OVERVIEW OF AQUACULTURE ENVIRONMENTAL PERMITTING ISSUES in the COMMONWEALTH OF THE NORTHERN MARIANA ISLANDS, USA

Center for Tropical and Subtropical Aquaculture
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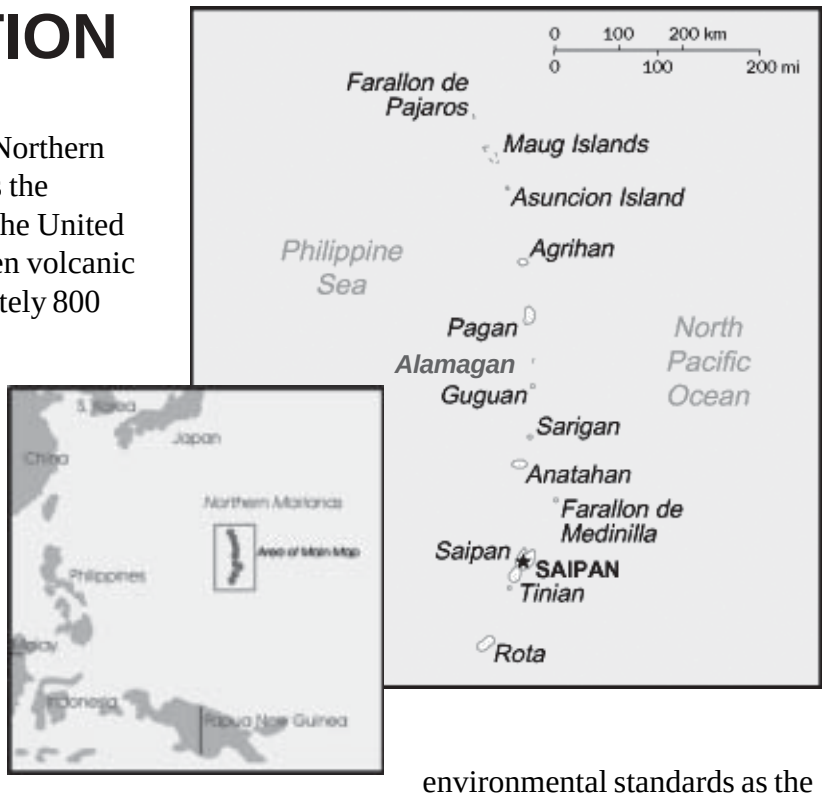
As a word of caution, this document is to be used for guidance purposes only. Interpretation of regulations and policy decisions by the regulatory authorities can change, and final guidance should be obtained directly from the agency responsible for the particular regulatory program you are attempting to comply with. Additionally, this document does not cover all regulatory programs that the CNMI aquaculturists may encounter in their venture.

The author is interested in receiving comments, negative or positive, from those who use this document. Your feedback can help make the planned updated versions of this document more understandable or accurate. Please provide any comments directly to john.gourley@saipan.com.

I. INTRODUCTION



The Commonwealth of the Northern Mariana Islands (CNMI) is the westernmost extension of the United States and is comprised of fourteen volcanic high islands stretching approximately 800 kilometers south from Farallon de Pajaros or Uracas at 20º latitude to Rota at 14º latitude.

Only the three southernmost islands, Rota, Tinian, and Saipan, are continually inhabited with a total CNMI population estimated at 81,126 people during the first quarter of 1999. The largest island, Saipan, contains approximately 90% of the total CNMI population and is approximately 120 km^2 in size. The smallest island, Farallon de Medinilla, is uninhabited and approximately 1.0 km^2 in size. The total land mass of the CNMI is estimated at 460 km^2.

The CNMI has the physical and geographical capability of sustaining a viable aquaculture industry. With a limitless supply of quality seawater, a tourism based economy, and a good air shipping support system, the stage appears to be set for aquaculture development. Presently however, aquaculture related activities are largely undeveloped and limited to land-based, freshwater tilapia and brackish water penaeid shrimp culture. It is ironic that the CNMI, which is fresh-water limited, only has fresh/brackish water aquaculture facilities.

One critical and often overlooked aspect of aquaculture industry development is not at all related to the raising of aquatic organisms, but concerns the regulatory framework that governs its development. As a Commonwealth of the United States, the CNMI has the same environmental standards as the U.S. mainland and must comply with all federal environmental laws.

These laws were promulgated to protect our natural resources from overexploitation; therefore, regulatory standards which the aquaculture industry must meet can be formidable. This may easily frustrate an aspiring aquaculturist, either through general prohibitions of proposed activities or through an increase in the cost of doing business to a point that would make the venture unprofitable.

Unlike the minimal environmental regulatory requirements in other Micronesian areas that will likely become competitors (e.g., Federated States of Micronesia, Republic of Palau, and the Republic of the Marshall Islands), numerous U.S. federal and local CNMI environmental laws regulate everything from facility siting, raw water sources, how and where wastewater is discharged, and culture species, to the preparation of final products for sale. Knowing and understanding the reasons for these regulations are crucial to the initial planning stages of any potential aquaculture

venture. The purpose of this document is to provide a basic understanding of the CNMI environmental regulatory programs as they pertain to aquaculture. In this document, the term aquaculture is used to describe the culture of both marine and freshwater plants and animals. It will hopefully provide a base of knowledge for prospective aquaculturists to make informed decisions on what and where they can culture, thereby saving time and money. This document is not intended to be a primer on aquaculture development in the CNMI, but an important part of the information necessary to start a successful venture.
The permitting of aquaculture activities can be a difficult process depending upon site limitations, facility design, and what species are targeted for culturing. Under certain circumstances, multiple permits will be required from different agencies for the same activity. The applicant must possess *all* of the required permits for a proposed action prior to commencing construction. If, for some reason, one of the regulatory agencies refuses to issue the required permit for the proposed action, the project is dead.

Application forms for various permit applications can be found at website links imbedded in this document. These forms will provide applicants with an understanding of the level of detailed information required by the various regulatory agencies in order for a project to be evaluated. In general, the required information is similar; however, the CNMI has had difficulty in finding a reasonable solution to streamlining the permitting process.

Site selection is another very important step. Although beyond the scope of this document, permitting requirements and site selection should be assessed simultaneously. It will be virtually impossible to identify an aquaculture facility site in the CNMI that will be free of regulatory constraints. However, certain sites will have a greater regulatory burden than others. It is highly recommended to conduct a preliminary assessment of the regulatory requirements of any potential aquaculture site prior to investing in a land lease or purchase.

It should be emphasized that permitting is only one of the main issues that needs to be examined when developing an aquaculture business plan. Determining the target culture species and marketing strategy are equally as important, and both have their own set of regulations to contend with. In this regard, the importance of early and regular communication with regulatory agencies, local extension agents, and other development agencies cannot be stressed highly enough. While forms and permits exist for most activities, this does not mean that permission will be granted by the agency in question. This is particularly pertinent to the importation of non-native species and use of the marine environment for aquaculture.

The CNMI Government has several regulatory agencies that are involved with the permitting of aquaculture facilities, and these will be discussed in Section III. These include the Coastal Resources Management Office (CRMO), the Division of Fish and Wildlife (DFW), and the Division of Environmental Quality (DEQ). If submerged lands are involved, then a lease agreement may be required from the Marianas Public Lands Authority (MPLA).

