

**SAN JUAN COUNTY
HEARING EXAMINER**

FINDINGS, CONCLUSIONS AND DECISION

Applicant: John and Barbara Woodman

Agent Francine Shaw
PO Box 2112
Friday Harbor, WA 98250

File No.: PSJ000-12-0015

Request: Shoreline Substantial Development Permit

Parcel No: 462650028

Location: San Juan Island

Summary of Proposal: Bulkhead

Shoreline Designation: Rural Residential

Hearing Date: 3/13/13 and 4/19/13

Application Policies and Regulations: San Juan County Shoreline Master Program

Decision: Approved subject to conditions.

S.J.C. COMMUNITY
MAY 03 2013
DEVELOPMENT & PLANNING

1 **BEFORE THE HEARING EXAMINER FOR THE COUNTY**
2 **OF SAN JUAN**

S.J.C. COMMUNITY

MAY 08 2013

3 Phil Olbrechts, Hearing Examiner

DEVELOPMENT & PLANNING

4 RE: John and Barbara Woodman

5 Shoreline Substantial
6 Development Permit
(PSJ000-12-0015)

**FINDINGS OF FACT, CONCLUSIONS
OF LAW AND FINAL DECISION.**

7 **INTRODUCTION**

8 The applicants have applied for approval of a Shoreline Substantial Development
9 Permit to construct a bulkhead to stabilize an eroding bank. The application is
approved subject to conditions.

10 **TESTIMONY**

11
12 Lee McEnery stated that the application is for a rock bulkhead on lot 28 in Yacht
13 Haven subdivision. The parcel is undeveloped with only some trees and grassy area.
14 Staff has recommended denial of the application for several reasons. First, the lot is
15 undeveloped, thus there are no structures threatened by erosion. Upland drainage has
16 not been investigated as to cause or effect. The applicant did not supply evidence
17 noting effects on adjacent properties. No alternatives to the rock bulkhead were
investigated. Erosion is a normal process on the shoreline, and, on a vacant property,
there is no reason to correct for it. The beach shows no evidence of needing
stabilization, and there is no commerce or industry that needs protection. Armoring
has larger impacts than stabilizing a specific site and does not provide any long-term
benefit.

18 Applicant Testimony

19
20 Stephanie O'Day, representing John and Barbara Woodman, stated that the applicants
have gone through the bulkhead application process previously.

21
22 Bob Anderson, surveyor, testified that, over the course of five years, the property's
23 beach was surveyed for various reasons. The survey found that the ordinary high
24 water mark varies according to the season. In the winter, the beach becomes steeper
and, in the summer, it becomes flatter. A line of logs on the property inhibits water
coming from seaward, thus upland vegetation does grow. In late summer, the log line
can be used as the ordinary high water mark; however, in the winter, wave action
25 clears the beach and destroys the vegetation beyond the log line. According to Mr.
Anderson, the applicants met with Paul Anderson from the Department of Ecology to
discuss the project. Previously, Bob Anderson and Paul Anderson have attended the

1 same training programs administered through the Department of Natural Resources.
2 After discussion with Paul Anderson and Mr. Woodman, the applicants' team chose
3 the most conservative option for delineating the line of ordinary high water. There is
4 no seaward vegetation upland. All of the planned rockery will be at or above the
5 ordinary high water mark. The DOE set the limit of construction at the top of the
6 bank. State law notes that if there is any ambiguity between the line of ordinary high
7 water on the beach, the line is delineated as the mean higher high water mark, at 7.6ft
8 tidal elevation in the Woodman application, which would put it seaward of the log
9 line. However, the applicant has chosen the most conservative option. All of the
10 rockery will be at, or above, the ordinary high water mark. Previously, this
11 delineation was a point of contention for a hearing in front of the Shoreline Hearings
12 Board in regard to a property adjacent to the subject site. Ultimately, the Shoreline
13 Hearings Board agreed with Mr. Anderson's determination for the ordinary high-
14 water mark in the previous case. This hearing's proposal is an extension of the
15 rockery on the Woodman property discussed in the previous Shoreline Hearings
16 Board decision, John and Barbara Woodman v. San Juan County.

17
18 Ms. O'Day noted that the previous decision in *John and Barbara Woodman v. San*
19 *Juan* Shoreline Hearings Board decision had many of the same components as the
20 current application.

21 Under cross examination by Kyle Loring, Mr. Bob Anderson stated that he submitted
22 a diagram of the site to Francine Shaw on December 4, 2012. This new site plan
23 replaced the plan submitted with the October, 2012 application. Mr. Bob Anderson
24 said that Mr. Paul Anderson, Dept. of Ecology, has seen the new site plan and agrees
25 with the placement of the ordinary high water mark. This high water mark is not the
same as the one from the 2008 Woodman Shoreline Hearings Board decision. The
ordinary high water mark for the previous 2008 application was 5-10 ft seaward
(elevated at approximately 8 ft) of the current application's ordinary high water mark.

Francine Shaw, land use planner with law office of Stephanie O'Day, testified that
she prepared the application and coordinated all of the studies. She noted that John
and Barbara Woodman own two lots off of Mosquito Pass on the northwest side of
San Juan Island. They purchased lot 29 in 1993. Lot 29 has a non-conforming
residence, a guest house, and a boat ramp. In 1994, they applied for a shoreline
exemption to add a length of bulkhead to their property to protect their residence.
This exemption was approved by San Juan County. In 2004, they applied for another
shoreline exemption; however, San Juan County found that it was not to protect a
structure, thus the application was not approved. They applied for a shoreline
development permit which was eventually approved. When they applied for a further
95 ft extension due to the undermining of some trees, the County denied their
application. The Woodmans appealed this decision to the Shoreline Hearings Board.
Ms. Shaw added that the Woodmans purchased lot 28 in 2007 with the intent to sell
the property. They established a building site, punched in a driveway, placed utilities,
etc, but the real estate market plummeted. Lots 28 and 29 have no real separation,
and the Woodmans utilize lot 28 as a side-yard. The current application proposes an

1 80ft bulkhead on a 150ft wide lot with 6-8ft height in approximately two tiers. The
2 two levels are necessary to protecting the existing trees. The bulkhead will be built of
3 boulders to match the existing one on lot 29. These boulders will be set in a 1ft
4 trench to prevent the waves from scouring underneath. The bulkhead will be built
5 from the landward side to prevent the crushing of potential surf smelt spawning
6 habitats.

7 In regard to the staff report comments, Ms. Shaw clarified that lot 28 is not for sale.
8 It was for sale in 2009, but it is no longer on the market. Erosion runoff is a non-
9 issue. The staff report does not note the new erosion (on the first tier) occurring on
10 the property which will hurt the already weakened shoreline. In order to establish a
11 stable foundation for the bulkhead, some clearing will have to occur. Originally, the
12 applicant asked to remove 12 trees, but has reconfigured the plan to remove only 4
13 trees. A bulkhead is acceptable in more situations than just protecting a structure.
14 The Shoreline Hearings Board has made it clear that protecting a use also warrants a
15 bulkhead.

16 In regard to the Friends of the San Juans comment letter, Ms. Shaw has several issues
17 with the comments. First, there will be no excavation within the surf smelt habitat.
18 The applicants submitted a report which shows that the spawning habitat of the surf
19 smelt on the beach does not go landward of the mean ordinary high water mark. The
20 bulkhead construction will be 8-10ft from this line. Second, in regard to beach
21 excavation, the previous bulkhead has made no difference to the beach, and none is
22 expected for the extension. The beach soil sediment is gravel-like, and the area is not
23 a feeder bluff. There is no beach starvation. Third, the bulkhead will not be
24 constructed below the ordinary high water mark. As noted above in Mr. Bob
25 Anderson's testimony, there is confusion as to where the mark is; however, the
applicant has taken the most conservative position. Four, the bulkhead will protect
vegetation along the eroding bank. Five, the proposal is consistent with the SMA and
the SMP. The SMA is a set of policies and goals established by the state, and the
county has created their regulations based on the state. This application complies
with the implementation regulations.

