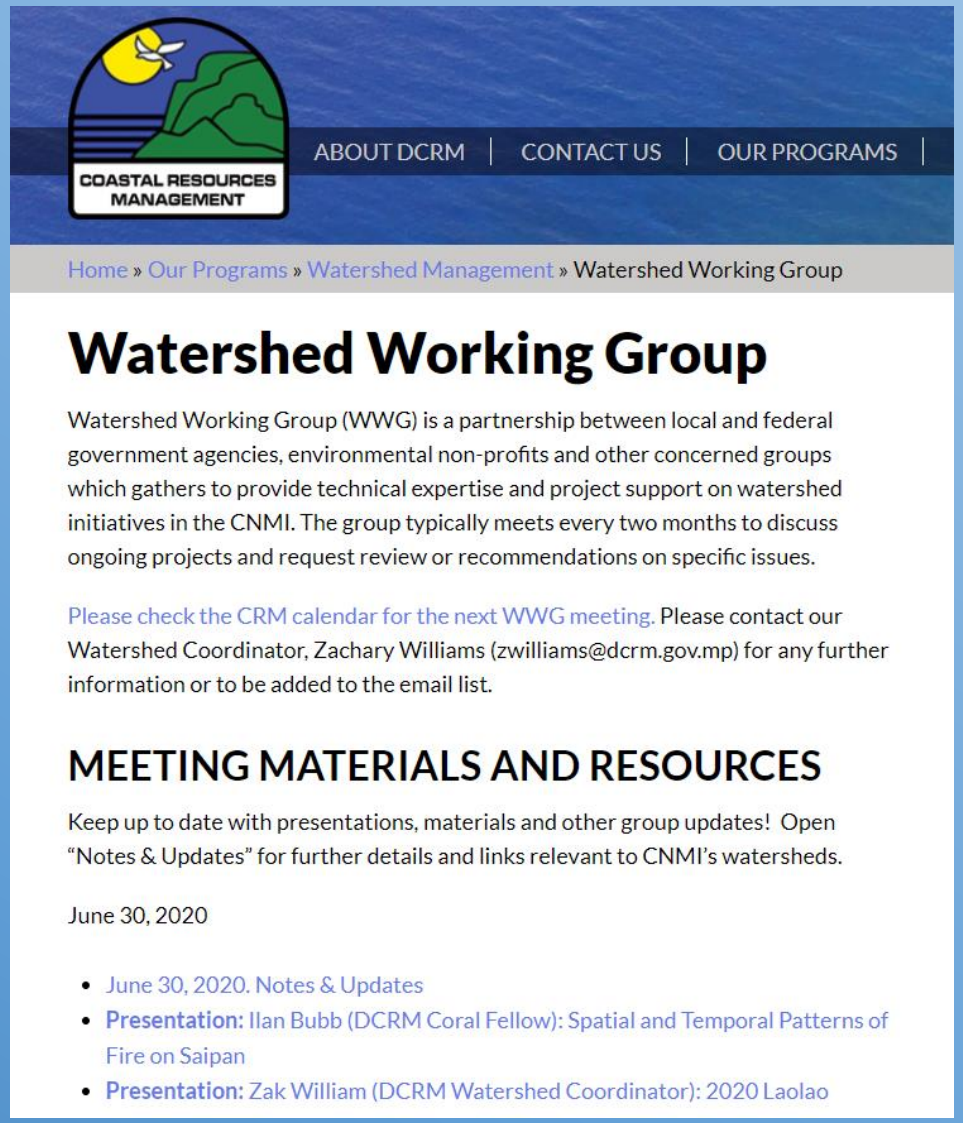
Watershed Working Group (WWG)

October 21, 2020
Quarterly Meeting

The Watershed Working Group is a network of partners involved in watersheds planning, project implementation, research, and education.

Includes members from local and federal government agencies, NGOs, community groups, and other interested parties.

Typically meets quarterly to discuss issues relating to watersheds, in order to pool knowledge and networks towards better management and collaboration.



Watershed Working Group DCRM Page

Meeting Agenda

Larry Maurin (EPA/BECQ-DEQ)

- Updated Stream Visual Assessment Protocol (SVAP)
- 2020 CNMI 305(b) & 303(d) Water Quality Report

Rep. Sheila Babauta (CNMI House of Representatives)

- Tanapag Rain Garden Project

Zak Williams (BECQ-DCRM)

- Overview of the Garapan and Talakhaya Watershed Management Plans (WMP)
- Next steps in WMP implementation

Roundtable Discussion

- Member updates, concerns, opportunities, etc.

Closing

DEQ Updates

2020
Commonwealth of the Northern Mariana Islands
305(b) and 303(d)
Water Quality Assessment Integrated Report

Photo: Scott Eck - Bird Island in Saipan's Northeastern Coastal waters

Bureau of Environmental and Coastal Quality
September 2020

Editor & Contributing Author:	Kathy Yuknavage
Contributing Authors:	Jonathan Arriola, David Benavente, Rodney Camacho, Erin Derrington, Malcolm Johnson, Larry Maurin, Denise Perez, and Travis Spaeth
Maps:	Rodney Camacho, Robbie Greene, and Kathy Yuknavage

[DEQ Water Quality Reports]

Stream Visual Assessment Protocol for the Commonwealth of the Northern Mariana Islands

VERSION 2 – UPDATED 2020

[CNMI SVAP - 2020]

Tanapag Community Garden Project

Hope Garden Facebook Page

For more information you may contact:

Shannon Sasamoto | missnmi2019@gmail.com

Rep. Sheila Babauta | rep.sbabauta@gmail.com

2020 CNMI Watershed Management Plans (WMP) Update — Garapan

Zak Williams
Watershed Coordinator
BECQ - DCRM - CRI
NOAA Coral Reef Conservation Program

Priority Watersheds

Watersheds identified as the central focus of the Coral Reef Initiative's land-based coral conservation efforts (ridge-to-reef).

