

The Effectiveness of the Emergency
Rules of 1998,
As Implemented during the Erosion
Event in Neskowin Oregon, 1999

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Table of Contents

Acknowledgements	3
Preface	4
Introduction	5
Managing the Beach	8
Reasons for Managing Shore Protection Structures	9
Jurisdiction and Authority on the Beach	11
Shore Protection Policy and Implementation	13
Prior to Emergency Rules	15
Case Study of Neskowin	20
History	20
The Storms	21
Narrative of Emergency	23
Land Use	26
Results and Discussion	27
Meeting Policy Objectives	27
Results of Emergency Rules	29
Reflections in Broader Context	32
Conclusion and Recommendations	35
Appendices	
1998 Emergency Rule Analysis	37
Senate Bill 11	48
Emergency Rules	
Map of Neskowin	
References	59

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Oregon Parks and Recreation Department provided me a wonderful opportunity to learn about coastal management. I appreciate all the help and kindness that was shown to me by OPRD. The opinions and conclusions reached in this paper are humbly submitted as a tribute to the wonderful and careful work that goes on in that agency. This report recognizes the hard work performed by the Parks Department and is an opportunity to reflect upon the continuing evolution and maturation of coastal management in Oregon. If there are omissions or mistakes in this text, it is through no fault but my own. The opinions expressed should not be construed as originating from within OPRD nor as representing OPRD's coastal policy.

Preface

In January 1999, Oregon Parks and Recreation Department hired me to assist Steve Williams, North Coast Coastal Land Use Coordinator, through a period of increased workload. The South Coast Coordinator had fallen ill and I joined OPRD as a temporary worker part-time Coastal Land Use Coordinator for three months. Before entering school, I worked in California for the California Coastal Commission. My work at the Commission provided me a background into coastal management and the intricacies of working with diverse constituencies. Though I had little experience in coastal permit analysis, my course work and my interest dovetailed with OPRD's needs.

Promptly after my being hired, Mr. Williams left for a much earned three-week vacation. Unexpectedly, the vacation coincided with the three largest La Niña events to hit the Oregon coast that winter. The La Niña winter hastened multiple coastal emergencies up and down the coast as property owners experienced severe erosion. In anticipation of El Niño erosion, OPRD had just completed rule making to institute policies to address emergency situations. The emergency rules had just gone into effect and I, with the help of Nan Evans, Coastal Policy Manager and her assistant Tammy Bowman, was the first OPRD staff to use the emergency rules. After Mr. Williams returned from vacation, I was asked to continue working through the summer. I worked with Steve Williams in the North Coast office in Newport from January through August of 1999. Most of the analysis provided in this paper is a direct result of my experience using the emergency rules in an emergency. In addition, the recommendations provided at the end of the paper are a result of my experience and should not be construed as representing the thoughts or the desires of any other person or agency.

Please refer to Appendix 3 for a quick overview of the paper. Appendix 3 consists of slides provided during project defense in May, 2000.

The Effectiveness of the Emergency Rules: A Case Study in Neskowin, 1999

Introduction

Neskowin, Oregon is a small village tucked against the north side of Cascade Head in the southern end of the Nestucca littoral cell in Tillamook County. It is a quiet place of narrow streets lined with old beach shacks and new mansions. Proposal Rock divides the old and new: to the north is the old town and to the south is the newer section. In summer, the town is full of vacationing residents while in winter the town is virtually deserted. Therefore, few residents were present to view the 30+ foot swells that rolled across the beaches in February and March of 1999. Not many saw the creek overflow as the wave bores tumbled across the main bridge dumping huge stumps and other debris in the Neskowin State Wayside. Returning on Memorial Day 1999, summer residents were confronted with a changed beach. A flat beach backed by boulders brought in from quarries had replaced the rolling dunes. The changes occurred suddenly in the winter of 1999, between January 1 and March 30 when the last of the dunes disappeared and the waves threatened the ocean front homes. The storms took the sand and the contractors replaced it with rock.

The events of winter 1999 in Neskowin are not new to the state of Oregon, though they were unusually severe. Oregon has policies and rules in place to address the inevitable threat to oceanfront property. However, not until 1998 did the state formally address coastal erosion emergencies. Before 1998, the state provided emergency authorization to protect homes from erosion but there existed no formal process. El Niño 1997-98 motivated the State to formulate policies that would formalize the emergency authorization processes thereby insuring protection of the State's interest in coastal development. The storms of February and March 1999 offered the first test of these procedures in an emergency. The Neskowin erosion event provides an opportunity to judge the effectiveness of the new emergency rules. Understanding the events of Neskowin in 1999 provide a forum for discussing the entire Oregon coast. Neskowin reflects the issues and problems repeated throughout

the state. Oregon's coast is dynamic and has the potential for major erosion events. In order to preserve the beaches for summer residents and visitors, the State must actively manage shore protection structures. By working with residents in winter, the State protects the public trust and the interest of non-coastal property owners. Oregonians have a unique relationship to their beaches; they are part of the family and act as an open playground. Armoring the coast undermines the right to wander the beach, gather agates and camp. The armoring alters the ability of the beach to respond to storms, and to move and retreat as water levels change. However, homes built on dunes and bluffs need protection. Managing the coast is about balancing the public good with private rights while recognizing the inevitability of coastal hazards. Viewing the erosion event at Neskowin and the subsequent management response as a microcosm for Oregon allows a broader understanding into the state of the coast and is therefore immediately relevant and important

Shore protection structures are a controversial subject on the Oregon coast. The dispute over the structures is essentially about the conflict between private property rights and the public's right to an unobstructed beach. The private property owners feel that they have a legitimate interest in protecting against loss of property from wave attack and erosion. There is also a sense in the private property community that the beach fronting their homes is essentially owned by them. This is a misperception leading to conflict with public beach advocates. Those that oppose shore protection structures have, typically, three main arguments. The first argument is that the structures limit access to the beach from the upland as well as lateral access along the beach in periods of high tide. The second argument is that the public owns the beach and private property owners do not have the right to place hard structures on the beach limiting the aesthetic quality of the beach. A last argument involves the uncertainty of sea level rise. If the sea level were to rise, this may result in a complete loss of beach with waves at all tidal levels reaching the back of the beach fronted with structures. The State of Oregon has tried to reach a compromise with the two views through its coastal management program and more specifically with the emergency rules. The ability of the State to protect private property while still protecting the public trust on the shore is a delicate balancing act. The emergency situation at Neskowin is illustrative of the implementation problems associated with protecting the public's right to an unobstructed beach while still offering property owners the opportunity to protect their homes.

The purpose of this research is two-fold: to evaluate the success of the new emergency procedures promulgated in 1998 and to characterize the erosion event that

precipitated the emergency during January, February and March 1999. These two purposes support each other and provide a holistic understanding of how emergencies arise and how effective state procedures are in meeting the challenges of extreme events. In order to facilitate understanding, an overview of Oregon's shore protection policies will proceed the analysis of the new emergency rules. Neskowin will act as a case study to see how well the emergency rules worked.

Managing the Beach

The beach, in Oregon, is free and open to the public. Oregon has been at the forefront of coastal states in protecting the beach from privatization since the early part of 1900. As early as 1911, Governor Oswald West worked to preserve the beach as a treasure for the public. In 1913, legislation was passed that included all tidelands as a public highway and declared the area between low and high water open to the public. In that day, in some places, the only way to get from north to south was to use the beach as a road. The interior was mountainous and densely forested; the beaches were flat and wide. By declaring the beach a highway, the government took possession of the beach and insured its availability for public use, which is in contrast with the rest of the coastal United States.

Due to the early rights to use the ocean shore for travel and recreation, Oregonians believed that the entire beach was owned by the public (Evans, 1998). This was not the case; the government only held possession of the land between high and low water in most cases. The sand above high water continued to be held privately where private property deeds extended to mean high water¹. During the summer of 1966, Surfsand Motel designated the beach in front of the motel for private use by guests only. The beach was marked off by logs and later by a fence. This action raised several critical questions about beach ownership and the ability of private interests to alienate part of what was believed to be the public trust.

In response to the increasing furor over the privatization of the beach, the legislature, with the guiding hand of Governor Tom McCall, passed the Beach Bill in 1967. This bill delineated the area of dry sand 16 feet above mean high water as being critical to the public's interest and provided jurisdiction to the State to regulate structures in that area. In 1969, the line delineating the jurisdiction was codified through the creation of a surveyed boundary that was roughly at the vegetation line. This line is called the Beach Zone Line (BZL) or Statutory Vegetation Line. Though neither Bill gave the state ownership of this area, it established the line below which development would be regulated by the State.

¹ All land below low water is held by the State under Division of State Lands

In 1969 the first challenge to the Beach Bill reached the Supreme Court of Oregon. In *Thornton v. Hay* the Court recognized that the public had a right to access the dry sand area of the ocean shore. This right derives from the "doctrine of custom" which states that Oregonian's use of the beach has been continuous since the beginning of human use. In preserving access to the dry sand area, no rights were taken from upland property owners, because they never had rights to exclude the public from the dry sand area of the beach.

The State of Oregon, protects the public's access to the dry sand area as part of the public trust. In addition, due to the Beach Bill, the State also has the authority to regulate structures below the Beach Zone Line². The Beach Zone Line is non-ambulatory and does not depend on mean high or low water; it is independent of those variables. The Bill designated the Highway Commission as the permitting authority for construction seaward of the BZL. At that time, the Parks Department was a division of ODOT. In 1989, the Parks Division separated from ODOT and became a distinct governmental agency. When OPRD separated from the Highway Department, it was given jurisdiction over the area seaward of the BZL. OPRD ensures maintenance of the public easement against private intrusions onto the beach while allowing protection of ocean front development. The Beach Bill is codified in the Oregon Revised Statute (ORS) 390.605 to 390.770.

Reasons for Managing Shore Protection Structures

Shore protection structures have both an aesthetic and morphological effect on the beach fronting the structure. These structures fix the shoreline in one location and limit the ability of the beach to respond to changing wave conditions. How large of an effect the structures exert on beach processes is an important parameter in understanding the costs of placing these structures on the beach. Shore protection is not just about protecting the upland property owner, but it is about understanding the impact that one structure or a series of structures will have on the beach system. In addition to the beach system, public access may be diminished and in extreme wave conditions, eliminated.

Unfortunately, a uniform conclusion about the impact of the structures has not been reached. Kraus and McDougal (1996) in a literature review of 40 recent papers

² The jurisdiction governed by the Beach Zone Line changed in 1999 under SB 11. Please refer to Appendix 2.

dealing with seawall³ - beach interactions drew several conclusions that are helpful in understanding the Oregon situation. All of conclusions reached carry the caveat of needing further research to be unambiguous. Kraus and McDougal found that during a storm, reflection of energy from the wave bouncing off the seawall did not significantly contribute to beach profile change. Though the beaches with seawalls did experience some scour at the base of the riprap, it was less than the amount of sand lost from non-protected beaches. This means that the riprapped beach did not lose more sand than was lost from adjacent beaches. Due to wave reflection not playing a significant role during storms, beaches with a seawall retain about the same amount of sand as beaches without seawalls. Under normal wave conditions, beaches backed by seawalls behave the same as non-armored beaches.

Riprap is a wall made of large rock placed one on top of the other. The rock is placed against the beach dune and slopes backward away from the ocean at an angle of about 1.5:1. Riprap has several elements: toe trench, pitrun fill, and armor rock. The toe trench generally digs into the sand about 4-5 feet deep. Large heavy rocks placed carefully in the trench act as an anchor for the structure. The pitrun fill is small rock laid down above the toe trench and finally large rocks weighing approximately 1 ton are placed on top of the smaller rock. The rock is not dumped onto the beach; it is individually placed by a machine. Much energy and literature has been devoted to understanding the impacts of hard shore revetments on beaches.

Although the beaches with riprap did not experience more erosion than adjacent areas, the seawalled areas contributed less to the overall sediment budget. The sand behind the shore protection is unavailable and hinders berm formation. Under non-protected beach conditions, the dune sand moves from the beach to the off shore where it forms sand berms or bars. The formation of the berm increases the dissipative nature of the beach and causes the largest waves to break farther out. Riprap traps sand precluding it from forming berms and waves are able to move in land and break higher up on the beach causing more energy expenditure on the beach. Although in the long term the sand is not lost to the area, it may not be available at critical times. During the critical period of high waves, the sand does not assist in dissipation of energy because berms that would naturally form do not have the supply of sediment (Kraus and McDougal, 1996). In addition to locking up sand in the immediate area, evidence suggests that seawalls effect more than the immediate area. The longer the wall, the farther away the effects are felt. These conclusions support

³ Seawall and riprap for the purposes of this paper are used interchangeably.

work by Komar and McDougal (1988) done in a wave laboratory. The results of their tests show that shore protection structures affect adjacent properties on both sides to a length approximately 70% of the length of the structure. If a shore protection wall were 100 feet long, then 70 feet to both the north and south would experience significant impacts. However, the laboratory results are not conclusive and further studies are underway.

Most riprap structures are covered in sand after construction and planted with beach grass. Nevertheless, even without this help seawalls do not seem to hinder the return of the sand. The sand tends to blow back on shore and it takes about 10 years to return to pre-erosion conditions (Komar and McDougal 1988). Contrary to this conclusion, another study found that long-term recovery of the beaches is hindered by prohibiting berm formation by wave swash and dunes formation from wind (Kraus and McDougal, 1996). There is no agreement between researchers about the long-term effect of shore protection on beach recovery and it is therefore difficult to make wise resource decisions concerning their placement on the beach.

Jurisdiction and Authority on the Beach

There were three governmental bodies sharing authority on the ocean shore in 1999: local governments, Oregon Parks and Recreation Department (OPRD) and Division of State Lands (DSL). The Division of State Lands no longer holds authority on the ocean shore due to Senate Bill 11, 1999, but during the promulgation of the emergency rules and the erosion events discussed here, DSL maintained authority on the ocean shore.⁴ Local governments have planning jurisdiction over the ocean shore through the Coastal Land Use Goals and through zoning. Local governments, though, maintain no enforcement authority on the ocean shore. DSL's authority derived from the Removal/Fill Law and OPRD's power is from the Beach Bill. The Oregon Supreme Court confirmed this authority in the landmark case *Thornton v. Hay* in 1969.

If the proposed construction was below the BZL, then jurisdiction lay with OPRD, if above the BZL and in front of the actual vegetation line, then the permitting authority was DSL. OPRD, through an agreement with DSL implemented the Removal/Fill Law on the ocean shore. This relationship was simplified with SB11

⁴ Please refer to Appendix 2 for a more complete discussion of these changes.

that extended OPRD's jurisdiction to the actual vegetation line. OPRD now oversees the beach between the extreme low water and the actual vegetation line with the Beach Zone Line surveyed in 1969 no longer in use.

