation is required in the zoned areas as a condition of approval for construction and grading permits. Only 5% said that the maps had not yet been adopted ("Effectiveness Survey" 2003).

These survey results show that the Seismic Hazards Mapping Act has had an effect on many aspects of building and permitting as well as some influence on the education and knowledge of the local jurisdictions' staff.

The Natural Hazard Disclosure Statement

Section 1103 of the California Civil Code, originally known as Assembly Bill (AB) 1195, came into effect on June 1, 1998. This Code requires sellers of residential property to give the prospective buyer a "Natural Hazard Disclosure Statement" if the property is located in one or more statutorily defined hazard areas or if the seller has actual knowledge that the property is located in a hazard zone.

This statute combines existing natural hazard disclosure requirements into a single document (Hendricks 2002).

This Code applies to all transfers of real property with one to four dwelling units on the property. Beginning January 1, 2000, sales of mobile homes or manufactured homes are also subject to the natural hazard disclosure requirements. It does not apply to court-ordered sales, foreclosures, eminent domain transfers, and other similar legal or governmental transfers.

Six hazard areas are required to be disclosed which cover floods, fires, and earthquakes. The hazards must be disclosed if the seller or seller's agent has "actual" knowledge that the property is in a hazard area or the local jurisdiction has included the property on special hazard lists or maps.

The six disclosure areas are:

1. A "special flood hazard area" which is designated by the Federal Emergency Management Agency (FEMA). This includes any type Zone "A" or "V."
2. An "area of potential flooding" which includes any land that could be inundated if a dam fails and which is designated by the state Office of Emergency Services.
3. A "very high fire hazard severity zone" which is designated by the California Department of Forestry and Fire Protection (CDF). Properties located in this zone are also subject to specific maintenance requirements.
4. A "wildland area that may contain substantial forest fire risks and hazards" that is designated by the State Board of Forestry. After this question, the disclosure states that it is not the responsibility of the state to provide fire protection to any building in the "wildlands" unless CDF has a cooperative deal with a local agency. It also says that the owner of this property is subject to certain maintenance requirements (California Civil Code 1103.2 (a)).
5. An "earthquake fault zone" designated by the State Geologist. This zone refers to development across "the trace of active faults."
6. A "seismic hazard zone" designated by the State Geologist. This zone consists of areas that may suffer from "strong ground shaking, liquefaction, landslides, or other ground failures" (AB 1195; Detwiler 1998; California Seismic Hazards Mapping Act; Alquist-Priolo Earthquake Fault Zoning Act; California Civil Code 1103.2 (a)).

The hazard statement comes with a warning to prospective buyers that the hazards could limit their ability to develop the property, obtain insurance, or receive assistance after a disaster. The statement also advises the potential purchaser that they "may wish to obtain professional advice" (AB 1195). In addition, the statement tells the potential buyer that the information on which the disclosure is

based, are estimates and “not definitive indicators of whether a property will be affected by a natural disaster” (California Civil Code 1103.2 (a)).

For the two questions about flooding and dam failure inundation, the seller has the option to check “yes,” “no,” or “do not know and information not available from local jurisdiction _____.” The fire-related questions and the earthquake fault zone question provide only “yes” or “no” options. For the seismic hazard zone question, the seller has the option of “yes (landslide zone),” “yes (liquefaction zone),” “no,” or “map not yet released by state” (California Civil Code 1103.2 (a)). If the provided maps are not of sufficient scale or accuracy to determine whether the property is within a hazard zone, the seller must mark the “yes” box (AB 1195).

The seller may also hire a private firm to investigate potential natural hazards. This is the situation for the majority of transactions (Troy, et al. 2004). After the signature of the seller and seller’s agent, they are supposed to indicate whether they completed the form or if it was done by a third party. If it is indicated that a third party completed the form, there is a space for the third party signature as well as a statement telling the buyer that the seller and seller’s agent have not verified this information or is personally aware of inaccuracies in the reporting (California Civil Code 1103.2 (a)).

If proper disclosure is not made, buyers have a three-day rescission period to terminate a transfer even after signing a contract (Troy, et al. 2004). The disclosure is also to be used only between the seller and the buyer. Other parties including insurance companies, lenders, or government agencies, cannot use the discloser “for any purpose” (AB 1195).

Official Hazard Maps and Lists

The official maps and lists used for the completion of the “Natural Hazard Disclosure Statement” come from various state and federal sources depending on the type of natural hazard. FEMA is responsible for producing the flood maps. State Board of Forestry designates wildland areas of high wildfire risk while the California Department of Forestry and Fire Protection is responsible for the “very high fire hazard severity zones.” The State Geologist produces earthquake fault zone and seismic hazard zone maps. The Office of State Emergency Services creates the dam failure inundation maps (California Civil Code 1103.2 (a)). Each county is then required to post notices of where the maps can be found.

The maps are created by different departments but they are produced following uniform standards that each department follows. Quality checks and controls are all performed internally and all maps are subject to independent peer review. When a new map is produced it goes through a three month public review process. At least one public meeting is held about the map. Usually, the meeting is populated by people with geotechnical knowledge and skills. They make suggestions and corrections as necessary. A three month revision session follows the review session; then the map is released and ready to use (Real Interview 2006).

The rate at which the maps are updated is variable. Maps are frequently updated when mapping work is being performed in an adjacent area. This means that some

areas will be updated in one year while others do not get updated for ten years (Real Interview 2006).

Zone maps in California are the first step of a two-step process for identifying sites with potential natural hazard problems. The zone maps are used as a screening tool rather than a defining tool. The location of a property on the map triggers an onsite investigation to see what needs to be done to mitigate the problem. The site investigation is performed by a specialized engineer or other person with appropriate training. With this knowledge, appropriate site mitigation actions can be taken to increase the resilience of any structures on the site. Because of this two-step process, California has not experienced issues with map quality or scale (Real conversation).

Safety Element of the General Plan

All cities and counties in California are required to have General Plans. Each General Plan contains seven mandated sections called “elements.” Each element is published separately. The city or county can add other elements to its General Plan in addition to the required ones. The seven elements are: land use, circulation, housing, conservation, open space, noise, and safety (City of Glendale website).

The safety element addresses all the natural hazards that could affect region. The jurisdiction must also make recommendations on how to manage the natural hazards. There is no legal requirement to follow them. Potential litigation provides the incentive for a jurisdiction to follow its safety element. Maps are also created to help define the hazards.

The safety element can be incorporated into local zones. This is not a requirement and not all jurisdictions have chosen to do so. However, in the jurisdictions that have chosen to do that, natural hazard maps can then be incorporated into zoning maps. Developers or other people handling undeveloped property are made aware at the beginning of the process that restrictions or mitigation requirements might be necessary with the development of the property (Real Interview 2006).

Why The Natural Hazard Disclosure Statement Was Created

There are two primary reasons why the natural hazard disclosure statement was created. The first was that California experienced many major natural disasters during the twelve years previous to the bill’s enactment. The disasters resulted in cries for money from local officials and cried for assistance from property owners. The second reason was a result of technological advances which increased the ability of the state to produce more accurate natural hazards maps, both in quality and quantity (Detwiler 1998). In addition, the disclosure statement combines or streamlines previously existing disclosure requirements into one form. For example, the floodplain disclosure was already required by federal law and previous bills required disclosure for properties located in seismic zones.

In 1995, after severe flooding, a bill was introduced to the state senate to expand the number of hazards that must be disclosed to prospective buyers. This bill also wanted to limit property owners’ abilities to receive public aid after disasters. The bill did not pass.

There were more floods in 1997. A bill similar to the 1995 bill was introduced. This new bill, AB 6x, did not include the clause to deny property owners disaster aid. AB 6x also had the cooperation of the California Association of Realtors. It passed easily. AB 6x became AB 1195.

AB 920: The 2005 Amendment

The natural hazard disclosure statement is frequently prepared by a third party. A quick search on Google for the phrase “natural hazard disclosure” will produce a long list of California firms ready to perform a natural hazard check for you. However, the actual disclosure form only had lines for the buyer’s and seller’s signatures. If a third party was paid to provide the disclosure form, there was no place on the form for that party’s signature. According to a lobbyist for the California Association of Realtors, realtors began to feel uncomfortable about signing the form when it did not show who actually performed the check (LePage 2004). As a result, AB 920 was signed into law by Gov. Arnold Schwarzenegger and went into effect in January 2005. AB 920 was also sponsored by the California Association of Realtors.

