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DEPT. OF LAND &
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OFFICE OF CONSERVATION AND COASTAL LANDS
STATE OF HAWAII

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

REF:OCCL:MC

CDUP: HA-3497

Neil Sims
Kona Blue Water Farms
PO Box 4239
Kailua-Kona, HI 96745

JUL - 8 2009

SUBJECT: CONSERVATION DISTRICT USE PERMIT (CDUP) HA-3497
Amendments to Mariculture Facility
TMK (3): submerged lands
Offshore of North Kona, Hawai'i County

This is to inform you that on July 1, 2009, the Chair of the Department of Land and Natural Resources approved this Conservation District Use Permit (CDUP) HA-3497 for modifications to the Kona Blue mariculture facility located offshore of Unualoha Point, North Kona, Hawai'i, subject to the following conditions:

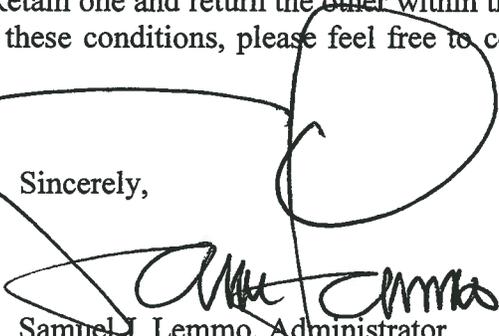
1. The applicant shall comply with all applicable statutes, ordinances, rules, and regulations of the federal, state, and county governments, and applicable parts of Chapter 13-5, Hawaii Administrative Rules;
2. The applicant, its successors and assigns, shall indemnify and hold the State of Hawaii harmless from and against any loss, liability, claim, or demand for property damage, personal injury, and death arising out of any act or omission of the applicant, its successors, assigns, officers, employees, contractors, and agents under this permit or relating to or connected with the granting of this permit;
3. The applicant shall obtain appropriate authorization from the department for the occupancy of state lands, if applicable;
4. The applicant shall comply with all applicable Department of Health administrative rules;
5. Before proceeding with any work authorized by the department or the board, the applicant shall submit four copies of the construction plans and specifications to the chairperson or his authorized representative for approval for consistency with the conditions of the permit and the declarations set forth in the permit application. Three of the copies will be returned to the applicant. Plan approval by the chairperson does not constitute approval required from other agencies;
6. The applicant shall notify the department in writing when construction activity is initiated and when it is completed;

7. All representations relative to mitigation set forth in the final environmental assessment for the facility are incorporated as conditions of the permit;
8. The applicant understands and agrees that the permit does not convey any vested rights or exclusive privilege;
9. In issuing the permit, the department and Chair have relied on the information and data, which the applicant has provided in connection with the permit application. If, subsequent to the issuance of the permit such information and data prove to be false, incomplete, or inaccurate, this permit may be modified, suspended, or revoked, in whole or in part, and the department may, in addition, institute appropriate legal proceedings;
10. Where any interference, nuisance, or harm maybe caused, or hazard established by the use, the applicant shall be required to take measures to minimize or eliminate the interference, nuisance, harm, or hazard;
11. The offshore facility shall operate five net pens in production, none larger than 7,000 cubic meters, and together totaling no greater than the current capacity of 24,000 cubic meters. Approval of DLNR will be needed prior to adding any additional fallow pens;
12. The use of feeds containing supplemental hormones shall not be allowed;
13. Approved species for the open-ocean facility are kāhala (almaco jack, *Seriola rivoliana* and amberjack, *S. dumerili*), mahi mahi (*Coryphaena hippurus*), ulua (giant trevally, *Caranx ignobilis*) and moi (Pacific threadfin, *Polydactylus sexifilis*). No other species is approved. Any further culture of fish species must be approved by the Chairperson of the Department of Land and Natural Resources;
14. Signs or other markings of the site shall be regulated by site plan approval. The applicant shall immediately report any ocean use conflicts, such as entanglement of fishing nets on the farm facility, to both the boating and land divisions. Buoys, signs or other markings shall be provided on the ocean surface when required by the Chairperson;
15. The applicant shall forward details of all monitoring efforts to the DLNR and water quality results to the Department of Health, two weeks after receipt of the results. The department shall be immediately notified of the failure of the mooring system, a disease outbreak, theft or vandalism;
16. The applicant shall monitor the condition of the submerged fish farm on a daily basis. When weather and surf conditions do not permit physical monitoring, visual monitoring shall be conducted;
17. The lease shall be in compliance with Chapter 190D, HRS. The applicant shall implement mitigative measures approved by the Chairperson to alleviate environmental or use concerns, when the need is apparent or when required by the Chairperson. Such mitigative measures may include the partial or complete removal of the fish farm facility;

18. Cages, anchors, lines and other fish farm facilities shall be removed at the conclusion of the use;
19. Any nets or other debris that foul on the cages or other part of the farm facility shall be disposed of as required by federal, state and city and county regulations and shall not be set free in the marine environment;
20. Dead fish shall not be disposed of in the surrounding waters but shall be removed from the site and disposed of at a County approved site;
21. The applicant will comply with the Reporting Requirements of the Management Plan, as amended July 2009, for the duration of the lease or until amended;
22. Other terms and conditions as prescribed by the Chairperson; and
23. Failure to comply with any of these conditions shall render the permit void;

Please acknowledge receipt of this approval, with the above noted conditions, in the space provided below. Please sign two copies. Retain one and return the other within thirty (30) days. Should you have any questions on any of these conditions, please feel free to contact Michael Cain at 587-0048.

