IN THE COURT OF APPEALS OF THE STATE OF WASHINGTON

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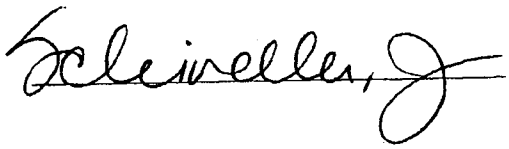
| DARRELL de TIENNE and CHELSEA FARMS, LLC,<br><br>Appellants,<br><br>v.<br><br>SHORELINES HEARINGS BOARD; PAUL H. GARRISON and BETTY N. GARRISON; PIERCE COUNTY; and COALITION TO PROTECT PUGET SOUND HABITAT,<br><br>Respondents. | ) | No. 74844-1-I<br><br>DIVISION ONE<br><br>ORDER GRANTING MOTIONS TO PUBLISH |

Respondents Betty N. Garrison and Coalition to Protect Puget Sound Habitat filed motions to publish the opinion filed on November 14, 2016. Appellants Darrell de Tienne and Chelsea Farms LLC and respondent Shorelines Hearings Board filed answers to the motions. A majority of the panel has determined that the motions should be granted. Now, therefore, it is hereby

ORDERED that respondents' motions to publish the opinion is granted.

DATED this 9th day of January, 2017.

For the Court:



Judge

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| DARRELL de TIENNE and CHELSEA FARMS, LCC, | ) | No. 74844-1-I |
| | ) | DIVISION ONE |
| Appellants, | ) | |
| v. | ) | |
| SHORELINES HEARINGS BOARD; PAUL H. GARRISON and BETTY N. GARRISON; PIERCE COUNTY; and COALITION TO PROTECT PUGET SOUND HABITAT, | ) | UNPUBLISHED OPINION |
| Respondents. | ) | FILED: November 14, 2016 |

SCHINDLER, J. — Darrell de Tienne owns a 10.74-acre intertidal and subtidal parcel of property located on the north shore of Henderson Bay. The property is designated as a shoreline of statewide significance. In 2005, de Tienne and Chelsea Farms LLC (collectively, de Tienne) applied for a shoreline substantial development permit to operate a commercial geoduck farm on 5 acres of the property. Eelgrass beds separate the intertidal and subtidal portions of the proposed geoduck farm. Eelgrass is a critical and fragile aquatic habitat protected by the Shoreline Management Act of 1971 (SMA), chapter 90.58 RCW, and the Pierce County Shoreline Master Program (SMP). The Pierce County Hearing Examiner approved the permit subject to a number of conditions. The Shorelines Hearings Board (SHB) reversed the decision. The SHB

concluded the permit did not adequately protect the eelgrass and approval was inconsistent with the SMA and the SMP. De Tienne appeals denial of the shoreline substantial development permit. De Tienne contends the SHB did not have the authority to deny the permit. In the alternative, de Tienne claims substantial evidence does not support finding adverse potential environmental impacts from the geoduck operation, the SHB erred in rejecting expert testimony, the Coalition to Protect Puget Sound Habitat did not meet its burden of proving the permit conditions were inadequate to protect the eelgrass, the SHB erroneously interpreted the Pierce County Code, and the SHB erred in requiring a cumulative impacts analysis. We reject de Tienne's arguments, and affirm.

Shoreline Property

Darrell de Tienne owns a 10.74-acre intertidal[1] and subtidal[2] parcel of property located on the north shore of Henderson Bay in Pierce County. The parcel "water ward of -4.5 tidal elevation is . . . designated a Shoreline of Statewide Significance." The Pierce County development regulations identify eelgrass as a critical habitat. A "continuous swath" of eelgrass runs across de Tienne's property parallel to the shoreline.

2001 Unauthorized Geoduck Harvesting

In 2001, de Tienne entered into a lease with Washington Shell Fish Inc. (WSF) to allow WSF to engage in the commercial harvesting of geoducks on his property.

In 2003, Pierce County issued a cease and desist order. The order stated WSF is violating the Pierce County Code by harvesting geoducks without a permit. The order

[1] Intertidal shore is the area that is above the low-tide line and exposed at low tide but under water at high tide.

[2] Subtidal shore is the area below the low-tide line and is always covered by water.

directs de Tienne and WSF to stop "[h]arvesting cultivating planting or allowing such activity without required shoreline permits" and stop "[w]orking or allowing working to be done in eelgrass beds without authorization."[3] "No actions were taken to restore" the eelgrass. The harvesting operation resulted in "extensive" damage to the eelgrass.

2005 Shoreline Development Permit

In July 2005, de Tienne and Chelsea Farms LLC (collectively, de Tienne) filed an application for a shoreline substantial development permit to operate a commercial geoduck farm on the five-acre intertidal and subtidal property owned by de Tienne. Geoducks are large edible burrowing clams indigenous to Puget Sound. Commercial geoduck farms "artificially plant and then harvest the geoduck."

Typically, geoduck farms are on intertidal land. De Tienne proposed planting, growing, and harvesting geoducks on .5 acres of intertidal and 4.5 acres of subtidal property. The geoduck operation in the subtidal area "would run along the seaward boundary of this eelgrass bed, separated by a buffer." De Tienne planned to stagger planting and harvesting "for different sections of the Farm." To plant the geoducks, "[p]lastic (PVC) tubes" measuring 8 to10 inches long and 4 inches wide are inserted into the sand substrate. The tubes would be spaced 15 to 18 inches apart, extend "2-3 inches above the substrate," and covered with netting to protect the geoduck seedlings.

> A small net is placed on top of each tube and/or a large net is placed over multiple tubes. The small nets are secured with bands. Large nets are secured with metal rebar with the expose ends bent downward. The tubes and nets protect the geoduck until they reach an adequate depth and size to avoid predators. Predators include snails, crabs, ducks, etc. The large nets also help prevent the escape of dislodged tubes. The amount planted each year will vary depending upon factors such as seed

[3] On appeal, WSF argued there was no requirement to obtain a shoreline substantial development permit to engage in geoduck cultivation in eelgrass beds. We disagreed and affirmed the cease and desist order. Wash. Shell Fish, Inc. v. Pierce County, 132 Wn. App. 239, 131 P.3d 326 (2006).

availability. However, at no time will the farm have more than two acres of tubes.

Three to four geoduck seedlings are placed in each tube. De Tienne proposed a "maximum of two acres of aquatic lands containing up to 56,000 tubes at any one time." The plastic tubes and "predator netting" are removed after approximately two years. When the geoducks mature in four to seven years, divers use high-pressure water jets to loosen the sand substrate and harvest the geoducks.

De Tienne conducted surveys and prepared maps identifying the eelgrass on the proposed site. De Tienne relied on the surveys "to establish baseline conditions for the Site." The surveys show a native eelgrass bed that spans the site with "two zones of eelgrass growth: (1) continuous bed growth within a tidal range of -2 and -7 [feet] MLLW [(mean lower low water)], and (2) patchy bed growth in a slightly more truncated area between -2 and -7 [feet] MLLW."

Subtidal Geoduck Harvesting FSEIS

In 2001, the Washington State Department of Natural Resources (DNR) and Washington State Department of Fish and Wildlife (WDFW) issued a "Final Supplemental Environmental Impact Statement" for the "State of Washington Commercial Geoduck Fishery" (FSEIS). The FSEIS is the only environmental impact statement that addresses subtidal geoduck harvesting. The FSEIS took 10 years to complete and "went through significant peer review." The FSEIS identifies known adverse impacts from geoduck harvesting. The FSEIS concludes that subject to the "mitigation measures" in the FSEIS, there is "only a very slight potential for impacts based upon the low risk of adverse effects to marine organisms." One of the FSEIS mitigation measures requires maintaining "[a] 2-foot vertical buffer or a minimum of 180

foot buffer (for tracts with a very gradual sloping contour) . . . between the harvest area and eelgrass beds and any substrate used for herring spawning."

2009 Eelgrass Habitat Assessments

In October 2009, de Tienne's environmental consultant ENVIRON International Corporation prepared an "Eelgrass Delineation and General Habitat Assessment" (Habitat Assessment) for "potential development of geoduck aquaculture" on four parcels owned by de Tienne. The goal of the study was "to delineate potential eelgrass habitat and other important habitat characteristics within the four tax parcels owned by Darrell de Tienne in relation to potential development of geoduck aquaculture." The Habitat Assessment acknowledges the ecological importance of eelgrass.

> Because eelgrass is a well-recognized ecological resource within Puget Sound, the study focused on mapping the extent, quality and composition of eelgrass in the largest tax parcel (0122233064). The current estimate of total eelgrass area in Puget Sound is 52,900 [plus or minus] 9,100 acres (Gaeckle et al. 2008). However, according to the latest survey (Gaeckle et al. 2008), there was a significant amount of eelgrass decline at the north end of Henderson Bay from 2001 through 2007 (average of 11.7% loss per year). The authors do not speculate on reasons for this specific decline, but do state that tracking changes over time will aid in researching causal or correlative factors for loss at different spatial and temporal scales. The current survey of eelgrass associated with de Tienne tax parcels can serve as a baseline for monitoring environmental changes within the intertidal/subtidal zones.