The bill did not add additional liability to the third party; they were already liable for missing information and mistakes. The purpose of the bill is to make it clearer that the third party is liable if the statement is not filled out correctly (LePage 2004).

There are approximately 30 firms that sell disclosure statements in California. They charge from \$30 to \$150 per report. This industry is not regulated and they are not required by the state to carry insurance to cover missing information (LePage 2004).

The Real Estate Transfer Disclosure Statement (CCC Section 1102)

In addition to natural hazard disclosure, California also has a “regular” disclosure statement that covers property conditions and amenities. The applicability of California Civil Code Section 1102 is similar to that of Section 1103. The real estate transfer disclosure statement is required for sale of a property containing from one to four dwelling units, manufactured homes, and mobile homes. The sellers answers to the best of his or her ability. The buyer has up to three days after receiving a purchase contract to change his or her mind. This real estate disclosure may not be waived and the property cannot be sold “as is.” This is the result of a decision from the 1993 court case, Loughrin v. Superior Court (California Civil Code 1102.1 (a)).

The Code does not provide the seller with an actual disclosure form. The Code merely describes what should be included in the statement even down to the font size of the type (California Civil Code 1102.6c.(a)(1)). The code makes it clear that a city or county is able to require additional disclosures in addition to what is required by the state.

In order to make the Code more understandable and useful for realtors, sellers, and buyers, Professional Publishing in Novato, California has created and copyrighted a “Real Estate Transfer Disclosure Statement” made in accordance with Section

1102. Many of the items listed in the form are not specifically mentioned in the Section. This form has a similar look and feel to other state's disclosure forms.

It begins with the location and description of the property in question. Then, it discusses how this disclosure form coordinates with other disclosure forms, that it is not a warranty, and that the following information was provided by the seller and not the seller's agent. Next, the seller must check the boxes next to the amenities the property has such as, dishwasher, sump pump, gazebo, spa, or microwave. This is followed by a question about defects in the structure, including walls, roof, and foundation, as well as the electrical and plumbing systems.

The final section consists of a series of yes-no questions including four relating to natural hazards. There are questions about environmental hazards, features of the property shared in common with another property owner, zoning violations, lawsuits potentially, and special tax levy liens or fixed liens affecting the property. The four natural hazard questions are: "Are you (Seller) aware of any of the following:"

- "Fill (compacted or otherwise) on the property or any portion thereof,"
- "Any settling from any cause, or slippage, sliding, or other soil problems,"
- "Flooding, drainage or grading problems," and,
- "Major damage to the property or any of the structures from fire, earthquake, floods, or landslides" (Professional Publishing Form 110.22 CAL).

The final page of the form has space for the listing agent (if any) and selling agent (if different from listing agent) to add additional comments to the disclosure.

Literature about the California Natural Hazard Disclosure Statement

There has been very little scholarly review of the California natural hazard disclosure process and its results. This is probably in large part due to the relative newness of the disclosure law. Austin Troy, for his doctoral dissertation and later in an article co-authored with Jeff Romm, explored the effects of the law on the price of homes. Both articles showed similar results.

In the article, Troy and Romm compared the flood disclosure aspects of the law with the National Flood Insurance Program (NFIP) which had been California's flood disclosure standard up to the passing of AB 1195. The authors wanted to learn if information was better disseminated under the new law and if there were biases in the way information was disseminated under NFIP that resulted in less information reaching minority or lower income households.

The NFIP is a program that requires disclosure during the sale of any property within Special Flood Hazard Area as well as required purchase of flood insurance. Disclosure is mandatory for any property financed by a federally regulated institution such as commercial banks, savings and loans, credit unions as well properties resold on the secondary market to lenders such as the Federal National

Mortgage Association (Fannie Mae). People who used other financing methods, such as self-financing or sub-prime mortgage companies, were less likely to receive the disclosure (Troy 2004).

Troy and Romm determined that flood information was better disseminated under AB 1195 than the NFIP because of the change in selling price of properties in flood zones that occurred after the implementation of AB 1195. Under the NFIP there was no difference in prices houses sold for between comparable houses inside and outside flood zones. After AB 1195, the prices of the houses within the flood zones dropped by 4.2% compared to the houses outside the zone (Troy 2004).

The authors also found that the higher the Hispanic population in a neighborhood within a flood zone, the less the houses sold for after the passing of AB 1195. The percentage of Hispanics in the population had a direct effect on the “negative capitalization” of the properties. In a tract with a 1% Hispanic population, the value of the properties within the flood zone had a negative capitalization of \$213 or the price decreased by \$213. In a tract that was 60% Hispanic the negative capitalization reached \$15,230 (Troy 2004).

Troy and Romm provide two hypotheses for this. The first was that there is a disproportionately large population of Hispanics living in flood plains in California as compared to other minority groups and the sample of properties used in the study were disproportionately weighted towards neighborhoods with higher proportions of Hispanics. The second reason was that flood disclosure under AB 1195 was now reaching a larger percentage of the population than it was under the NFIP. They reason that this is due to “biases in NFIP’s triggering mechanisms for disclosure” (p. 153). Hispanics are much more likely to use less-regulated lenders for their mortgages, such as sub-prime lenders. Sub-prime lenders specialize in lending to people with bad credit and are “notorious for not adequately describing the terms of the loan” (p. 155). Because of this, Hispanics were less likely to receive flood disclosure information under NFIP.

One problem with California’s natural hazard disclosure is pointed out by George Lefcoe (2004). He states that some of the data required in California’s law is misleading due to political influences. Local jurisdictions and property owners do not want to have their area portrayed as unsafe. As a result, over half of the cities that the state considered to have high fire risk were able to remove themselves from the high fire risk maps. Among the areas removed from the fire maps is the Oakland hills area that suffered from one of the state’s worst fires in 1991. It was this fire that prompted the state mapping of high fire risk areas.

Chapter Summary

There are two fundamentally different types of disclosure among the states I described. The disclosure form is completed to the best of the seller’s knowledge in Alaska, Washington, Idaho, Oregon, and Florida. California has a separate natural hazard disclosure form that is completed based on information provided by state and federal sources. Hawaii does not provide a form for any type of disclosure; however it does specify two natural hazard questions in the statute and requires the seller to answer those questions based on information from state and federal sources. Other disclosed information was based on the seller’s knowledge.

California has been enacting various natural hazard related legislation for many decades. California's natural hazard disclosure statement is based partially on these previously enacted legislative requirements. In addition to the natural hazard disclosure, the state also requires a real estate transfer disclosure statement in which the seller must disclose known amenities and material defects to the property.

Research has shown that the natural hazard statement in California has had a negative effect on the prices of the property within hazards zones. This could be a positive result of increased hazard information dissemination. The research has also shown that the negative price effect is stronger if the area has a large Hispanic population. This could be the result of a disproportionate amount of Hispanic-owned homes in the study areas. It could also be an indicator that the disclosure statement is being disseminated to more Hispanic consumers.

Chapter 5

Stakeholder Interviews

The interview questions were deliberately kept simple. The purpose of the interviews was not to test the knowledge of the respondents but instead gain insight into the opinions of the organizations and how they would value a disclosure policy. This chapter describes the answers I received from the respondents. It has three main sections. It begins by evaluating if the interviewed organizations really have stake in the issue. The second section discusses key themes I identified from the interviews. The third section includes “miscellaneous” items mentioned by respondents.

Which Organizations Actually Have a Stake?

The respondents/organizations to be interviewed were recommended by the IHMT subcommittee because of their perceived stake, or interest, in the implementation of natural hazards disclosure. The subcommittee wanted to include anyone they thought would be affected by changes to real estate transfers. Some of the organizations I interviewed indeed would have a large stake or interest in disclosure. Others, even though on first thought one might think they would be impacted, thought they would have little or no stake in the matter.

Here, again, is the list of organizations I contacted:

- Oregon Homebuilders Association
- Oregon Association of Realtors
- Northwest Insurance Council
- Oregon Association of Mortgage Professionals
- Association of Oregon Counties
- League of Oregon Cities
- Oregon State Building Codes Division
- Oregon Chapter of the American Planning Association (OAPA)
- Oregon Emergency Management Association (OEMA).

It is usually sound planning to collaborate with as many people or organizations as possible regarding a particular issue or policy. Collaboration and participation in a project builds trust among the groups, provides a variety of insights and knowledge with which to build upon, and can develop greater interest and investment in the topic at hand. The development and later success of a natural hazard disclosure policy is dependant on the involvement and buy-in of a variety of stakeholder

organizations. Each organization presents its own concerns and points of view; some of these overlap with other organizations viewpoints while other concerns are unique, yet equally valid.

