Ex 50

Friends *of the* **San Juans**

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By Electronic Mail

May 22, 2018

Erika Shook, Director
San Juan County Community Development Department
P.O. Box 947
Friday Harbor, WA 98250
ErikaS@sanjuanco.com

Re: Supplemental Comments for PSJXMP 15-0028, PSJ000-12-0009
After-the-fact applications for unpermitted bulkhead

Dear Ms. Shook:

Friends of the San Juans ("FSJ") respectfully submits these supplemental comments to identify information in the newly-revealed application materials that continues to support rejection of Whaleback LLC's request for after-the-fact approval of a bulkhead on Blakely Island, and to request that San Juan County ("County") investigate whether the applicants obtained proper approval to develop a road through a stream and a road and bulkhead in wetland buffers. In the event that County did not approve that development pursuant to the Critical Areas Ordinance ("CAO"), FSJ respectfully requests that it commence enforcement based on new application information showing excavation and fill of wetlands and alteration of a roadway in or near a stream. FSJ also seeks confirmation that County will observe its 30-day public comment period and thus allow comments on the new application materials notwithstanding that a public hearing will occur in the midst of that comment period.

These comments follow the comments that FSJ supplied to County on April 6, 2016, in which FSJ provided a geotechnical report and legal analysis to demonstrate that: (1) the bulkhead did not satisfy either exemption or permit criteria under the County's Shoreline Master Program ("SMP"); (2) the bulkhead conflicted with the SMP's environmental protections; (3) the bulkhead conflicted with the CAO; and (4) the adjacent stretch of unpermitted bulkhead should also be investigated for removal.

The following comments: (1) argue that the hearing has been scheduled

prematurely; (2) explain the need for new State Environmental Policy Act ("SEPA") review based on newly identified development in a stream and wetland buffers; (3) identify additional material in the record showing that site erosion resulted from poor upland drainage and stormwater practices rather than shoreline wind and wave energy; (4) identify additional inconsistencies between the bulkhead and SMP exemption criteria; (5) identify additional grounds for the bulkhead's inconsistency with SMP permit criteria; and (6) request application of County wetland and stream protections.

This hearing comes more than seven (7) years after the Washington Department of Fish and Wildlife ("WDFW") investigated the unpermitted construction of the rock wall in early 2011. WDFW officers were patrolling the San Juans when they observed a new ramp on the beach and a new rock wall along the shoreline, all at what appeared to be below mean higher high water ("MHHW").[1] The officers also observed an excavator working on the beach below the MHHW line, smoothing the beach with what they believed to be a driftwood log.[2] No permits had issued for those activities.[3] That investigation reported from interviewees that the landowner purportedly knew of the need to obtain permits but had expressed a desire to obtain them later.[4] The investigation also reportedly obtained confirmation that a dock on one of the landowner's properties had been replaced without a permit.[5] The current applications, which grew out of the ensuing WDFW enforcement action, should now be resolved through the removal of the unpermitted bulkhead installed on Tax Parcels No. 151024002 and 151024003 ("Property").

In conducting this permit review, FSJ encourages the Hearing Examiner to avoid the natural inclination to give weight to the existence of the bulkhead. Although a

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[1] Ex. 14a -- WDFW, Incident Report, WDFW Case # WA-11-001018, 4 (April 20, 2011) (hereafter "Incident Report").

[2] *Id.*

[3] *Id.*

[4] Ex. 14a -- Incident Report, at 12.

[5] *Id.* at 18.

significant amount of money, time, and effort likely were required for its installation and its subsequent justification, that expense cannot play a role in the current decision.

A. The Hearing Is Premature.

The hearing is premature given that recently submitted materials have not been available long enough to allow members of the public a full 30-day comment period pledged by the SMP. If the County elects to hold the hearing in the midst of that comment period, it should at least ensure that the full 30-day window remains open post-hearing for public comment.[6] Although a hearing was initially set for the bulkhead review several years ago, a significant amount of application material has become publicly-available only since that time, including a brief argument about alternatives and a wetland summary that appear to have been uploaded for the first time on approximately May 21, 2018.[7] Yet the hearing was published for notice on May 2, 2018, just 21 days before its scheduled date, and hearing materials became available only approximately 16 days before the hearing date. Because the San Juan County Code ("Code") establishes a 30-day public comment period from the date of notice, the comment period beginning May 2nd extends through June 1st, 2018.[8]

In addition, it is not clear from the Staff Report that the new materials were circulated to state agencies or the County's Environmental Resources office consistent with applicable permit processing standards.[9] The Code directs DCD to circulate a "copy of the application, or appropriate parts of the application, to each affected agency and County department for review and comment," within 14 days of determining that

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[6] SJCC 18.80.030.B.2. ("[t]he public comment period shall be 30 days for shoreline substantial development applications....").

[7] FSJ representatives discovered those materials online for the first time Monday morning, May 21st, two days prior to the scheduled hearing.

[8] SJCC 18.80.030.B.2.

[9] *Compare* San Juan County Department of Community Development, Staff Report for Permit # PSJ000-12-0019, 5 (May 7, 2018) (omitting a date in stating that request for review was circulated to several state agencies) *with* SJCC 18.80.020.D.7.

the application is complete.[10] Those agencies and County departments then have 20 days to comment.[11] Although the Staff Report states that request for review was sent to the US Army Corps of Engineers, Department of Ecology, Department of Fish and Wildlife, Department of Natural Resources, and University of Washington Friday Harbor Labs, it does not state whether it provided any information to those agencies after May 2, 2013, when DCD circulated initial SEPA information to those agencies.[12] To the extent that DCD failed to provide the significant amount of newer materials to those agencies, it must continue the hearing to allow it to circulate that information consistent with its established permitting process. This action is particularly pressing given the recent revelation by applicants that they installed development in a stream and in stream and wetland buffers.[13]

B. The Newly Discovered Impacts to a Stream and Wetlands Warrant Supplemental SEPA Review.

SEPA directs reviewing agencies to prepare a new threshold determination or supplemental EIS where there is "[n]ew information indicating a proposal's probable significant adverse impacts," including discovery of misrepresentation or lack of material disclosure.[14] A new threshold determination can be avoided only where the probable significant adverse environmental impacts are covered by the range of alternatives and impacts analyzed in the existing environmental documents.[15]

Here, the applicant just disclosed for the first time in 7+ years that they constructed, or at least improved, a road through a stream area and through a stream

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[10] SJCC 18.80.020.D.7.

[11] *Id.*

[12] Staff Report, at 5.

[13] Ex. 36 – Hart Crowser, Runstad Wetland and Stream Reconnaissance (April 30, 2018).

[14] WAC 197-11-600(3)(b)(ii); *see Kiewit Constr. Group Inc. v. Clark Cnty*, 83 Wn. App. 133, 142, 920 P.2d 1207 (1996).

[15] WAC 197-11-600(3)(b)(ii) (incorporated by the San Juan County Code at SJCC 18.80.050 (stating that the "County hereby adopts by reference the SEPA rules, Chapter 197-11 WAC.")).

and wetland buffers.[16] The terse document that identified those critical areas, however, omitted any discussion of the impacts that the new development caused to those critical areas, or less impactful alternatives or options for compensating for those impacts.[17] As explained at pages 11-12 of the attached memorandum from Tina Whitman, Friends of the San Juans' Science Director, the armoring excavated a substantial amount of the wetland and stream area.[18] A supplemental SEPA review must be conducted and a new threshold determination must issue that takes into account the significant impacts to the wetlands, streams, and their buffers from road construction, water redirection, and bulkhead excavation.