Local governments do not have authority to issue permits to construct on the ocean shore. Cities or counties exert control over the ocean shore area through local comprehensive plans (LCPs) which must incorporate the Statewide Planning Goals. The LCP's are approved by the Department of Land Conservation and Development (DLCD), after approval, they carry the force of law. The LCP's guide development within the city or county and define zoning and critical land uses. The local government determines what can be built fronting the ocean shore without consultation with OPRD. The Parks Department does not have oversight over upland development thought it does affect the ocean shore character and scenic qualities and creates the need for shore protection structures.

There are three principal Goals addressing shore protection: Goal 7, 17 and 18. Goal 7 states that development in known natural hazard areas should only occur with appropriate safeguards. Natural hazards include erosion, ocean flooding and landslides. Goal 17, the Shorelands Goals, requires LCPs to address geologic and hydrologic hazards along the ocean shore. This Goal also states that "nonstructural solutions to problems of erosion and flooding shall be preferred to structural solutions."

The preference for non-structural solutions has not been well implemented due to the dearth of non-structural examples on the Oregon coast and the intransigence of the contracting community for trying new structures. Contractors working for the property owners design all of the structures built on the coast. The contracting community on the Oregon coast is small and most of the structures seen on the coast are built by only a handful of firms. The designs used by these firms are virtually identical to each other and do not vary with the topography or the need of the given area. The same structure is built throughout the coast of Oregon. In addition, the State has not required the property owners to show any evidence that non-structural solutions are not feasible. In the application for a shore protection structure, there is a small box asking the property owner to list the alternatives considered. Many times this box has the following undocumented assertion, "No other alternative possible, hard shore protection the only solution."⁵ Though this statement does minimally

⁵ Through my experience at OPRD, I often saw this or a similar version on shore protection structure permit applications. Please refer to Preface for clarification of my experience.

satisfy the requirements of the statute, it represents a lack of true alternatives considered.

Goal 18, Beaches and Dunes has some of the strongest language for coastal development. Goal 18 restricts shore protection structures (SPSs) to property where development existed on January 1, 1977. Development is defined as houses, commercial and industrial buildings, vacant subdivision lots that have been physically improved or areas of special exceptions. Though local governments cannot authorize development on the ocean shore, OPRD requires local government approval for all shore protection structures.

Shore Protection Policy Implementation

Oregon Parks and Recreation Department is the primary governmental body responsible for implementing the Beach Bill and for protecting the public easement on the ocean shore. The Beach Bill states in unequivocal terms the public policy of ensuring the public's right to use the beach (ORS 390.610). The Statute states that the "public may have the free and uninterrupted use (of the ocean shore)." The statute also recognizes the need to regulate and control improvements on the ocean shore, "no person shall make an improvement on any property that is within the (ocean shore) area" without a permit. The language has been modified slightly in the wake of SB11's passage, but the differences are minimal. The process for property owners to apply to OPRD for a beach improvement structure includes a public review period, procedures for holding a hearing, a timeline and an appeals process. The policy also provides standards for beach improvement structures in ORS 390.655. The standards are based on the following considerations: public need for safe surroundings, suitability of area for improvement, land use trends, and the need for recreation and access.

In order to fulfill the goals of the Beach Bill, OPRD codified in Oregon Administrative Rules sections 736-020-0003 through 736-020-0032 how construction on the ocean shore would be regulated. The Administrative rules provide additional standards used by OPRD to decide the fate of proposed ocean shore construction. Five standards must be addressed before approval of a shore protection permit. The first, general concerns, has six sub-standards: project need, protection of public use of

easement, compliance with federal, state and local laws, consideration of alternatives to better protect public rights, consideration of non-structural solutions to reduce public costs, and compliance with LCDC Goal 18. ⁶ The other four standards address scenic, recreation, and safety and associated resource concerns. Both the recreational and safety standards require construction to avoid blocking access-ways to the ocean shore area.

When all relevant laws are surveyed the three critical policy objectives are 1) minimization of coastal hazards, 2) consideration of alternatives to hard shore protection structures and 3) protection of beach access and recreational activities within the dry sand area (Good, 1992). In order to meet these objectives, OPRD requires permit applicants to demonstrate project need and consider alternatives to hard shore protection. Most importantly, all applicants must go through a public review process that notifies the neighbors and the community about the proposed construction. To facilitate the public's involvement, the property is posted with signs for 30 days during which time the public and other governmental agencies may submit concerns about the proposed project. In addition, the public may request a hearing, which requires OPRD to gather public testimony that is then considered during the evaluation process. In order to trigger the hearing, ten interested individuals or the permit applicant must request a hearing. In contrast to regular permit applications, emergency authorizations required no such public evaluation process. The statute states that in emergency situations the property owner who is in "imminent peril of being destroyed ...by the Pacific Ocean" may bypass the public review process. The only provision provided in the statute is that the oral permit must be reduced to writing within 10 days of authorization. Before 1998, emergency situations were not mentioned in the Administrative Rules. They listed no procedures, no standards nor any criteria for determining an emergency.

Until the winter of 1997, OPRD had not formalized their emergency powers with rule making. The Department had been issuing emergency permits under this provision without any additional constraints or guidelines. Due to fears that El Niño storms of 1997-1998 would trigger large numbers of emergency authorizations, OPRD realized the necessity of creating emergency procedures that would formalize what had been an informal process between OPRD and the property owner. During 1998, Steve Williams with the help of Nan Evans, Manager of Policy and Planning, wrote a draft of the emergency rules. Williams is the Coastal Land Use Coordinator

⁶ Goal 18 bans hard structures for property developed after January 1, 1977.

for the northern part of Oregon. As the point person for most ocean shore development, he has a broad understanding of not only the laws which govern development but delicacies of dealing with the public in heated and controversial discussions. The job of the Coastal Land Use Coordinator (CLUC) includes dealing with the public, private landowners, contractors and other government agencies.

Prior to Emergency Rules

There were three serious problems due to the lack of formal procedures in emergency situations. 1) Structures were not temporary on the ocean shore, 2) emergency structures were not tracked internally 3) emergency structures circumvented the public review process. The Coastal Hazards Working Group also noted these problems in 1992. The working group stated that "emergency shore protection procedures are essentially ad hoc, they result in inconsistent, uncoordinated decisions and violate both the letter and the spirit of other shore protection policies." (Pg. 57) Although the emergency procedures were not formalized, OPRD had an internal set of procedures that were used to deal with emergency situations. These procedures were not codified in any form but due to informal policies, decisions were made in a rational and predictable manner known to the few OPRD employees engaged in coastal management.

The nature of informal policies is that they change over time and evolve as managers learn how to deal with situations. The informal procedures in action just before implementation of the emergency rules in 1998 bear a striking resemblance to the current emergency rules. Statute requires reduction to writing within 10 days of verbal authorization. The written form consisted of a letter to property owners listing the conditions of the structure including size, length and construction requirements. The letters were filed by county with OPRD on an annual basis. The decision for authorization was usually made in coordination with county planners and involved a site visit.

The most serious problem resulting from lack of emergency procedures was that the structures once in place stayed in place without further administrative review or public comment. The structures were not meant to be temporarily on the beach in the minds of the State, the property owners nor the contractors. Temporary has two meanings in this context. 1) Temporary within the permitting structure of OPRD.

Temporary in this sense is used to describe the fact that the structure has not gone through the regular permitting process and that the permit is a "temporary permit." Temporary refers to the regulatory regime requiring property owners to come back for a permanent permit that was codified in the new rules. There is an element of transitional regulation with this definition of temporary. The emergency permits are transitional permits that are issued prior to the regular shore protection permit to allow placement of shore protection. Temporary in this sense means that the permit is only valid for a specific period of time after which the structural protection must be removed from the ocean shore. The emergency permits authorized by OPRD prior to 1999 were not temporary nor transitional in that the property owners were not required by the State to submit a regular shore protection application and go through the regular review process in order to maintain structure on the beach.

The second definition of temporary is more concerned with the physical nature of the emergency structure. 2) Temporary as in temporarily placed on the beach. This definition means that the structure will only be on the ocean shore for a given time period after which it is removed. Structures engineered to last only a short time would also be temporary within this definition. For instance, a truly temporary structure would be hay bales or sand bags. The structures would be temporary in that they would exist until destroyed by wave action and hence would temporarily protect the upland property. Emergency structures prior to the 1999 Emergency Rules did not require that the structures be removed or even modified after the emergency event ended. Nor was it required that the structures be designed to be temporary.

The ability of property owners to place on the ocean shore permanent hard protection during emergencies created a loophole through which property owners could by-pass all the carefully delineated procedures laid out by the legislature for shore protection structures. During the 1983 El Niño event, the lack of emergency procedures resulted in construction of a seawall in front of 124 lots that went largely unrecorded by OPRD⁷. Though state agencies were aware of construction and attempted to regulate the placement of rock on the ocean shore, the lack of procedures created an ad hoc decision making process largely controlled by the property owners.

For instance, in 1983 during an emergency erosion event OPRD attempted to respond to the concern of property owners in Bayshore. In an internal memo dated March 7, 1983, OPRD discussed the barely veiled threat by the property owners to dump rock in spite of legal requirements of obtaining a permit. OPRD responded by

⁷ In 1983, OPRD was a division of ODOT, but for simplicity, I have used the term OPRD.

authorizing the placement of the rock as an emergency structure with several conditions. The conditions are largely standard for any shore improvement structure: toe trench, revegetation, filter blanket and meeting any requirements of the local jurisdiction. None of the conditions required the structure to be temporary nor do the conditions limit or describe the size of the structure. The structure bypassed public review and the requirement of seeking alternatives. In addition, part of the revetment was for empty lots, there were no homes at that time on several of those lots that received emergency structures. The Beach Law provides for revetments in front of vacant lots but it requires some explanation to justify an emergency on a vacant lot. The statute states that an emergency is justified "where property or property boundaries are in imminent peril." It is difficult to see how a property boundary would be in "imminent peril" given that the boundary is simply a line on paper that is not removed with erosion or movement of sand. In addition, the property is not in imminent peril from erosion if there is no home. For instance, sand dunes are not in imminent peril of destruction by wind or by erosion, wherever they go and whatever form they are in, the sand is not in danger. Though this is just one example, it is illustrative of the problems associated with the lack of emergency procedures that OPRD faced.

Emergency structures were also very difficult to keep track of due to the filing system of OPRD. Each new shore protection application that is received by OPRD is assigned a number that is then filed under each county within OPRD offices. OPRD did not assign numbers to emergency authorizations for several reasons. Primarily, there was neither application received from the property owner nor any other paper trail to keep track of during decision making. The decisions were made in verbal consultation with other Parks employees and then communicated, usually in person, to the property owner. This is not meant to imply that decisions were poorly made or that anything unseemly was occurring. It was simply a bureaucratic filing problem in need of correction.

The ORS 390.650(6) required OPRD to reduce to writing the emergency authorization. This usually consisted of a letter that may or may not have listed conditions, tax lot or any other features of the property. The emergency authorizations were not recorded in the computer by tax lot or by last name of property owner nor were they tracked in any sort of internal list system. There is virtually no way to trace the numbers of emergency authorizations granted over time nor is there any way to search for specific properties that may have received emergency authorizations.

The lack of filing procedures created a huge hole in the ability to quantify how many shore protection structures there are on the Oregon coast or even where they are. Nor did the letters written by Parks provide standard information. For instance, the most important pieces of information necessary to track shore protection structures are the tax lot number and section, township and range. The section, township and range allow any person to look at the map and know the region and area of the revetment. The tax lot tells you which parcel within that area. The names and ownership change but the parcels usually are the same. This information can be found on some emergency letters but not others. In addition, many parcels were done as a group so only the lead property owners name is listed without listing of adjacent property owners. This creates a confusing quagmire for anyone interested in reconstructing events along any given stretch of coast.

Knowing which properties have shore protection permits is critical for land use planning but more specifically, those properties that have revetments may repair them without going through any permit process. A property owner who needs to repair their revetment simply calls OPRD and receives a drive on the beach permit for the large equipment to use the ocean shore area. The property owner can only repair the revetment, without going through a permitting process, if the damage occurred within three years of requesting the repair. A major loophole could occur when a repair is requested for an emergency structure.

Let us consider the following scenario. A property owner received emergency authorization for a structure that went unrecorded within OPRD. Subsequent winters destroy the emergency structure. The property owner can then rebuild the structure with a simple drive on the beach permit without going through any public review or design analysis. This scenario effectively circumvents all of the State's permitting procedures. The lack of emergency procedures not only hindered the State's ability to respond to emergencies but also limited its ability to follow the letter and intent of the law to protect the public's interest on the beach.

Emergency authorizations also circumvent the public review process. For a regular shore protection permit, the public and government agencies are given thirty days to file comments or concerns that are then considered by OPRD when making application decisions. Emergency authorizations by their very nature do not have the time to take in public testimony or concern. Before the 1998 rules, emergency authorizations never went through a public review process. The emergency structures became de facto permanent on the beach but without the ability of the public to respond to the structure. The placement of shore protection changes the visual and

physical nature of a place thereby affecting adjacent properties and communities. For instance, treasured accessways may be blocked during an emergency and remain blocked due to the property owners fear that any rock removed may lead to more erosion.

The lack of public review also meant the exclusion of other public agencies from the decision making. As part of the public review process, Department of Land Conservation and Development, Division of State Lands, and Department of Geology and Minerals are all encouraged to comment on the proposed shore protection. Each of the agencies offers an expertise to OPRD that is valued when making decisions about shore protection. Before 1998, the other state agencies were not included in the determination or consultation of emergencies. This was a lost opportunity for Parks to harness the expertise provided by the other agencies. In addition, it made conformance with local comprehensive plans more difficult.

It is particularly important for OPRD to coordinate with the city or county within which the emergency is occurring to identify whether the property is a pre-1977 development⁸. OPRD does not have, nor does any agency or county, a comprehensive list or map to determine the age of development along the Oregon coast. OPRD relies upon the expertise and knowledge of the local planning departments to determine the property's eligibility for shore protection. The recent erosion emergency at the Capes development strengthened the Goal 18 requirement in the eyes of the public. Even in an emergency Goal 18 applies. However, without close communication between state and local agencies, properties could slip through the regulatory cracks setting precedent for other properties. This has not occurred at this time. The procedures introduced in 1998 attempted to address all of these concerns and provide a sound process for emergencies.

