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65

Shoreline Master Program Update Process and Materials

Review and Comments

Purpose

This submittal is provided to San Juan County as part of the public participation process associated with the updating of the County's Shoreline Master Program. The contents are presented in the first person to facilitate ease of reading.

I and my wife, Jan, are owners and residents of Lot 17 Brown Island, a small island located in Friday Harbor. My submittal focuses primarily on the referenced Lot 17. It is intended to officially document the current (April, 2012) conditions on Lot 17 and Brown Island in response to the Shoreline Inventory and Characterization prepared for the County. I do not expect the Shoreline Inventory and Characterization to be amended to include my comments on Lot 17. I simply want the conditions and exceptions I note to be documented. I also provide comments and opinions regarding Brown Island generally, the Washington State Shoreline Management Act, and various aspects of San Juan County's Shoreline Master Program that I think deserve consideration.

Personal and Professional Background

My wife and I have owned Lot 17 on Brown Island for over 25 years and it has been our primary residence since 1997, so I am well-qualified to comment on the conditions on our lot and those of Brown Island from lengthy first-hand experience.

In terms of qualification to offer comments and opinions related to the County's Shoreline Master Program update, I have been personally and professionally involved in shoreline (coastal zone) management since 1970. While a graduate student at the University of Washington, and working as a research assistant to Dr. Ed Wenk in the preparation of ***The Politics of the Oceans*** (a notable insider's assessment of the history and evolution of the United States' policies related to the Earth's oceans and the management of its coastal and marine resources), I was directly involved in the formative stages of coastal zone and shoreline management.

My research responsibilities for Dr. Wenk's book focused principally on the issues of the nation's coastal zones. Along with several other graduate students at the University, I also performed a review and refinement of drafts of a national Coastal Zone Management Act (CZMA) on behalf of Senator Warren Magnuson's office. (When Senate Bill 3507 was ultimately passed in 1972, it was entitled on the floor of the Senate as the Magnuson Act in admiration for Washington's senior U.S. Senator who had steadfastly championed it.)

Concurrently, I was also a key resource to the Washington Environmental Council and co-author of Initiative 43, which proposed a state-level Shoreline Management Act in Washington that would be consistent with the draft provisions of the CZMA that was then proceeding through Congress. Initiative 43 garnered sufficient signatures to be presented to the Washington Legislature. The Legislature chose to prepare and refer an alternative version of the Initiative to the voters, titled Initiative 43B. The two options were placed on the 1972 general election ballot and Washington's voters approved Initiative 43B, the Shoreline Management Act in 1972. In 1976, Washington State's Shoreline Management Program was the first to be qualified as a participant state under the national CZMA, to a large degree because the State's Shoreline Management Act was carefully drafted to mirror and conform to the national legislation.

After graduate school, I remained professionally involved in the public policy aspects of water resource management. As the manager of the City of Bellevue Storm and Surface Water Management Utility (the first stormwater utility ever established) from 1974 through 1978, I am generally recognized as one of the originators of that management concept. In 1978 I established Water Resource Associates, Inc., through which I have providing consulting assistance to several hundred cities, towns, counties, districts, states, boroughs, and regional agencies across the United States and in Canada, Australia, and New Zealand. I specialize in the formulation of stormwater management programs and, particularly, stormwater utility service fees and other forms of funding, though I have also worked in several other water resource fields. I am a recognized authority in stormwater management funding, having served as an expert witness in legal proceedings in more than a dozen states.

I don't mean to belabor this, but the point is that my credentials relative to shoreline management are (at least) as sound as the County's staff and consultants, and my knowledge of Brown Island and our own property is vastly superior in terms of properly characterizing the conditions pertaining to the update of the Shoreline Master Program. I would hope the County Planning Commission, County Council, and staff would recognize that in considering my comments and opinions.

