

The Legal Implications of Sea Level Rise in Washington

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The sea level is rising. The science is certain on that point. It is not, however, clear how fast the sea will rise, or how a rise in sea level will impact Washington’s shorelines. Some projections anticipate a gradual rise over the next 100 years. Other models suggest that the most significant initial impacts of a rise in sea level could be anything but gradual. Western Washington may very well experience the impacts of a rise in sea level episodically as increasingly severe and unprecedented storms produce very significant high water events. When this happens, river systems will flood, bluffs will reach maximum inundation levels, and land will slide. Increased coastal erosion of is also likely.

While the immediate impacts of a rise in sea level are not yet certain, we do know that a rise in sea level will impact shoreline property rights in the Puget Sound and along the Washington coast. As rising waters threaten shoreline property, there will be increased pressure to armor shorelines to protect shoreline property interests. If allowed to do this, property owners will attempt to prevent the inevitable by trying to hold back the water with seawalls, rock revetments, and other barriers. If shoreline armoring is allowed, beaches below the walls may disappear as a result of increased erosion, and ecosystem function along these sensitive areas will inevitably diminish. Loss of near-shore marine organisms and coastal habitats occur as these areas are squeezed between rising water levels and the upland barriers. Shoreline stabilization also threatens to diminish the public's longstanding right to access Washington tidelands. Shorelines need to be able to migrate upland, away from the sea.

The current statutory scheme does not address the impact that a rise in sea level will have on private property rights. For the most part, state shoreline and land-use statutes, associated administrative regulations and guidelines, and local land use plans do not mention sea level rise. Even though our regulatory approach recognizes that shorelines move, it does not take into account shoreline changes resulting from sea level rise. Our increased understanding of shoreline ecological function makes it clear that Washington's shorelines will change dramatically as the sea level rises.

This report explores the legal implications of sea level rise along Washington shorelines. The first section explains the legal landscape in Washington, with a particular focus on the Shoreline Management Act ("SMA"). This section of the report also presents a brief discussion of the provisions most likely implicated by sea level rise with

regard to each piece of legislation. If readers are already familiar with Washington’s statutory scheme, they may choose to proceed directly to section two. Section two presents the governing legal principles that apply to all shoreline regulation. This includes the public trust doctrine, the common law of erosion and accretion, the constitutional prohibition against taking property without just compensation, and the substantive due process doctrine. Finally, section three explores several options policymakers may want to consider in response to shoreline management and sea level rise.

1. THE LEGAL LANDSCAPE ALONG SHORELINES IN WASHINGTON

Washington’s shorelines are subject to a complex set of federal, state, and local regulations. At the federal level, there is the Coastal Zone Management Act, which is administered by the National Oceanic and Atmospheric Administration (“NOAA”) and the National Flood Insurance Program (“NFIP”), which is administered by the Federal Emergency Management Agency (“FEMA”). Washington has implemented the mandate of the Coastal Zone Management Program through the SMA, which is administered by the Department of Ecology (“Ecology”). Ecology also oversees implementation of Washington’s Floodplain Management Act. The Department of Fish and Wildlife administers the hydraulic permit program. “Critical Areas”—which include wetlands, areas with a critical recharging effect on aquifers used for potable water, frequently flooded areas, geologically hazardous areas, and fish and wildlife habitat conservation areas—are protected by Washington’s Growth Management Act (“GMA”), which is administered by the Department of Community, Trade & Economic Development (“CTED”). In Washington, local governments play a very significant role when it comes

to drafting, implementing, and administering protections for shorelines, flood plains, and critical areas.

1.1. Shoreline Management Act 1971 (SMA)

Although each layer of the regulatory system plays a unique and important role, the Shoreline Management Act is the dominant statute involved in regulating and protecting our shorelines and the Department of Ecology—the administrative agency tasked with administering the Act—is the primary actor. Washington was one of the first states in the nation to adopt a comprehensive management system for its shorelines. The Washington legislature enacted the Shoreline Management Act of 1971 to “prevent the inherent harm” associated with “an uncoordinated and piecemeal development of the state’s shorelines.”ⁱ The SMA has three broad policies: to encourage water-dependent uses, to protect shoreline natural resources, and to promote public access.ⁱⁱ

The SMA applies to the shorelines of the state. This includes, among other things, all marine waters below the ordinary high water mark and the submerged lands underlying all marine waters.ⁱⁱⁱ The ordinary high water mark is defined as “that mark that will be found by examining the bed and banks and ascertaining where the presence and action of waters are so common and usual, and so long continued in all ordinary years, as to mark upon the soil a character distinct from that of the abutting upland.”^{iv} In any area where the ordinary high water mark cannot be found, the ordinary high water mark adjoining salt water shall be the line of mean higher high tide and the ordinary high water mark adjoining fresh water shall be the line of mean high water.”^v

The SMA also applies to the “shorelands” and “associated wetlands” that border the shorelines of the state. “Shorelands” are lands extending landward 200 feet from the

ordinary high water mark. On rivers, the shoreland area includes the entire floodway^{vi} and contiguous flood plain areas extending landward 200 feet from the floodway. Figure 1, below, depicts coastal shoreline jurisdiction under the SMA.

Figure 1: Coastal Shorelines

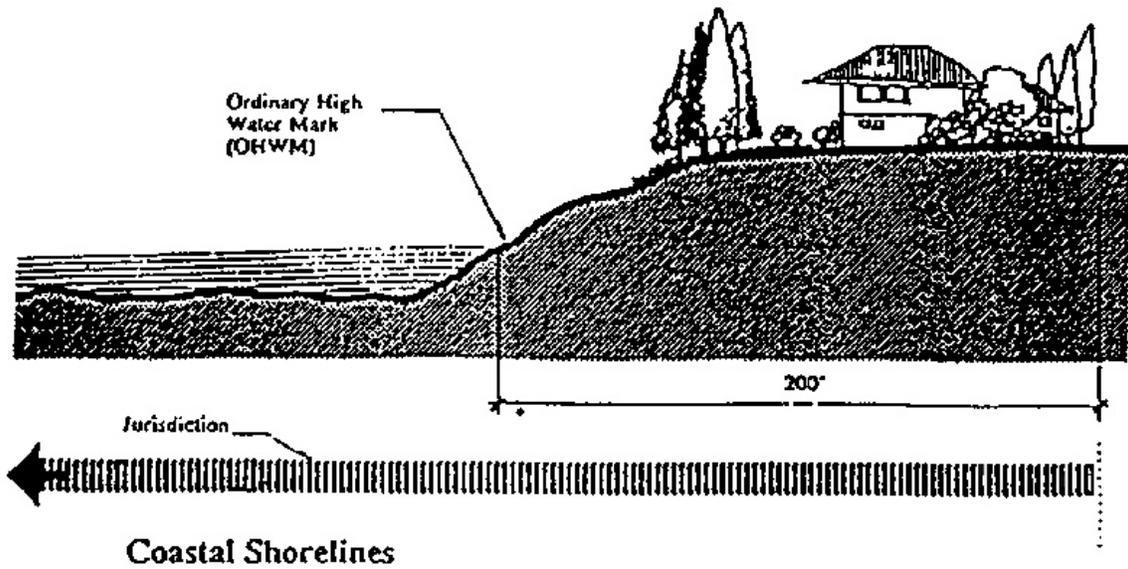
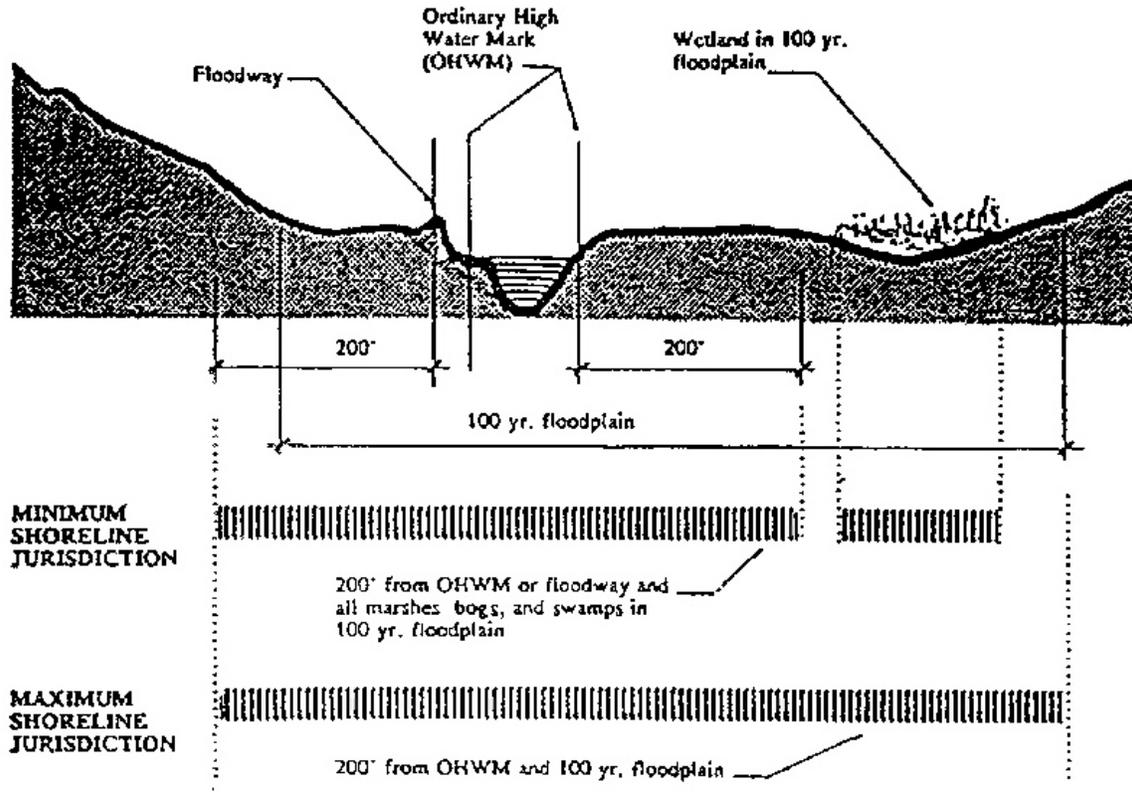


