

Watershed Working Group
May 16th, 2018

Attendees:

Jihan Younis, Emily Northrop, Colleen Flores, Rich Salas, Katie Graziano (BECQ), Roberta Guerrero (MINA), Michael Borja (DPW), Kevin Camacho (DLNR-DFW), Carl Goldstein (EPA R9 PIO), Kathy Yuknavage

Round-Table Updates

Jihan Younis (BECQ – Coral Reef Initiative)

There is a Calendar Events published for international Year of the Reef (up on the website, <https://dcrm.gov.mp/about-dcrm/event-calendar/>)
BECQ has been at Taste of Marianas every Saturday with MINA, coral reef outreach booth. Wetlands clean-up was scheduled for Friday at AMP with MINA and with NMTI - postponed until June 2 (Saturday)
Tinian Ridge to Reef Eco Camp – June 11 – 14
Rota Eco Camp – Aug 7 – 10
Stakeholder Meetings for Coral Reef Priority Setting Document
Coral Reef Summer Internship – selection process is almost complete for interns who will be placed with various agencies from June through August.

Emily Northrop– DCRM Planning

Recently matched with a NOAA Coastal Management Fellow, she will be creating a user capacity assessment to come up with thresholds for most popular, impacted tourist sites. Using a mixed methods approach, incorporating all sorts of data including water quality and data. Starts in August, two year project. Working with BECQ –CZ Program and MVA.

In the interim, there are already proposed numbers but may be changed in the future (when the Fellow's assessment is complete).

Where would you like to see focus?

Managaha, Jeffries, Grotto, Laolao Dive Site, Pao Pao, Wing

Discussion about Managaha - In 2017 there were over 500,000 arrivals – averaging 1200 or 1300 a day (from DPL). Now in RFP process for granting of a new concession. There may be a 1000 person limit due to the sewer treatment.

The DPL Land Use Plan is open for comments – focuses heavily on population projections.

Robbie Greene, NOAA –

Steve McKagan has been underwater doing reef resilience surveys around Saipan, They've seen over 80% mortality of branching coral. Lower percent of general coral. Couple of good patches! That's where the nurseries will go. Repetitive bleaching, especially on the west side where there are impacts from urban runoff.

Colleen Flores – DCRM Outreach

Joined the CZM Outreach team, this is her first watershed working group.

Roberta Guerrero (MINA)

MINA has been continuing mission of supporting outreach activities in the community. Recently helped Lion's Club do a volunteer planting along 13 fishermen Support from Forestry, saline resistant trees. Also participated at taste of the Mariana's.

Identifying funding so that MINA can assist with eco-scamps

Just got a small grant to increase watershed surveillance, for more boots on the ground to do surveillance (Tasi watch ranger program).

Michael Borja – DPW Roads

First time at WWG meeting, mainly responsible for maintaining territory high ways. Discussion about paving secondary roads – Paving depends on funding from highway, secondary roads depends on legislature to appropriate money.

Discussion: Ongoing issue with tourists at hidden beach – the dump trucks don't have easy access, working with the mayor's office. Can it be paved so that it is accessible?

Kevin Camacho – Marine protected area coordinator, DLNR – DFW

A lot going on with Managaha, tourist numbers and concession transfer. Maintaining contact with Chris Concepcion (MVA) about Managaha.

Discussion with MINA about nighttime MPA surveillance for poaching – (Tasi Watch). MINA can contact Manny, head of enforcement at DLNR. Or, email Kevin. Manny is head of enforcement, contact him. Or, can email Kevin about it and he can connect to Manny.

Kathy Yuknavage – Water Quality

At Old Man BTS, there was an issue where a stream was filled in for access to the beach. Draft NOV gives 50 days to remove the stream fill in state waters. The owner of the property, wants to charge access fees to get down to old man. It will be removed before rainy season.

Presentation – Robbie Greene, NOAA Affiliate, former GIS Specialist w/ BECQ

Shoreline Vulnerability Along the Saipan Lagoon: Measuring Exposure in our Lower Watersheds

**** Please see PDF Attached****

In the past, we developed inundation maps (showed extent of coastal flooding).

New task –combine that inundation with coastline vulnerability based on different features (habitat type, etc).

Natural Capital Project – giant partnership worldwide, valuing ecosystem services – developed a tool, that was never brought to CNMI. But, Robbie and Rod adapted it to work on Saipan.

Unlike the inundation model, we can change the results depending on different scenarios (i.e. living shoreline, vs development). With good management, we can change the model outcome!

Why couldn't we use their inVEST model?

Scale – was not useful for management purposes here, needed smaller scale here.

Variables of vulnerability:

Geomorphology – Web soil, surface morphology

Relief – slope and aspect based on lidar data

Habitats- C-CAP coastal change analysis program

Sea level rise – bring in products from vulnerability maps.

Geoprocessing Steps

150 ft buffer zone- cut out for the entire saipan lagoon, broke down into 10x10 m polygons, Load the data – inundation potential, etc. – for each polygon. Re-classify based on sensitivity classes.

Two outputs – one for climate change 50 years in future (using 2017 projections from NOAA), one for right now

Index results – shore exposure index

5 means very vulnerable

Index looks drastically different with 50 years of sea level rise.

Next steps:

2017 data – bathymetry, benthic habitat, Wave energy – incorporate.

Replicable! If we do a big living shoreline project, the model output can change.

Management implications: Lots of the high exposure areas (lowlying, flat) are popular zones for development (for the same reason they are highly exposed).

Hazards Viewer can be accessed: [dcrm.maps.arcgis](http://dcrm.maps.arcgis.com)

Check out inVEST –Natural Capital Project - ton of models to assess condition and gauge value, ecosystem services

Questions:

Is there a way to nuance the development, i.e. parcel data with more information about structure –
“worth of existing structure ‘ you could start to quantify the economic value of loss – under different scenarios.

Can incorporate shoreline change?

Full terrestrial coverage for Rota, Tinian, ..

10-15 m and shallower, can get bathymetry data.

Upcoming dates:

Smart safe growth –
July 18, 19, 20

Next WWG: August 16 (tentative)