The Habitat Assessment identifies the eelgrass on the 10.74-acre parcel located at Henderson Bay. The Habitat Assessment states the "total area of land within the property boundaries that contained eelgrass was . . . 2.05 acres . . . , which represented approximately 20% of the 10.74-acre parcel." The Habitat Assessment "avoidance and minimization measures" to "prevent impacts to the existing eelgrass beds" include

adopting the FSEIS buffer of 2 vertical feet for subtidal geoduck harvesting and the WDFW buffer of 10 feet for intertidal harvesting.

> [A] variety of avoidance and minimization measures will be implemented to prevent impacts to the existing eelgrass beds. Minimum buffer distances would be maintained shoreward and waterward of the outer boundaries of the eelgrass bed delineated in this report . . . . These distances correspond to a buffer width of 10 [feet] shoreward of the bed, and 2 vertical feet waterward of the deep water boundaries of eelgrass and kelp that were observed in survey. These buffer distances correspond with those already in place under the WDFW hydraulic project approval guidelines (10 [feet]), and [ ]DNR buffer distances prescribed for subtidal geoduck harvests of wild stocks.

In November 2009, ENVIRON prepared a "Critical Fish and Wildlife Habitat Area Review: Habitat Assessment Study at de Tienne Tax Parcels in Pierce County, Washington" (Critical Habitat Assessment). The Critical Habitat Assessment reiterates imposition of a horizontal 10-foot shoreward buffer and a vertical 2-foot waterward buffer "to prevent impacts to the existing eelgrass beds."

> Minimum buffer distances would be maintained shoreward and waterward of the outer boundaries of the eelgrass bed delineated in this report . . . . These distances correspond to a buffer width of 10 [feet] shoreward of the bed, and 2 vertical feet waterward of the deep water boundaries of eelgrass and kelp that were observed in survey. These buffer distances correspond with those already in place under the WDFW hydraulic project approval guidelines (10 [feet]), and [ ]DNR buffer distances prescribed for subtidal geoduck harvests of wild stocks ([ ]DNR 2008).

<u>2011 Biological Evaluation</u>

In July 2011, ENVIRON prepared a "Biological Evaluation of Potential Impacts to [Endangered Species Act]-listed Species, Critical Habitat and Essential Fish Habitat, from a Proposed Geoduck Aquaculture Farm in Henderson Bay" (Biological Evaluation). The Biological Evaluation describes de Tienne's proposal to operate a commercial

geoduck farm on the Henderson Bay property and the need for a vertical 2-foot subtidal buffer and 10-foot intertidal buffer to protect the eelgrass.

> The proposed project involves the aquaculture (aquatic farming) of geoduck clams (Panopea generosa) on lower intertidal and subtidal aquatic lands owned by the applicant in Henderson Bay, near Purdy, WA ( . . . Pierce Co. Parcel 0122233064). The project action under analysis here involves the staggered planting, grow-out and harvest of native geoduck clams on these intertidal and subtidal lands, outside of native eelgrass beds found on portions of the parcel. As filter feeding planktivores, no supplemental feed is provided.
>
> Shellfish culture activities would occur on a 10.74 acre parcel owned by the applicant (Pierce County parcel number 0122233064) between a tidal range of about +2 to -38 [feet] mean lower low water (MLLW) . . . . Considering a 10 [foot] intertidal buffer from an existing native eelgrass bed on the parcel, and a 2 vertical foot buffer from the subtidal edge of the eelgrass bed, as previously delineated, there are about 5.0 acres of cultivable aquatic land on the parcel outside of native eelgrass buffers identified from survey. In the SE quadrant of the property, approximately 3/4 acre of these lands ([about] 15%) is intertidal and the remainder is subtidal. Both proposed intertidal and subtidal planting areas are outside of the eelgrass beds and proposed buffers.
>
> Staggered planting by the farm operator/lease (Chelsea Farms LLC) would occur from April through November, based on seed availability, though predominantly in the late spring and early summer months. Planting activity consists of placing 4-inch diameter PVC tubes into the substrate to protect the out-planted geoduck seed from potential predators. The tops of the tubes will extend about eight to 10 cm (about 3 to 4 inches) above the substrate, and the tubes will be positioned about 15 inches apart on center.
>
> After planting, the 4-inch diameter PVC tubes are covered with 1-inch mesh canopy predator exclusion netting secured over the 'tube fields' with rebar hooks positon about every 4 to 6 feet.

The United States Army Corps of Engineers, National Marine Fisheries Service, and United States Fish and Wildlife Service reviewed the Biological Evaluation and the use of a "2 vertical foot buffer from the subtidal edge of the eelgrass bed" on the parcel.

Based on the 2011 Biological Evaluation, the National Marine Fisheries Service and United States Fish and Wildlife Service issued "concurrence letters."

MDNS for Proposed Commercial Geoduck Farm

In November 2012, Pierce County Planning and Land Services Department Senior Planner Ty Booth issued a "Mitigated Determination of Nonsignificance" (MDNS) for de Tienne's proposed commercial geoduck operation at Henderson Bay under the State Environmental Policy Act, chapter 43.21C RCW. The MDNS identifies adverse impacts including turbidity as an adverse impact to "fish and wildlife species and their habitat." The MDNS imposed 12 mitigation measures and required de Tienne to submit a "fish and wildlife application and habitat assessment." In response, de Tienne submitted the November 2009 Critical Habitat Assessment that identifies minimum buffers of 10 feet shoreward and 2 vertical feet waterward to protect the eelgrass. Pierce County determined that "compliance with the conservation measures detailed" in the Critical Habitat Assessment and Pierce County's critical areas development regulations would "adequately mitigate any probable significant adverse impacts to eelgrass and macro algae."

Staff Report

In March 2013, Booth and Pierce County Planning and Land Services Department Environmental Biologist David Risvold issued a "Staff Report." The Staff Report recommended approval of the proposed geoduck farm subject to 26 conditions including "Farm activities shall be maintained a minimum of 10 feet away (on the shore side) and two vertical feet (on the water side) from eelgrass beds." The Staff Report

states, in pertinent part:

> **RECOMMENDED CONDITIONS OF APPROVAL:**
>
> . . . .
>
> C. A physical separation shall be maintained between farm activities and beds of submerged aquatic vegetation (eelgrass and kelp species [rooted species in the order Laminariales]). For purposes of this application, a "bed" shall consist of three or more individual plants.
>
> (1) Farm activities shall be maintained a minimum of 10 feet away (on the shore side) and two vertical feet (on the water side) from eelgrass beds.
>
> (2) Farm activities shall be maintained 10 feet away from any kelp beds.[4]

The Pierce County Key Peninsula Advisory Commission (KPAC) held a public meeting on de Tienne's application for the shoreline substantial development permit.

> The KPAC considered the following concerns: the Rural Residential environment; views of the area; areas of high winds with lots of debris; subtidal harvest damage to Sound floor; different permit requirements for aquaculture; need for reports that aquaculture will not damage the ecology; . . . concerns about long-term effects; concerns about no net loss of ecological function.

The KPAC voted "to recommend approval of the staff report as presented."

Hearing Examiner Decision

The Pierce County Hearing Examiner (Hearing Examiner) scheduled a hearing on the shoreline substantial development permit for March 27, 2013. The Hearing Examiner held the record open and continued the hearing to May 2 for testimony.

De Tienne's attorney submitted a letter objecting to conditions recommended in the Staff Report. For the first time, de Tienne objected to the vertical 2-foot buffer "between farm activities and native eelgrass beds" in the subtidal planting and

[4] Some alteration in original.

harvesting area. The attorney argued the 2-foot vertical buffer "would translate into a 40-80 foot horizontal buffer at the subject property, severely restricting the cultivable area at the farm and imposing a significant hardship on the Applicants." De Tienne claimed the 2-foot vertical buffer "appears to be based on outdated, inapplicable, and scientifically unsupported buffers related to the harvest of wild geoducks on state lands." The attorney states de Tienne will submit a memorandum from their expert Marlene Meaders on an "alternative buffer of 10 horizontal feet with monitoring."

Meaders submitted "A Review of Potential Adverse and Positive Effects from a Proposed Geoduck Clam Farm in Henderson Bay - de Tienne/Chelsea Farms." The memorandum identifies eelgrass and kelp as "habitats of special concern ([former] WAC 220-110-250(3)(a,b) [(1994)])."[5] Meaders states the site contains approximately three acres of eelgrass beds.

> Eelgrass resources were surveyed and mapped in 2004, 2009, and 2012. All three surveys identified eelgrass within approximately the same areas. Although there is natural interannual variation, the extent and location of eelgrass is very well understood within the aquatic parcel. Total area of land within the project area that contained eelgrass was about 3.0 acres ranging from -2 to -8 [feet] MLLW . . . . [T]he eelgrass boundaries identified in 2012 were based on a very conservative view of a continuous eelgrass bed.