The Federal Government also has regulatory jurisdiction over much of the marine and freshwater resources within the CNMI, mainly under authority of the Clean Water Act and the Rivers and Harbor Act of 1899. Administrators of these permitting programs include the U.S. Army Corps of Engineers (USCOE) and the U.S. Environmental Protection Agency (USEPA). Assessment of project impacts on federally listed Endangered Species is usually addressed during the processing of federal permits that your aquaculture facility may

require. These permitting programs are discussed in Section IV.

The importation and exportation of aquaculture products is also jointly regulated by both the CNMI and Federal Governments. If certain species being considered for culture are listed by the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), another layer of regulatory requirements must be addressed for international shipments (export, import, and re-export). Local Micronesian examples of these regulated species include the giant clams (Family: Tridacnidae) and hard or reef building corals (Order: Scleractinia).

Specific details on the importation and exportation of CITES regulated aquaculture products is a separate issue and is beyond the scope of this document. A summary of the required import and export permits are discussed in Section V.

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The list of acronyms used in this document is as follows:

AST: Above-ground Storage Tank (fuel)
CITES: Convention on International Trade in Endangered Species of Wild Fauna and Flora
CRM: Coastal Resources Management
CRMO: Coastal Resources Management Office
CWA: *Clean Water Act*, as amended
CUC: Commonwealth Utilities Corporation
DEQ: Division of Environmental Quality
DEQ-OWTS Permit: Other Wastewater Treatment System Permit
DEQ-IWDS Permit: Individual Wastewater Disposal System Permit
DEQ-Section 401 WQC: Section 401 Water Quality Certification of the *Clean Water Act*
DOA: Division of Agriculture
DFW: Division of Fish and Wildlife
DLNR: Department of Lands and Natural Resources
ESA: Endangered Species Act
MPLA: Marianas Public Land Authority
NMFS: National Marine Fisheries Service
USCOE: U.S. Army Corps of Engineers
USCOE-Section 10/404 Permit: Section 404 permit of the *Clean Water Act* and Section 10 permit of the *Rivers & Harbors Act of 1899*
USEPA: U.S. Environmental Protection Agency
USEPA-Section 402 NPDES permit: Section 402 National Pollution Disposal Elimination System Permit of the *Clean Water Act*
USFWS: U.S. Fish and Wildlife Service
UST: Under-ground Storage Tank (fuel)

II. GENERAL LIST OF REGULATED AQUACULTURE ACTIVITIES

Access pier for tourist cruise vessels (Echo Dock, Saipan)

Sugar Dock (Saipan)

Floating cages with hanging nets (Pohnpei, FSM)

Rebar stands holding coral growout trays (Pohnpei, FSM)

In order to gain a perspective of the regulatory world that faces all aspiring aquaculturists in the CNMI, a list of potential aquaculture related activities has been identified. This list is not exhaustive; however, it should assist the aquaculturist in understanding the regulatory requirements that may be associated with a project. Not included are the Business License (Licensing Bureau) and Food Handlers permit (Department of Public Health), as well as other non-environmental permits.

The list of activities is divided into three groups: general aquaculture facility and infrastructure, aquaculture discharge, and import/export of aquaculture products. Required permits for each activity are listed under the corresponding agency. Further discussion for each of the permits is included in Sections III, IV, and V.

Intake structure for artificial inland lagoon (Nikko Hotel, Saipan)

Effluent drain (Pohnpei, FSM)

Discharge point for inland lagoon (Nikko Hotel)

Established VSB treatment system (LSG Sky Chefs, Saipan)

Not-established VSB treatment system (Marpi Solid Waste Facility, Saipan)

Discharge point for wastewater pipeline (Saipan Lagoon)

Sadog Tasi wastewater discharge piepline (Saipan Lagoon)

A. GENERAL AQUACULTURE FACILITY AND INFRASTRUCTURE

		Regulatory Agencies and Required Permits			
		CRMO	DEQ	MPLA	USCOE
Set up of any commercial and possibly personal or backyard aquaculture facility.		Major Siting Permit			
Excavations of any kind for any reason. For example: ponds, drainage ditches, infrastructure development, and building foundations.			Earthmoving and Erosion Control Permit		
Construction of piers or docks over ocean/lagoon waters, suspended and anchored nets or cages within the water column, or cages sitting on or just above the bottom substrate.		Major Siting Permit	Section 401 WQC	Submerged Lands Lease or Permit*	Section 10/404 Permit
Presence of an on-site power generator system for the aquaculture facility.			Permit to Construct and Operate		
Presence of an on-site diesel/gas fuel storage tank.	Underground Storage Tanks (UST)		UST Permit to Install UST Permit to Operate		
	Aboveground Storage Tanks (AST)		AST Permit to Install		
Construction of wells for either potable water or brackish water supply.			Well Drilling Permit Well Operations Permit		
Construction of a water intake structure that is physically attached to the bottom substrate in marine waters or intermittent/perennial streams that are physically connected to the ocean or lagoon.		Major Siting Permit	Section 401 WQC	Submerged Lands Lease or Permit*	Section 10/404 Permit

* May be required, depending upon the situation

B. AQUACULTURE DISCHARGE

	Regulatory Agencies and Required Permits					
	CRMO	CUC	DEQ	MPLA	USCOE	USEPA
Direct pipe discharge of aquaculture associated effluent into oceanic waters or intermittent/perennial streams that are physically connected to the ocean or lagoon.	Major Siting Permit		Section 401 WQC			Section 402 NPDES Permit
Construction of a water discharge structure that is physically attached to the bottom substrate in oceanic waters or intermittent/perennial streams that are physically connected to the ocean or lagoon.	Major Siting Permit		Section 401 WQC Earthmoving and Erosion Control Permit*	Submerged Lands Lease or Permit*	Section 10/404 Permit	Section 402 NPDES Permit
Discharge of more than 55 gallons of aquaculture associated effluent (e.g., wastewater or other pollutants) per day onto the bare ground.			Land Disposal Permit			
Discharge of any amount of aquaculture associated effluent to the island's wastewater disposal system.		Sewer Connection Permit				
Discharge of aquaculture associated effluent into a specially designed wastewater treatment system.			IWDS/OWTS Permit			
Construction of an Individual Wastewater Disposal System (IWDS) for on-site facilities such as, toilets, showers, kitchens, housing units, etc.			IWDS/OWTS Permit			

* Possible, depending upon the situation

C. IMPORT/EXPORT OF AQUACULTURE PRODUCTS

Importation of any live animals or plants (including CITES listed species) for commercial aquaculture purposes.

	Regulatory Agencies and Required Permits			
	CITES / USFWS	**DFW**	**DOA**	**USFWS**
Direct importation from an international source (includes Republic of the Marshall Islands, Republic of Palau, Federated States of Micronesia, Taiwan, The Philippines, People's Republic of China, etc.)*		Import/Export Permit	Animal Quarantine Entry Permit	Import/Export License Designated Port Exception Permit
Direct importation of live CITES listed animal or plant species from other U.S. states or territories.**		Import/Export Permit	Animal Quarantine Entry Permit	

* The following list does not include the required accompanying CITES documentation that the exporter must provide with the shipment, only the necessary permits.