Ms. Shaw concluded that site specific condition impact mitigations trump
generalities. This application needs to be evaluated on the specific characteristics of
the property. The applicants have submitted site-specific studies and evaluations of
the existing bulkhead. DNS was issued for the application and has not been
withdrawn. The bulkhead was thoughtfully designed based on expert opinions.

Under cross-examination by Kyle Loring, Ms. Shaw noted that she is familiar with
the Department of Ecology's opinions on the ordinary high water mark. Originally,
the DOE questioned where the ordinary high water mark line was, but, after meeting
with the applicant and surveyors, the DOE helped stake, in the field, the location of
the ordinary high water mark. She noted that Bob Fritzen did recommend denial of
the application, but she does not know if he is aware of new information on the
record.

1 Ms. O'Day noted that the Woodmans have hired two different geologists to review
2 the site. Additionally, Mr. Simpson, an engineer from Coastal Engineering, reviewed
3 the proposal. One of the conditions of the 2008 hearing was that the Woodmans
4 conduct three years of monitoring of the existing bulkhead would have on the beach.
5 Mr. Simpson reviewed this monitoring information in conducting his new report, and
6 the Department of Fisheries agreed that the new project would not cause beach
7 starvation.

8 John Woodman, applicant, stated that he purchased his first lot in 1993. He
9 purchased lot 28 in 2007 when he decided that he wanted more beach access. He and
10 his wife obtained a boundary line adjustment between the two lots to create a beach
11 access point on lot 29. Then, he planned to sell lot 28; however, the real estate
12 market forced him to keep the property. In 2008, during the original hearing, he did
13 not ask for the 80ft extension on lot 28 because he still planned on selling the
14 property. He believes the Hearings Board would have approved it then if he had
15 asked. The property is contiguous. He utilizes lot 28 as a picnic and play yard. On
16 lot 29, he has a home and a guest house. His children and grandchildren visit often
17 and use lot 28 to ride ATVs and play with their dogs. He has no interest in selling
18 now. His properties are within the Yacht Haven neighborhood on the northwest end
19 of San Juan Island. The properties face west, and the water body he looks out at is
20 the Strait of Juan de Fuca. It is all open water with no islands interrupting the view.
21 In regard to storm-events, the Woodmans have experienced 9ft "King" tides which
22 have hit the existing bulkhead. On lot 29, where there is no bulkhead, these tides,
23 with big winds, hit the bank and keeps rolling. The trees have slowly fallen to the
24 beach due to the impacts. Normal tidal action does not impact the bank, but storm
25 tides/wind cause major damage. In October 2010, he had two dinghies destroyed
during a "King" tide. These tides and waves bring in huge logs. He does not know
the rate of erosion for the two lots. Once he loses more trees, the rate will go up. He
does not want his property to erode away. He could potentially lose 10-15ft of bank.
He uses lot 28 often, even though there is no structure on it. The original bulkhead
has helped stop the erosion process on lot 29. This bulkhead has caused no noticeable
changes to the beach.

20 Mr. Levinson testified that he has BS in Civil Engineering with 50 years of
21 experience. He has been a resident of the San Juans since 1988. During this 25 year
22 period, he has performed numerous investigations on the islands. He is a certified
23 geotechnical engineer in the state of California. He has visited the Woodman
24 properties numerous times and assisted on the 2008 application. He helped create the
25 2008 report and design the original bulkhead; however, he did not testify at the
hearing. The shoreline on lot 28 is eroding drastically, based on his findings. There
are two major slides in the area which are evidenced by the arc-shape of the bank.
This landslide is caused by a loss of tow support. In regard to the construction of the
new bulkhead, his firm is recommending putting in a 4-6ft high rockery, using a
single rock. The new rockery will be dug down at least 1ft to firm the ground. None
of this construction will be below the ordinary high water mark. Due to the steepness

1 of the slope, they will create a tiered rockery. This tier-plan was used in the previous
2 bulkhead, as well. The erosion is caused by loss of tow support. The loss of tow
3 support is due to winter storms that cause 2-3ft waves. He did not discuss upland
4 water runoff in his report because it is a non-issue. Slide instability from runoff
5 would result in slope channels, but it would not cause a slide of the magnitude
6 happening on lot 28. The erosion on lot 28 is serious. Lot 28 actually has more
7 severe erosion than lot 29. Soft-shore armoring is not an option. Soft-shore is a form
8 of armoring where logs are placed on the beach to allow accumulation of sediments
9 behind the logs. This type of armoring will not support an unstable slope. Rockeries
10 work, and Mr. Levinson has never seen underpinning of rockeries. The existing
11 bulkheads have not affected the beach. The shoreline looks similar to maps created
12 over 130 years ago. In regard to Mr. Fritzen's letter about a pocket beach and beach
13 berm, Mr. Levinson did notice a small berm when he visited the site on March 12;
14 however, he believes it is just a result of the high-tide depositing gravel. In the next
15 couple of storms, this berm will disappear. A bulkhead is the most reasonable
16 method of stabilizing lot 28's beach. No other non-structural change could save the
17 bluff.

11 Under cross-examination by Kyle Loring, Mr. Levinson stated that he is unaware of
12 the rate of erosion on lot 28's shoreline. The erosion happening on the Woodman
13 property is happening quickly, but he does not know at what rate. He has not
14 compared the current condition with previous overhead aerial photos. In regard to
15 Mr. Simpson's 3-year study, it is possible that changes to a beach due to development
16 could take longer than three years to become apparent. He believes there is a lot of
17 myth about what bulkheads actually do to beaches, and, in his experience, no damage
18 has ever occurred. Mr. Levinson agreed that the applicant and DOE have placed the
19 ordinary high water mark at the tow of the bank. The base of the rockery will go into
20 the tow of the bank to set the rock. Most likely, the base will be 1-2ft below the tow,
21 but he cannot give a definite distance. They will place the rockery as close to the
22 hillside as possible because they have to make cuts to place the rock.

18 Under questioning by the hearing examiner, Mr. Levinson said that the landscaping
19 on lot 28 almost meets the top of the slope. In his opinion, if the bulkhead is not
20 constructed, the lawn will eventually be threatened because of slope instability. He
21 cannot predict when the lawn will be affected because it depends on too many natural
22 occurrences. Originally, there was a loss of tow support for the slope. This allowed
23 for a greater chance of water reaching the bank, which hampers stability even more.
24 The erosion on lot 28 is greater than lot 29. This is possibly due to lot 28 having a
25 slightly steeper slope.

24 Stephen Belluomini stated that he is a coastal geomorphologist and is board certified
25 in engineering geology and coastal morphology, which is a scientific study of land
forms and the process that shape them. He works in coastal zones which are
identified as land areas affected by marine processes. A beach such as the Woodman
beach is the most well known of these environments and can be defined as an
accumulation of sediments moved by currents. He has worked in areas from Alaska

1 to California and has worked for the U.S. Army Corps of Engineers in the Golden
2 Gate Bridge Area. Presently, he is working on the Smith Island Restoration Project.
3 In the state of Washington, he is a licensed engineering geologist. He received a BS
4 in Geology in 1978. Landslides are one of his specialties, and he is maintained as
5 emergency personnel in California for when these disasters occur. Currently, he is a
6 resident of San Juan County. He visited the Woodman site more than a half dozen
7 times in the past several months to make onsite observations. For his report, he was
8 asked to assess the processes that are affecting the beach. He also evaluated whether
9 a bulkhead was necessary. His observations, combined with information in other
10 reports, find that the beach and beach gravels are not related to bank erosion, thus
11 cannot be considered beach material. Since the construction of the bulkhead on lot
12 29, there have been no changes to the following: (1) beach elevation, (2) drift log
13 accumulation, (3) high tide realignment, (4) surface of the beach, and (5) composition
14 of the beach gravels. The beach and bluff soils are different in composition. A rough
15 estimate of the total volume of materials present on Woodman beach is 30,000 cubic
16 yards of material, based on estimations of the bedrock below the beach. Contrary to
17 Mr. Fritzen's letter, the bluff does not provide sediment to the beach. All of the
18 sediment provided to the beach comes from currents. Since 2009, there has been no
19 starvation to the beach. Lot 29's bulkhead preserves habitat and vegetation on the
20 beach because it has kept erosion to a minimum. The bank is not feeding the beach,
21 and the beach has not changed due to the existing bulkhead. Mr. Belluomini
22 questions whether Mr. Fritzen has visited the beach, and, Mr. Belluomini noted, Mr.
23 Fritzen is a planner, not a geomorphologist. The material on Woodman beach is 1-
24 1.5inch gravel pieces which are not conducive to surf smelt. Surf smelt require
25 coarse sand to lay their eggs, and large gravel pieces are too easily moved, exposing
the eggs to the sun and predators. Sand lance fish require even finer sand. Mr.
Belluomini classified the soils both on the beach and bank and found they are not
related. Even if this is a fish spawning beach, this project will not affect habitats
because the bulkhead will not touch the beach. Additionally, the project will not
cause any future changes to the beach. The rate of erosion is not important; instead,
it is important to question how much of the bluff could be removed in one storm
event. One huge storm event could remove 25ft of bank in a single day. There is
progressive slumping on the beach now. Upland drainage is not a problem, and the
county was mistaken in reaching this conclusion. The slope instability is caused by
undercutting from storm surges.