⁸ Statewide Planning Goal 18 states that only properties developed prior to January 1, 1977 may receive hard shore protection.

Case Study of Neskowin, 1999

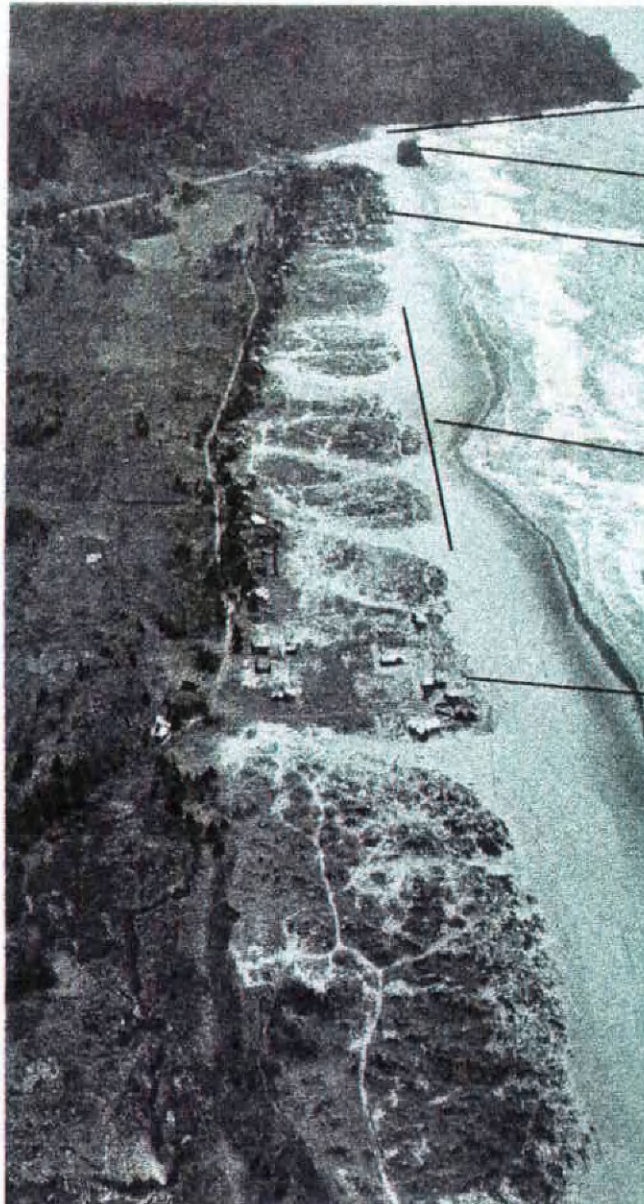
History

Neskowin has a rich cultural heritage that is reflective of Oregon as a whole. It was first settled in the 1880's by a small group of farmers. It is believed that a Nestucca Indian settlement at the mouth of the Neskowin Creek was abandoned prior to the arrival of the settlers. Like much of the Oregon coast, the town quickly became a place to camp and picnic. In 1912, William Walton received most of the Neskowin property from his brother and decided to turn the town into a resort community (Tillamook History). This decision and timed deed restrictions that limited any commercial activity ensured that the community would evolve into a neighborhood of single family vacation homes. By 1959 when the timed restrictions were lifted, the feel and the vision for the town were well established and commercial development is virtually non-existent in Neskowin. The town has always been small: in 1950, there were approximately 70 full time residents, in 1988 there were 180.

Neskowin is also the site of the first legal challenge to the Beach Bill. Lester Fultz and the L.E.W. Engineering firm began construction of a road from the low dunes to the north of Cascade head across the beach and towards the headland a few weeks before the passage of the Beach Bill. After passage of the Bill, Fultz applied for a permit to continue to construction but was denied approval of the structure. Fultz appealed the decision to the State Circuit Court claiming that the Beach Bill was unconstitutional and violated the 5th and 14th amendment of the Federal Constitution (Straton, 1977). But, before Fultz had his day in court the State Supreme Court ruled on the parallel case of Thornton v. Hay 1968. The Beach Bill was ruled constitutional and Oregonians gained a "customary right" to the dry sand portion of the beach. Fultz continued to be a major presence in Neskowin despite the loss of the beach road. The entire southern portion of Neskowin was developed by Fultz and much of the riprap in town was a result of his involvement. Fultz has left his mark throughout Oregon due to his active interest in riprapping large sections of the coast for coastal development.

Geography of Neskowin

(Picture from 1974)



South Beach was mostly riprapp in the early 1980's. The section immediately adjacent to Cascade Head though was riprapp For the first time in under emergency rules of 1999.

Proposal Rock

Neskowin Core Area was without riprapp until the emergency of 1999. Only Pacific Sands had shore protection in the form of a seawall.

Notice that the entire town sits on a sand dune. In the areas without homes you can see where the waves have washed up into the dune system.

Neksowin North - this area is largely without riprapp except for the two properties that were riprapp in 1999 under emergency authorizations.



Emergency Authorizations North of Proposal Rock

(This picture is from the 1960's)



This is **Neskowin North** - at the time of this picture, there was no development
There is now a development on this parcel of land. Two homes received emergency authorization

Pacific Sands Received Emergency Authorization from DSL

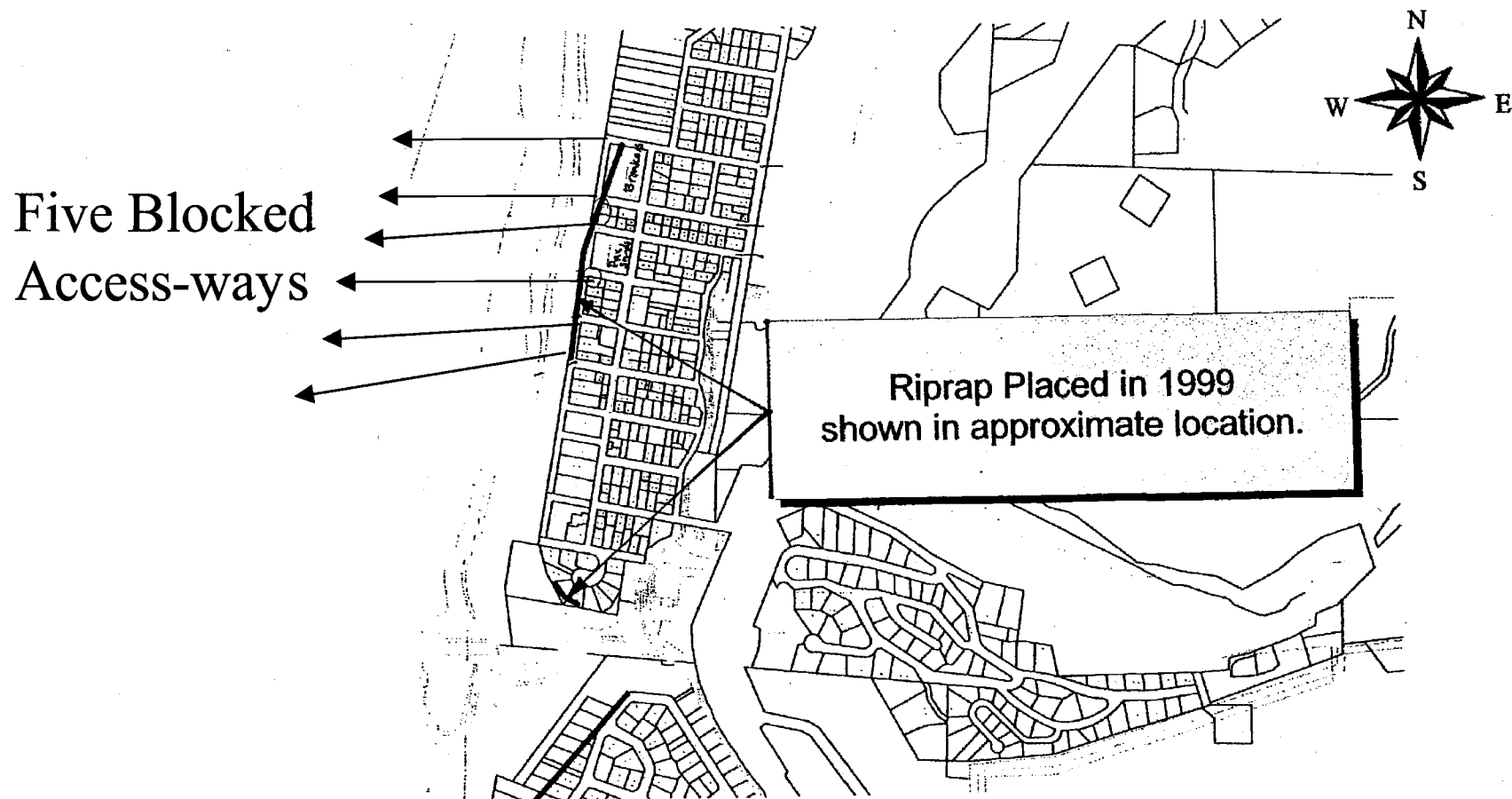
This is the **Neskowin core** area. This was the first area to receive emergency authorization, there were seven contiguous properties riprapped

This is the **The Point** - a small gated community
Two homes received emergency authorization,

Proposal Rock



Riprap location in Neskowin Core Area



The Storms

Although Neskowin experienced the worst damage in 1999, the groundwork for the emergency was laid the year before during the El Niño of 1998. The West Coast of North America experienced a severe El Niño event that brought increased water levels and intense storms to Oregon. El Niño years result in fewer and weaker storms hitting the Pacific Northwest (Komar et al, 1999) due to the jet stream sitting off of California. The jet stream's southern path results in storms being diverted away from Oregon and towards California. The storms that do reach Oregon are weaker than average and tend to be strongly from the south. The southern origin of the storms causes waves and energy to hit the Oregon beaches at an angle causing sediment to be transported from the south to the north. This process is like hitting a cross court shot in tennis, the ball goes from the right to the left just as the sand moves from the south to the north. The result is sand loss at the southern end of the littoral cell and sand gain at the northern end. Neskowin is in the most southerly position in the Nestucca littoral cell.

In addition to the effects of Neskowin in the southern portion of the Nestucca littoral cell, the beach was also affected by the increased water levels. El Niño brings increased water levels to coastal areas. This is due to a wave like current that originates at the equator and moves from the western Pacific to the Eastern Pacific. When the wave hits South America, it splits with half of the energy moving up the coast of North America. As it moves north, it is kept close to land due to Coriolis forces (Komar, 1998). The water is warm resulting in increased water levels due to thermal expansion. The combination of increased water levels and southern genesis of the storms dealt a double blow to Neskowin.

There are trees that emerge periodically in the surf zone in the south of Neskowin. The buried trees at Neskowin offer a unique opportunity to judge how unusual the lowered beach level was during El Nino. By studying the trees at Neskowin for evidence of marine exposure, it is possible to judge when the last time the trees were exposed. Researchers estimate that the trees had not been exposed to the depth seen in 1998 in the last 2,000 years (personal communication with Roger Hart 7/99). This assertion is supported by no sign of barnacles or shipworms on the lower portion of the trees. During the last extreme El Niño stumps were exposed and were carbon dated at approximately 1,700 years old (Hart, 1997) The exposed trees

are a harbinger of future erosion due to lowered beach levels. They are also an indication of the dynamic nature of the coast and how much the shoreline moves between time periods. Clearly the trees were not growing on the beach 1,700 years ago. This area had been forested but due to sea level rise this area is now beach front.

In 1999, climatic conditions changed from El Niño to La Niña conditions. La Niña, in contrast to El Niño brings a greater frequency of storms to the Oregon coast. The increase in storms results in higher wave-energy levels and wind induced storm surge thereby increasing likelihood of erosion. (Komar, et al, 1999). Higher wave energy levels mean that more waves will reach higher on the beach towards the location of structures. Storm surge results in an increase in the overall water level due to wind pushing the water up against the coast. Storm surge can be understood by blowing on a bowl of water and watching the water pile up on the far side of the bowl.

Komar and McDougal in 1988, showed that erosion on the Oregon coast is largely due to rip embayments. Rip embayments generally set up before a storm hits and then continue throughout the storm season and relax in the spring. Neskowin in particular, is susceptible to rip set up. The waves bounce off the southern headland and are able to set up rip embayments at regular intervals. Fine-grained beaches, like Neskowin, tend to be dissipative. Dissipative beaches tend to be wide and shallow, which allows the energy of waves to dissipate before hitting the back dunes. The wave swash on dissipative beaches tends to have less energy to remove sediment than wave swash on steep beaches. The dissipative nature of the beach does not allow rip embayments to reach deep into the sand berm but instead the effect of the rip embayment is felt along the coast (Komar and McDougal, 1988). Rip embayments played a critical role in exacerbating the erosion problem at Neskowin.

The storms that had the greatest impact in Neskowin occurred on February 5-7 and March 2-4. The emergency authorizations cluster around these two events and further illustrate the extreme nature of the storms. The storm on February 5-7 brought significant wave heights of 10 m. with total water levels around 3.5 m. NGVD29 (Komar et al, 1999). Ten-meter waves have a probability of returning every 100 years thus giving this storm the honor of being a "100-year storm." Significant wave heights are a measurement of the highest 1/3rd of deep-water waves. The water level is given by adding the height of the tide with the maximum run-up on the beach. If you raise water 3.5m and then you spread that increased height across a relatively flat beach, the water can reach far into the back of the beach area where the houses are. The ocean had risen so much that the waves were breaking directly on what is typically the back dune of the beach. Standing with the property owners watching foot after foot of

Wave Run-up during storm of March 2-4, 1999. This picture was taken from South Beach looking north to Proposal Rock. This is the area of exposed ancient forests. This area has a low dune and was experiencing very low sand levels. This property and the two adjacent properpeties received emergency authorization.