Sincerely,



Samuel J. Lemmo, Administrator
Office of Conservation and Coastal Lands

Receipt acknowledged:



Applicant's Signature

Date

7/14/2009

cc: DLNR - Chair, Land Division, DOFAW, DAR, Humpback Whale NMS
DOH - Clean Water Branch
National Fish & Wildlife Service (attn: Patrick Leonard)
National Marine Fisheries Service (attn: Dave Schofield)

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
Office of Conservation and Coastal Lands
Honolulu, Hawai'i

FILE NO.: CDUA HA-3497
REF: OCCL: MC

Acceptance Date: February 25, 2009
180 Exp. Date: August 24, 2009

TO: Chairperson's Office, Department of Land and Natural Resources

REGARDING: Mariculture (Modifications to Existing Permit)

APPLICANT: Kona Blue Water Farms
Neil Sims, President
#1 Keahole Point Road
Kailua-Kona, HI 96740

LOCATION: Offshore of Unualoha Point, North Kona, Hawai'i

TMK: Submerged Lands

LEASE AREA: 90 acres

SUBZONE: Resource

DESCRIPTION OF AREA AND CURRENT USE:

Kona Blue Water Farms LLC (Kona Blue) operates a mariculture operation located 2600 feet offshore of Ulualoha Point, North Kona, Hawai'i County. The Board of Land and Natural Resources approved Conservation District Use Permit (CDUP) HA-3118 for the original operation on August 8, 2003. The application was processed and approved pursuant to Chapter 190D, Hawai'i Revised Statutes, relating to Ocean and Submerged Lands Leasing.

The 90-acre leased area lies in the Hawaiian Islands Humpback Whale Sanctuary (**Figures 1a** and **b**). The benthos is composed of coarse sand without any known macrofauna communities.

CDUP HA-3118, as amended, allows for the use of eight submerged Sea Station 3000 pens for the culture of kāhala (almaco jack, *Seriola rivoliana* and amberjack, *S. dumerili*), mahi mahi (*Coryphaena hippurus*) and ulua (giant trevally, *Caranx ignobilis*). The only species Kona Blue currently cultures in the ocean pens is *S. rivoliana*. There are other species which Kona Blue cultures on-shore, and which do not fall within the scope of this CDUP.

The current capacity for the open ocean pens is 24,000 cubic meters. Production is approximately 500 tons.

In October 2008 the Monterey Bay Aquarium Seafood Watch Program released their report on the environmental sustainability of farmed *Seriola spp.* operations worldwide. As Kona Blue is the only current mariculture operation in the US farming these species, the Seafood Watch evaluation of US fishery is *de facto* an evaluation of Kona Blue.

Seafood Watch gave farmed US *Seriola* a sustainability ranking of “Good Alternative¹.” The ranking is based upon five criteria: the use of marine resources, the risk of escaped fish to wild stocks, the risk of disease and parasite transfer to wild stock, the risk of pollution and habitat effects, and the effectiveness of the management regime. This compares to Japan and Australia, both of which Seafood Watch recommended to “Avoid.” No *Seriola* fisheries received that top recommendation of “Best Choice.”

PROPOSED USE:

Kona Blue would like to amend the permit to allow for a wider range of possible pen types. Their proposal would allow a maximum of five net pens, none larger than 7,000 cubic meters, and together totaling no greater than the current capacity of 24,000 cubic meters. The pens would be used for any combination of research, breeding, and production.

Under the proposal, Kona Blue could use either submersible or surface pens, of the following types:

- (1) modified submersible Sea Stations (see **Figure 2**),
- (2) PolarCirkel-style thick-walled HDPE surface pens (see **Figure 3**),
- (3) plastic-lumber framed Aquapods (see **Figure 4**), *or*
- (4) any other similar professionally-engineered, rigid-framed net pen that does not extend beyond 4 ft above the ocean surface.

Surface pens would require the additional use of bird nets.

The permissible netting for the pens would be from the following:

- (1) strengthened Dyneema® mesh,
- (2) Kikkonet rigid plastic mesh,
- (3) plastic-covered metal mesh,
- (4) other similar non-corrosive metal mesh, *or*
- (5) any other similar low-stretch, taut-mesh material.

¹ OCCL notes this ranking is contingent on Kona Blue obtaining third party verification on the accuracy of their internal data regarding the feed conversion ratio and the levels of PCB contamination, and that an independent party evaluate the genetic similarity between wild-caught and brood stock.

Kona Blue is not requesting an increase in ocean lease area or in total farm capacity. The existing mooring grid will remain largely unchanged. Public access to the lease area will be essentially unchanged.

The primary cultured species will continue to be kāhala. Kona Blue would like to add moi (Pacific threadfin, *Polydactylus sexifilis*), to the list of permitted species.

Kona Blue requests the permit modifications as they believe it will improve the economic viability of the facility, and reduce it's environmental impact. In terms of specific impacts, Kona Blue argues that the more rigid mesh will provide a more hostile substrate to aquatic invasive species and parasites & thus reduce disease; that there will be fewer breakouts and escapes with the more rigid mesh; that surface pens can be maintained, and the fish harvested, at lower cost; and that surface pens will reduce the amount of potential interaction between humans and marine mammals as there will be less open-water diving.

SUMMARY OF COMMENTS:

The Office of Conservation and Coastal Lands referred the application to the following agencies for review and comment: Office of Hawaiian Affairs; Hawai'i County Planning; DLNR- Land Division, Historic Preservation, DOCARE, Division of Aquatic Resources, DOBOR; Kanaka Council; US Army Corps of Engineers; US Fish and Wildlife Service; US Coast Guard; National Marine Fisheries Service; and the State Department of Health.

A notice of the application was placed in the March 8, 2009 edition of the Office of Environmental Quality Control's *Environmental Notice*. OCCL issued a FONSI and noticed this in the May 8, 2009 edition.

Copies of the application and EA were available for review at the Thelma Parker Public Library in Waimea and the Kailua Kona Public Library.

OCCL held a public hearing at 6 pm on Thursday, April 2, 2009 at Spencer Beach Park near Kawaihae, Hawai'i.

Comments were received from the following agencies:

DLNR – Boating and Ocean Recreation

No Comments

DLNR – Conservation and Resource Enforcement

No Comments

DLNR – Division of Aquatic Resources (DAR)

DAR acknowledges the potential benefits of switching to surface pens with a more rigid frame, but questions why there is still equivocation in the application as to the exact type of material. DAR concludes from the application that the continued use of subsurface pens would likely not result in the benefits noted above, and DAR strongly recommends that only surface pens be used for the two production pens and, if feasible, for the nursery and research pens as well.

DAR also noted the following:

- The application doesn't discuss the use of bird nets on surface cages
- The application doesn't provide evidence that impacts of the project on the `ōpelu ko`a will be insignificant.
- Protocols should be established for substantial pen escapes, disease outbreaks, and shark management.
- the draft EA should provide evidence that there is no increase in parasitism on wild kahala in the vicinity.
- The management plan discusses `ōpakapaka, but the species is not mentioned in the EA or CDUA.
- *S. dumerii* is listed in the CDUA but not the management plan or draft EA.
- The proposal mentions that pens, subsurface lines, and other structures will be removed upon termination of the lease. The plan should explicitly state that all anchors and mooring blocks also be removed.
- The management plan states that production will be 350 tonnes, but the CDUA indicates that it will be 500 tonnes.
- The monitoring videos and data posted to the website are either low quality or absent.