The organizations I interviewed fell into three categories. The first category includes organizations with high interest, knowledge, and investment in the topic. Inclusion of these organizations would be critical to the success of the policy. The second category was organizations with potential interest and investment in the topic. Natural hazard disclosure might not directly affect their daily work, yet could provide opportunities to the communities they serve and to themselves. The third category consists of organizations that said directly that they would not be affected one way or other by natural hazard disclosure implementation.

Of the organizations I contacted, I felt that the Oregon Homebuilders Association and the Oregon Association of Realtors have the greatest stake and concerns regarding the development, implementation, and maintenance of a natural hazard disclosure policy and fit into the first category. The Oregon Association of Realtors was the primary instigator for the implementation of the seller disclosure form Oregon currently uses as well as the update to the form in 2003. The representative of the Oregon Homebuilders Association was very knowledgeable about natural hazard disclosure and had clear ideas of what should be included in the disclosure. The Oregon Homebuilders Association has also been supportive of similar legislation in the past. Both organizations handle different parts of the real estate continuum yet both have some similar concerns.

The second category includes the Oregon Association of Mortgage Professionals, the League of Oregon Cities, the Association of Oregon Counties, Oregon Emergency Management Association (OEMA) and the Oregon Chapter of the American Planning Association (OAPA). These organizations also have a stake in the issue but none of these organizations seemed as interested or connected to the topic as the organizations in the first category. The representatives all provided interesting and relevant opinions. The representative from the Oregon Association of Mortgage Professionals pointed out that mortgage lenders are interested in the collateral and financial health of the purchaser rather than the property's qualities to the buyer as an investment.

The Oregon State Building Codes Division and the Northwest Insurance Council fit into the third category. The response of Northwest Insurance Council surprised me. My previous assumption was that the insurance industry would be very interested in a new natural hazard classification system that would provide the insurer with increased information about the property to be insured. Instead, the representative pointed out that insurance agents "make it their business to know about risk" and the insurance companies conduct their own research or buy the information. The agents will go out in person to check out the location, situation, condition, and so on of the property to be insured. They do not rely on government information or disclosures made during the transfer of property. In addition, insurance companies do not cover pre-existing conditions.

The representative of the Oregon State Building Codes Division said that his organization would not be affected because construction in specific hazard areas is already accounted for in the building codes. They provide the state-level minimum standards and variations are accounted for in the local codes.

Key Themes of the Interviews

I asked each participant four questions. The questions were designed to receive broad answers. To review, here are the questions again:

1. What does your organization identify as strengths of natural hazard disclosure?
2. What does your organization identify as weaknesses of natural hazard disclosure?
3. What does your organization identify as opportunities presented by natural hazard disclosure?
4. What does your organization identify to be challenges of natural hazard disclosure?

From the responses to these questions I identified the following bullet points as the key or reoccurring themes mentioned during the interviews:

- The advantages of a well-informed consumer,
- Protection and responsibility,
- Problems and concerns with accuracy and updates of the supplied maps and other information,
- Designation and relevance of the hazard areas,
- Maintenance and dissemination of information, and
- Funding.

Most of the issues brought up during the interviews could be fit into the themes presented above. I chose to organize the rest of this section around these themes rather than around the questions asked during the interviews because I felt that I could provide more complete and concise summaries of the responses to the themes. The topics would be presented in a more concise pattern if arranged by theme than they would if presented by question. For example, if I presented the information by question, comments about educating and informing people would appear under both the strengths and opportunities questions. This way, information and education is contained within a single section, "Well-Informed Consumers." I have tried to use the key question words, strength, weakness, challenge, and opportunity, whenever possible in order to retain the flavor of the original interviews. The end of each section includes summary bullet points of the main points. Finally, I included a section of additional items containing important, yet quickly-mentioned comments.

Well-Informed Consumers

The overwhelming opinion from the peopled interviewed was that the primary strength of natural hazard disclosure is its ability to provide additional information about the property to the potential buyer. According to the League of Oregon

Cities representative it is in the public's interest to have consumers well informed about risks to properties. The spokesperson for the Northwest Insurance Council stated that any type of disclosure strengthens the confidence of the purchaser of the property. The Oregon Homebuilders Association representative affirmed that if people are willing to purchase a property, they should know about the risks and hazards that come with it.

The OAPA spokesperson saw the benefits of natural hazard disclosure on a larger scale than most of the other representatives. While most of the representatives mentioned the benefits to the property buyer, the OAPA representative stated that natural hazard disclosure relates to the necessity to protect public health, safety, and welfare. The information gleaned from the disclosure could be used on a community level as well as by individuals.

The League of Oregon Cities representative said that natural hazard disclosure presents an opportunity to educate homebuyers, sellers, real estate agents, and other professional in related fields about different natural hazard events and methods of reducing a property's vulnerability. The Association of Oregon Counties representative mentioned that it would be helpful if there was supplemental materials with specific examples of what other homeowners have done increase their property's resilience to hazards. The OAPA representative mentioned that there needs to be an educational component to the disclosure as a simple notification about a hazard is not enough. The OEMA representative felt that natural hazard disclosure would provide the opportunity for planners and realtors to provide the same information about the property as well as education about mitigation techniques.

In summary, natural hazard disclosure has the potential to:

- Provide important information about the property to the buyer,
- Protect the health, safety, and welfare of the public through its educational opportunities, and
- Provide an opportunity to educate sellers, buyers, and real estate-related professionals about natural hazards and mitigation.

Protection and Responsibility

Rightly or wrongly, we live in a litigious society, blaming others for problems and seeking legal redress is common. Natural hazard disclosure could provide some measure of legal or monetary protection for people in the construction industry and real estate, as well as buyers and sellers. The Oregon Homebuilders representative pointed out that with disclosure where the buyer is informed about potential hazards in advance, there is less "blow back" onto the industries if something does happen to the property. The Northwest Insurance Council representative mentioned that giving buyers or investors an "out" was an opportunity provided by disclosure. The Association of Realtors spokesperson said that it was good to have educated buyers because there are less problems later. The OEMA representative also mentioned that informed buyers are less likely to become "victims" later on and try to sue the city or the seller.

The Oregon Homebuilders Association spokesperson expressed concerns about the allocation of responsibility if something happened. For example, who is responsible when homes built along the coast fall down a cliff? Is it the builders, the homebuyers, the geologists or whoever surveys the appropriateness of the land for development, or the city or county for allowing development in that area? In addition how much personal responsibility should the landowner take? People do not generally like to have limits on the use of their land or to be told after the fact that they should have done something.

The realtors are not responsible for any inaccuracies or omissions contained in the current Oregon Seller Disclosure form. As the realtor association representative pointed out, a seller that lies is committing fraud.

In summary, natural hazard disclosure can:

- Protect people against unnecessary lawsuits,
- Provide people (buyers) with the opportunity to stop the transaction, and
- Help clarify responsibility if a disaster occurs.

Maps and Information

Maps and other means of information dispersal were frequently mentioned as concerns while answering the “challenges” and “weaknesses” questions. The usefulness, accuracy, and maintenance of disclosure maps were reoccurring and primary concerns for many people. In order for the maps to be useful, they must be in an appropriate property-level scale. People frequently cited the federal flood zone maps as an example of maps lacking detail and accuracy. The representative of the League of Oregon Cities stated that these maps can be problematic to use and can require additional survey work to determine whether a property is actually in a hazard zone. The representative of the Association of Oregon Counties also made a comment about the current degree of specificity of the maps. Sometimes a pencil-width represents several hundred feet.

Another problem with these maps is that they are not updated frequently enough. The Oregon Association of Mortgage Professionals representative also commented about problems they have had with the flood maps. Sometimes the lender will receive information that the property in question is located within a flood zone and therefore needs flood certification. The person handling the property (borrower, purchaser, or owner, for example) says that the property is no longer in a flood zone. This conflict could be alleviated if the maps were updated more frequently. The League of Oregon Cities spokesperson also mentioned the challenges of updating and disseminating the information as new scientific information or new risks came to light.

The representative of the League of Oregon Cities also voiced concerns about the inaccuracies and current unknowns about hazards and hazard information. The OAPA representative mentioned that obtaining the baseline scientific information used to underpin the maps and other related tools would be a challenge.