** The following list does not include the required accompanying documentation that the exporter must provide.

Exportation of live or dead animal or plant species or products (not limited to aquacultured products) for commercial purposes.

	Regulatory Agencies and Required Permits			
	CITES / USFWS	**DFW**	**DOA**	**USFWS**
Direct exportation of non-CITES species to any international destination.*		Import/Export Permit		Import/Export License
Direct exportation of CITES listed species to other U.S. states or territories.*		Import/Export Permit		
Direct exportation of CITES listed species to any international destination.*	CITES export stamp and receiving country's CITES import stamp, or in the case where the receiving country is not a signatory of CITES, their in-lieu documentation	Import/Export Permit		Import/Export License Designated Port Exception Permit

* The following list does not include the accompanying documentation required by the importer which the exporter must include with the shipment. Documentation requirements vary depending upon the final destination and product shipped.

III. CNMI REGULATORY PROGRAMS

Management responsibilities over various aspects of the CNMI's coastal marine resources are shared between the Coastal Resources Management Office (CRMO), the Division of Fish and Wildlife (DFW), and the Division of Environmental Quality (DEQ). Minimizing physical anthropogenic impacts to the coastal resources are primarily addressed by the CRMO through its permitting program, while DEQ is primarily responsible for monitoring and regulating those activities that may affect the quality of ground water, fresh water, and marine waters. The DFW focuses its conservation efforts on maintaining biological community diversity and fishery stocks at levels sufficient to support sustainable fisheries and regulating the importation of live wildlife species (i.e., potential aquaculture species). As can be expected with this scenario, several permits have overlapping responsibilities which requires the aquaculturist to obtain multiple permits (including some Federal permits) for the same activity.

A. COASTAL RESOURCES MANAGEMENT (CRM)

The CNMI initiated development of a Coastal Zone Management program during 1978 which was ultimately approved by the U.S. National Oceanic and Atmospheric Administration in 1980. The enabling legislation which formulates the mandate of the Coastal Resources Management Office (CRMO) is Public Law 3-47 (*Coastal Resources Management Act*) which was passed by the Legislature in 1983. Although initial regulations were promulgated in 1980, they have undergone several modifications and the current version may be found at www.crm.gov.mp. The CRMO is a line agency under the Governor.

The CRM regulatory program has two types of permits: a Major Siting Permit and a Minor Siting Permit. As the name implies, Major Siting Permits are usually required for those larger development projects that may affect coastal resources. "*Major Siting*" is defined in Section 5 of the regulations and is restated (in part) below:

> "Major Siting means any proposed project which has the potential to directly and significantly impact coastal resources, as provided for in Section 11 A of these regulations. The phrase includes, but is not limited to the following:
>
> (vii) Aquaculture or mariculture facilities, and silvaculture or timbering operations; and
>
> (x) Any other proposed project which by consensus of the CRM Agency Officials, has the potential for causing a direct and significant impact on coastal resources including any project having a peak demand of 500 kilowatts per day and/or 3,500 gallons of water per day as established by CUC demand rates for particular types of projects."

In general, all commercial and personal aquaculture facilities in the CNMI will require a Major Siting permit. Application forms may be found at www.crm.gov.mp/permit/print_app.htm.

A Major Siting permit will require the development of an Environmental Impact Assessment, the holding of a Public Hearing, and a thorough review by representatives of the CRM Agencies. The latter includes the following: Secretary, Department of Commerce; Secretary, Department of Lands and Natural Resources; Executive Director, Commonwealth Utilities Corporation; Historical Preservation Officer; Director, Division of Environmental Quality; and Secretary, Department of Public Works.

It should be noted that for the most part, knowledge about aquaculture in general by the regulating agencies is limited as the CNMI aquaculture industry is in a fledgling stage. In an attempt to assist the agencies with their administrative review, it is advisable to provide as much information as possible about a proposed project in the Environmental Impact Assessment. On occasion, the CRMO may request for additional information which they deem necessary to complete the review of an application. It is important to respond promptly to these requests for information as applications may be placed in abeyance until the information is submitted. Once the CRMO (not the applicant) has determined that the application is complete, the CRM Agencies have sixty days to make a decision on whether to grant or deny the permit application. A more detailed description of the permitting process may be found at www.crm.gov.mp/permit/permit_process.htm.

If the project is likely to be approved, a draft version of the conditioned permit will be sent to the applicant and circulated among the CRM Agencies for review usually a few weeks before the end of the 60-day deadline. It is vitally important that the applicant meet with the CRM Permit Manager to discuss his or her responsibilities for compliance with the various

conditions contained in the permit. These conditions are very important, and the applicant should pay particular attention to the additional regulatory conditions or costs involved in compliance. Occasionally, there may be a single permit condition that could jeopardize the entire business venture. If any of the permit conditions appear to be unreasonable, concerns should be discussed with the CRM Permit Manager in order to have them resolved prior to the permit being issued (that is, signed by all of the CRM Agency members). If the issue cannot be resolved informally, then there is a permit appeal process that can be pursued, as specified in the CRM regulations.

CONTACT INFORMATION:

Coastal Resources Management Office
P.O. Box 10007
Morgen Building, 2nd Floor, San Jose
Saipan, MP 96950
Mr. Joaquin Salas, Administrator

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Fax: (670) 664.8315
E-mail: crm.director@saipan.com
Web site: www.crm.gov.mp

B. DIVISION OF ENVIRONMENTAL QUALITY

The DEQ is a line agency under the Governor and was mandated by the *Commonwealth Environmental Protection Act* to:

> "*develop and administer programs, including where appropriate, a system of standards, permits, or prohibitions, to prevent or regulate activities concerning the discharge of pollutants to the air, land, water, wetlands and submerged lands.*"

To this end, the DEQ administers several regulatory programs that will likely play an important role in the permitting of any aquaculture facility.

In order to protect the islands' ground water resources, DEQ regulatory programs include the permitting of individual waste water disposal systems (IWDS), well drilling and well operations, and above- and below-ground fuel storage tanks. Their non-point source pollution program requires Earth Moving and Erosion Control Permits for all mechanized earth moving activities. The DEQ also administers the state certification program for Federal water related permits - the Section 401 Water Quality Certification (Section 401 WQC). Finally, the CNMI air quality regulations require permits for the larger power generators, even if they are to be used for back-up purposes only.

Those DEQ regulatory programs most likely to be encountered for an aquaculture facility are:

1. CNMI Water Quality Standards Regulations
2. Earthmoving and Erosion Control Regulations
3. Wastewater Treatment and Disposal Rules and Regulations [adopted on 27 November 2002 in Commonwealth Register, Vol.24(11)]

4. Underground Storage Tank (UST) regulations [initially adopted in 1992 - Commonwealth Register, Vol.14(09); and Revised Interim Criteria for Aboveground Storage Tanks].
5. Well Drilling and Well Operations Regulations [initially adopted in 1992 – Commonwealth Register Vol.14(9); amended 1994 – Commonwealth Register Vol. 16(2)]
6. CNMI Air Pollution Control Regulations [initially adopted in 1987 - Commonwealth Register, Vol.9(1)] (Currently under revision).

