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4 BEFORE THE SHORELINE HEARINGS BOARD
IN AND FOR WASHINGTON STATE

5 TAYLOR SHELLFISH COMPANY, INC, a
6 Washington corporation,

No. 12-012

7 Petitioner,

PRE-HEARING BRIEF OF RESPONDENT

8 vs.

9 THURSTON COUNTY, a political subdivision
of the State of Washington,

10 Respondent.

11 I. INTRODUCTION

12 Taylor argues that the Environmental Impact Statement (“EIS”) issued under the State
13 Environmental Policy Act (“SEPA”) compels approval of his permit under the Shoreline Management
14 Act (“SMA”) and the Shoreline Master Program for Thurston County (“SMP”) is fundamentally
15 flawed. Taylor bears the burden of establishing that a new 58-raft mussel complies with each of the
16 policies of both the SMA, and the SMP. Taylor cannot meet this burden.
17

18 The Hearing Examiner (“Examiner”) understood his authority to independently review the
19 project under the specific policies of the SMA and SMP. He found that the proposal was compliant
20 with the SMA and SMP, with the exception of two specific areas that the record did not address: (1) an
21 adequate analysis of cumulative impacts was not conducted for dissolved oxygen, the effect on the
22 benthic community, and the potential spread and genetic pollution by *Mytilus edulis galloprovincialis*
23 (“Gallo mussels”); and (2) aside from cumulative impacts, the record was deficient on the project’s
24 impact to the benthic community.

25 Taylor was given opportunity to provide additional evidence to assuage the record’s

1 deficiencies. *See* P-2, Finding 189. Taylor chose not to do so. *Id.* The Examiner had no choice but to
2 deny the permit. When there are gaps in relevant information, decision-makers cannot make the
3 requisite findings of a project's compliance with the SMA and SMP.

4 Because this is a *de novo* proceeding before the Shorelines Hearing Board ("SHB"), Taylor
5 could have submitted data to address the deficiencies identified by the Examiner. However, Taylor did
6 not do this. *See* Taylor's Final Exhibit List. For similar reasons stated by the Examiner, the SHB
7 should deny Taylor's permit. Alternatively, the SHB should condition the project on further review,
8 within five years, to assess the actual environmental impacts arising from the project.

10 II. FACTS

11 A. History of Taylor's Mussel Farms in Totten Inlet.

12 Taylor proposes to develop a *third* floating mussel aquaculture facility ("mussel farm") in
13 Totten Inlet. In 1992 Taylor received a shoreline substantial development permit ("SDP") to install a
14 28 raft mussel farm in Gallagher Cove. R-19. In 1994, Taylor received a SDP to install a second
15 mussel farm at Deepwater Point consisting of 48 rafts. R-20.

16 The floating rafts represented a relatively new technology for *intensive* culture of Gallo
17 mussels, a non-indigenous species.¹ In some instances, these exotic species have become invasive and
18 had dramatic impacts on native species through direct or indirect competition, predation, parasitism,
19 disease and hybridization. *Id.*

20 Surprisingly, there was little public participation, R-5, or environmental review for either the
21 Gallagher Cove or Deepwater Point mussel farms.² Furthermore, no conditions were imposed on
22

24 ¹ R-2, p. 1; R-6, 1998 Hearing Examiner Decision, Finding 9. *See* R-21(USFW expressed serious concerns about
25 Taylor's proposal to cultivate Gallo mussels in Island County).

² The scientific review for both farms consisted of a simple benthic survey, and a literature reference. *See* R-19 and
R-20.

1 these farms to monitor the farms' effect on the aquatic environment.³

2 In 1996, Taylor filed his third and current application for the SDP to install a 58-raft mussel
3 farm at the North Totten site. The addition of this third farm would "significantly increase Gallo
4 mussels in Totten Inlet."⁴ It is estimated that the North Totten farm will produce an average of 877,963
5 pounds (whole body, wet weight) of mussels for sale each year. P-3, p. 1-4. At the Deepwater Farm,
6 which has fewer rafts, approximately "1, 600,000 pounds of live mussels (727,272 kg/yr)" are
7 produced each year.⁵ It is not clear why the *projected* production of Gallos (877,963 lbs) at the 58 raft
8 North Totten farm is less than the *recorded* production of Gallos (1,600,000 lbs) at the smaller 48 raft
9 Deepwater Point farm.