C. Applicant and WDFW Investigation Materials Demonstrate that Site Erosion Resulted from Improper Upland Drainage and Stormwater Practices.

Numerous materials in the record, including statements from the applicant's representatives, acknowledge that the scarps that engendered bulkhead installation were caused by upland drainage issues that were exacerbated by a new road and development. On February 10, 2011, in response to officers' questions about the rock wall, the project manager stated that it had been constructed in response to excessive water runoff caused by heavy rains and melting snow a few weeks prior.[19] He also acknowledged that the new road work and construction projects had added to the issue.[20] The following month, on March 22, 2011, Chris Needham stated that he was familiar with the rock wall construction and confirmed that it had been started after a slope washout above the beach.[21] On April 21, 2011, WDFW officers spoke with Bruce Wiscomb, the subcontractor whose company constructed the bulkhead and learned

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[16] Ex. 36 – Runstad Wetland and Stream Reconnaissance.

[17] *See id.*

[18] Memorandum from Tina Whitman to San Juan County Hearing Examiner re: Whaleback, LLC after the fact permit application for shoreline armoring, 8-12 (May 21, 2018) (attached as Attachment A).

[19] Ex. 14a -- WDFW Incident Report, at 6.

[20] *Id.*

[21] *Id.* at 10.

from him again that "strong rains had washed out sections of the bank."[22] Likewise, the Joint Aquatic Resources Permit Application ("JARPA") confirmed that "[s]torm conditions in late December 2010 and January 2011, which resulted in heavy rains and melting snow, caused two areas along the property's ban to wash out."[23] A photo of the site attached to a recent declaration by the landowner also shows the erosion starting at the top of the bank, consistent with runoff as the cause of erosion.[24]

A year later, David Needham confirmed again that construction activity that included road widening and installation of underground utilities worsened water runoff and erosion.[25] He noted that two main areas upland of the beach had suffered from erosion issues and thus were the first project sites addressed.[26] He explained that the work had originally focused on preventing the road from washing out and then "continued to the beach where a new bulkhead had been constructed."[27] The last of the Needham photographs at Exhibit 14a shows this progression toward the beach with rock piles poured on the slope and extending down onto the beach.[28] Although the initial armoring was limited to an area where the bank had washed out, the project manager stated that the property owner "'liked the way it looked and told [them] to continue the wall down the beach.'"[29] A WDFW interview learned from the contractor that he had been told that bulkhead construction should continue and that permitting issues would be addressed after the fact.[30] Thus, in addition to addressing an upland mistake, the

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[22] *Id.* at 47 (Supplemental Report of Officer C. Rosenberger).

[23] Ex. 7 -- JARPA, at 4.

[24] Ex. 38 – Declaration of Jon Runstad, at Ex. D.

[25] *Id.* at 14.

[26] *Id.* at 14.

[27] *Id.* at 14 (quoting Incident Report language) (emphasis added).

[28] *See* photograph 27 of Exhibit 14a.

[29] *Id.* at 7 (quoting David W. Needham).

[30] *Id.* at 15.

bulkhead extended beyond the areas that experienced the scarps.

D. Beach Impacts Observed by WDFW.

A significant amount of material for the rockery and its vicinity came from the beach itself. The WDFW Incident Report notes that the officers "observed other areas of the beach where it was clear that natural substrate and woody debris had been removed and deposited at the base of the wall."[31] The officers also noted that "[o]ur inspection also found that, contrary to NEEDHAM's claims, beach materials had been used during the construction of the face of the wall as well as backfill behind the wall. This fact was evident by the presence of attached barnacles and visible marine algae."[32] Eventually, after being shown barnacle and algae-covered rocks, the project manager agreed that beach materials had apparently been used for portions of the rock wall.

In conjunction with a site visit, WDFW biological staff prepared a biological survey that concluded that: (1) the newly armored area extended along approximately 416 feet of beach without a WDFW permit; (2) 416 feet of beach below the Mean Higher High Water line had been significantly impacted by operating equipment and removing native rocks to construct the new bulkhead; (3) "construction of the rock bulkheads 'eliminates future recruitment of native substrate materials to the beach;'" and (4) an additional 422 feet of the landowner's shoreline had been armored by a rock wall in the recent past.[33] This last point is consistent with findings by a Coastal Geologist who prepared a report that motivated FSJ to seek enforcement and removal of that additional stretch of unpermitted rockery armor.[34]

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[31] *Id.* at 8.

[32] *Id.*

[33] Ex. 14a – Incident Report, at 11 (quoting biological survey).

[34] *See* Ex. 20f – Attachment E to FSJ Request for Shoreline Management Act enforcement of unpermitted bulkhead on San Juan County tax parcel number 151024003000 (Nov. 16, 2016).

E. The Unpermitted Bulkhead Does Not Warrant Processing As An Exemption Because It Would Not Protect a Single-Family Residence and Appurtenant Structures.

In addition to the grounds that FSJ identified in its 2016 comment letter[35] and the excessive fill identified by County, the bulkhead does not qualify for the narrow single-family residence exemption process because it would not protect a single-family residence. In determining whether a proposal qualifies for an exemption, the SMP states "[e]xemptions shall be construed narrowly in accordance with WAC 173-27-040(1)(a). Thus, "[o]nly those developments that meet the precise terms of one or more of the listed exemptions may be granted exemption from the substantial development permit process." *Id.* The bulkhead does not qualify for the normal protective residential exemption.

Principles of statutory interpretation show that the exemption was not intended to apply to armoring along a new residential road but instead was meant to prevent houses and associated structures from eroding into the sea. Where a statute is plain on its face, a court should discern the intent from the ordinary meaning of the words. [36] Where a statute is ambiguous, tools of statutory construction like legislative history should be applied.[37] The possibility of multiple reasonable interpretations does not render a statute ambiguous.[38]

Here, the exemption addresses "[c]onstruction of the normal protective bulkhead

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[35] FSJ's 2016 comment letter, in the record as exhibit 24a, noted that the bulkhead could not be processed as an exemption because: (1) there was no "existing" single-family residence on the Property when it was built; (2) the application had not demonstrated that the acknowledged slow erosion rate of approximately 1 inch per year posed a threat of loss or damage; (3) the application's stormwater reports indicated that the erosion resulted from improper drainage conditions rather than shoreline erosion caused by wind and waves; and (4) much of the bulkhead could not have been built for the sole purpose of interfering with erosion near the developing areas because it lay at some distance from them.[35]

[36] *See Tesoro Refining and Marketing Co. v. Wash. Dept. of Revenue*, 164 W.2d 310, 317-18, 190 P.3d 28 (2008).