Figure 2, below, represents the extent of shoreland jurisdiction for river shorelines under the SMA.

Figure 2: River Shorelines



River Shorelines

All wetlands that either influence or are influenced by tidal waters or a lake or stream subject to the SMA are considered “associated wetlands.” The entire wetland is associated if any part of it lies within the area 200 feet from either the ordinary high water mark or the floodway. River deltas associated with shorelines are also considered associated, except for those lands protected from floodwaters by authorized flood control devices. Local governments may, at their discretion, include in their shoreline jurisdiction the buffer needed to protect associated wetlands. If a local government exercises this option, the buffer for critical areas is considered within the shoreline jurisdiction regardless of whether the buffer zone is in the floodplain. Local governments may also include, at their discretion, all or a larger portion of the 100-year floodplain

within their shoreline jurisdiction, as long as such portion includes, at a minimum, the floodway 200 feet from the floodway boundary. Naturally occurring and manmade alterations of the shoreline alter shoreline jurisdiction where the action changes the ordinary high water mark, or any other physical characteristics that determine SMA jurisdiction.^{vii}

The Act gives more stringent protections to “shorelines of statewide significance.” The interests of the people are “paramount in the management of shorelines of statewide significance.”^{viii} “Shorelines of statewide significance” include the Pacific Coast—including harbors, bays, estuaries, inlands, and all associated shorelands. Specific estuarine areas, including the Nisqually Delta, Birch Bay, Hood Canal, Skagit Bay, Padilla Bay, and all of the associated shorelands are also recognized as “shorelines of statewide significance.”^{ix} Shorelines of statewide significance also include all other areas of the Puget Sound and the Strait of Juan de Fuca, including adjacent salt-water areas lying waterward of the extreme low tide line (but not the adjacent tidelands or shorelands).

Administrative Approach—Local Governments and the Department of Ecology

Local governments and the Department of Ecology administer the SMA in concert. Under this cooperative approach, cities and counties bear the primary responsibility for initiating and administering the regulatory program. They develop Shoreline Master Programs (“SMPs”) that regulate development along marine waters, lakes, and streams. Although SMPs vary between jurisdictions, most SMPs include a statement of goals relative to shoreline use, economic development, public access, circulation, recreation, conservation, and historical/cultural values; general policies and

regulations that apply to shoreline uses and modification activities; specific policies and regulations for shoreline uses and shoreline modification activities; environmental designations; and administrative regulations for permits and enforcement. Ecology, among other things, establishes statewide guidelines, provides technical assistance to cities and counties, and reviews and approves local SMPs and permit decisions.

Local SMPs must be consistent with the Shoreline Master Program Guidelines (“Guidelines”) established by Ecology.^x The Guidelines translate the broad policies of the Shoreline Management Act as articulated in RCW 90.58.020 into standards for regulation of shoreline uses. The most recent Guidelines, which were adopted in 2003 after a long litigation and mediation process, do not mention sea level rise. They do, however, require that SMPs contain policies and regulations that “assure, at a minimum, no net loss of shoreline ecological functions necessary to sustain shoreline natural resources.”^{xi} To achieve this standard, the Guidelines state that SMPs should establish and apply:

- Environmental designations with appropriate use and development standards; and
- Provisions to address the impacts of specific common shoreline uses, development activities and modification actions; and
- Provisions for the protection of critical areas within the shoreline; and
- Provisions for mitigation measures and methods to address unanticipated impacts.^{xii}

SMP Updates

Prior to 2003, the SMA did not provide a schedule for regular SMP updates. This changed in 2003 when the legislature amended the SMA. Now, SMPs and local Critical Areas Ordinances under the Growth Management Act must be updated every 7 years.

Environment Designations

Shorelines are classified into specific “environment designations” based on their physical, biological, and development characteristics. The recommended classification system involves six environment designations—“natural,” “rural-conservancy,” “urban conservancy,” “high-intensity,” “shoreline residential,” and “aquatic.”^{xiii} Although local governments may modify the recommended classifications to better accommodate shoreline areas with unique characteristics, the SMP must develop policies and regulations for each designation, reflecting the specific purpose and intent of each environment and responding to its specific conditions. The current character of an area—relative to the future character as established by the proposed environment designation—will generally determine the range and degree of potential impacts to shoreline ecological functions resulting from development. Requiring SMPs with appropriate development and use standards for each environmental designation will help ensure that there is no net loss in environmental functions.

Consistency Requirement

The SMA prevents development on Washington shorelines unless the development is consistent with both SMA policies and the local SMP.^{xiv} This consistency requirement can be an important enforcement mechanism. Notably, however, a proposed shoreline use that is consistent with the SMA and the local SMP regulations and policies cannot be denied based solely on concerns about possible adverse cumulative impact if similar development occurs on adjacent and nearby properties.^{xv} The legislature may want to consider amending this aspect of the SMA to provide enhanced shoreline protection.