Kona Blue's Response

Kona Blue points out that the net-development industry is still in its early stages, and would like to retain the flexibility to use subsurface nets should new materials or technologies be developed. So long as there is no change in overall biomass then Kona Blue would like the ability to respond to these potential developments.

Kona Blue also noted that:

- *Bird nets are standard on surface pens, and will be used;*
- *The original EA in 2003 discussed the `ōpelu ko`a.*
- *Kona Blue would comply with a reporting protocol for significant escapes and for disease reporting;*
- *They will incorporate the existing shark management plan into the emergency response plan;*
- *The sampling of wild kahala was conducted in house by Kona Blue, and there is not other documentation available;*
- *The omission of other permitted species, opakapaka and s. dumerii, was an oversight and Kona Blue would like them to remain on the permit;*
- *“Other structures” was intended to include mooring chains and anchors. This can be made explicit if needed;*

- *Total production will not exceed that of the current operation, 500 tons. The two production net pens should produce approximately 350 tons, and the two research pens 150 tons.*
- *Kona Blue provides water quality and benthic monitoring data to the Clean Water Branch as required by the NPDES permit, and to DLNR through OCCL. Kona Blue had assumed that the data were then distributed throughout DLNR.*
- *Kona Blue is open to suggestions on how to improve the video monitoring.*

DLNR - DAR, Hawaiian Islands Humpback Whale National Marine Sanctuary

The Sanctuary is concerned with bottlenose dolphins (*Tursiops truncatus sp.*) interacting with divers, fish stock, and the project's associated structures. The Sanctuary has proposed a management protocol concerning dolphin interactions².

Kona Blue's Response

Kona Blue has implemented many of the recommendations made in the suggested protocol, and has no objections to the complete protocol being made a condition of the permit.

Kona Blue also notes that the change from submersible to surface cages should minimize human/dolphin interactions. The Kona Blue staff member who had engaged in feeding dolphins is no longer with the company, and the remaining employees have signed forms promising to abide by both permit and federal regulations.

DLNR – Historic Preservation Office (SHPO)

SHPO does not believe that any historic properties will be affected by this project. They request that work ceases in the vicinity of any find should submerged historic resources such as maritime wreckage, aircraft remains, or structural remnants be discovered, and that SHPO be contacted immediately.

Kona Blue's Response

Kona Blue has no objections to these recommendations being made a condition of the permit.

DLNR – Land Division

A Notice of Default was mailed to the applicant in March 2009 for failure to submit an annual statement of gross receipts due under its mariculture lease, General Lease No. S-5721. Applicant needs to resolve this.

The proposals in the current application do not increase the number of cages approved by the Board. The lease does not prohibit the use of surface cages.

² OCCL will be recommending that the Chair accept the proposed Marine Mammal Plan in its entirety, and will discuss it later in this report.

Kona Blue's Response

The applicant apologizes for this oversight, and will take immediate steps to correct it³.

DLNR - OCCL

OCCL had our own comments on the application that we asked the applicant to address. These concerned questions on capacity, a request to present us a simplified and comprehensive management plan, and a paucity of information on the proposed addition of moi to the permit. These will be addressed in our Discussion.

County of Hawai'i, Planning Department

The facility is outside the jurisdiction of the Planning Department .

Office of Hawaiian Affairs (OHA)

OHA notes that the environmental impacts of the change in pen configuration will likely be no different than the impacts of the current configuration. OHA also notes that the applicant will continue to culture native Hawaiian species that have not been genetically modified.

OHA would like to see a management plan included that addresses interactions with marine mammals, sea turtles, and sharks.

OHA considers submerged lands to be ceded lands, and should receive 20% of the revenue stream from the lease.

OHA is not adverse to the idea of the applicant conducting tours; however, questions why a request for this activity is included in the application when tours would be outside the purview of OCCL.

OCCL Notes

These comments were received after the Final EA was published. The concerns regarding animal interactions, Hawaiian species, and genetic modification were also raised by other agencies and were addressed in the final EA. The issue of rent on submerged lands should be handled by Land Division.

*OCCL will not be considering the applicant's request to allow tourists to visit the pens, as this activity is outside our purview. However, we will rely OHA's concerns, and would **highly** recommend that Kona Blue ensure that all visitors to the facility are familiar with the protocols regarding marine mammal interactions.*

US Fish and Wildlife Service (FWS)

FWS believes that the increased concentration of prey fish species could create an attractive nuisance to seabirds in the area. FWS recommends that Kona Blue develop a

³ OCCL has confirmed with Land Division that this issue has been taken care of.

statistically sound monitoring plan to evaluate seabird species presence and abundance in the area. They recommend that the results be evaluated 12 months from the implementation of the proposed changes, and that the report be submitted to OCCL, DOFAW, and FWS within 18 months.

FWS recommends that the final EA fully describe how the location and position of the fish and pens will affect water quality in the surrounding area.

FWS notes that the draft EA does not address the type and incidence of disease on fishes surrounding the pens.

FWS would like the final EA to discuss where hatchery stock originates and how they are transported to the pens. They recommend that the final EA includes a risk management protocol that is implemented during set-up, stocking, harvesting, and maintenance of the pens.

OCCL Notes

We received these comments after the final EA had been submitted. Many of the issues raised were covered in the original 2003 permit. OCCL will discuss the remaining issues, relevant to this application, in our Discussion.

State Department of Health, Clean Water Branch (CWB)

CWB notes that the project must meet the anti-degradation policy pursuant to HAR §11-54-1.1, designated uses pursuant to HAR §11-54-3, and water quality criteria pursuant to HAR §11-54-4 to 8.

CWB points out that the current NPDES permit expires on June 15, 2009, that the applicant has applied for a renewal, and that the proposed changes are reflected in the application.

Dr. Dale Sarver

Dr. Carver, a con-founder of Kona Blue, states that efforts to apply problems associated with other mariculture operations around the world are misguided (sic) and that Kona Blue's application should be evaluated without regard to what is happening in China, Central America, or Europe.

