



Coastal Law Memo

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COASTAL NATURAL HAZARDS MANAGEMENT

Development in the coastal zone is exposed to a variety of natural hazards. Development often increases the risk of personal injury or property damage. Coastal land in Oregon is threatened by geologic hazards such as earthquakes, erosion, landslides, and land subsidence. This Coastal Law Memo will discuss how state and local government in Oregon are attempting to mitigate damage caused by coastal natural hazards.

GEOLOGIC HAZARDS

The most common geologic hazard in Oregon's coastal zone is erosion. Erosion is the removal and transport of rocks or soil material by moving water. It is a vital process in the coastal zone because it provides a source of sandy material for the beach. But as a seacliff erodes, cliff-top development may be threatened.

Many shoreline erosion problems are the direct result of past unwise development decisions and are made worse by inadequate resource management. Erosion damage is likely to increase in the future. While more beach and dune areas are devoted to housing, the supply of new beach sand is reduced by dredging and flood control projects. Narrowing beaches will result in flooding and landslide damage.

The 1976 amendments to the federal Coastal Zone Management Act (CZMA) recognized the problem of coastal erosion by requiring federally-funded state coastal zone management programs to contain a planning process for shoreline erosion problems. Oregon's federally approved coastal program contains such a planning process as well as specific rules with respect to shoreline erosion management which are described later in this memo.

Landslides are often associated with erosion. A landslide is a perceptible downward sliding or falling of a mass of earth, rock, or a mixture of the two. It is nature's method of stabilizing a slope. Landslides may result from natural forces, but are often caused by man. With many coastal hillsides being developed, the risk of downslope movement increases. Development can increase the water content of the soil and the amount of ground-

water in the system. When this occurs the soil becomes saturated and its weight increases. In addition, the weight of hillside structures increases the downward force on the slope. These factors increase the risk of a slide. Consequently, because of development, an area which was free of problems may end up with slope failures.

Land subsidence occurs when surface material is displaced vertically downward with little or no horizontal movement. Man can cause subsidence by withdrawing large volumes of fluids from weakly consolidated segments. The loss of support causes subsidence. Unlike other coastal geologic hazards, the major problem with subsidence is economic loss rather than personal injury. Solutions are generally expensive.

An earthquake is the sudden release of stress built up by tectonic forces in the earth's crust. This stress release causes ground shaking, which may result in landslides. Many coastal areas are exposed to moderate to high earthquake risk. This is especially true of the Pacific coast, primarily because of two tectonic plates, the Pacific and the North American plates, which meet in the San Andreas Fault Zone.

COMMON LAW PRINCIPLES

Historically, the pattern of development in coastal areas was relatively haphazard. There were no long-range comprehensive plans. As a result, disputes between coastal landowners, or the government and coastal landowners over such issues as liability for eroding land, protection for eroding lands and use restrictions were often resolved by the courts.

Coastal property owners often desire to protect their land and improvements against damage from coastal waters by constructing various shoreline protective devices. The crucial issue is the degree of protective measures that a landowner may take without incurring liability for damage to neighboring lands.

Although there has been no reported litigation on this issue in Oregon with respect to the Pacific shoreline, decisions involving inland

waterways may be applicable to the coast. Under the common enemy doctrine, surface floodwaters are a common enemy and a landowner can do anything to repulse them from his land without liability for damage to other land. The civil law rule places a burden on the lower property requiring it to receive all surface water flowing through its natural course. Oregon follows the civil law rule for both surface water and ordinary floodwaters defined as that which might have been anticipated by a person of reasonable prudence. A landowner may expel surface water onto adjacent land if the water would naturally flow there. But a downstream owner does not have the right to throw the water back onto upstream land by damming the watercourse. Nor does the upper owner have the right to block the natural flow of water. The same rules apply to adjacent owners on opposite sides of the watercourse. Extraordinary floodwaters, however, constitute a common enemy and may be repelled by the owner of lands over which the waters flow without incurring any liability for damage to other land.

On the coast disputes may arise when a property owner constructs a shoreline protective device such as a seawall, jetty, groin, or rip rap; it can cause the water to be cast on adjacent land, resulting in flood damage, or it may alter the ocean's currents so as to prevent further additions to a sandy beach. In the former situation, since the water would not naturally flow to the adjacent land, the first landowner would be liable for damage caused by his protective device, subject to the extraordinary floodwater exception. In the latter example, the landowners would also be liable since the natural flow of the water cannot be altered under the civil law rule.