1. CNMI Water Quality Standards Regulations

The USEPA delegated authority to the DEQ to administer the Section 401 WQC program of the *Clean Water Act* when the CNMI Water Quality Standards Regulations were promulgated in 1997. This regulatory program authorizes the CNMI to basically approve, condition, or deny various Federal water-related permits that are issued in the CNMI and include the USCOE-Section 404 permit, the USCOE-Section 10 permit, and the USEPA-Section 402 NPDES permit. The above Federal permits are not valid without the required CNMI state certification (e.g., Section 401 WQC), and vice-versa.

Although there is no Section 401 WQC application form, the DEQ normally accepts copies of the USCOE–Section 10 or 404 Permit application and the CRM Major Siting Permit application for the same project. The CNMI Water Quality regulations are the basis by which the Section 401 WQC is issued; however the DEQ has been known to incorporate non-water quality conditions, such as biological and/or geological issues, in the final certification document.

2. Earthmoving and Erosion Control Regulations

Any type of mechanized earthmoving activities (e.g., any aquaculture facility) will require an Earthmoving and Erosion Control Permit. Earthmoving design plans for the facility will require prior written “clearance” from the Historic Preservation Office (HPO), as well as the Division of Fish and Wildlife (DFW). The HPO will evaluate the significance of the proposed project site and the magnitude of earthmoving activities relative to impacts on historical and/or cultural artifacts that could be disturbed or destroyed. On the other hand, the DFW will assess whether the project site contains any habitat of special concern or any endangered species. As a general rule, the DEQ will not begin to process an Earthmoving and Erosion Control application until the HPO and DFW clearances are submitted. The application form may be found at www.deq.gov.mp/Permitpage.htm.

As required by the regulations, this particular permit application will require the services of a professional CNMI registered civil engineer who will be familiar with the permit requirements and should be able to guide applicants through the process.

Every commercial aquaculture facility that requires a CRM-Major Siting Permit will also require an Earthmoving and Erosion Control Permit. In order to save time in permitting, it would be prudent to submit the DEQ-Earthmoving and Erosion Control Permit application at the same time as the CRM-Major Siting Permit application package.

3. Individual Wastewater Disposal System (IWDS) Rules and Regulations

Originally promulgated in 1992, these regulations were substantially amended, and subsequently repealed and reenacted in 2002. In addition to regulating the design of wastewater and disposal systems (e.g., septic tanks and leaching fields or other treatment systems), the inclusion of "*confined animal facilities*" (e.g., pigs, goats, cattle and chickens) was added to their regulatory authority. However, confined animal facilities do not include aquaculture associated species and therefore aquaculture ventures are not specifically covered.

An aquaculture facility will likely generate two primary sources of wastewater: facility-associated (e.g., sinks, kitchen, toilets, housing units) and aquaculture-associated (tank/pond water exchange or emptying). Disposing of wastewater can become a serious permitting problem and should be given substantial consideration during the planning stages of the project.

(a) Facility-associated wastewater: Addressing facility-associated wastewater is straightforward, especially if it is possible to connect to the nearest CUC sewer collection line. If a CUC sewer line is not available, a DEQ-IWDS/OWTS Permit must be obtained in order to construct an individual wastewater disposal system. As required by the regulations, this particular permit application (www.deq.gov.mp/Permitpage.htm) will require the services of a professional CNMI registered civil engineer who will be familiar with the permit requirements and should be able to guide applicants through the process. Be aware that the regulations do contain certain setbacks that must be followed when designing a facility layout plan. When construction of the IWDS has been completed, a "*Certification for Use*" must be obtained from the DEQ prior to use.

(b) Aquaculture-associated wastewater: Although the disposal of aquaculture-associated wastewater can be addressed in several different ways, this discussion will be limited to disposal methods using wastewater treatment technology.

A DEQ-Land Disposal Permit must be obtained if more than 55 gallons of wastewater per day will be disposed onto the ground. Although these regulations (CNMI Water Quality Standards Regulations; Part 11) specifically exclude "*animal wastewater*" (as this is addressed in the IWDS regulations), it is not clear whether the DEQ considers aquaculture effluent to be "*animal wastewater*". Depending upon the determination by the DEQ, volume of aquaculture effluent, project site location (over an aquifer or within 150 feet of the mean high water mark along the shoreline), soil perculation rates, and possibly salinity, the Land Disposal Permit may not be a viable option. Because no application form has been developed for this permit, the regulations require a $500 filing fee and the following information to be submitted for review:

1. *"Name, address and phone number of applicant;*
2. *Description of the physical process that produces the wastewater, chemical make-up of wastewater, and average volume discharged on a daily and annual basis;*
3. *Map of disposal site which identifies elevation, nearby landmarks, and proposed point of discharge;*
4. *Schematic of proposed land disposal method (e.g., percolation trench, ponding basin, leach field, infiltrator) to be used;*
5. *In the event that the land disposal plans requires seepage as a mechanism for the removal of fluids, the applicant must perform a percolation test on the proposed site and submit the results to the Director of the*

Division of Environmental Quality." (CNMI Water Quality Standards Regulations; Part 11)

Regarding fresh- or brackish-water aquaculture facilities which are connected to the CUC sewer collection system, it may be possible to approach the CUC and utilize their wastewater treatment facilities to dispose of aquaculture effluent. The higher the salinity of the effluent, the more difficult it will be to obtain authorization to use the CUC sewer collection system due to the possible interference of salt water with the biological treatment system.

With regard to those fresh- or brackish-water aquaculture facilities that cannot be connected to the CUC sewer collection system, the use of alternate wastewater treatment systems can be explored with professional assistance from a civil engineer. Implementing this type of treatment system would involve obtaining a DEQ-IWDS/OWTS Permit.

For marine aquaculture facilities, disposal options tend to be less numerous, more costly, and have a greater regulatory burden. Under normal circumstances, the CUC will not authorize the disposal of marine waters into their sewer collection system. Other options include direct discharge into near shore waters which will require a myriad of permits [see Section II (B)] or possibly some form of land disposal technique which will depend on whether the DEQ considers aquaculture effluent as non-animal wastewater. If allowed, then a DEQ-Land Disposal Permit will be required.

4. Under-ground (UST) and Above-ground Storage Tank (AST) regulations

This regulatory program will affect an aquaculture facility should an on-site power generating system be planned. Even if the power generating system is to be used for emergency purposes only, the aquaculturist may wish to install a fuel storage tank to support the generator for longer than a few hours. Power outages caused by typhoons could last for several days, and without power, the entire (live) product line could be jeopardized.

The regulations are slightly different for UST and AST. The UST application and renewal fees are more expensive and have a greater regulatory burden as these tanks are generally used by auto service stations or fuel distribution centers. Additionally, the UST requires a second permit, a DEQ–UST Permit to Operate, prior to actually being able to use the tank. As a general rule, the AST is a better choice for the aquaculturist.

The AST will require a DEQ-AST Permit to Install (www.deq.gov.mp/Permitpage.htm). During the facility planning phase be sure that AST siting complies with the established setback requirements from public water supply wells. The following AST setback requirements are found in the *Revised Interim Criteria For Aboveground Storage Tanks* [Section XII(a)] and the *Well Drilling and Well Operations Regulations* [Section 6.1].