Chef Olelo pa`a Faith Ogawa

Chef Olelo states that Kona Kampachi is one her favorite fish to serve clients.

Jeff Sacher

Mr. Sacher asks that OCCL defer their decision until the people of Kona have the opportunity to comment on the application. He also states that the outcome of the EA should be decided before a decision is made.

Mr. Sacher states that genetically modified fish have escaped into the wild. He believes that this business is not economically viable. He has heard that sharks have been killed

at Kona Blue. He questions the lack of studies on the benthic communities, the viability of the cages in severe weather, and whether local fishermen will be put out of work by the operation.

He asks that the process be allowed to run its course before OCCL makes its decision.

Kona Blue's Response

Kona Blue does not understand the request that the state wait to see the outcome before making a decision, or to wait for the EA to be completed. The EA is the mechanism by which the State uses input from the public on proposals. Your testimony is part of this process.

Kona Blue does not use genetically modified fish. It is not allowed in the permit. The facility uses wild fish, F1 and F2, as broodstock. There is no selective breeding. Therefore, there is little genetic difference between fish in and outside of the pen.

The shark incident has been discussed on numerous occasions. There is now a shark management plan in place.

Wild stocks in Kona have been depleted to the point where there is little commercial fishing left on the coast. Local fisherman will not be put out of work.

There is a benthic monitoring plan in place, there are no bottom-fish communities on the sandy substrate below the pens, and the existing grid has been in place for four years.

Mauna Kea Resorts

The Executive Chef at Mauna Kea Resorts supports the application.

Ms. Cory (Martha) Harden

Ms. Harden supports local fisheries, and commends Kona Blue for securing a “good alternative” rating from Seafood Watch.

(Ms. Harden attached twelve pages of concerns; her comments and Kona Blue's responses are included in the CDUA file. OCCL found that the comments were not specific to this permit application, but rather related either to mariculture operations in general, the original permit and lease, or to economic considerations outside of OCCL's purview. We have therefore not summarized all her comments here).

Maui Tomorrow Foundation, Inc.

Maui Tomorrow states that open ocean aquaculture uses relatively new technology and that the burden of proof of its safety must fall on the applicant. They do not believe that Kona Blue has demonstrated that mariculture is sustainable, technically possible, or financially feasible.

(OCCL notes that the bulk of Maui Tomorrow's remaining comments concerned the issue of Kona Blue's mariculture permit in general, which was not the subject of this application. We have therefore not summarized all their comments here. The comments, and Kona Blue's response, are in the case file and final EA and available for public review).

Food & Water Watch (FWW)

FWW is troubled by the request for permit flexibility, and remain concerned about the overall sustainability of the company. They object to the permit request.

FWW does not believe that the state should subsume it's duties to protect the environment to sustain a project located within, and using, public resources (sic).

Allowing for flexibility would allow Kona Blue to place cages in the water without conducting an environmental assessment, and FFW believes that Kona Blue would be able to place any type of high-tech structure in the water without review.

FFW also:

- criticizes Kona Blue for having offices in Mexico and California, and finds Kona Blue's economic claims to be dubious;
- states that the EA seeks to minimize environmental monitoring;
- is concerned with marine mammal interactions;
- notes that Kona Blue had to kill a tiger shark, which is revered in Hawaiian culture as a guardian spirit;
- notes that fishing pressures on wild stock are unlikely to be reduced; and
- that land-based fish farming offers many benefits.

Applicant's Response

Kona Blue notes that the flexibility they are requesting is not open-ended, but rather occurs in a tightly controlled framework. Kona Blue is not proposing to use the high-tech self-propelled pens that are the subject of other mariculture applications. Kona Blue does not want to commit to one form at this time so that they can test and refine technologies, and to learn which are more appropriate for different stages of production. The types of allowable pens are all discussed in the EA.

Kona Blue agrees that increased efficiency will lead to labor reductions. Without these the company will not be viable. Moving towards self-sufficiency requires developing economies of scale. Opening offices in other locations does not imply that Kona Blue intends to pull out of Hawai'i.

Kona Blue notes that they are not requesting an increase in allowable biomass, so they stand by the statements in the EA that there should not be a significant change in impact on water quality or the benthos.

Kona Blue notes that the shark killing occurred in 2005, and has been addressed on many occasions. They argue that there have been no similar incidents in the past 3 ½ years.

Kona Blue also discussed the many environmental, energy, and economic problems that land-based alternatives presented.

Peter L Merriman (Owner, Merriman's Restaurant Group)

Mr. Merriman supports the proposal, and uses Kona kampachi in his restaurants. He states that every ounce of kampachi served is one less ounce of a threatened species that he would have served in its stead.

ANALYSIS:

Following review and acceptance for processing, the Applicant was notified, by letter dated March 18, 2009, that:

1. The proposal was an identified land use within the Conservation District, pursuant to Hawai'i Administrative Rules (HAR) §13-5-22 *Identified land uses in the protective subzone*, P-9 STRUCTURES, EXISTING, (C-2) *Operations, repair, maintenance, or renovation of existing structures, facilities, equipment, or topographical features which are different from the original permit or which are different from the department-approved construction plans*. This use requires a Departmental Permit from the DLNR signed by the Chair of the Board of Land and Natural Resources. **The final decision as to whether to grant or deny the permits lies with the Chair.** The Chair has the option of referring the application to the full Board for approval.
2. A public hearing will be required pursuant to HAR §13-5-40 *Hearings*, (a) *Public hearings shall be held on (1) All applications for a proposed use of land for commercial purposes*. OCCL held the hearing at 6 pm on Thursday, April 2, 2009 at Spencer Beach Park near Kawaihae, Hawai'i.
3. Pursuant to HAR §13-5-31 *Permit applications*, the permit requires that an environmental assessment be carried out. A Finding of No Significant Impact (FONSI) to the environment is anticipated for the proposed project. The draft environmental assessment (DEA) was published in the Office of Environmental Quality Control's (OEQC) March 8, 2009 *Environmental Notice*. OCCL issued a FONSI on May 8, 2009.

§13-5-30 CRITERIA:

The following discussion evaluates the merits of the proposed land use by applying the criteria established in HAR §13-5-30.