Summer, 1998



During erosion event, February, 1999



Mid-construction of riprap wall,
February, 1999

The same location in Neskowin
Core Area before and during
erosion event of February, 1999

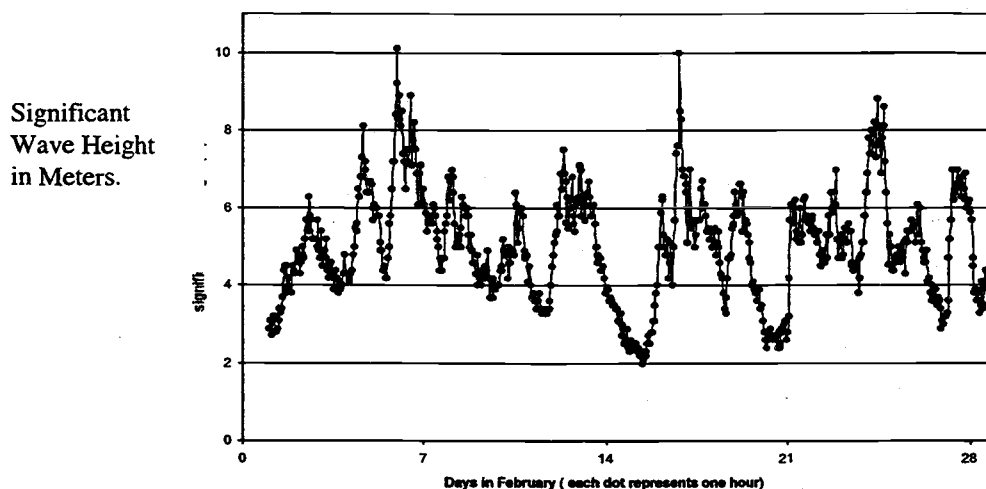


Same South Beach location
as previous figure.

beach disappear into the water provided me an opportunity to reflect on the immense power of the ocean and the smallness of our protective structures.

On March 2-4, an even larger storm reached the Oregon coast. There were deep-water significant waves of 14 m, or 42 feet high. The storm also hit the coast during Spring tides meaning the part of the month that has both the highest and lowest tides. Fortunately, the storms largest waves were reserved for low tides resulting in total water levels of 4m NGVD29 (Komar, et al 1999). If the storms largest waves had reached the coast during high tide, the erosion would have been measurably worse due to the ability of the waves to reach even further in land during high tides.

Significant Wave Height in February



Narrative of Emergency

The intensity and the frequency of the storms created an unprecedented erosion event in the history of Neskowin. Throughout the month of February and March, the town was battered by storms. More shore protection permits were issued between February and March of 1999 than any year since 1985. Although much of the central - southern portion of town in 1999 had shore protection, both the northern section and the far south were unprotected. The presence of shore protection became critically important as the winter of 1999 unfolded.

Recognizing the lowered beach level due to El Niño 1997-98, the homeowners of northern Neskowin asked OPRD to visit the site and discuss non-structural solutions to the erosion problem in January 1999⁹. I met with residents of Neskowin to talk about the state of the beach in front of their homes. There was a palpable fear in the house as residents told how much their homes meant to them but that they enjoyed their natural dunes. There was very little interest in riprapping the area. Residents expressed to me their interest in alternative technologies. Ideas such as reshaping the remaining dune or using soft technology were considered but before any action was taken, the erosion worsened.

By February 2, 1999, the 17-foot escarpment was within 10 feet of several houses. Between January 25 and February 1, 1999 the dune was 36 feet closer to the houses. On February 2, emergency authorization at my recommendation and using the newly promulgated rules was given to construct a riprap revetment in front of four homes in the north-central section of town. On site was a land use planner from Tillamook County, Tom Ascher. Mr. Ascher's presence helped decide the nature of response to the emergency and I relied upon his expertise during decision making. Just north of these homes sits Pacific Sand Condominiums, which had a seawall made of wood. The southern end of the wall had been edge scoured and was beginning to collapse. The waves were washing up and over the wall removing the sand between the wall and the structure. Pacific Sands lost most of their remaining seawall on February 3 and the sand dune began to erode in earnest. On February 5, 1999 Pacific Sands was granted emergency authorization by the Division of State Lands to construct a riprap wall where the seawall had failed. Pacific Sands, unlike the rest of Neskowin, received emergency authorization from DSL. Though the property was faced with the same conditions as properties on both the north and south, DSL claimed jurisdiction for the emergency and authorized the emergency permit under the Removal/Fill Law with minimal coordination with OPRD. I was not on site that day, it remains unclear how that decision was made.

The riprap constructed in front of Pacific Sands was done with different rock than adjacent properties and was constructed using different design standards than the property on either side. The riprap used was of a lower grade quality and the placement of the rock was poor. The rock wall was placed much further out on the beach than adjacent properties creating a large rock promontory on the beach. The

⁹ Except where otherwise noted, I have drawn upon my experience to relate the events of the emergency situation.

riprap was also placed across two heavily used public accessways. DSL emergency authorizations do not require property owners to come back for a regular shore protection permit after the emergency nor did they require the taking of a bond note. The multiple jurisdictions on the beach was a problem that has largely been resolved due to the passage of SB11.¹⁰

The north side of Pacific Sands continued to experience erosion and several properties were in immediate danger. On February 16, property to the north of Pacific sands lost 20 feet of dune. The house on the north side of Pacific Sands was sitting a precarious eight feet from the edge and again emergency authorization was given. This emergency authorization extended the riprap wall past the instant property and continued it several houses to the north that were also experiencing erosion. This central core of Neskowin had nine riprapped properties.

In addition to rock placed in front of homes, the rock was also placed across five access-ways, effectively terminating the use of them. In addition to access to the beach from upland areas, lateral access across the beach was also severely impacted. At most high tides, the area in front of Pacific Sands was impassable due to breaking waves on the headland of rock. This hindered access continued throughout the spring and will likely continue the following winter. During the summer of 1999, some sand returned improving lateral beach use. But, the problem of lateral access will likely persist in future winters.

Immediately adjacent to Cascade Head in the southern portion of Neskowin, properties were also experiencing severe erosion. This area, known as South Beach, is famous for its buried trees. When the tree stumps appear, it is a signal of lowered beach level and the trees had been exposed for approximately one year. This section of Neskowin has a lower foredune and the homes are built closer to sea level. The low sand level and initial lack of foredune increased the susceptibility of South Beach properties to damage from direct wave attack. Waves were washing up and over the ten-foot escarpment and hitting the lower stories of several homes. Between February 7th and 17th, the westward dune lost 15 feet and two houses were within 45 feet of the escarpment. In addition, the water pipe and the road that ran parallel to the beach were wiped out in mid-February. Though I was not on site to see the waves washing up over the deck of the homes, the property owner provided the pictures at the front of this section which show the amount of wave damage. Emergency authorization was

¹⁰ Refer to Appendix 2 for more details

given to construct a riprap wall in front of two homes and an empty lot as well as in front of the street where the pipe was exposed.

Further to the north, in an area known as Neskowin North, the erosion event continued into March. On March 1, 1999, the waves washed up and over an 8-foot sand dune to scour a long narrow gully that came within 15 feet of the house. The adjacent property to the north had a septic system in the foredune that was being threatened. The two properties received emergency authorization to place riprap on the ocean shore. By the end of the erosion event, riprap stretched for almost 1,000 feet in central Neskowin and for several hundred feet in South Beach and Neskowin North. In addition to the new structures, massive repairs to existing riprap were necessary throughout the town. The northern section of town, like South Beach, did not have access concerns. Both areas are behind gated communities and do not have any public accessways.

Land Use

The erosion experienced in Neskowin, though, cannot be blamed entirely on extreme wave conditions. The town was built on a sand dune. By looking at aerial photographs from the 1960's and 1980's, it is easy to see the wave run up that occurs throughout the beach. The photographs show that some of the houses built in the northern section of town are clearly placed in areas of extreme wave run-up. In addition, through conversations with local residents I was told that in the early 1930's the wave swash reached behind the homes that are currently built in the central section of town. The dunes in this area are in constant state of rearranging. Recognizing the precariousness of the moving dunes, Tillamook County has not allowed additional development of the dunes directly to the north of town due to ocean flooding concerns. There is no geological reason to separate this area from the rest of Neskowin, as the entire area is relatively uniform. The development on the dunes occurred prior to Oregon's Land Use Goals and the recognition of changing beach morphology.

Results and Discussion

The events that occurred in Neskowin in early 1999 were a culmination of history, land use choices, and extreme storms. The new emergency rules attempted to ameliorate the situation by protecting those homes that were most threatened. The rules were designed to provide a transparent process that could be seen by all involved parties: land owners, state agencies, local planners and interested individuals. The new emergency rules can count both successes and failures in the case of Neskowin. The three most important policy objectives of OPRD's regulation of shore protection structures are: 1) minimization of coastal hazards, 2) consideration of alternatives to hard shore protection structures and 3) protection of beach access and recreational activities within the dry sand area (Good, 1992). These three objectives should have been met during the emergency situation at Neskowin.

Meeting the Policy Objectives

The first policy objective, minimization of coastal hazards was satisfied by the ability of the State to get shore protection to threatened homes in a timely manner. The most important success of the new emergency rules is that the State was able to respond in a clear and decisive way to an emergency without loss of life or property to the coastal landowners. The process did allow careful coordination between state agencies and local jurisdictions. The requirements of the emergency rules allowed for efficient decision making in a timely fashion. Through informal discussions with some property owners involved in the emergency, they felt that their needs were addressed and that the State was responsive to their concerns.

The second policy objective of seeking alternatives to hard shore protection is inherently very difficult during an emergency situation. This policy objective must be addressed prior to the emergency in a pro-active management situation. This was attempted with the Breakers Condominium situation. Breakers offers a glimpse into the future of coastal hazard management on the Oregon coast. By defining the emergency before the emergency, the state was able to clarify design and structural elements. The decisions were made without the emotion usually associated with emergencies. In addition, the line decided on by the State and the property owner was appropriate and met the needs of both parties. The line was far enough back to ensure

horizontal access along the shore while also protecting the structure from wave damage. This pro-active approach used throughout the coast could lead to better management by allowing the State the time to act and determine what is in the best interest of the public. The State is charged with holding the coast in trust for all citizens. In a reactive situation as occurs during emergencies, the property rights of the landowner often seem more pressing than the diffuse rights of the public. The rights of the public to access and enjoy the beach seem small and optional when faced with a neighborhood whose homes may be destroyed by wave action. In an emergency situation, the diffuse rights of the public are lost due to the intense vocal minority acting in their self-interest.

Breakers Condominiums (Breakers) had worked with OPRD in the early 1980's when sand in front of their property had eroded. The State had denied Breakers a shore protection permit for riprap but allowed the reconfiguring of their ocean front dune. The restructured dune was maintained periodically to offer more protection for wave attack and dune grass was planted for stabilization. In addition, the State also set out a line on the sand that would justify an emergency in the future. The line delineated how much erosion would classify as an emergency. In addition, Breakers was required to submit designs for the structure that would be built if ever the erosion worsened to an emergency. The drawings and the design were filed for future use at OPRD. However, because the emergency component of the permit was within a dune management permit, the public never had the chance to review or comment upon the possibility of a riprap structure.

When the emergency situation hit Neskowin, Breakers contacted OPRD to request a triggering of the emergency aspect of their dune management permit. The State authorized the emergency and the riprap wall was put in. Unfortunately, the design agreed upon in 1988 was not the structure built in 1999. The discrepancy between the design and the actual structure though small was not negligible. The Breakers did not receive an emergency permit for this structure and therefore no bond money was collected nor were they required to come back for regular permit. The intricacies of this particular case are interesting in light of the statewide trend to a more pro-active approach to emergency situations. In this instance, the State was working off an old permit from a decade earlier. Due to the lack of bond money collected, the only choice for the State if Breakers refused to reconfigure their structure to meet the requirements of the permit would have been legal action. That course of action is expensive and far more time consuming than using bond money paid by the property owner to force compliance with permit. On the positive side, the

State needed to spend far less time addressing Breaker's emergency than the other properties in Neskowin because the emergency trigger was clearly outlined and designs were already given. In terms of efficiency at the administrative level, Breakers was markedly more efficient.

To improve the instant case, the State could have required a deposit of a bond in the amount necessary to enforce compliance at the time of construction. The other concern was the lack of public review of the riprap structure. The structure was not authorized under the emergency rules therefore it did not follow the same requirements of having to come back for a regular shore protection permit. Because the emergency rules were not triggered, the public never had a chance to comment or review the permanent shore protection permit. To improve the lack of public review in cases like this, the State could state that the structure is an emergency structure and therefore must follow the procedures laid out in the 1998 emergency rules. This simple condition would allow public review and would allow the State to address any additional concerns that may arise between the time of first issuance of permit and the final shore protection permit.

The third policy objective, preservation of access and recreation in ocean shore area was poorly met in Neskowin. The loss of access, both horizontally down to the beach and laterally along the beach is the most pronounced failure by the State. Before the erosion event of 1999, the core area of Neskowin had five public accessways. The property owners adjacent to the accessways received permission from the State to riprap across the accessways to protect their structures from edge scour. All of the public accessways became inaccessible. In addition, property owners placed signs in the middle of the accessways directing people elsewhere to access the beach. Many of the property owners, most notably Pacific Sands, placed signs indicating that the accessway was now private property. This was done with yellow tape placed across the riprap and by signage that stated that the access was closed. Access in Neskowin had been severely diminished both in fact due to the inaccessibility of traversing the riprap but also psychologically through signage. The loss of access, though, is not a problem inherent in the emergency rules, but it is an issue that must be addressed during emergencies. Preservation of access may be needed to be added to the emergency rules to insure that the public continues to be able to use the "customary right" protected by the Beach Bill.

Results of the Emergency Rules

The problems associated with lack of codified emergency procedures should have been resolved through the use of the new emergency rules. The problems associated with the lack of emergency rules were: 1) structures are to be temporary on the ocean shore, 2) emergency structures should be tracked internally 3) emergency structures need a public review process.

Structures built during the emergency situation in Neskowin were all given temporary status. The property owners were all required to submit regular shore protection permit applications to convert their structures from temporary to permanent. The structures were essentially given transitional permits allowing the placement of rock on the shore and requiring owners to return for a permanent permit. However in terms of the physical definition of temporary, the emergency rules did not require them to be placed temporarily on the ocean shore. None of the structures placed on the beach were built for temporary placement. The structures were built to be there permanently. However, the State did take bond money from each of the property owners equal to the amount necessary to remove the structures in the event that the property owners did not submit a regular application in one year. In order to get truly on the ground temporary structures, the State would have to offer some incentive to contractors or to property owners to try a new design.

The second problem, lack of record keeping, was thoroughly resolved through the use of the new emergency procedures. From an administrative point of view, the emergency permit rules allowed for better record keeping. The files were entered into the database and careful record keeping of correspondence occurred. In addition, the riprap structures have all been photographed for future reference and the photos stored within the files. The files also include descriptions of the emergency structures and all structures had design conditions placed on them. All the properties involved were required to give bonds or cash equal to the cost of removal of the structure. Procedurally, the emergency rules were effective in increasing coordination among government agencies.