In summary, natural hazard maps and other sources of information must be:

- Accurate and based on a relevant scale,
- Based on valid scientific information,
- Regularly and appropriately updated, and
- Periodically updated to reflect current hazard knowledge levels and theories.

Designation and Relevance of Hazard Areas

Several representatives also expressed concern about how the hazard areas would be designated. They were concerned about the potential single-dimension design of hazard zones. Not every property in a specific hazard zone would be impacted by a disaster in the same way. They were also concerned that the hazard could be too general or vague to be of any value.

One example of “pointless” “blanket requirements” was given by the Association of Oregon Counties representative. He said that although his house was located at an elevation of 700 feet and if it flooded all of Portland would be underwater, he still had to complete the federal flood zone forms. The Realtor Association representative also stressed the necessity for hazard zones to be practical and useful. He cited the Oregon Senate Bill 12 about mapping fast moving landslides as an example. There was a major problem with the techniques used for mapping. The first was that the scale the maps were produced in was inappropriate for the type of information it wanted to convey. Because of the scale of the map, it appeared that the majority of several counties were in fast moving landslide zones when in reality, substantially smaller portions of the counties were vulnerable. While the intention of the bill was good, the results were not practical and misleading.

The OAPA representative was concerned about the value of telling people about certain types of zones. For example, he wanted to know what the value would be to tell someone that his or her property was in an earthquake zone. It is too general to make any difference and not all properties would be affected in the same way. In order to identify relevant, specific, and appropriate hazard areas, “sound benchmarks” would need to be developed.

In addition to concerns about hazard zones being too vague or general to be much use, the OAPA representative also had concerns that every property within a hazard zone would be considered to have equal risk to the hazard. In addition to a geographical dimension, drawing lines on a map for instance, there would need to be a “vertical” dimension also that took into account the idea that every not every area in the zone is subject to the same degree of risk. Two properties located within the same hundred year flood zone may be located in such a way that they would not experience the same level of disaster when a hundred year event occurred. One property might end up several feet underwater while the other, due to its distance from the water source or its location on a slight rise, would only be subjected to a few inches. The properties would require different mitigation strategies. This uniformity of zone applicability is a weakness of disclosure.

The OAPA representative continued to say that because of the inequality of risk, another challenge would be how to apply the information in a relevant way that would provide solid information to improve or maintain health, safety, and welfare standards while not creating the “Chicken Little” syndrome where everyone panics over nothing. Also, if the information is not applicable or very useful, the people will ignore it and nothing will be changed.

The Oregon Homebuilders Association spokesperson also expressed concern about the appropriateness or relevance of the designated hazards. Some hazards in some situations can be mitigated for by employing appropriate construction methods and building materials. In addition, some hazards identified by geologists or other experts do not present a real risk. For example, downtown Portland is a “risky” place to build because of its soil types and flooding potential but appropriate construction methods specified through the building codes mitigate the risk and allow for continued development. Building codes however, can have similar relevancy problems as hazard zone designations. Some codes were developed to try and mitigate problems that do not really exist; the code-writers were merely scared.

In summary, the natural hazard zones must:

- Be specific and detailed enough to be of use,
- Include a vertical dimension that accounts for the idea that not all areas within a zone are at equal risk, and
- Work in conjunction with appropriate building codes and construction methods.

Maintenance and Dissemination of Information

Other challenges mentioned by several respondents were developing a workable strategy for maintaining and updating the policy and hazard information and creating an easy and accessible dissemination method. The representative of the Association of Mortgage Professionals pointed out that currently, the timeliness of information updates and how the new information is then disseminated is a weakness in existing systems.

According to the spokesperson for the League of Oregon Cities, local governments already have very detailed GIS maps that could be relevant to natural hazard disclosure needs. What is missing is a system for this information to be shared with other organizations that would be working with hazard maps. There would also need to be a plan for updating the information as well as the creation of a good dissemination system to the public. The OAPA representative also mentioned that maintenance and updates of the maps and other sources of information present a challenge to disclosure.

In addition to regular informational updates, the actual disclosure form would need periodic review and updates. The Oregon Association of Realtors spokesperson mentioned that it is essential to periodically reevaluate. The Realtor Association reevaluated and updated the current Oregon seller disclosure form to reflect new concerns.

In summary, a natural hazard disclosure policy would need to include:

- A practical and timely system for updating the existing information,
- An easy and accessible method for dissemination to the public, relevant organizations, and local governments, and
- Periodic reevaluation of the disclosure form.

Funding

As is true of many projects, the issue of money, how much will it cost, and who will pay for it are important issues. The Oregon Homebuilders Association and the Oregon Realtors Association both mentioned funding as concerns. Setting up and maintaining a disclosure program will cost money; who will bear the cost? Property owners, according to the Homeowners Association representative, tend not to be interested in things like this. The Realtors representative had concerns regarding the quality of information provided if disclosure increased transaction costs. If the cost of transferring property increased beyond a reasonable amount due to disclosure program needs, the information gained from the disclosure must be worth the extra cost.

To summarize:

- The funding source(s) must be clarified (who, how, and for how long will it be funded?), and
- The costs of the policy/program must reflect the quality of the product.

Additional Items

This section includes comments and themes briefly mentioned by one or two of the various representatives.

Loss of Revenue/Sales

Both the OEMA representative and the Oregon Homebuilders Association representative mentioned that a potential weakness of natural hazard disclosure is that it could cause a negative effect on sales. This could lead to a loss in profits for homebuilders as well as a decrease in property tax revenue. The Association of Realtors spokesperson had a related comment that the information provided to the buyer must be accurate rather than inflammatory. On the other hand, he also mentioned that natural hazard disclosure could help the property reflect fair market value.

Value Harmonization

One purpose of natural hazard disclosure is to increase an individual's resiliency thereby increasing a community's resiliency. One challenge to natural hazard disclosure, as mentioned by the OEMA representative, is harmonizing values. Can the truth be disclosed while still always making a profit? How can public safety be integrated with economic development? It is also challenging to make the belief in the need to disclose information more important than selling property.

Limits to Seller Disclosure

The representative of the Northwest Insurance Council saw limitations of the seller's knowledge as challenge to disclosure. The current seller disclosure form requires the seller to complete the form to the best of his or her knowledge. Therein lies the problem. The seller can only answer what he or she knows. For example, if the house on the property is 50 years old but the seller has only lived there for the past five years, the information provided on the form will only account for the past five years. What happened during those other 45 years?

Timing of the Disclosure

The Oregon Homebuilders Association representative was the only respondent to particularly mention timing of the disclosure. Timing of the disclosure should occur as early as possible in the process; even as early as the zoning level. From a developers point of view it is easier to include on-site remediation if property limitations or impairments are known in the earliest stages.

Natural Hazards and Urban Growth Boundaries (UGB)

The Oregon Homebuilders Association representative also discussed a unique opportunity presented by natural hazard disclosure, or at least with the maps and information the disclosure would rely on. This information could be used in conjunction with UGB expansions. When it is time to expand, the new UGB could be designed to bypass "hazardous" land while including other, less risky land. This also provides an opportunity to transfer uses to more appropriate areas.

Additional Paperwork

Not surprisingly, the representatives of the Association of Realtors and the Association of Mortgage Professionals both mentioned paperwork. The Realtor representative discussed concerns about natural hazard disclosure taking up additional time by creating further paperwork to be processed and time spent waiting to receive reports and information. It could make things more complicated and "mess up" the ease of transfer.

Lenders already have to handle large amounts of paperwork for each purchase. According to the Mortgage representative, lenders are currently responsible for presenting all of the federal disclosure requirements. These federal disclosures consist of about one quarter of the approximately 70 pages of signature-requiring paperwork handled by the lenders.

A Central Resource

The Mortgage representative mentioned that an ideal situation would be one where there was an easily accessible central resource for property information. A person could easily access information about the property he or she owns or wants to buy.

Chapter Summary

I interviewed nine representatives from state-level organizations with interests in land use, natural hazards, development, planning, and real estate. The interviews underscored the need to collaborate with stakeholder organizations. The interviews also demonstrated that some organization have more of a stake in the issue than others.

All of the representatives agreed that a strength of natural hazard disclosure is its ability to provide a consumer with additional information about a property. Many people had concerns about the accuracy of the maps, the frequency the information would be updated, and how the information would be disseminated the organizations that need it. How the hazard zones are designated and the relevance of the zones was another issue discussed. Some people also pointed out that disclosure could provide protection to certain people or organizations from litigation as well as be an opportunity to establish responsibility if something happens in the future.