- 1) *The proposed use is consistent with the purpose of the Conservation District.*

The objective of the Conservation District is to conserve, protect and preserve the important natural resources of the State through appropriate management and use to promote their long-term sustainability and the public health, safety and welfare.

The mariculture operation was approved by the Board in 2003. Staff is of the opinion that the proposed modifications will increase the impact on the State's natural resources, and has the potential to actually reduce the impact.

- 2) *The proposed land use is consistent with the objectives of the Subzone of the land on which the use will occur.*

Pursuant to HAR §13-5-14, the objective of the Resource Subzone *is to designate open space where specific conservation uses may not be defined, but where urban use may be premature.*

The project in and of itself will not affect open space. The open-air surface area of the pens might increase, but this will be accompanied by a commensurate reduction in underwater surface area. The leased area, and overall capacity, will not change.

- 3) *The proposed land use complies with the provisions and guidelines contained in Chapter 205A, HRS entitled "Coastal Zone Management", where applicable.*

The State Office of Planning has determined that the modifications are consistent with the Hawai'i CZM Program..

- 4) *The proposed land use will not cause substantial adverse impact to existing natural resources within the surrounding area, community or region.*

The Board found that the original proposed use would not cause a substantial adverse impact. OCCL does not believe that the proposed modifications would change this determination.

- 5) *The proposed land use, including buildings, structures and facilities, shall be compatible with the locality and surrounding areas, appropriate to the physical conditions and capabilities of the specific parcel or parcels.*

The proposed modifications would not change the project's compatibility.

- 6) *The existing physical and environmental aspects of the land, such as natural beauty and open space characteristics, will be preserved or improved upon, whichever is applicable.*

The project will have little impact on open space. The leased area will not change.

- 7) *Subdivision of land will not be utilized to increase the intensity of land uses in the Conservation District.*

The proposed project does not involve subdivision of Conservation District land.

- 8) *The proposed land use will not be materially detrimental to the public health, safety and welfare.*

Staff is of the opinion that the proposed addition will not be materially detrimental to the public health, safety and welfare. It is possible that the modifications will make the facility more economically viable and environmentally friendly.

DISCUSSION:

Kona Blue Water is applying to modify its existing mariculture permit to expand the range of allowable pen types. The farm currently uses eight submerged Sea Station 3000 pens, which have a total capacity of 24,000 cubic meters and produce 500 tons of product.

This application asks that Kona Blue be allowed more flexibility in choosing net designs, layout, and material. Kona Blue requests that the permit to be modified to allow for a maximum of five net pens, none larger than 7,000 cubic meters, and together no larger than the current capacity of 24,000 cubic meters.

The pens could be used for research, breeding, or production. The primary species will be kāhala (*Seriola rivoliana*). Kona Blue may also culture amberjack (*S. dumerili*), mahimahi (*Coryphaena hippurus*), and moi (*Polydactylus sexifilis*).

They are not requesting an increase in ocean lease area or in total farm capacity. The existing mooring grid will remain largely unchanged. Public access to the lease area will be essentially unchanged.

The Board of Land and Natural Resources approved a permit for the original mariculture facility in 2003. Since that time the permit has been modified and amended. As the facility has evolved many of the reporting protocols and management plans have been fine-tuned. OCCL determined that it would be appropriate to treat the proposed modification as a request for a new Conservation District Use Permit (CDUP), as that would allow us to address some of the issues that have arisen since 2003, as well as to incorporate the previous modifications into one streamlined permit.

Monterey Bay Aquarium's Seafood Watch released its sustainability assessment of the world's farmed *Seriola spp.* facilities in October 2008. U.S. farmed *Seriola*, in effect Kona Blue, received a ranking of "Good Alternative."

Maintaining the current ranking of “Good Alternative” is not a requirement of this permit. At the same time, OCCL wishes to ensure that local mariculture operations are as sustainable as possible. We have asked that Kona Blue comply with Seafood Watch’s requests for improvement where possible, and that Kona Blue keep OCCL informed of their progress. The complete 72-page Seafood Watch report is included in the CDUA file.

The switch to a more rigid netting, larger but fewer pens, and more surface pens has the potential to reduce the facilities environmental impact in a number of ways. These include:

- The number of mooring lines could be reduced by half, including the overall elimination of the ballast mooring lines, thus reducing the risk of marine mammal entanglement;
- Surface pens are easier to stock, maintain, and harvest. This would reduce the risk of escapes at many points in the production cycle;
- There is a more efficient removal of fish mortalities with surface pens;
- Surface pens require less open-ocean diving, thus reducing human-marine mammal and human-shark interaction; and
- The rigid pens are easier to clean, and provide a more hostile substrate for invasive species and parasites, thus reducing bio-fouling and disease.

OCCL notes that Kona Blue is asking for flexibility, and is not committing to a complete change to surface pens. The Division of Aquatic Resources has pointed out that the continued use of subsurface pens would likely not result in the benefits noted above, and DAR strongly recommends that only surface pens be used for the two production pens and, if feasible, for the nursery and research pens as well. OCCL does not feel that we have enough information to recommend that this be made a mandatory condition of the permit, but would also encourage Kona Blue to pursue this array.

Kona Blue also put forward a number of economic arguments for the proposed modifications; however, OCCL’s assessment will be focused on the potential environmental impacts.

A number of concerns were raised by OCCL, other agencies, and the community. They are briefly summarized below:

Capacity

OCCL found some potential discrepancy between the potential size of the new cages and the applicant’s statement that capacity would remain unchanged. Condition 11: *The offshore fish farms shall operate six submerged cages at least twenty (20) feet below the ocean surface, but may be raised for repair, transport or other maintenance, and two surface cages not to exceed 45 feet⁴ in diameter.* The current proposal would allow

⁴ 45 feet = 13.7 meters, which would provide a subsurface area of 675 square meters (Subsurface area = $\frac{1}{2} (\pi r^2)$).

for surface cages of 30-meters in diameter, which would give a submerged area of 7068 m³ each. Two production cages of this size alone would have a capacity of 14,124 m³, and the application as written would have a potential capacity of 35,000 m³.

Kona Blue clarified, and stated that they will only have 24,000 m³ *under culture*. Their current vision is to have three 7000 m³ grow-out pens, one 2000 m³ cubic meter nursery pen, and a smaller research pen. They believe that the permit would allow for additional pens on the site that lay fallow, to be used for engineering trials, or the testing of new designs and materials. There would still only be five pens in production, and 24000 m³ stocked at any time.