Selected based on economic, biological, and social significance, degree of threat / degradation, and because they are high-use areas with vital natural resources.

Four (4) priority watersheds identified in CNMI.

Three (3) on Saipan:

- Achugao (*new*)
- **Garapan (West Takpochao)**
- Laolao

One (1) on Rota:

- Talakhaya

Garapan Watershed Management History

Conservation Action Plan (CAP) written in 2013 (updated 2015).

CAP challenges: i) lack of key agency participation, ii) lack of progress monitoring, iii) lack of coordination (Watershed Coordinator turnover).

Notable CAP accomplishments:

- Infrastructure improvements (e.g. stormwater collection)
- Illicit discharge detection and elimination program
- Leveraged funding through grants that referenced CAP
- Outreach & Education Campaigns
  - e.g. "Watershed Warriors"
- Installation of CNMI Museum raingarden
- New legislation passed to fine littering
- Removal of junk cars
- Cash-for-Trash Program
- Climate change components integrated into marine monitoring program
- Tour guide certification program now required and curriculum developed

WMP Approach

5-year plan to address watershed impairments and their causes.

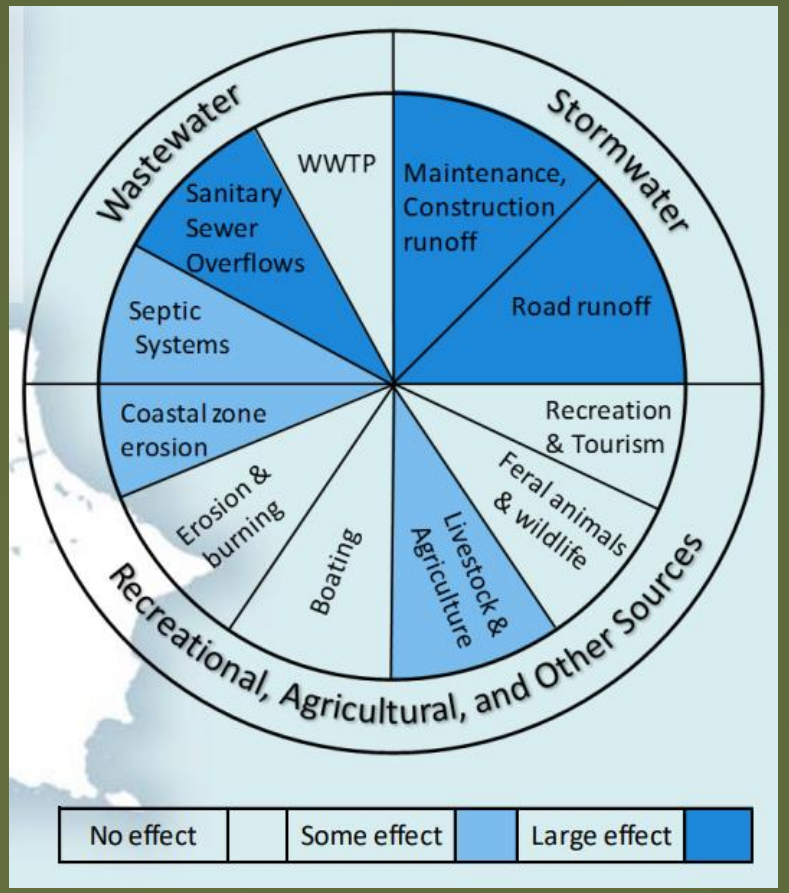
Watershed Management Planning (as compared to CAP) takes a more integrated approach more inclusive of human/infrastructure-based objectives.

- Meeting A-i criteria

Updates initiated in 2019 collaboratively between NOAA, TNC, and DCRM, contracted to Sea Change Consulting and Koa Consulting, with technical assistance from Horsley Witten Group, Inc.

WMP informed by previous CAP, management and scientific literature, environmental monitoring data, pollutant load modeling, and stakeholder meeting (Jan. 2020) attended by >40 agency, NGO, and community groups.

Updated Watershed Boundary



Key Threats

Bacterial Contamination

- Illicit connections of sewer to storm drains
- Failure or lack of individual waste disposal system (IWDS) or lack of connection to sewer system
- Aging/ill-maintained/overworked wastewater infrastructure
- Lack of adequate public restroom facilities; inadequate facilities for construction workers
- Animal waste from stray animal populations

Non-bacterial Polluted Runoff

- Aging/ill-maintained/overworked stormwater infrastructure
- Clogging due to improper use of drains (trash, fats/oils/grease, etc.), inflow and infiltration
- High amounts of impermeable surfaces, lack of runoff mitigation measures
- Insufficient inter-agency coordination, spot zoning, and permitting

Native Wildlife Population Decline

- Habitat loss/fragmentation
- Predation from feral animals (e.g. dogs, cats, rats)

