

December 12, 2003

To: Andy Bruckner, National Oceanographic and Atmospheric Administration
From: Chief, Division of Fish and Wildlife Protection
Subject: Final Report on NOAA Grant Funds

Attached is the final report on the grant funds that the National Oceanographic and Atmospheric Administration (NOAA) provided to the Division of Fish and Wildlife Protection (DFWP). Thank you very much for giving us the opportunity to work with NOAA. This project was a great success for DFWP, and I hope that we can continue to work together in the future for the benefit of the fish and wildlife of Palau. Please contact me directly at +680 488-2487 if you have any questions or concerns. Send correspondence via email to wildlifepolice@palaunet.com, or via postal mail to:

Kammen Chin
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Sincerely,

Kammen Chin
Chief, Division of Fish and Wildlife Protection

CC: Michael Rosenthal, Minister of Justice
Hazime Telei, Director, Bureau of Public Safety

DIVISION OF FISH AND WILDLIFE PROTECTION

FINAL REPORT

NOAA GRANT FUNDING

FISCAL YEAR 2003

December 12, 2003

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1. Introduction

The Republic of Palau is an independent, democratic nation in the western Pacific Ocean with a population of approximately 20,000 people spread over 16 States. The country is an archipelago of over 300 islands stretching roughly 350 miles from the northernmost State of Kayangel to the southernmost State of Hatohobei. The total land mass is very small (less than 200 square miles) compared with the enormous expanse of ocean (over 230,000 square miles) that falls within the Republic of Palau.

The Republic of Palau was colonized by the Spanish in the 19th century, and then sold to Germany in 1899. After a brief period of German rule, Japan accepted the mandate of the League of Nations in 1919 to rule over Palau. In 1943, forces of the United States of America (U.S.) occupied the islands with the surrender of the remaining Japanese troops in Peleliu State. After World War II, in 1946, the United Nations charged the U.S. with governing the Trust Territory of the Pacific Islands, extending from Palau in the west to the Marshall Islands in the east. The Constitution of the Republic of Palau was ratified in 1980, and independence was formally achieved on October 1, 1994. Palau has a Compact of Free Association with the U.S.

The Division of Fish and Wildlife Protection (DFWP) is a branch of the Ministry of Justice. The Ministry of Justice is composed of the Bureau of Immigration, the Office of the Attorney General, and the Bureau of Public Safety. The Bureau of Public Safety contains the national police force of the Republic, including DFWP. The earliest history of the Division stretches back to January of 1955, when a Marine Biologist was hired by the Trust Territory of the Pacific Islands government to study ways to increase the harvest of trochus shells for export. The Division of Conservation and Entomology was created in 1988 and charged with both research and enforcement of conservation issues. In 2001, the research and enforcement duties were separated, and DFWP was created to accept the duty of conservation law enforcement. From 1955 until 1996, the main focus has been on conservation research. Enforcement became a priority seven years ago, and conservation law enforcement for the benefit of the Republic of Palau is the top priority of DFWP.

In November 2002, DFWP received a grant totaling \$31,000 from NOAA. DFWP spent about 75% of the funds received. Below is a detailed account of how the funds were used. Since the funds granted by NOAA were earmarked for specific purposes, this final report will address the funds item-by-item.

2. Computers and Electronic Equipment

The Division purchased two computers with monitors, one facsimile machine, one scanner, two printers, two digital video cameras and four digital still cameras. All of those items have been installed and are working excellently, except for the two digital video cameras. The digital video cameras arrived at our office missing a cable that connects the camera to a computer for viewing or downloading purposes. The cameras can still be used without the missing cable, although viewing the recorded information

will be much less effective using the small screen on the camera instead of the large computer monitor. Copying the recordings will also be impossible without the missing cable. DFWP is working with the supplier to obtain the missing cables as soon as possible.