The final problem resolved by the new emergency rules was the lack of public review. The procedures were effective in communicating to the property owners their responsibility to submit a regular shore protection permit. In addition, the rules provided a course of action for concerned citizens. Most of the properties given emergency permits submitted a regular shore protection permit application by summer of 1999. All the structures went through a public review process. Due to this process the community had an opportunity to voice their concerns through the review process that was helpful to both the State and to the community. When the public notice signs

were posted to convert the temporary structures to permanent, the public response was swift and voluminous. OPRD received many letters and telephone calls all concerned about the same issue - access. The State received more than ten requests for a hearing leading to a very well attended hearing.

There were three main points gleaned from the hearing. First, the inland residents of Neskowin respected the need of ocean side residents to protect their property. Second, the ocean front owners did not feel that providing access was their responsibility. Third, the inland residents felt that access needed to be restored either at the expense of the ocean front residents or by Tillamook County. Mr. Ascher of Tillamook County was present for the discussion and made it clear that the County is not responsible for the accessways that were terminal ends of the street. This discussion was a result of the new emergency rules and is part of the success of the new rules. Though the issues raised are difficult, the community's ability to respond to the changed landscape is critical to coastal resource management. Increasing opportunities for citizens to be engaged in the permit process only strengthens the coastal program and should be encouraged.

Due to the response of the community and the new emergency rules, the State was provided the opportunity to require the property owners to reconfigure the structure to provide better and easier access. The State took this opportunity to respond to local concerns and improved access in three locations, two of which were in the core area of Neskowin.

The largest failure of the rules has less to do with the rules themselves and is instead focussed on the nature of determining an emergency. The emergency rules do not assist the Coastal Land Use Coordinator in determining an emergency situation. A definition is given for an emergency but the interplay between dunes and storms is unpredictable as shown in the discussion above. It was statistically improbable that two storms rated at 100-year storms would occur within weeks of each other but that was the situation.

Due to the gift of hindsight, it is easy now to see where the emergency was justified and where it was not but in the heat of the storm these distinctions are less clear. There was at least one property that received emergency authorization when the property did not meet the "immediate peril" definition. The structure on the property was 70' back from the dune edge, but this property received emergency authorization. The property was the last in a row and it was felt at the time that the erosion may worsen due to edge effects to threaten the house. Nevertheless, at the time of emergency authorization the home was not threatened. This failure though, represents

one of the few mistakes during the crises of La Niña and is not a reflection of the policy itself. The new emergency rules require the on the ground decision maker to make quick judgements in determining emergencies. The mistakes made during crises could be reduced by using proactive management; like that seen in the case of Breakers Condominiums.

Reflections in a Broader Context

Oregon's coastal management program is networked between multiple agencies. Some states, like California, have a central agency, California Coastal Commission to fulfill the role of managing the beach and shore area. Oregon's coastal management is dispersed amongst the Department of Land Conservation and Development, Oregon Parks and Recreation Department and until recently, the Division of State Lands. The dispersal of roles amongst various bureaucracies creates several problems but also provides some benefits. One of the critical problems is funding coastal management. OPRD has at least four full-time staff directly involved with coastal management and many other individuals who provide assistance as needed. Yet, the coastal program at OPRD is not directly funded by the legislature. The funding for the program must come out of OPRD's general budget used more specifically for managing the many State Parks throughout Oregon. This lack of specific funding means that the legislature does not address the needs of coastal management directly within OPRD.

In California, the Coastal Commission is a line item in the State budget and is open to the political process of compromise and political pressure. The Coastal Commission is supported by a small set of interest groups interested in coastal issues. To counter their influence is an opposing set of interest groups largely supported by private property rights groups. By contrast, in Oregon, due to the lack of explicit funding for OPRD's coastal management, it is difficult for interested individuals or groups to exert pressure through a political process. Francis E. Rourke provides a useful tool for understanding the importance of interest groups in America with the Iron Triangle Theory. The "Iron Triangle" explains policy sub-governments and how decisions are made through the political process (Rourke, 1976). Each point of the

triangle represents a player in the political process: interest groups, legislative subcommittee, and the bureaucracy. In Oregon the "Iron Triangle" is weak because the interest groups lack a direct link to the legislative subcommittee that controls coastal management at OPRD. This weakness is exacerbated by the lack of direct budgetary control of coastal management within the legislature. In addition, decisions about coastal management are made by the Commissioners for OPRD and this may not be recognized by interested citizens or interest groups in Oregon. The decision making body, though not hidden, is not easy to find for the general interested individual. This is in contrast to the California management program. The decisions are made by the Coastal Commissioners and meetings are publicized throughout California held in different regions of the state in order to address local concerns. Coastal Commission decisions tend to be well attended by California interest groups who can voice their concerns within the public forum.

The interest groups most involved in Oregon's coastal management are: Oregon Shores Conservation Coalition (OSCC), Surfrider, Save Our Shores, property owners, the community citizens concerned with access or scenic values. The first two groups, OSCC and Surfrider, tend to support better funding for coastal management and reduction of hard shore protection on the ocean shore. Save Our Shores is a private property rights groups interested in protecting private citizen's rights to build on private property on the beach. Finally, the last two groups are only groups in a loose sense. The property owners generally favor shore protection when their property is at risk. Their voices tend to be the most intense during emergency situations and they tend to hold great power for small periods of time over coastal decisions. Public policy is generally dominated by the most vocal or intense group that can be heard on a given issue (Lunch, 1997). The community members interested in access or scenic values are a loose group heard intermittently during hearings or when applications for shore protection enter their community.

Oregon's networked program reduces the influence of all interest groups except the property owners. There is very little opportunity to influence coastal management within OPRD except in relationship with individual permits where

property owners are the most vocal. The current interest in pro-active management would allow more individuals and interest groups to exert pressure on the coastal decisions and may strengthen coastal management within the organization. Pro-active management would reduce the influence of property owners and may result in the other interest groups gaining power.

An additional problem with the networked program is a mixing of missions. OPRD is mainly an organization concerned with managing recreational parks throughout the State. The coastal management program's mission includes elements of managing for recreation but also includes issues not seen in any other area of OPRD. For instance, there is a need for coastal specialists familiar with coastal processes, coastal engineering and policy that does not exist in any other department of OPRD. The skills needed are different and the issues addressed are different. The coastal management program is deeply involved with balancing private property rights against public recreation and public trust issues. The missions have some overlap, but generally, they are distinct and separate.

A networked program, though, does offer Oregon some advantages. Splitting management amongst agencies leads to decentralized decision making which may benefit local communities. In addition, it may be a cost-cutting measure because the bureaucracies already exist complete with the necessary infrastructure. In general, the networked program gives the impression of less government to the citizen that sees government oversight as onerous. Oregon has a cultural tradition of trying to solve problems outside of the government structure, the Salmon Plan is another example. The networked program can be seen as meeting the needs of management without creating further red tape for citizens.

Although my experience leads me to favor a central agency to administer coastal management, I am not prepared to make a recommendation. I do not feel that my research into the differences and benefits of a networked program was extensive enough to allow me to draw explicit conclusions outside of those provided. This paper has focussed more on the particular case of emergency situations and less on the broader political questions faced by Oregon's coastal program.

Conclusion and Recommendations

Climatologists predict that the next 25 years should be dominated by La Niña conditions. The La Niña conditions of more frequent and larger storms spell disaster for coastal properties. In order to be ready for the new climate conditions the State needs to begin taking a more pro-active approach to coastal management. This allows the State to protect areas of significant value while allowing protection in areas that are already aesthetically or environmentally diminished. Part of being pro-active is working with local governments as they make land use decisions. Local governments and OPRD need to work in tandem to define set back lines that have strong enforcement components that keep development out of the coastal hazard zone.

In addition to being active in managing the coast, the State needs to institute ways to protect vertical access to the beach. Deciding who will pay for reconstructed accessways is the central issue that the State must address if any meaningful access is to be preserved. In addition to paying the cost of construction, the liability issues must be resolved. Who is liable in an accessway owned by the County but ripped by private property owners with permission from the City and the State? It is a complicated issue in need of resolution. Vertical access is critical to protecting the rights of Oregonians on the beach but no less important is horizontal access. The placement of riprap on the beach in some places may diminish or completely impede the ability to walk up and down the beach. Exacerbating this concern is future global warming that may cause sea level rise. Even if beaches continue to be present at low tide they may become unusable at high tide when water washes up to the base of the riprap. A discussion of this concern needs to begin at the State level in order for there to be time to respond to disappearing beaches.

The contractors working on the coast of Oregon know how to build riprap walls. Most of them use appropriate materials and build safe structures. However, the temporary structures built during emergency situations are the same permanent structures they build elsewhere. There is nothing temporary about the construction methods used. If the State takes the "temporary" status of emergency structures seriously, then designs that are truly temporary need to be encouraged. OPRD needs

to work with contractors to provide a large set of design options that range in size and in permanence. The State should be progressive in bringing new technology and encouraging new shore protection systems. The State is the only player in the world of shore protection that has a vested interest in protecting the public's right to an accessible beach and is therefore responsible. The State's responsibility to the public extends beyond reactive management to helping contractors and home owners have more choices than the same riprap structure that has been built hundreds of times throughout the coast.

The State should begin instituting state-wide pro-active hazard management. Decide where emergencies are most likely and work with those communities to insure that development does not occur in high hazard zones. In addition, existing development in hazard zones needs to either be protected or the homes need to be relocated further back. Through the use of hazard zone mapping and technology like GIS, better management is possible and should be attempted. Effective lines in the sand that show where the emergency begins could increase the efficiency of emergency situations. But, if a line in the sand is drawn, it must be fully reviewed by interested parties and relevant agencies. In addition, a line in the sand should not preclude the State from requiring alterations to a built structure that strays from agreed upon designs.

Finally, OPRD must be watchful of their role as protectors of the public trust. OPRD carries an immense responsibility for insuring that the coast is open and beautiful for the seventh generation. It is difficult to see the long view when in the short term there are angry property owners on the telephone asking for shore protection and no other voice is heard. However, the diffuse voices of every visitor are also asking for wild and scenic beaches that are accessible and free of debris. Those visitors fuel the coastal economy and their voices should not be discounted. The beach is an important legacy that we pass onto our children. Very few have the resources to purchase a second home on the Oregon coast but we all have the right to walk the beach. That right needs to be protected.

Appendix 1

The 1998 Emergency Rules

The emergency rules have three sections covering eligibility, review and issuance and terms and conditions of the permits. The rules are written to support current policies and to reflect the suggestions made by the public and other state agencies. These rules are a codification of informal policies that were already being used within the Parks Department. Each section is discussed separately to better understand the significance of the various parts. In addition, the final draft will be compared to the publicly circulated July 20, 1998 draft. Each of the sections will be discussed to show how the rules evolved through internal and external discussion. The effectiveness of the rules will be discussed in relationship to the Neskowin emergency and can be found in the final section of the paper.

Eligibility for Emergency Permit -OAR 736-020-0050

(1) In accordance with ORS 390.650(6), an emergency permit for a new improvement or alteration may be issued, unless otherwise prohibited by law, to provide immediate and temporary protection where property is in imminent peril of being destroyed or damaged by action of the Pacific Ocean or waters of a bay or river, landslide, or other natural disaster. Said permit may be granted by the Department prior to the Ocean Shore Improvement Permit process required under ORS 390.650 (1),(2),(3),(4),and (5).

(2) "Property" shall be defined as an upland building, road, street, highway, sewer, or water line, or other infrastructure improvement.

(3) "Imminent Peril" shall be defined as a situation in which property is likely to be severely damaged or destroyed by action of the Pacific Ocean or waters of a bay or river, or by landslide or other natural disaster, and where such damage would be likely to occur prior to the time required for approval of an Ocean Shore Improvement Permit.

The first section, Eligibility for Emergency Permit, defines several essential features of emergency structures. The structures are meant to provide immediate and temporary relief to the property in imminent peril. The July 20, 1998 Draft, which I will call the Public Draft, did not include provisions insuring that the structures would be temporary. The Public Draft's first sentence is the same as the final draft with the addition of the language "*to provide immediate and temporary protection.*" The Coastal Hazards Working Group recommendations discuss the importance of providing immediate relief from erosion that is short term and extreme. Due to the brevity of the emergency, the Working Group recommended that the structures be temporary. Structures designed to provide more than temporary protection are not appropriate. Although there is no formal acknowledgment that OPRD reviewed the Working Groups recommendations, through personal communication with Steve Williams, OPRD did use the Working Group's findings as a reference and an outline. Though there may have been other verbal suggestions, OPRD received from Fran Recht, President of Oregon Shores Conservation Coalition (OSCC) a written suggestion. OSCC is the only non-profit citizen group currently active in shore protection issues in Oregon. Her letter is generally supportive of the new rules but she has several specific suggestions that come from Working Groups suggestions. She suggests, "adding words to '*provide immediate and temporary protection*' after the first phrase." OPRD used this suggestion and the final rules reflect her comment verbatim. The final sentence of the first paragraph did not change between drafts. It is a mechanical sentence requiring the emergency rules to conform to existing statutes.

(2) "*Property*" shall be defined as an upland building, road, street, highway, sewer, or water line, or other infrastructure improvement.

(3) "*Imminent Peril*" shall be defined as a situation in which property is likely to be severely damaged or destroyed by action of the Pacific Ocean or waters of a bay or river, or by landslide or other natural disaster, and where such damage would be likely to occur prior to the time required for approval of an Ocean Shore Improvement Permit.

The second and third paragraphs define what is eligible for protection and defines when emergency protection is allowed. The second paragraph defines property that will be protected under the emergency rules. The definition of property narrows under this definition from a broader definition in the statute. ORS 390.650(6) states that emergency permits could granted when "*property or property boundaries*

are in imminent peril or being destroyed or damaged." The new rules exclude property boundaries from the definition. The new rules list "*upland building, road, street, highway, sewer or water line or other infrastructure improvement.*" Even with the most liberal definition of the seven types of property listed above, property boundaries do not fit any of those categories. The exclusion of property boundaries from the emergency rules definition may be in response to the recognition that coastal property boundaries sometimes stretch out into the ocean. Though the land is not currently usable, there have been several proposals over the years by developers to build seawalls in the surf and use the land reclaimed from the ocean for development. If property boundaries had been included in the definition of property, coastal land holders could have used the emergency provisions to reclaim land that even in normal conditions is inundated or unsafe. In addition, many of the western property edges are hundreds of feet west of any structure. Protecting property boundaries makes little sense because the boundary is always there, just the state of the land below it changes. Protecting the edges of the property from breaching by the ocean would likely diminish the public's ability to recreate and use the ocean shore.