Meaders acknowledged the FSEIS established "180-[foot] horizontal and 2-[foot] vertical" buffers "[i]n order to protect eelgrass habitat from wild geoduck harvest activities." But Meaders asserts there "was no need to provide a precise buffer distance based on the best available science." According to Meaders, a buffer width of either 25 feet "without monitoring" or a 10-foot buffer "with monitoring" was adequate to protect

[5] Chapter 220-110 WAC was repealed in 2015 and incorporated into chapter 220-660 WAC. WASH. STATE REGISTER 15-02-029 (Order 14-353 July 1, 2015).

the eelgrass beds. Meaders cited a number of studies to support imposing a smaller buffer between the subtidal commercial geoduck operation and the eelgrass.

Meaders testified at the May 2 hearing. Meaders stated that "much of the information" referenced in her memorandum "is a summary of the expert testimony from the Longbranch hearing before the Pierce County Hearing Examiner and the Shorelines Hearings Board." Coal. to Protect Puget Sound Habitat v. Pierce County, No. 11-019, 2012 WL 3577481 (Wash. Shorelines Hr'gs Bd. July 13, 2012) (Longbranch).

Meaders testified that "there is a low potential for adversely impacting spawning beds from sediment mobilized during harvest" and "[b]uffers would protect herring spawning in eelgrass from aquaculture activates." According to Meaders, the condition "requiring habitat surveys is not necessary because the Applicants would carry out monitoring studies instead."

Booth testified that Pierce County did not agree with de Tienne's request to limit the eelgrass bed to "native eelgrass" but agreed to delete the requirement for a habitat survey and agreed to reduce the buffer "on the waterward edge of the eelgrass." Risvold testified that the parties "agreed on 25 horizontal feet, along the waterward edge of the eelgrass buffer, as a sufficient buffer, along with monitoring." Risvold testified the WDFW and the Department of Ecology "were included among the parties agreeing to conditions" but he "was not present on [the] conference call" with Meaders, WDFW, the Army Corps of Engineers, the Department of Ecology, and DNR staff.

The Hearing Examiner approved the shoreline substantial development permit subject to conditions including the eelgrass buffers proposed by de Tienne: a 10-foot buffer for the intertidal shore side of the eelgrass bed and a 25-foot horizontal buffer for

the subtidal water side of the eelgrass bed. The Hearing Examiner decision allows de Tienne to reduce the 25-foot buffer "in a limited number of locations for purposes of monitoring" and allows de Tienne to further reduce the 25-foot buffer if monitoring "demonstrates a small[er] buffer provides effective protection of the eelgrass bed."[6] The Hearing Examiner concluded the "proposal is consistent with the policies of the Shoreline Management Act" and "consistent with the Pierce County Shoreline Master Program."

The Coalition to Protect Puget Sound Habitat (Coalition), property owners Paul and Betty Garrison, and de Tienne filed petitions for review of the Hearing Examiner decision with the SHB.

The Coalition argued the SHB should reverse approval of the shoreline substantial development permit because the permit conditions did not protect the fragile areas or "existing aquatic resources" from damage and violated the SMA and the Pierce County shoreline and critical areas regulations. The Garrisons raised a number of

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[6] The decision states, in pertinent part:

> A physical separation shall be maintained between farm activities and beds of submerged aquatic vegetation (eelgrass and kelp species [attached species in the order Laminariales]). . . .
>
> > (1) Farm activities shall be maintained a minimum of 10 feet away (on the shore side) and a minimum of 25 . . . horizontal feet (on the water side) from eelgrass beds. The 25-foot buffer may be reduced in a limited number of locations for purposes of monitoring.
> >
> > (2) The 25-foot buffer may be reduced if monitoring over the course of at least one complete planting and harvest cycle demonstrates a small buffer provides effective protection of the eelgrass bed.
> >
> > (3) Farm activities shall be maintained 10 feet away from any kelp beds.
> >
> > (4) Protective eelgrass requirements do not apply to eelgrass that recruits into the farm area.

(Some alteration in original.)

issues including a property dispute. De Tienne challenged two of the conditions "that were not needed to remedy significant environmental impacts."[7]

During the prehearing conference, "the parties agreed to consolidation." The SHB entered an order that consolidated the three petitions for review under SHB No. 13-016c.

Before the hearing, the SHB dismissed "numerous legal issues" and the Garrisons' petition for review. The SHB granted the Garrisons "limited intervention" to participate in the hearing on the issue of whether the proposed farm was consistent with the requirements of Pierce County Code (PCC) 20.24.020.A.3.

In his prehearing brief, De Tienne argued that most of the Coalition's claims were previously rejected by the SHB in Longbranch and Coalition to Protect Puget Sound Habitat v. Thurston County, No. 13-006c, 2013 WL 5676901 (Wash. Shorelines Hr'gs Bd. Oct. 11, 2013) (Lockhart). De Tienne asserted collateral estoppel barred the Coalition from asserting the same claims. De Tienne also argued the Coalition "cannot meet their burden to show that the alleged impacts will occur or that they will result in violations of the SMA or SMP."

The SHB held a six-day hearing. The hearing focused "only on Legal Issue No. 15 (with subparts)."

> Legal Issue No. 15: Was the Pierce County Hearing Examiner's approval of the de[ ]Tienne [shoreline substantial development permit] done in

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[7] De Tienne challenged the following two conditions as "unnecessary because they are not required to eliminate or reduce a significant impact required to be mitigated under the County's Shoreline Master Program:"

- Diver communication with the surface shall not utilize a loudspeaker system. (Condition 21)
- A preliminary survey for eelgrass shall be completed between June 1 and October of each harvest year, following WDFW protocols. Both Zostera marina and Zostera japonica shall be included in eelgrass surveys. (Condition 26.D).

violation of RCW 90.58.020 (and other subsections included in part B) and PCC 20.24.020 (and other subsections included in part B) because:

. . . . The authorized development in this high value site that includes a Shoreline of Statewide Significance does not protect against adverse impacts of harm, damage, and loss of ecological functions, loss of the natural environment and values of the shorelines?

. . . . The authorized development does not promote and enhance the public interest including the quality of life, public's opportunity to enjoy the physical and aesthetic quality of the shoreline, preservation of the natural environment, safety, and intensive recreational uses afforded to the public?

. . . . The authorized development is not consistent with the overarching goal of protecting, preserving, restoration of Washington's natural shoreline or consistent with related state agency goals and management actions?

. . . . The authorized development does not preclude damage to specific fragile areas and existing aquatic resources and does not maintain the highest possible levels of environmental quality and compatibility with native flora and fauna?

. . . . The authorized development with perpetual operations does not preclude damage to the natural ecosystem and ecology of the area including, but not limited to, the following issues: forage fish, salmon, native species, prey resources, forage fish eggs, forage fish larvae, crab larvae and other intertidal species eggs and larvae?

. . . . The authorized development does not preclude damage by allowing plastic netting that decreases biodiversity, increases siltation/ sedimentation, increases organic matter, entangles aquatic life as well as poses a safety risk to the public?

. . . .

. . . . The authorized development does not protect against aquaculture operations that cannot be maintained in a safe and sound condition in this well-known wind/high energy area?

. . . . The authorized development and the arbitrary buffers do not protect the eelgrass and macroalgae conservation areas as required by Pierce County critical areas regulations?

. . . .

> . . . . The authorized development failed to provide adequate conditions to properly mitigate for impacts to the shoreline areas as to insure no harm, no loss of ecological function, minimize insofar as practical any resultant damage to the ecology, forage fish, juvenile salmon migratory corridor, or the interference with the public's use of the water?
>
> . . . . The authorized development does not require the respondent (de[ ]Tienne) to mitigate or restore eelgrass degraded during past geoduck aquaculture activities in this area?

The Coalition called a number of witnesses to testify about the adverse impacts of the proposed commercial geoduck farm on the environment, the inadequacy of the permit conditions, and recreational use. The Coalition presented the testimony of three expert witnesses: fish biologist Daniel Penttila, certified fisheries scientist Wayne Daley, and environmental scientist Dr. Gary Ritchie. Pierce County Senior Planner Booth and Environmental Biologist Risvold, de Tienne, and his expert witness Meaders also testified. The SHB admitted more than 150 exhibits. The parties stipulated to the admission of most of the exhibits including the Hearing Examiner decision, the FSEIS, surveys, the 2009 Critical Habitat Assessment, the 2011 Biological Evaluation, research studies, correspondence, e-mails, maps, and photographs.

Adjacent property owner Robert Wenman is a land use planner with 30 years of experience. Wenman presented slides and maps showing extensive eelgrass beds on the proposed site "in the middle of an extensive and highly productive" critical habitat area. Wenman testified the FSEIS is the only environmental review for subtidal geoduck harvesting. Wenman notes the FSEIS was based on 10,000 holes per acre. By contrast, de Tienne proposed inserting 56,000 tubes in two acres with three to four geoduck seedlings in each tube.

