

## Watershed Working Group

13 February 2012, 8:30-10:30am

### *Dates to Remember:*

Climate Change Adaptation Training: March 4<sup>th</sup>-8<sup>th</sup> (contact Robbie for more information)

Next Watershed Working Group meeting: May 15<sup>th</sup>, 8:30-10am

### *Attendees:*

DEQ: Derek Chambers, Clarissa Bearden, Shelly Kremer, Avra Heller, Jihan Buniag, Gus Camacho, Steven Johnson, Olivia Tenorio, Kaity Mattos

CRM: Robbie Greene

NOAA: Dana Okano

NRCS: Kendal Hicks

### *Meeting Notes:*

- I. Opening: sign-in, introductions
- II. Project updates
  - a. DEQ Marine Monitoring Team (Steven Johnson)
    - i. Next month MMT is going to Rota to begin monitoring similar to the study done in Laolao Bay to evaluate water quality and benthic parameters. They are hoping to secure EPA 319 funding to continue this work.
    - ii. WERI is partnering with MMT to complete similar work in the Garapan area
    - iii. The manuscript of the analysis of MMT's 10-year dataset is going to be submitted to peer-reviewed journals soon, evaluating the drivers that affect reef recovery across the islands
  - b. RARE (Jihan Buniag)
    - i. The Laolao-area household surveys will begin in the next two weeks to collect data for a land-clearing education campaign
    - ii. Jihan is starting a BMP guide for land/home-owners in collaboration with DEQ's erosion control branch and USDA-NRCS
    - iii. Tasi-Watch is doing a planting of 40 coconuts near their hut in Laolao for beautification this Saturday, Feb 16<sup>th</sup>
  - c. OurLaolao: started a monthly radio show and has a new Seaweb campaign manager coming out in March

- d. DEQ Water Quality branch (Clarissa, Shelly)
  - i. Nimbus Environmental Services came out in December to help chose sites for the Surface Water Quality Assurance Monitoring Plan. The plan will be completed in June and sampling will begin this summer. (From others: C2HM Hill may have storm data from 11 stations on Saipan that DEQ could use or take over the monitoring of for this project. Weather data could also be obtained from the ICON station, Tasi-Watch and/or dive site security guards in Laolao)
  - ii. Beach monitoring continues – there is a sewer line leaking by DPW Channel Bridge, the same leak from 2011 that was “fixed”
  - iii. The 2<sup>nd</sup> round of reef flat monitoring came out well except many sites on Tinian (Long Beach/Unai Dangkulo and Tachonga had high nutrients and bacteria levels)
  - iv. Brainstorm with group: could be related to old cesspools in the village (before septic tanks); permitted septic tanks need to be checked every 3 years, but if needed they are pumped to the dump that leaches to Barcinas Bay; the treatment plant at the Dynasty has typically been in good shape but could be checked again
  - v. From MMT (Steven): “Attached you'll find two graphs of the marine monitoring teams data from our Taga Beach monitoring site. The first figure shows the average percent cover for coral, macro algae, and fleshy coralline algae (with standard deviations). The second figure shows the same relationship but expounds to the level of reef accreting substrate (things that help a reef grow - i.e., coral and crustose coralline algae) and substrate that inhibits reef growth (macro algae and fleshy coralline algae). I know that the DEQ WQ lab was discussing their monitoring at Tachonga Beach, just south of our monitoring station. I've brought this up with the rest of the monitoring team and the reef just out from Tachonga is something we could possibly look into.” (two graphs are attached here and pasted at the bottom of this document)
- e. NOAA (Dana)
  - i. Working with USFS on Talakhaya firebreak implementation. Forestry is revising their 5-year statewide plan now which will hopefully include Talakhaya projects
  - ii. Ryan and Dana received WERI funding for a groundwater discharge study in Garapan nearshore areas
- f. Climate Change Working Group (Robbie)
  - i. There will be a week-long training with a regional Pacific Islands advisory group in early March, 2.5 days will be spent on communications and 2.5 on vulnerability assessments and adaptation. Contact Robbie for more information
  - ii. Robbie has 2011 satellite imagery. May be working with summer interns (Clarissa, Kaity and Jose too) to do flow mapping
- g. Derek Chambers
  - i. Groundwater Under Direct Influence (GUDI) study is going on with CUC to see if groundwater is influenced by stormwater. They selected the most vulnerable

wells to evaluate. Most were not affected but there is a huge seep by a Puerto Rico well which is causing CUC to take it offline. The well had high spikes in turbidity during rain events but is also very high-performing. No contaminants were detected in a microscopic particulate analysis (MPA) indicating that they are naturally filtered

- h. NRCS (Kendal Hicks)
    - i. NRCS is willing to work with multiple agencies on collaboration – they can identify focus areas (like the areas discussed on Tinian) and help direct funds towards those places, especially if there is a map produced of where the issues are)
    - ii. They have cost-share programs that focus on dry litter piggeries and comprehensive nutrient management on farms, vegetation treatment to improve erosion – we can help them identify hotspots (such as sinkholes affecting groundwater like in Puerto Rico)
    - iii. The Kagman Watershed Project will relieve sedimentation effects on Tank and Marine Beaches and provide water to local agriculture. The rest of the project will cost \$6.5 million with a need for a \$2.5 million estimated local match.
    - iv. NRCS could partner with Surface Water Quality sampling (Shelly) to identify areas already enrolled in NRCS programs and areas of need. The ag census is ongoing and may provide data for this.
  - i. Garapan CAP (Kaity)
    - i. DEQ/CUC are partnering to smoke the storm drains and identify buildings in downtown Garapan that may be directly discharging waste into the storm sewers
- III. Speaker: Kaity Mattos on New Partners for Smart Growth Conference
- a. Kaity attended the New Partners for Smart Growth Conference in Kansas City, Feb 7-9 this year and presented on the content learned and applications to the CNMI. If you want to look at the materials or presentation, feel free to contact her.
  - b. Dana and Robbie has journals and other materials on these topics (urban planning, smart growth, etc.) as well that are available if anyone is interested. Contact them to borrow or review materials
- IV. Next meeting
- a. 15 May 2013, 8:30-10:30am – Robbie will present on Climate Change topics
  - b. Future meeting topics that people would like to see:
    - i. Forestry
    - ii. Surface Water Quality Assurance Monitoring Plan (Shelly, Clarissa, Kaity)
    - iii. Value of a tree (Shelly)
    - iv. Tasi-watch programs/projects
    - v. Think Blue (Olivia/Avra)

Attached Figures from MMT (Steven Johnson)