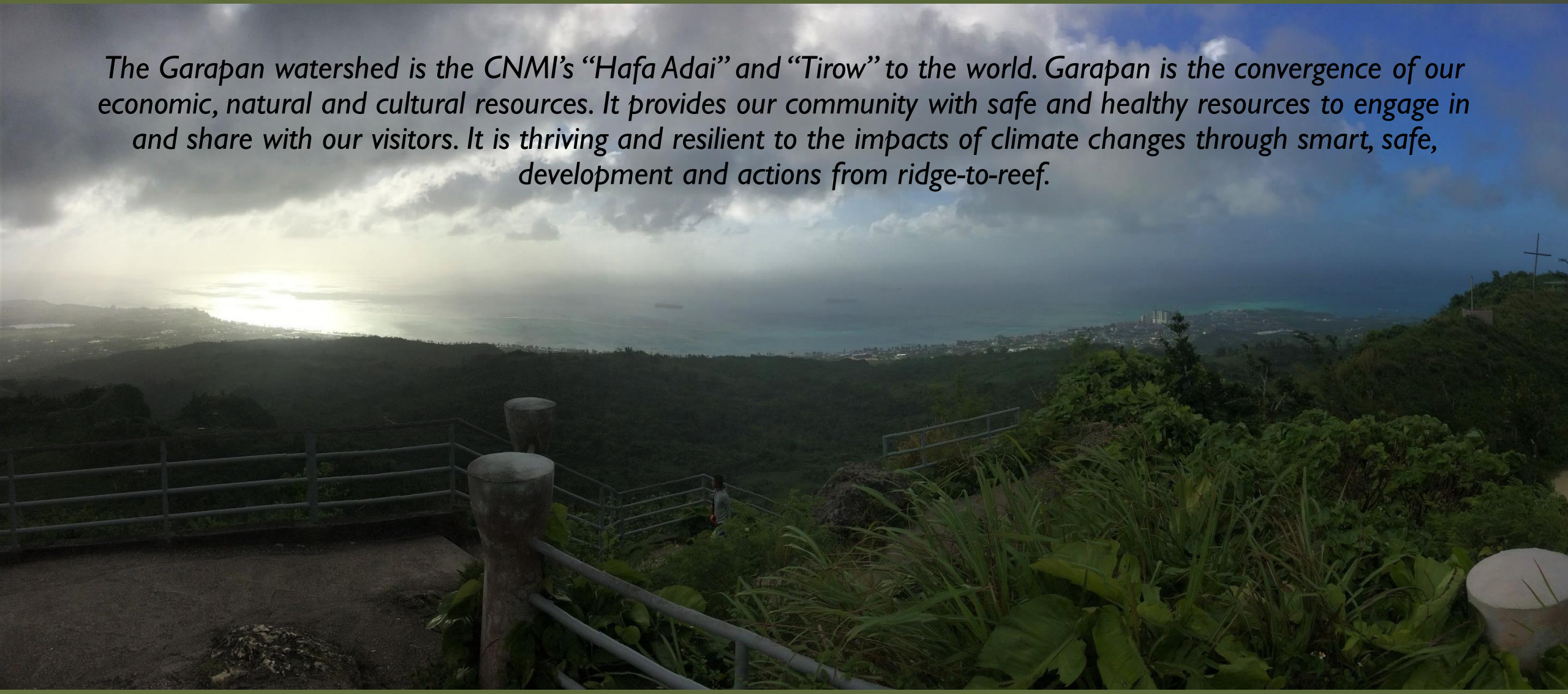
Invasive Species

- Existing invasive species from historical introductions
- Potential introductions through port/marina
- Spread of invasive species facilitated by disturbances (e.g. fires, storms, land-clearing)
- Lack of inspections and inadequate training of quarantine officers

Illegal Harvest

- Violations of DFW regulations
- Lack of awareness of rules (both tourists and residents)
- Confusing/conflicting regulations (e.g. moratoriums not clear)
- Disconnect between enforcement action and the legal system
- Lack of dedicated legal council for natural resource agencies
- Unregulated harvest

The Garapan watershed is the CNMI's "Hafa Adai" and "Tirow" to the world. Garapan is the convergence of our economic, natural and cultural resources. It provides our community with safe and healthy resources to engage in and share with our visitors. It is thriving and resilient to the impacts of climate changes through smart, safe, development and actions from ridge-to-reef.



10-Year Goals

By 2030, Garapan will have:

1. Improved lagoon water quality through:
   - Improved management to reduce illicit discharge and improper fats, oils, and grease (FOG) disposal;
   - Upgraded infrastructure to handle loads;
   - Reduced stormwater runoff;
   - Green infrastructure to reduce flooding events;
   - Reduced and controlled stray animal population; and
   - Safe, Smart Growth (SSG) Principles integrated into development permitting and management activities.
2. Improved management of Critical Habitat (i.e. wetlands, seagrass, reef, forest) through:
   - Invasive species prevention and management;
   - Greater compliance and enforcement of natural resource management regulations through clear updated regulations and regulatory framework; and
   - Restoration of degraded native habitats and science-based management.
3. More sustainable and resilient development through:
   - Improved permitting processes based on integrating SSG Principles and best available data that considers climate change and natural disaster impacts and risks;
   - Inter-agency collaboration and decision-making for permitting; and
   - Community engagement that fosters environmental stewardship.

5-Year Objectives & Actions

Objective 1:

By 2025, 20 green infrastructure or stormwater mitigation projects have been implemented through a pilot program that provides funding and technical assistance to homeowners or businesses.

1.1 Identify funding sources and develop plan for funding/technical support mechanism.

1.2 Implement a funding and support mechanism (through MoU, program establishment, etc.).

1.3 Identify priority neighborhoods, projects/recipients, receive applications from interested homeowners and businesses.

- Disseminate information to communities through community meetings
- Provide application/proposal technical support

1.4 Projects approved and implemented.

- 20 green infrastructure and/or stormwater projects by 2025
- Provide funding/technical support for ongoing maintenance and community outreach

1.5 Identify more funding, expand program to include all of Garapan watershed.

Objective 2:

By the end of 2025, three sustainable designed public restroom facilities will be open, maintained, and available for public use during regular daytime hours.

- 2.1 Work with legislative champions to gain support for funding to develop new bathroom at Fishing Base.
- 2.2 Collaborate with DLNR Parks & Rec and DFW to assess reasons behind closures and lack of maintenance. Identify someone in Parks & Rec to lead on project. Develop plan of actions for Obj implementation.
- 2.3 Construction of new bathrooms with supporting maintenance MoU or agreement.

Objective 3:

By the end of 2025, high priority individual waste disposal systems (IWDS) have been identified and 10% of inspected sites repaired.