Former WDFW biologist Penttila testified as an expert on "forage fish" and "submerged aquatic vegetation." Penttila testified, "[I]t is very likely that herring will eventually be found to use the relatively lush vegetation beds of eelgrass and marine algae on and around the de Tienne project site." Penttila stated a "wide scale anti-predator webbing" would decrease the "biomass and abundance" of all types of marine plants. Penttila testified that based on the need to protect eelgrass identified in the FSEIS, a "two-foot vertical buffer or the hundred-and-eighty-foot buffer should be applied to this project."

Meaders testified that she is an expert in a number of fields including "sediment transport and dynamics," "[s]upended sediments and turbidity," and "[v]egetation community." Meaders testified she believed the two-foot vertical buffer in the FSEIS was "not relevant" to the proposal. Meaders relied on a number of studies to conclude the "potential effects to water quality, physical conditions, and flora and fauna from a geoduck harvest event are localized, limited in duration, and do not result in significant effects."

Meaders admitted the "potential effects to eelgrass from a harvest event are going to be whether or not the suspended sediment gets into the eelgrass and persists because that would affect . . . the ability for those plants to photosynthesize." But according to Meaders, the "sediment plume generated during a harvest event has been shown to be short-term and localized." Meaders said the "data indicates that a 10-foot buffer is likely protective."

The SHB entered an extensive 58-page decision, "Findings of Fact, Conclusions of Law, and Order." Preliminarily, the SHB rejected the argument that the Longbranch

and Lockhart decisions controlled. The SHB noted the proposed geoduck operation on de Tienne's property "would be primarily in the subtidal zone, which distinguishes this Farm from others reviewed by the Board located in the intertidal zone;" the proposal "would be the first subtidal commercial geoduck operation to be permitted in Pierce County;" and significantly, unlike "other geoduck farms reviewed by the Board," there was a critical eelgrass habitat.

> [T]he proposed Farm . . . sits over a continuous swath of eelgrass that runs adjacent to the shoreline of Henderson Bay. Planting of geoducks in the subtidal area of the Farm would run along the seaward boundary of this eelgrass bed, separated by a buffer.

The SHB states these distinctions are the main focus of the analysis and "ultimately, its decision to deny the Permit in this case."

> [T]his case presents some unique aspects that include the presence of eelgrass at the Farm Site, the proximity of known herring spawning locations to the Farm Site, the specialized recreational use of the area for windsurfing, and the Farm Site's location on a shoreline of statewide significance. These areas of distinction serve as the main focus of the Board's analysis and, ultimately, its decision to deny the Permit in this case.

The SHB findings describe the proposal to operate a five-acre commercial geoduck farm on a site that is zoned for aquaculture but is designated as a shoreline of statewide significance. The findings address the location of a "continuous swath" of critical eelgrass habitat including an area "damaged by previous operations."

The SHB findings describe the diverse aquatic ecosystem and the high winds and waves at the site.

> This area of Puget Sound supports diverse aquatic life that includes eelgrass and kelp, forage fish (including herring, surf smelt, and sand lance), aquatic organisms (including sand dollars and sea stars), and various terrestrial species such as bald eagles. Purdy Creek is a nearby

> salmon spawning creek that flows into the north end of Henderson Bay. Orca and grey whales have also been spotted in the Bay. . . .
>
> . . . .
>
> This area also boasts a large fetch, the distance over which the wind can blow unobstructed by land, making it a popular windsurfing spot. The winds create high waves that translate into a higher energy shoreline environment.

The findings address the evidence establishing the important role of eelgrass in the ecological system.

> Both eelgrass and macroalgae provide major ecological benefits as habitat for out-migrating juvenile salmon and for forage fish, including herring, to spawn. Herring are one of three major shore-spawning forage fish species in Puget Sound; they are a key species in the marine food web and therefore a good "indicator species" for gauging the relative health of the Sound. Herring spawn cling to vegetation, including eelgrass. Evidence of spawning can easily be seen by the naked eye, especially when spawning occurs at medium or high intensities. . . .
>
> . . . .
>
> Eelgrass and macroalgae . . . serve vital ecological roles in addition to providing spawning habitat. This includes carbon-fixing/sequestration, the production of organic matter and detritus (the basis of the food chain), and the provision of physical habitat for use by adult marine species and as a refuge and nursery area for juvenile life stages. Eelgrass is particularly susceptible to disturbances. This can include both direct disturbances like trampling, plus effects from indirect disturbances (e.g., sedimentation and related turbidity) that decrease light availability.

The record established de Tienne originally adopted the FSEIS buffer for harvesting geoducks in the 4.5-acre subtidal portion of the proposed farm. "[T]he Applicants originally proposed a two vertical foot buffer in the subtidal zone, . . . which would equate to a 40-50 foot horizontal buffer based on conditions at this Site." The record established the "MDNS and Staff Report that reviewed the application were based on this proposed larger seaward buffer" and "some federal agency consultation was based on the larger, two-foot vertical buffer."

The findings state that after Pierce County issued the Staff Report imposing the two-foot vertical buffer, de Tienne "began negotiations for a smaller buffer, with the express intent of gaining more farmable area." The testimony established de Tienne "viewed the larger buffer as 'severely restricting the cultivable area of the farm and imposing a significant hardship.' "

The SHB found the testimony of Penttila on the inadequacy of the buffers to protect eelgrass credible.

> As a fisheries expert who has conducted approximately 800 herring spawn surveys over the past three decades, it was Mr. Penttila's unopposed view that the Purdy stock's habitat is not yet completely known, and that additional surveys would be necessary to accurately determine the full spatial extent of their spawning habitat. It was also his unopposed opinion that the distance from where the Purdy stock have been documented to spawn to the Farm Site would be a small spatial leap for them to make in subsequent seasons, making it highly likely that herring will spawn at the Farm Site in subsequent years. . . . The Board finds that eelgrass at the Farm Site is, therefore, a potential spawning habitat for Purdy stock herring and it is highly likely herring will spawn in the eelgrass beds on and around the Farm Site. The Board finds that, because the Permit fails to adequately protect eelgrass, it also fails to adequately protect herring, which depend on eelgrass for spawning habitat.

The SHB found Penttila's testimony persuasive that the buffers "are not protective of eelgrass" and "a two-foot vertical seaward buffer should be imposed" as recommended in the FSEIS.

The SHB found that while Meaders "is knowledgeable of the geoduck industry and science underlying aspects of industry practices," she was not "a credible expert in all aspects of study related to the nearshore environment to which she claimed expertise." Specifically, "geomorphology or sediment transport, or eelgrass biology and growth." Because of her "lack of independent expertise," the SHB found Meaders' testimony "largely constituted her summarization of work done by other experts on the

potential spillover effects to eelgrass, thus making her unable to offer an independent opinion."

The SHB found Pierce County agreed to the smaller buffers based on the concurrence of other agencies and Meaders' representation that "the smaller buffers represented the implementation of 'best available science.' " The SHB addressed the studies Meaders relied on and concluded there was "unpersuasive scientific support for the smaller eelgrass buffer at this Site." The SHB found the one soon-to-be published study "did not address impacts to eelgrass, in particular." According to Meaders, she relied primarily on three unpublished analyses or studies to support the smaller buffer:

> (1) [A]n internal agency Technical Memorandum on the Operational Definition of an Eelgrass (Zostera marina) Bed (Tech Memo . . .); (2) an unpublished study by Michael Horwith at the University of Washington that assessed "spillover effects" from an existing Samish Bay geoduck farm (Horwith Study . . . ); and (3) an unpublished study by Dr. Pearce of the Department of Fisheries and Oceans in Canada that directly assessed the impacts of a subtidal geoduck harvest on nearby eelgrass (Pearce Study . . . ).

The SHB found the DNR internal agency Tech Memo "did not address impacts to eelgrass from geoduck aquaculture, nor suggest an appropriate buffer area," and did not support Meaders' opinion that "eelgrass is limited in its ability to expand at the Farm Site based on limitations in subtidal light."

> The Board does not find Ms. Meaders' opinion on this point persuasive due to her lack of expertise in this area, the fact that the Tech Memo did not provide direct support for this opinion, and the fact that her opinion was not supported by any site-specific analysis. Nor did Ms. Meaders evaluate the fact of prior eelgrass damage and degradation as it pertains to the manner in which eelgrass would be expected to recover and expand at the Site over time.

The SHB found the Horwith Study "assessed impacts from an operating intertidal geoduck farm in Samish Bay." The SHB concluded the Horwith Study did not support Meaders' opinion on the "spillover effects from geoduck harvest."

> Although acknowledging the limited use of the study results to the proposed Farm, Ms. Meaders nonetheless relied on this study as identifying a maximum spatial extent for spillover effects from geoduck harvest that is limited to nine meters (the end of the second zone in the study). She further testified that, in her opinion, nine meters overestimates the potential for spillover effects at this Site. . . . This opinion is not adequately supported by the Horwith Study.