The computers and electronic equipment are being used for support functions. Items that have been created to date using the equipment include a monitoring form, a pamphlet and certificates of completion for the Conservation Law Enforcement workshop held by DFWP from December 1-3, 2003, a draft version of the DFWP website, a database for tracking conservation law offenders, a database for tracking information gained from the monitoring forms, and countless powerpoint presentations, letters, reports, and press releases with attached pictures.

The equipment is also being used for enforcement operations. The computers have greatly reduced the amount of time spent completing routine police paperwork, and have increased our ability to track the individuals that most often violate conservation laws, as well as the most common locations where violators are found. This information makes enforcement operations against these repeat violators easier to conduct. The cameras are used to take pictures of illegal activities or contraband materials, and the pictures are stored safely on the computers for the pending court cases.

The increased efficiency of the support operations mentioned above has freed up extra time for DFWP staff to increase patrols and outreach sessions, and has also allowed us to attend key meetings with other conservation agencies that we have historically been unable to attend due to lack of time or manpower to attend the meetings. The most important of these conservation meetings have been the National Environmental Protection Council (NEPC), and the Marine Resources Pacific Consortium (MAREPAC). While both organizations consist of a membership of key governmental and non-governmental agencies concerned with conservation, the NEPC directly influences the Republic of Palau's national government policies, and MAREPAC focuses on Palau's contribution to conservation within the larger region of the Pacific Islands.

The Office of the Attorney General in Palau has expressed a strong desire for DFWP officers to continue exhaustively photographing search and seizure activities as we have been doing since the cameras arrived. With the increase in patrols, a corresponding increase in arrests has occurred, resulting in a much greater prosecutorial workload for the already understaffed Office of the Attorney General. While DFWP has historically enjoyed a nearly perfect record for winning court cases, the pictorial evidence has ensured continuing victories in court cases even though our annual arrest totals have increased 500% from 2001 to 2002, and is projected to increase by another 100% during 2003 due to the increased patrols. The cameras have also been used to photograph living creatures that have been confiscated as evidence for conservation law violations. Once photographed, the living creatures are immediately released into the wild. This practice, along with programs of absolution for cooperation, has saved 33 mangrove crabs, 27 coconut crabs, 127 turtles, protected birds, and many other protected species.

Taking pictures of live evidence for a court case allowed DFWP to release three *ketat* (coconut crab – *Birgus latro*) back into the wild without jeopardizing the criminal case. The cameras have also allowed DFWP to prove to the courts that the employees of various restaurants and fish markets knew that their actions were illegal. Officers were able to photograph signs posted prominently on the walls of these establishments in several different languages that clearly state conservation law requirements. This has led to harsher penalties for at least three restaurants convicted of conservation law violations during 2003.

DFWP expended all of the available funds earmarked for computer ink, but some money remained for computers and printers. With verbal permission from NOAA, DFWP used a small amount of the leftover funding for additional printer ink to keep the office running efficiently.

3. Monitoring Forms

DFWP has used the computers to keep a record of information obtained by the officers in the field. The most useful information is observations on the status of marine and terrestrial living resources that the officers gather while on patrol. Through conversations with fishermen, hunters, business owners (such as restaurateurs and food market employees), and other community members, Fish and Wildlife officers obtain information regarding the number and health of various fish and wildlife in habitats around the Republic. New monitoring forms have been developed to make the information easier to record, and the forms were added to the police routine in December 2003. Officers also record their own observations on the new forms. With access to powerful computers, DFWP compiles these important data and presents them to research agencies within the government and private sector. It is hoped that the information provided will help to strengthen ties between DFWP and research agencies. It might also be used to show research agencies what conservation problems need immediate research.

4. Community Outreach

In the past several decades, reports and action plans have frequently listed the lack of conservation law enforcement as a major problem in Palau. Today, the tables have turned, and Palau has become the leader throughout the Pacific Islands in conservation law enforcement. However, the rapid increase in enforcement led to some complaints that outreach was being neglected in favor of “heavy-handed” enforcement techniques. While DFWP feels that some backlash was inevitable since enforcing the law is more “heavy-handed” than allowing the laws to be broken every day for 55 years, we can see that successful education and outreach is also essential to the success of any conservation program.