10
11 Community members, who soon identified themselves as the Association to Protect
12 Hammersley, Eld and Totten Inlets ("APHETI") caught wind of Taylor's latest proposal, and became
13 actively involved in the public review of the North Totten permit. R-5; P-3, p. 1-2. As a result of
14 information received from APHETI and other State agencies, the County ultimately issued a
15 determination of significance (DS) which Taylor appealed. *Id.* The DS was upheld. R-6.

16 **B. Description of North Totten Farm Site.**

17 The location of the North Totten farm is located within a shoreline of statewide significance,
18 RCW 90.58.030(2)(ii), and in a designated conservancy environment. SMP, Map of Shoreline
19 Environmental Designations. This farm is approximately .9 miles north of the Gallagher Cove farm. P-
20 1, p. 1. The tidelands adjacent to the proposed mussel farm site are part of a farm 1.6 miles in length
21 owned and operated by Taylor. P-3, p. i. Documented spawning habitat for essential forage fish – Sand
22

23
24
25 ³ R-19 and 20. DNR Aquatic Leases for these farms do have some monitoring conditions related to the benthic
community and water column impacts. R-17. These types of surveys would be helpful to review impacts to the aquatic
habitat over time. However, it is not clear if the required surveys were ever done. *See* R-9.

⁴ R-6, 1998 Examiner Decision, Finding 9.

1 Lance and Surf Smelt are on the shorelines directly onshore from the location of the proposed farm. P-
2 1, Finding 27. In addition, the Capital Land Trust recently purchased a 34-acre tract of land on Adams
3 Cove, directly onshore from the location of the proposed mussel facility. R-18. Adams Cove contains a
4 small pocket estuary with critical salmon habitat, an intertidal salt marsh, mudflats, a subtidal kelp bed,
5 1400 feet of waterfront, and several small streams flowing through a mature forest that covers most of
6 the property. *Id.* The property contains habitat for Coho salmon, winter steelhead, Chinook salmon,
7 Chum salmon and coastal sea-run cutthroat. *Id.*

8
9 **C. 2006 APHETI Dive.**

10 APHETI participated in the environmental review of the North Totten site because of their
11 concerns and frustrations with the Gallagher Cove farm. *See* R-5. In 2006, APHETI commissioned a
12 dive under the Gallagher Cove mussel rafts on November 3, 2006. The results of the dive were
13 startling because it revealed that the bottom conditions were significantly disturbed and showed
14 evidence of substantial abuse. R-14, Part A, p. 1-2. The divers observed the following:

- 15 • At least three or more inches of “sludge” covered the entire area underneath and
16 adjacent to the existing mussel rafts.
- 17 • The entire area was covered with mussel shell debris.
- 18 • The entire area was spread with debris including sheet metal and PVC.
- 19 • A large growth of white matting which was later confirmed to be *Beggiatoa*⁶ spread
20 throughout the area.
- No evidence of algae or other plant life was present.
- The entire benthic layer under the rafts and surrounding area appeared significantly
compromised and indeed like a “dead-zone.”

21 *Id.* On December 1, 2006, these results were communicated to Department of Natural Resources
22 (DNR) as they had regulatory control of the farm through Taylor’s Aquatic Lease. *Id.*; R-16. DNR

24 ⁵ R-20, Brooks-The Epibenthic Community Observed in Association with the Intensive Raft Culture of *Mytilus*
galloprovincialis in Totten Inlet, Washington, p. 6.

25 ⁶ *Beggiatoa* is indicative of the aerobic/anaerobic interface at the sediment surface. This condition can result from
either hypoxic conditions in the water, or from the buildup of organic material on the bottom. R-14, Part D, (Memo to Dave
Roberts from Larry Dominguez, DNR scientist, dated December 10, 2006).

1 immediately shared APHETI's letter with Taylor so that they could "consult/coordinate" their actions
2 with Taylor. R-14, Part D (email from Doenges to McNair). Almost immediately, Taylor's crew spent
3 the next several days cleaning up the seafloor under the rafts at Gallagher Cove. R-13.

4 DNR conducted their own dive on December 10, 2006, after Taylor had been on site for
5 several days cleaning up. Not surprisingly, DNR did not find any problems. P-29. However, the DNR
6 scientists who were reviewing the matter acknowledged they had fought with Ecology about whether
7 build up from salmon pens would increase *Beggiatoa*.⁷ The DNR scientists recommended that surveys
8 be taken underneath and adjacent to the farm and an adequate number of reference sites as means to
9 determine whether there are ongoing issues at the Gallagher Farm that need to be addressed. *Id.* These
10 surveys were never conducted by DNR. R-9.