[37] *Id.*

[38] *Id.*

common to single family residences."[39] Normal protective bulkheads are "those structural and nonstructural developments installed at or near, and parallel to, the ordinary high water mark for the sole purpose of protecting an existing single-family residence and appurtenant structures from loss or damage by erosion."[40] The SMP defines structures as "permanent or temporary edifice[s] or building[s] or any piece[s] of work artificially built up or composed of parts joined together in some definite manner, whether installed on, above, or below the surface of the ground or water, except for vessels (WAC 173-27-030)."[41] Thus, to qualify for the exemption, the bulkhead would need to "protect[] an existing single-family residence and appurtenant structures."[42]

The bulkhead cannot be approved via exemption because it does not protect both of a single-family residence and appurtenant structure. In *Tesoro Refining*, the court held that the term "and" must be read in its conjunctive sense unless legislative intent clearly indicates that it was meant to be interpreted disjunctively, in which case a court could substitute "or" for "and."[43] Nothing in the text of the exemption or the SMA's admonishment for narrow construction of exemptions indicates that the exemption would be allowed for any appurtenant structure without also protecting the residence itself. And since the application here acknowledges that a bulkhead is not needed for the house, the exemption does not apply.

In addition, the exemption does not apply to roads because they are not structures. Structures are "edifice[s] or building[s] or any piece[s] of work artificially

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[39] RCW 90.58.030(3)(e)(ii).

[40] WAC 173-27-040(2)(c) (incorporated by SJCC 18.50.020.F.2.c.).

[41] SJCC 18.20.190.

[42] WAC 173-27-040(2)(c).

[43] *Tesoro Refining*, 164 Wn.2d at 319.

built up or composed of parts joined together in some definite manner."[44] Thus, a house or garage could qualify as structures with parts joined together, but a road does not consist of individual parts. Instead, it is a mixture of material laid on the ground. Consequently, the single-family residence exemption does not apply to the bulkhead.

Last, to reiterate a point made in FSJ's 2016 comment letter, the SMP explains that the reference to erosion applies to erosion caused by marine waters, not improper treatment of upland drainage. The SMP defines bulkheads or seawalls as, "structures erected parallel to and near the high water mark for the purpose of protecting the adjacent bank or uplands from the action of waves or currents."[45] Thus, as argued in FSJ's 2016 comments, the upland drainage erosion caused by rain and snow runoff and exacerbated by the road and other site construction cannot justify approval of the bulkhead through the exemption process because the bulkhead was not installed to protect structures from loss of damage by this marine erosion.

F. The Permit Must Be Denied Because It Does Not Satisfy SMP Criteria for Approval.

Although the County staff report recommends conditional approval of the shoreline substantial development permit ("Permit"), its content indicates that the bulkhead conflicts with the SMP because it was not necessary to protect an existing use on the adjacent uplands and the sheltered shoreline does not experience serious erosion from wave and wind energy. In addition, the bulkhead contravenes SMP criteria that: (1) prohibit new development like the applicant's road and house where armoring would be anticipated in the near future; and (2) preclude actions like the bulkhead that cause unnecessary and excessive impacts to shoreline habitats and functions. Consequently, the application must be denied and the impermissibly-built bulkhead must be removed.

1. The Bulkhead was not necessary to protect an existing use on the adjacent uplands from serious erosion.

Although the May 7, 2018 staff report for Permit # PSJ000-12-0019 recommends

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[44] SJCC 18.20.190.

[45] SJCC 18.20.020.

approval of the bulkhead subject to a demonstration of the infeasibility of locating the road and utilities, its findings show that the bulkhead does not satisfy the SMP's bulkhead criteria. In addition to demonstrating that alternatives are not feasible, an applicant must show that "serious erosion is threatening an existing use on the adjacent uplands." Yet the Staff Report noted in evaluating the bulkhead against the Critical Areas Ordinance that the section that requires that a bulkhead be necessary to protect existing primary structures does not apply "because the residence and driveway were not existing structures at the time that the UDC was adopted."[46] The photos in the record similarly show that the residence did not exist at the time of bulkheading and it is unclear whether the road had been installed at that point. The application also does not satisfy the criterion that "erosion is not being caused by upland conditions, such as drainage and the loss of vegetation," because "[t]he initial damage was likely caused by upland drainage issues and inadequate stormwater management on the site during construction. Substantial drainage infrastructure has been constructed on-site to capture water from the slope and discharge it to two outfalls."[47] And although the staff report concludes that current erosion is no longer a result of upland drainage, it neither identifies any current erosion (which presumably has been arrested by the construction of the bulkhead) nor explains how conditions in 2018 could justify the construction of the bulkhead in 2011.[48] For that matter, consistent with the application, the Staff Report does not identify significant wave and wind erosion on the site. And to the extent that the bank now exists in an "oversteepened" state, that was caused by upland drainage and inadequate stormwater management, which do not qualify a property for a bulkhead. As discussed at pages 23-25 of FSJ's April 2016 comment letter and attached memorandum from Jim Johannessen, a coastal geologist, the protected shoreline enjoys a slow long-term erosion rate that does not qualify as "serious."[49]

On a last point, even if the bulkhead could be permitted to address upland

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[46] Staff Report, at 14.

[47] Staff Report, at 14 (citing SJCC 18.35.130.G.3.e.ii.(A))

[48] Staff Report, at 14-15.

[49] Ex. 24a.

drainage issues for development that had not been established, nothing in the application demonstrates that it should be constructed over its entire 300-foot-stretch. As the bulkhead contractor declared during the initial investigation, they installed the rock in a few locations and then extended the bulkhead across the full length of shoreline when requested by the landowner. Consequently, in addition to the failure to properly evaluate the no-action or soft shore alternatives, the project has not evaluated the alternative of leaving rock in those areas where it was initially installed to address the upland erosion. This omission conflicts with both the CAO and SMP.[50]

2. The SMP prohibits residential construction that will require a bulkhead in the foreseeable future.

As described at pages 15-16 in FSJ's 2016 comment letter, the applicable SMP expressly prohibited "residential structures which will require bulkheads or other shoreline fortifications at the time of construction or in the foreseeable future."[51] Further, in *In re Gibson's North Beach Inn, Inc.*, PSJ000-16-0005, the Hearing Examiner cited less stringent Critical Areas provisions in finding and concluding that "any future requests for shoreline armoring or other stabilization measures must comply with applicable county and state shoreline regulations in effect at such time, and that such request may very well be denied, if future decision makers determine that the new cabins were not located, designed and/or setback in a manner that complies with" the requirement to set back new development sufficiently to ensure that shoreline stabilization would be unlikely to be necessary for at least 75 years.[52] The unpermitted bulkhead here was constructed to address drainage issues near a new road to a structure that had not yet been built. For the prohibition against siting new development where it

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[50] SJCC 18.35.130.G.3, 18.50.210.3.

[51] Citing SJCC 18.50.330.B.2. Although that provision has been revised, it now resembles the Critical Areas provision quoted by the Hearing Examiner and discussed in this paragraph, stating that, "[a] required geotechnical report must demonstrate that the proposed buffer will be sufficient to avoid the need for new protective structural shoreline stabilization measures for the life of the structure (75 years)." SJCC 18.50.540.C.1.

[52] *In re Gibson's North Beach Inn, Inc.*, PSJ000-16-0005, Findings of Fact, Conclusions of Law and Decision Approving Shoreline Substantial Development and Shoreline Conditional Use Permits, 11 (May 14, 2018).

will require armoring in the near future to have any effect, the bulkhead must be denied.