When coastal property erodes or suffers other natural hazards damage, the present owner may attempt to hold the person who sold him the property responsible for the damage. Historically, the owner had no recourse. Responsibility for inspecting land and improvements prior to the purchase was placed on the buyer-owner. Absent fraud, courts were reluctant to impose liability on sellers after they had parted with ownership and control of the property.

However, the law in this area is changing. Buyers of homes and homesites are receiving protection. A recent Oregon case, Beri v. Salishan Properties Inc., (282 Or. 569 (1978)), imposed a duty on the land developer-seller to exercise reasonable care to determine whether homesites offered for long-term lease or sale are fit for residential use. In Beri, the plaintiffs leased oceanfront lots with condominiums. The lots were being destroyed by erosion.

Whether Oregon courts will extend liability beyond that in Beri remains to be seen. In California, liability has been extended to a bank making a construction loan. Using a balancing test, the court concluded that the lender was under a duty to exercise reasonable care to protect the buyer from damage caused by major structural defects. However, the court cautioned that liability would only be imposed when there

is substantial involvement by the lender in the sale of the homes. Lending money alone will not give rise to liability.

With increasing pressure for development in hazardous coastal areas will come litigation over liability for damages suffered, and further clarification of the liability rules. However, a legal response which merely allocates responsibility after the damage is done is not satisfactory. Preventing the losses should be the ultimate goal.

CONSTITUTIONAL PRINCIPLES

When private property is taken for a public purpose under the power of eminent domain, the owner is entitled to receive just compensation from the taker. But if the government only restricts an owner's use of the property, it is often determined to be a valid regulation under the government's police power and no compensation is required. Because use restrictions are often placed on coastal property, the issue of regulation versus taking frequently arises.

There has been no reported litigation concerning regulation of natural hazards in Oregon. However, in Kopetzke v. County of San Mateo, (396 F. Supp. 1004 (1975)), a federal district court in California denied the property owner compensation when a local government allegedly rendered property unmarketable by requiring a professional geologic soils report showing the specific building site was safe or could be made safe. Kopetzke stands for the proposition that regulatory actions based on credible scientific evidence of a hazard to life or property probably will be upheld without compensation to the affected landowner.

REGULATORY RESPONSES IN OREGON

LCDC

In response to land use problems, the Oregon Land Conservation and Development Commission (LCDC) was established in 1973. The 1973 Land Use Act which set up LCDC requires that each county and city develop coordinated comprehensive plans, zoning, and subdivision ordinances which are in conformance with the adopted goals of LCDC. State agency plans and actions must conform to the goals and local comprehensive plans. Between December 1974 and December 1976, LCDC adopted nineteen state-wide planning goals, which are regulations carrying the full force of state legal authority, and supporting guidelines, which are suggested directions as to how to meet the planning goals.

Of the nineteen goals, three have particular applicability to coastal hazards management. They are: 1) Goal 7-Areas Subject to Natural Disasters and Hazards; 2) Goal 17-Coastal Shorelands; and 3) Goal 18-Beaches and Dunes.

Goal 7 is designed to protect life and property from natural disasters and hazards. Areas of natural disasters and hazards are defined as "areas that are subject to natural events that are known to result in death or endanger the works of man such as stream flooding, ground water, erosion and deposition, landslides, earthquakes,

OREGON COASTAL MANAGEMENT PROGRAM

weak foundation soils and other hazards unique to local or regional areas." Developments subject to damage or which could result in loss of life shall not be located in areas of natural disasters and hazards without appropriate safeguards. The Goal 7 guidelines indicate a preference for uses that do not require the protection of dams and dikes in flood plain areas. Low density and open space uses that are less subject to loss of life or property damage are more appropriate uses for natural disaster areas.

To implement Goal 7, local communities are urged to participate in the national Flood Insurance Program which requires that development in flood prone areas be appropriate to the probability of flood damage and the danger to human life. Under the National Flood Insurance Program, permits are required for construction in areas of flood-related erosion hazards. This requires the local governing body to determine if the site is safe for construction.

Goal 17 aimed for coastal shorelands was adopted to conserve, protect and where appropriate, develop or restore the resources and benefits of these lands. It is also designed to reduce the risk to human life and property, and the adverse effects on water quality and fish and wildlife habitat resulting from use of the shoreland. Inventories are required to be taken to provide information on the nature, location and extent of geologic and hydrologic hazards and shoreland values. Local governments will use this information in their planning process.