11
12 **D. Hearing Examiner's Decision.**

13 The Examiner, based on the above information from APHETI, the studies and reports in the
14 DEIS and expert testimony, determined that the cumulative effects on the benthic community had not
15 been covered:

16 30. Next, the Findings show that the study by Dr. Brooks at Ex. 7, Tab 4 takes into account
17 the cumulative effect of mussel production in Totten Inlet on benthic life. However, the
18 evidence, as found, did not discuss the extent of *Beggiatoa* under the rafts or its effect on
19 benthic life. Nor does the evidence make clear whether the high sulfide readings under the
20 Deepwater rafts, which the evidence showed were sufficient nearly to exclude or extirpate
21 benthic life for a period of months, are expected to be exceeded over the finer sediments at the
22 project site. Without evidence on the cumulative effects of *Beggiatoa* and sulfide levels beneath
23 this proposal and other existing mussel facilities in the Inlet, cumulative effects on benthic life
24 have not been covered under the standards above.

25 P-1, Conclusion 30.

The Examiner found similar issues with dissolved oxygen:

⁷ R-14, Part D, (Memo to Dave Roberts from Larry Dominguez, DNR scientist, dated December 10, 2006).

1 29. This project, considered alone, could be benign in its reductions of DO, although it
2 plainly poses a "risk" of harm under *Fladseth*. At some point, though, the accumulation of
3 pockets of low DO in the Inlet, although transient, may do harm. The evidence is silent as to
4 whether this proposal is approaching or crossing that point. Under RCW 90.58.020, *Hayes*,
Skagit County and *Fladseth*, this does not properly consider cumulative impacts on DO or the
cumulative impacts of low DO on aquatic life and habitat.

5 *Id.*, Conclusion 29. The Examiner also had trouble with the lack of cumulative review on Gallo
6 mussels and their impact to the native mussels:

7 34. The evidence does not address the combined effect of this proposal and existing mussel
8 cultivation in the Inlet on the spread of Gallos and hybrids. Without that, cumulative effects are
not adequately addressed under the standards above.

9 *Id.*, Conclusion 34. Apart from the cumulative impacts, the Examiner determined that additional
10 evidence was needed to determine whether the project's effect on the benthic community was
11 consistent with the SMP. P-1, p. 90.

12 The Examiner gave Taylor the opportunity to provide additional evidence to bridge the data
13 gap. P-1, Conclusion 80. Taylor chose not to do so. P-2, Conclusion 83. When Taylor declined to
14 supplement the record the Examiner denied the permit. P-2, p. 8. The Board of County Commissioners
15 affirmed the Examiner's decision and ultimate conclusion about the need for a cumulative impact
16 analysis:

17
18 for the reasons stated in the hearing examiner's decisions the law requires an adequate analysis
19 of cumulative impacts before a SSDP permit may be issued in this case. The legislature enacted
20 the State Shoreline Management Act of 1971 (SMA) to "prevent the inherent harm in an
21 uncoordinated and piecemeal development of the state's shorelines." RCW 90.58.020. The
22 Supreme Court recognized that "[l]ogic and common sense suggest that numerous projects,
23 each having no significant effect individually, may well have very significant effects when
24 taken together" and concluded that "[t]he SMA recognizes the necessity for controlling the
25 cumulative detrimental impact of piecemeal development through coordinated planning of *all*
development. RCW 90.58.020." Emphasis supplied. *Skagit County v. Department of Ecology*,
93 Wn.2d 742, 750 (1980). Furthermore, our Shorelines Hearings Board understands that
"consideration of potential cumulative effects and *precedential effects* is warranted in *any* case
where there is proof of impacts that risk harm to habitat." Emphasis supplied. *Fladseth v.*
Mason County, SHB No. 05-026 (2007); *Coalition to Protect Puget Sound Habitat v. Pierce*
Co. and Longbranch Shellfish, LLC, SHB No. 11-019 (2012).