(3) "*Imminent Peril*" shall be defined as a situation in which property is likely to be severely damaged or destroyed by action of the Pacific Ocean or waters of a bay or river, or by landslide or other natural disaster, and where such damage would be likely to occur prior to the time required for approval of an Ocean Shore Improvement Permit.

The language defining imminent peril very closely mirrors the definition given in ORS 306.55(6). The statute states "*imminent peril of being destroyed or damaged by action of the Pacific Ocean or the waters of any bay or river of this state.*" However, the emergency rules do contain an important modifier. The emergency must be likely to result in damage within a period defined by the time it takes to go through regular permitting process. This requires property owners and the public to understand the process of receiving an ocean shore improvement permit. Defining the emergency in terms of administrative procedures is not helpful to property owners who may be unfamiliar with coastal permitting. From receipt of the permit application, OPRD has 60 days in which to render a decision. If a hearing is held, then the Department has 45 days after the hearing in which to render a decision. Framing an emergency in terms of administrative procedures is an interesting way to define an emergency but is imminently practical for OPRD. If a property owner is experiencing erosion but it is

not currently threatening the upland buildings; the property owner may begin the regular permit process. The property owner does not forego his ability to claim an emergency by entering the process thereby offering no disincentive to begin the regular permitting process.

However, the imminent peril definition allows a relatively long time frame for an emergency situation. Most major erosion events are the result of storms that last from several days to a week. Storms do not last sixty days but the initial erosion event may place the property at risk from damage that may occur within days of the next storm. Defining imminent peril is difficult because OPRD cannot foresee the types of situations that may present themselves. However, a pro-active approach would allow OPRD to define emergencies before they present themselves. This would allow them to use coastal hazard mapping to determine high risk areas that may become hot spots. The "Results and Discussion" section provides a more thorough discussion of pro-active versus reactive approach to coastal management.

Review and Issuance of Emergency Permit - 736-020-0060

(1) Upon inspection of the site by an Oregon Parks and Recreation Department employee or authorized representative of the Department, a permit may be issued, written or oral, by an employee specifically designated by the Director to issue an Ocean Shore Improvement Permit. Any permit granted orally shall be reduced to writing by the Department within 10 days. A permit shall name the property owner of record, and list required conditions.

(2) Prior to issuance of an emergency permit, the Department shall contact the local government to describe the proposed emergency measures and obtain certification that the proposed measures are in compliance with the local comprehensive plan and zoning ordinances. The permittee shall be responsible for obtaining any required permits from the local government. The emergency permit issued by OPRD shall not be considered valid until all local permits have been obtained.

The first two paragraphs of the second section mirror the ORS 390.655 (6). OPRD needs the ability of issuing verbal authorization due to the nature of emergency events. It is sometimes necessary to approve the placement of rock immediately to insure that the contractor has adequate time to place shore protection prior to the next high tide or an impending storm. The first two paragraphs provide OPRD the flexibility to respond to nervous property owners immediately. The new administrative rules reiterate the requirement found in statute to reduce the verbal

authorization to writing within 10 days. The time frame of ten days is taken directly from ORS 390.655(6) which states "*Any emergency permit granted hereunder shall be reduced to writing by the department within 10 days after granting the same with a copy thereof furnished to the applicant.*" The administrative rule also requires that the written authorization list the owner of the property and the conditions placed on the structure. This provision improves the record keeping and insures that the Department tracks properties. Neither of these paragraphs was modified due to public input nor were they changed from the Public Draft to the final draft.

(3) Prior to issuance of an emergency permit, the Department shall request recommendations from the Oregon Department of Fish and Wildlife on minimizing adverse impacts to wildlife or habitat values, and the Oregon Department of Geology, for information on geologic hazards. Prior to issuance of an emergency permit, the Department shall consult with the Division of State Lands to coordinate the emergency permit with the requirements of the Oregon Removal-Fill Law and the Division's land management responsibilities under ORS Chapter 274.

The third paragraph was modified due to input from the public, the Department of Geology and Mineral Industries (DOGAMI) and the Division of State Lands (DSL). The original draft did not include consultation with DOGAMI for information about geologic hazards. Originally, DOGAMI was to be notified of an emergency permit when the permit was issued. DOGAMI would have no avenue to offer expertise to OPRD concerning geologic hazards. This deprived the emergency process of DOGAMI's technical expertise that OPRD may need in determining emergencies. Though DOGAMI expressed interest in contributing to ocean shore permits, the lack of personnel committed to working with OPRD has limited the effectiveness of any coordination between the two agencies. On July 27, 1998, DOGAMI sent a letter to OPRD requesting addition of language that would insure notification of emergencies prior to issuance of emergency authorization. The same letter gives examples of the type of expertise that DOGAMI could provide to OPRD. The suggestion was taken by OPRD and the final rules reflect the concerns of DOGAMI. However, DOGAMI has failed to get involved in the emergency permit review process and has offered none of their expertise during emergency situations.

The relationship between OPRD and DSL was complicated prior to 1999¹¹, due to concurrent jurisdiction in the coastal zone. However, when the emergency rules were written, OPRD and DSL were still sharing jurisdiction on the beach. OPRD administered the Removal/Fill Law for DSL on the ocean shore through a signed Memorandum of Understanding by the two agencies. The Public Draft simplified this complexity by stating simply, “ *The Department shall consult with ...the Division of State Lands, to verify compliance with the requirements of the Oregon Removal - Fill Law.*” The Removal -Fill Law provides a different definition of emergency than was written into OPRD’s emergency rules. An emergency under the Beach Bill is triggered by a threat to property whereas DSL may proclaim an emergency in situations that threatened public health, safety and or welfare. In addition, an emergency under the Removal-Fill Law must be determined by a DSL employee. From a memo to Steve Purchase (DSL) from William Cook (AG), it is clear that DSL is uncomfortable with delegating any more of its Removal-Fill responsibility to OPRD. DSL recognizes that though the Beach Bill and the Removal-Fill Law are similar, the two statutes use different definitions for “emergency” and public values. The values that OPRD addresses are derived from the need to protect the beach from private encroachment and preserve the recreational and scenic nature of the coast. DSL, in contrast, must consider the public health, safety, wildlife and public welfare. Although it is true that OPRD may not make final decisions under the MOU, in practice, OPRD was the de facto decision-maker. OPRD inspects the sites, writes the permit reviews, holds the hearings, and deals with the property owners. DSL’s insistence on separating themselves from the emergency process, neglects to address how decisions are actually being made on the ocean shore.

The changes to the Public Draft concerning DSL respects the authority of the Removal- Fill Law as being separate from the Beach Bill. The final language states that the responsibility for compliance with the Removal - Fill Law during emergency situations belongs with the Division of State Lands. OPRD’s responsibility changes from verifying compliance with Removal-Fill to coordinating with DSL and consulting with them. The changes that were proposed by DSL were added to the emergency rules verbatim. DSL must issue its own emergency authorization separate from OPRD’s process which requires property owners to deal with two agencies during a crisis situation instead of just OPRD. Reference to administering the Removal - Fill Law was removed from all sections of the draft rules.

¹¹ SB11 removed DSL’s jurisdiction in the coastal zone, refer to Appendix 2 for more discussion.

(4) Upon issuance of an emergency permit, the Department shall provide notice to the local government, the Department of Land Conservation and Development, the Division of State Lands, Oregon Department of Fish and Wildlife and the Oregon Department of Geology and Mineral Industries.

The final paragraph states which agencies will be notified after issuance of the emergency permit. This is a follow-up to the paragraph above. First, OPRD will consult with other agencies and after consultation shall make a determination. After determination, all the consulting agencies will be provided notice of the action taken. This requirement means that the letter sent to the property owner providing emergency authorization is also sent to all the interested agencies. By notifying other agencies, OPRD improves coordination between agencies and provides better record keeping.

Terms and Conditions of Permit - 736-020-0070

The "Terms and Conditions" section changed in substantive ways between the Public and Final drafts. The paragraphs were reworded to provide greater specificity. An entire paragraph was removed and another added to address the concerns listed in the Working Group's analysis that the emergency structures be temporary. This section also lays out the post-emergency process for property owners who have received emergency authorizations.

(1) Under an emergency permit authorization, material placed on the ocean shore, other than beach sand moved for watercourse alterations, shall be considered temporary and shall be removed within a time specified by the Department, except as specified in (3) below. At the time of removal, the permittee shall be responsible for restoring, to as natural a condition as possible, as determined by Oregon parks and Recreation Department, the natural, scenic and recreational values of the ocean shore.

This paragraph had several references to the Removal-Fill Law that were all removed between drafts. The Public Draft had references to administering DSL's Removal - Fill Law in the first sentence, "*Under an emergency permit authorization, material placed on the ocean shore, or material that meets the definitions of 'fill'*"

under ORS 196, other than beach sand moved for watercourse alterations." The underlined section was removed in order to address the concerns of DSL that OPRD not take control of DSL's emergency authorization powers on the ocean shore.

Originally, the first paragraph also had references to obtaining of a regular ocean shore improvement permit. The final sentence reads as follows, (The structure) *shall be considered temporary and shall be removed within a time specified by the Department, unless an Ocean Shore Improvement Permit and /or Removal - Fill Permit is obtained during that period. Except as specified in (3) below.* The underlined section was completely removed from the paragraph. Paragraph (3) did not exist in the Public Draft but was added. In fact, the entire post-emergency process was missing which left the emergency rules without a way to deal with property owners after the emergency was finished. The new rules addressed the existence of "temporary structures" permanently on the ocean shore by articulating how to convert the temporary to permanent. This sentence was also deleted due to the mention of administering the Removal - Fill emergency process.

The deleted sentence begins addressing the need for the temporary structures to go through the regular permitting process in order to remain on the beach. However, the sentence did not require the property owners to go through the regular permitting process. The ocean shore improvement process is distinct and separate from the emergency authorization. The Public Draft left the property owner with the obligation to remove the structure unless they completed the regular permitting process within a time specified on the authorization letter. This flexibility allows OPRD to decide on an ad hoc basis whether to require the property owner to acquire a regular permit or not. In addition, each property may be on different time lines for obtaining the regular permit. If the emergency authorization did not specify a time in which to acquire the permanent permit, then the property owner would be left with having to remove their temporary structure. The Final Draft remedies the ambiguity around the interface between the emergency and regular permit process shown in the Public Draft. Further discussion of the remedy is addressed under the analysis of paragraph (3).

There was also a weakening in the restoration condition between the Public and Final Drafts. In the Public Draft the final sentence read, "*At the time of removal, the permittee shall be responsible for restoring any damage to the natural, scenic, and recreational values of the ocean shore.*" The wording was reworked and softened to "*as natural a condition as possible, as determined by (OPRD).*" The change of wording was recommended by a letter from the City of Cannon Beach. The new

language is more practical given the reality of riprap structures inherently causing damage to the "natural and scenic values." Restoring any damage is an impossibility but a minimization of the human made structure is practicable.

(2) The Department may impose conditions on the project size, design and materials used in order to meet the objectives of the Improvement Permit Standards of ORS 390.655 and Beach Construction/ Alteration Standards of OAR 736-020-0005 through OAR 736-020-0030.

The Department needs a way to limit shore protection structures size and materials. This paragraph insures that OPRD maintains control over the type and the size of the structure even in emergencies. The Public and Final Draft read identically, there were no changes.

The Public Draft included a paragraph that was completely removed for the Final Draft. The original paragraph stated "The Department shall be under no obligation to approve an Ocean Shore Improvement Permit and /or Removal - Fill Permit to allow an emergency structure to become permanent." This paragraph is a strong statement to the public that the emergency process is a distinct and separate process from the regular permitting process. In addition, the circumstances that may allow placement of an emergency structure may not lead to approval of a regular permit. However, this paragraph is a strong statement about the intent of keeping the regular and emergency procedures separate, it does not provide a course of action to property owners. It is a cautionary sentence but there is no process articulated for property owners interested in maintaining their shore protection structure. The Final Draft addresses this in paragraph (3).

(3) The permittee shall apply for an ocean shore improvement permit, as specified in ORS 390.650, in order to seek approval to convert the temporary project approved under an emergency permit into a permanent ocean shore improvement. If a permanent permit is not applied for and approved by the Department, then all material placed on the ocean shore must be removed and the condition of the ocean shore restored, in compliance with the conditions of the emergency permit.

In the first paragraph of this section, property owners are directed to remove the emergency structure within a time determined by the Department unless the property owner follows the directive of paragraph (3). This is the critical paragraph

because it offers property owners a road map to protecting their home from future erosion. The paragraph directs the property owner to begin the regular ocean shore improvement permit process in order to keep the emergency structure. However, this paragraph does not specify a time line for beginning the process. This flexibility allows the Department to have properties on unique timelines. The timeline is included as part of the conditions when the emergency authorization is given. From the perspective of the property owner, the ambiguity may not be noticeable because the property owner follows the timeline outlined in the emergency authorization received. If a permanent permit is not sought or if sought is denied then the property owner is still bound to removing the emergency structure.

Requiring property owners to go through the regular permitting process is critical to maintaining control on ocean shore development. By going through the regular permitting process, the structure must go through the public review process. Unlike permits that originate in non-emergency situations, the public can view the structure on the beach. A large rock structure on the beach is a far more compelling and controversial object than a small sign placed on the beach requesting comments for a hypothetical structure. An emergency structure that must come back for a regular permit provides the opportunity for real public discussion about an object that everyone can view. A built structure removes the abstractions that are inherent in structures that are not built yet. Though it is too early to assess, it would seem likely that property owners applying for permanent status of their emergency structure would result in more hearings than other permits. For instance, in Neskowin hearings were held concerning the two main stretches of riprap that was placed. But, it is impossible to know if this would have occurred without the riprap already in place.

(4) In accordance with Statewide Planning Goal 18, Beaches and Dunes, emergency permits for beach front protective structures may be issued only where development existed on January 1, 1977, or where an exception to this Goal 18 implementation requirement has been approved by the appropriate local jurisdiction.

The Statewide Planning Goal 18 only allows hard shore protection structures for property developed prior to January 1, 1977. This paragraph supports Goal 18 by ensuring that even in emergency situations, properties developed after the 1977 deadline may not receive hard structures. The disincentive to build in areas without the threat of coastal erosion is further reiterated in this paragraph. The strength of this paragraph is important to encourage developers to place their structures well behind

the erosion zone. In addition, this paragraph encourages close working relationships with the local jurisdictions that hold the information about which properties are post and pre-1977.