The Pearce Study "looked at effects from a subtidal geoduck harvest on nearby eelgrass." Meaders testified she "relied most heavily" on the Pearce Study.[8] The SHB found the Pearce Study of limited applicability.

> To the extent the Board considers the Pearce Study, the Board finds it provides limited applicability to the current proposed Farm. The planting densities and duration of harvest activities in the Pearce Study are different from those of the proposed Farm in this case. In the Pearce Study, a 1.5-acre subtidal plot (60 x 100 [square meters]) was planted with geoducks at a density of 1.58 individuals per one-half square meter (approximately five square feet). . . . The edge of the study plot was five meters seaward of an eelgrass bed. . . . Geoducks were harvested over a two-day period, with a total of 1,554 harvested. . . . In contrast, the tubes at the proposed Farm will be placed approximately 15 inches apart on center and will be planted with three to four seeds each. . . . Harvesting activity will be more intense as it will occur five to eight days at a time, for up to four hours on 0.1 to 0.8 acres depending on the number of harvesters. . . . Although no precise figure was presented, it is anticipated that the harvested quantities of geoducks from the proposed Farm will substantially exceed those in the Pearce Study.
>
> . . . .
>
> It is also not clear that the Pearce Study assessed subtidal conditions like those found at this Site, including the high wind and wave activity translating into a higher energy subtidal environment at the Site.

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[8] The SHB noted:

Mr. Pearce apparently requested that the report on his study . . . not be relied upon as evidence at hearing, as it has not been peer reviewed or published—and Appellants cautioned the Board not to rely upon it. Meaders Testimony (relying on a personal communication with Mr. Pearce); . . . Statement by . . . counsel for the Applicants.

The SHB found Meaders' opinion "on the protectiveness of the smaller buffer unpersuasive."

> The Board finds these studies do not provide sufficient scientific support for Ms. Meaders' opinion that the buffers imposed will adequately protect eelgrass at this Site, and thus finds Ms. Meaders' opinion on the protectiveness of the smaller buffer unpersuasive. The Board is left with no real analysis in the record that assesses spillover effects to nearby eelgrass for a similarly-scaled geoduck farm operating in a higher energy subtidal environment.

The SHB found de Tienne and Pierce County also relied on monitoring and an "unspecified approach to adaptive management" to "justify the reduced buffer size." The SHB found an "overreliance on monitoring and adaptive management to mitigate impacts . . . is particularly concerning" because "the Permit does not incorporate any required implementation for change—i.e. to increase the buffer should monitoring prove the need for greater protection."

> There may be real consequences from selecting the small buffer here, given the particularly fragile state of eelgrass at this Site. Neither the Applicant nor the County considered the extent to which eelgrass might persist in a degraded state, that the past survey(s) may consequently have set what is an already-degraded baseline for assessing eelgrass, and that no area for potential expansion was included in the buffer. Instead, the degraded Site will be used for aquaculture in a manner that will ensure no further recovery.

The SHB concluded the Coalition "met its burden to show that the Permit conditions are inadequate to protect eelgrass." The buffers represent "the lowest sized buffer . . . typically applied to protect eelgrass" and the monitoring conditions do not adequately protect the eelgrass. The SHB also found the Coalition met its burden to show the permit conditions were inadequate to protect species that depend on eelgrass

including herring, juvenile salmon, forage fish, and other benthic organisms.

> The Board concludes that Pierce County approved a permit with the smallest buffer possible, in the absence of any scientific basis for such a small buffer. This small buffer, when combined with an overreliance on monitoring and adaptive management, a lack of accounting for off-site impacts, and the potential need for restoration and/or expansion of eelgrass made particularly fragile from past commercial geoduck harvest activity at the Site, contravenes the requirements in the SMA, its implementing regulations, and Pierce County's SMP.

The SHB concluded the permit did not appropriately balance statewide interests and was inconsistent with RCW 90.58.020.

> Given the lack of protection for eelgrass and related ecosystem values at the Site, the Board concludes that the Farm proposed is not consistent [with] the SMA's requirement that the interest of all people be paramount in the management of this shoreline of statewide significance. RCW 90.58.020. In particular, the potential for impacts to eelgrass and other dependent aquatic resources make this proposal one that does not "recognize and protect the state-wide interest over the local interest," does not "result in long term over short term benefit," and does not adequately "protect the resources and ecology of the shoreline." RCW 90.58.020(1), (3), (4). Further, because the Farm may negatively impact the public's use of the area for windsurfing and other recreational uses, it does not "increase recreational opportunities for the public in the shoreline." RCW 90.58.020(5).
>
> Balancing these considerations as mandated by the SMA weighs in favor of denying the Permit for these shoreline of statewide significance.

Because the record did not support "making any definitive determination on a more appropriate buffer size within the ranges discussed in the evidence," the SHB reversed and denied the shoreline substantial development permit. But the SHB expressly states the decision does not "rule out that a future operation, with appropriate analysis, buffers, and conditions that address site characteristics and limitations, could not be permitted under the SMA." The superior court affirmed the SHB Findings of Fact, Conclusions of Law, and Order entered on January 22, 2014.

Appeal of SHB Decision

De Tienne contends the SHB decision is not timely. In the alternative, he claims the evidence does not support finding potential adverse environmental impacts on the eelgrass, the SHB erred in rejecting the testimony of Meaders, the Coalition did not meet its burden of proving the conditions to protect the eelgrass were inadequate, the SHB erroneously interpreted the Pierce County Code requirements, and the SHB erred in requiring a cumulative impacts analysis.[9]

Shoreline Management Act

All development on the shorelines of this state undertaken after June 1, 1971 must conform to the Shoreline Management Act of 1971 (SMA), chapter 90.58 RCW. Buechel v. Dep't of Ecology, 125 Wn.2d 196, 203, 884 P.2d 910 (1994) (citing RCW 90.58.140(1), (2)).

The SMA is liberally construed "to give full effect to the objectives and purposes for which it was enacted." RCW 90.58.900. The essential purpose of the SMA is to protect the shorelines of the state because they are "among the most valuable and fragile of its natural resources." RCW 90.58.020. Permitted shoreline uses must be designed and conducted in a manner that minimizes damage to the ecology, damage to the environment, and interference with the public's use of Washington's water. RCW 90.58.020. The SMA provides, in pertinent part:

> The legislature finds that the shorelines of the state are among the most valuable and fragile of its natural resources and that there is great concern throughout the state relating to their utilization, protection, restoration, and preservation. . . . There is, therefor, a clear and urgent demand for a

[9] De Tienne makes a number of additional arguments in the footnotes of his brief. Arguments raised in footnotes need not be considered. Tamosaitis v. Bechtel Nat'l, Inc., 182 Wn. App. 241, 248 n.2, 327 P.3d 1309 (2014).

> planned, rational, and concerted effort . . . to prevent the inherent harm in an uncoordinated and piecemeal development of the state's shorelines.

RCW 90.58.020.

To ensure coordinated development of our shorelines, the SMA establishes a permit system, with the primary responsibility for its administration upon local government, for the control of such development consistent with the SMA and the local jurisdiction's SMP. RCW 90.58.050, .140(2).[10] A local government may issue a shoreline substantial development permit "only when the development proposed is consistent with the applicable master program and [the SMA]." RCW 90.58.140(2)(b).

A permit applicant bears the burden of proving the proposal is consistent with the SMA and local SMP. RCW 90.58.140(7); Buechel, 125 Wn.2d at 205. Any person aggrieved by a local government's issuance of a shoreline substantial development permit can seek review to the SHB. RCW 90.58.180(1); Buechel, 125 Wn.2d at 204. The SHB review of a shoreline development permit is de novo. Buechel, 125 Wn.2d at 202. The SHB is a quasi-judicial administrative body "with specialized skills in hearing shoreline cases," and this court is obligated to give due deference to the SHB's "specialized knowledge and expertise." Buechel, 125 Wn.2d at 204, 202-03.

Standard of Review

The Washington Administrative Procedure Act, chapter 34.05 RCW, governs judicial review of a SHB decision. Buechel, 125 Wn.2d at 201. Appellate review is of the SHB decision, not the decision of the local government or the superior court, and

[10] We note the legislature amended RCW 90.58.140(5)(c) in 2015 to add new subsections (i) through (iii) for project permits "addressing significant public safety risks, as defined by the department of transportation." LAWS OF 2015, 3d Spec. Sess., ch. 15, § 7. The amendments do not affect our analysis here.

judicial review is limited to the record before the SHB. Buechel, 125 Wn.2d at 202.

As the party challenging the SHB decision, de Tienne bears the burden of demonstrating the invalidity of the SHB's actions. RCW 34.05.570(1)(a); Pres. Our Islands v. Shorelines Hr'gs Bd., 133 Wn. App. 503, 515, 137 P.3d 31 (2006). We can grant relief only if the "person seeking judicial relief has been substantially prejudiced by the action complained of." RCW 34.05.570(1)(d); Densley v. Dep't of Ret. Sys., 162 Wn.2d 210, 216-17, 173 P.3d 885 (2007).