In the past year, DFWP has made an effort to be involved with the community in conservation projects that do not involve enforcing laws. Newspaper articles discussing our projects or providing warnings to the public about upcoming closed seasons have been published about twice per week since May 2003. Some articles highlight portions

of the Palauan conservation laws that provide incentives for community members to provide information to DFWP regarding possible violations. For instance, a recent enforcement action involved a confidential informant who provided information that led to the arrest of several people who had killed a *mesekiu* (dugong, or sea cow), which is a felony in Palau. If the arrests lead to convictions, the informant is entitled to 50% of all fines actually collected. The minimum penalty for illegally taking a *mesekiu* is \$5,000, and each person can be charged independently since taking and possessing are separate crimes under the law.

In addition to newspaper articles, DFWP has participated in a number of radio talk shows in Palau. The talk shows have been a very effective way to reach the community with our message of conservation since most businesses and government offices listen to the radio talk shows in the background during work hours. Within the past year, DFWP has participated in three separate radio talk shows, focusing on the role of DFWP, the conservation laws of Palau, the eradication of tilapia (an invasive, non-native fish) and the plight of *cheraprakl* (lobsters or crayfish) in Palau.

The Marine Environmental Enforcement Response Team (MEERT) was created with assistance from Project WildAid (a non-government organization), with the purpose of fostering cooperation between DFWP and other conservation agencies, especially the State governments and the traditional chiefs. The project funding allowed DFWP to hire one person to coordinate the conservation effort across the country. As a result of the impact that the MEERT project has made, we were able to offer our services to the State governors, as well as providing the traditional chiefs with conservation information (see attached letters). The response to those letters has been very positive, resulting in direct requests from the States of Ngatpang, Peleliu, Angaur and Ngardmau to hire another officer to be stationed in their State. Other States have requested for DFWP to participate in joint enforcement projects, conservation projects, or to speak at community meetings.

5. Fuel for Education and Outreach

A small amount of the funding for fuel was used to support coastal and terrestrial cleanup projects with community members. Three cleanup projects were completed in Koror State, including one focusing only on the hamlet of Echang, and two much larger projects that were completed with the help of numerous other agencies and covered the entire State. Cleanup projects were also organized and completed in the States of Airai, Melekeok, Peleliu, and Ngiwal. Ngiwal State asked DFWP to return for a second cleanup scheduled for later this month, and Ngaraard State has also requested assistance with their cleanup project. DFWP plans to conduct a week-long cleanup of Ngerukewid Wildlife Preserve in February, 2004, with community volunteers to remove litter and detritus from the beaches of the Preserve. The cleanup is necessary in order to allow nesting turtles to access all of the beaches. These cleanup projects are essential to promote an understanding of the fundamental reasons for conservation. We want to preserve the best parts of Palau, and repair the damaged portions, for the benefit of tomorrow's Palauan citizens. The projects also help to reinforce that DFWP is an ally of the community rather than an enemy.

DFWP has also expended some of the fuel funds to support other government agencies on key projects related to conservation programs. The eradication of two invasive species – tilapia and city pigeons – was a joint effort between DFWP and a number of other government organizations. Tilapia is a dangerously invasive fish that can out-compete indigenous fish in both freshwater and saltwater habitats. The fish have been eliminated from several landlocked water bodies, but a serious threat still remains from tilapia populations in at least three additional areas. City pigeons, also known as rock doves, are hardy, invasive birds that can out-compete the indigenous birds of Palau, and can also carry diseases that could impact local bird populations as well as humans. DFWP believes that all of the city pigeons have been captured, confiscated and destroyed. However, DFWP is still investigating some scattered reports of possible sightings. Our work on the invasive species eradication project presented a very positive public image, and also resulted in the addition to DFWP of Mr. Eric Kutter, who now works as an individual volunteer on a wide variety of DFWP projects.