1 R-1, p. 1-2. This appeal followed.

2 III. ARGUMENT

3 The increasing political⁸ and economic⁹ appetite for commercial aquaculture is stressing the
4 “fragile” shorelines of our State, especially in Totten Inlet.¹⁰ Fortunately, the SMA and the SMP, are in
5 place precisely to ensure that the waters of Totten Inlet do not ultimately become the next Chesapeake
6 Bay.¹¹ The careful scrutiny of new aquaculture projects and protection of the aquatic environment is
7 mandated under both the SMA and the SMP. RCW 90.58.140(2)(b).

8 The issues raised by this case are whether (1) an EIS conclusion that a proposed project has no
9 significant adverse environmental impacts compels approval of a shoreline permit under the SMA and
10 SMP; (2) an analysis of cumulative impacts is appropriate in three areas: dissolved oxygen, the effect
11 on the benthic community, and the potential spreading of or genetic pollution by Gallo mussels; and
12 (3) additional evidence, apart from cumulative impacts, is needed to determine whether the mussel
13 farm’s effect on the benthic community is consistent with the SMP and SMA.

14 A. The Shorelines Hearings Board is not Bound by an EIS.

15 The initial issue raised by Taylor is whether an EIS conclusion of no significant adverse
16 environmental impact compels the Examiner, and now the SHB, to approve the permit in this case. The
17 answer is clearly no. In *Bellevue Farm Owners Ass’n v. Shorelines Hearings Board*, 100 Wn. App.
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20
21 ⁸ See P-20, Washington Shellfish Initiative.

22 ⁹ See P-10, Attachment D, 2011 Marine Aquaculture Policy, U.S. Department of Commerce, National Oceanic and
23 Atmospheric Administration.

24 ¹⁰ Totten Inlet has proven to be well suited for aquaculture, P-10, p. 6, and is graphically demonstrated by the high
25 proportion of aquaculture sites in this one bay relative to the rest of southern Puget Sound. R-8, Attachment G (Draft –
Shellfish Culture Areas in South Puget Sound).

¹¹ Taylor will likely argue that intensive mussel farming is exactly the buffer needed to prevent the eutrophication
experienced in Chesapeake Bay. However a recent study challenges the commonly held belief that dense populations of
mussels act as a buffer against eutrophication processes by exerting a top-down control on phytoplankton growth and
sequester nutrients, which are subsequently removed when the shellfish are harvested. R-2, p. 196. The study results
indicate “whilst it is true that the mussel ropes . . . exerted an intense grazing pressure on the phytoplankton, the ingested
organic nutrients were rapidly recycled back to the water column by the mussel ropes and the underlying sediments, where

1 341, 354-355, 997 P.2d 380 (2000), this specific issue was addressed. The property owners challenged
2 the SHB's denial of its permit because of scenic view impacts. The property owners argued that the
3 County's SEPA determination of no significant adverse impact on scenic view was *binding* on the
4 SHB. The Court disagreed. The Court recognized that "[s]horeline development in Washington must
5 not only comply with SEPA, but it must also be consistent with the SMA and local governments'
6 corresponding shoreline master programs." *Id.* The court reviewed the Legislature's intent regarding
7 SEPA's interplay and found that SEPA "should not have been used as a substitute for other land use
8 planning and environmental requirements." *Id.* at 353. The Washington Supreme Court is also in
9 accord:

10
11 SEPA is essentially a procedural statute to ensure that environmental impacts and alternatives
12 are properly considered by the decision makers. *It was not designed to usurp local decision-*
making or to dictate a particular substantive result.

13 Emphasis supplied. *Id.* at 354, citing *Save Our Rural Env't v. Snohomish County*, 99 Wn.2d 363, 371,
14 662 P.2d 816 (1983)(citations omitted).

15 The SHB is similarly in accord. *Preserve Our Islands v. King County*, SHB 04-009. In this
16 case, the SHB determined that a SEPA review of noise impacts was adequate based on various testing
17 that had occurred. But the SHB pointed out that

18 the adequacy of noise analysis under SEPA and whether the noise impacts of a project
19 complies with a shoreline master program and SMA *are different questions*. SEPA review does
20 not preclude environmental review under different statutory schemes, and should not be used as
a substitute for other land use planning and environmental requirements.

21 Emphasis supplied. SHB 04-009 at Conclusion 15.

22 The Examiner in this case clearly understood this rule of law as well. He meticulously reviewed
23 the hard scientific data in the numerous expert reports and analyzed the data in light of the purposes,
24

25

they would fuel further phytoplankton growth. *Thus the net effect of the filter feeders may be to increase phytoplankton*

1 policies and regulations set forth in the SMP and SMA. The Examiner properly exercised his authority
2 and was *not* bound by the conclusions in the EIS.