21 Under cross-examination by Kyle Loring, Mr. Belluomini said he took his samples in
22 July, 2012. Any slumping from the bank onto the beach is washed away. The only
23 material that remains on the beach is sediment consistent with the beach makeup
24 derived from surrounding waters. The bank makes an insignificant contribution to
25 the beach. The ocean provides the sediment to the beach. Within Harod Straits there
are dunes on the sea floor. These dunes are made of rock, sand, and silt, and this
material is partially making up the beach sediment. A portion of the fine grain
sediment may be derived from the Frazier Delta. Mr. Belluomini referenced a paper
written by Dr. Johannsen in his report in regard to the potential sources of sediment to
Woodman beach. In his report, Mr. Belluomini stated that a bulk of the sediments on

1 the beach come from Mosquito Pass. He cannot make any absolute statements about
2 these sediments. In his report, he questions how a biologist found two surf smelt eggs
3 on a beach that does not contain the substrate described in the Dept of Fish and
4 Wildlife manuscript on the subject. Mr. Belluomini is not a habitat biologist, but he
5 has thoroughly studied surf smelt for other projects. His work involves a lot of
6 crossover with biology. He has studied surf smelt habitats in San Juan County.
7 Currently, they have not conducted enough studies to develop a rate of erosion based
8 on the progressive slumping on the beach. Mr. Belluomini attempts to look at both
9 rates and catastrophic events, which are both difficult to quantify.

10 Under questioning by the hearing examiner, Mr. Belluomini noted that empirical data
11 suggests there has been about 10ft of erosion in 10 years. This is based on the
12 slumping of a single tree. Conservatively, he would say the erosion will be around
13 30ft in 30 years. Major storms that can have significant impacts occur on a yearly
14 basis. One of these yearly events could cause 25ft of bank erosion. From his
15 experience, once in thirteen years, San Juan has an extreme storm event with very
16 high tides and high winds causing multiple slope problems.

17 Mr. Woodman noted that sloughing on the bank is a significant problem. He believes
18 that at least 6 inches have been lost at the tow of the bank in the past year. The tow
19 used to have vegetation, but photos show that it no longer has this vegetation due to
20 erosion.

21 Ms. Stephanie O'Day commented that the new critical area ordinance regulations are
22 going into effect in May. Additionally, the SMP is being reviewed and changed.
23 However, this application is being reviewed under the existing regulations, the same
24 regulations that were in effect for the previous Woodman applications and hearings.
25 San Juan County Code is ambiguous about erosion affecting the use of a property.
This ambiguity was the core subject of the previous Shoreline Hearings Board
decision, Woodman v. San Juan County. In that case, the arguments are very much
the same as those being made in the current application by county staff, Bob Fritzen,
and Friends of the San Juans. Ms. O'Day submitted a copy of the 2008 decision
which found in favor of the Woodmans. On page 3 of the decision, it notes that the
county originally denied the application because it did not feel landscaping was
protected as a use. The Shoreline Hearings Board disagreed with the county's
findings and decided that the use of an area as a yard is considered an established use.
The use of a property is very important and that is why the Woodmans are attempting
to protect their lots. Moreover, the use of soft-armoring techniques is inappropriate
for this site because of the high-energy waves. Major storms occur routinely in the
winter. The bank along lots 28 and 29 are eroding. In 2009, the Board found that the
bluff is not a feeder bluff and that the erosion is more serious than the county
contended. Lot 28 and 29 are along the same property line and have the same erosion
issues. This project is well-planned and has been reviewed by experts. Finally, no
damage will be done to possible surf smelt habitats because construction will be done
from the top of the bank, above the ordinary high water mark.

Public Testimony

1
2 Kyle Loring, staff attorney for Friends of San Juan, stated that this bulkhead does not
3 comply with the Shoreline Master Program. The previous bulkhead was approved
4 under different circumstances. First, the 2008 application had a different ordinary
5 high water mark which was lower on the beach. This different location put greater
6 distance between where the water reached and the bulkhead. This decreased the
7 likelihood of impacts because the bulkhead is higher above the water. The Shorelines
8 Hearing Board was not looking at the same facts as those presented with the current
9 application. Additionally, the Board found that there was serious, episodic erosion.
10 Episodic erosion is how erosion occurs in San Juan County. As noted in Mr.
11 Levinson's testimony, the shoreline looks similar to maps created 130 years ago,
according to Mr. Loring. No specific rate of erosion has been provided. Based on
testimony given today, it appears the erosion that is occurring is ordinary for San Juan
County, not serious. In the previous decision, the Board did not evaluate the word
"serious." The Board merely evaluated the information given to it at the time. No
information about alternatives to building a bulkhead was given to the Board.
Besides soft-armoring, another alternative approach is upland vegetation planting to
stabilize banks.

12 Mr. Loring testified that Mr. Fritzen's letter was sent after Mr. Anderson's site plan
13 was submitted to the county. The current application does not meet the criteria of the
14 SMP. The applicant has failed to establish that there is serious erosion. There is no
15 threatened established use on the adjacent uplands. The property can still be used for
16 the purposes it was bought. It is 450ft deep so a home can be built further away from
17 the shoreline. Even if a site plan was approved, this cannot be the reasoning behind
18 building a bulkhead. The applicant is not properly defining "established use." Any
19 use of the property, such as having a lawn, is not considered an "established use."
20 Washington courts have not directly established what "use" means in a landuse
21 context; however, it is normally determined that it is referencing the entire use. Thus,
the "established use" for lot 28 is as a residence. The erosion is not preventing lot 28
from being used as a residence. In addition, this bulkhead will result in fewer
shoreline trees. There is no need for this bulkhead. Surf smelt were identified on
the beach, and the habitat is suitable for these fish. Building the bulkhead could have
detrimental effects on these habitats. Up to two thirds of spawning surf smelt occur
above the ordinary high water mark according to recent studies.

22 Staff Rebuttal

23 Lee McEnery noted that lot 28 may appear to be part of a yard, but that does not
24 make it a yard. It is a separate piece of property. In regard to tree removal, she stated
25 that, logically, fewer trees could have been removed so the county required the
applicant to reevaluate their design. The 2008 Shoreline Hearings Board decision
was for a different piece of property

Applicant Rebuttal

1 Francine Shaw stated that legally these are two properties. However, it is a unified
2 development, and the properties function as one. The ordinary high water mark for
3 the 2008 bulkhead was different from the current application's mark. This change
4 occurred because the applicant took a more conservative stance. The existing
5 bulkhead is on the same contour line as the proposed bulkhead. There have been no
adverse impacts to the beach profile due to the existing bulkhead. Rate of erosion is
not a code criterion so it is irrelevant. The Department of Ecology members do not
have the same education as the experts retained by the applicant.

6 Stephanie O'Day noted that the Woodmans want to protect their waterfront property.
7 Yard and landscaping is considered an "established use."

8 Mr. Loring clarified that the Shoreline Hearings Board believed the ordinary high
9 water mark was further seaward when they approved the application in 2008. The
10 Board believed the bulkhead would be placed higher, further away from the ordinary
high water mark.