My Review Process

In the course of preparing this submittal to San Juan County, I assembled and reviewed numerous documents made accessible on-line by the County and also researched materials available on the internet. I have conscientiously examined the various documents and minutes of proceedings conducted during the update process. This effort consumed perhaps fifty hours of my time over several months. The findings, conclusions, comments, and opinions presented in this submittal are solely my own, and do not purposefully include those of others who may be involved in the update of the County's Shoreline Master Program or associated issues such as the update of the Critical Areas Ordinance pursuant the Growth Management Act.

Setting of Brown Island and Lot 17

This submittal is focused on the circumstances of Lot 17 and, to a lesser degree, Brown Island. For the record, I have recently taken a large number of photographs of our property and structures which will be recorded with the County Auditor to ensure that an accurate representation is known to the County and available to any other interested party.

My wife and I purchased Lot 17 in 1985 and have been full-time residents since mid-1997. Lot 17 is slightly larger than one-half acre and is pie-shaped (i.e., it narrows from the shoreline frontage to its frontage on the island's narrow gravel road). For the purposes of the Shoreline Master Program, Lot 17 is classed as Rural Residential and as a "non-conforming use", which is the case for many though not all properties on Brown Island. The water frontage along San Juan Channel measures approximately 128 feet, and faces northeast to San Juan Channel. The lot's "pie shape" is relatively common on Brown Island because the island has two "lobes" at its northwest and southeast ends separated by a somewhat narrower isthmus in the middle. The interior areas at both ends of the island inside the gravel road are in a natural forested state and are owned in common by the properties on the island.

The shoreline of Lot 17 is exposed bedrock and very steep. Water depth is between seventy and ninety feet at one hundred to one hundred fifty feet seaward of the lower low water shoreline. Currents immediately in front of Lot 17 are significant (+/- 3 to 4 knots during major tides) with substantial horizontal and vertical mixing evident. Marine flora and fauna along this shoreline appear from the uplands to be typical of such environments. Both the shoreline and slope to the bottom are highly irregular along the frontage. This condition is common on portions of the northeast side of Brown Island, but is not by any means the only shoreline configuration on the island. The island's shorelines are very diverse, ranging from sandy flats, to steep gravel, to exposed bedrock. Some individual properties have a mix of shoreline types.

Our home was originally built in stages from the late 1960s through the late 1970s pursuant to various County permits and in compliance with the County's codes and regulations in effect during that period. The original structure was extensively remodeled on the existing footprint from 1999 through 2001, and an addition was made to the existing shop to provide a home office and storage room, again pursuant to the necessary building permits and in compliance with the codes and regulations in effect at that time. The deck on the water side of the house was expanded in the mid-2000s, pursuant to the appropriate permits and in compliance with the codes in effect at that time. The on-site septic system was replaced with an Advantex wastewater treatment system in the late 2000s pursuant to directives and permits issued by San Juan County. I am attaching an unofficial and unrecorded planimetric rendering of the lot and improvements that I prepared to support the application for modifying our deck approximately six years ago.

In reviewing the various map overlays incorporated into the Shoreline Inventory and Characterization by reference, I find that most are generally representative of Lot 17. However, they are not nearly as accurate in the treatment of Brown Island as a whole. The implication of these extensive deficiencies in

the mapping are that care should be taken in recommending restrictive regulations based on them. They simply aren't sufficiently accurate to support highly restrictive or burdensome regulations. I realize there is a disclaimer on the mapping stating that the depictions are for planning purposes only, but property owners fear (with cause) that once such inaccuracies are entered in the record by reference to these maps in the Shoreline Inventory and Characterization the property owners might be forced in the future to prove that their land is (for example) not a "wetland" by retaining engineers and other professionals to prepare expensive studies. Property owners should not be required to have expensive studies prepared to refute inaccuracies contained in the County's datasets. At least my property, Lot 17, is properly shown as Evergreen Forest in the Land Cover map.