3 **B. The Project's Demonstrated Risk of Harm to Benthos, Dissolved Oxygen and**
4 **Gallo Mussels Necessitates a Cumulative Impact Analysis in this Case.**

5 The County hereby incorporates by reference APHETTI's Pre-Hearing Brief.

6 **C. Taylor Cannot Show that the Project's Impact on the Existing Benthic Community**
7 **is Consistent with the Standards of the SMP.**

8 Under the SMP, a new proposal is subject to several components, including the General Goals
9 and Policies, SMP, section 2, Regional Criteria, SMP, section 2, V, and Policies and Use Regulations
10 for Aquaculture, SMP, section 3, II. The project must also be consistent with the Conservancy
11 Environment. SMP, section 2, VII. The burden of proof is on Taylor. RCW 90.58.140(7).

- 12 1. Taylor's proposal is not consistent Aquaculture Policies and Regional Criteria to
13 "closely analyze" the project's effect on the "existing" benthic community
below the North Totten farm.

14 While Taylor's proposal complies with many of the aquaculture policies and use regulations, it
15 notably failed to comply with Policy 8 which requires:

16 Proposed aquaculture activities should be reviewed for impacts on the *existing* plants,
17 animals and physical characteristics of the shorelines.

18 SMP, Section 3, II, B, 8. In addition to Policy 8, Taylor failed to comply with Regional Criteria B
19 which requires that all project applications shall be "closely analyzed" for their "effect on the aquatic
20 environment." SMP, Section 2, V, B. Taylor, as discussed below, failed to "closely analyze" the
21 project's effect on "existing" benthic community under the North Totten farm site.

- 22 a. Documented benthic impacts from intense aquaculture.

23 It is well known that benthic effects have been observed under intensive bivalve culture and
24

25 *turnover and productivity rather than to decrease phytoplankton biomass." Emphasis supplied. Id.*

1 these effects should be managed to insure that they do not extend over large areas and that the effects
2 remain reversible in some reasonable period of time. P-5, Brooks 2005a, p. 2. It is the near field
3 accumulation of waste in sediments that may have the most significant effect on the inlet's biological
4 resources. P-5, Brooks 2005b, p.2.

5 The Intensive aquaculture of bivalves transfers organic matter filtered from the water to
6 sediments in the form of feces and pseudo feces that once ejected, settle to the bottom in the immediate
7 vicinity of the farm. The result is that the sediment chemistry and the macro benthos are affected. *Id.* at
8 p. 1. Specifically, the accumulation of organic material in the benthos results in increased biological
9 oxygen demand (BOD). R-5, Brooks 2005b, p. 4. The increase oxygen demand can exceed the
10 diffusion of oxygen into the sediments resulting in an anaerobic environment. When surface sediments
11 become anaerobic, colonies of *Beggiatoa* are observed on the surface as white filamentous patches. *Id.*

12
13 ***b. Taylor's analysis of benthic impacts at Deepwater Point Farm.***

14 Taylor studied the anticipated impacts to the benthic community at the North Totten site by the
15 examination of conditions at the existing Deepwater Point mussel farm.¹² The benthic effects were
16 assessed adjacent to the inner row of six mussel rafts at Deepwater Point, in 2002, during production of
17 189,624 lbs of Gallos. The farm is located in shallow water over relatively *coarse sediments* (30.2 to
18 55.8% gravel and 13.6 to 51.4% sand). Little change was initially observed in the sediment chemistry.
19 However, sulfide levels increased, significantly under the rafts in the last five months of grow out.
20 Large increases in sulfide were observed under the rafts and these increases extended to a distance
21 between 60 and 75 meters. As Brooks noted, the sulfide concentrations observed under the rafts in July
22 8, 2002 (1,571 to 2620 μM) "would have excluded many sensitive taxa." R-6, Brooks 2005b, p. 23.

24
25 ¹² P-5, Brooks 2005b-Benthic Response at Deepwater Point Farm.

1 These impacts continued to escalate in the fall. On October 31, 2002, the sulfide levels (12,800, 13,300
2 and 15,300 μM) were “sufficiently high to exclude most infauna (Brooks 2001a). Their effects on
3 “epifauna attached to, but respiring above, the sediment surface *is unknown.*” Emphasis supplied. *Id.*

4 Significantly, Brooks concluded that:

5 [i]f sediments under the rafts had contained higher concentrations of fine material (silts and
6 clays), the moderately high sulfide concentrations observed in November 2002 would have
7 excluded all but a few opportunistic annelids.