Funding for fuel has also been expended for education and outreach sessions in every State of Palau. DFWP has given conservation presentations to 90% of primary schools in Palau, reaching over 3,000 students. The Division has also spoken to the science classes of the Palau High School and the Palau Community College twice in the past year. MEERT (see Section 5, Education and Outreach) visited the Southwest Islands – Hatohebei and Sonsorol States – to spread the message of conservation to Palau’s southernmost citizens.

6. Indirect Costs

Two Peace Corps Volunteers have joined our staff to help us with two separate projects. Ms. Teri Brugh and Mr. Erik Husoe are the two volunteers. DFWP is required to pay a small monthly fee for each volunteer, and our current budget appropriation was insufficient to cover that cost. DFWP is requesting approval from NOAA to use money from the “Indirect Costs” category of the grant funding to cover the costs of the volunteers.

Ms. Teri Brugh is stationed in Peleliu State, and her task is to serve as a liaison between DFWP and the Peleliu State conservation officers. The State is a separate island in Palau, to the south of Koror, with a population of roughly 450 people. A ferryboat moves commuters from Peleliu to Koror twice per week and a six-seat airplane runs about twice per week. The island is close enough to the DFWP main office that patrols can be conducted a few times per year, but Peleliu is too far to allow regular patrols and visits. Other traffic into or out of Peleliu is only possible using a personal boat. The conservation program in Peleliu State is in its early stages, and DFWP is in a unique position to help the State officers through their struggle to become a mature and effective conservation enforcement organization. Naturally, in the early stages of the program, the emphasis must be on education and outreach, with a small but steadily growing effort in enforcement. Ms. Brugh regularly gives talks in the schools of Peleliu State, and meets with the Governor about once per month. She will provide the Peleliu State officers with

the new monitoring forms so the officers can record ecological information while they are on patrol.

One of the most important goals that DFWP specified in the grant application was to coordinate and integrate our efforts with other entities that can help us to increase our effectiveness. Ms. Brugh is essential to the effort of coordinating with one of our most important potential allies: the State governments of Palau. DFWP has started with Peleliu State, and already we can see that the success of Ms. Brugh's project is causing other States to demand the same kind of assistance and coordination with DFWP. Already, Angaur State (Peleliu's nearest neighbor to the south) has begun to show great interest in Ms. Brugh's program, and they have requested for assistance from DFWP to start up a State conservation enforcement program in Angaur.

Mr. Erik Husoe is stationed at the DFWP main office. His task is to finish the development of our Division website, and then to maintain the website once it is published. As a computer expert, Mr. Husoe will also help to maintain the computer databases that we have set up to track monitoring and enforcement records. Additionally, Mr. Husoe is tasked with supporting Mr. Sebastian Marino, who has recently joined DFWP as the MEERT Coordinator (see Section 5, Education and Outreach). Mr. Marino meets with State leaders as well as a key potential ally: traditional leaders. His project is key to the success of DFWP, since no conservation program can be effective without community support, and community support in the Republic of Palau cannot be obtained without the leadership of the traditional chiefs. With his hectic schedule of meetings with chiefs, leaders, citizen groups and school children, Mr. Marino does not have the time to develop his computer skills to allow him to rapidly create the vast array of support materials that he needs, from PowerPoint presentations to meeting handouts and even posters. Mr. Husoe is adept with PowerPoint as well as being experienced in the creation of posters and pamphlets, and he can quickly change materials to suit the intended audience whether they are children, fishermen, traditional chiefs or governors. His support is essential to the success of Mr. Marino's project.

While Ms. Brugh and Mr. Husoe volunteer at DFWP, we are obligated to pay a small housing and transportation fee of \$100 per month for each volunteer. This fee is intended to offset the costs that are borne by the family that houses the volunteers during their stay in Palau, and also to defray the costs of ferries and taxis, since the volunteers are not allowed to drive cars while in Palau. Ms. Brugh started in August of 2003, and Mr. Husoe started in October of 2003. Five months for Ms. Brugh and three months for Mr. Husoe costed DFWP a total of \$800 from the "Indirect Costs" category of the grant.

The balance of the Indirect Cost budget was allocated to the purchase of a new copy machine. Every financial transaction in the office requires multiple copies of many documents, including invoices, product information, ordering forms and a letter of justification. In addition, Mr. Eric Kutter (see Section 3, Fuel) has developed the monitoring forms for DFWP free of charge. DFWP determined that it would be less expensive to purchase a small copy machine rather than pay a printing company to make simple black and white copies of our requisition and monitoring forms, and much less

expensive than continuing to use up all of our computer printer inks printing out copies of all of these essential but numerous forms. A copy machine costs \$1,870, which DFWP proposes to pay using \$1,700 from the Indirect Costs category, and \$170 from the "Developing and Printing Report Forms" category of grant funding.

7. Night Vision Binoculars

Two vendors willing to ship to the Republic of Palau were finally located for night-vision binoculars, and individual items were ordered in December, 2003. DFWP purchased four pairs of night vision binoculars. Two pairs are the less expensive but durable UNITEC BNV-3 night vision binoculars. These will be the workhorse night vision binoculars of DFWP. The Division also purchased one Rigel 2150 Compact, and one Rigel 3200 Pro. These more expensive binoculars will be used for special projects, mostly in terrestrial situations where they can be protected from the damaging effect of the ocean environment. DFWP anxiously awaits the delivery of the four pairs of night vision binoculars.

8. Website Development

The previous vendor for the creation of a Division website had to leave Palau unexpectedly. DFWP paid \$1,000 to the original vendor for a copy of the extensive framework that was already developed. A new website creator has been found and has begun to fill in the content of the website. The section of the website devoted to DFWP is expected to be completed by the end of January, 2004. The funds for the completion of the website will be covered by the budget of the Ministry of Justice, since the site is intended to include all of the branches of the Ministry.

9. Video Production

DFWP developed plans and a draft script for a video production, using the same vendor that was intended to develop the website (see Section 8, Website Development). To allow editing of the video upon its completion, as well as to provide a means to show the video to schools and community groups in the future, DFWP purchased a small television and VCR unit. However, now that the vendor is no longer able to complete the project, DFWP has been searching unsuccessfully for another individual to take over production. With the lapsing of the NOAA grant funding, DFWP has decided to use our digital video cameras to complete a temporary version of the video that we can use for outreach projects in the near future. This will be possible once we obtain the missing USB cables from the cameras (see Section 2, Computers and Electronic Equipment). As soon as a new vendor can be found to produce the video professionally, DFWP will try to locate funding for the final production.

10. Workshop for Building Monitoring Capacity

DFWP was unable to find a suitable workshop for building monitoring capacity. Previous inquiries about this sort of training with the Palau International Coral Reef

Center and the Palau Conservation Society were unsuccessful. DFWP will continue to pursue the workshop with the U.S. Department of Fish and Wildlife and other organizations, as this type of training would be of great use to the Fish and Wildlife officers.

11. Waterproof Housing for Cameras

A vendor could not be found for the waterproof camera housings, since our cameras use 3.5-inch disks for memory and are a different shape than the usual waterproof housings. Efforts will continue to try and locate someone who can provide this essential service.

12. Weatherproof Containers for Boats

Six large plastic boxes that are designed to withstand rain and splashed ocean water were purchased to protect equipment, papers and other materials while Fish and Wildlife officers are out on patrol. DFWP purchased one each for our two Indian canoes and the four powerboats. The Division also purchased four small plastic dive bags to keep equipment and papers dry on the two kayaks and the two jet skis. The kayaks and jet skis are too small to be able to carry one of the large plastic boxes, but the plastic bags provide enough protection for a small amount of equipment and forms.

13. Education Training

DFWP was unable to locate a course to train Fish and Wildlife officers how to be better teachers. The only such courses that could be found were offered outside of Palau, which made the classes too expensive to be covered by the \$800 budgeted for the training. However, DFWP recognizes that we have room for great improvement in our presentation skills. Instead of obtaining classroom training, the Fish and Wildlife officers have made an effort to give training sessions in cooperation with other organizations in Palau that have educational specialists working for them, such as the Palau Visitor's Authority (PVA) and the Environmental Quality Protection Board (EQPB). Through observing the expert educators giving presentations, the Fish and Wildlife officers have been able to improve their skills somewhat. DFWP hopes to continue learning by example in future outreach sessions by coordinating our projects with PVA and EQPB.

14. Making Written Outreach Materials

The design for new outreach brochures, pamphlets and posters could not be completed satisfactorily in time to make use of the grant funding. DFWP had planned to reprint a very popular set of posters that were used previously in the Republic of Palau that showed colorful drawings of the flora and fauna around the Ngerukewid Islands Wildlife Preserve and around the State of Koror. DFWP chose to go ahead with the reprinting of the original posters before the loss of the remaining grant funds, and continue developing the new designs for brochures and pamphlets as quickly as possible. As soon as the new designs are completed, DFWP will once again search for funding sources for the new outreach materials.

15. Summary and Conclusion

Attached is a summary table tracking NOAA grant funds, including expenditures and moneys remaining in each category. The use of the electronic equipment obtained with the grant funds has resulted in a significant increase in the effectiveness of this Division. Enforcement operations have become easier to plan and to track to conclusion (i.e., the end of the court case and the subsequent collection of fines), and support functions have become much easier to accomplish. In addition, the ability to draft designs for brochures and pamphlets, and the ability to draft and then print presentation materials has vastly improved our education and outreach programs. The fuel funding has allowed DFWP to greatly expand our outreach projects, as well as allowing us to use more of our annual budgetary allocations to purchase fuel for patrol and other enforcement operations. The night vision equipment will be invaluable for night patrols, especially with clandestine operations where Fish and Wildlife officers do not yet have enough evidence to make an arrest of a suspect. The first draft of the website looks very professional, and upon its completion it promises to be a very effective tool for communicating with the population. In addition, DFWP plans to use the website to help foreign visitors and tourists to understand our conservation laws and programs prior to arriving in Palau. The weatherproof containers for the boats will ensure that our new equipment will last for as long as possible. The officers appear to be happy with the new monitoring forms, and two non-governmental research organizations have already expressed strong interest in seeing the first round of monitoring results.

DFWP has increased the frequency of patrols to twelve marine patrols per month, eight terrestrial patrols in Babeldaob per month, and terrestrial patrols in Koror virtually every day. These regular patrols are in addition to the specific enforcement operations based upon reports from community members and other government employees. DFWP citations have raised 100% compared to last year, and four more States have started conservation law enforcement programs. In addition, at the close of the first Conservation Law Enforcement Workshop that DFWP hosted from December 1-3, 2003, the State conservation law enforcement officers that attended independently decided to establish a Conservation Enforcement Association. The membership is limited to State officers and employees whose duties are focused on conservation enforcement. They will meet once every two months to discuss progress and problems that they have encountered in enforcing State conservation laws. The first meeting will be held in Angaur State, with members of the conservation law enforcement groups from the States of Angaur, Hatohobei, Koror, Ngatpang, Ngardmau, Ngaremlengui, Kayangel, Peleliu, Ngarchelong, Ngaraard, Ngiwal, Ngchesar, Airai, Aimeliik, and Melekeok in attendance.

The projects that were funded by the NOAA grant have been an enormous success far beyond the expectations of DFWP when we applied for the grant. It is our sincere hope that we can continue to work together toward a brighter future.