Chapter 6

Recommendations

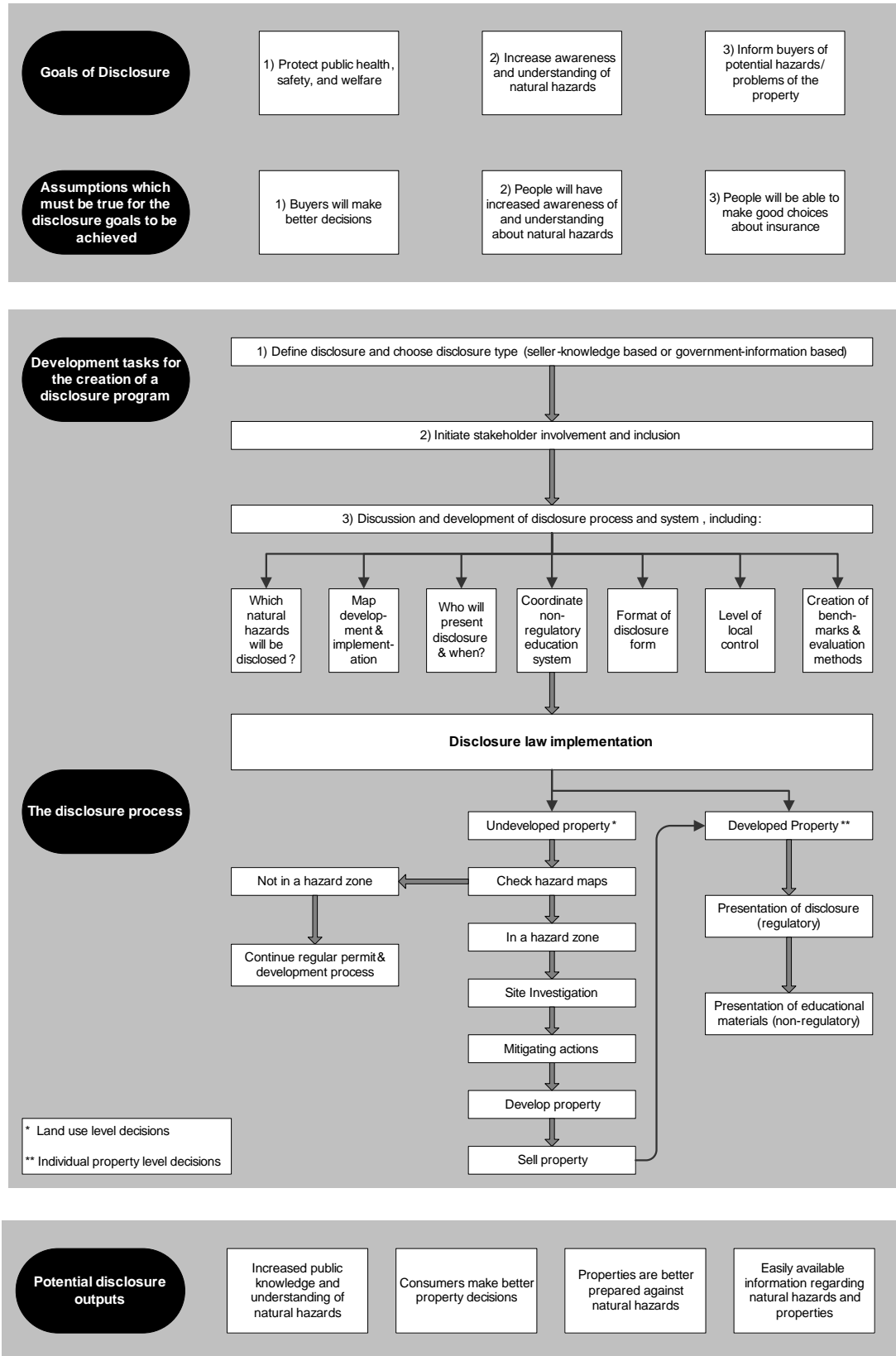
Natural Hazards Disclosure Logic Model

I have chosen to present my recommendations in a logic model format in order to present the information in a clear and orderly fashion. Figure 3 on the following page, illustrates my recommendations for the development and implantation of a natural hazard disclosure program. It is based mostly on the stakeholder interviews I conducted and the California natural hazard disclosure process.

The logic model and my recommendations focus mainly on the development of a regulatory system; however, there is a proportionally small but key, non-regulatory theme concerning public education about natural hazards. It could be easy to overlook this non-regulatory, educational component, yet I feel that a natural hazard disclosure program would have limited success in achieving its goals without this section. I talk about this topic more in the discussion of the logic model.

I have divided the model into five sections, presented in the following order: goals, assumptions, program development, disclosure process, and potential results. Each section is headed by a black oval with white text. The first and second sections, grouped together, present the goals of a disclosure program and the assumptions of outcomes. The third section outlines the process of developing a natural hazard disclosure program which connects to the fourth section, a graphical representation of the flow of the disclosure process once it is established as a law. The final section shows the potential outcomes of the disclosure system. Ideally, the outcomes should match the assumptions. The rest of the chapter is a discussion and description of each section.

Figure 3. Logic Model for a Natural Hazard Disclosure Program



Discussion of the Logic Model

Goals of Disclosure

Natural hazard disclosure has three primary goals.

- **Protect public health, safety, and welfare.** This is a primary goal of governments on any level. Governments are in place partially to protect its citizens from preventable harm.
- **Increase awareness and understanding of natural hazards.** Natural disasters have had devastating effects on communities and individuals. Natural hazard disclosure should increase property owners' awareness of potential hazards. Supplemental hazard information would increase hazard understanding.
- **Provide valuable and informative information to purchasers of residential property.** Information is the fundamental purpose of disclosure and the other goals mentioned depend on an effective system of information dissemination. Disclosure in its most basic form simply tells someone about a past, present, or potential problem. It provides an individual, community, or organization with a "heads up." Then the person or organization can take appropriate action. However, this is also a weakness of disclosure; it informs a person about a potential issue but does not provide additional information about the problem or a method to assess the risk. It does not provide the person in a hazard area with types of actions that might mitigate the situation.

Assumptions of Disclosure

Through my research process, interviews with stakeholders, and conversations with the IHMT subcommittee, I have heard three basic assumptions about what disclosure will or can accomplish.

- **Buyers will make better real estate decisions.** It is logical to assume that people provided with more complete and better information about a potential purchase property will make a better decision about whether to purchase. Austin Troy (2001) demonstrated that, in general, the price of houses in hazard zones cost less than equivalent houses outside a hazard zone. This is reflective of consumers making better decisions when purchasing real property. In spite of this other research has shown that people do not always make better decisions when provided with more complete information. As Stern demonstrated in Chapter 1, when the disclosure is presented late in the buying process the purchaser has a greater chance of having already formed an attachment to the property that will cause the buyer to minimize the potential natural hazard risks. In addition Palm suggested that although it has been theorized that people will choose the action associated with the least risks, this is not always the situation. Also, in some areas, demand for housing might be so great that potential hazards receive little or no consideration in the decision making process.

- **People will have increased awareness and understanding of natural hazards.** It is assumed that providing consumers with a statement that the property they are considering might be afflicted by a natural hazard will increase the consumer's awareness of the hazard. It is logical to assume that the consumer will take the time to inform him or herself about the hazard; however, research has shown that many people are overwhelmed by the amount of information they already have to process or are not motivated enough to take the extra step to inform themselves. In order for disclosure to be an effective means of increasing people's awareness of and knowledge about natural hazards, educational supplements presented in an interesting, easy to read format would be necessary. The information could come from a variety of sources and via a variety of methods and be available at the same time the disclosure is made.
- **People will be able to make good decisions about insurance and risk reduction.** By knowing which hazards have the greatest potential of impacting the property, homeowners can make informed choices about insurance coverage and risk reduction. This assumption was made given to me by a member of the subcommittee. It is logical to assume that homeowners will make better decisions about which types of insurance to purchase if they are provided with information from sources that are not affiliated with the insurance industry.