In total, Brown Island is approximately 65 acres and provides the principal physical protection for the inner reaches of Friday Harbor, especially from northerly and easterly winds and associated sea conditions. The shorelines of San Juan Island in Friday Harbor are also shielded by Brown Island from wave action that would otherwise occur due to the wakes of passing vessels in San Juan Channel, etc.

Brown Island was developed in compliance with County subdivision codes in the 1960s, with sixty-one lots along the shoreline ranging from about .5 acre to 1.5 acres in area. The plat included a single lane road down the center of the island (which is gravel), with loops at each end where commonly-owned tracts in the interior of the island were set aside from development. Through acquisitions over the years, several of the lots have been consolidated with adjacent lots or divided between two flanking lots (pursuant to lot line revisions), so the total number of lots has been reduced. There are currently forty-one private residences on Brown Island, a manager/caretaker residence that also encompasses an office, shop, and fire station. In addition, there is a community swimming pool and cabana structure. Brown Island has a community marina with a pier and floats on its southwest shoreline, built in the 1960s pursuant to then-current codes and regulations. Approximately ten lots on the island remain undeveloped, though several of those lots are owned by parties with residences built on adjacent lots.

The Shoreline Inventory and Characterization prepared by the County's consultants is incredibly gross and in some regards it is simply inaccurate in its treatment of the shorelines of Brown Island. For example, several of the Land Cover pixels for Brown Island are coded as Palustrine Emergent Wetland, Palustrine Forested Wetland, Estuarine Aquatic Bed, and Estuarine Emergent Wetland. Another is shown as Grassland. From personal experience and knowledge of the properties involved I can testify that all of these classifications are in error.

Other mapping overlays referenced in the Shoreline Inventory and Characterization are technically correct in some aspects but not sufficiently precise to provide a proper portrayal of the conditions, whether for individual properties or for Brown Island as a whole. For example, the impervious surfaces overlay map prepared as part of this process assigns individual pixels within relatively large areas into four brackets by percentage of coverage. Apparently because of pixel sizing and alignment issues, some (though not all) areas of Brown Island are placed in the 0 (zero) to twenty-five percent bracket while others are depicted as zero imperviousness. The fact is that the <u>total</u> impervious area of Brown Island is

on the order of +/- 120,000 to 140,000 square feet, which represents less than five percent overall imperviousness.

Most of the pixels representing the 0/25 percentage of imperviousness on Brown Island are actually imposed on the "common area" of the island that is densely forested with a few walking trails and is enclosed within the island's narrow gravel road that provides access to the shoreline lots (there are no "inner lots" on Brown Island). The 0/25 percent bracket may be the "correct" one for the pixels including the residential structures on the island, but is clearly not accurate in any sense. The imperviousness of virtually every lot and certainly of the island overall is at the low end of that bracket. Given the importance assigned to imperviousness in the Shoreline Inventory and Characterization report and the discussions that have taken place during the process, I would think a more refined and accurate depiction is warranted – especially since regulatory measures to limit impervious surfaces are a plausible outgrowth of the Shoreline Master Plan update at some point.

The County's map depicting lingcod and greenling presence probability shows a high probability on the southwest shore of Brown Island. That is inaccurate, since most of that shoreline in that area is comprised on sandy flats that ling cod and greenling don't typically occupy. The floodplain and wetlands map shows a low-probability (1%) zone encompassing the entire southwest shore of Brown Island. Even that very low probability is clearly in error, as the banks along that shore are typically 15' to 20' in height and wave building is limited by the fetch of the southwesterly winds from the Shipyard Cove area.

My Assessment Regarding the Inventory/Characterization Process

In summary, in my professional opinion the high-level inventory and characterization of shorelines prepared for San Juan County reveals some of the serious flaws of the current shoreline master program paradigm in Washington State. It is a "poster child" example of good intentions that fail to stand up to practical application. They key problem is that the approach taken demands resources and detailed information on a range of very complicated topics at a level of precision that, in a practical sense, simply cannot be economically afforded.