PUBLIC Water Supply Wellhead Protection Area[1]	Minimum Down- and Up-gradient Distance[3] (ft)
Above/Below Grade Structures	10/10
Road Drainage Course/Roadside	50/100
Surface Water Body	150/150
Public/Private Sewer Line	100/200
Sewage Pump Station	150/300
Seepage Pit, Outhouse, Cesspool, Leach field, Wastewater Treatment Facility	150/300
UST	500/500
Auto, Heavy Equipment, Engine Repair Facility	250/500
Underground Injection Well	250/500
IWDS Effluent Disposal (> 5,000 gpd)	500/500
AST Facility (< 2,000 gallons)	250/500
AST Facility (> 2,000 gallons	1,000/2,000
AST Facility (provided the tanks meet certain criteria)	500/500
AST Facility (provided the tanks are double-walled, etc.)	200/400
Landfill or Hazardous Waste Storage/Treatment Facility	1,000/2,000
Unsewered Industrial Process	1,000/2,000
NON-PUBLIC Water Supply Wellhead Protection Area[2]	**Minimum Down- and Up-gradient Distance[3] (ft)**
Road Drainage Course	25/50
Surface Water Body	75/75
Public/Private Sewer Line	75/150
Sewage Pump Station	75/150
Seepage Pit, Outhouse, Cesspool, Leach field	75/150
All wells - property line setback	25 minimum[4]
All wells - overhead power line setback	25 minimum[4]

[1] From *Amended Well Drilling and Well Operations Regulations* [Commonwealth Register Vol. 16(2); 1994].
[2] From *Well Drilling and Well Operations Regulations* [Commonwealth Register Vol. 14(9); 1992].
[3] For seawater wells, the down- and up-gradient wellhead protection distances may be reduced by up to 66%, but no less than 50 ft, provided the well is constructed with at least 100 feet of solid casing.
[4] Seawater wells are exempt from property line, power line setbacks, and disinfection requirements.

5. Well Drilling and Well Operations Regulations

Drilling and operating wells will require two different permits; application forms may be found at www.deq.gov.mp/Permitpage.htm. The DEQ-Exploratory Well Drilling Permit is required to initially site the well and authorize the drilling component. The drilling company contracted to construct the well would also most likely be able to obtain this permit with relative ease for the aquaculturist. During the facility planning phase be sure that the proposed well site complies with the established setback requirements from water supply wells (both private and public). The well

siting setback requirements in the table above are found in the *Well Drilling and Well Operations Regulations* [Section 6].

Once the well has been drilled, the applicant must then apply for a DEQ-Well Operations Permit. Again, the well driller will be able to assist in completing the technical portion of the application as well as help process the permit. The DEQ-Well Operations Permit expires every year on 30 September and therefore, must be renewed annually. The annual renewal form is the same as the DEQ-Well Operations Permit application.

For those planning to utilize seawater wells, the regulations should be carefully examined because many of the water testing requirements normally required in operating a "*for drinking*" well are not relevant. Unfortunately, the regulations do not clearly address the use of seawater wells for aquaculture purposes.

6. Air Pollution Control Regulations

A DEQ-Permit to Construct and Operate must be obtained for any power generator with a power source that has a BTU gross rate greater than 500,000 BTU per hour. This regulatory requirement is applicable for any on-site power generator systems: emergency or full-time.

CONTACT INFORMATION:

Division of Environmental Quality
P.O. Box 1304
Morgen Building, 3rd Floor, San Jose
Saipan, MP 96950
Mr. Juan I. Castro, Director

Tel: (670) 664.8500
Fax: (670) 664.8540
E-mail: deq@saipan.com
Web site: www.deq.gov.mp

C. DEPARTMENT OF LANDS AND NATURAL RESOURCES

The Department of Lands and Natural Resources oversees the Division of Fish and Wildlife and the Division of Agriculture. Both of the latter two line agencies share regulatory control in the importation of live animals. The DFW wildlife regulations were initially adopted in 1986 [Commonwealth Register, Vol. 8(06)], and subsequently modified in 1988 [Commonwealth Register, Vol. 10(11)], 1990 [Commonwealth Register, Vol. 12(07)], 1998 [Commonwealth Register, Vol. 10 (11)] and 2000 [Commonwealth Register, Vol. 22(4)]. In order to import any live animal into the CNMI, including viable eggs, larvae, or juveniles, a DFW-Permit for Introduction must be obtained.

Presently, import regulations (see www.dfw.gov.mp/fishing.htm) do not allow for the importation of any species of amphibians or reptiles and a select number of bird and mammal species, however these animals are irrelevant for aquaculture purposes. Those species of interest to aquaculturists are marine or freshwater invertebrates and fish. With respect to invertebrates, only those species that can be shown not to be harmful can be imported and that decision is made by the DFW Director on a case-by-case basis. Interestingly, fish species are not addressed. Therefore, prior to any serious planning effort, the aquaculturist should get approval (e.g., a DFW-Permit for Introduction) from the DFW Director for the

animal species targeted for importation. There is no formal application form, and a letter of request should suffice. However, it is recommended that additional support information about the animal or plant species being proposed for importation accompany the letter. Additionally, it would be beneficial to schedule a meeting with the DFW Director in order to directly address any concerns the DFW may have about the species. If the aquaculturist plans to export any aquaculture product outside the CNMI (does not include Tinian or Rota), a DFW-Import/Export Permit must be obtained. This license is obtained from the DFW Office in Lower Base by identifying the IMPORT/EXPORT PERMIT and paying the required $10.00 application fee.

CONTACT INFORMATION:

Division of Fish and Wildlife
P.O. Box 10007
Lower Base
Saipan, MP 96950
Mr. Richard Seman, Director

Tel: (670) 664.6000
Fax: (670) 664.6046
E-mail: rbsdfw@itecnmi.com
Web site: www.dfw.gov.mp

In addition to a DFW-Permit for Introduction, the aquaculturist must also have a DOA-Animal Quarantine Entry Permit for importation of live animal shipments. This permit is issued by the Animal Industry Section of the Division of Agriculture and does not have a formal application form. You must meet with the Animal Industry staff in As Perdido to provide them with the species, estimated number of individuals, and time period that you wish to import. Provided the target animal species to be imported has been previously approved by the DFW Director, the permit can usually be issued upon payment of the fee.

CONTACT INFORMATION:

Division of Agriculture
P.O. Box 10007
Kagman
Saipan, MP 96950
Mr. Donald G. Flores, Director

Tel: (670) 234.9139
234.6169
Fax: (670) 235.9001

D. MARIANAS PUBLIC LANDS AUTHORITY (MPLA)

The *Submerged Lands Act* was initially passed in 1979 to regulate and provide management over exploration, development, and extraction of petroleum or mineral deposits within the waters surrounding the CNMI. These powers were further expanded in 1988 (Public Law 6-13) by the sixth legislature to authorize the Department of Natural Resources (= Department of Lands and Natural Resources) to lease, license, and permit the use of submerged lands. The Submerged Land Rules and Regulations were promulgated the following year [Commonwealth Register, Vol. 11(03)]. During a government reorganization effort in 1995, authority to manage submerged lands was transferred to the MPLA.

A second related law, the *CNMI Sovereignty Act* (Public Law Number 2-7), was passed in 1980. Public Law Number 2-7 declared "*that the Commonwealth has sovereign rights in the exclusive economic zone for the purpose of exploring, exploiting, conserving, and managing the natural resources. . . .*" Rules and regulations were never promulgated for this law, and it will have little additional impact to CNMI aquaculture projects.