Permit System

One way that the SMA enforces its consistency requirement is through the permit system. Even though the SMA requires *all* development to be consistent with the SMA and the local SMP, only “substantial development” is subject to the substantial development permit requirement.^{xvi} All shoreline permits are processed by the local government pursuant to local regulations. There are three types of permits—substantial development permits, conditional use permits, and variances. Substantial development is development that materially interferes with normal public use of the water or shorelines of the state (regardless of cost); or development with a total cost or fair market value exceeding \$5,000.^{xvii} Substantial development permits cannot be approved unless they are consistent with the SMA policies and procedures, Ecology rules, and the local SMP.^{xviii}

After the local government makes its decision on permit applications, the applications are sent to Ecology. Then Ecology approves, approves with conditions, or denies the conditional use permit or variance. Ecology does not, however, have direct approval authority over substantial development permits. If a substantial development permit is inconsistent with the local SMP or the SMA, Ecology can appeal issuance of the permit by filing an appeal with the Shorelines Management Hearings Board.

Exempted Activities

Certain development is exempt from the SMA’s substantial development permit requirement. Exempt uses must, however, be consistent with the SMA policies and the local SMP. Although multiple types of development are exempt, the following exemptions are particularly relevant to the issue of sea level rise:

- Normal maintenance or repair of existing structures;
- Owner-occupied **single family residences** and appurtenant structures;
- Emergency construction to protect property from the elements;
- **Building bulkheads to protect single-family residences.**

It is important to note that emergency construction does not include the building of new permanent protective structures (i.e.: bulkheads or other armoring devices) where none previously existed. An emergency is defined as “an unanticipated and imminent threat to public health, safety, or the environment which requires immediate actions within a time too short to allow full compliance.”^{xxix} Also, as a general matter, flooding or other seasonal events that can be anticipated, but are not imminent, are not considered emergencies.^{xx}

The exemption for bulkheads does contain some important qualifications. First, bulkheads are only exempt if they are installed for the sole purpose of protecting an existing single-family residence or appurtenant structure from loss or damage by erosion. Second, bulkheads for undeveloped property are not covered under this exemption—a permit is required. Third, a normal protective bulkhead is not exempt if constructed for the purpose of creating dry land. Finally, when a bulkhead has deteriorated such that an ordinary high water mark has been established by the presence and action of water landward of the bulkhead, then the replacement bulkhead must be located at or near the actual ordinary high water mark—not below.

The SMA and related regulations do provide several important provisions that limit the potential scope of exempted activities. First, exempt activities may still require variances or conditional use permits. Second, exemptions must be narrowly construed. “Only those developments that meet the precise terms of one or more of the listed exemptions may be granted exemption from the substantial development process.”^{xxxi}

Finally, exempt activities can still be conditioned. It should also be noted that activities exempt from the substantial development permit may still need to get other permits—such as a Hydraulic Project Approval Permit (discussed below).

The SMA & Implications for Sea Level Rise

Although the SMA does not explicitly mention or plan for sea level rise, there are protections inherent in the current statutory and regulatory framework that provide some of the responsiveness and flexibility necessary to adapt to issues associated with sea level rise. For example, the recently added requirement that SMPs be updated every 7 years ensures responsiveness and flexibility in local shoreline regulation. So does the requirement that SMPs adopt policies and regulations to assure “no net loss” of ecological function. The requirement that SMPs be consistent with State Guidelines also provides needed flexibility at the local level.

Given that local governments look to Ecology and the State Guidelines for technical assistance, it may be appropriate to update the State Guidelines in response to anticipated threats associated with sea level rise. Policymakers and Ecology may also consider whether it would be useful to have local governments identify erosion hazards and possible threats to shoreline function as part of each SMP environmental designation system. These vulnerable areas may then be subject to more protective shoreline regulation.

When updating the State Guidelines, it may also be useful to consider the cumulative impact of exempted uses. For example, it may be that the cumulative impact associated with the exemption for single-family residences is quite significant. Although the cumulative impact of exempted uses may be considered as part of the SMA’s

cumulative impact assessment, this review may not provide the level of specificity that would come if exempted uses were subject to the substantial development permit requirement.

It may also be worthwhile to consider ways to promote more effective enforcement strategies for local governments. Even though exempted uses are subject to the SMA's consistency requirement, this may prove to be an insufficient enforcement mechanism to ensure that exempted uses comply with the SMA policies and the local SMP. Increased training at the local level may help ensure that local governments maximize their review authority with regard to exempted activities.

1.2. Flood Plain Management

Climate change, and a resulting rise in sea level, is expected to produce coastal erosion and damage associated with increased storm surge throughout Western Washington. These events will cause rivers, streams, and lakes to overflow and inundate adjacent land areas. The adjacent land areas are known as floodplains.

The National Flood Insurance Program ("NFIP") was created in 1968 to guide development in floodplain areas to minimize the financial impact and loss of life caused by impending flood events. One of the primary goals of the program is to reduce federal disaster costs by shifting the burden from the general taxpayer to the floodplain property owners through floodplain mapping, regulations, education and other programs. The NFIP provides financial backing for flood insurance coverage that is not generally available in the private market. Homeowners in a floodplain cannot get a mortgage without flood insurance.

The Washington State Department of Ecology is responsible for coordinating the

statewide floodplain management regulation elements of the NFIP. As a state, Washington has adopted higher standards than the minimum requirements imposed by the NFIP. Under the Floodplain Management Act, chapter 86.16 RCW, local governments and the Department of Ecology work in concert. Local governments adopt and administer regulatory programs that comply with the NFIP and Ecology, among other things, establishes minimum state requirements for flood plain management that are equivalent to the NFIP minimum standards. Ecology also provides technical assistance and information to assist local governments in the administration of their flood plain management ordinances. For example, local governments rely on Ecology to assist them in locating the bounds of the 100-year floodplain in their jurisdictions.

Floodplain Management & Implications for Sea Level Rise

Floodplain maps are the basis for implementing local floodplain regulations. The maps used vary in detail depending on the amount of historical data, the detail of the base topographic maps, the flood threat, and the floodplain development potential. If the maps do not adequately characterize the risks posed by sea level rise, then the regulations based on those maps will not be sufficient.

1.3. Hydraulic Projects Approval Law

The Department of Fish and Wildlife is charged with preserving, protecting, and perpetuating all fish and shellfish resources of the state. Recognizing that virtually any construction that affects the seabed or flow of waters has the potential to cause habitat damage, the state Legislature passed the “Hydraulic Code” (Chapter 77.55 RCW) in 1949. The law is intended to ensure that construction is done in a manner that prevents damage to fish, shellfish, and their habitat.

The Hydraulic Code requires any person, organization, or government agency wishing to conduct any construction activity that will use, divert, obstruct, or change the bed or flow of salt or fresh water obtain permit approval from the Washington State Department of Fish and Wildlife. Although a permit is required for many types of activities, the ones most applicable to sea level rise are activities involving the construction of bulkheads, dredging, and the construction of marinas and breakwaters.

As with the SMA, fewer protections and restrictions apply to the construction of bulkheads for single-family residences.^{xxii} Bulkhead construction and other bank protection projects for non single-family residences must mitigate as necessary to achieve “no net loss of productive capacity of fish and shellfish habitat.”^{xxiii} Single-family residences wishing to build bulkheads are not held to the no net loss standard. Instead, bulkheads for single-family residence are not allowed to result in the “permanent loss” of “critical” food fish or shellfish habitat.^{xxiv} Notably, of the approximately 6,000 applications received each year by Fish and Wildlife, less than one percent are denied.^{xxv}

The Hydraulic Code & Implications of Sea Level Rise

Sea level rise will likely result in increasingly eroded shorelines, inundated or compromised wetlands, and degraded water quality—all of which will damage fish and shellfish habitats. If the risk to these habitats is considered significant enough, then the Department of Fish and Wildlife may have the authority to require adequate buffers around wetlands to allow for their upland migration. The Department may also have the authority to adopt stricter rules and regulations to ensure that the individual and cumulative impact of construction projects does not adversely impact habitat. If data reveals that the cumulative impact of bulkheads for single-family residences is

significant, then the Department could re-evaluate the less stringent standards it currently imposes on these projects.