11 Stephen Belluomini stated that according to the Army Corps of Engineer the mean
12 high water mark is equivalent to the ordinary high water mark. The mean high water
13 mark at Woodman beach is 7.6ft, and the existing bulkhead tows at 10ft. The new
14 bulkhead will be uphill of the tow of the existing bank and will not disrupt the beach.
The ordinary high water mark is subjective, and the mean high water mark is
objective.

15 Hearing continued on April 19, 2013

16 Under examination by Kyle Loring, Ms. Tina Whitman stated she works for Friends
17 of the San Juans as the Science Director. She does shoreline research for protection
18 and restoration projects. Ms. Whitman has held the position since 2002. She
19 received a Masters of Science from the University of Oregon with a focus on
20 conservation biology. Her undergraduate degree is from University of Colorado. Her
21 CV was submitted as exhibit 22. Referencing a map provided in exhibit 15b, Ms.
22 Whitman identified forage fish habitats along the shoreline of the Whitman parcels
23 (highlighted in green on the map). She performed a study from 2001-2002 which
involved over 1200 field surveys. The goal of the project was to identify surf smelt
and sand lance spawning areas around the San Juan Islands. The resulting map is the
new sites that the project found, along with the old sites found by the Department of
Fish and Wildlife in the 1980s. The suitable habitats are documented in light blue,
and areas of documented habitats are presented as pink lines.

24 Under cross-examination by Stephanie O'Day, Ms. Whitman noted that she
25 personally completed the survey for the Woodman beach area. She found fish eggs at
the site. She collected soil from the site which was analyzed in a lab. The proof of
these eggs can be found in the database used for the project. Every positive sample,
along with one third of the negative samples, was sent to the Department of Fish and

1 Wildlife for quality control. She does not recall how many eggs she found at the site.
2 She received permission from the previous land owner to conduct the survey. The
3 map found in exhibit 15 shows that a portion of the Woodman property is a habitat,
4 and a portion has the potential to become a habitat. She used state protocols for
5 determining these delineations. Scanned copy of the field sheets can be found on the
6 WDFW database online. Ms. Whitman used the database to create the map found in
7 exhibit 15b. The pink area of exhibit 15b is where the eggs were originally found.
8 This pink area is on lot 29, where the existing bulkhead is located. It is highly likely
9 that there are habitats on lot 28 as well because it is one beach substrate. There is
10 sand and gravel habitat across both lot 28 and 29's beach areas. When she conducted
11 the survey in 2002, the beach was suitable for surf smelt habitats.

12 Under redirect by Kyle Loring, Ms. Whitman clarified that the pink line in exhibit
13 15b is the physical spot where the eggs were found during the 2002 survey. In 2002,
14 Friends of the San Juans' mapping protocol put a distance of 200ft from each
15 direction of where eggs were located. Current standards for the Department of Fish
16 and Wildlife apply a 500ft mapping protocol. In Ms. Whitman's opinion, it is likely
17 that the southern portion of the mapped area in exhibit 15b is a spawning habitat. She
18 has performed several hundred surf smelt spawning surveys. She believes surf smelt
19 could be spawning along the entire pocket beach. Surf smelt spawn from 4-10ft
20 elevation in San Juan County. The data from 2011 suggested that two thirds of the
21 habitats were above the mean high water mark with one third below. There is
22 approximately 11 miles of documented surf smelt spawning habitats in San Juan.
23 Currently, there is 20 miles of shoreline armoring in sand and gravel habitat, with two
24 miles coinciding with documented surf smelt spawning habitats. In regard to eel
25 grass, there is mapped eel grass along the Woodman property shore. There is also a
herring spawning ground along the property line. Recently, Ms. Whitman
participated in a restoration project which prioritized shorelines in the county for
Chinook salmon based on rearing forage fish and forage fish spawning areas. This
research is documented in exhibit 15c. The map notes that northwest San Juan Island,
the location of the Woodman property, is one of the priority regions for juvenile
salmon. Exhibit 15 notes the priority protection areas for Chinook salmon in relation
to the proposed new bulkhead. The area where the new bulkhead would be placed is
a priority protection area for salmon because of its location in the northwest region of
the island. Additionally, it is a pocket beach which is a priority shore-type. The map
ranking is based on juvenile Chinook, rearing forage fish, and forage fish spawning.
Exhibit 15d describes the Woodman shoreline as a pocket beach. A pocket beach is a
type of shoreline with sand and gravel that is constrained by bedrock on either side.
Pocket beaches are very common in San Juan County. These beaches are important
for juvenile Chinook and rearing forage fish. Juvenile Chinook are listed under the
endangered species list.

Under redirect by Kyle Loring, Ms. Whitman stated that, in regard to bulkhead
impacts, she anticipates direct burial of upper beach habitat and changes in the wave
energy. The wave energy could be pushed downward and ruin habitats in other areas.
Additionally, there is often loss of marine vegetation associated with bulkhead

1 construction. Available data suggests that certain insects that live in this marine
2 vegetation are food sources for the Chinook salmon. The loss of this vegetation is a
3 loss of a food source for the salmon. The bulkhead may cause sea levels to rise and
4 result in marine habitats shifting, or "the coastal squeeze." Riparian vegetation,
5 vegetation on the upland side, can also be destroyed. In regard to exhibit 15f, Ms.
6 Whitman noted that the photo shows the proposed bulkhead location. She visited the
7 site in 2002 as part of a surf smelt spawning survey project. In her letter, she cited
8 overhanging vegetation, micro-climate, and riparian vegetation as important factors in
9 shoreline ecosystems. She cited a study in Snohomish County by Casey Rice which
10 found that the egg mortality at armored sites was reduced up to 50 percent. This
11 study was conducted in the same climate area as the Woodman beach. Based on past
12 studies and her own knowledge, if the vegetation on the right side of exhibit 15f
13 matched the left side, surf smelt spawning habitats could be negatively affected.

9 Under cross-examination by Stephanie O'Day, Ms. Whitman stated her education
10 ended with her Masters in 1999. Her Masters of Science was interdisciplinary and
11 included biology, conservation biology, and landscape ecology. She does not have an
12 engineering degree and is not a geologist. She has taken ordinary high water training
13 from Coastal Ecology with Brian Williams. In the past, she has worked closely with
14 project engineers and coastal geologists on restoration projects. There are several
15 major concerns with bulkhead construction: (1) burial of spawning habitats, (2)
16 reduced nourishment of spawning areas by preventing erosion of feeder bluffs or
17 associated banks, and (3) increased erosion of substrates by wave action below the
18 bulkhead. Number three is a fairly common based on Ms. Whitman's past
19 experiences. The last time she visited the Woodman property was 2002. She has
20 not visited since the rockery was constructed on lot 29 in 2009. She has seen aerial
21 photos taken by the Department of Ecology and the other application materials. The
22 entire beach is suitable for surf smelt, and the WFW maps it as a potential spawning
23 area. She personally found eggs at the upper site in 2002. The standard
24 understanding is that surf smelt spawn in the upper one third inner tidal zone. Dan
25 Penttila, fish biologist, trained Ms. Whitman. Mr. Penttila has published recent
reports on surf smelt spawning patterns, including a 2011 project on surf smelt tidal
range with Friends of the San Juans, according to Ms. Whitman. This study was an
attempt to better understand vertical distribution of eggs across the beach in San Juan
County. Ms. Whitman cited this report in the letter submitted to the hearing
examiner. The report noted that surf smelt spawn in finer grain sandy substrate. This
is interpreted as being finer than gravel as the range is from sand to pea gravel. Mr.
Penttila's 2011 study was done in San Juan and does note that a beach of coarse
matter is of "low attractiveness" to surf smelt. In Ms. Whitman's field experience,
she has seen surf smelt spawning habits in all types of sediment. She noted that the
highest density of eggs is in the smaller bands of substrate. This substrate would be
around mean high water, and eggs can be found up to the tow of a driftwood line.
Generally, eggs would not be found above the tow of the driftwood line. In regard to
exhibit 23, page six notes that 28 percent of the eggs are found above 8ft. Some eggs
end up above the driftwood line because of storm-events, but they are not generally
deposited above the driftwood line. In regard to the 1992 Penttila photograph

1 provided by Ms. O'Day, Ms. Whitman agreed that the beach-type noted is a typical
2 spawning area. The photograph depicts appropriate substrates for fish spawning.
3 Recent studies show that the understanding of where fish spawn on the beach is
4 evolving.