8 *Id.*, p. 40. Brooks discounted these high sulfide levels, because the sediments under the Deepwater
9 Point rafts were

10 dominated by *gravel and sand*; an environment not conducive to surface and subsurface deposit
11 feeding annelids . . . Instead the benthic community under the rafts was dominated by surface
12 living mega fauna including starfish, crabs, anemones and predatory gastropods.

13 *Id.*

14 c. *Taylor's analysis ignored the notable differences between the sediments*
15 *and benthic communities at the North Totten site and the Deepwater*
16 *Point farm.*

17 The sediments under the proposed North Totten site, unlike the Deepwater Point farm are
18 described as “soft mud”¹³ and are dominated by “fines.”¹⁴ Thus, as hypothesized by Brooks, the very
19 high sulfide levels measured at Deepwater Point would be even higher at the North Totten site as a
20 result of the higher percentage of fines in the sediments. Furthermore, unlike the Deepwater Point, the
21 benthic community immediately beneath the site of the proposed North Totten site is dominated by

22 ¹³ P-3, p. 2-17.

23 ¹⁴ The site originally identified for the North Totten farm was located near the northernmost end of the Taylor
24 tidelands. DEIS 2-17. However, a dive survey revealed the presence of a wild geoduck bed in solid sand and mud substrate
25 in a portion of the originally identified site. *Id.* The proposed Aquatic Lands Lease for the North Totten farm was
repositioned southward to the location identified as Alternative I in the DEIS, in order to avoid potential impacts to the wild
geoduck population. *Id.* The DEIS describes the bottom substrate in the relocation area as “soft mud (Goodwin 1997).” *Id.*
The percentage of fines measured under the proposed North Totten farm at three different locations within the raft array is
56.91%, 47.86% and 37.94%, or an average 47.57% fines. P-5, Sediment Physiochemistry of Totten Inlet, p. 7. In
comparison, the Deepwater Point “proportion fines were relatively low (25% to 38%) under and on the perimeter of the
rafts.” P-5, Benthic Response at the Deepwater Point Farm, p. 17. The most recent analysis of Brooks’ data on sediment

1 annelids (38% of total number of animals collected),¹⁵ the very organisms that would have been
2 excluded by the high sulfide levels recorded at the Deepwater Point farm. Finally, due to raft array at
3 North Totten site, the DEIS concluded that benthic areas impacted by these high sulfide levels would
4 rang from .92 acre to 1.54 acres. P-3, p. 3-35.

5 While Brooks analyzed the effects on the Deepwater Point farm's benthic community, he failed
6 to "closely analyze" the project's effect on the "existing" benthic community below the North Totten
7 rafts. This is because Brooks failed to discuss the differences between the two benthic communities in
8 the following areas: (1) the grain size of the sediments;¹⁶ (2) the benthos that inhabited the sediments;
9 (3) volume of mussel production which directly relates to amount of organic deposition;¹⁷ and (4)
10 anticipated recovery time for the benthic community to return to its previous baseline. In addition,
11 Brooks failed to address the occurrence of *Beggiatoa* which was documented by APHETI at the
12 Gallagher Cove farm.

14 *d. Taylor's analysis leaves any unanswered questions about impacts to the*
15 *benthic community.*

16 This lack of analysis and discussion left many unanswered questions about the project's effect
17 on the existing benthic community at the North Totten site. Which in turn led the Examiner to allow
18 Taylor to provide additional information to address the following questions:

- 19 • Approximately how long will the high sulfide concentrations described in Finding 100
- 20 • Approximately how long will these levels exclude or extirpate benthic in fauna as

21 composition, submitted by Taylor, erroneously concludes that the North Totten farm site has "the least sediment silt and
22 clay of all the various study areas of Totten Inlet." P-26, p. 4.

23 ¹⁵ P-3, p. 3-32.

24 ¹⁶ When comparing study results between two different sites, one of the most important parameters is grain size. P-
5, Brooks 2005a, p. 2.

25 ¹⁷ The study by Brooks of the Deepwater Point examined the effects of 189,624 lbs of mussels in production. In
contrast the anticipated production of mussels at the North Totten site is significantly greater. It is estimated that each raft
will generate an average of 20,183 pounds whole body, wet weight (meat + shell – cavity liquid for sale per growing
period. The growing period averages 16 months. It is estimated that the 58 rafts would produce an average of 877,963
pounds of mussels for sale each year.