The approach is fundamentally broken, compromised by the notion that one can attain sound resource management policies based primarily on the volume of material referenced rather than the quality and detail of the analysis. There appears to be a conscious effort to bury the most vital issues under a mountain of paper. More information does not translate to better policies and decisions. That approach just doesn't stand up under careful scrutiny.

Perhaps the most serious failing of the approach employed involves the attempt to overwhelm the process by assembling huge volumes of information, data, and opinions that range from general overviews to incredibly narrow, site-specific studies on highly variable conditions, and describe it as the "best available science". There is at best a tenuous linkage between the vast amount information assembled/referenced in the Shoreline Inventory and Characterization (and the consultant's treatment of it), and the actual conditions on individual properties in the County that will be subject to regulations adopted pursuant to the Shoreline Master Program update.

The huge volume of information has been kludged[1] into a package from which conclusions are drawn and recommendations are made that may in the future be applied down to the scale of individual properties. It simply doesn't work very well that way. The best outcome that can be hoped for in that instance is that some undetermined (but probably small) percentage of properties may be properly characterized. However, the likelihood is that many will not. The likely failure in application to numerous privately-owned shoreline properties is written off as an acceptable consequence of the process. That shouldn't be the goal of the shoreline master program update process and certainly shouldn't be acceptable.

The consultant's approach creates (but doesn't account for) numerous impacts on the lives of many people whose properties are not accurately portrayed in such a process. It is left up to individual property owners to correct the record as it pertains to their properties, or simply accept the inappropriate portrayal and consequences. Most people aren't capable of doing so and don't have the time even if they are. It creates a legacy of self-perpetuating inaccuracies that jeopardize the credibility of the County's program and create unwarranted economic risks for the County and its citizens and businesses that own shoreline properties or may be otherwise impacted by follow-on regulatory measures and decisions.

This process survives because it is easy for those inside the shoreline master program process to write off the negative consequences as long as they impact others and not themselves. Imagine if they were held personally responsible and liable for the economic consequences of errors resulting from the process. The County doesn't bear the majority of blame for this, but it (and particularly its citizens and businesses) will bear the consequences. The San Juan County community cannot sidestep such risks over time.

In my opinion, it has been irresponsible to design a process that presents such a conundrum for those doing the work, but that is what has happened with the San Juan Shoreline Master Program update. The process needed to be inherently much more flexible, less arrogant and dogmatic, and employ more user-friendly procedures. In its present configuration, the entire shoreline management paradigm is adversarial and is heading for a political and legal crisis. It appears to me that the directives and expectations of the Washington State Department of Ecology, which bears essentially none of the consequences, have dictated this severely flawed approach to the County and the County has assented. It is what it is, but that doesn't mean that it shouldn't be criticized. Someone lost the plot here.

Albert Einstein is credited with the quote "Make everything as simple as possible, but not simpler". The County and its consultants seem to have pursued the opposite course, "Make everything as complicated

[1] Most commonly applied as a computer slang term, "kludge" is defined as an inelegant or inefficient approach or system constituted of poorly matched elements or elements originally intended for other applications. It is a pejorative, but certainly seems fitting in this situation. It appears to me that the County's consultants attempted to simply cookbook the San Juan Shoreline Inventory and Characterization based on prior work in other areas of western Washington.

(and undecipherable) as possible, unless you can make it more complicated and convoluted by spending more time and money." What really matters in the management of our shorelines are the conditions on individual properties and the relationship of those circumstances to attainment of the objectives of the Act, yet that relatively simple relationship has been willfully buried under vast piles of often obtuse information that is frequently irrelevant to the actual, on-the-ground (on-the-water?) settings, conditions, and program objectives.