Development Tasks of a Disclosure Program

There are two steps that should be taken before a program is sketched out. The first is to **define disclosure**. Should the program be based on seller's knowledge or should it be more in the style of California's natural hazard disclosure program? The second step, which should really occur at the same time, is **the initiation of stakeholder involvement** in the development and implementation process. The only way to get the program off the ground is to involve stakeholders as soon as possible. Many stakeholders have valuable insights and important concerns that must be considered. They also can have important political strength. The Homebuilders Association representative mentioned during the interview that the organization supported disclosure legislation in the past and had clear ideas of what his organization would like to see in a disclosure program. Involving stakeholder organizations also increases the tools and knowledge available for creating a disclosure program. The representative from the League of Oregon Cities mentioned that many local jurisdictions already possess detailed GIS maps that could be valuable in a disclosure program. Before these maps are used, they would need to be evaluated for suitability for the disclosure program. If these maps are useable, why reinvent the wheel if it already exists.

Once the stakeholders are assembled crucial discussions and debates about the disclosure program can begin. Discussions need to include:

- **Types of hazards to be disclosed.** The committee needs to discuss which natural hazards should be included in the disclosure and why. Can existing hazard legislation be adapted to work with the proposed disclosure system? Oregon already has existing natural hazard

legislation in Senate Bills 360 and 2-5. What other types of maps and research that could be useful already exist?

- **Map development and use.** The stakeholders interviewed had many concerns about map quality and usefulness. The role the map plays in the disclosure should also be discussed. Should the map be a screening device for onsite investigations or is it an end to itself?
- **Presentation of the disclosure.** Timing of the disclosure can be critical. Timing issues were presented in Chapter 1. Stern discussed that the later in the process disclosure occurs, the less weight the disclosure will have in the buyer's decision to buy. Another issue to consider is who would be responsible for presenting the potential buyer with the disclosure.
- **Supplementary education or information.** I feel that providing extra information about the hazards is key to real success. The sources, format, and availability of the information must be discussed. This is also the non-regulatory portion of disclosure and will require including outside, non-governmental and real estate related groups.
- **Format and text of the disclosure.** A disclosure statement and accompanying text will need to be written.
- **Level of Local Control.** Another aspect to be considered is the level of control the local governments will have over the process. Not every region in Oregon is affected by the same natural hazards. Will the disclosure law provide minimum standards that local jurisdictions tailor to suit their local needs? Would a local jurisdiction be able to add a hazard not included on the form but that the jurisdiction feels is important in their area? Or, conversely, would a local jurisdiction be able to remove a hazard that is not relevant to the area. For example, a requirement about tsunami inundation zones would not be necessary in Bend, Oregon.
- **Creation of benchmarks and an evaluation process.** It is necessary to create a process by which the disclosure process can be evaluated in the future.

The Disclosure Process

I envision the disclosure process as having two separate tracks: one for developed property and another for undeveloped property. The **developed property track** affects individual properties during sale or transfer. This track is followed when someone wants to sell his or her house. The **undeveloped property track** would be integrated with existing land-use laws and requirements. It affects "empty" properties ranging in size from single lots to large subdivisions.

Even though the tracks are separate, they are both equally important. Together they have an effect on all dwellings in Oregon. The track for developed property covers all homes or structures no matter if they were built by Oregon pioneers in the late 1800's, during the post-World War II development boom, or in the new

millennium. The undeveloped track covers the properties to be developed in the future. Oregon's population will continue to grow creating an ever-increasing need for more housing. As the population expands the "safer" land for development will become scarcer. The need for natural hazard disclosure and the knowledge it can impart will become even more necessary.

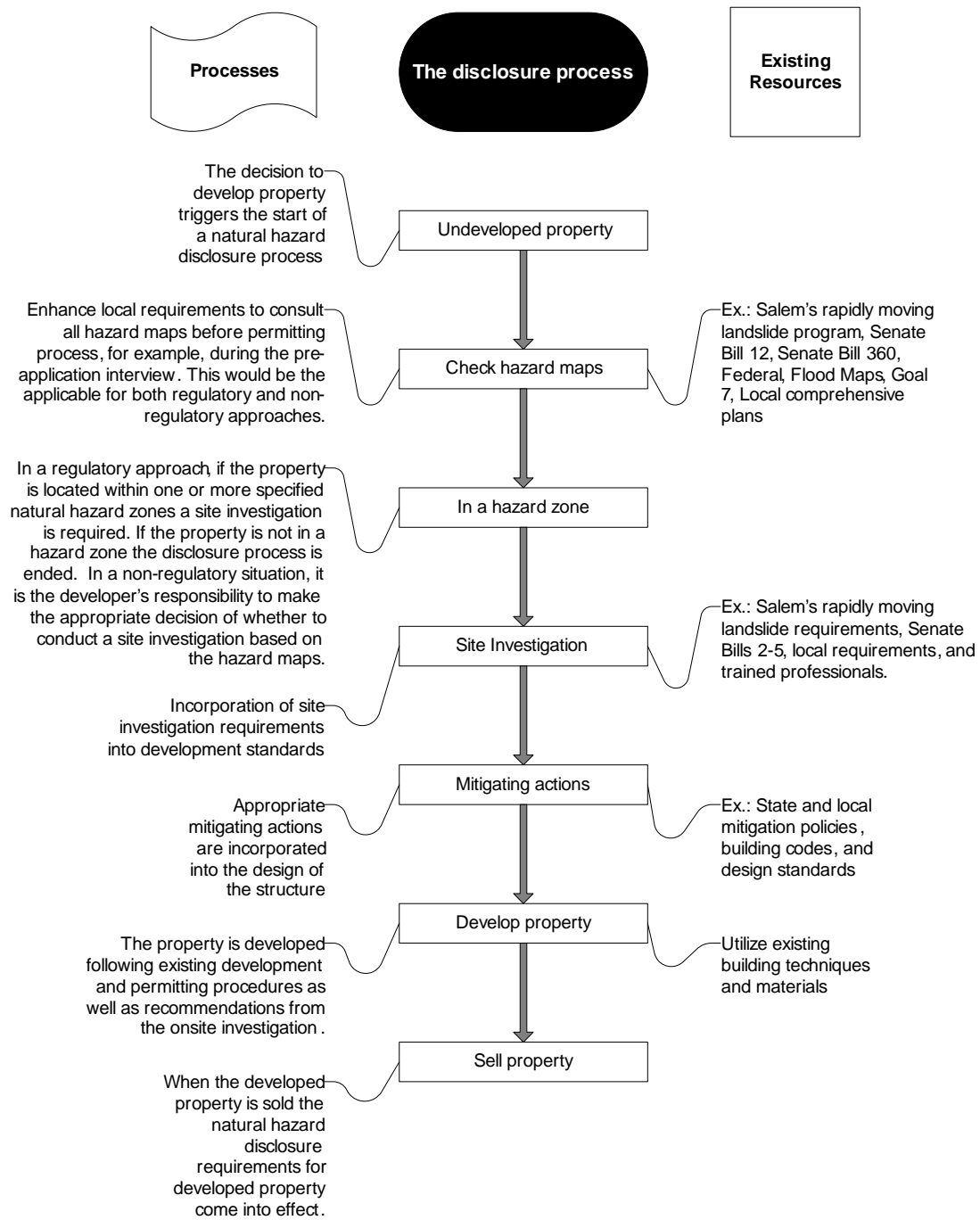
The program for undeveloped property could be made into a **regulatory** or a **non-regulatory** process. In a regulatory situation, the process is written into the laws of the local jurisdiction and directs people how to proceed with the development of specific parcels. In the non-regulatory situation, the disclosure acts as a guide or a warning. The disclosure tells the property owner that the property has the potential for a particular hazard. The owner/developer chooses the appropriate actions to take.

As is shown in Figure 3, when the owner of an undeveloped property wants to develop, an early step in a regulatory process would be to check the appropriate natural hazard maps. If the property is not located in a hazard zone, that is the end of the disclosure process. If the property is in a hazard zone, an onsite investigation is required (similar to the Salem landslide requirements). Appropriate mitigating actions are incorporated into the design of the structure. When the property is sold, natural hazard disclosure is required and follows the process for a developed property. Advantages of this situation include required site mitigation based on site investigation. Disadvantages include the difficulty of requiring all local jurisdictions to comply with creating and maintaining such a program, limited ability of the jurisdictions to enact a program due to existing laws or regulations, as well as potential lack of support from non-governmental organizations.

In a non-regulatory process, the developer would be presented with appropriate maps and information about natural hazards during the pre-application interview with the planning department. This information would be presented in addition to the information already presented during the pre-application interview. The developer would use the natural hazard information to decide if a site investigation should be conducted and could then incorporate an appropriate layout and design of the structure or structures proposed on the site. The property, when sold as developed, would still be subject to the disclosure track for developed property. Advantages of a non-regulatory approach include program flexibility and the relative ease of implementation. No laws would need to be written to implement the program. Disadvantages include potential lack of uniformity in the presentation of the information and the potential reluctance of the developers to act on the information contained in the disclosure.