OCCL does not concur that the original permit would allow Kona Blue to exceed capacity if a pen were fallow. We recommend that the current permit maintain the capacity at 24,000 m³, and that Kona Blue request Site Plan approval from OCCL for any future additional fallow pens they might need.

Reporting Protocols and Management Plans

OCCL notes that CDUP HA-3118 contains six separate and overlapping reporting requirements⁵, and these have evolved and been amended over the years. In 2007 the Board added a requirement for a benthic monitoring plan. The application also mentions, at various places, proposed or actual management plans for sharks, marine mammals in general, diseases, escapes, dolphins, and emergencies. We also note that Seafood Watch is requiring third party verification of Kona Blue's data and a complete written report by October 2009 in order for US Farmed Yellowtail to retain its sustainability ranking.

OCCL feels that issuing a new permit offers an opportunity to simplify and clarify all these overlapping reports and plans. OCCL recommended that Kona Blue compile a master list of all the reports and protocols that they were required to follow. In their master list Kona Blue referred to the salient federal permits where there were overlapping federal and state requirements. OCCL then made the following additions:

- Given that there has been confusion in the past regarding when and to whom reports should be sent, the REPORTING SCHEDULE will now state that *An original copy of all reports shall be provided to OCCL.*

⁵ **From CDUP HA-3118:**

- Condition 15 requires forwarding "all monitoring reports" to DLNR and water quality results to DOH
- Condition 16 requires a "water quality, benthic and coral reef monitoring protocol."
- Condition 17 requires testing both farm and wild fish for parasites at least once per year
- Condition 18 requires that all research and data be submitted to DLNR; that independent third parties collect water samples, and that all state or federally required environmental reports be submitted to the DAR Office at Honokohau.
- Condition 23 requires that applicant to develop a Marine Protected Species Monitoring & Reporting Protocol with NOAA.
- Condition 24 requires that the applicant develop a Project Activity Modification Protocol with NOAA.

- Upon the recommendation of the Division of Aquatic Resources, the EMERGENCY REPORTING PLAN will now state that *The company shall notify the Division of Aquatic Resources of any significant fish escapes (>50) or disease outbreaks.*
- Given the possibility of resident dolphin populations becoming established, and upon the recommendation of the Humpback Whale Sanctuary Staff, a DOLPHIN MANAGEMENT PLAN has been added.
- Given that surface nets will increase the facility's attraction to seabirds, and upon the recommendation of the National Wildlife Service, OCCL will ask that the applicant develop a SEABIRD MONITORING PLAN.
- The State Historic Preservation Division does not believe that any historic sites will be affected by the project; however, should historic resources be uncovered they ask that work cease and they be contacted. OCCL has added a section called the HISTORIC RESOURCE MANAGEMENT PLAN.

The proposed **Management Plan, Section 4: Reporting Requirements** are attached in to this report. OCCL will recommend that the Chair make the adoption of these requirements be a condition of granting the permit, and that they replace the previous permit's reporting provisions.

Community Concerns

OCCL received a number of written statements opposing Kona Blue's mariculture facility. The majority of the complaints revolved around overall objections to mariculture in Kona's waters, rather than to specific elements of the this request. OCCL notes that the Board approved the mariculture operation in 2003. If this permit is rejected the original facility will remain; in other words, none of the community's concerns would be addressed by rejecting the modifications.

Other community members were concerned that the "process" was not being properly followed, that public testimony was not being received, and that an environmental assessment needed to be carried out *prior* to OCCL making any recommendations. OCCL did not fully understand this series of comments, as these individuals offered public testimony saying that OCCL was not taking public testimony, and *as part of* the environmental process that they said was not happening.

A final concern raised was that Kona Blue was experimenting on materials and technologies in Hawaiian waters, and that more research should be carried out before approval is granted. They were concerned with Kona Blue being offered an undue amount of flexibility in their permit. OCCL would share this concern if new technologies were being introduced to the facility. However, Kona Blue will still be required to operate with strict parameters, and with the flexibility limited to the net array, net materials, net size.

Moi

OCCL did not receive any comments or concerns regarding adding moi, or Pacific threadfin, to the permit. Kona Blue reports that the only differences in management details for moi would be the size of the fish at deployment, the size of the pen mesh at first deployment, the duration of the culture, the food conversion rations, and the size at harvest. Given that other mariculture operations in the state culture moi without known incidence, OCCL has no objections to adding it to the list of permitted species.

OCCL is satisfied that the proposed modifications are consistent both with the intent of the original Board-approved permit and with the goals and objectives of the Conservation District. We have amended our recommendations to reflect additions and changes to the original permit that have occurred since 2003, and have added a few conditions to address new concerns.

Therefore:

RECOMMENDATION:

Based on the preceding analysis, Staff recommends that the Chair of the Board of Land and Natural Resources APPROVE this application for modifications to the Kona Blue mariculture facility located offshore of Unualoha Point, North Kona, Hawai`i, subject to the following conditions:

1. The applicant shall comply with all applicable statutes, ordinances, rules, and regulations of the federal, state, and county governments, and applicable parts of Chapter 13-5, Hawaii Administrative Rules;
2. The applicant, its successors and assigns, shall indemnify and hold the State of Hawaii harmless from and against any loss, liability, claim, or demand for property damage, personal injury, and death arising out of any act or omission of the applicant, its successors, assigns, officers, employees, contractors, and agents under this permit or relating to or connected with the granting of this permit;
3. The applicant shall obtain appropriate authorization from the department for the occupancy of state lands, if applicable;
4. The applicant shall comply with all applicable Department of Health administrative rules;
5. Before proceeding with any work authorized by the department or the board, the applicant shall submit four copies of the construction plans and specifications to the chairperson or his authorized representative for approval for consistency with the conditions of the permit and the declarations set forth in the permit