3. Impermissible shoreline impacts.

The attached memorandum from Tina Whitman details numerous, inadequately evaluated biological impacts from the bulkhead that conflict with the SMP environmental protections identified at pages 25-26 of FSJ's 2016 comment letter.[53] For example, the applicable SMP established environmental policies to assure the preservation of unusual, fragile, or scenic elements and to preserve critical marine and terrestrial wildlife habitats.[54] The SMP also directed new development to "avoid disturbance of and minimize adverse impacts to fish and wildlife resources, including spawning, nesting, rearing and habitat areas, and migratory routes."[55]

Nonetheless, the bulkhead has caused significant ecological impacts, including:

- Burial of significant portions of potential, suitable forage fish spawning habitat;
- Excavation of significant portions of a wetland;
- Impoundment of sediments necessary to maintain a balance in the amount of sands and gravels slowly nourishing and eroding from the beach.; and
- Removal of most of the shrub layer in exchange for less complex grasses.[56]

Most distressingly, this occurred on one of the shorelines identified as among the highest importance for out-migrating juvenile Puget Sound Chinook salmon in the San Juans.[57]

Further, as Ms. Whitman notes, the proposed mitigation will not compensate for the bulkhead's impacts because it is "limited in its geographic scope, number of plants and overall objectives and does not adequately address the impacts that have occurred

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[53] Whitman Memo, at 7-13.

[54] San Juan County Comprehensive Plan §§ 3.2.F.1, .F.2.

[55] SJCC 18.50.070.F.

[56] Whitman Memo, at 7-13.

[57] Whitman Memo, at 2-3.

at the site.[58] The vegetation effort would not replant a sufficient amount of vegetation to replace the lost vegetation or exclude deer or provide for watering after the planting date. And it fails to propose mitigation for the wetland and stream buffer impacts. The application does not specific beach nourishment details like design, volume, location, or materials sourcing.

These impacts alone qualify for denial of the unpermitted bulkhead.

G. Bulkhead Impacts to the Stream and Wetlands Must be Mitigated.

The excavation and filling that the application describes in a stream and wetland buffers must be mitigated. Ms. Whitman notes that application materials show significant bulkhead-related excavation of 5-10 feet into the bank for a width of 275 linear feet, including areas within wetland and stream buffers.[59] FSJ is not aware of authorization for those impacts. To the extent that such authorization does not exist, the impacts must be mitigated pursuant to County's Critical Areas Ordinance.

H. Conclusion.

The requested bulkhead does not satisfy SMP criteria and should have been remediated long ago. It was constructed in response to upland drainage issues that were later addressed through better treatment of stormwater runoff. It was constructed before the residence on the property, directly contravening the SMP's prohibition against new development that would require bulkheading in the near future. And it is not needed to respond to the sluggish erosion rate at the site, which cannot qualify as serious erosion. Consequently, it must be removed and its impacts mitigated.

Thank you for your careful consideration of these comments.

Respectfully submitted,

Kyle A. Loring
Staff Attorney, Friends of the San Juans

[58] Whitman Memo, at 11-12.

[59] Whitman Memo, at 11-12; *see also* Ex. 36.

ATTACHMENT A

Friends *of the* **San Juans**

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TO: San Juan County Hearing Examiner

FROM: Tina Whitman, Science Director

SUBJECT: Whaleback, LLC after the fact permit application for shoreline armoring

DATE: May 21, 2018

The intent of this memo is to summarize current nearshore marine habitat conditions at the Whaleback, LLC site and describe the likely impacts of authorization of the unpermitted shoreline armoring on the ecological functions and values. Multiple existing unpermitted as well as permitted shoreline modifications located on the marine shoreline and within wetland and stream buffers at this site have already negatively impacted the functions and values of critical habitat for priority species including juvenile salmon and forage fish. As a result, site restoration and protection of remaining functions and values of intertidal, backshore, wetland and stream habitats is even more important. The proposed retention of significant unpermitted shoreline hardening will further increase the level of impact at this high value critical area into the future. In addition, the information provided by applicants regarding the ecological function and values at the site for fish and wildlife habitat is overly general and does not represent the full understanding of local conditions or the state of knowledge on critical habitats and species and armor impacts (Exhibit 28 Appendix M fish and wildlife habitat conservation areas). None of the materials identify any impacts to wetland and stream habitat or propose mitigation for those impacts.

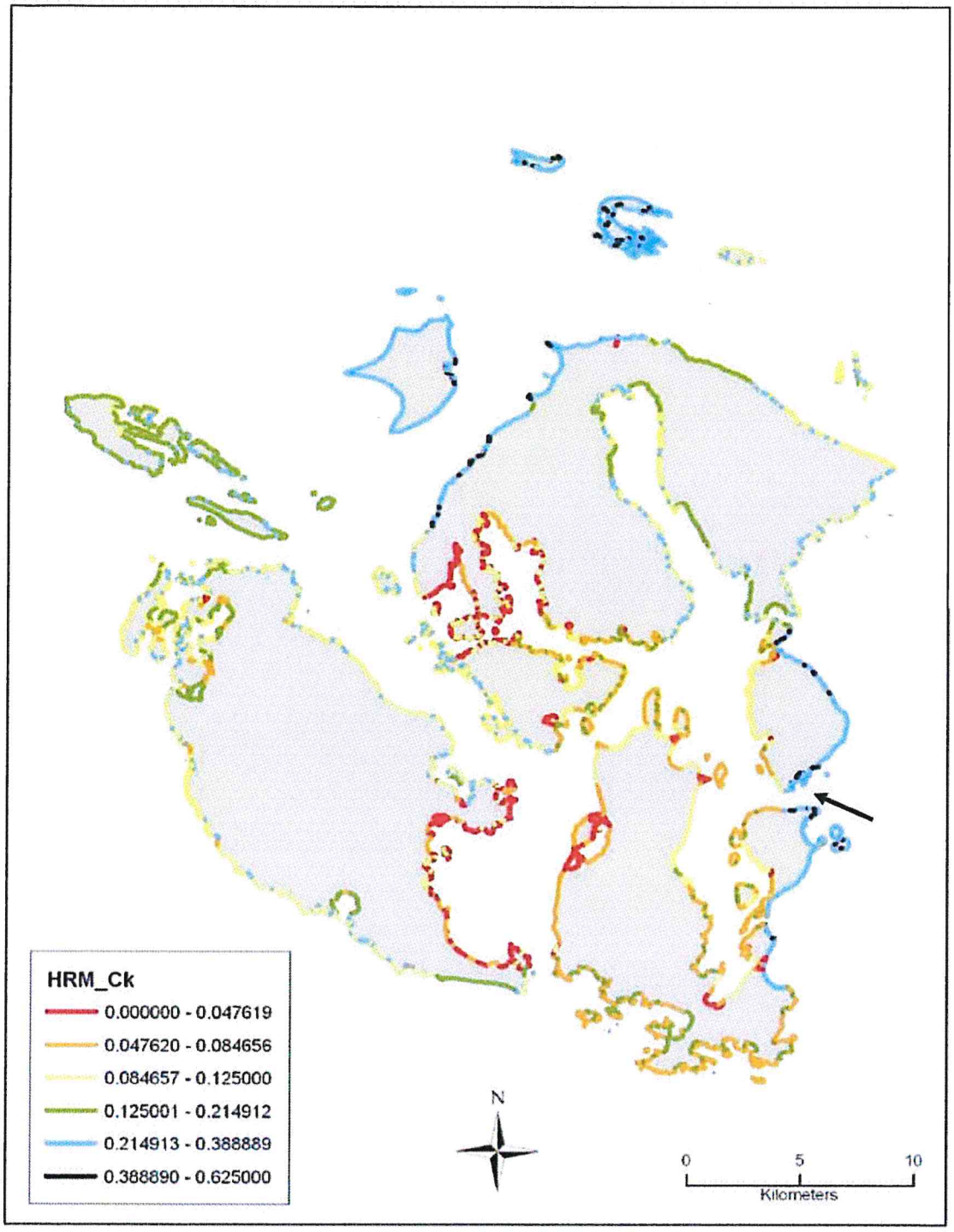
Report contents are derived from existing San Juan County (SJC) and State information on the site and its context within the landscape; reports, site plans and other documents provided by the project applicant; relevant scientific research from the literature; and my professional opinion. As a habitat biologist specializing in intertidal beach systems, with over 16 years of applied experience in marine shoreline habitat research, protection and restoration in San Juan County, the contents of this report reflect my best professional opinions, based on my educational background, on-the-ground experience in habitat research and restoration and my working knowledge of the state of relevant shoreline science.