Goal 18, directed at beach and dune areas, is designed to conserve, protect and where appropriate, develop and restore the resources and benefits of these areas and to reduce the hazard to human life and property from natural or man-induced actions. It requires inventories to obtain information necessary for identifying and designating beach and dune uses and policies. This information includes descriptions of the stability, movement, groundwater resource, and hazards values of each area. Development is prohibited on active foredunes, other dunes which are conditionally stable and subject to ocean undercutting or wave overlapping, and on interdune areas that are subject to ocean flooding.

As described in Ore. Rev. Stat. 390.605-770, the Oregon Department of Transportation requires permits for ocean shore improvements subject to ocean flooding. Under Goal 18 permits for beach front protective structures are allowed only if the development existed on January 1, 1977 and requires criteria to be developed for issuing permits. The criteria must provide that: 1) visual impacts are minimized; 2) necessary access to the beach is maintained; 3) negative impacts on adjacent property are minimized; and 4) long term or recurring costs to the public are avoided. The Department of Transportation has issued such criteria.

Exceptions to the requirements of Goals 17 and 18 are permitted under the Goal 2 exceptions process, but no exceptions to Goal 7 are allowed.

The Oregon Coastal Management Program (OCMP) is based on the 1973 Oregon Land Use Act. It is designed to comply with the requirements of the federal CZMA. The LCDC goals and guidelines discussed above are part of the OCMP. In addition, many other statutes and regulations are part of the program.

The land use act requires city and county governments to adopt comprehensive plans and to pass ordinances consistent with LCDC goals by July 1, 1980. These plans are the primary mechanism for establishing long-term site specific land use policies and decisions. Once the comprehensive plans are acknowledged by LCDC, all land use actions must be consistent with the plans. In addition, under the land use act and the federal CZMA, state and federal agencies must act consistently with the acknowledged comprehensive plans.

As part of the shoreline erosion planning process, local governments must identify areas where shoreline erosion is a problem. They must assess existing and potential erosion to determine possible management techniques. Local plans must include erosion management policies for specific areas.

Although city and county governments are primarily responsible for planning and zoning under the OCMP, LCDC retains some authority with respect to hazards management. It can recommend to the legislature designation of areas of critical state concern. When recommending such a designation, LCDC must submit a report stating: 1) the reasons for the designation; 2) the damages which would result from uncontrolled development in the area; 3) the reasons for imposing state regulations on the area; and 4) suggested state regulations to be applied to the area. To date, no such critical areas have been recommended.

LOCAL GOVERNMENT COMPREHENSIVE PLANS

Pursuant to LCDC's nineteen goals and guidelines, many coastal jurisdictions have prepared local comprehensive plans. The local responses to coastal natural hazards are varied. Lincoln County may require a geotechnical study to be conducted in areas of known or suspected natural hazards. On-site inspection may be required before issuing development permits along beaches and shorelands. Natural resource zones have been established to protect natural resources in Coos County. Cannon Beach has adopted specific policies for hazardous areas, which prohibit protective devices for beachfront property, sand dune construction, and beachfront protective structures. Excavation of sand also is prohibited. In specified areas including any land with beach frontage, a site-specific investigation by a qualified expert is required prior to the issuance of a building permit.

The Warrenton Soil and Water Conservation District divides lands into zones. Different activities are permitted in each zone. For example, to control erosion in one zone, livestock grazing is prohibited. The town of Manzanita requires site-specific investigation at the developer's

expense by an engineering geologist or soils engineer as a prerequisite for the issuance of building permits in open sand areas, on hillsides of more than 20% slope, and other potentially hazardous areas.

ALTERNATIVE LAND USE CONTROL TECHNIQUES

Although many local communities have developed plans and ordinances attempting to counter the increasing problems caused by coastal hazards, other techniques need to be considered. Other local governments may be hesitant to impose building or use restrictions on landowners for fear that compensation will be required. However, as discussed earlier, the Kopetzke v. County of San Mateo decision should allay some of those fears.

Inaction by local governments also may be caused by lack of data on the hazards involved and information on innovative techniques in land use control. Some of the techniques discussed below generate information on the hazards involved. Some provide compensation to affected landowners; others do not. Some are designed to prevent disaster in developed areas; others are to restrict development in underdeveloped hazardous areas. A discussion of different techniques follows, beginning with methods that do not provide compensation.