- 3.1 CUC has completed a full inventory of the entire watershed to identify where additional sewer connections can or should be made and identified high priority areas for sewer expansion.
- 3.2 Septic system education program implemented to at least 8% of homeowners to encourage repair, upgrade, or connection to sewer with the majority showing willingness to repair.
- 3.3 An implementation plan is developed to address highest priority IWDS, including funding mechanism assessment to support connections for low-income land-homeowners.
- 3.4 10% of inspected sites found lacking improvement are repaired.

Objective 4:

By the end of 2025, illicit discharge has been detected and removed in at least 30% of the watershed area through the implementation of an inspection program for illicit discharge detection and elimination (IDDE).

4.1 An IDDE program has been established and institutionalized by DPW — as required by MS4 — and includes processes for collaboration with enforcement authority (DEQ) and outreach support (MINA) to eliminate IDDE.

4.2 Update DPW and CUC infrastructure maps identifying illicit discharges (sanitary and stormwater).

4.3 Work with DEQ to asses enforce, and eliminate illicit discharge in at least 30% of the watershed.

Objective 5:

By the end of 2025, fats, oils, and grease (FOG) disposal program is established and implemented.

5.1 Hire a FOGs Manager at CUC, as required by CUC Stipulated Order.

5.2 Design CUC FOGs Program:

- Establish and execute a FOG Control Plan
- Work with BEH and CNMI government to create an Enforcement Action Plan to ensure FOG compliance
- Work with DPW on best practices for FOG disposal

5.3 Implement CUC FOGs Program:

- Setup community collection sites to allow for FOG collection
- Conduct regular inspections of sewer sheds and grease traps throughout the island
- Integrate FOGs into Waste Management Feasibility Study and Comprehensive Plan

5.4 Implement a FOGs Outreach Program to disseminate information to both residential and commercial entities about BMPs for FOGs disposal and consequences of inappropriate FOGs disposal.

Objective 6:

By 2025, a minimum of two affordable spay/neuter clinic events are completed in Garapan.

- 6.1 Source and contract a veterinary team.
- 6.2 Advertise clinics on TV, radio, newspaper; target Garapan residents with mailed flyers.
- 6.3 Active round-up of stray animals to be spayed/neutered.
- 6.4 Implement clinics and collect fees.

Objective 7:

By 2025, DFW hunting, fishing, and research permit regulations have been reviewed and updated with legal guidance.

- 7.1 Identify non-sportfish funding source to cover time for DFW staff to review and provide input to existing regulation.
- 7.2 Conduct 3–5 key informant interviews, and interagency surveys to provide input on conflicts and challenges to users with existing regulation.
- 7.3 Convene small workshop of in-house DFW experts and relevant external partners to identify conflicts and challenges with existing regulations.
- 7.4 Contract legal support (e.g. Legal Fellow) to review and update regulations based on internal DFW review and stakeholder support.
- 7.5 Follow DFW protocols to update regulations.

Objective 8:

By 2025, guidance on BMPs for invasive species/vegetation developed and integrated into agency-specific permitting and enforcement processes.

8.1 Conduct preliminary revegetation and successions study.

8.2 Establish Invasive Species Working Group to pool expertise and develop guidance.

8.3 Contract signed and implemented to review guidance, and determine how to integrate into various agency permitting processes.

8.4 Guidelines integrated into permitting requirements through adoption of regulations and policies.

8.5 Training for Enforcement Officers on BMP guidance and what to look for.

8.6 Outreach materials developed to simplify guidance and shared with developers on which BMPs are required.

Objective 9:

By 2025, DCRM will update NMIAC 15-20 (jet ski regulations) to encompass all marine sports operations (MSO).

9.1 Conduct internal review of current 15-20 regulations.

9.2 Conduct inter-agency review with partner agencies and DCRM Board, including DFW, DPS Boating Safety, DPL, and USCG.

9.3 Conduct stakeholder review and feedback, including but not limited to:

- Holding MSO Forum workshop
- Soliciting public comments

9.4 Incorporate stakeholder and community feedback into new revised regulations with guidance from legal counsel.

9.5 Approval by DCRM Board and promulgated into CNMI Code.

Objective 10:

By end of 2025, all development projects incorporate Smart, Safe Growth (SSG) principles through the application of the SSG Project Review Matrix.

- 10.1 Develop CNMI implementation framework for CNMI's SSG Guidance through incorporation of principles into the Comprehensive Sustainable Development Plan and related planning documents as well as through the application of SSG Project Review Matrix in CNMI project scoping and prioritization processes (CIP, CEDS, HM, etc.).
- 10.2 Conduct at least three SSG trainings for regulator as well as project developers and consultants with supporting materials posted online at www.opd.gov.mp.

Objective 11:

By 2023, major siting permitting decisions include the Zoning Board.

- 11.1 Work with DCRM Director, Permit Manager, Zoning Administrator, Governor's Office, and Attorney General's Office to conduct feasibility analysis to determine the best approach for how to integrate Zoning into the DCRM Review Board.
- 11.2 Implement feasibility analysis recommendations.
- 11.3 Capacity building workshop for Zoning and DCRM Board, as well as other relevant project development and regulatory partners on SSG Principles and ideas on how to further incorporate them into the permitting process.

Objective 12:

By 2025, a central portal for public spatial data is established and used for planning, permitting, and decision-making.

- 12.1 Formal establishment of CNMI GIS Working Group (GIS-WG).
- 12.2 Hire a GIS Coordinator at OPD
- 12.3 Identify who will house/maintain central database (with emphasis on data security).
- 12.4 Provide GIS trainings on: GIS portal, GIS software, protocol, familiarity with GIS-WG, and CNMI geospatial tools.
- 12.5 All agencies have access to a centralized GIS database, with non-protected data also made accessible to the general public.
- 12.6 Incorporate GIS data into planning, permitting, and decision-making.