Comments are organized into three sections, significant habitat values of the site, likely impacts of the project that are not adequately addressed by the application, no net loss finding based on incomplete assessment and information, and the inadequacy of proposed mitigation.

Ecologically Significant Habitats at the Project Site: The nearshore marine environment of the project site supports a suite of priority habitats, functions and values, including rearing habitat for out-migrating juvenile salmon and forage fish; suitable, potential spawning habitat for forage fish; eelgrass and kelps, wetlands and streams and limited but important riparian vegetation. The project site has been identified among the highest importance for out-migrating wild juvenile chinook salmon in the County (see Figure 1.) and research conducted at the site documented 3 species of juvenile salmon (chum, pink and chinook) as well as all 3 species of forage fish (Pacific herring, surf smelt and Pacific sand lance) utilizing the shallow water environments at the site[1].

[1] Beamer, E. and K. Fresh 2012. Juvenile salmon and forage fish presence and abundance in shoreline habitats of San Juan Islands, 2008-2009: map applications for selected systems. Prepared for the San Juan County Lead Entity for Salmon Recovery, Community Development and Planning Department and Marine Resources Committee.

Figure 1. Rearing chinook salmon presence probability (Beamer and Fresh 2012).

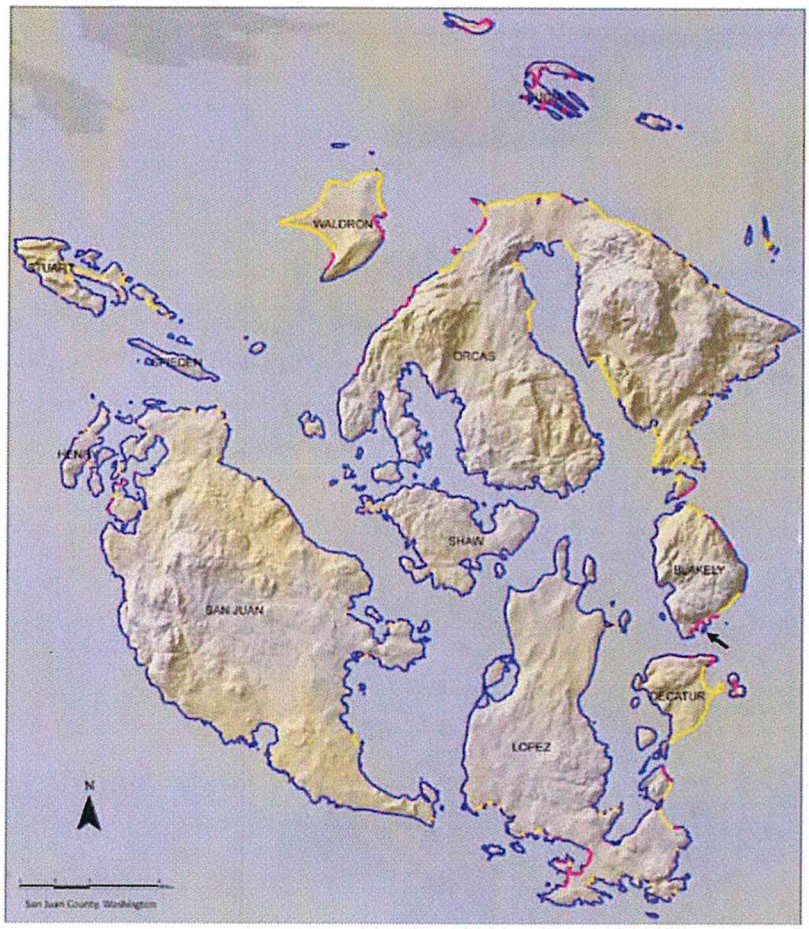


Because of its location in a top priority region as well as a top priority shoreform (pocket beach) for out-migrating juvenile chinook salmon, as well as hosting priority habitat for rearing and spawning forage fish habitat, the project was ranked in the top 3% (8 miles of the over 410 marine shorelines in SJC) of sites for salmon recovery efforts during a countywide strategic salmon recovery planning effort completed for the San Juan County Lead Entity for Salmon Recovery and the Washington State Salmon Recovery Funding Board in 2017[2], see Figure 2.

[2] Whitman, T, MacLennan, A. Schlenger, P., Small, J. Hawkins, S. and J. Slocomb. Strategic salmon recovery planning project for San Juan County Washington: the Pulling It All Together (PIAT) project. Friends of the San Juans, Coastal Geologic Services, Confluence Environmental and Anchor QEA. Prepared for the SJC Lead Entity for Salmon Recovery and the Washington State Salmon Recovery Funding Board RCO-10-1789. B)

Figure 2. Priority Fish Use Shoreforms for San Juan County (Whitman et al 2012)

Figure 7. Priority Fish Use Shoreforms.