We review the SHB decision to determine whether it is arbitrary and capricious and supported by substantial evidence in light of the entire record. Buechel, 125 Wn.2d at 201-02; Port of Seattle v. Pollution Control Hr'gs Bd., 151 Wn.2d 568, 588, 90 P.3d 659 (2004). Substantial evidence is evidence in sufficient quantity to persuade a fair-minded person of the truth of the declared premises. Port of Seattle, 151 Wn.2d at 588; Heinmiller v. Dep't of Health, 127 Wn.2d 595, 607, 903 P.2d 433 (1995). We will not substitute our judgment for that of the SHB regarding credibility of witnesses or the weight of conflicting evidence. Beatty v. Fish & Wildlife Comm'n, 185 Wn. App. 426, 449, 341 P.3d 291 (2015); Port of Seattle, 151 Wn.2d at 588. Unchallenged findings are verities on appeal. Postema v. Pollution Control Hr'gs Bd., 142 Wn.2d 68, 100, 11 P.3d 726 (2000).

A decision is arbitrary and capricious if it is " 'willful and unreasoning action in disregard of facts and circumstances.' " Buechel, 125 Wn.2d at 202 (quoting Skagit County v. Dep't of Ecology, 93 Wn.2d 742, 749, 613 P.2d 115 (1980)). Where there is room for two opinions, an action is not arbitrary and capricious so long as it is undertaken honestly and upon due consideration, even if the reviewing court disagrees

with the conclusion. Buechel, 125 Wn.2d at 202. An appellate court may reverse only if the SHB order is a willful unreasoning action in disregard of facts and circumstances or if firmly convinced a mistake has been committed in light of the policy of the SMA. Hayes v. Yount, 87 Wn.2d 280, 286, 552 P.2d 1038 (1976); Port of Seattle, 151 Wn.2d at 588-89; Buechel, 125 Wn.2d at 202.

We review the SHB conclusions of law de novo and the SHB interpretation of the SMA and local government shoreline regulations de novo. Herman v. Shorelines Hr'gs Bd., 149 Wn. App. 444, 458, 204 P.3d 928 (2009). We give the SHB interpretation of the SMA and SMP great weight. Cornelius v. Dep't of Ecology, 182 Wn.2d 574, 585, 344 P.3d 199 (2015); Weyerhaeuser Co. v. King County, 91 Wn.2d 721, 736, 592 P.2d 1108 (1979); Pres. Our Islands, 133 Wn. App. at 529. If the SHB "interpretation is consistent with the language of the [SMA], and clearly serves to further its goals," we affirm the SHB decision. Weyerhaeuser, 91 Wn.2d at 736.

Timeliness of SHB Decision

De Tienne contends that because the SHB did not comply with the statutory mandate to issue the decision within 210 days, the decision is void.[11] RCW 90.58.180(3). We review de novo whether the SHB order exceeds statutory authority. RCW 34.05.570(3)(b); Kittitas County v. E. Wash. Growth Mgmt. Hr'gs Bd., 172 Wn.2d 144, 155, 256 P.3d 1193 (2011).

Under RCW 90.58.180(3), the SHB "shall issue its decision on the appeal . . . within one hundred eighty days after the date the petition is filed with the board" plus an

[11] Contrary to de Tienne's assertion on appeal, the petitions filed by the Garrisons and the Coalition were not "the only petitions before the Board at the time of the hearing." The Garrisons' petition was dismissed prior to the hearing, while de Tienne's petition was never dismissed.

additional "thirty days upon a showing of good cause."[12] RCW 90.58.180(3) states, in pertinent part:

> The board shall issue its decision on the appeal authorized under . . . this section within one hundred eighty days after the date the petition is filed with the board or a petition to intervene is filed by the department or the attorney general, whichever is later. The time period may be extended by the board for a period of thirty days upon a showing of good cause or may be waived by the parties.

The Garrisons filed a petition for review with the SHB on June 11, 2013. The Coalition filed a petition for review on June 25, 2013. De Tienne filed a petition for review on June 28, 2013. The parties stipulated to consolidation of the petitions. The SHB entered an order that consolidated the three petitions for review under SHB No. 13-016c.

Before the hearing, the SHB dismissed the Garrisons' petition for review but "granted the Garrisons limited status as Petitioner-Intervenors." The SHB did not dismiss de Tienne's petition for review. The decision notes de Tienne resolved the conditions that he challenged in the petition for review but review is limited to the Hearing Examiner decision, and "no changes to the Permit made subsequent are before the Board for review."[13]

The SHB issued the Findings of Fact, Conclusion of Law, and Order on January 22, 2014. Because de Tienne stipulated to consolidation of the petition he filed on June

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[12] De Tienne does not contend the SHB did not have "good cause" to extend the initial 180 days for an additional 30 days as provided in RCW 90.58.180(3).

[13] The decision states, in pertinent part:

> The Applicants filed their own Petition for Review to challenge certain conditions imposed by the Pierce County Hearing Examiner . . . , but settled all issues with the County prior to hearing. Though this settlement purported to encompass subsequent changes to the Permit, the Board's review in this matter is limited to the Hearing Examiner's Decision approving the Permit with conditions, and no changes to the Permit made subsequent are before the Board for review.

28, 2013 and there is no dispute the SHB extended the time period for good cause for an additional 30 days, the SHB complied with the time limits of the statute.[14]

Potential Adverse Impact to Eelgrass

De Tienne contends substantial evidence does not support the SHB finding that the commercial geoduck operation will result in potential adverse impacts to eelgrass. We disagree.

There is no dispute that eelgrass is a critical habitat. The record establishes Pierce County and de Tienne recognized the need to protect the eelgrass from adverse impacts by imposing mitigation measures including a buffer and monitoring. Consistent with the SMA, the Pierce County SMP states aquaculture operations must be conducted in a manner that "precludes damage to specific fragile areas and existing aquatic resources" and "maintain the highest possible levels of environmental quality and compatibility with native flora and fauna." PCC 20.24.020.A.3. PCC 20.24.020.A.3 states:

> Aquacultural operations shall be conducted in a manner which precludes damage to specific fragile areas and existing aquatic resources. These operations shall maintain the highest possible levels of environmental quality and compatibility with native flora and fauna.

The record establishes the only environmental impact statement to address subtidal geoduck harvesting is the FSEIS. The FSEIS identifies sedimentation from harvesting geoducks as a "known" adverse impact. The FSEIS states, in pertinent part:

> Harvest of geoducks disrupts the sediment around each geoduck and the animals that live within the sediment. The area actually dug within a commercial tract depends on the density of geoducks. Average density on unfished tracts in Washington is 1.7 geoducks/[square meters], and 1.9 geoducks/[square meters] in central Puget Sound, southern Puget Sound,

[14] Because we conclude the SHB decision was timely, we do not address the issue of whether the time established by RCW 90.58.180(3) is directory or mandatory.

> and Hood Canal (Goodwin and Pease 1991). Assuming an average density of 1.9 geoducks/[square meters] and an average hole size of 1,093 [square meters] (1.18 [square feet]), digging will affect 21% of the area within a harvest tract if all geoducks are removed. A liberal estimate of the amount of area affected by digging would be 25% (State of Washington 1985).

Certified fisheries scientist Wayne Daley also testified, in pertinent part:

> [W]hat we're seeing, in many of the activities directly involved with the work right within the sites themselves, you end up with a significant amount of turbidity over a period of time that's not continued for a long period of time. But, my point is it's a cumulative impact. It's there; it's gone; it's there; it's gone; it's there; it's gone.
>
> And this is going on, on a continuous basis, as they're working in the areas of putting the pipes in place, of putting their material on the pipes, and, then, it's directly an impact at the time that they're harvesting.
>
> In the process of the hydraulic injection into the water column to force those geoducks to the point where they can be reached, you have a level of turbidity that is, probably, ten times to a hundred times above the standard. I have not measured those numbers, but, based on my understanding and my visual observation of that level of turbidity, it's not unrealistic to assume that those levels are significant.

Meaders admitted there is "a continuous eelgrass bed along the entire shoreline" and "potential it would be exposed" to sedimentation. Meaders testified sediment generated during harvest could expand between 100 and 200 feet, sediment from the intertidal portion of the farm was "likely" to move into eelgrass beds, and suspended sediment could affect the ability of the eelgrass to photosynthesize.

Meaders admitted the sediment plume generated during a harvest of the intertidal portion of the farm was "likely to move into the [eelgrass] beds" because of "offshore transport" and "alongshore transport." Meaders testified sediment could move into eelgrass beds located outside of the proposed farm site. Meaders testified, "[W]e don't really know the extent of the eelgrass beds that may be exposed to the sediment deposition along the shoreline" because "[t]hat hasn't been looked at." Yet no permit

condition addresses sedimentation. The permit also does not contain a provision to change the buffers based on the eelgrass bed expanding or contracting.