1.4. State Environmental Policy Act of 1971

The State Environmental Policy Act of 1971, SEPA, requires state and local agencies to consider the likely environmental consequences of a proposal before approving or denying the proposal. SEPA provides an independent set of thresholds to determine projects that are exempt from SEPA review. Certain projects are categorically exempt from SEPA review. For example, except when undertaken wholly or partly on lands covered by water, the construction or location of any residential structure of four dwelling units or less does not require SEPA review. Part Nine of the SEPA rules, WAC 197-11-800, contains the categorical exemptions adopted by Ecology. When SEPA review is required, projects must submit an Environmental Checklist.

A more involved Environmental Impact Statement (“EIS”) is required where there are probable significant impacts as a result of the proposed project. Notably, only a very small percent of projects subject to SEPA review require an EIS. The primary purpose of an EIS is to provide an impartial discussion of significant environmental impacts, reasonable alternatives, and mitigation measures to avoid or minimize adverse environmental impacts. A draft EIS for each proposal is reviewed—in conjunction with applicable regulations and other relevant information—by the public and relevant agency officials. After a final EIS that incorporates the public comments is circulated, agency officials decide whether to approve, condition, or deny the proposal.

In response to growing awareness of climate change, a SEPA work group has been established to develop recommendations to ensure that consideration of climate

change is included in the SEPA review process.^{xxvi} The work group will prepare recommendations on changes to SEPA rules, guidance and/or environmental review documents to provide clarity and predictability to project proponents and administering agencies regarding how climate change is to be addressed through the environmental review process. The focus of the work group is on addressing the relationship between greenhouse gas emissions and SEPA review.

SEPA & Implications for Sea Level Rise

The fact that there is already a SEPA work group established to consider the effects of greenhouse gas emissions is significant. It may also be appropriate for a SEPA work group to consider the implications of sea level rise. When SEPA review is required, it should require consideration of the likely environmental impacts and possible mitigation strategies for projects along Washington shorelines—especially important to consider are the impacts associated with development that may impair a shoreline’s ability to migrate inland as sea levels rise.

1.5. Coastal Zone Management Act

The state of Washington, through the Department of Ecology, participates in the federal Coastal Zone Management Program. The CZM program is a voluntary state-federal partnership that encourages states to adopt their own management programs in order to meet the federal goals of protection, restoration, and appropriate development of coastal zone resources. States have broad latitude to adapt federal goals to state and local circumstances, needs, and legal traditions. Washington’s CZM program is based primarily on the Shoreline Management Act. In 2004, Ecology submitted the newly updated Shoreline Management Guidelines as an amendment to our CZM plan. NOAA

is in the final stages of completing their EIS work surrounding this change to Washington's CZM Program.

CZMA & Implications for Sea Level Rise

The 1990 updates to the CZMA expressly articulated a “growing need to plan for sea level rise.”^{xxvii} More recently, both NOAA and the Coastal States Organization have worked to develop draft legislation for a newly reauthorized CZMA. Both groups have indicated that adaptation to climate change will play a significant role in their final bill language.

2. GOVERNING LEGAL PRINCIPALS

Any response the Legislature takes in response to sea level rise will likely implicate one of the following four legal principles: the public trust doctrine, the law of accretion and erosion, the taking of property without compensation, or the violation of landowners' substantive due process rights. The first two principles are significant because they are common law legal doctrines that will, unless expressly dealt with by the legislature, constrain any legislative response to sea level rise. The second two principles are significant because they represent the two ways to challenge the constitutionality of land use regulations in Washington.

2.1. The Public Trust Doctrine in Washington

The public trust doctrine is a legal principle derived from English common law. The essence of the doctrine is that the waters of the state are a public resource owned by and available to all citizens equally for navigation, commerce, fishing, recreation, and similar uses. The public retains its rights under the public trust doctrine even when the land at issue is privately owned.^{xxviii} Although the public trust doctrine does not allow the

public to trespass over privately owned land adjacent to tidelands, in other states it has been interpreted to protect public use below the ordinary high water mark. In Washington, the Department of Ecology has advised that public trust rights extend only to navigation over private tidelands for commercial, fisheries, or recreational purposes. As of yet, there is no case law in Washington establishing a clear public trust right to walk across privately owned tidelands. Courts in other states have determined that public trust interests can be defeated only by express legislation “and then only to promote other public rather than private values.”^{xxxix}

The Shoreline Management Act is Washington’s primary means of protecting the public’s right to access trust lands. The SMA carries out this duty via the planning and permitting requirements imposed on both the state and local level.^{xxx} Interestingly, it is not yet clear whether the SMA codified the entirety of the public trust doctrine in Washington or whether additional public trust rights exist outside of the SMA’s regulatory framework.^{xxxi} The uncertain status of Washington’s public trust doctrine is due to the fact that it is created, developed, and enforced by the judiciary. This means that Washington courts may expand or limit it on a case-by-case basis according to public need and legitimate private expectations. As a result, its scope is flexible and not fully developed, which means there are few “bright lines” that the state and local governments can rely on when enacting shoreline regulations.

Although the scope of the doctrine varies from state to state, states are increasingly relying on it as a tool for coastal resource management. This is due in large part to the fact that the doctrine can be used to justify limitations on private property rights along shorelines, in order to protect and preserve public trust rights. When private

property rights are limited in this way, the limitations are often insulated from takings challenges. This is because, under the public trust doctrine, the public holds a property right “akin to an easement that is owned by the state and subject to state control for the benefit of the public interest in navigation, commerce, environmental quality, and recreation.”^{xxxii} When a state enacts legislation designed to protect the public right by limiting certain private rights, the state is not regulating private property—it is “merely controlling a right that it already owns.”^{xxxiii}

2.2. The Law of Accretion and Erosion in Washington

Erosion and sediment deposit (accretion) occurs constantly in nature. These processes, especially erosion, are exacerbated by sea level rise and shoreline armoring. Under the common law of erosion, shoreline property owners lose title to land as it erodes. The opposite is generally true when sediment is deposited along a shoreline, through accretion. In a majority of states, the common law of accretion provides shoreline property owners with title to the newly added land. This is not so in Washington. A Washington statute, RCW 79.125.440, provides that any accretions to tide or shoreland belong to the state.

2.3. Unconstitutional Takings

All state governments have the authority and responsibility to protect the public health, safety, and welfare under what is known as the state’s “police power.” Government regulation of property is a recognized and accepted exercise of the police power. But sometimes the government regulation goes too far and in so doing, unconstitutionally limits the use of private property. Both the United States Constitution and the Washington Constitution prohibit the taking of private property without the

payment of just compensation.^{xxxiv} Just compensation is the fair market value of the property when the taking occurs.

The Washington Supreme Court’s takings analysis is set forth in the 1993 case of Guimont v. Clarke.^{xxxv} Courts first consider whether mere enactment of the regulation constitutes a per se taking. Four types of government regulation can constitute a per se, categorical, takings:^{xxxvi} (1) regulations that result in a total taking of all economically viable use of an individual’s property;^{xxxvii} (2) regulations that result in a physical invasion of the private property;^{xxxviii} (3) regulations that destroy one or more fundamental attributes of property ownership;^{xxxix} and (4) regulations aimed at enhancing the value of publicly owned property.^{xl} If mere enactment of the regulation is a per se taking, then the courts will require the payment of just compensation.