Priority Fish Use Shoreforms

HIGHEST HIGH MODERATE

ANCHOR OEA

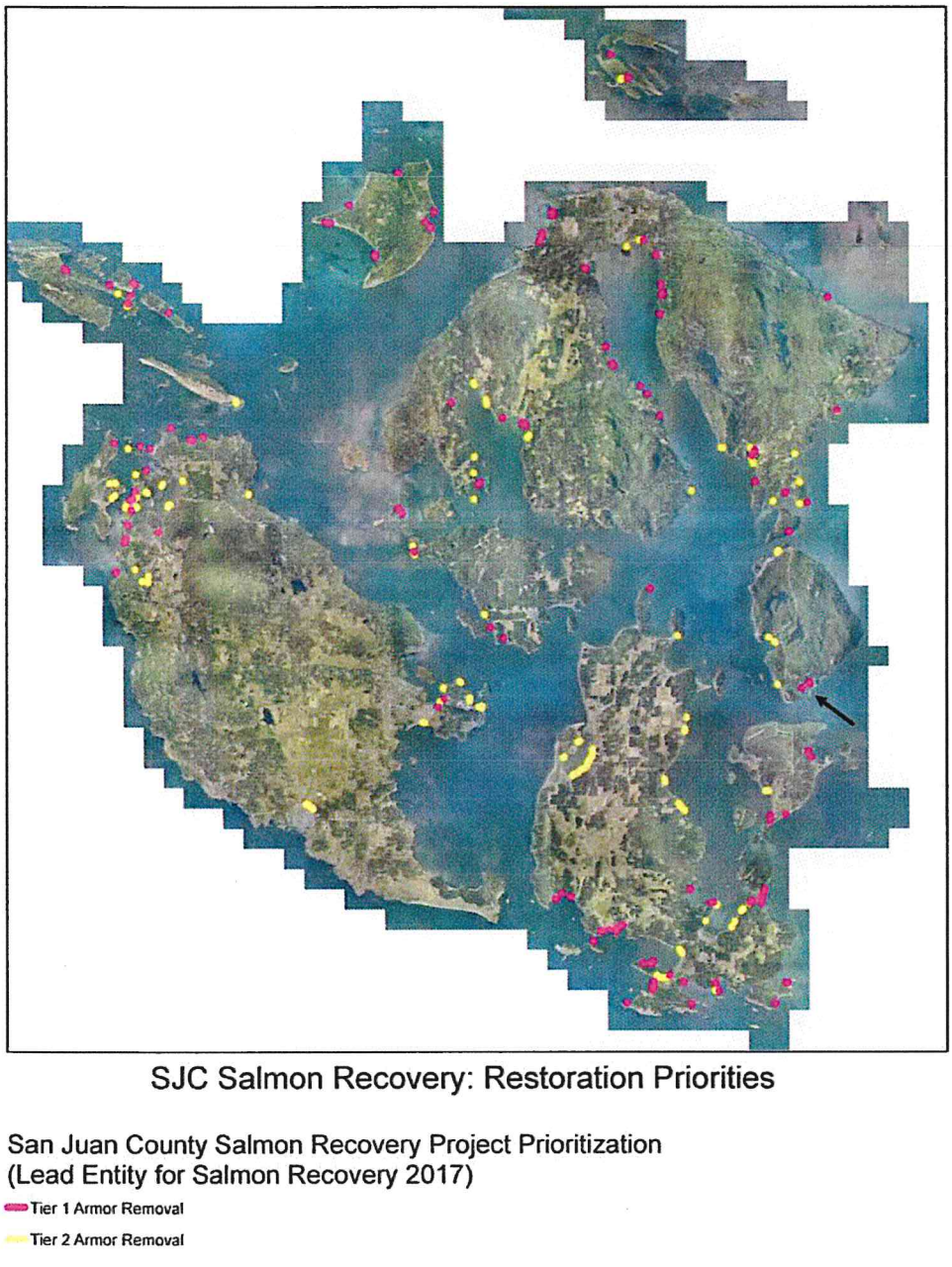
FRIENDS

CGS COASTAL GEOLOGIC SERVICES

More recent project (site scale) rankings have been completed in support of local efforts to recover chinook salmon in San Juan County; using a combination of site specific modification data as well as fish use, habitat and coastal processes criteria. Removal of shoreline armoring at the Whaleback LLC site

ranked as Tier 1 (highest priority) salmon recovery actions, in the top 18% of ranked armor removal sites among the approximately 700 armored sites countywide (figure 3).[3]

Figure 3. Armor Removal Restoration Priorities San Juan County Salmon Recovery (Whitman et al 2017)



[3] Whitman, T., A. MacLennan, P. Schlenger, and B. Rot. 2017. Strategic Salmon Recovery Planning in the San Juan Islands: Nearshore Marine Habitat Restoration and Protection Project Prioritization. Prepared for the San Juan County Lead Entity for Salmon Recovery.

Project Impacts to Fish and Wildlife Habitat and Inadequacy of No Net Loss Assessment

Rearing salmon and forage fish: While the application materials do note that the shorelines of the County are utilized by out-migrating juvenile salmon (Exhibit 8 28 Appendix M), they fail to acknowledge either the site specific fish utilization data that documented 3 of the 4 species of salmon that rear in the islands and all 3 species of forage fish (herring, sand lance and surf smelt) at the site or the significant importance of the site in local salmon recovery planning efforts, information which has been readily and publicly available online since 2012 (Beamer and Fresh and Whitman et al 2012) and 2017 (Whitman et al 2017) respectively. In addition, the project site has continued to be one of a handful of San Juan County sites utilized as a research site for salmon recovery efforts, most recently by NOAA Fisheries in 2014 and 2015, for its likelihood of having listed Puget Sound chinook present, in work that concluded that "The San Juan Islands appear to be uniquely beneficial as juvenile Chinook salmon rearing given the observed temperature patterns and the presence of fish in the majority of diets. Specifically, the contribution of both Pacific herring and Pacific sand lance is unique to the region compared to other rearing areas in northern Puget Sound and the benefit of increased contributions are reflected in individual growth rates." [4] This scientific understanding of the role the specific site plays in supporting rearing herring and sand lance, and juvenile chinook salmon, is not even noted in the application materials, and the known impacts of armor to the quantity and quality of this rearing habitat over time are not acknowledged.

Forage fish spawning: The investigation into forage fish spawning conducted by proponents was not sufficient to discount the site as potential spawning habitat for forage fish. Application materials (Exhibit #28 Appendix M section D) note that beach surveys were conducted for surf smelt, sand lance and herring in 2013 January through April and then October through December. Herring spawn offshore on submerged aquatic vegetation including eelgrass and kelps and thus herring eggs could not be expected to be found in beach samples. Even for those species that do spawn on intertidal beaches, the original sampling effort skipped the peak surf smelt spawning season of May through September, without any discussion of the rationale for not sampling in this key time period,[5].

While a more recent document provided by the applicant (Exhibit #8b) does note that spawning samples were taken in August and September of 2016, it still does not demonstrate that spawning doesn't occur at the site. Smelt eggs could have been present in the months not sampled at all (May, June and July), and as the incubation period can be as short as 10 to 14 days, monthly sampling is also not sufficient to

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[4] Chamberlin, J., M. Gamble, K. Connelly, J. Gardner, R. Barsh, M. O'Connell, J. Keister, D. Beauchamp, M. Schmidt, B. Beckman, and K. Warheit. 2018. Assessing early marine growth in juvenile chinook salmon: factors affecting variability in individual growth in Northern Puget Sound. Salish Sea Marine Survival Project. NOAA Fisheries and Long Live the Kings.

[5] Friends of the San Juans. 2004. San Juan County Forage Fish Spawning Habitat Assessment Report. Partnership with the University of Washington and the Washington Department of Fish and Wildlife. Report to the WA State Salmon Recovery Funding Board.

be sure the site isn't used by forage fish to spawn during other times of the year. The data provided does not support the conclusion that the site is not forage fish spawning substrate and the discounting of impacts to that habitat is not warranted.

Application materials (Exhibit 11e WDFW site map) show the toe of the unpermitted rock slated to remain in perpetuity to be at 8.3 feet for reaches 1 and 2 and at 8.8 feet for reaches 3 and 4. The application itself show just one toe elevation, at 8.7 (Exhibit 1 pg 11). All of these elevations are within the intertidal beach; predicted tides are common in the mid 8 feet range and reach into the 9 foot elevation range and actual, observed tides get even higher as a result of low pressure and wind waves. Forage fish eggs have been documented incubating at an elevation of 9 feet in the San Juans, so direct burial of habitat has already occurred across more than 300 feet of beach from the most recent unpermitted armor that is at issue in the current application.[6] Additional significant lengths of armor on the site have also buried habitat, as the older permitted and unpermitted armoring at the site also have toe elevations within the known intertidal beach, negatively impacting habitat. Applicant photos (such as in Exhibit 12b pg 12, Exhibit 12e pg 1-3, Exhibit 12h pg 6-8) clearly show the location of the wrack line (organic material deposited by tides) at and in close proximity to the toe of the structure, indicating its location in the intertidal beach. In addition, Ecology materials reference the need for verification of the OHW mark (Exhibit 24b); we did not find any evidence in the record that this verification had occurred.