Objective 13:

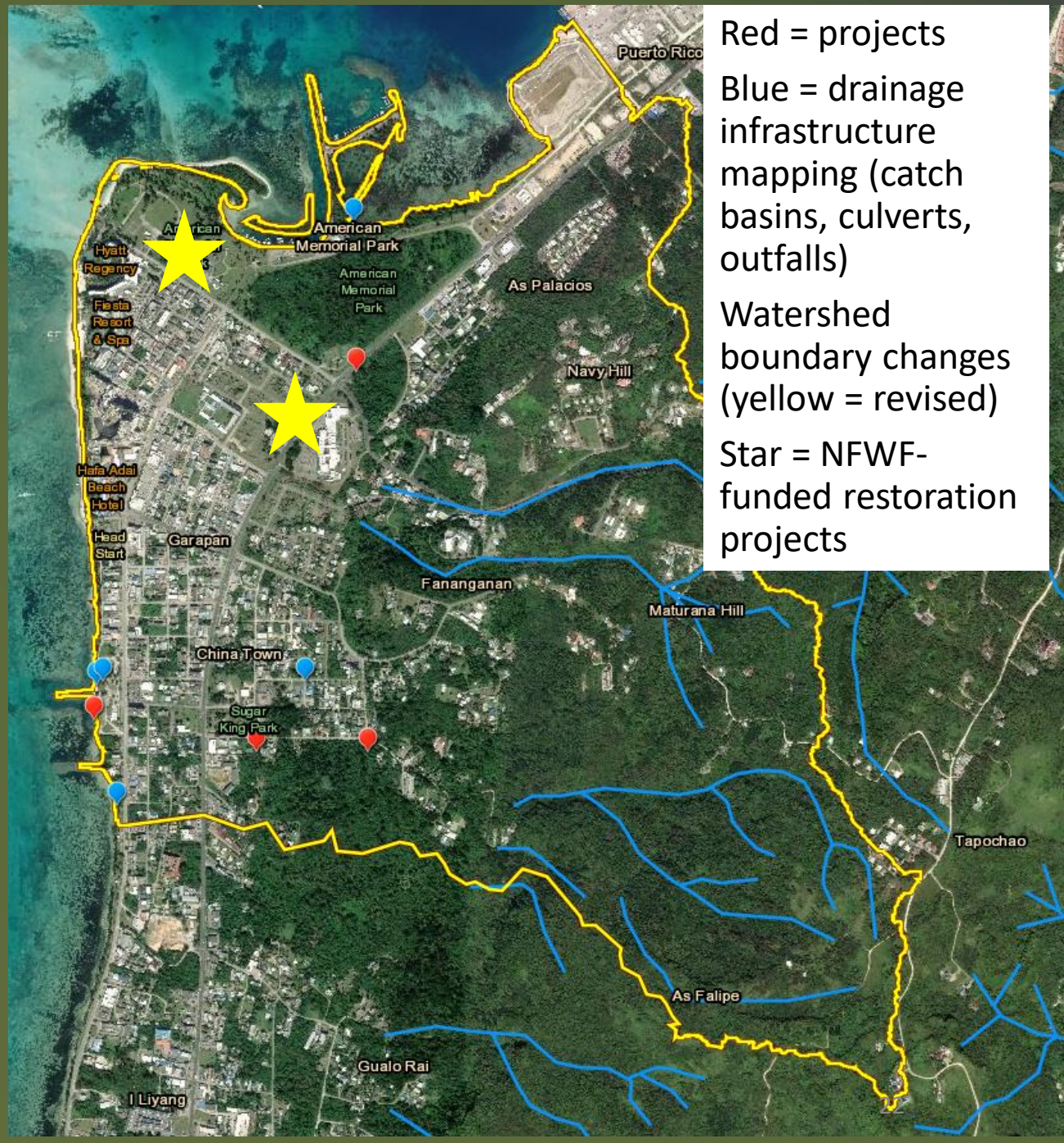
By 2025, the Garapan Revitalization Taskforce and Watershed Working Group have an action plan based on the Horsley Witten (HW) Model to manage at least 50 acres of drainage area (in Garapan watershed) to address stormwater impacts through new structural stormwater BMPs, including a 10% average reduction in impervious cover and in turf by 2030.

- 13.1 By 2022, develop a Stormwater Management Plan for Garapan watershed that identifies and prioritizes stormwater BMPs that will be most impactful. These may include sites identified in the HW Model.*
- 13.2 Implement top priority stormwater BMPs in Garapan, with implemented action plan components covering at least 25 acres by 2025, and aiming for 50 acres by 2030.

* Includes practices such as bioretention, cisterns, green roofs, constructed wetlands, catchment basins, permeable parking, etc. These would be specific projects done on public lands, or as subsidized demonstrations with willing land-/homeowners.