If a landowner fails to establish a per se taking, then the court will consider whether the regulation prevents a public harm or provides an affirmative public benefit.^{xli} If the regulation prevents harm and safeguards the public interest in health, safety, the environment or the fiscal integrity of an area, then it is likely not an unconstitutional taking of private property. If, however, the regulation “seeks less to prevent a harm than to impose on those regulated the requirement of providing an affirmative public benefit” then the courts will engage in a fact-specific takings analysis.^{xlii}

Under the fact-specific analysis, courts first examine whether the regulation substantially advances a legitimate state interest. If it does not, the regulation is a taking. If, however, the regulation does substantially advance a legitimate state interest, courts perform a balancing test. Courts will ask whether the state interest in the regulation is outweighed by its adverse economic impact to the landowner. In particular, Washington

courts consider: (1) the regulation's economic impact on the property; (2) the extent of the regulation's interference with investment-backed expectations; and (3) the character of the government action. If the court determines that the adverse economic effect on the landowner outweighs the state's interest in the regulation then a taking has occurred and just compensation is mandated.^{xliii}

Although takings challenges are often asserted in response to land-use regulations, Washington courts rarely find that the regulation amounts to the taking of private property.^{xliiv} More often courts find that the regulation violates the landowners' substantive due process rights. Washington courts prefer the remedy available for a substantive due process violation over the remedy available for an unconstitutional taking. If a land-use regulation violates a landowner's substantive due process rights, then the remedy is invalidation of the regulation. For unconstitutional takings, the remedy is an award of monetary damages. Courts prefer the remedy available for substantive due process violations because, "the specter of strict financial liability" in takings cases results in a "chilling effect" on land-use regulation, which may deter legislative bodies from making difficult, but necessary, land-use decisions.^{xliiv}

2.4. Substantive Due Process

Alleging a deprivation of substantive due process rights is another way for property owners to challenge and potentially invalidate land-use regulations in Washington. It is possible for a regulatory action to survive a takings challenge, but nevertheless to violate substantive due process. The remedy in such a case is invalidation of the offending regulation; not payment of just compensation.

The due process clause of the Fourteenth Amendment limits governments from using the police power in an arbitrary or unreasonable manner.^{xlvi} To determine whether a regulation violates due process, the Washington Supreme Court employs a three-prong test.^{xlvii} First, courts consider whether the regulation is aimed at a legitimate public interest. Then, courts determine whether the means used are reasonably necessary to achieve that purpose. Finally, courts assess whether the regulation is unduly oppressive on the landowner. Consideration of the unduly oppressive part of the test involves ad hoc balancing that is highly subjective. The Supreme Court has identified a set of non-exclusive factors to guide this analysis. These factors include: the seriousness of the public problem, the feasibility of less oppressive measures, the amount and percentage of lost property values, and the extent of investment-backed expectations.^{xlviii} Whether a party could have anticipated the liability imposed by a regulation and whether they could have altered their behavior to avoid such liability is one of the more important factors to consider, especially when considering a statute that applies retroactively.^{xlix}

3. POSSIBLE ADAPTATIONS TO SEA LEVEL RISE IN WASHINGTON

3.1. Current Efforts

A deliberate and coordinated effort is needed to ensure that Washington responds efficiently and effectively to the threats posed by rising waters. Formal and informal work groups are beginning to explore the likely impacts of climate change. One such work group developed in response to an executive order from Governor Gregoire. Section C of Executive Order 07-02 tasked the Directors of the Departments of Ecology and Community, Trade and Economic Development (CTED) with determining specific

steps the state should take to prepare for the impacts of global warming on public health, agriculture, the coastline, forestry, and infrastructure. In response to this charge, five preparation and adaptation work groups (PAWGs) composed of representatives from state and local governments, tribes, business, academic, and various public and private organizations were created. A report of recommendations from the PAWGs was issued in February 2008.

King County has also taken significant steps towards adaptation planning. In 2006, King County formed an inter-departmental climate change adaptation team, building scientific expertise within county departments to ensure climate change factors were considered in policy, planning, and capital investment decisions. Partnering with the Climate Impacts Group, an interdisciplinary research group, the county has already begun many adaptation efforts, including the development of water quality and quantity models and monitoring programs. The 2007 King County Climate Plan lays out detailed goals and actions for six “Strategic Focus Areas” for adaptation efforts—including a focus area dedicated to reviewing land use plans and policies (i.e., Regional Hazard Mitigation Plan, Shoreline Master Plan, River and Floodplain Management Program, transportation infrastructure plans, etc.) to address flooding and sea level rise projections.¹

Another important group working on shoreline issues was created by the “West Coast Governors’ Agreement.”^{li} According to that Agreement, Washington, Oregon, and California have established a draft action plan stating that the West Coast States will collaborate on a West Coast-wide assessment of shoreline changes and anticipated impacts to coastal areas and communities due to climate change over the next 30-50

years. The states will work together to develop actions to mitigate and adapt to the impacts of climate change and related hazards.

3.2. Acknowledging Key Recommendations that have Already Been Made

The Coastal PAWG’s recommendations to the Governor are directly on point.^{lii} This report adopts those recommendations in their entirety. In the interest of avoiding unnecessary duplication, this report aims to provide additional suggestions and analysis to further the discussion on how Washington might choose to adapt to sea level rise. Before discussing those other suggestions, however, it is important to highlight some of the Coastal PAWG’s most applicable recommendations.

Summarized below are four main strategies for adaptation that were recommended by the coastal group:

- 1. Land use and hazard mitigation**, including, among other things:
 - Incorporating best available sea level rise information into local government planning;
 - Revising state land use and shoreline planning statutes and regulations to effectively address sea level rise and other climate change impacts;
 - Pursuing state funding for pilot projects in vulnerable developed shoreline areas to examine alternatives to bulkheads;
 - Informing property purchasers and investors regarding sea level rise risk that may affect coastal property.
- 2. Vulnerability characterization and monitoring**, including, among other things:
 - Improving mapping and characterization of sea level rise vulnerability for all our coasts.
- 3. Coastal nearshore habitat restoration and protection**, and
- 4. Coastal facility construction and maintenance**, including, among other things:
 - Including best available data on sea level rise in the design of coastal facility construction and all major repair projects.

Under the land use and hazard mitigation strategy, the Coastal PAWG recommends, among other things, that the state revise our land use and shoreline planning statutes and regulations to effectively address sea level rise and other climate change impacts. The Coastal PAWG also recommended that Washington undertake a comprehensive statewide vulnerability mapping effort. This would assure that specific threats to their jurisdictions are identified before local governments begin planning for sea level rise. Much of the current shoreline mapping assumes that coastal regions will experience a gradual rise in sea level. But many low-lying areas along the Coast and around the Puget Sound will be subject to periodic flooding from severe storm inundation. Vulnerability mapping should reveal (1) likely growth and development patterns for the coastal and Puget Sound regions, (2) areas especially vulnerable to sea level rise under a variety of different scenarios, and (3) areas of particular ecological and social value.

3.3. Possible Legislative Responses

Although revising the existing regulatory framework is important, that alone does not directly address the fundamental question raised by sea level rise: whether to retreat or attempt to hold back the sea. The science is telling us that attempts to hold back the sea with shoreline armoring has devastating effects—including increased erosion, compromised ecosystem function, and diminished access to public trust land.

In an attempt to answer the fundamental question of whether Washington should retreat or attempt to hold back the sea, this report discusses two possible statewide responses to sea level rise. Although only two potential responses are discussed, many

options are available. It should be noted that the discussion here is not intended to be a complete or comprehensive evaluation of all possible responses to sea level rise.

The first option lawmakers might consider is implementation of a gradual, statewide policy of retreat through the use of setbacks. The second option is adoption of a policy providing for rolling easements. These options are not mutually exclusive; they could be combined to create a comprehensive policy response to sea level rise. Either approach, or a combination of both, could be incorporated into the Shoreline Management Act's existing framework.

3.3.1. Statewide Policy of Retreat

Retreat policies accept that rising waters will soon threaten development along vulnerable shorelines. In response, the policies generally condition the use of property in areas vulnerable to erosion and flooding and prohibit new construction seaward of a setback line. Although setback lines can be based on a variety of measures, including elevation or estimates of how the shore might change in the future, they are most often based on erosion rates. Retreat policies often restrict the use of shoreline armoring devices, choosing instead to let the sea naturally migrate landward. In so doing, retreat policies protect shoreline ecosystems and ensure that the public continues to have access to public trust lands.