5 Under cross-examination by Stephanie O'Day, Ms. Whitman testified that she is
6 aware of the Shoreline Hearings Board previous Woodman decision in May, 2009.
7 She has not read the decision recently. She concurs that the mean high water mark is
8 in the range of 7.6ft. She has reviewed the Woodman site plan drafted by Bob
9 Anderson for the new section of rockery. She understands that, based on the site
10 plan, the rockery will only be built on the 10ft line at the tow of the bank. She is not
11 aware of the exact point of the driftwood line in relation to the tow of the bank. Surf
12 smelt do not spawn landward of the driftwood line. The driftwood line noted on the
13 site plan appears low to Ms. Whitman. The typical driftwood line is normally higher.
14 Surf smelt come in with high tides and find suitable habitats. They will spawn on the
15 driftwood if the tide is higher than that line. If the bulkhead is installed as drawn on
16 the site plan and no construction occurs below this line, it is likely the rockery will be
17 above the spawning line. Ms. Whitman questions how such a wide bulkhead will be
18 installed in the planned area without crossing the 10ft line. Additionally, the southern
19 and northern sections of the tow of the bank cross the 9ft line which is potentially in
20 the range of surf smelt spawning habitats based on previous forage fish surveys. It is
21 unclear if there is a solid, permanent driftwood line, thus spawning habitats could
22 move beyond the line that is denoted on the site plan. The driftwood line could shift
23 during high energy periods which typically occur in the winter. Ms. Whitman has not
24 visited the Woodman site in the winter. Surf smelt spawn year-round in San Juan
25 County. The driftwood line is potentially not a permanent, constant line.

16 In regard to armoring, Ms. Whitman stated that any installation of a hard structure
17 will cause some permanent impacts. There is not a large amount of data on the
18 impacts of a concrete structure versus soft-armoring techniques. She is unaware of
19 any concrete bulkheads being constructed in San Juan County over the past ten years.
20 The factors that contribute to bulkhead impacts are the tidal elevation and hard vs.
21 soft material. If a concrete bulkhead was installed instead of a rockery, it would have
22 similar impacts because it would be in the same location. Most rockery bulkheads are
23 engineered with geofabric, thus they do not have space for vegetation. She does not
24 claim all hard armoring has the same negative impacts. The degree of the impacts
25 varies from case to case. She has reviewed the 3-year monitoring plan for the
previous bulkhead construction on lot 29. She believes a 3-year timeframe is very
short in terms of coastal geology in the San Juans. The impacts from the previous
bulkhead, including vegetation removal, may be very similar to the new proposal in
terms of this time frame. Ms. Whitman was not present at the first hearing on March
13, 2013 and cannot comment on what was said by other experts. Friends of the San
Juans is concerned with habitat issues that develop from the construction of
bulkheads around the islands. In many other counties, there has been a shift away
from hard armoring due to the increased knowledge about forage fish spawning
grounds and other impacts. Friends did not help draft the new COA guidelines for

1 bulkheads, but they did submit comments on the topic. She is not familiar with the
2 final draft of the new code regulations. Ms. Whitman has no expertise in bank
3 erosion. She has not studied the Woodman site in regard to erosion. She concurs that
4 the Woodman site is not a feeder bluff. She cannot provide a specific amount of
5 vegetation that will be removed because the application only approximates. She has
6 not completed any site-specific review of her own, but she has reviewed the
7 application material. Her comments reflect her scientific understanding of important,
8 potential impacts. These are general understandings applied to the resources
9 available about the specific site. She has no knowledge of the ordinary high water
10 mark placement outside of the information provided in the application. The record
11 suggested that there were different opinions about the location of the ordinary high
12 water mark, but she has not gone to the site to determine her own mark. The project
13 will affect eel grass because of the long-term impact of altered wave energies. It is
14 assumed that, when a hard structure is built on shorelines, wave energy will be altered
15 and sediment will be lost. If there are no changes to the substrate, the eel grass will
16 not be impacted. In regard to juvenile Chinook salmon, negative impacts to micro-
17 climate and forage fish spawning habitats will be detrimental to this endangered
18 species. In regard to the riparian vegetation, Ms. Whitman does not know what size
19 trees will be removed to place the rockery because the application does not provide
20 this information.

21 Under redirect Kyle Loring, Ms. Whitman reiterated that she does not know the size
22 of the trees that will be removed because the information is not given in the
23 application. In regard to the 2011 Penttila study, she understood the study as finding
24 that two thirds of surf smelt eggs are placed above the ordinary high water mark.

25 EXHIBITS

All fourteen exhibits identified in the exhibit list attached to the 2/21/13 staff report
were admitted into the record at the hearing. In addition, the following exhibits were
also admitted during the hearing:

Exhibit 15	Friends of the San Juan exhibit March 6, 2013
Exhibit 16	Motion to strike Friends of San Juan exhibit
Exhibit 17	Friends of San Juan response to motion to strike
Exhibit 18	3/12/13 Hearing Examiner ruling on Motion to Strike
Exhibit 19	No exhibit entered
Exhibit 20	Mr. Levinson's CV
Exhibit 21	Stephen Belluomini CV
Exhibit 22	Tina Whitman CV
Exhibit 23	Penttila 2011 Study
Exhibit 24	1992 Penttila photograph of a rocky beach
Exhibit 25	Tina Whitman letter dated 3/6/13

FINDINGS OF FACT

1 Procedural:

- 2 1. Applicant. The applicants are John and Barbara Woodman.
- 3 2. Hearing. The Hearing Examiner conducted a hearing on the subject
- 4 application on 3/13/13 and 4/19/13. A site visit was also conducted on 4/19/13.

5 Substantive:

6 3. Site and Proposal Description. This proposed bulkhead is an 80 foot extension

7 of an existing rock bulkhead located on a shoreline lot adjoining the south property

8 line of 1705 Yacht Haven Road. The extension constitutes the applicants' fourth

9 successive bulkhead built at 1705 Yacht Haven Road and the subject adjoining lot.

10 The purpose of the proposed bulkhead is to prevent further erosion of the bank and

upland trees, vegetation and lawn area. Four trees would be removed in order to

protect the remaining trees and vegetation at the top of the bluff.

11 The rockery will be six to eight feet in height with some portions built in two tiers. It

12 will be constructed of various rocks increasing in size from top to bottom. Any space

13 that exists between the bulkhead and will be filled with up to 71 cubic yards of clean

14 gravel¹. A trench will be dug above the ordinary high water mark ("OHWM") within

15 which the bulkhead will be placed. The shoreline bluff at the project site is about 20

feet in height and there are more than twelve trees located across the slopes of the

bluff. Above the bluff are trees and shrubs and then lawn. According to the staff

report, the bluff does not qualify as a feeder or marine bluff.

16 The proposed bulkhead will be an extension of the Woodman's existing natural rock

17 bulkhead that was constructed to protect their single-family residence, guest house

18 and associated yard on Lot 29 of the Yacht Haven subdivision. It will be constructed

19 to match the existing bulkhead in height and materials. The lot housing the project

20 site is Lot 28 of the Yacht Haven subdivision. Lot 28 currently serves as an extension

of the lawns and yard space of Lot 29, but is otherwise vacant. The Lot 28 yard space

is indistinguishable from that on Lot 29 and the Woodmans use it as part of the yard

space for their home.

21

22

23 ¹ The fill information was taken from the application, Ex. 1. The same amount of fill was identified in

24 the habitat management plan prepared for the 2009 bulkhead extension, See Ex. 9. It appears that this

25 fill amount may have been erroneously taken from the Ex. 9 habitat management plan, given that the

amount of fill would appear to be negligible given that the bulkhead is proposed to be built landward

of the OHWM, which is the toe of the shoreline bluff. The correct amount of fill is not significant to

this application. However, this application is only approved upon the understanding that the bulkhead

will be constructed landward of the OHWM, which is the toe of the shoreline bluff.

1 4. Necessity of Bulkhead to Protect Against Serious Erosion. The proposed
2 bulkhead is necessary to protect upland vegetation and residential yard space from
3 serious erosion.