Potential Projects

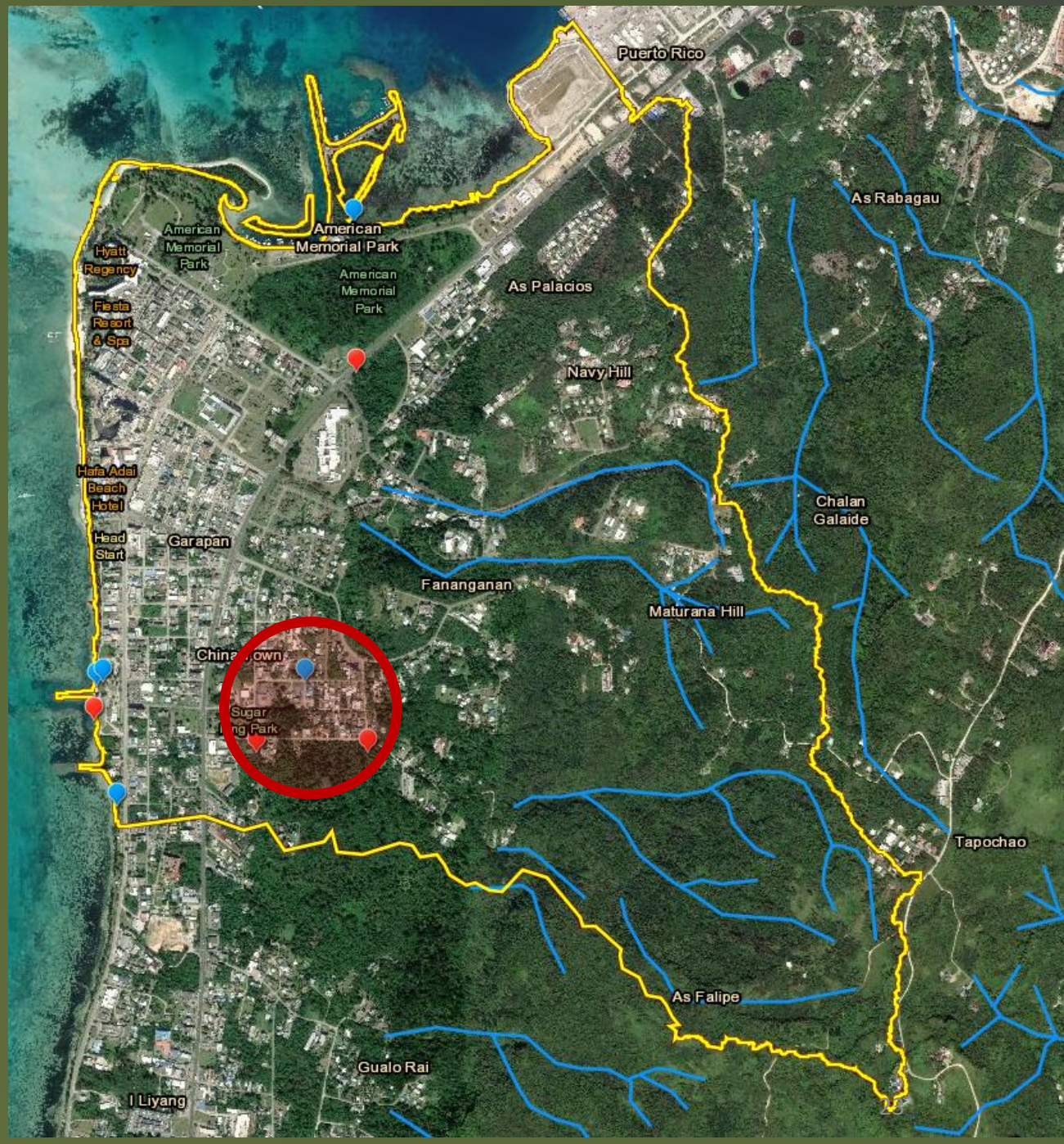
- Green infrastructure and BMPs/stormwater mitigation
- Additional public restrooms
- Residential hookup to sewer infrastructure
- Illicit discharge monitoring
- FOG disposal program; spay/neuter clinics
- Updated fishing/hunting permit regulations
- Invasive species removal
- Review/update CRM permitting regulations (e.g. marine sport, APC)
- Incorporation of SSG into development
- Spatial data consolidation and sharing



Potential Projects

Stormwater infrastructure

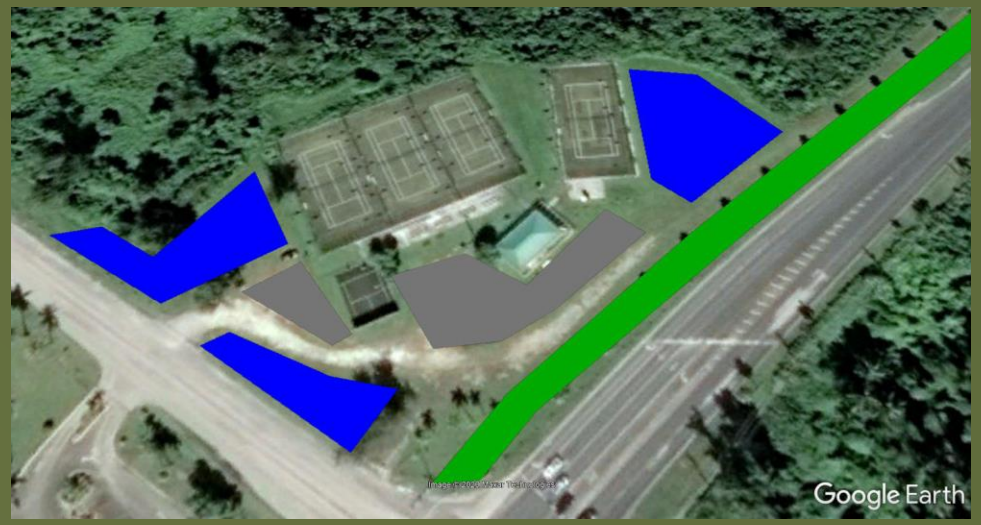
- ➢ Sugar King Rd.
- Installation of roadside swales along Sugar King Park
- Partial or complete paving
- Water bar installation (e.g. speed-bumps)