South Carolina, for example, adopted a 40-year policy of retreat from the shoreline in 1988.^{liii} The South Carolina Beach Management Act found that the use of armoring in the form of hard erosion control devices such as seawalls, bulkheads, and rip-rap to protect erosion-threatened structures adjacent to the beach “has not proven effective.” The legislative findings state that these “armoring devices have given a false

sense of security to beachfront property owners. In reality, these hard structures, in many instances, have increased the vulnerability of beachfront property to damage from wind and waves while contributing to the deterioration and loss of the dry sand beach which is so important to the tourism industry.”^{liv} The South Carolina statute goes on to find that “erosion is a natural process which becomes a significant problem for man only when structures are erected in close proximity to the beach/dune system. It is in both the public and private interests to afford the beach/dune system space to accrete and erode in its natural cycle. This space can be provided only by discouraging new construction in close proximity to the beach/dune system and encouraging those who have erected structures too close to the system to retreat from it.”^{lv}

The Act established a setback line at a distance greater than forty times the average annual erosion rate.^{lvi} The minimum setback line, in areas with stable shorelines, was twenty feet. Construction and reconstruction of all structures—other than boardwalks and decks of limited size—and erosion control devices is limited seaward of the setback lines. An owner who cannot build a structure under these limitations can apply for a “special permit” to build seaward of the setback line subject to two important conditions.^{lvii} First, the owner must agree to remove the structure if erosion causes it to be “situated on the active beach.” Second, there is a total prohibition of any erosion control structure or device seaward of the vegetation line.

Despite their overall prohibition against hard shoreline armoring devices, retreat policies typically recognize that highly valued or densely developed shorelines will require some form of structural protection. The applicable land-use laws or regulations may, however, require permits for construction of the structural protection to minimize

the risks associated with armoring. Where armoring must be allowed, Washington might consider ensuring the public's right to access the beach and tidelands (as long as they exist) through stipulations in armoring permits. Washington might also consider imposing a requirement that property owners, who are allowed to armor, nourish the beach by importing sand to help mitigate the erosive effect caused by the hard shoreline. Finally, Washington could consider imposing an impact fee that could contribute to a coastal habitat restoration fund.

Benefits of a Retreat Policy

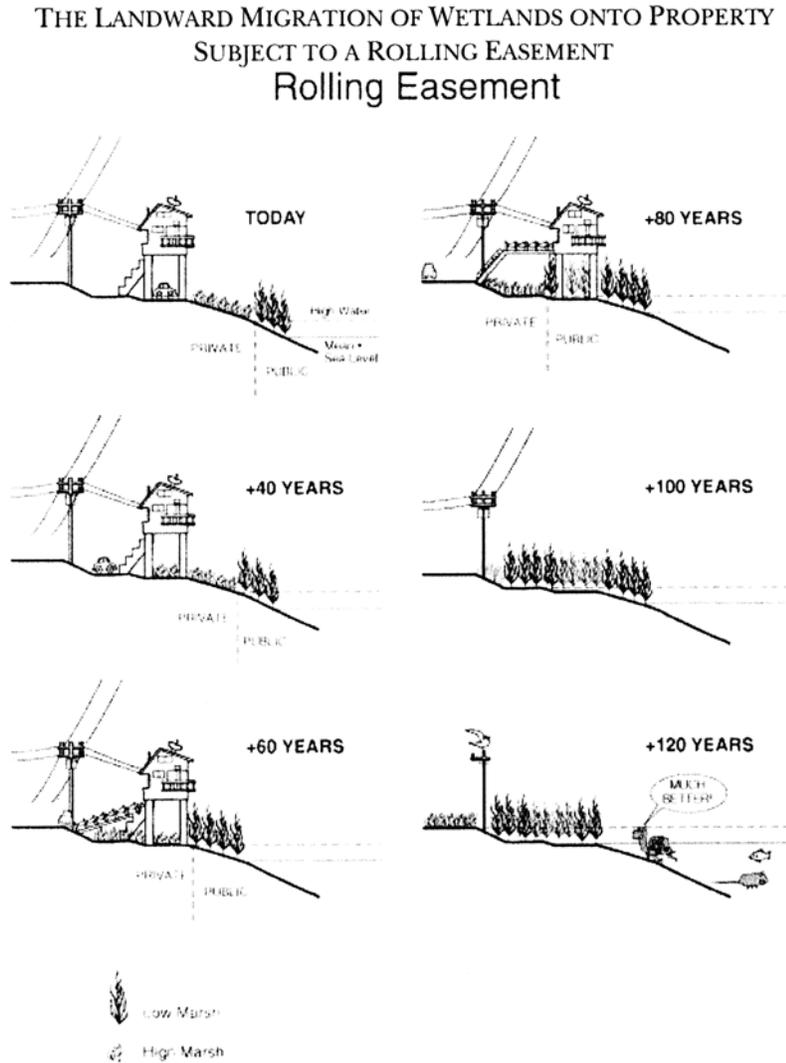
A statewide retreat policy acknowledges sea level rise as a risk that needs to be managed over the long term. It would also restrict the use of shoreline protective devices, set realistic setback lines and prohibit construction below those lines, thereby addressing many of the challenges associated with sea level rise—mitigating risk, minimizing erosion, and ensuring protection of environmental resources and the public's right to access the beach. Most importantly, a statewide retreat policy in Washington—where we rely largely on local decision-making regarding shoreline management—could provide local governments with guidance that might facilitate a comprehensive and consistent approach to mitigating the risks associated with sea level rise.

3.3.2. Rolling Easements

Another approach used in response to rising seas is the codification of rolling easements along vulnerable shorelines. A “rolling easement” is a device that allows publicly owned tidelands to migrate inland as the sea rises, thereby preserving ecosystem structure and function.^{lviii} Thus, rolling easements transform static property lines into ones where private property must yield the right of way to naturally migrating shorelines.

Figure 3, below, illustrates the landward migration of wetlands or shoreline onto property subject to a rolling easement.^{lix}

Figure 3



A rolling easement allows construction near to the shore, but requires the property owner to recognize nature's right of way to advance inland as sea level rises. In this case, the high marsh reaches the footprint of the house 40 years hence. Because the house is on pilings, it can still be occupied (assuming that it is hooked to a sewerage treatment plant. A flooded septic system would probably fail). After 60 years, the marsh has advanced enough to require the owner to park the car along the street and construct a catwalk across the front yard. After 80 years, the marsh has taken over the entire yard; moreover, the footprint of the house is now seaward of mean high water and hence on public property. At this point, additional reinvestment in the property is unlikely, and the state might charge rent for continued occupation of the home. Twenty years later, the particular house has been removed, although other houses on the same street may still be occupied. Eventually, however, the entire area returns to nature.

A state that has adopted rolling easements as a shoreline management strategy typically allows construction near the shore, but requires the property owner to recognize the shoreline's right of way to advance inland as sea levels rise. As the sea rises, the high water mark moves inland, and with it so does the public right to access the new shoreline. For example, imagine a housing development built just above a small strip of beach. As the sea rises and increasingly severe storms crash onto the beach, the shoreline begins to erode. In response, the property owners would probably seek to erect some form of shoreline armoring that would prevent the natural migration and survival of the beach. If the state held a rolling easement, the property owners would not be able to interfere with the public easement by building a shoreline armoring device. Instead, they would be allowed to use their property as normal until the sea reaches it. When that happens, the property owners would either have to move their structures back or cede them to the ocean or advancing marshlands. Because erosion generally occurs very slowly, shoreline property owners often have several decades to enjoy their property before the sea consumes it.