- application. Three of the copies will be returned to the applicant. Plan approval by the chairperson does not constitute approval required from other agencies;
6. The applicant shall notify the department in writing when construction activity is initiated and when it is completed;
 7. All representations relative to mitigation set forth in the final environmental assessment for the facility are incorporated as conditions of the permit;
 8. The applicant understands and agrees that the permit does not convey any vested rights or exclusive privilege;
 9. In issuing the permit, the department and Chair have relied on the information and data, which the applicant has provided in connection with the permit application. If, subsequent to the issuance of the permit such information and data prove to be false, incomplete, or inaccurate, this permit may be modified, suspended, or revoked, in whole or in part, and the department may, in addition, institute appropriate legal proceedings;
 10. Where any interference, nuisance, or harm maybe caused, or hazard established by the use, the applicant shall be required to take measures to minimize or eliminate the interference, nuisance, harm, or hazard;
 11. The offshore facility shall operate five net pens in production, none larger than 7,000 cubic meters, and together totaling no greater than the current capacity of 24,000 cubic meters. Approval of DLNR will be needed prior to adding any additional fallow pens;
 12. The use of feeds containing supplemental hormones shall not be allowed;
 13. Approved species for the open-ocean facility are kāhala (almaco jack, *Seriola rivoliana* and amberjack, *S. dumerili*), mahi mahi (*Coryphaena hippurus*), ulua (giant trevally, *Caranx ignobilis*) and moi (Pacific threadfin, *Polydactylus sexifilis*). No other species is approved. Any further culture of fish species must be approved by the Chairperson of the Department of Land and Natural Resources;
 14. Signs or other markings of the site shall be regulated by site plan approval. The applicant shall immediately report any ocean use conflicts, such as entanglement of fishing nets on the farm facility, to both the boating and land divisions. Buoys, signs or other markings shall be provided on the ocean surface when required by the Chairperson;
 15. The applicant shall monitor the condition of the submerged fish farm on a daily basis. When weather and surf conditions do not permit physical monitoring, visual monitoring shall be conducted;

16. The lease shall be in compliance with Chapter 190D, HRS. The applicant shall implement mitigative measures approved by the Chairperson to alleviate environmental or use concerns, when the need is apparent or when required by the Chairperson. Such mitigative measures may include the partial or complete removal of the fish farm facility;
17. Cages, anchors, lines and other fish farm facilities shall be removed at the conclusion of the use;
18. Any nets or other debris that foul on the cages or other part of the farm facility shall be disposed of as required by federal, state and city and county regulations and shall not be set free in the marine environment;
19. Dead fish shall not be disposed of in the surrounding waters but shall be removed from the site and disposed of at a County approved site;
20. The applicant will comply with the Reporting Requirements of the Management Plan, as amended July 2009, for the duration of the lease or until amended;
21. Other terms and conditions as prescribed by the Chairperson; and
22. Failure to comply with any of these conditions shall render the permit void;

Respectfully submitted,



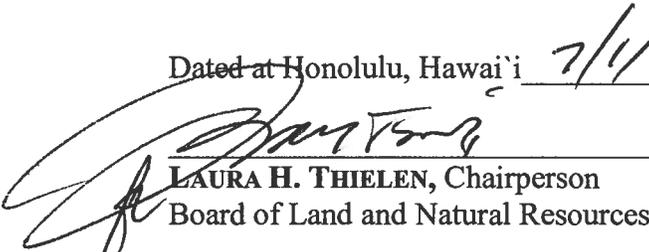
Michael Cain
Staff Planner

Under the authority of §13-5-30(a) and 13-5-33, Hawai'i Administrative Rules, this request for a Departmental Permit for CDUA HA-3497 is hereby:

Approved

Disapproved

Dated at Honolulu, Hawai'i 7/1/09



LAURA H. THIELEN, Chairperson
Board of Land and Natural Resources

Figure 1 (a): Existing offshore fish farm site and primary fishing areas

The existing site is well inside of both the 100 fathom (200 m) trolling ledge along the “grounds” offshore of Keahole Point, and the 40 fathom (80 m) ono lane. Reef fishing and ‘opelu ko’a are found well inshore of the proposed site, along the edge of the reef, in waters up to 120 feet deep (40 m). Fishing grounds for ‘opelu at night are usually deeper than 40 fathoms (80 m).