Therefore, the critical areas assessment conclusion of no net loss to forage fish, absent complete information and any discussion of the likely short term impacts to forage fish habitat, such as direct burial of the upper edge of spawning habitat by the rock wall and reduction in egg success due to the changes in microclimate (hotter and drier) in front of the rock armoring, or the long term impacts that include alternations in the availability of suitable spawning substrate as the beach coarsens over time as a result of the altered wave energy at the site and impoundment of sediment in the bank[7], are not supported by the site specific information or scientific understanding of the likely impacts.

Wetlands: New application materials provided to San Juan County on May 18, 2018 note the presence of a stream and multiple wetlands adjacent to the marine shoreline (Exhibit 36). It should be noted that this is the first documentation or reference to wetlands or streams provided in the application materials

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[6] A) Whitman, T., D. Penttila, K. Krueger, P. Dionne, K. Pierce Jr., and T. Quinn. 2014. Tidal elevation of surf smelt spawn habitat study for San Juan County Washington. Friends of the San Juans, Salish Sea Biological and Washington Department of Fish and Wildlife. And B) Exhibit 113 WDFW site map

[7] A) Whitman, T., D. Penttila, K. Krueger, P. Dionne, K. Pierce Jr., and T. Quinn. 2014. Tidal elevation of surf smelt spawn habitat study for San Juan County Washington. Friends of the San Juans, Salish Sea Biological and Washington Department of Fish and Wildlife. And B) Carrasquero-Verde, J., T. Abbe and S, Morrison. 2005. Bulkheading in Thurston County: impacts on forage fish spawning habitat. Proceedings of the 2005 Puget Sound Georgia Basin Research Conference. Herrera Environmental Consultants. And C) Dethier, M., W. Raymond, A. McBride, J. Toft, J . Cordell, A. Ogston, S. Heerhatz and H. Berry. 2016. Multiscale impacts of armoring on Puget Sound shorelines: evidence for cumulative and threshold effects. Estuarine, Coast and Shelf Science. 175 (2016) 106-117.

and certainly reflects a lack of a rigorous site assessment by previous experts assessing critical areas and developing mitigation such as the replanting plans and calls into question the adequacy of their findings as they are based on clearly incomplete information. More importantly, while the new materials on wetlands and streams do reference a requirement for water quality and habitat buffers, no assessment of the impacts of the project to the functions and values of the wetland or stream, or mitigation for the current or proposed long term existence of the extensive armor and fill within these buffers is provided.

Connected coastal wetlands play an important ecological role to marine shoreline functions and values, in part as a source of organic material and insects that support the marine food web and juvenile salmon[8]. Coastal wetlands play an important role in supporting water quality, wildlife, flood control and even the production of insects eaten by marine fish, including juvenile chinook salmon[9]. Streams are a source and transfer mechanism of the terrestrial and freshwater insects important to the diets of juvenile salmon[10]. Significant disruption of this wetland through digging out of the bank, removal of vegetation, and the placement of fill and armoring would have had significant impacts to the functions and values of the coastal wetland and stream and restoration alternatives must be explored to compensate for these impacts.

Impacts of armoring: The application materials focus heavily on the avoidance of additional construction impacts to the beach that would occur through removal of the unpermitted armoring and fill as the best means to avoid impacts to critical areas. While beach restoration through armor removal would certainly include short term disruptions, best practices can be employed and avoidance of the permanent and increasing impacts of remaining armor into the future at this priority site warrant full restoration. With adequate planning and oversight of construction, which the record shows did not occur in the current situation where applicant materials show major disruption of beach habitat and extensive, large equipment operating directly on the beach (Exhibit 12C) and not matted as stated in the no net loss findings (Exhibit 28 Appendix M), short term impacts could be much reduced. In addition, the applicant's conclusion that similar beach substrate, along with the presence of limited drift wood

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[8] A) Schlenger, P., A.MacLennan, E. Iverson, K. Fresh. C. Tanner, B. Lyons, S. Todd, R. Carmman, D. Myers, S. Campbell and A. Wick. 2011. Strategic needs assessment: analysis of nearshore ecosystem process degradation in Puget Sound. Prepared for the Puget Sound Nearshore Ecosystem Restoration Project. Technical report No 2011-02. And B) Beamer, E. June 30, 2010 DRAFT. Ecosystem Components and Key Ecological Attributes for Estuarine and Nearshore Environments with Focus on Salmonids. Prepared for the Puget Sound Regional Implementation Technical Team.

[9] See above A and B

[10] See above A and B

and vegetation is proof of no long terms impacts is unsupported by current scientific understanding and research results from our region[11].

Particularly at relatively low energy sites like this one, with limited fetch and wave energy (evidenced by the very presence of those beach plants), changes to the beach from hard armoring, especially impacts to slope and substrate, occur on a slower time frame than the time that has elapsed since construction[12]. In addition, no information is provided that compares pre and current conditions to show that the volumes of wood and vegetation are comparable. While some impacts may take longer to appear than others that are immediate, impacts are well documented to occur, and include burial of beach spawning habitat for forage fish[13], a reduction in organic material accumulation[14], reductions in the quantity and quality of prey for juvenile salmon[15], reductions in egg survival of incubating forage fish eggs[16] and changes to the beach substrate and slope that further reduce habitat quantity and quality[17]. Impacts of armor are likely to increase in severity over time, and result in a narrowing, or loss of

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[11] Dethier, M., W. Raymond, A. McBride, J. Toft, J . Cordell, A. Ogston, S. Heerhatz and H. Berry. 2016. Multiscale impacts of armoring on Puget Sound shorelines: evidence for cumulative and threshold effects. Estuarine, Coast and Shelf Science. 175 (2016) 106-117. And B) Johannessen, J. and A. MacLennan. 2007. Beaches and bluffs of Puget Sound. Puget Sound Nearshore Ecosystem Partnership Report No. 2007-04. Published by Seattle District U.S. Army Corps of Engineers, Seattle, WA

[12] Dethier, M., W. Raymond, A. McBride, J. Toft, J . Cordell, A. Ogston, S. Heerhatz and H. Berry. 2016. Multiscale impacts of armoring on Puget Sound shorelines: evidence for cumulative and threshold effects. Estuarine, Coast and Shelf Science. 175 (2016) 106-117.

[13] A) Whitman, T., D. Penttila, K. Krueger, P. Dionne, K. Pierce Jr., and T. Quinn. 2014. Tidal elevation of surf smelt spawn habitat study for San Juan County Washington. Friends of the San Juans, Salish Sea Biological and Washington Department of Fish and Wildlife. And B) Carrasquero-Verde, J., T. Abbe and S, Morrison. 2005. Bulkheading in Thurston County: impacts on forage fish spawning habitat. Proceedings of the 2005 Puget Sound Georgia Basin Research Conference. Herrera Environmental Consultants.

[14] Dethier, M., W. Raymond, A. McBride, J. Toft, J . Cordell, A. Ogston, S. Heerhatz and H. Berry. 2016. Multiscale impacts of armoring on Puget Sound shorelines: evidence for cumulative and threshold effects. Estuarine, Coast and Shelf Science. 175 (2016) 106-117.