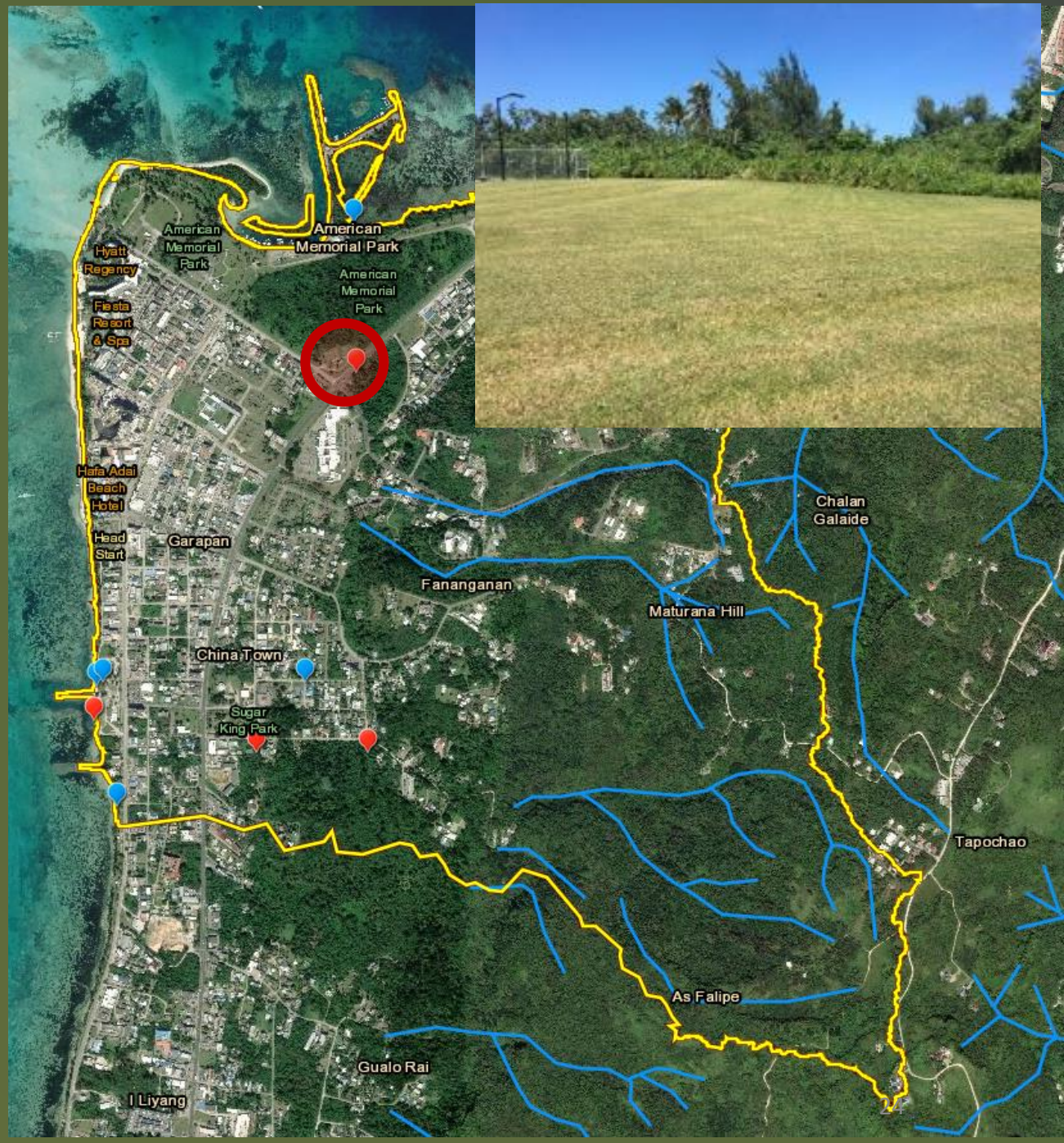


Potential Projects

Stormwater infrastructure, BMPs

- ➢ AMP tennis courts
- Extending roadside swale further north along Middle Rd.
- Installation of raingardens / constructed wetlands at low-lying areas
- Install additional inlets and piping on road to convey flows into stormwater infrastructure
- Permeable parking lots in existing gravel/grass parking area