Although the CNMI has claimed jurisdiction over the 200-mile EEZ, land ownership has been under investigation by the courts since 1997 when a lawsuit was filed by the CNMI Government to document ownership rights. A ruling by the U.S. District Court during August 2003 found that the two local laws, discussed above, wer preempted by Federal law and supported the U.S. Federal Government's claim to all CNMI submerged lands extending seaward of the ordinary low water mark. It is believed that the CNMI government will appeal the case. Despite the Federal courts ruling, it is recommended that ny potential aquaculturist requiring the use of submerged lands approach teh MPLA for guidance in this manner.

Virtually all coastal or in-water aquaculture related activities, with the obvious exception of recreation, fishing, and navigation, may require a permit, license, and/or conveyance of property interest from the MPLA. Unlike most other regulatory programs, aquaculture activities are specifically supported by the *Submerged Lands Act* and are identified as the number one use activity. Leases are required to:

> "dredge, fill or erect permanent causeways, bridges, marinas, wharves, docks, pilings, moorings, aquaculture or other permanent structures on submerged land in the Commonwealth." Page 6077

A "*use permit*" can be authorized by the MPLA for aquaculture purposes if the area utilized for aquaculture does not exceed 2,000 square feet. If the area required is greater than 2,000 square feet, legislative approval will be required. Lease payments for the private use of submerged lands will be required.

Obtaining authorization for the use of submerged lands is not as straightforward as some of the other regulatory programs. It would be prudent to talk with a MPLA representative during the planning phase of your project for additional information.

CONTACT INFORMATION:

Marianas Public Lands Authority
P.O. Box 500380
Saipan, MP 96950
Mr. Henry Hofschneider, Commissioner

Tel: (670) 234.3751
234.3752
Fax: (670) 234.3755
E-mail: mpla@vzpacific.net

IV. FEDERAL REGULATORY PROGRAMS

The US Congress has passed several environmental laws that will likely affect the siting, design, or operational aspect of any aquaculture facility. These laws include the Clean Water Act, the Rivers and Harbors Act, and the Endangered Species Act. The more difficult and complex of the three Acts are the Clean Water Act and Endangered Species Act. As a note of caution, regulatory compliance with conditioned permits issued under the auspices of these acts could potentially reach a point where business ventures are no longer viable. It is important to have a basic understanding of the regulatory constraints that these laws impose when selecting a facility site or when developing the operations plan.

Following a brief overview of the relevant components of each Act is a summary of the regulatory program for each Federal agency that is involved in administering the intent of the Acts.

1. **CLEAN WATER ACT OF 1977, AS AMENDED:** The Federal Water Pollution Control Act of 1948, later completely revised and renamed the Clean Water Act (CWA) in 1977, was passed by the U.S. Congress in order to "*restore and maintain the chemical, physical, and biological integrity of the Nation's waters*." The CWA regulates virtually all physical alterations and discharges into "*waters of the US*." Within the CNMI, this term includes; all territorial seas (three nautical miles seaward from the mean high water mark) and lagoons surrounding each island; Lakes Susupe (Saipan) and Hagoi (Tinian) and their surrounding karriso (*Phragmites karka*) wetlands or marsh lands; intermittent streams that have a physical connection to the ocean or lagoon (for example, Saddok Dogas, Saddok Tasi and Saddok Talufofo on Saipan); and other wetlands (for example, the Lower Base wetland complex on Saipan). If you are not sure whether any regulated natural resource features are found on a potential aquaculture site, contact the USCOE Guam Regulatory Office and they will be able to arrange for a site visit and make a determination of jurisdiction as a public service.

   The CWA covers several different water associated issues, however, with respect to aquaculture, Sections 402 and 404 of the CWA are the more relevant Federally administrated sections and are discussed below.

   (a) **Section 402 National Pollution Discharge Elimination System or NPDES**: Section 402 NPDES, specifically regulates the discharge of pollutants into "*waters of the US*." Aquaculture related activities that would be regulated under this program would include the discharge of aquaculture associated tank or pond effluent into near shore marine waters, lakes, or certain wetlands (examples were given in the discussion of the Clean Water Act).

   There are two related issues associated with Section 402 NPDES; those activities that involve direct discharges into near shore waters or other "*waters of the US*" and therefore require individual permits, and those project (or construction) sites that may have storm water discharge issues with near shore waters. The latter situation is covered under a Construction General Permit.

(b) **Section 404**: Section 404 specifically regulates the discharge of fill material into "*waters of the US*". This includes most earthmoving activities within the territorial sea (three nautical miles seaward from the mean high water mark), in/along intermittent streams that have a physical connection to the ocean/lagoon, and jurisdictional wetlands.

2. **RIVERS AND HARBORS ACT OF 1899**: Section 10 of this Act regulates the placement of structures in "*navigable waters*." Potential aquaculture activities regulated by this program in the CNMI include placing structures within the territorial sea (seaward three nautical miles from the mean high water line). Examples include: dock or pier pilings, breakwaters, bulkheads, pipelines, anchoring or mooring buoys, and floating platforms. In contrast to the CWA's definition of "*waters of the US*" which is very broad, "*navigable waters"* as defined by the Rivers and Harbors Act is limited to those waters within the territorial sea. When comparing the two terms, "*navigable waters"* could be considered a subset of "*waters of the US*". Because the CNMI has no intertidal river systems, in virtually all cases within the CNMI, "*navigable waters"* are limited to coastal lagoon waters and oceanic waters out to three nautical miles (e.g., territorial seas). When compared with the Section 404 Permit, the Section 10 Permit is relatively straight forward and usually does not involve compensatory mitigation.

3. **ENDANGERED SPECIES ACT OF 1973, AS AMENDED**: The Endangered Species Act (ESA) was initially passed by the US Congress in 1973 and has been reauthorized and amended several times (http://endangered.fws.gov/esa.html). The purpose of the Act is to conserve "*the ecosystems upon which endangered and threatened species depend*" and to conserve and recover listed species. Those wildlife species which have been determined to have dangerously low population levels or are in imminent threat of extinction and thus requiring Federal protection are classified as Endangered or Threatened. Endangered is defined in Section 3(6) of the Act as "*...any species [including subspecies or qualifying distinct population segment] which is in danger of extinction throughout all or a significant portion of its range."* A threatened species is defined in section 3(19) of the Act and is defined as *"...any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range."*

Under Section 9 of the ESA, it becomes unlawful to "*take*" an endangered or threatened (e.g., listed) species. The term "*take*" is defined by the ESA as "*to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or attempt to engage in any such conduct*." The term "*harm*" has been further defined to include "*significant habitat modification or degradation*."

If project plans cannot be modified to completely avoid impacting an endangered species or its habitat, the USFWS or NMFS will likely determine a "*take*" situation. Under these circumstances, Endangered species "*take*" issues can be addressed or resolved through two mechanisms: ESA Section 7 consultation if the project has a Federal nexus, or the more complex ESA Section 10 Incidental Take Permit.

A. U.S. ARMY CORPS OF ENGINEERS (USCOE)

The USCOE has been administering the *Rivers and Harbors Act* Section 10 regulatory program (regulates placement of structures in "*navigable waters*") for over 100 years. The *Clean Water Act* Section 404 regulatory program (regulates the discharge of fill material into "*waters of the US"*) is also directly administered by the USCOE, however the USEPA has environmental guidance and oversight.