(5) At the Department's discretion, the Department may require cash bond, or other security acceptable to OPRD, to ensure that the permittee complies with the terms of the permit, including removal of material. Failure of the permittee to comply with the terms and conditions of the permit will enable the Department, without further notice, to conduct the work necessary to complete the required terms and conditions and deduct any and all costs and expenses for the work.

(6) The Department shall deduct from the cash bond or other security, all legal costs associated with the emergency permit, including, but not limited to, enforcement or permit conditions, and acquisition of funds from the cash bond or other security. The Department shall pursue all available legal or judicial alternatives to recover costs incurred by the public resulting from non-compliance with the terms and conditions of any emergency permit.

Paragraph (5) and (6) address the practical aspects of the emergency authorization and the collection of cash bonds to insure property owner accountability. The amount of the cash bond collected by the Department is determined by the amount of money necessary to pay for removal and restoration of a given site. Though it is not explicitly stated that the Department will use the money for removal, in actuality, that is the purpose of the collection. The Department would not use the cash bond to finish work on shore protection structure fronting private property. The precedent set by completing work on a private structure with State time and oversight would be politically difficult. The final two paragraphs were unchanged during the public comment period.

Appendix 2

Senate Bill 11

Prior to 1999, the ocean shore area was administered by two State agencies: Oregon Parks and Recreation Department and Division of State Lands. OPRD regulated placement of structures on the beach from the mean low water to the Statutory Vegetation Line that was delineated in 1969. DSL's jurisdiction began at the Statutory Vegetation Line and extended to the actual vegetation line. The two agencies also had different enabling legislation acting on the beach. OPRD followed the policies of the Beach Bill with associated administrative rules whereas, DSL followed the Removal/Fill Law. The Beach Bill oversees any structure on the beach, but the Removal/Fill Law only applies to structures over 50 cubic yards of material.

Recognizing the complexities of multiple jurisdictions on the beach, Senate Bill 11 was introduced into the 1999 legislative session. The bill, subsequently passed, gave all ocean shore area jurisdiction to Parks in May 1999. This bill gave OPRD jurisdiction from mean low water, below which is still owned by DSL, to the actual vegetation line. The Statutory Vegetation Line is no longer used in the regulatory setting. Nor is the Removal/Fill Law active on the ocean shore area. Structures placed on the ocean shore must now go through the OPRD permitting process so long as they are below the actual vegetation.

The Senate Bill also contains provisions creating permitting fees and outlines an appeals process. These provisions are not relevant to this discussion but needed mentioning.

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The Effectiveness of the Emergency
Rules of 1998,
As Implemented during the Erosion
Event in Neskowin Oregon, 1999

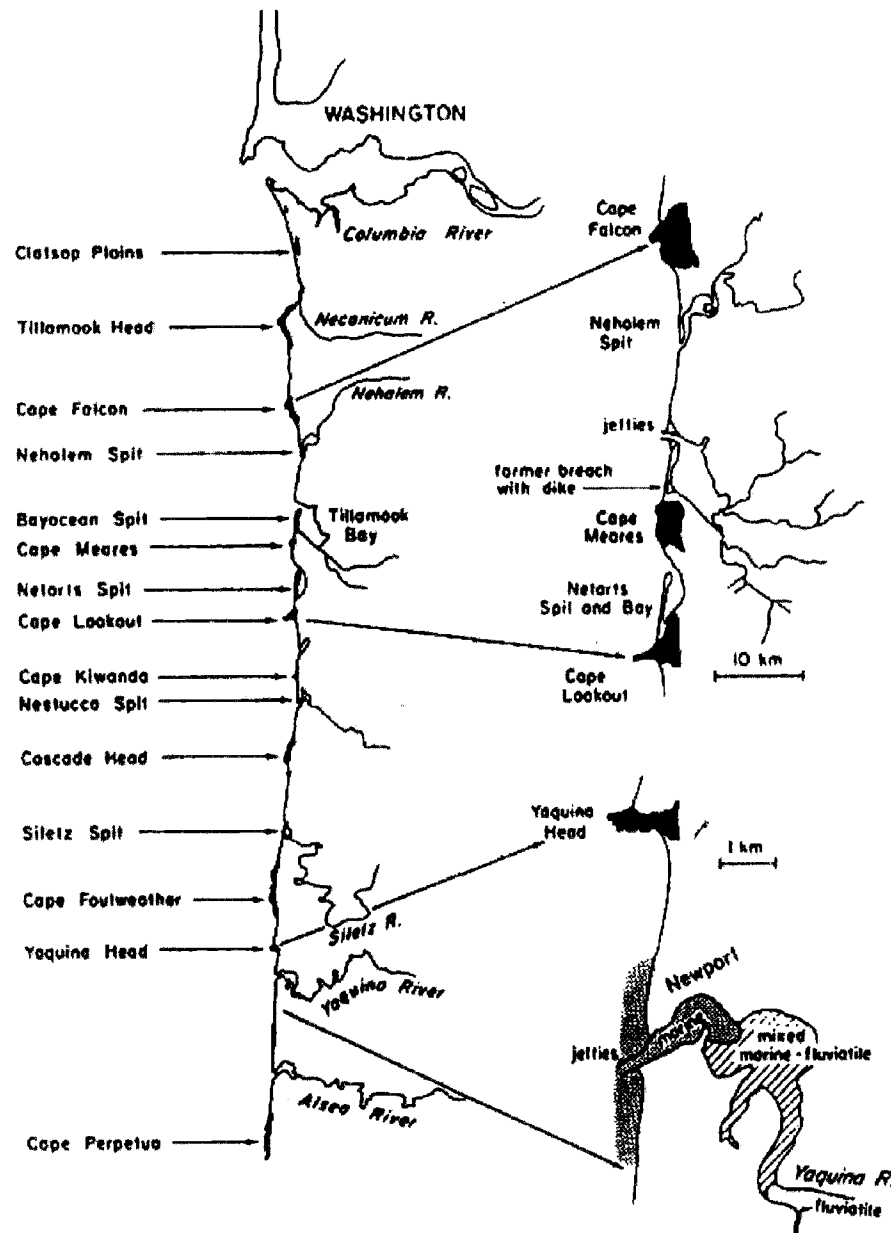
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Oregon's Dynamic Coastline

- Divided into 12 littoral cells by headlands
- Beaches cover 260 miles
- Dynamic coastal environment prone to erosion

Erosion is a Natural Process

- Erosion is only a “problem” in developed areas
- Soft vs. hard solutions
- 90% of structures in Oregon are riprap



(Komar, 1986)

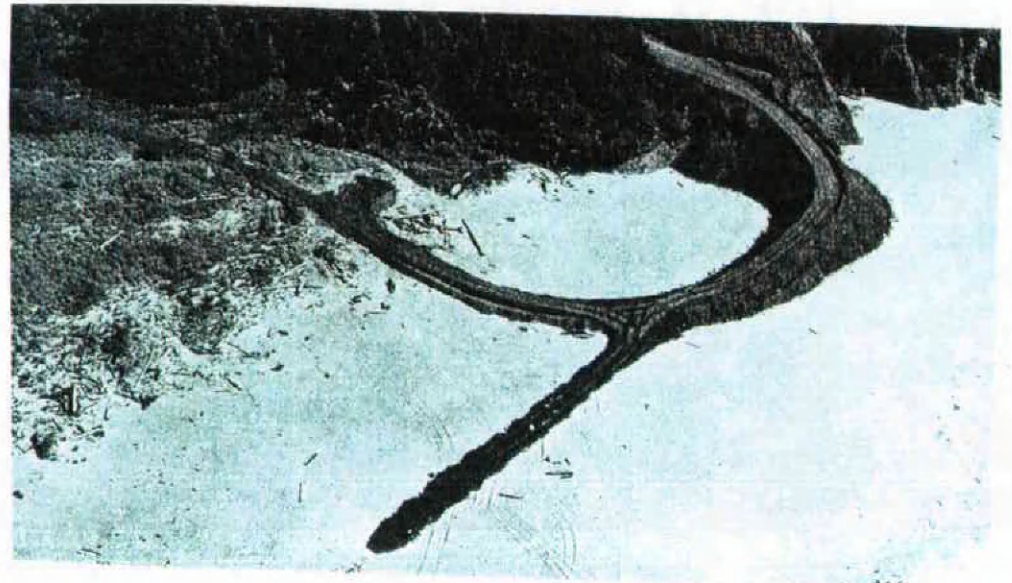
Examples of Riprap

- Sloping boulder wall
- Hard Stabilization structure
- Fixes shoreline



Shore Protection on Oregon Coast: Why do we care?

- May accelerate erosion on adjacent properties
- Loss of visual aesthetics
- Sea level rise leads to loss of beach
- Loss of Access



Managing Oregon's Beach

- Beach Bill: Established OPRD's jurisdiction within ocean shore area
 - Institution of Beach Zone Line
 - Created permit process for beach improvements
- Thornton v. Hay 1969: Oregonians have the right to use the dry sand portion of the beach due to doctrine of custom.
- Senate Bill 11, 1999 extended OPRD's jurisdiction up to actual vegetation line.

Policy Objectives

- Protect beach access and recreation
- Minimize coastal hazards
- Consider alternatives to hard shore protection

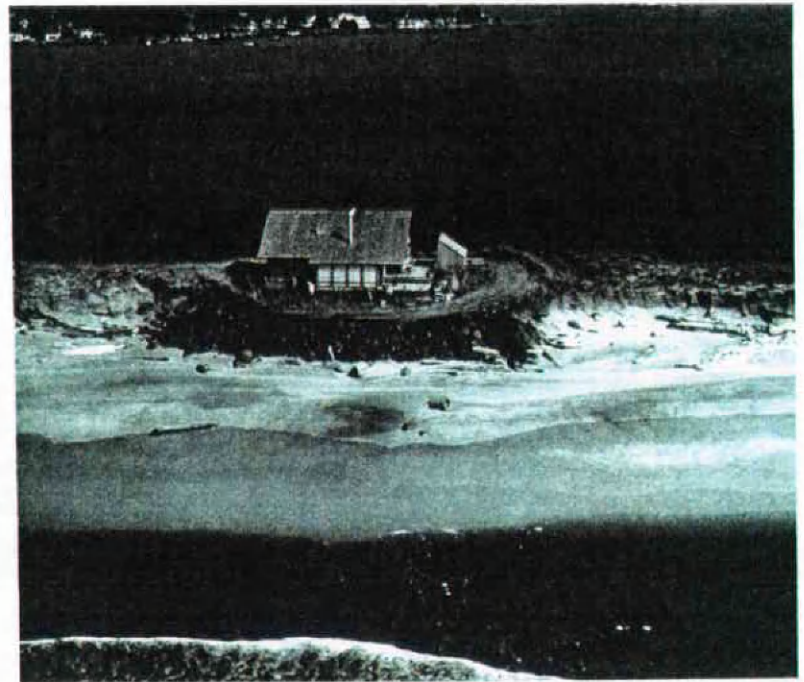


Regular Shore Protection Application

- Project need must be demonstrated
- Consideration of alternatives and/or modifications
- Application must go through a public review process

Emergency Procedures Prior to 1998 Rules

- Defined as “imminent peril of being destroyed by the Pacific Ocean .”
- Informal policies used by OPRD during emergencies
- Emergency authorizations reduced to writing in 10 days



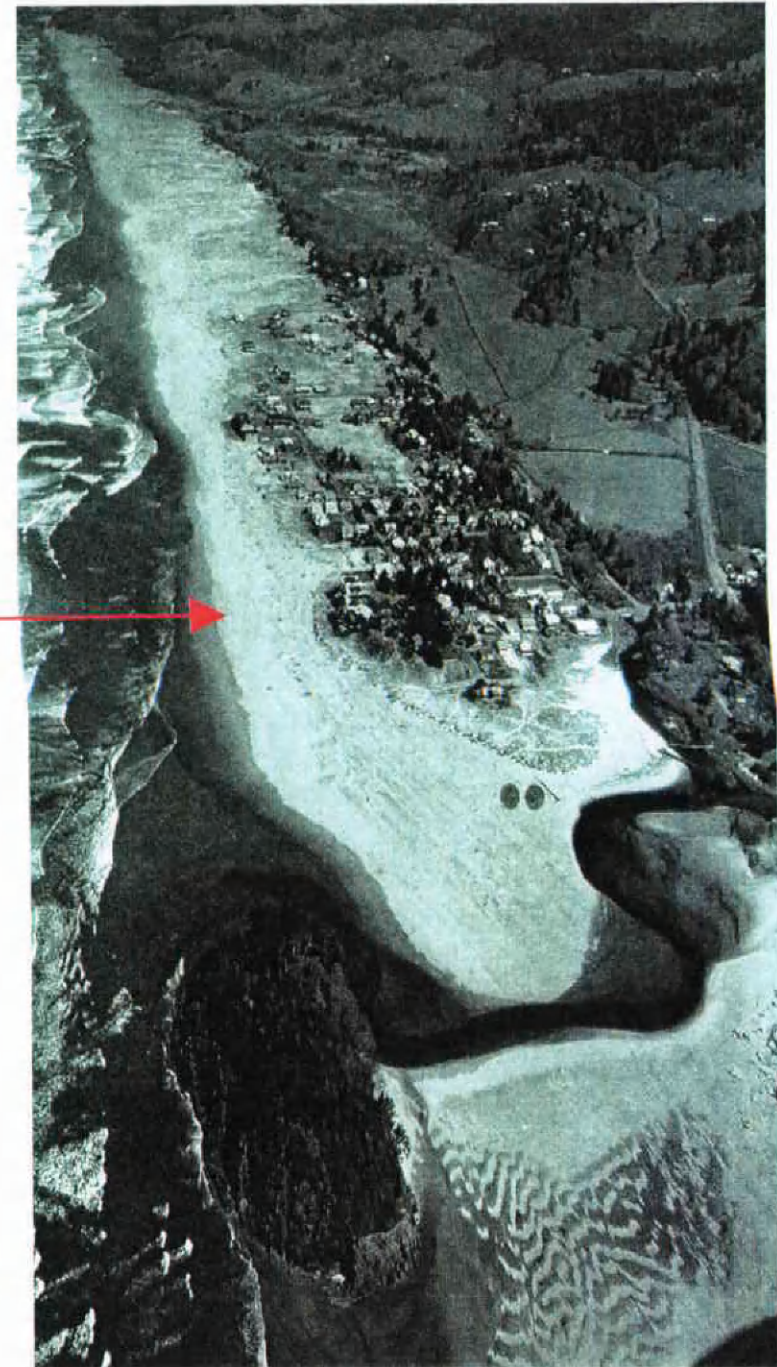
Definition of Problem

- Lack public review process
- Lack of emergency authorization records
- Structures were permanent