4 Bob Levinson, a professional geological engineer, prepared a geotechnical evaluation
5 of the site, Ex. 1. Mr. Levinson concluded that a rock bulkhead was necessary to
6 stabilize the site from continuing erosion. He found that two landslides 30 feet in
7 width had already occurred at the site. He found that recent erosion had occurred at
8 the site, undermining several trees and that several trees were leaning shoreward. Mr.
9 Levinson noted that soft armoring was not appropriate for the site due to the presence
10 of high energy, high impact waves.

11 In the Woodman decision the SHB concluded that the Woodman shoreline has been
12 subject to serious erosion over the years as evidenced by historical slope failures and
13 the high wave energy to which the shoreline is subject. The SHB concluded that
14 additional slope failures could happen upon the occurrence of any storm event and
15 take out large areas of vegetation all at once. For these reasons, the SHB concluded
16 that the bulkhead of the *Woodman* case was necessary to protect vegetation on Lot
17 29. The site of the proposed bulkhead is subject to the same wave energy and is also
18 subject to similar past incidents of slope failure and erosion. For these reasons, the
19 proposed dock is necessary to protect the vegetation on Lot 29.

20 Friends argues that the applicants have failed to demonstrate any serious erosion
21 problem because they are not able to formulate any concrete erosion rate. The SHB
22 in Woodman found no such erosion rate necessary, since erosion at the Woodman
23 shoreline is caused by storm events and not regular wave action. At FOF No. 10 in
24 the Woodman decision the SHB noted that "*at some time in the future, the trees at the
25 top of the bank will fall, some portion of the bank will fail, and several feet of the
bank will be lost.*" The SHB also noted that even if the overall erosion rate is slow, it
would still be serious since "*the potential for a sudden bank failure caused by high
energy waves is high*".

26 The staff report asserts that the applicants have not proven a bulkhead is necessary
27 because the erosion at the project site could have been caused by stormwater drainage
28 across the face of the bluff. The only expert testimony on storm drainage was
29 provided at hearing by Stephen Belluomini, a coastal geomorphologist, and he
30 concluded that upland drainage does not contribute to the erosion of the subject slope.
31 Given his testimony, the preponderance of evidence is that upland drainage is not a
32 cause of the erosion on Lot 28.

33 5. Adverse Impacts of Proposed Use. There are no significant adverse
34 impacts associated with the proposal. Friends of the San Juans have submitted an
35 excellent memo detailing the adverse impacts typically associated with bulkheads.
See Ex. 2. Those impacts are addressed separately below:

1 A. Erosion. The bulkhead will not create any adverse erosion impacts to other
2 shoreline properties or the Woodman beach itself. This finding is compelled
3 by a prior Shoreline Hearings Board (“SHB”) decision that addressed the
4 same erosion issues for another portion of the existing Woodman bulkhead.
Despite the detailed analysis provided by Friends on erosion impacts, they did
not present any new evidence that would distinguish the findings of the SHB
decision from this application.

5 One of the greatest adverse impacts associated with bulkheads is erosion.
6 Bulkheads deflect wave energy, eroding adjoining fish habitat as well as
7 adjoining properties that are not armored. The impact upon unprotected
8 properties was addressed in *Woodman v. San Juan County*, SHB No. 08-032.
9 The *Woodman* case involved one of the prior bulkhead extensions on Lot 29,
10 so many of the findings and conclusions are germane to this application². In
11 FOF No. 11 of the *Woodman* decision the SHB noted that the Woodman
12 beach is considered a pocket beach that is confined on both ends by natural
13 rock outcroppings. The SHB determined that these rock outcroppings
14 confines wave energy created by the existing bulkhead and limits its reflection
down the coastline, such that “*an extension on the Woodman beach is not
likely to cause erosion further down the coastline*”³. The proposed bulkhead
extension is within the same pocket beach and there is no evidence in the
record that conflicts with the SHB’s findings regarding the impact of the rock
outcroppings. Consequently, it must be determined that the proposed
extension is unlikely to cause erosion further down the coastline.

15 The *Woodman* decision is equally persuasive on impacts to fish habitat. As
16 noted in the Friends briefing, the deflected energy of bulkheads can adversely
17 affect fish spawning areas and fish habitat by causing the removal of
18 sediments used by those spawning areas and habitat. Bulkheads also impound
19 sediments that would otherwise erode and contribute to spawning and habitat
areas. In FOF No. 12 of the *Woodman* decision the SHB determined that the
bulkhead extension of that decision would not adversely affect the Woodman

20 ² In its briefing Friends argues that the *Woodman* case is distinguishable because the bulkhead of that
21 case was built several feet landward of the OHWM whereas in this application Friends contends that
22 the bulkhead will be built seaward of the OHWM. As discussed in the FOF, Friends is incorrect in its
23 assertion that the bulkhead will be built seaward of the OHWM. The bulkhead will be built on the
24 landward side of the OHWM similar to the currently existing bulkhead. However, it is acknowledged
that in the *Woodman* case the SHB considered the OHWM to be located further seaward than the
OHWM set for this application, such that the SHB believed the bulkhead it was reviewing to be several
feet landward from the OHWM while in this case it is adjacent to it. To the extent that the Woodman
findings have been applied to this case, the difference in the location of the OHWM was of no
consequence.

25 ³ COL No. 13 of *Woodman* decision also concluded that the proposal wouldn’t affect adjoining
properties based upon “end” effect of bulkheads because the bulkhead is removed from most wave
action. The same reasoning would apply to the bulkhead proposed for this application.

1 beach itself or natural coastal processes in the vicinity. This determination
2 was based upon studies by the applicant showing that there was no difference
3 in beach substrate between the unarmored portion of the Woodman beach and
4 the bulkhead approved in 2004.

5 The applicants have provided a similar substrate study, Ex. 9, showing no
6 difference in substrate between the bulkhead constructed in 2009 and the
7 unarmored beach of Lot 28. Photographs of the beach area between 2009 and
8 2013 showed no decrease in beach width or volume of sediment, or change in
9 the beach composition. Friends argues in its briefing that the three year span
10 of the study is not a sufficiently long period of time to assess substrate
11 impacts. The period of time used for the Ex. 9 study was approximately the
12 same as that used for the study in the *Woodman* SHB decision. Friends has
13 not provided any compelling reason or scientific evidence to show why the
14 time period is not sufficiently long. Without any new evidence on this issue,
15 the determination of the SHB in the *Woodman* case equally applies to this
16 application and it must be determined that the proposal will not create any
17 erosion of the Woodman beach or in the sediment supporting its fish spawning
18 areas and fish habitat.

19 B. Fish Spawning Areas. A primary concern raised in the Friends briefing is that
20 the bulkhead will adversely affect fish spawning areas. As determined in FOF
21 No. 5(A), above, the proposal will not adversely affect fish spawning areas
22 through erosion. However, Friends also argues that fish spawning areas will
23 be adversely affected because the bulkhead will be constructed on top of fish
24 spawning areas. It is determined that the bulkhead will be built landward of
25 the fish spawning areas so no adverse impacts are anticipated.

As noted in the Habitat Management Plan for the 2008 bulkhead application,
Ex. 9, the beaches along the Woodman property have surf smelt and Pacific
herring areas documented by Friends of the San Juans and the Washington
Department of Fish and Wildlife. At hearing, Tina Whitman, Science
Director, testified that she had observed surf smelt eggs along the Woodman
beach. The applicants argue that the type of substrate found at the Woodman
beach is not suitable for fish spawning, but Ms. Whitman's observations of
fish eggs and her expertise on fish spawning is more compelling.
Consequently, it is determined that more likely than not the Woodman
beaches, including those on Lot 28, are fish spawning areas.

Although the Woodman beach has fish spawning areas, the bulkhead will not
be built over those areas. Friends begins its argument on this issue with the
erroneous understanding⁴ that the bulkhead will be constructed waterward of

⁴ It is acknowledged that Friends was basing its understanding on the location of the bulkhead upon comments made by Bob Fritzen, which were in turn based upon an earlier draft of the final site plan that did in fact show the bulkhead waterward of the ordinary high water mark.