Meaders admitted the 2011 Biological Evaluation that "supported" the agreement of the Army Corps of Engineers, National Marine Fisheries Service, and United States Fish and Wildlife Service "was based on a 2-foot vertical" buffer, not the 10-foot and 25-foot horizontal buffer.

De Tienne relies on Robertson v. May, 153 Wn. App. 57, 218 P.3d 211 (2009), to argue substantial evidence does not support finding potential adverse impacts to the eelgrass beds. May does not support his argument. In May, the SHB concluded the " 'proposed structure would likely be detrimental to the [eelgrass] habitat currently existing and recovering at this location.' " May, 153 Wn. App. at 89 (quoting May v. Robertson, No. 06-031, 2007 WL 1201596, at *13 (Wash. Shorelines Hr'gs Bd. April 16, 2007)). Because the SHB's conclusion "disregarded its own finding" that the "biological evaluation found no eelgrass," we held the decision was not supported by substantial evidence. May, 153 Wn. App. at 89. Here, unlike in May, the findings of the SHB and the record establishes substantial evidence that the proposed commercial geoduck operation will have adverse impacts on the critical eelgrass habitat and the buffer to protect the eelgrass was inadequate.

Adequacy of the Eelgrass Buffers

De Tienne asserts the SHB erred in "disregarding critical, uncontroverted testimony" showing the Department of Ecology, WDFW, DNR, United States Fish and Wildlife Service, and the Army Corps of Engineers agreed the buffer was adequate to

protect the eelgrass beds. The SHB findings state, in pertinent part:

> While the Applicants assert that agreement was reached as to the acceptability of a smaller buffer in conversations with individuals at the State Department of Ecology, WDFW, DNR, the [United States Fish and Wildlife Service] and/or the Corps (Meaders Testimony), the record lacks documentation to show agreement by all agencies involved.

De Tienne argues Meaders' uncontroverted testimony established "the various agencies agreed to the Farm's eelgrass buffers." The record does not support his argument.

Meaders testified the monitoring and buffer plan "was created through multiple meetings that had a variety of different agencies, WDFW, Ecology, the Corps, DNR, and the County." But Meaders testified, "[P]erhaps it's also an assumption on my part [that the Corps, Ecology, and DNR created buffers]."

> Q. . . . So I'm trying to understand. So on that page, the table, it states that the Corps, Ecology, and DNR used this information to come up with these buffers. Where in the record are these — is information that supports that statement that the Corps, Ecology, and DNR created buffers?
>
> [Meaders]. I think it's — perhaps it's also an assumption on my part, but the technical work group that discussed the biological requirements in the Donoghue 2011 included representatives of DNR, obviously.

De Tienne points to an August 12, 2013 memorandum Meaders sent to various state and federal agencies to argue the SHB erred in finding the record "lacks documentation to show agreement by all agencies involved." In the memorandum, Meaders states, "Two buffers have been agreed to by the applicant and approved by the Corps, Ecology, and Pierce County. These include a 10-foot (ft) horizontal buffer in

the intertidal zone, and a 25-ft buffer in the subtidal zone." Meaders' self-serving memorandum does not establish the agencies agreed.[15]

The record shows there was no documentation from the Department of Ecology, WDFW, or DNR agreeing to a buffer of 25 feet. Pierce County Environmental Biologist Risvold testified he did not have a letter from the Department of Ecology saying, " 'This is what we think you should do for this project.' " Risvold "[did not] recall" whether there was any document from the WDFW or Department of Ecology that "actually provides us with what their final recommendation for the buffers were."

We conclude the SHB did not err in finding the record lacked documentation showing that all of the state and federal agencies involved agreed the smaller buffers were acceptable.

De Tienne contends the SHB erred by "misapplying" the burden of proof to require Pierce County and de Tienne to justify the buffers were adequate to protect the eelgrass. The party seeking review of the local government's decision to issue a permit bears the burden of proof before the SHB. RCW 90.58.140(7); Buechel, 125 Wn.2d at 205.

The record clearly shows the Coalition bore the burden of proof to show the buffer was inadequate to protect the eelgrass. The SHB decision specifically states, "[T]he Coalition has met its burden to show that the Permit conditions are inadequate to

[15] De Tienne also cites an e-mail from DNR to Meaders that states, "For geoduck aquaculture we now require a buffer of 8 meters ([about] 25 feet) from existing native aquatic vegetation." But DNR notes, "[W]e do have an adaptive management option that allows for a variation in the buffer size in order to better define impacts." This e-mail also does not show the agencies agreed to the reduced buffers for the de Tienne permit.

protect eelgrass."[16]

The Coalition relied on the FSEIS buffer to argue the buffers approved by the Hearing Examiner were inadequate. The FSEIS identifies the need for a "2-foot vertical buffer or a minimum of 180-foot horizontal buffer" between eelgrass and subtidal geoduck harvest areas to protect eelgrass. The Coalition established that throughout the permitting process, de Tienne agreed to use the FSEIS buffer to protect eelgrass. Review of de Tienne's permit application by the Army Corps of Engineers, National Marine Fisheries Service, and United States Fish and Wildlife Service was "based on a 2-foot vertical" buffer listed in the 2011 Biological Evaluation.

On cross examination, Risvold testified that although the Department of Ecology " 'generally requires a 25-foot landward buffer which may be reduced with monitoring,' " Rick Mraz of the Department of Ecology told Risvold he " 'could see no immediate reason not to defer' " to the 2-foot vertical buffer in the FSEIS. Risvold testified:

> A. "I discussed this issue with Rick Mraz, and he expressed that Ecology generally requires a 25-foot landward buffer which may be reduced with monitoring, but that, at least specific to waterward buffers for subtidal dive harvest, he could see no immediate reason not to defer to guidance in the State [FSEIS].
> Q. And is that guidance in the State [FSEIS] the 2-foot vertical or 180 feet?
> A. Yes.

Risvold testified the "primary reason for the buffer" is to protect eelgrass from sedimentation from farm activities and "physical trampling by the divers." Risvold said he believed the 2-foot vertical buffer used in the FSEIS "was based on absolute worst-

[16] By contrast, the SHB concluded the Coalition did not meet its burden to show the proposal to plant and harvest geoducks would (1) cause adverse "benthic effects," (2) cause any direct impacts to forage fish or juvenile salmon other than impacts to eelgrass used for habitat and refuge, (3) cause adverse impact to whales, (4) cause adverse impact to "other aquatic organisms like sand dollars and sea stars," or (5) "pose[ ] an actual risk of environmental harm to bald eagles."

case sediment transport." But he did not know where the idea of a 25-foot horizontal buffer "popped out from."

The Coalition also introduced the letter Risvold wrote addressing de Tienne's objection to the size of the buffer raised for the first time in the March 2013 letter to the Hearing Examiner. The April 2013 letter from Risvold to Meaders states the Department of Ecology "could see no immediate reason not to defer to guidance in the" FSEIS.

> Eelgrass buffer
> I would hesitate to call the State [FSEIS] on dive harvest "inapplicable and scientifically unsupported" and would argue that State diver harvest and private diver harvest share quite a few similarities. I would also argue that ENVIRON felt the same way since they reference a 2-foot vertical buffer in both their 2009 and 2011 reports. The 2011 report makes clear that the (approximately) five-acre farm size is predicated upon providing a 2-foot vertical buffer. However, I now understand that the applicant feels that such a buffer is not warranted in light of additional studies and that the 2-foot vertical buffer would impose an unreasonable hardship on the applicant.
>
> I discussed this issue with Rick Mraz and he expressed that Ecology generally requires a 25-foot landward buffer (which may be reduced with monitoring), but that, at least specific to waterward buffers for subtidal dive harvest, he could see no immediate reason not to defer to guidance in the State [FSEIS].
>
> With that said, I'm not in 100% opposition to establishing a different buffer around the eelgrass. I understand from discussions with DNR staff that the various harvest restrictions described in the [FSEIS] were intended to be quite conservative and that they were intended to address a number of issues above and beyond eelgrass protection (such as diver safety, tribal issues, shoreline property owner disturbance). I also recognize that the 2[-foot vertical]/180[-foot horizontal] may not represent an absolute "best available science" mandate and that it may be reasonable to proceed with a smaller buffer based on more current research.

Risvold admitted that he did not "contemplat[e]" 50 percent of the waterward buffer would be reduced to 10 feet, and that there "were more reductions than I thought

were going to happen." Risvold also testified there was "no condition in the permit to require a change in the buffer" if monitoring showed an impact on the eelgrass bed. Risvold said the permit did not include a "requirement to provide additional substrate for expansion" of the eelgrass bed. Risvold testified he "felt better about reducing the buffer" because of the required monitoring plan but admitted monitoring does not "prevent impacts."

We conclude the SHB did not err in concluding the Coalition met its burden of proving the permit buffers did not adequately protect the eelgrass from adverse impacts in violation of the SMA and Pierce County SMP.

Interpretation of PCC 20.24.020.A.10

De Tienne asserts the SHB erred by interpreting PCC 20.24.020.A.10 as "a zoning limitation excluding aquaculture" where a proposal might result in environmental impacts. We disagree.