Although the two above regulatory programs were created from different Acts, the USCOE has only one comprehensive application and processes both permits simultaneously as if they were one. An overview of the USCOE permitting program may be found at www.usace.army.mil/inet/functions/cw/cecwo/reg/oceover.htm.

Administrative reviews and assessments of pending USCOE applications are conducted by the NMFS and USFWS Hawaii offices, as well as certain CNMI resource agencies. These reviews focus on potential project impacts to endangered species (known as ESA Section 7 consultation) and to the aquatic ecosystem in general. Another administrative review is conducted by the local CNMI Historical Preservation Officer and their Federal counterpart, the Advisory Council on Historical Preservation. Their review is required under Section 106 of the National Historic Preservation Act (www.achp.gov/work106.html) and focuses on potential project impacts to historic properties. Basically, all these agencies act in an advisory role to the USCOE and recommends mitigative measures to be included as conditions in the permit, if issued.

It should be noted that at least two other local permits will be required in order to authorize the same activity applied for with the USCOE application: a CRM-Major Siting Permit and a DEQ-Section 401 WQC. The DEQ-Section 401WQC must be issued to validate the Federal USCOE-Section 10/404 permit and vice versa.

Of all the regulatory permits that one may encounter with aquaculture ventures, the CWA Section 404 permit can be the most complex (depending upon what activities are being permitted) and possibly expensive. First of all, the proposed project must be able to meet the water dependency test outlined in the CWA *Section 404(b)(1) Guidelines* (www.usace.army.mil/inet/functions/cw/cecwo/reg/40cfr230.htm). This includes but is not limited to, whether there are any practicable alternatives available for the proposed project that will not affect jurisdictional wetlands or "*waters of the US*". If this test is passed, then the USCOE could require compensatory mitigation in the form of creating new habitat (e.g., wetland) to offset project related impacts to the regulated natural resource (e.g., wetland). At this point, and depending upon the mitigation plan, compliance costs may exceed project viability. Pre-planning strategy should involve avoidance of this permit foremost, and secondarily, minimization of project impacts on those regulated resources being affected.

Although the CNMI is under the administrative authority of the USCOE Honolulu District (www.poh.usace.army.mil/regulatory.asp), the point of contact for all CNMI Section 10 and 404 regulatory issues is the USCOE Guam Regulatory Office. At a minimum, the USCOE requires a completed and signed Engineering Form 4345 (see www.orn.usace.army.mil/cof/apply.htm) and related documentation identified in the application form. It is highly recommended that the supplemental Environmental Application form also be completed and submitted. This additional information will assist the reviewing agencies in developing the impacts analysis.

CONTACT INFORMATION:

U.S. Army Corps of Engineers
Guam Regulatory Branch
PSC455, Box 188
FPO AP 96540-1088
Mr. Frank Dayton

Tel: (671) 339.2108
Fax: (671) 339.2306
E-mail: guamregulatorybranch@hotmail.com
Web site: www.poh.usace.army.mil

B. U.S. ENVIRONMENTAL PROTECTION AGENCY (USEPA)

The US Congress gave the USEPA authority over the CWA Section 402 NPDES regulatory program. Although the USEPA has not delegated responsibility of the NPDES regulatory program to the DEQ as it has with various states in the US mainland, the two agencies coordinate closely in the processing of this permit.

An individual Section 402 NPDES permit will be required for any discharge of aquaculture related effluent into near shore marine waters or "*waters of the US.*" (see http://cfpub.epa.gov/npdes/home.cfm?program_id=45). Completed application forms (http://cfpub.epa.gov/npdes/doctypecfm?sort=name&program_id=45&document_type_id=8) must be submitted to the USEPA Region 9 (San Francisco, CA) office for processing. Effluent monitoring will likely be required as part of the permit, if issued. This can become costly and should be included in evaluating the overall operating costs for the facility.

With respect to construction site storm water issues which are also covered by the Section 402 NPDES program, the USEPA has issued a NPDES Construction General Permit for storm water discharges at construction sites that are greater than one acre in size (see http://cfpub1.epa.gov/npdes/home.cfm?program_id=6). The purpose of the NPDES Construction General Permit is to decrease the regulatory burden by eliminating the need to obtain an individual Section 402 NPDES permit for earthmoving activities at construction sites. If the area of the aquaculture facility exceeds the minimum one acre, then it is necessary to comply with the regulations. A permit will not actually be issued by the USEPA, but the USEPA will need to be provided with a Notice-Of-Intent (NOI) for the pending construction work. The NOI form may be found at www.epa.gov/npdes/pubs/connoi.pdf. Although initially established by the USEPA to be a simple process, there are several steps that must be completed prior to sending the NOI to the USEPA. First, a Storm Water Pollution Prevention Plan (SWPPP) must be prepared that will require a written approval letter from the DEQ. At the time the SWPPP is submitted to DEQ for review, an application fee must also be paid to the DEQ. The NOI is then completed and sent to the USEPA (by the applicant) with the accompanying DEQ approval documentation for the SWPPP.

CONTACT INFORMATION:

U.S. Environmental Protection Agency
Pacific Islands Office
75 Hawthorne Street
(CMD-5)
San Francisco, CA 94105-3901
Mr. John McCarroll, Manager PIO

Tel: (415) 972.3774
Fax: (415) 947.3560
E-mail: mccarroll.john@epa.gov
Web site: www.epa.gov/region9/

C. U.S. FISH AND WILDLIFE SERVICE (USFWS): IMPORT/ EXPORT ISSUES

If the aquaculture business plan involves the international importation or exportation of any animals or animal products to/from the CNMI, a USFWS-Import/Export License will be required. With respect to the Pacific island region, international sources include the Republic of Palau, the Republic of the Marshall Islands, and the Federated States of Micronesia. The cost for this License is $50.00 per year and is renewable annually. The USFWS-Import/Export License application form may be found at http://forms.gov/3-200-3.pdf.

In addition to the above license, and because this involves conducting business in the CNMI, a second import/export authorization will be required for international shipments: the USFWS-Designated Port Exception Permit. All international wildlife shipments arriving into or leaving the United States (e.g., the CNMI or Guam) must be cleared by the USFWS at the first port-of-entry. There are only nine authorized ports-of-entry that can approve fish and wildlife shipments: Dallas, New York, Los Angeles, Chicago, San Franciso, New Orleans, Miami, Seattle, and Honolulu. If Guam or the CNMI is used as the port of first entry, then a USFWS-Designated Port Exception Permit must be obtained prior to shipment. The application form may be found at http://forms.gov/3-200-3.pdf .

The USFWS-Designated Port Exception Permit application fee is $25.00, and it must be renewed every two years. There is also an automatic inspection fee of $55.00 for every international shipment, whether it is physically inspected or not. Other charges (overtime) may be incurred if the wildlife shipment is cleared outside of normal working hours or if a Federal wildlife inspector from Guam has to travel to Saipan to inspect the shipment (air fare, food, lodging).