Setbacks have been the classic regulatory response to shoreline erosion problems. A fixed setback requires all structures to be set back a designated distance from a specified point, often the mean high water line for beaches and the bluff edge for bluffs. A major purpose of coastal setbacks is to keep developments from encroaching upon the shore and interfering with natural beach regeneration. Fixed setbacks are more useful for bluffs than for shorelines where the beach and dune configuration is subject to drastic change. Many states have successfully used setbacks as a response to coastal storm hazards and for dune protection.

A setback ordinance should: 1) be based on scientific surveys of the necessity for a setback; 2) be imposed only after providing notice and an opportunity to be heard to all affected property owners. A provision for periodic review of the setback requirements should be included since the conditions of the beach or bluff will change, possibly warranting a change in the setback requirements. The stronger the scientific evidence supporting the setback, the more likely that it will be upheld in the courts.

Planned unit developments (PUD's) are a useful method to regulate dense development along hazardous shorelines and bluffs. A large parcel of land is needed and it must extend inland. In PUD's, development is concentrated on one part of the parcel, with the rest remaining open. For example, the owner of a large coastal tract would only be permitted to subdivide and sell the areas not subject to any coastal hazards. Communities utilizing PUD's need adequately trained staff to review and improve proposed development plans.

These techniques do not prohibit development

in hazardous areas, instead they require the structures to be on the safer portions of the land. In some areas, site-specific inspection should be required before development to insure that development on a given lot is reasonably safe. As discussed earlier, some Oregon communities require site-specific investigations in hazardous areas. Geologic reports prepared at the landowner's expense showing that a site is suitable for development may be required.

Disclosure of hazards to potential investors in coastal areas should be part of any coastal hazards management program. The National Flood Insurance Program mandates notification of the special flood hazard to a purchaser or lessee of land within a designated flood hazard area by banks and savings and loan associations as a condition for making a loan secured by real estate in the area. In addition to the National Flood Insurance Program, disclosure could occur through environmental impact reports, subdivision reports, and hazard warnings in deeds and other recorded documents affecting title.

Several land management techniques which do provide compensation to property owners are available to Oregon local governments. The most obvious is condemnation of hazardous land under the power of eminent domain. The limiting factor, of course, is funds. Additionally, public acquisition of land reduces the local tax base and subjects the government to possible liability for injuries on publicly-owned hazardous lands. Thus, other compensation methods may seem preferable to local governments.

Transferable development rights (TDR's) are one such method. Under this system a landowner prevented from developing his land may sell development rights to the owner of undeveloped land outside of the hazard area. For this system to work, the safe but undeveloped land already must be subject to some development restrictions such as a height or density limit which the owner would like to exceed through the purchase of development rights. For example, if a coastal community has a building height limit of one story, a landowner prohibited from developing his hazardous property would be permitted to sell an additional story to another landowner on a tract safe for development. The price he received would be compensation for the restriction on his property due to the hazardous conditions. However, if most of the remaining undeveloped land in a community is too hazardous to develop, then a more complex scheme allowing transfer of development rights outside the community would have to be designed. TDR's have only been attempted in a few places, and although they have been successful, the legality of such a system is uncertain. Impacts on properties neighboring the purchaser of development rights must be considered.

Purchasing easements is another method by which local communities could regulate development in hazardous coastal areas without purchasing a fee simple interest in the land. Negative easements preventing development could be purchased while other uses, such as boating, bathing, and fishing would remain with the landowner.

Such easements can be expensive and probably should be purchased only when regulatory techniques cannot be used.

Under the Oregon Coastal Management Program many coastal communities are taking steps to regulate development in hazardous coastal areas. Based on the foregoing discussion, they should consider utilizing a combination of regulatory techniques, some with compensation and some without compensation, depending on the location, geological formation, development pressures, and other relevant factors.

Gary Kahn
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For further discussion of the issues covered in this memo, see the article Coastal Natural Hazards Management by Professor Richard Hildreth in Volume 59 of the Oregon Law Review.

With this first Coastal Law Memo, the University of Oregon Ocean and Coastal Law Center initiates a series of publications intended to parallel the Ocean Law Memos with which the reader may already be familiar. Any questions or comments concerning this or future Coastal Law Memos should be directed to Professor Richard Hildreth, Co-director of the Ocean and Coastal Law Center, University of Oregon School of Law, Eugene Oregon 97403. (503) 686-3845.



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