The problems associated with the information overload approach taken by the County's consultants are exacerbated by the gross inaccuracies evident in several of the supporting resources. Much of the "science" is not peer-reviewed. The County's mapping resources incorporated by reference in the Shoreline Inventory and Characterization pose significant potential problems in terms of how properties (and owners) may be affected by the update of the County's Shoreline Master Program, depending to a degree on how "non-conforming uses" are treated generally. While that term has simple descriptive value and specific meaning in the context of various codes, it fails to properly represent the history or legacy of the subject properties.

The vast majority developed shoreline properties in San Juan County are single-family residential. The vast majority were also developed in full compliance with then-current regulations and standards. The County has repeatedly assured shoreline residents that it does not intend to eliminate non-conforming shoreline uses (or at least non-conforming shoreline residential uses). However, past statements by the Washington Department of Ecology are directly in conflict to that assurance. It would be more accurate, and vastly more reassuring to shoreline residents, if the County would simply classify such already-developed residential shoreline properties as "originally-conforming and grandfathered". A major community concern and potential long-term issue would simply go away.

Seemingly exhaustive science in various disciplines is cited in the consultant's Shoreline Inventory and Characterization. However, large portions of that science are neither suitably local nor sufficiently validated by repetitive testing so as to be trustworthy in the San Juan County setting. Some has not been peer reviewed. It certainly isn't sufficient foundation for highly restrictive regulation of various human activities in the shoreline area as proposed in the consultant's recommendations. Some restrictive measures are clearly appropriate in the shoreline margins and marine system, but the consultant's extrapolation of limited (and even questionable) scientific justifications to impose regulation of relatively inconsequential human uses and actions is unsupportable.

Professionals working in marine and other physical sciences have long recognized the variability and inconsistency of conditions over both time and space. Even science that has been carefully validated over time in one setting or area (e.g., a given marine or shoreline location) has been shown to not be transferrable to other settings. Yet the San Juan County Shoreline Inventory and Characterization bootstraps studies done in other areas to the circumstances in San Juan County. It then poses policy and management recommendations to the County predicated on those unproven foundations.

Benthic and water quality studies performed as nearby as Central and Southern Puget Sound are quite likely very limited in their transferability to San Juan County simply because the physical settings and systems are so different in critical dimensions. The San Juan Islands are much less like Puget Sound and much more like the southern portion of the Strait of Georgia, yet the County's consultants and the Department of Ecology staff insist on misappropriating science and data generated in Puget Sound to San Juan County – probably because they are familiar with it from previous experience and it is conveniently available. I suppose Puget Sound science and data may be superior in this case compated to data from the Chesapeake Bay or the Baltic Sea, but that is not a valid reason for treating it as gospel truth in San Juan County.

Furthermore, physical conditions are influenced by the interaction of a variety of factors, some of which may not even be recognized at a given point in time. Virtually all conditions are evolving rather than static. Some evolve relatively slowly (geology), while others are more volatile. Water chemistry in a given location may change very slowly over centuries or decades, or be radically transformed in months or even days, entirely by natural processes. Simple occurrences such as a seasonal "red tide" show how radically marine waters can change in a brief interval. We need to accept that nature itself is not a static condition, and be ready to change our thinking to accept new theses of what is happening and our influence on it.

Man's actions clearly intervene, but we often don't accurately grasp the consequences. Sometimes the results are not what we hoped for. I am very supportive of the Marine Mammal Protection Act of 1972 (MMPA). We sailed throughout the San Juan Islands in the summer of 1972, and recorded the sighting of a solitary seal near Obstruction Pass in the ship's log because it was so exceptional. Now I have the joy of regularly sharing my morning coffee with a group of five to fifteen seals that work the waters of San Juan Channel in front of our house. I refer to them as the wolf pack. However, the proliferation of marine mammals over the past forty years, most notably seals and sea lions, almost surely must have had a significant impact on the fish stocks in local waters during that brief time. Yet I can find no science assessing that consequence of the MMPA. But I can assure you the wolf pack isn't eating popcorn out there.