Figure 4 illustrates the undeveloped property disclosure process again and includes the processes that would need to be created or modified in order to create a disclosure process. It also shows which existing pieces of legislation could be modified to be used in the disclosure program and where the legislation fits in the disclosure process. It also shows how a non-regulatory process could follow the same steps and use the same information. The center column is the same as the undeveloped track of "The Disclosure Process" section in Figure 3.

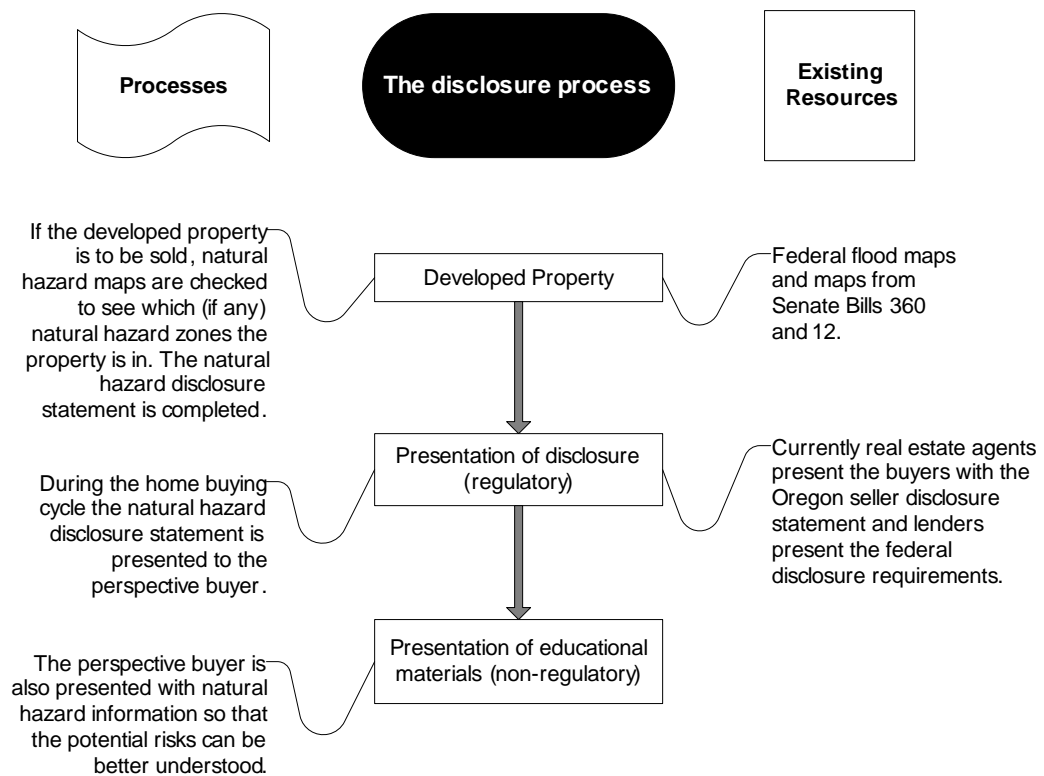
Figure 4. The Disclosure Process for Undeveloped Property



The developed properties disclosure track, also shown in Figure 3, has fewer steps. When a developed property is going to be sold, the lot is checked on the natural hazard maps and the natural hazard disclosure statement is completed. The potential buyer is presented with the form that indicates the property is not located in any natural hazard zones. However, if the property is within a hazard zone, the potential buyer is provided with information about the hazard and retrofitting opportunities. The potential purchaser makes an informed decision.

Figure 5 shows the disclosure process for developed properties again, as well as the necessary regulatory actions and existing resources that could be used in the disclosure process.

Figure 5. The Disclosure Process for Developed Property



Potential Results of Disclosure

If the disclosure statement is well designed and implemented it could have four potential results.

- Increased public knowledge and understanding of natural hazards.** Information provided to consumers during the process of looking for and purchasing property will increase people's knowledge about natural hazards.

- **Consumers make better decisions about real property.** Armed with additional information and sound criteria on which to base decisions, people will make better real estate purchases.
- **Properties (and their owners) are better prepared against natural hazards.** People might be more inclined to prepare themselves and their property against natural hazards if provided with the right resources and knowledge.
- **An easily accessible information source about hazards to specific properties and uniform information about natural hazards.** A “byproduct” of the process of creating the maps and other information necessary for natural hazard disclosure could be a statewide, centralized, comprehensive, and uniform natural hazard database that could provide benefits outside natural hazard disclosure.

Next Steps

I think the subcommittee should pursue a natural hazard disclosure program only if it includes an informational component. A simple disclosure form, even if based on valid scientific research, won't create the desired outcomes of increased understanding and awareness of natural hazards. In addition, failing to involve the stakeholders in all aspects of the development of the program would be disastrous. The program would have little or no support from the people who would have to use the program on a regular basis. This section provides the initial steps that I feel must be taken in order to create a workable and useful program.

Step 1

The first step is for the subcommittee to start convincing stakeholders to participate in the development of a natural hazard disclosure program. I suggest **forming an advisory council** that would act as a decision-making body. The structure of the council could be modeled after existing councils, such as the Oregon Seismic Safety Policy Advisory Commission. The council would include representatives from stakeholder organizations as well as members of the IHMT subcommittee. I suggest beginning by contacting the Homebuilders Association and the Realtors Association. Both of the representatives that I spoke to were very knowledgeable about disclosure and had firm opinions on the subject. They would also provide a non-governmental perspective to the discussions. Of course, there are many other stakeholder groups, both public and private, that would need to be encouraged to participate in the council.

The council's role, as I said, would be to make the decisions that form a disclosure program. In order to have a rational on which to base their decisions, they would **need staff** to collect and process relevant information. The staff would be responsible for conducting research, supplying any information the council would need, and writing reports. I think having a staff is critical because the potential members of the advisory council are too busy with their other project to devote much extra time to disclosure related research, writing, and other administrative details.

Step 2

The first task of the new advisory council would be to create a working **definition of natural hazard disclosure**. I have already presented what I think are the goals, assumptions, and potential outcomes of a natural hazard disclosure program; the advisory council needs to consider these issues for itself. In addition, the definition must also include:

1. the source of the information for completion of the form, and
2. what types of properties (developed and undeveloped) will the disclosure cover.

Although I have the impression that the IHMT subcommittee is leaning towards a program that is based on government-supplied information rather than the knowledge of the seller, the advisory council must consider both choices. Oregon already has a seller disclosure form with natural hazard related questions. Would it be worthwhile to adapt it to meet the new natural hazard needs? There are many advantages to adapting the form. For instance, it has been used for many years and is familiar to the professionals who regularly handle it. It is also already integrated into Oregon's real estate buying process.

The second aspect of defining the disclosure program is to decide whether it would apply only to individual, developed properties or if it would also include land-use level development. I think it would be a wasted opportunity if it only applied to the sale of homes. This is an opportunity to create a dual track program that covers both developed and undeveloped property. Property developers would be able to learn upfront which hazards they would need to mitigate for on a particular property. According to the Homebuilders Association representative, the earlier this type of information is presented in the development process the more options developers have to adapt and modify their plans to the situation. This land-use based track could also be applied to remodeling or other changes on developed property. Think of Salem's program mentioned in Chapter 3.

The program for the land-use, undeveloped land track could begin as a non-regulatory program. Available natural hazard information would be presented to the developers during the pre-application interview. The local jurisdictions would receive new and updated information through the protocols in Goal 7 (see Chapter 3). A non-regulatory approach would be flexible and would act as a guide rather than as a dictated set of steps to follow. Eventually, if later desired, the program could be phased into a regulatory program.

Step 3

The **role of the map in disclosure** is another important issue to discuss and define. How would the map be used? Many of the representatives I spoke to had concerns about the effectiveness of any map created for a disclosure program. They had concerns about scale and accuracy as well as creating a blanket approach to the zones where every property within a zone is treated as if they would be equally affected by a disaster. The role the maps will play in the disclosure program contributes greatly to how they would be designed and developed.