One of the most useful things about a rolling easement policy is that it provides shoreline property owners with advanced notice of what will happen when the sea reaches their property. This lets the property owners develop realistic investment backed expectations regarding the long-term value of their property. Owners of vulnerable shoreline property may then choose to avoid major capital expenditures to expand, upgrade or repair their homes.^{ix} This advanced notice helps insulate rolling easement policies from takings challenges.

A 1998 law review article by James G. Titus of the EPA provides an invaluable discussion of rolling easements as a laudable policy response to sea level rise. Titus suggests a number of ways to implement rolling easements.^{lxi} According to Titus, the simplest way is to prohibit bulkheads or any other structures that interfere with naturally migrating shores. Alternatively, states can pass a statute—or amend an existing statute—clarifying that all coastal land is subject to a rolling easement. States may also choose to require deed disclosures for shoreline property that specify that the boundary between the publicly owned tidelands and the privately owned dry land will migrate inland as the sea level rises—whether or not human activities artificially prevent the water from intruding. Finally, states can arrange to purchase a property right in privately owned shoreline property, whereby the state takes possession of the privately owned land when the sea rises to a certain point.

The legal support for rolling easement policies vary from state to state. They are often, however, grounded in common law principles. Reliance on common law principles helps immunize the state from constitutional takings challenges because the policies are viewed as clarifying limitations the property owner already had under the common law. Put simply, if the property owner never owned the right to hold back the sea based on longstanding common law principles, then a statute clarifying that does not take anything from the property owner.

Because the public trust doctrine requires that the state hold its coastal resources in perpetual trust for the people and arguably requires the state to protect those resources, it is often used to justify rolling easements or any other prohibitions against shoreline armoring.^{lxii} Although not yet settled in Washington, the public trust doctrine presumably

attaches to shores regardless of their location because the public trust extends up to the ordinary high water mark. As the ordinary high water mark migrates inland, so should the public trust. Similarly, if the ordinary high water mark moves seaward through accretion, so should the public trust. Because a sea wall prevents the ordinary high water mark from migrating landward, it arguably denies the public its reversionary trust interest. It also, arguable, destroys the public's trust interest in the beach itself because armoring often causes beaches to disappear as a result of increased erosion activity.

It should be noted that statutes authorizing shoreline armoring, like the Shoreline Management Act, may only be valid if they maintain public trust rights. This issue has not yet been raised in Washington. But policymakers should be aware that state authorization of armoring could lead to potentially successful litigation based on this theory.

Rolling easements can also be rooted in the common law custom doctrine. Customary rights may grant an easement over beach property when a community can demonstrate that its use of the beach has been “ancient, continuous, peaceable, and free from dispute,” as well as “reasonable, certain, obligatory, and consistent with other laws.”^{lxiii} Grounding a statewide rolling easement policy based on the doctrine of custom has one significant limitation: the degree to which custom applies varies based on the history of a particular stretch of beach. The public in Washington may be able to demonstrate that its historical use of certain coastal beaches has given rise to an easement. In Oregon, for example, the state Supreme Court invoked the doctrine of custom to declare an easement for the public to enjoy all of Oregon's coastal beaches.^{lxiv} Communities may have a more difficult time establishing a historical use of Puget Sound

beaches because public use of Puget Sound shorelines is not as firmly established as along the Oregon and Washington coasts.

Finally, rolling easements may be justified based on the doctrine of public nuisance. “To obstruct or impede, without legal authority, the passage of any river, harbor, or collection of water” is considered a public nuisance in Washington.^{lxv} So long as a plaintiff can establish a substantial and unreasonable interference with the plaintiff’s use and enjoyment of land, a cause of action for a public nuisance may be maintained, even though the nuisance occurs under the express authority of a statute.^{lxvi} This definition of public nuisance could, arguably, include damage to the coast. Additionally, shoreline armoring could arguably be defined as a private nuisance based on its effect on nearby coastal properties. This is because waves refract off of barriers and alter the surf’s impact on neighboring properties.

Benefits of Rolling Easements

One of the most significant benefits associated with rolling easements is the advanced notice it gives property owners regarding the realistic, long-term investment expectations for their properties. The only present day limitation placed on property owners is a restriction on the right to hold back the sea with shoreline armoring devices. Other than that, property owners are generally free to continue using their property as they like until the ordinary high water mark reaches their doorstep. At this point, assuming gradual erosion over time due to sea level rise, property owners will be prepared to either move their structure back or to abandon it to the sea. Either way, their ability to assert a successful takings challenge is minimal given the advanced notice.

Rolling easements may be particularly immune to takings challenges relative to retreat policies based on setbacks. Where setback policies place immediate restrictions on a property owner's use of land—by requiring all construction to take place landward of a setback line—rolling easements do not. For this reason, when first implemented, rolling easements will rarely, if at all, be deemed a categorical taking that denies the property owner all economically viable use of the land. Assuming that the sea does eventually rise to a point where the ordinary high water mark consumes a property, a successful takings challenge is unlikely because rolling easements allow the state to take over lands that the state is already entitled to under the law of erosion.^{lxvii}

3.3.3. A Statewide Policy of Retreat with Rolling Easements

The two policy options discussed above are not mutually exclusive. Policymakers could consider amending the Shoreline Management Act to include a combination of the two approaches. Under this option, a policy would require houses to be set back enough to protect them from the expected erosion over the next several decades—while creating rolling easements to ensure that future generations do not simply build bulkheads along the setback line.

4. CONCLUSION

Policymakers responsible for determining how Washington will respond to sea level rise must consider a variety of potentially conflicting factors, including private property rights, public trust responsibilities, environmental preservation, and public expenditure. Because the effects of sea level rise are distant and still somewhat uncertain, policymakers will inevitably confront those who prefer adaptive responses that defer major restrictions on private property until the effects of sea level rise are

imminent. Although Washington’s current statutory and regulatory landscape has not yet considered sea level rise, the Shoreline Management Act provides policymakers with a solid foundation to create a responsive and flexible approach to the threats associated with sea level rise.

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ⁱ RCW 90.58.020.

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- ii See RCW 90.58.020.
- iii RCW 90.58.030(2). The SMA also applies to rivers with a mean annual flow greater than 20 cubic feet per second and lakes and reservoirs greater than 20 acres in area. RCW 90.58.030(2).
- iv RCW 90.58.030(2)(b).
- v RCW 90.58.030(2)(b).
- vi The SMA defines “floodway” as the area that has been established in federal emergency management agency flood insurance rate maps or floodway maps, areas flooded with reasonable regularity, or areas identified by changes in surface soil conditions or changes in the types or quality of vegetative ground cover. Floodway does not include lands protected from floods by legal dikes or levees. RCW 90.58.030(2)(g).
- vii See RCW 90.58.020
- viii RCW 90.58.020.
- ix RCW 90.58.030(e).
- x RCW 90.58.090.
- xi WAC 173-26-201(2)(c).
- xii WAC 173-26-201(2)(c).
- xiii WAC 173-26-211. Historically, SMPs used only four basic environmental designations—“natural,” “conservancy,” “rural,” and “urban.”
- xiv RCWA 90.58.140(1). See Bellevue Farm Owners Ass’n v. State of Washington Shorelines Hearings Bd., 100 Wn. App. 341, 997 P.2d 380 (2000).
- xv Seaview Coast Conservation Coalition v. Pacific County, SHB No. 99-020, Final Findings of Fact, Conclusions of Law and Order (January 28, 2000).
- xvi RCWA 90.58.140(2).
- xvii RCW 90.58.030(3)(e).
- xviii WAC 173-27-150.
- xix WAC 173-27-040(2)(d).
- xx It has yet to be determined whether this includes sea level rise. It probably does not because the threats resulting from sea level rise can be anticipated.
- xxi WAC 173-27-040(1)(a).
- xxii Compare WAC 220-110-285 with WAC 220-110-280.
- xxiii WAC 220-110-280.
- xxiv WAC 220-110-280(1).
- xxv <http://wdfw.wa.gov/hab/hpape.htm>
- xxvi http://www.ecy.wa.gov/climatechange/2008CAT_iwg_sepa.htm
- xxvii Pub. L. 101-508 section 62021(a)(7).
- xxviii See Caminiti v. Boyle, 107 Wn.2d 662, 732 P.2d 989 (1987).
- xxix Klarin et al., 1990, p. 1.
- xxx See Portage Bay v. Shorelines Hearings Bd., 92 Wn.2d 1, 593 P.2d 151 (1979).
- xxxi For example, in Orion Corp. v. State, 109 Wn.2d 621 (1987) the Washington Supreme Court clearly distinguished between the public trust doctrine and the Shoreline Management Act. But in earlier cases the Supreme Court indicated that the doctrine merged into the Act. See Caminiti v. Boyle, 107 Wn.2d at 670 where the Supreme Court stated that “the requirements of the ‘public trust doctrine’ are fully met by the legislatively drawn controls imposed by the Shoreline Management Act of 1971.