PCC 20.24.020.A.10 states, "Shoreline areas having the prerequisite qualities for aquacultural uses shall have priority in order to protect Pierce County's aquacultural potential."

Here, the SHB did not interpret PCC 20.24.020.A.10 as excluding aquaculture. Instead, the SHB concluded the "preferences and priorities normally provided to properly mitigated and designed aquaculture in state and local regulation do not apply here."[17]

> [T]he preferences and priorities normally provided to properly mitigated and designed aquaculture in state and local regulation do not apply here. Pierce County only prioritizes those projects that are situated in shoreline areas well-suited (i.e. having the "prerequisite qualities") for aquaculture. PCC 20.24.A20(A)(10). The fact that the Farm Site here will be operated

[17] Emphasis added.

> in a high-energy subtidal environment, bordering a continuous eelgrass bed that provides spawning habitat for nearby herring, and habitat and refuge for other forage fish, juvenile salmon, and various aquatic organisms—makes this Site one without the prerequisite qualities for prioritizing it as an appropriate aquaculture site under PCC 20.24.020(A)(10).

We conclude the SHB did not err in interpreting PCC 20.24.020.A.10.

De Tienne argues that because the phrase "no net loss" is not in the SMP, the SHB erred in concluding the buffers contained in the permit were inconsistent with the "no net loss" concept and the SMP requirement to "preclude damage to specific fragile areas and existing aquatic resources." PCC 20.24.020.A.3. The SHB conclusions of law state, in pertinent part:

> As noted in the Findings of Fact, eelgrass is of particular importance to the health of Puget Sound. Eelgrass (zostera [species]) and macroalgae (kelp in the order laminariales) are explicitly recognized in state regulations as a saltwater habitat of special concern based on the essential functions they serve in the developmental life history of fish and shellfish. [Former] WAC 220-110-250. They are also regulated under the County's Critical Areas Ordinance. . . . PCC Title 18E. While not directly applicable, these regulatory protections acknowledge the importance placed on eelgrass and kelp as a fragile aquatic resource. The SMA and PCC explicitly protect fragile but vital aquatic resources, with protection of the shoreline environment as a particular consideration for this shoreline of statewide significance. RCW 90.58.020(4); PCC 20.24.020.A(3).
>
> . . . .
>
> The Board concludes that Pierce County approved a permit with the smallest buffer possible, in the absence of any scientific basis for such a small buffer. This small buffer, when combined with an overreliance on monitoring and adaptive management, a lack of accounting for off-site impacts, and the potential need for restoration and/or expansion of eelgrass made particularly fragile from past commercial geoduck harvest activity at the Site, contravenes the requirements in the SMA, its implementing regulations, and Pierce County's SMP. In particular, it contravenes the concept of "no net loss" and the local SMP requirement to "preclude[ ] damage to specific fragile areas and existing aquatic resources" and "maintain the highest possible levels of environmental quality and compatibility with native flora and fauna." PCC 20.24.020.A(3); WAC 173-26-241(3)(b).[18]

[18] Some alteration in original.

De Tienne relies on Friends of the San Juans v. San Juan County, No. 08-005, 2008 WL 5510444 (Wash. Shorelines Hr'gs Bd. Aug. 25, 2008). Friends of the San Juans is distinguishable. In Friends of the San Juans, the County argued the SHB should not apply the "no net loss" standard contained in WAC 173-26-241(3)(j). Friends of the San Juans, 2008 WL 5510444, at *11.

WAC 173-26-241(3)(b)(i)(C) provides, in pertinent part:

> Aquaculture should not be permitted in areas where it would result in a net loss of ecological functions, adversely impact eelgrass and macroalgae, or significantly conflict with navigation and other water-dependent uses.

In Friends of the San Juans, the SHB concluded the "no net loss" standard in WAC 173-26-241(3)(j) did not apply because San Juan County had not yet amended its SMP to "incorporate concepts of no-net loss into its shoreline master program." Friends of the San Juans, 2008 WL 5510444, at *11.

Here, unlike in Friends of the San Juans, the record shows Pierce County applied the "no net loss" regulations. For example, in response to the 2009 Critical Habitat Assessment, Risvold identifies the need for additional information and clarification "to ensure compliance with Title 18E and with the No-Net-Loss provisions of the Shoreline Management Act."

Cumulative Impacts

Contrary to de Tienne's assertion, the SHB did not deny the shoreline substantial development permit on the ground that neither de Tienne nor Pierce County performed a cumulative impact analysis. The SHB decision states the permit did not adequately protect eelgrass and did not appropriately balance statewide interests. The SHB

concludes, in pertinent part:

> This Farm's proposed location on a shoreline of statewide significance means that particular consideration must be given to balancing the interests of aquaculture as one statewide interest, with other statewide interests like the shoreline's ecological values and the public's recreational use. This is the Board's first opportunity to consider the potential impacts of a larger five-plus (5+)-acre geoduck farm proposed on a shoreline of statewide significance, where extensive but fragile resources including eelgrass are present and where herring spawn nearby. The proposed farm would be a first-of-its kind operation in an area where minimal aquaculture already exists, where unauthorized practices have impacted fragile marine resources through prior harvesting activity, where farm operations pose a potential harm to habitat and loss of community recreational use, and where additional projects have either been approved, proposed, or are likely to be proposed—including at least one similar project.
>
> . . . .
>
> The careful review required for this shoreline of statewide significance weighs in favor of requiring a cumulative impact analysis of the impacts that might result from granting the first subtidal geoduck farm permit in Henderson Bay—in particular, to assess the potential for longer term impacts to fragile resources like eelgrass, as well as unique use of the area by recreationalists like windsurfers.[19]

The legislature recognizes the "necessity of controlling the cumulative adverse effect" of " 'piece-meal development of the state's shorelines' through 'coordinated planning' of all development, not only 'substantial development.' " Hayes, 87 Wn.2d at 288 (quoting RCW 90.58.020; .030(3)(e)).

The record supports consideration of cumulative impacts. There is no dispute the permits "would be the first commercial geoduck farm permitted in the area." There is no dispute the proposed farm would be located on a shoreline of statewide significance. Evidence presented at the hearing showed there are potential adverse impacts to critical habitat. Booth testified the proposed farm was the first subtidal geoduck farm in Pierce County, and Meaders testified the permit "is a fairly unique

[19] Emphasis added.

proposal for geoduck aquaculture in that cultivation will be done primarily in the subtidal habitat." Booth testified there were six other proposed geoduck farms in Pierce County and one was "essentially next door" to de Tienne's proposed farm. A Pierce County aquaculture map shows a number of existing and pending applications for geoduck farms.

Longbranch is distinguishable. Unlike here, the area was not designated as a shoreline of statewide significance, there was no eelgrass, and there was no evidence of other similar projects in the area. Longbranch, 2012 WL 3577481, at *2, *3, *6.

Because the consideration of a cumulative impact analysis prior to approval of the permit is consistent with the purpose of the SMA and clearly furthers the goal of the SMA to prevent "uncoordinated and piecemeal development,"[20] the SHB did not err in concluding consideration should be given to preparing a cumulative impacts analysis.

Attorney Fees and Costs on Appeal

The Coalition requests attorney fees and costs on appeal under RCW 4.84.370. Under RCW 4.84.370(1), in a decision involving a substantial development permit under the SMA, the prevailing party or substantially prevailing party on appeal is entitled to reasonable attorney fees and costs if that party was:

> (a) . . . [T]he prevailing party or the substantially prevailing party before the shoreline[s] hearings board; and (b) . . . the prevailing party or substantially prevailing party in all prior judicial proceedings.[21]

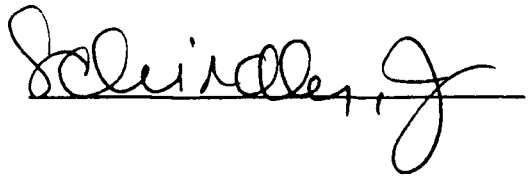
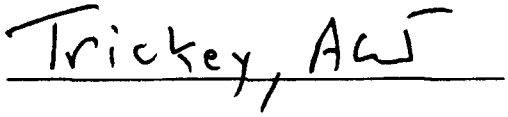
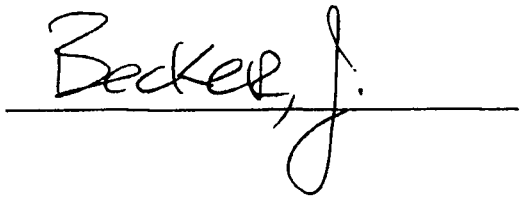
Here, the Coalition was the substantially prevailing party before both the SHB and the superior court. Upon compliance with RAP 18.1, the Coalition is entitled to

[20] RCW 90.58.020.

[21] Some alteration in original.

reasonable attorney fees and costs. Durland v. San Juan County, 182 Wn.2d 55, 79-80, 340 P.3d 191 (2014).

We affirm.



WE CONCUR: