



CSREES
Southwest States
& Pacific Islands
Regional Water Quality Program

Applying knowledge to improve water quality

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**To : Office of the President
College of the Marshall Islands**

**Thru : Diane Mayzoe-deBrum,
CRE Dean**

Re : Trip Report – Kaven, Maloelap Atoll

The CRE Water Quality Extension Agent visited Kaven community from the 10 – 17 of July 2006. The purpose of the visit was to conduct outreach programs, further investigate the water sources and to follow up on the Simple Solar Distillation Unit. Below is the summary of the trip.

I departed Majuro at 8:00 am on Monday 10th July transiting through Utrik and Tarwa, Maloelap Atoll before arriving at Kaven. There was some unforeseen confusion with regards to my destination at the Tarwa airport but after much delegation I finally reached Kaven. Upon arrival at the Kaven airport, I was met by the agent and 3 youth boys. The agent along with the youth boys escorted me to the dispensary where I met councilman Sear Bobo, briefed him about the purpose of the visit and how the community can participate in the program. I also showed him the simple test kits (H₂S) that I brought for detecting pathogenic (disease causing bacteria) and the survey forms that they can easily fill. The forms were already translated into Marshallese Language. After meeting with the councilman, I began to collect samples from hospital, schools, and two churches as identified as public waters with help by the police officer. The results were brought to the meeting place the next day for the public to them. Most of the results turned little cloudy within 24 hours, which mean the tanks were contaminated.



Fig: 1- Test Public Water Tanks.



Fig: 2- Test Household Tanks.

On Tuesday July 11 at 10:00 am, the opening ceremony of the program commenced with works of blessing from the Assembly of God Pastor. After the blessing, Honorable Councilman Sear Bobo proceeded on to deliver the welcoming remarks on behalf of the Kaven community and Maloelap Atoll Local Government. In his remarks, he mentioned the purpose of the trip and also asked the community members to come every day to attend the workshops. He concluded his talk thanking Maloelap Mayor for accepting the Land Grant request to revisit Kaven to do another community workshop. He also thanked the participants for their cooperation and time and two pastors for their blessings. After his speech, I proceeded on and deliver my presentation on the following issues: **waterborne disease, (typhoid fever) water treatments, conservation, sanitation and purification techniques.** After my presentation, questions and concerns were raised by each participant but most on typhoid fever. Foods and drinks were prepared for the program and served after the closing prayer from Kaven Protestant Church Pastor. At 2:00 pm, we started the survey and testing of Kaven community rainwater tanks. During the collection, I provided the owners' brochures with information on water treatments and little of the H₂S test kit. On that day, we were able to sampled 18 rainwater catchments.



Fig. 3-Councilman Bobo Open Remarks. Fig: 4- Community Participants.

On the third day, Wednesday July 12, 2006 at 9 am, we started collecting water samples from the northern end of the community until we complete the half of the island. We paused for lunch and at 2:00 pm we continued the rest of the island. It didn't take long to complete the island because some of the tanks were empty. There are two problems that I observed when I collect water sample: some tanks are higher than the roof of the house, and some tanks don't have roof to catch rain and this is because some owners cannot afford to buy suitable materials for the roof.

Training

On Thursday July 13, I conducted the training on “**How to Calculate the Numbers of gallons available in the tank**”. This training was also part of the trip's activities. There was a need for this training because during the disinfection process using bleach, the owners **must** know how to calculate the exact numbers of gallons the tank(s) hold to apply correct amount of bleach. The community was divided into two groups, morning and afternoon groups. Both groups contained elderly, youth, men and women. The morning group had the training from 9:00 am to 12:00 noon and the afternoon group started from 1:00 pm till 5 in the evening. More than 50 people attended these trainings. I also showed them the results of the first three day testing and explained that the black tests indicate that the water is contaminated and not safe for drinking or food preparation. These people were really surprised when I showed and explained the results.



Fig: 4/5 - First Training Group.

The closing of the program was held on the fifth day, which is Friday July 14 at 10:00 am. Again, Honorable councilman Sear Bob called on the community members to come join for the closing ceremony. The first speech was given by the councilman Sear Bobo; again he thanked the Land Grant program, his community members for their cooperation and time, and also thanked the two pastors. After delivering his speech, he asked me to go head and say few words. I went ahead and thanked on behalf of the CMI community the local government especially councilman Sear for arranging a place to stay especially for the one-week workshop. I also thanked each community member for their participation and the effort. After giving my speech, I showed them the results of their tanks. There were a total of 34 tanks tested and of that numbers, only 4 were negative or good for human consumption. I explained to them that the black colors indicate that the water is contaminated or not good for drinking or food preparation and the yellow colors represent good and safe drinking water. The closing ended at 12:00 noon. As for the Simple Solar Distillation Unit, this unit is still in good condition, and based on my interviewed with the community members regarding the unit, most of them indicate positive response saying that although this unit is somehow expensive, they're still urging the local government to find money to install bigger one at each community. This indicates that people still favoring this project and would like see its expansion to other neighboring communities.



Fig: 6-Measuring the Height of Water.



Fig: 7-2nd Group-Calculate # of Gallons.

Results of Test & Survey

Public Tanks	Catchments Type	# of Tanks Tested	Tanks Capacity	Test Results	# of Toilets
Kaven Public School	Plastic/Cement	2	1,500 & 12,000	1 negative 1 positive	1-flush
Kaven Protestant Church	Plastic/Cement	2	2	1 positive 1 negative	2-flush
Kaven Assembly of God Church	Plastics	2	1,500	2-negatives	1-flush
Kaven Dispensary	Plastic/Cement	2	1,500 15,000	2-positive	1-flush
Private Tanks	Catchments Type	# of Tanks Tested	Tanks Capacity	Test Results	# of Toilet & Type
Makkun N.	Plastic/cement	3	2 x 1,500 & 8,000	3 - positive	none
Lootia L.	plastic	No water	1,500	none	none
Reno J.	same	1	500	positive	flush
Mario J.	same	1	1,500	positive	flush
Jemkar J.	same	2	2 x 1,500	positive	flush
Anja B.	same	1	1,500	Positive	flush

Ejron	same				
Tuna S.	same	1	1,500	positive	flush
Elvis A.	same	2	2 x 1,500	Positive/negative	flush
Henry	same	2	2 x 1,500	Positive	none
Lakjin	Plastic/cement	2	1,500/1,000	positive	none
Aldon A.	Plastic	1	1,500	positive	flush
Johnny	Plastic	1	1,500	Positive	none
Kattilman	Plastic	1	1,500	positive	none
Benji	Plastic	1	1,500	positive	none
Mori	Plastic	1	1,500	positive	none
Lowa	Plastic	2	2 x 1,500	positive	flush
Emmuel	Plastic	1	1,500	Positive	none
Romey	Plastic	1	1,500	Positive	none
Wodina	plastic	1	1,500	positive	flush
Jita	plastic	1	1,500	positive	none
Sear B.	Plastic	1	1,500	positive	none
Jiem	Plastic	1	1,500	positive	none
Dylan	Plastic	1	1,500	Positive	none
Dalton	Plastic	1	1,500	Positive	none
Tony	Plastic	1	1,500	Positive	none
Komta	Plastic	1	1,500	Positive	none