CONTACT INFORMATION:

U.S. Fish and Wildlife
Division of Law Enforcement
911 NE 11th Avenue
Portland, Oregon 97232-4181
Mr. Benito Perez, Assistant Director

Tel: (503) 231.6125
Fax: (503) 231.6197
Web site: http://permits.fws.gov

U.S. Fish and Wildlife
Division of Law Enforcement
P.O. Box 23774
Barrigada, Guam 96921
Mr. Art Taimanglo, Wildlife Inspector

Saipan Tel: (670) 233.0938
Saipan Fax: (670) 233.0941
E-mail: arthur_taimanglo@fws.gov

D. U.S. FISH AND WILDLIFE SERVICE (USFWS): ENDANGERED SPECIES ISSUES

Enforcement of the ESA is shared between the U.S. Fish and Wildlife Service (Department of Interior) and the National Marine Fisheries Service (Department of Commerce). Jurisdiction of the USFWS extends to terrestrial and freshwater wildlife species while the NMFS's primary responsibility is with the marine wildlife species. With respect to the CNMI, as of 1 January 2003, the USFWS Pacific Island Eco-region's website (http://pacificislands.fws.gov/) identified 12 listed species (11 animal and one plant species); http://pacificislands.fws.gov/wesa/pacplantanimal.pdf). Additionally, another five species (two animal and three plant species) have been slated for listing in Proposed Rules, however, the Final Rule has yet to be published on any of these species.

With respect to CNMI aquaculturists, the biggest hurdle will be encountered if the project site contains habitat that could be used by a listed species, or if a listed species is found on the project site. Non-avoidable impacts to endangered species can be addressed or resolved through two mechanisms: ESA Section 7 consultation or ESA Section 10 Incidental Take Permit. These are discussed briefly below:

(a) **Section 7 of the Endangered Species Act**: Section 7 of the ESA requires that any Federal action agency coordinate or consult with the USFWS or NMFS to ensure that the project does not jeopardize the continued existence of a listed species or destroy or adversely modify designated critical habitat. With respect to aquaculture projects, the requirement of any Federal permit (for example, a USCOE-Section 10 or 404 Permit or USEPA-Section 402 NPDES Permit) will constitute a Federal action (or "*Federal nexus*") and therefore require Section 7 consultation for the entire project, not just the specific action requiring a permit. The Section 7 consultation process is between the Federal action agency and either the USFWS or NMFS; the applicant has little to no direct involvement. If endangered species or its habitat, or designated critical habitat, occurs on the project site, the consultation process can get more involved and require more time as the USFWS or NMFS must issue a Biological Opinion (Bi Op) prior to the USCOE or USEPA issuing their permit. If this situation occurs, be

sure to fully understand the obligations for compliance with the non-discretionary Reasonable and Prudent Measures that will be included in the Bi Op prior to acceptance by the Federal action agency and subsequent permit issuance. Some of these permit conditions may jeopardize the business venture.

As of the date of this document, there has been no critical habitat designated anywhere in the CNMI. However, a Proposed Rule (dated October 15, 2002) has identified approximately 29% of the island of Rota as critical habitat for the Mariana crow (locally known as Aga). If a project will be sited on Rota, one should investigate whether critical habitat will be an issue.

(b) **Section 10 of the Endangered Species Act**: The Section 10 Incidental Take Permit is a regulatory mechanism whereby permit applicants can resolve endangered species issues if their project does not have a Federal nexus. If the proposed aquaculture project will not require any Federal permits and has no other Federal connection, then this route may be appropriate should listed species or their habitat occur on the proposed site and a "*take*" is anticipated. Although the applicant would be working directly with the USFWS for this permit, the local DFW will also be involved. Overall, this permit is very difficult to obtain, costly, and will require special expertise in order to collect the necessary biological information that will likely be required by the USFWS.

For the island of Saipan only, the Saipan Upland Mitigation Bank (SUMB) has been established for projects that will impact the endangered nightingale reed-warbler (locally known as gaga karriso). This mitigation bank is jointly administered by the USFWS and local DFW. After completing the necessary biological work to determine how many pairs of reed-warbler the project related land clearing activities will impact, a fee of $55,600 can be paid into the SUMB account to offset impacts to each pair of impacted reed-warblers. If only one reed-warbler occurs on the project site, it is considered as a pair and the fee will reflect this. To resolve endangered species issues of all other islands under these circumstances, an individual Section 10 Incidental Take Permit must be obtained.

CONTACT INFORMATION:

U.S. Fish and Wildlife
Pacific Islands Ecoregion
300 Ala Moana Boulevard
Room 3-122, Box 50088
Honolulu, Hawaii 96850
Mr. Paul Henson, Field Supervisor

Tel: (808) 541.3441
Fax: (808) 541.3470
E-mail: paul_henson@rl.fws.gov
Web site: http://pacificislands.fws.gov/

National Marine Fisheries Service
Pacific Islands Fisheries Science Center
2570 Dole Street
Honolulu, Hawaii 96822-2396
Mr. George Antonelis, Chief

Tel: (808) 983.5710
Fax: (808) 983.2902
E-mail: bud.antonelis@noaa.gov
Web site: www.nmfs.hawaii.edu/index.html

V. INTERNATIONAL REGULATORY PROGRAMS - CITES

The Convention on International Trade in Endangered Species of Wild Fauna and Flora, also known as CITES, is an international cooperative conservation agreement that has been signed by 162 countries to date; including the United States (see http://cites.org/). The agreement was first drafted during 1973 with actual ratification occurring in 1975. The purpose of CITES is to monitor the international trade of endangered species to ensure that commercial trade in these animals will not threaten the species with extinction.

Wildlife species were grouped according to their present threat of extinction and classified as either Appendix I, II, or III. Appendix I species (for example, the giant panda of China and the gorillas of Africa) are the most vulnerable to extinction and therefore have the most strict import/export regulations. Appendix II and III listed species are not immediately faced with extinction and commercial trade is being allowed provided all shipments implement special import/export rules and are properly documented. With respect to the US, the USFWS is both the management and scientific authority for all CITES related import/export/re-export shipments. For more information see http://international.fws.gov/cites/cites.html.

CITES regulations are only implemented when CITES listed species are commercially shipped between the CNMI (e.g., the US) and another country. For instance, if corals or giant clams are cultured in CNMI waters, the product can be commercially shipped without CITES documentation anywhere in the US (Guam, Hawaii, and the US mainland).

On the other hand, if the aquaculturist requires CITES listed animals (for example, corals or giant clams) for culture purposes and wishes to import them from the Republic of Palau, the Republic of Marshall Islands, or the Federated States of Micronesia, then CITES regulations for Appendix II species must be followed. Although these particular countries are not signatory to CITES, the appropriate in-lieu documentation has been developed to enable export of these species into the CNMI, that is if the DFW will issue the appropriate permits to authorize entry of the species into the CNMI.

Examples of cultured species or potential culture species within the Pacific region that are currently listed by CITES	
Giant clams (all species)	Appendix II
Blue corals (all species in the Order Coenothecalia)	Appendix II
Organ-pipe corals (all species in the Family Tubiporidae)	Appendix II
Black corals (all species in the Order Antipatharia)	Appendix II
Stony corals (all species in the Order Scleractinia)	Appendix II
Fire corals (all species in the Family Milleporina)	Appendix II
Coral (all species in the Order Stylasterina)	Appendix II

Although the detailed discussion of CITES import/export documentation is beyond the scope of this document, the CNMI aquaculturist should at least be aware of what may be required should CITES listed species be targeted for culture. Local contact information for CITES issues are the same as under the USFWS discussed in Section IV C.