Emergency Authorization Rules

- Defined “emergency”
- Provided process
- Protection is meant to be temporary
- Required coordination between agencies



Neskowin, in perspective

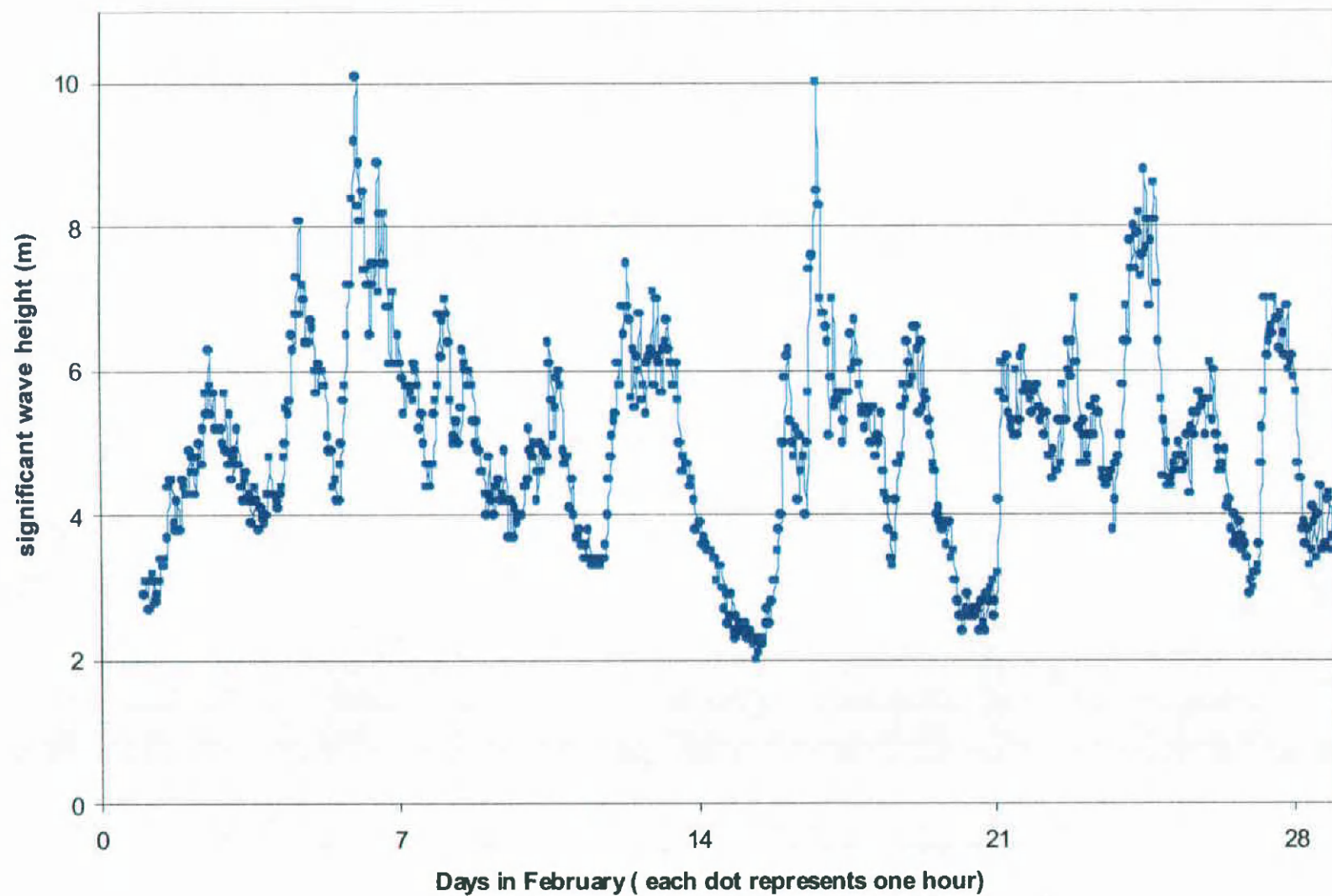
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Neskowin - A Case Study

- Most of the homes are pre-1977
- Town built on a dune in the southern end of a littoral cell
- 1999 La Nina after 1998 El Nino
- Lowered sand levels - evidenced by visibility of ancient tree stumps
- Experienced extreme wave conditions in February and March, 1999
- Rip embayment prone area

Significant Wave Height for February 1999





**Before the Erosion
Event in Summer in
1998**

**During Erosion Event,
February 1999**



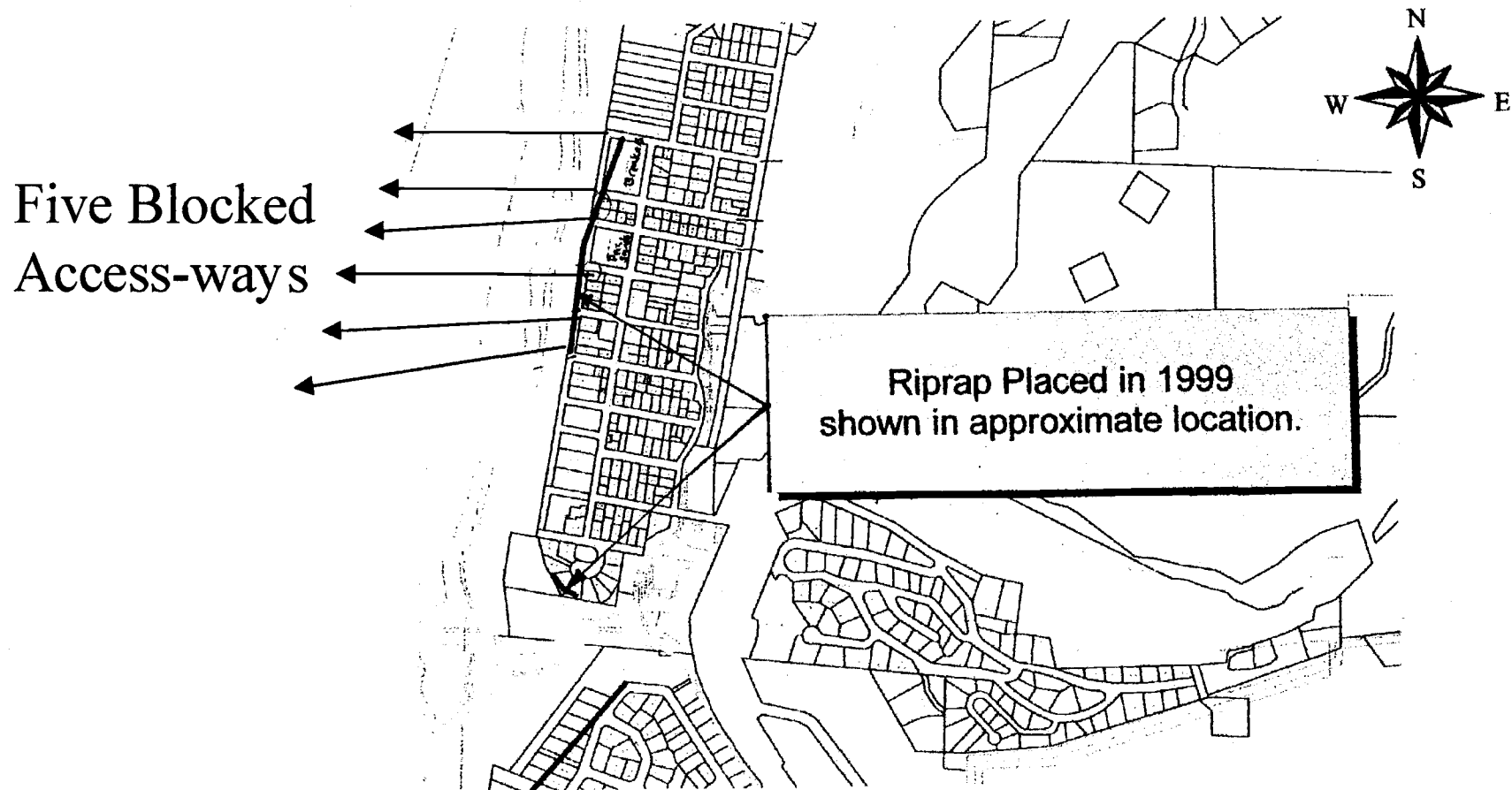




During riprap construction in February 1999



Riprap location in Neskowin Core Area



The Aftermath of Erosion

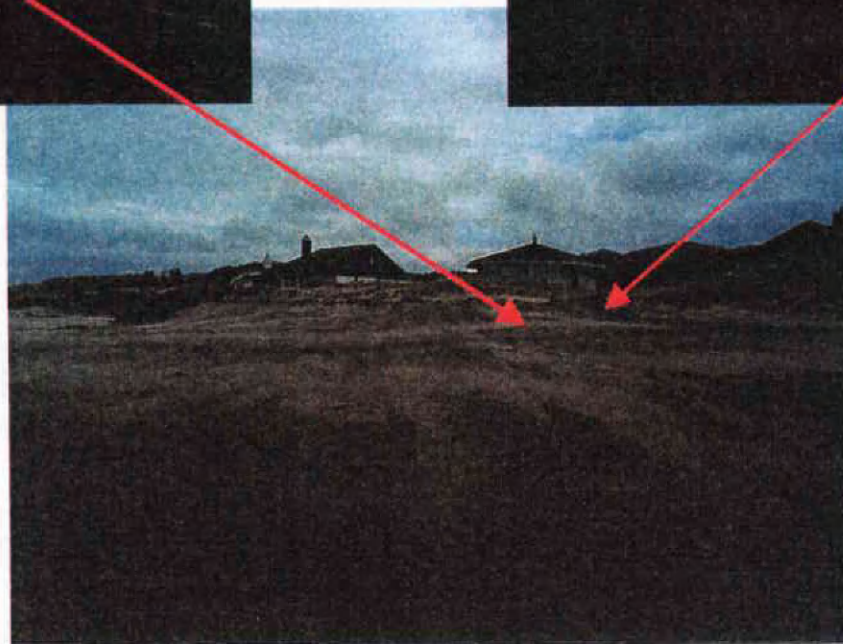
- 11 emergency permits authorized in 51 days
- All property owners applied for regular permit
 - Allowed public review period
 - Resulted in hearing
- Permanent Permit required reconstruction of several shore protection structures
- Some areas continued to erode while others accreted

Rip embayment undercutting riprap toe



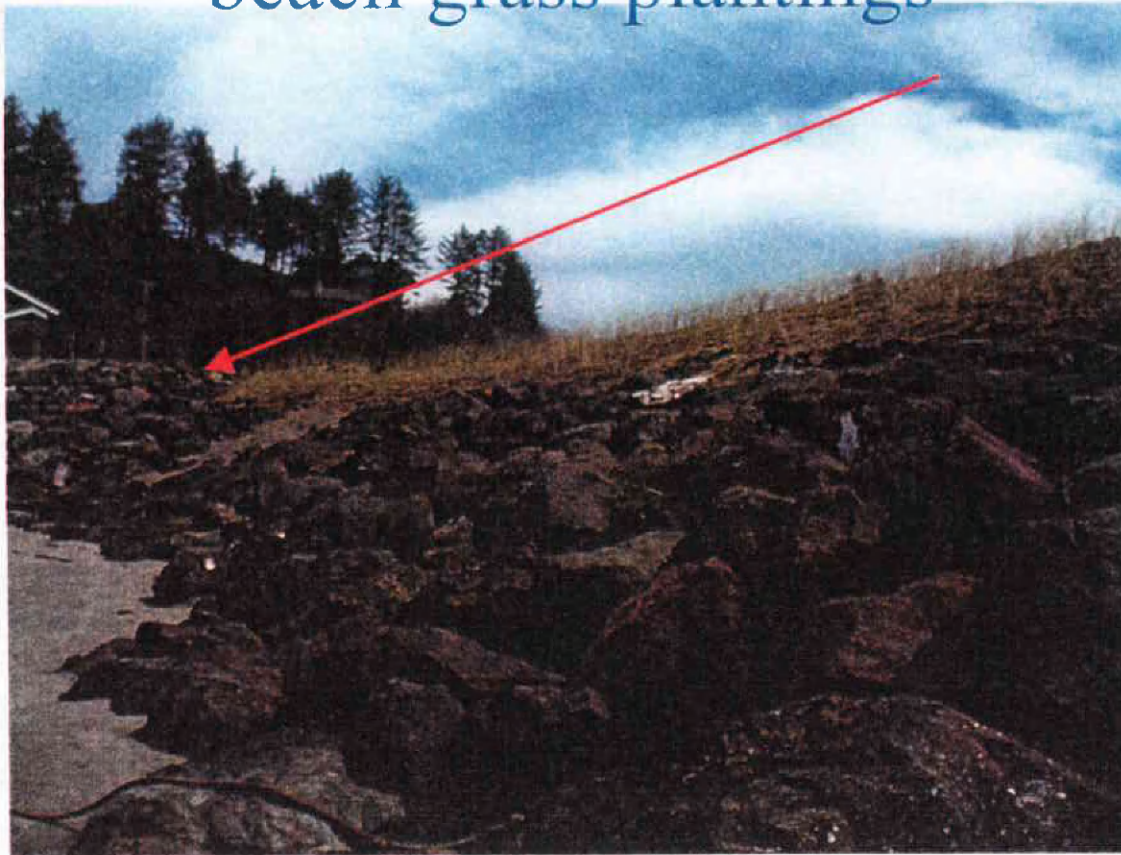
1/12/2000

Natural accretion in Neskowin North



5/18/2000

Completed riprap with access in South Beach with beach grass plantings



4/17/2000

Access steps through riprap



3/17/2000

Results of Emergency Rules

- Lack public review process
- Lack of emergency authorization records
- Structures were permanent

- All permits went through public review process
- Emergency authorizations were recorded and documented
- Structures considered temporary but built as if permanent

Results of Main Policy Objectives

- Protect beach access and recreation
- Minimize coastal hazards
- Consider alternatives to hard shore protection

- Emergency rules protected access
- No homes or life were lost during storms
- No alternatives were considered

Continuing Concerns

- State continues to use reactive approach to managing emergencies
- Lack of temporary structural options on the Oregon coast
- The State is the only steward of the public trust

Conclusion

Emergency Authorization rules have improved the emergency process in three key ways:

- Public review
- State maintains power to require structural modifications after emergency
- Better coordination between interested agencies