1 described in the materials cited in Findings 100 through 102?

- 2 • Finding 103 cites evidence that it will take about seven months for the benthic in fauna
3 to recover from the effects of the high sulfide levels. Given the length of the growth
4 cycle, does this comply with the Regional Criteria?
- 5 • What effect will the deposition of organic material, as described in Findings 94 through
6 97, have on benthic life at this site? Does that effect comply with the Regional Criteria?
- 7 • Finding 104 points out the absence of technical analysis of the extent or effect of
8 Beggiatoa. Approximately how long will Beggiatoa typically persist under the rafts in
9 each growth cycle and what effect does that have on benthic organisms?
- 10 • Are the high sulfide levels, deposition of organic material, and generation of Beggiatoa,
11 and the resulting effect on benthos, an inherent or inevitable aspect of mussel raft
12 culture in Totten Inlet? Can these effects be reduced or avoided through changes in
13 location of the facility or in its method of operation?

14 P-1, Conclusion 66, p. 84-85. Since Taylor has continually failed to provide the requested information,
15 Taylor cannot demonstrate the proposed project is consistent with the SMP's requirement to "closely
16 analyze" the project's effect on the "existing" benthic community at the North Totten site.

17 2. Taylor's project is not consistent with Regional Criteria B to "protect"
18 existing "aquatic habitat."

19 As with any type of shoreline development, aquaculture uses are required to comply with
20 Regional Criteria B which provides:

21 All development . . . *shall* demonstrate compliance with the following policies:

22 . . .
23 B. **Protection** of water quality and aquatic habitat is recognized as a primary goal. . . Of
24 particular concern will be the *preservation* of the larger ecological system when a change is
25 proposed to a lesser part of the system, like a marshland or tideland.

Emphasis supplied. SMP, Section 2, V, B

Taylor's burden is to show that the North Totten mussel farm is consistent with Regional
Criteria B's requirement to protect aquatic habitat, and preserve the larger ecological system, a burden
which cannot be met for the reasons discussed above. *Supra*, III, C. As discussed, the existing
information in the Brooks studies demonstrates that the project's effects will create *actual* harm to the
benthic community. The unknown information is the extent of that harm, and whether that harm can be
appropriately prevented and/or mitigated through appropriate conditions. Furthermore, there are

1 significant issues with water quality and dissolved oxygen, which are addressed in APHETI's Pre-
2 Hearing Brief.

3 3. Taylor's Proposal is not Consistent with the Conservancy Environment.

4 The shoreline along the project site is designated as a Conservancy Environment. The
5 Conservancy Environment restricts permitted uses to only those uses which are consistent with the
6 purpose and definition. Uses are permitted in the Conservancy Environment if they are demonstrated
7 to be:

8 uses of a *nonpermanent* nature which do not substantially degrade the existing character of
9 the areas.

10 SMP, Section 2, VII, B. Both the Gallagher Cove farm and Deepwater Point farm have been located in
11 Totten Inlet for over twenty years. See P-1, Finding 15. Deepwater Point recently *expanded* its farm.¹⁸
12 Neither of the SDP permits for these sites have an expiration date. Without a condition limiting the
13 SDP permit for the North Totten site, the project will be a use of a permanent nature, which is
14 prohibited in the Conservancy Environment. SMP, section 2, VII, B.

15 Support for a time limit on SDP permits is found in the SMA. See RCW 90.58.143, and WAC
16 173-27-090. RCW 90.58.143(3) provides: "authorization to conduct construction activities shall
17 *terminate* five years after the effective date of a substantial development permit." The definition of
18 development contained in RCW 90.58.030(3)(d), encompasses both one-time and on-going
19 construction and use activities. The SHB recognized that there is a distinction to the impacts caused
20 between a one time development activity like building a house and on-going construction activity:
21

22 An example of an ongoing construction project would be a gravel extraction operation, which
23 may last for decades. *It is necessary to limit the duration of shoreline permits for such projects*
24 *because of their continual physical disruption of the shorelines, which the SMA was enacted to*

25 ¹⁸ A 2012 amendment of the SDP for the Deepwater Farm authorized the installation of four additional mussel rafts and two new geoduck nurseries. R-20.