1 the OHWM. The proposal is to build landward of the ordinary high water
2 mark, as clearly shown on the 12/04/12 site plan, the proposed bulkhead will
3 be built landward of the OHWM, which in turn is located eight to ten feet
4 landward of the MHHW. In its briefing Friends cites to a local San Juan
5 County study that found that approximately two thirds of surf smelt spawning
6 eggs incubate at or above MHHW. Since the proposed bulkhead is located
7 several feet landward of the MHHW, this statistic provides little illumination
8 on whether or not the bulkhead will actually be constructed over fish
9 spawning areas. Perhaps more instructive is that the study also found that the
majority of eggs were found at tidal elevations of +7 and +8. The tidal
elevation of the proposed bulkhead starts at +10. Further, Ms. Whitman
conceded during cross-examination that fish eggs are rarely found landward of
the driftwood line. The proposed bulkhead will be located landward of the
driftwood line. The evidence in the record is fairly overwhelming that the
bulkhead will not be built over any fish eggs.

10 In its briefing Friends also argues that the bulkhead will serve to impound
11 rising sea levels resulting from climate change, resulting in the permanent
12 submersion of beach areas used for fish spawning. The only evidence
13 presented on this issue is the theory that sea levels will rise as a result of
14 climate change. Linking these rising sea levels to adverse fish spawning
15 impacts is too speculative to deny the proposal. The shoreline bank itself may
16 serve to impound rising sea levels and create the same harm as a bulkhead.
17 Conversely, if rising sea levels would wear away the bank and create
18 additional beach, it is just as possible that extensive new beaches would be
19 created at other shorelines due to rising sea levels, creating new spawning
20 habitat and eliminating the current critical need to protect this type of habitat.
21 Absent any studies that specifically link the loss of spawning habitat to rising
22 sea levels, the record does not contain sufficient evidence to warrant any
23 adverse findings to the proposal.

18 Friends also points to studies that show that smelt egg mortality along
19 armored shorelines was twice that than along unarmored shorelines. The
20 factors cited in the study as potentially contributing to this mortality included
21 significantly higher daily mean light intensity, air temperature, substrate
22 temperature and significantly lower mean relative humidity. The applicants
23 did not address these studies other than to point out that many of the Friends
24 arguments are based upon studies that apply to bulkheads in general and do
25 not take the specific characteristics of the proposal into consideration. While
this may be the case, the applicants should be able to explain why the studies
do not apply to their proposal. The applicants have provided substantial
information on why their bulkhead will not displace wave energy as found in
many bulkhead studies, but have provided no evidence as to why the proposed
bulkhead will not affect the light intensity, temperature or humidity of the fish
spawning habitat. The conditions of approval will require the retention and
introduction of native plant species along the top of the bulkhead to provide

1 shading to mitigate against the temperature/light/humidity impacts of
2 bulkhead construction. The retention/introduction of shade should at least
3 partially offset the temperature/light/humidity impacts to smelt eggs, since p.
4 6 of the Whitman letter (att. A to Ex. 15) links the loss of shade protection to
5 increased smelt egg mortality.

6 Of course, although the bulkhead will be built into the shoreline bluff outside
7 of fish spawning areas, the construction of the bulkhead could very well
8 disturb these fish spawning areas. The conditions of approval will require that
9 no construction activities may disturb fish spawning areas.

10 C. Loss of Vegetation. As conditioned, the proposal should not result in any
11 significant loss of native shoreline vegetation.

12 The staff report asserts that the applicants cannot claim that a bulkhead is
13 necessary to remove vegetation when part of their proposal entails the
14 removal of four trees and other vegetation to build the bulkhead. In its
15 briefing Friends also points out that the current Woodman bulkheads are
16 largely devoid of vegetation. Friends notes that overhanging vegetation
17 contributes to shoreline ecological function by providing shade, insects and
18 plant matter to fish and aquatic habitat.

19 The staff's argument that the bulkhead cannot protect vegetation if vegetation
20 must be removed to build is not persuasive. Four trees will be removed for
21 the bulkhead, but there are far more trees located upland of the proposed
22 bulkhead site. Under the SHBs reasoning in the *Woodman* decision, all of
23 these trees will potentially be lost due to the "serious" erosion at the site as
24 discussed in FOF No. 4 herein.

25 The Friends argument that native vegetation is lost upon the construction of
bulkheads is a concern. The site visit and photographs of the existing
Woodman bulkhead confirm that other than trees, no native vegetation
remains above the bulkhead. The areas above the bulkheads are completely
landscaped with lawn and flowers. The conditions of approval will require
the retention and restoration of native vegetation at the bulkhead site, to the
extent necessary to maintain ecological function while also not interfering
with the structural integrity of the bulkhead.

D. Eelgrass. The proposal will not adversely affect eelgrass. In its briefing,
Friends argues that bulkheads adversely affect eelgrass by depriving them of
new sediment from the beach necessary to take root. As noted previously,
however, the existing Woodman bulkhead has been demonstrated to not
change the composition of beach sediment. Consequently, no adverse impacts
to eelgrass are anticipated

1 E. Chinook Salmon. As mitigated, the proposal should not adversely affect
2 threatened Puget Sound Chinook. In its briefing, Friends also cites to studies
3 that show that bulkheads reduce the functions of beaches to provide prey to
4 threatened Puget Sound Chinook. However, these studies do not establish any
increase in fish mortality. Further, the mitigation requiring the
retention/introduction of shading vegetation should mitigate against these
impacts.

5 6. Soft Armoring. There is no reasonable alternative shoreline stabilization
6 available to the property. In the Woodman case, the SHB concluded that soft
7 armoring techniques such as installing anchored large woody debris is not appropriate
8 for the site, primarily because it would not provide adequate protection for such a high
9 energy area. COL No. 9 of the *Woodman* decision concluded that the rock bulkhead
10 proposed at the time “*would be the most reasonable method to stabilize the bank.*”
The proposed bulkhead of this application is of the same design and subject to the
same high wave energy as the bulkhead in the *Woodman* case. The same conclusion
applies.

11 CONCLUSIONS OF LAW

12 Procedural:

13 1. Authority of Hearing Examiner. The Hearing Examiner, after conducting
14 an open-record public hearing, is authorized to issue a final decision on shoreline
substantial development permits. SJCC18.80.110(E).

15 Substantive:

16 2. Shoreline Designation. The subject property is designated as Rural
17 Residential.

18 3. Zoning Designation. The subject property is designated as Rural
19 Residential.

20 4. Permit Review Criteria. SJCC 18.50.210 requires a shoreline substantial
21 development permit for development of bulkheads. 18.80.110(H) establishes the
22 criteria for approval of shoreline substantial development permits. The criteria
23 include the policies of the Shoreline Management Act (Chapter 90.58 RCW), the
24 policies and use regulations of the San Juan County Shoreline Master Program, and
the requirements of the San Juan Municipal Code and Comprehensive Plan. The
applicable policies and regulations are quoted in italics below and applied through
conclusions of law.

25 RCW 90.58.020 Use Preferences

*This policy (Shoreline Management Act policy) is designed to insure the development
of these shorelines (of the state) in a manner which, while allowing for limited*

1 *reduction of rights of the public in the navigable waters, will promote and enhance*
2 *the public interest. This policy contemplates protecting against adverse effects to the*
3 *public health, the land and its vegetation and wildlife, and the waters of the state and*
their aquatic life, while protecting generally public rights of navigation and corollary
rights incidental thereto.

4 5. The project will not interfere with public access to the shoreline or
5 navigation and is not associated with any significant adverse impacts. The policy is
6 met.

6 **RCW 90.58.020(1)⁵**

7 *Recognize and protect the statewide interest over local interest;*

8 6. The project will protect upland uses while not creating any significant
9 damage to the shoreline. The statewide interest is adequately protected.

10 **RCW 90.58.020(2)**

11 *Preserve the natural character of the shoreline;*

12 7. Natural character is preserved to the extent possible by the use of rock
13 instead of concrete. Beyond this, softer armoring will not provide sufficient
14 protection to this shoreline area due to the wave dynamics of the site as determined in
15 Finding of Fact No. 6.