[15] A) Duffy, E., D. Beauchamp, R.M. Sweeting, R. Beamish and J. Brennan. 2010. Ontogenetic Diet Shifts of Juvenile Chinook Salmon in Nearshore and Offshore Habitats of Puget Sound. Transactions of the American Fisheries Society 139:803–823. And B) Sobocinski, K.L., J.R. Cordell and C.A. Simenstad. 2010. Effects of shoreline modification on supratidal macroinvertebrate fauna on Puget Sound Washington beaches. Estuaries and Coasts 33:699-711

[16] Rice, C. 2006. Effects of Shoreline Modification on a Northern Puget Sound Beach: Microclimate and Embryo Mortality in Surf Smelt (Hypomesus pretiosus). Estuaries and Coasts. Vol. 29, No. 1. p. 63-71

[17] A) Dethier, M., W. Raymond, A. McBride, J. Toft, J . Cordell, A. Ogston, S. Heerhatz and H. Berry. 2016. Multiscale impacts of armoring on Puget Sound shorelines: evidence for cumulative and threshold effects. Estuarine, Coast and Shelf Science. 175 (2016) 106-117. And B) Johannessen, J. and A. MacLennan. 2007. Beaches and bluffs of Puget Sound. Puget Sound Nearshore Ecosystem Partnership Report No. 2007-04. Published by Seattle District U.S. Army Corps of Engineers, Seattle, WA

intertidal beach habitat associated with the impacts of sea level rise, through a process known as the coastal squeeze as armoring prevents natural, landward translation of the upper beach[18].

Inadequacy of Proposed Mitigation

Riparian Vegetation: Images provided by the applicant clearly show that while some trees were retained, extensive removal of vegetation, including most of the shrub layer, has occurred at the site previous to and during the unpermitted construction in question and the majority of the bank is now dominated by grass. The clearing of vegetation from the bank and top of bank likely contributed to the instability of the bank, as roots provide a significant portion of the sheer stress of a slope and grasses do not provide the same value. In addition, the loss of the shrub layer has negatively impacted the functions and values of habitat across the entire site, negatively impacting beach microclimate and habitat for salmon prey.

The proposed riparian mitigation is limited in its geographic scope, number of plants and overall objectives and does not adequately address the impacts that have occurred at the site. Specifically, just 20 total shrubs and 10 dune grass plugs will be planted along the entirety of reach #6, only 2 trees are proposed to be planted along the entire planting area of about 500 linear feet and performance standards of just 50% canopy coverage at year 4, the final year of proposed monitoring are considered success (Exhibit 25 Appendix C pg 7). In addition, while the application materials note both the high impact of deer (Exhibit 25 Appendix C pg 4) and the dry nature of the area (Exhibit 25 Appendix C pg 5) the riparian mitigation plan design does not exclude deer or provide any watering after the original planting date. In addition, the vegetation mitigation plan utterly fails to even mention, never mind propose any mitigation for the wetland and stream buffers impacted by the unpermitted excavation and fill conducted during bulkhead construction.

Beach Nourishment: The application alludes to Washington Department of Fish and Wildlife (WDFW) approved mitigation plans but just a draft JARPA application (Exhibit 7) and a short email (Exhibit 17g) are provided and no specific design details, volumes, location, materials sourcing or evidence of review or authorization by either WDFW or the U.S. Army Corps of Engineers are provided in support of the no impact conclusion reached.

Wetlands and Streams: On May 18, 2018, the first reference to wetland and stream habitats were provided (Exhibit 36). However, the new report does not provide any assessment of current impacts

[18] Krueger, K.L., Pierce, Jr., K.B., Quinn, Timothy, and Penttila, D.E., 2010, Anticipated effects of sea-level rise in Puget Sound on two beach-spawning fishes, in Shipman, H., Dethier, M.N., Gelfenbaum, G., Fresh, K.L., and Dinicola, R.S., eds., 2010, Puget Sound Shorelines and the Impacts of Armoring—Proceedings of a State of the Science Workshop, May 2009: U.S. Geological Survey Scientific Investigations Report 2010-5254, p. 171-178.

from the extensive unpermitted excavation and fill that occurred within the wetland and stream buffers, or any note or plans for how the applicant plans to potentially mitigate impacts to this protected and valued habitat. This information must be provided to allow any accurate assessment of impacts to habitat function or determination of no net loss. Absent any information on the wetland and stream besides the late added map and recognition of the required water quality and habitat buffers (Exhibit 36 wetland B pg 3), the only reasonable finding from the information that has been provided about the unpermitted construction that has occurred and the location where it has occurred (Exhibit 25 appendix C pg 3 notes excavation from the bank landward 5 to 10 feet in width for 275 linear feet and Exhibit 36 figure 1. pg 2 clearly shows that portions of that work were located within the required buffers for wetland b and the stream), is that there has been substantial excavation and filling within the wetland and stream's habitat and water quality buffers and thus a net loss of freshwater habitat quantity and quality has occurred at the site.

Conclusions

The project site is located in a documented area of high ecological importance and functions as rearing habitat for juvenile salmon and forage fish and potential spawning habitat for forage fish. Allowing the hundreds of linear feet of unpermitted armor to be authorized, and eligible to be repaired, replaced and maintained in perpetuity, further degrading beach, riparian and wetland habitats, is incompatible with the no net loss standards for critical areas. If the applicants were requesting a new permit for construction of a structure of this expansive size and location to solve the problem of slope instability in a few concentrated locations from upland drainage issues caused by recent development, these known impacts to critical habitat and species would not be tolerated and alternatives would be required. This application should be treated no differently, and all the conditions of the code must be met. As the application materials themselves state, the erosion rate is estimated to be about an inch a year and vegetation is growing on the upper beach, a sign of a stable and low energy site where upland management changes or possibly soft shore beach stabilization could be utilized.

The negative impacts of shoreline armoring on beach habitat and salmon prey are well documented, and as this priority pocket beach for rearing salmon and forage fish has already been negatively impacted by additional, permitted and unpermitted armoring structures and a boat ramp, restoration followed by protection of the remaining functions is needed at this site. In addition, recent application materials indicate that substantial excavation and fill occurred in wetland and stream buffers and no assessment of the specific impacts or plans to mitigate for them have been offered. As constructed, even with the limited proposed mitigation of re-vegetation and beach nourishment implemented, the hard armoring will continue to cause impacts to critical areas including beach and wetland habitat function and impacts

are likely to increase over time[19]. Therefore, full removal and site restoration should be required. Alternative methods to address the root causes of the problem, which the record shows to be upland in origin must be employed to ensure no net loss of the functions and values for priority marine and wetland species and habitats into the future.

[19] Dethier, M., W. Raymond, A. McBride, J. Toft, J . Cordell, A. Ogston, S. Heerhatz and H. Berry. 2016. Multiscale impacts of armoring on Puget Sound shorelines: evidence for cumulative and threshold effects. Estuarine, Coast and Shelf Science. 175 (2016) 106-117. And B) Johannessen, J. and A. MacLennan. 2007. Beaches and bluffs of Puget Sound. Puget Sound Nearshore Ecosystem Partnership Report No. 2007-04. Published by Seattle District U.S. Army Corps of Engineers, Seattle, WA