^{xxxii} Johnson, Ralph W., Craighton Goepple, David Jansen and Rachael Paschal (1991). *The Public Trust Doctrine and Coastal Zone Management in Washington State*. Washington Department of Ecology, Olympia: 2; see New Whatcom v. Fairhaven Land Co., 24 Wash. 493, 504, 64 P.735 (1901).

^{xxxiii} Johnson et al (1991) note that there are three kinds of ownership potentially involved in this situation. The first involves the state holding title to the beds of navigable waters or other land subject to the public trust doctrine. The second involves land that has been sold into private ownership even though the land is still subject to the public trust easement. Finally, the state can “own” a public trust easement on privately owned land. In the first two situations, Johnson et al conclude that the state does not “regulate” the use of these property interests under the police power—rather it manages these interests as an owner on behalf of the public. In the third situation, no takings questions are raised because the owner of the private property never owned the right to diminish or impair the public trust rights.

^{xxxiv} The Fifth Amendment to the United States Constitution states that “private property shall not be taken for public use without the payment of just compensation.” The Fifth Amendment applies to the states under the Fourteenth Amendment. Article 1, section 16 of the Washington State Constitution provides, in part, that “[n]o private property shall be taken or damaged for public or private use without just compensation.”

^{xxxv} Guimont v. Clarke, 121 Wn.2d 586, 854 P.2d 1, 8-11 (1993).

^{xxxvi} Manufactured Hous. Cmty. of Wash. v. State, 142 Wn.2d 347, 13 P.3d 183, 187 (2000).

^{xxxvii} Manufactured Hous., 13 P.3d at 187 (citing Lucas v. S.C. Coastal Council, 505 U.S. 1003, 1019 (1992)).

^{xxxviii} Manufactured Hous., 13 P.3d at 187 (citing Loretto v. Teleprompter Manhattan CATV Corp., 458 U.S. 419, 426 (1982)).

^{xxxix} The fundamental attributes of property ownership include the right to possess, the right to exclude, and the right to dispose of property. Manufactured Hous., 13 P.3d at 187 (citing Presbytery v. City of Seattle, 787 P.2d 907, 912-13 (Wash. 1990)).

^{xl} Manufactured Hous., 13 P.3d at 187 (citing Orion Corp. v. State, 747 P.2d 1062, 1077 (Wash. 1987), cert. denied., 486 U.S. 1022 (1987)).

^{xli} Interestingly, the U.S. Supreme Court has explicitly criticized use of this harm/benefit analysis. The Washington Supreme Court continues, nevertheless, to consider this as part of its takings analysis. See Guimont, 854 P.2d at 10-11 n. 5.

^{xlii} See Guimont, 854 P.2d at 10.

^{xliii} Guimont, 854 P.2d at 11.

^{xliv} See Orion, 747 P.2d at 1077, (stating that the Washington Supreme Court has found a taking on only two occasions over the last twenty years and that in those cases, the court has employed a due process analysis and remedy—rather than a takings analysis).

^{xlv} Presbytery of Seattle, 787 P.2d 907, 913-14 (Wash. 1990); Orion, 747 P.2d at 1077.

^{xlvi} Lawton v. Steele, 52 U.S. 133, 136-37, 14 S.Ct. 499, 38 L.Ed. 385 (1894) (discussing the limits of the police power without expressly stating that the Fourteenth Amendment is the constitutional authority for the limit). Lochner v. New York, 198 U.S. 45, 56, 25 S.Ct. 539, 49 L.Ed. 937 (1905) (explicitly recognizing the Fourteenth Amendment as a limit on the states’ exercise of police power).

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- ^{xlvi} Guimont, 121 Wn.2d 586, 608, 854 P.2d 1, 13 (1993).
- ^{xlvi} Robinson v. City of Seattle, 119 Wn.2d 34, 55, 830 P.2d 318, 331 (1992), cert. denied, 506 U.S. 1028 (1992).
- ^{xlvi} See Guimont, 121 Wn.2d 586, 854 P.2d 1, 13 (1993); Asarco Inc. v. Dep't of Ecology, 145 Wn.2d 750, 784, 43 P.3d 471, 487 (2002).
- ⁱ King County's full climate plan is available at <http://www.metrokc.gov/exec/news/2007/pdf/ClimatePlan.pdf>.
- ^{li} <http://westcoastoceans.gov/docs/WCOceanAgreementp6.pdf>
- ^{lii} See Preparing for the Impacts of Climate Change in Washington: Draft Recommendations of the Preparation and Adaptation Working Groups—Preliminary Draft for Public Review, December 21, 2007, pp. 38-52. Available at http://www.ecy.wa.gov/climatechange/CATdocs/122107_2_preparation.pdf.
- ^{liii} S.C. Code Ann. § 48-39-290(D).
- ^{liv} S.C. Code Ann. § 48-39-250(5).
- ^{lv} S.C. Code Ann. § 48-39-250(6).
- ^{lvi} S.C. Code Ann. § 48-39-280(B).
- ^{lvii} S.C. Code Ann. § 48-39-290(D).
- ^{lviii} Caldwell, Meg and Segall, Craig Holt (2007) No Day at the Beach: Sea Level Rise, Ecosystem Loss, and Public Access Along the California Coast. 34 Ecology Law Quarterly 533: 536; Titus, James G. (1998). Rising Seas, Coastal Erosion, and the Takings Clause: How to Save Wetlands and Beaches Without Hurting Property Owners. 57 Maryland Law Review 1279: 1313.
- ^{lix} The diagram, which was first published in the Maryland Law Review, is included here with permission from the Maryland Law Review. Titus, James G. (1998). Rising Seas, Coastal Erosion, and the Takings Clause: How to Save Wetlands and Beaches Without Hurting Property Owners. 57 Maryland Law Review 1279: 1316.
- ^{lx} Titus (1998) p. 1315.
- ^{lxi} Titus (1998) p. 1313.
- ^{lxii} It should be noted that the public trust doctrine, although well developed in other states, has not yet been fully developed in Washington. This report assumes that over time, the public trust doctrine will be developed, as it has been in other states, to require the state to protect trust land from environmental degradation.
- ^{lxiii} Caldwell (2007) p. 555.
- ^{lxiv} For a more complete discussion of how Oregon uses the doctrine of custom see Steven W. Bender (1998) Castles in the Sand: Balancing Public Custom and Private Ownership Interests on Oregon's Beaches, 77 Or. L. Rev. 913: 913.
- ^{lxv} RCW 7.48.140 Public Nuisances Enumerated.
- ^{lxvi} Grundy v. Thurston County, 155 Wn.2d 1, 117 P.3d 1089 (2005).
- ^{lxvii} Titus (1998) p. 1357.