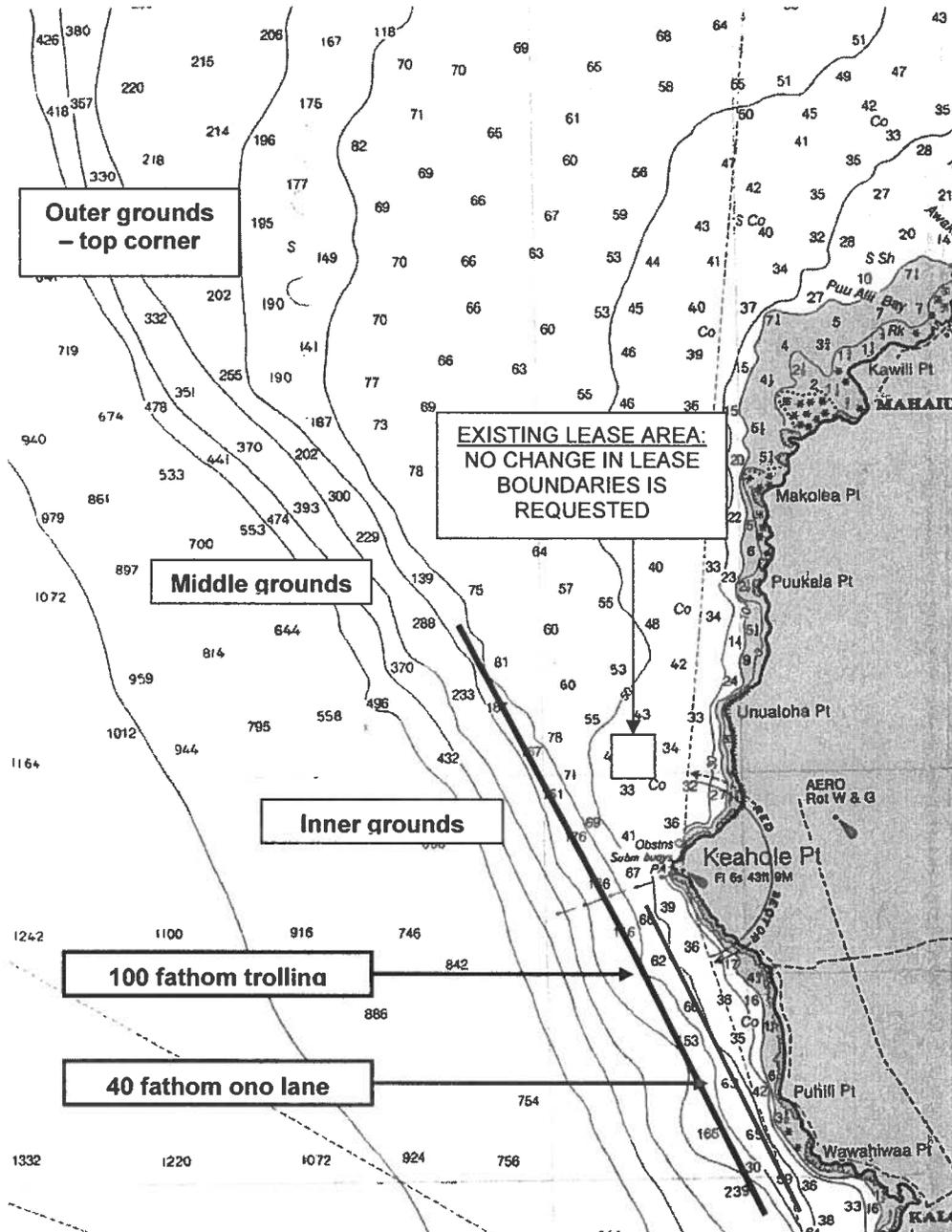
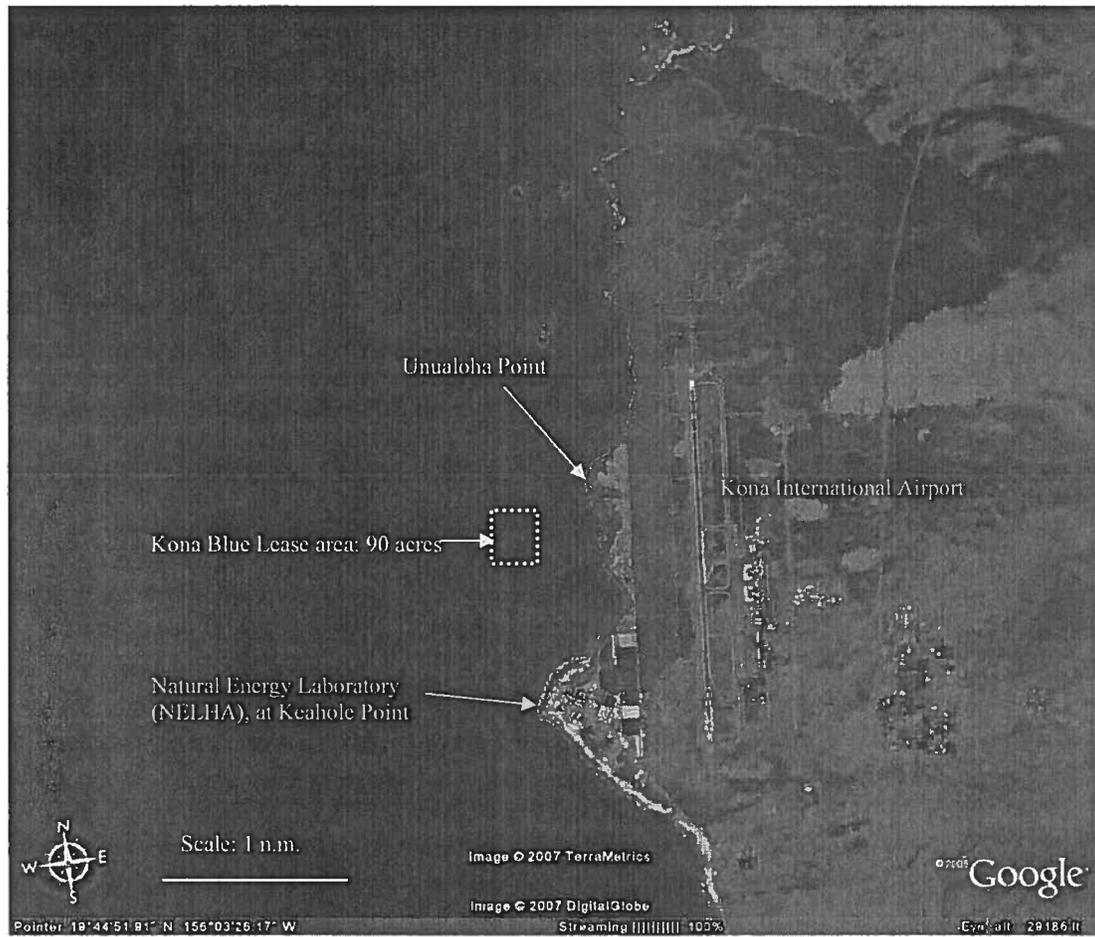


Figure 1 b : Aerial photo showing existing lease area, relative to the airport and Keahole Point.
No change in lease boundaries is requested.



(Note: Dimensions and location of area are indicative only – precise latitude and longitude of the existing lease area is included in the text.)

Figure 2: Sea Station net pen

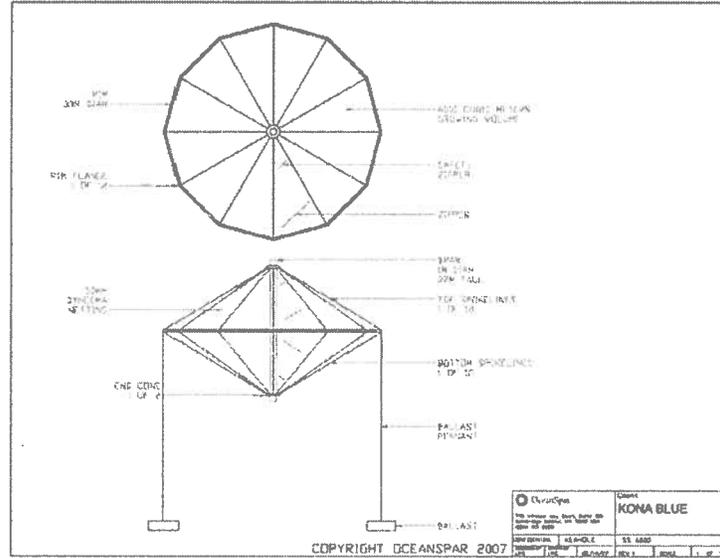


Figure 3: PolarCirkel surface net pen