16 **RCW 90.58.020(3)**

17 *Result in long term over short term benefit;*

18 8. The project provides for preservation of the shoreline without any
19 corresponding adverse impacts to environmental resources. The proposal results in
20 both long term and short term benefit.

21 **RCW 90.58.020(4)**

22 *Protect the resources and ecology of the shoreline;*

23 9. As determined in Finding of Fact No. 5 there are no significant adverse
24 impacts associated with the proposal.

25 **RCW 90.58.020(5)**

Increase public access to publicly owned areas of the shorelines;

⁵ RCW 90.58.020(1)-(6) applies to shorelines of statewide significance. Section 3.4.F of the San Juan County Comprehensive Plan identifies all saltwater surrounding the islands of San Juan County as shorelines of statewide significance. The policies of 90.58.020(1)-(6) are mirrored in the policies of Section 3.4.F of the Comprehensive Plan and for the reasons provided in assessment of RCW 90.58.020, the Examiner also finds consistency with the policies of Section 3.4.F.

10. The project does not pertain to a publicly owned area of the shoreline.

RCW 90.58.020(6)

Increase recreational opportunities for the public in the shoreline;

11. Since this is a private proposal with no public impacts no public recreation mitigation may be constitutionally imposed.

San Juan County Code Regulations

SJCC 18.50.210(A)(1): *No bulkhead to protect a single-family residence or appurtenant structures shall be constructed until the County has reviewed the proposed construction and determined that the project is or is not exempt from the shoreline permit requirements and is consistent with the policies of the SMA and this SMP.*

12. SJCC 18.50.020(F)(2)(c) provides that protective bulkheads common to single-family residences are exempt, subject to WAC 173-27-040(2)(c). WAC 173-27-040(2)(c) provides that in order to qualify for the exemption the sole purpose of the bulkhead must be to protect a single-family residence from loss or damage by erosion. The proposed bulkhead is not exempt because it is not needed to protect a residence. The threat is to the yard and trees of the residence as opposed to the residence itself.

SJCC 18.50.210(A)(2): *Nonexempt bulkheads shall be permitted only when nonstructural shoreline protection, restoration, or modification techniques have been shown to be ineffective and it can be shown that one or more of the following conditions exists:*

- a. Serious erosion is threatening an established use on the adjacent uplands;*
- b. A bulkhead is needed and is the most reasonable method of stabilizing an existing beach condition;*
- c. There is a demonstrated need for a bulkhead in connection with water-dependent or water-related commerce or industry in an appropriate environment;*
- d. A bulkhead is the most desirable method for stabilizing a landfill permitted under this master program.*

13. As determined in Finding of Fact No. 6, nonstructural methods of shoreline stabilization are not feasible due to the high wave energies of the site. As determined in Finding of Fact No. 4, the shoreline bank is subject to serious erosion.

One issue raised by the Examiner at hearing was whether the vegetation and yard protected by the bank are considered an “established use” pursuant to SJCC 18.50.210(A)(2)(a) above. As argued by the Applicants, the issue has been directly addressed by the Shoreline Hearings Board in *Woodman v. San Juan County*, SHB No. 08-032. The *Woodman* opinion interpreted the “established use” language above, concluding at COL No. 7 that an established residential use of the applicants included

1 “their yard, landscaping and most importantly, their trees which are stabilizing the
2 bank.” Under the *Woodman* decision, the applicants’ residential use of the yard space
3 on Lot 28 qualifies as an established use.

4 **SJCC 18.50.210(A)(3):** *Bulkheads shall not be permitted in conjunction with new
5 projects or development when practical alternatives are available.*

6 14. The proposal is not associated with any new development.

7 **SJCC 18.50.210(A)(4):** *Bulkheads shall be permitted on marine feeder bluffs only
8 where (a) a clear and significant danger to established development exists and (b)
9 there is reasonable cause to believe that the bulkhead will in fact arrest the bluff
10 recession and will not seriously disrupt the feeder action or the driftway.*

11 15. The subject bank is not a marine feeder bluff.

12 **SJCC 18.50.210(A)(5):** *Bulkheads constructed on Class I marine beaches shall be
13 located behind the berm.*

14 16. The staff report notes that the subject beach is not a Class I marine beach.

15 **SJCC 18.50.210(A)(6):** *All bulkheads shall conform to the design requirements of
16 the Washington Department of Fish and Wildlife, except where such design would be
17 incompatible with protection of the shore process corridor and operating systems.*

18 17. As conditioned.

19 **SJCC 18.50.210(A)(7):** *Applications for bulkhead permits shall include at least the
20 following information:*

21 *a. Purpose of proposed bulkhead;*

22 *b. Low, normal, and high elevations, when appropriate;*

23 *c. Direction of net longshore drift, when appropriate;*

24 *d. Type of construction proposed; and*

25 *e. Elevation of the toe and crest of the proposed bulkhead with respect to water
levels.*

18. The application contains all of the required information.

SJCC 18.50.210(A)(8): *Bulkheads shall be prohibited for any purpose if it will cause
significant erosion or beach starvation.*

19. As determined in Finding of Fact No. 5, the bulkhead will not create any beach
starvation or erosion.

DECISION

1
2 The proposed project is consistent with all the criteria for a shoreline substantial
development permit. The proposal is approved subject to the following conditions:

- 3
4 1. The Applicants shall obtain all other required permits and abide by the conditions
thereof.
5 2. Construction shall not be commenced until all relevant appeal periods have run.
6 3. Development under this permit shall commence within two years of the date of
permit approval and shall be substantially complete within five years thereof or the
7 permit shall become null and void.
8 4. Failure to comply with any terms or conditions of this permit may result in its
revocation.
9 5. The Applicants shall schedule a site inspection upon completion in order to
provide staff an opportunity to verify consistency with the proposed project design and
10 the conditions of approval.
11 6. The bulkhead shall conform to the design requirements of the Washington
Department of Fish and Wildlife.
12 7. The proposal shall comply with the recommendations of the 2008 habitat
management plan, Ex. 3, along with its addendum, Ex. 4, with the exception that the
13 bulkhead only has to be constructed landward of the OHWM as opposed to eight feet
from the OHWM .
14 8. An addendum to the habitat management plan shall be prepared to assess whether
the introduction of native vegetation would improve upon the ecological functions of
15 the shoreline, in particular whether it would mitigate against any increases in
temperature or loss of insect prey caused by the bulkhead that would adversely affect
16 fish spawning habitat or endangered salmon. To this end, plants that could provide
shading waterward of the OHWM should be specifically considered. If introduction
17 of these plants has ecological value, the habitat management plan shall formulate
recommendations for the introduction of such vegetation to the extent it doesn't
18 interfere with the function or structural integrity of the bulkhead. A three year
monitoring plan shall be included with any recommendations for introduction of shade
19 or insect bearing vegetation.
20 9. The applicants are strictly prohibited from removing or adding to any native
vegetation required to be maintained or introduced at the project site.
21 10. The proposal shall comply with the recommendations of the Earth Solutions
geotech evaluation, Ex. 2.
22 11. Construction will be completed from the top of the bank and no heavy equipment
or materials will be allowed to disturb the beach sediment waterward of the OHWM.
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24 Dated this 2nd day of May, 2013.

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Phil A. Olbrechts

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Effective Date, Appeal Right, and Valuation Notices

Hearing examiner decisions become effective when mailed or such later date in accordance with the laws and ordinance requirements governing the matter under consideration. SJCC 2.22.170. Before becoming effective, shoreline permits may be subject to review and approval by the Washington Department of Ecology pursuant to RCW 90.58.140, WAC 173-27-130 and SJCC 18.80.110.

This land use decision is final and in accordance with Section 3.70 of the San Juan County Charter, such decisions are not subject to administrative appeal to the San Juan County Council. See also, SJCC 2.22.100

Depending on the subject matter, this decision may be appealable to the San Juan County Superior Court or to the Washington State shorelines hearings board. State law provides short deadlines and strict procedures for appeals and failure to timely comply with filing and service requirement may result in dismissal of the appeal. See RCW 36.70C and RCW 90.58. Persons seeking to file an appeal are encouraged to promptly review appeal deadlines and procedural requirements and consult with a private attorney.

Affected property owners may request a change in valuation for property tax purposes notwithstanding any program of revaluation.