After interviewing Oregon stakeholders and hearing their complaints about past and current maps and fears about future maps, I talked to Charles Real of the California Geological Survey. I asked him if there had been problems with the scale and quality of the maps his department created for use in the California disclosure program. He said there were not. The reason for this was simple. The maps were used as a screening tool rather than for finding a definitive answer. If a property is located in or near a zone, a site investigation is triggered when development is proposed for the site. Salem, with its point-based landslide susceptibility program, uses maps in a similar way.

If the maps are correctly designed and scaled for their intended purpose, they can be used in both the non-regulatory process for undeveloped properties and in disclosure during the sale of developed property. This would save time and money as well as simplifying the system. There would be less confusion about which maps to use as there would only need to be one set.

Step 4

The advisory council must also decide **which natural hazards to include** in the disclosure. California's natural hazard disclosure statement was created by combining natural hazard related disclosures already required under California law into one form. Oregon does not have similar disclosure requirements embedded within its natural hazard legislation, but it does have existing natural hazard legislation. One way to decide which hazards to include in a disclosure statement would be to look at what natural hazards are covered in existing Oregon legislation. By looking at it this way, there is legislation and maps already created for fires in the wildland-urban interface, seismic hazards, and landslides. There is also federal legislation about flooding. Oregon even has existing protocols for distributing new natural hazard information to local jurisdictions through Goal 7. The advisory council would merely need to fill in missing natural hazard components. The creation of a natural hazard disclosure program provides the advisory council, the IHMT subcommittee, and other organizations with the opportunity to examine and evaluate existing Oregon legislation. There may also be other research and mapping efforts that could be utilized in a disclosure program.

Step 5

The final step in my recommendations is to **launch a pilot project**. Before an all-Oregon program is unveiled, I recommend testing the program and process first in a smaller area. The only way to really learn if a program or procedure works is to test it. A pilot project would show what works and what needs improvement. The staff of the advisory council would need to set up project evaluation methods and establish baselines to make before and after comparisons.

Next Steps Summary

There are five key steps to creating a natural hazard disclosure program in Oregon.

1. Create a decision-making advisory council and staff to support the council members.

2. Define natural hazard disclosure. Is the program knowledge-based or information-based and does it include both developed and undeveloped property?
3. Establish the role and purpose of the maps in the disclosure program.
4. Decide which natural hazards to include in the program.
5. Launch a pilot project in an area of the state to test the program and make changes as necessary.

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Appendix A

Links to Disclosure Documents

Listed below are web links to the states' disclosure statements and/or the appropriate statute or code. In some instances, for example California Civil Code Section 1103, the disclosure form is embedded within the text of the code. It is necessary to scroll through the text to find the form. In other cases, Alaska for instance, the link leads directly to the disclosure form. All links were accessed and available on May 26, 2006.

Alaska

State of Alaska Residential Real Property Transfer Disclosure Statement:
<http://www.dced.state.ak.us/occ/pub/rec4229.pdf>

Alaska Statute 34.70.010 – 34.70.200 Disclosures In Residential Real Property Transfers: <http://www.legis.state.ak.us/default.htm>

California

California Civil Code Section 1102 Disclosures Upon Transfer of Residential Property: <http://www.leginfo.ca.gov/cgi-bin/displaycode?section=civ&group=01001-02000&file=1102-1102.17>

California Civil Code Section 1103 Disclosure of Natural Hazards Upon Transfer of Residential Property: <http://www.leginfo.ca.gov/cgi-bin/displaycode?section=civ&group=01001-02000&file=1103-1103.14>

California Civil Code Table of Contents: <http://www.leginfo.ca.gov/cgi-bin/calawquery?codesection=civ&codebody=&hits=20>

Florida

The 2005 Florida Statutes Table of Contents:
<http://flsenate.gov./Statutes/index.cfm?Mode=View%20Statutes&Submenu=1&Tab=statutes>

Hawaii

The 2005 Hawaii Revised Statute Chapter 508D:
http://www.capitol.hawaii.gov/hrscurrent/Vol12_Ch0501-0588/HRS0508D/

Link to Hawaii State Legislature Status and Documents page:
<http://www.capitol.hawaii.gov/site1/docs/docs.asp#hrs>

Hawaii Association of Realtors Disclosure Form:
http://www.hawaiiirealtors.com/download/Real.Property.Disclosure_July05.pdf

Idaho

Idaho Statutes, Title 55 Property in General, Chapter 25 Property Condition
Disclosure Act: <http://www3.state.id.us/idstat/TOC/55025KTOC.html>

Oregon

Oregon Revised Statutes, Chapter 105 Property Rights:
<http://www.leg.state.or.us/ors/105.html>

Washington

Revised Code of Washington 64.06.020, Seller's Duty – Format of Disclosure
Statement – Minimum Information:
<http://apps.leg.wa.gov/RCW/default.aspx?cite=64.06.020> or
[http://www.law.washington.edu/courses/ramasastry/A501A_AuWi06/Documents/
RE_Disclosure_Form17.pdf](http://www.law.washington.edu/courses/ramasastry/A501A_AuWi06/Documents/RE_Disclosure_Form17.pdf)

Appendix B

Interview Instruments

Appendix B contains a sample of the cover letter emailed to potential interviewees and the script used during the interview.

Sample Cover Letter

Date

Dear Mr/Ms _____:

My name is Kamala Englin. I am a graduate student at the University of Oregon working on a master's degree in Community and Regional Planning in the Department of Planning, Public Policy, and Management. For my exit project, a requirement for graduation, I am working with the subcommittee of the State's Interagency Hazard Mitigation Team (IHMT) to investigate stakeholders' perceptions and concerns of natural hazard disclosure for real estate purchases in Oregon. IHMT consists of representatives from 19 Oregon state agencies that play a role in the state's natural hazard related policies and mitigation. Members of the subcommittee include Oregon Emergency Management, Oregon Department of Forestry, the Department of Geology and Mineral Industries, University of Oregon's Oregon Natural Hazards Workgroup, and the Department of Land Conservation and Development.

The intent of natural hazard disclosure, as used in other states, is to inform potential purchasers of real estate if the property is located in one or more specified natural hazard zones. Examples of natural hazard zones include flood plains, tsunami inundation zones, and earthquake zones.

My exit project is an investigation of the stakeholders with an interest in real estate disclosures for natural hazards (e.g. realtors, home builders, lenders, and insurance companies etc.). This is where you come in. In order to learn the attitudes and opinions of these stakeholders I am interviewing representatives from the professions and would like to ask you to participate. The interview should take approximately 15 minutes. I have included the questions at the end of this letter.

Participation in this interview is voluntary. Your name will not appear anywhere in the final document. In the document, you will be referred to as a "representative" of your organization. I and the IHMT would greatly appreciate your willingness to participate.

I will be in touch with you shortly to arrange an interview time. Please feel free to contact me with any questions or concerns you might have.

Sincerely,

Kamala Englin

kenglin@uoregon.edu

541-346-0259

You may also contact my project supervisor, André LeDuc at 541-346-5833 or email him at onhw@uoregon.edu.

Interview Questions:

Natural hazard disclosure informs potential purchasers of real estate if the property is located in one or more specified natural hazard zones (flood, tsunami, earthquake, etc.)

1. What does your profession identify as strengths of natural hazard disclosure?
2. What does your profession identify as weaknesses of natural hazard disclosure?
3. What does your profession identify as opportunities presented by natural hazard disclosure?
4. What does your profession identify to be challenges of natural hazard disclosure?

Sample Interview Script

Hello, (Mr/Ms _____), my name is Kamala Englin and I am a graduate student in Community and Regional Planning at the University of Oregon. I emailed you (last week) about participating in an interview to ascertain your profession's views on natural hazard disclosure statements. The interview should take about 15 minutes. Do you still have time to talk with me today?

As I said in my email, the purpose of my project is to learn about the general attitudes of professional organizations that could be affected by implementation of natural hazard disclosure statements. Natural hazard disclosure informs potential purchasers of real estate if the property is located in one or more specified natural hazard zones (flood, tsunami, earthquake, etc.)

You were chosen because you are a representative of (your professional organization) and able to express the opinions of the organization. Your name will not appear anywhere in the final document. In the document, you will be referred to as a "representative" of your organization.

Do you have any questions before I begin?

Questions:

1. What does your organization identify as strengths of natural hazard disclosure?
2. What does your organization identify as weaknesses of natural hazard disclosure?
3. What does your organization identify as opportunities presented by natural hazard disclosure?
4. What does your organization identify to be challenges of natural hazard disclosure?