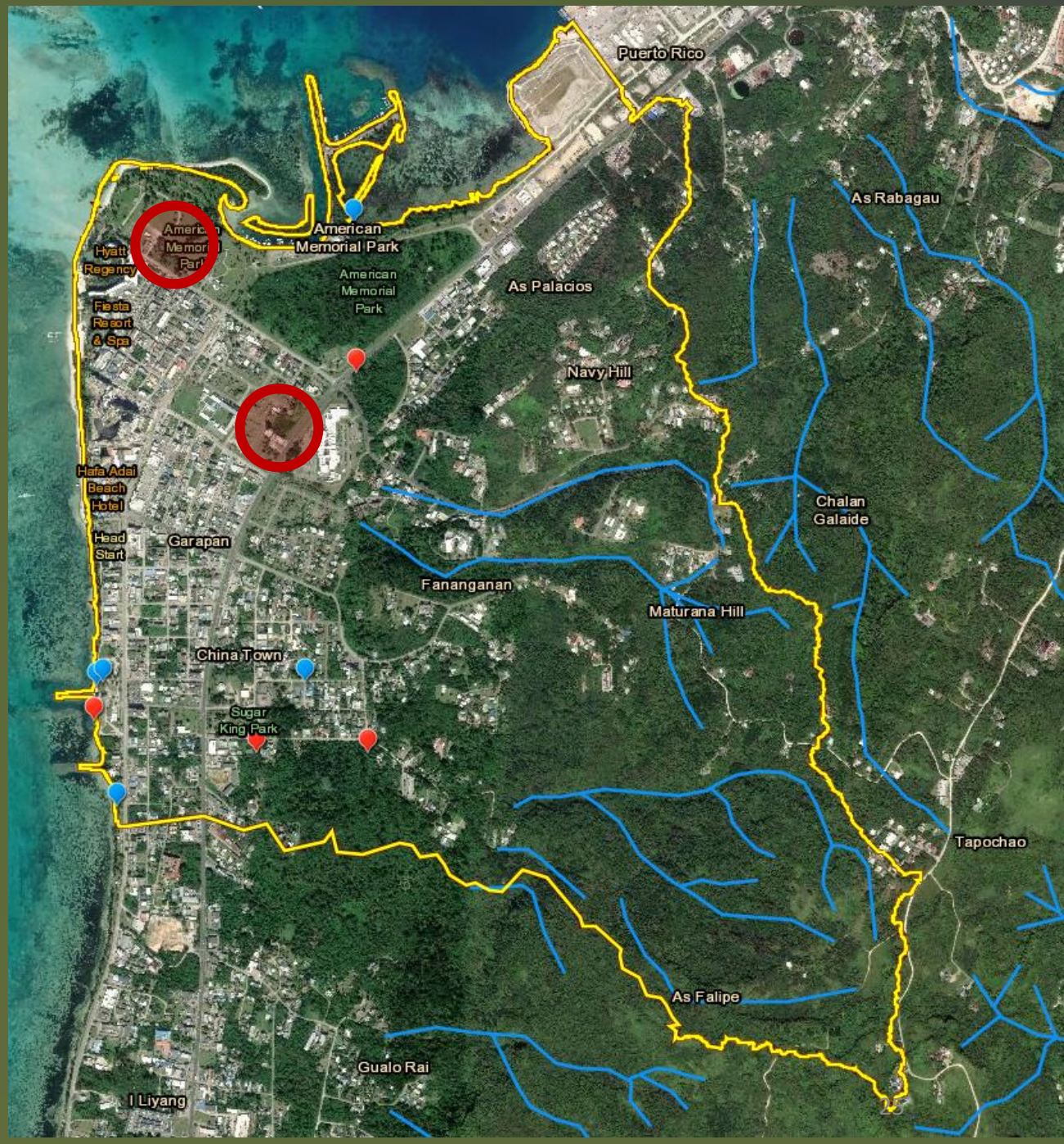


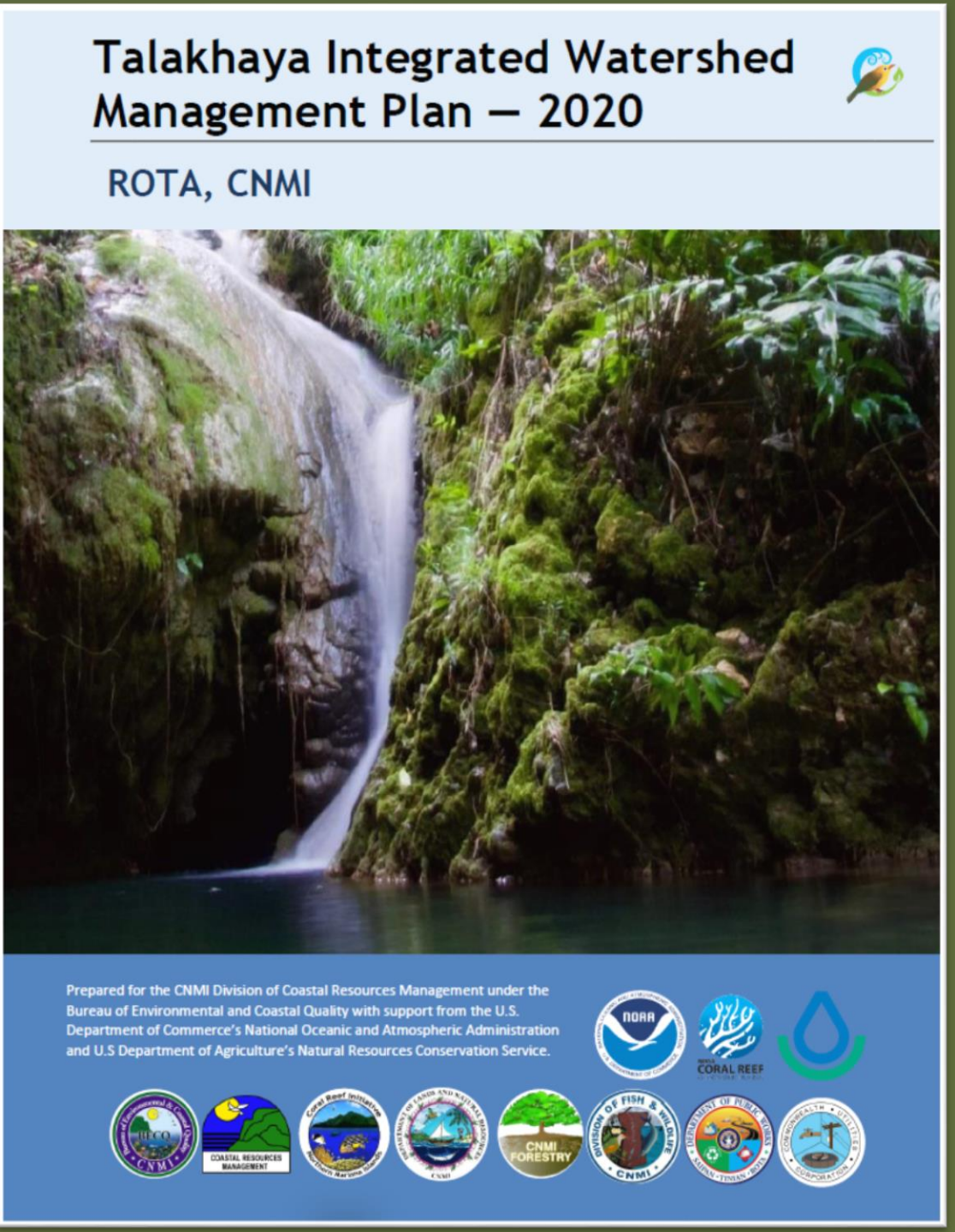


Upcoming Projects

Wetland Restoration

- ➢ MIHA and AMP wetlands
- Invasive vegetation removal (e.g. pond apple)
- Restore wildlife habitat (e.g. moorhen)
- Increase stormwater mitigation capacity
- Enhance aesthetic appeal





2020 CNMI Watershed Management Plans (WMP) Update — Talakhaya

Zak Williams
Watershed Coordinator
BECQ - DCRM - CRI
NOAA Coral Reef Conservation Program

Priority Watersheds

Watersheds identified as the central focus of the Coral Reef Initiative's land-based coral conservation efforts (ridge-to-reef).

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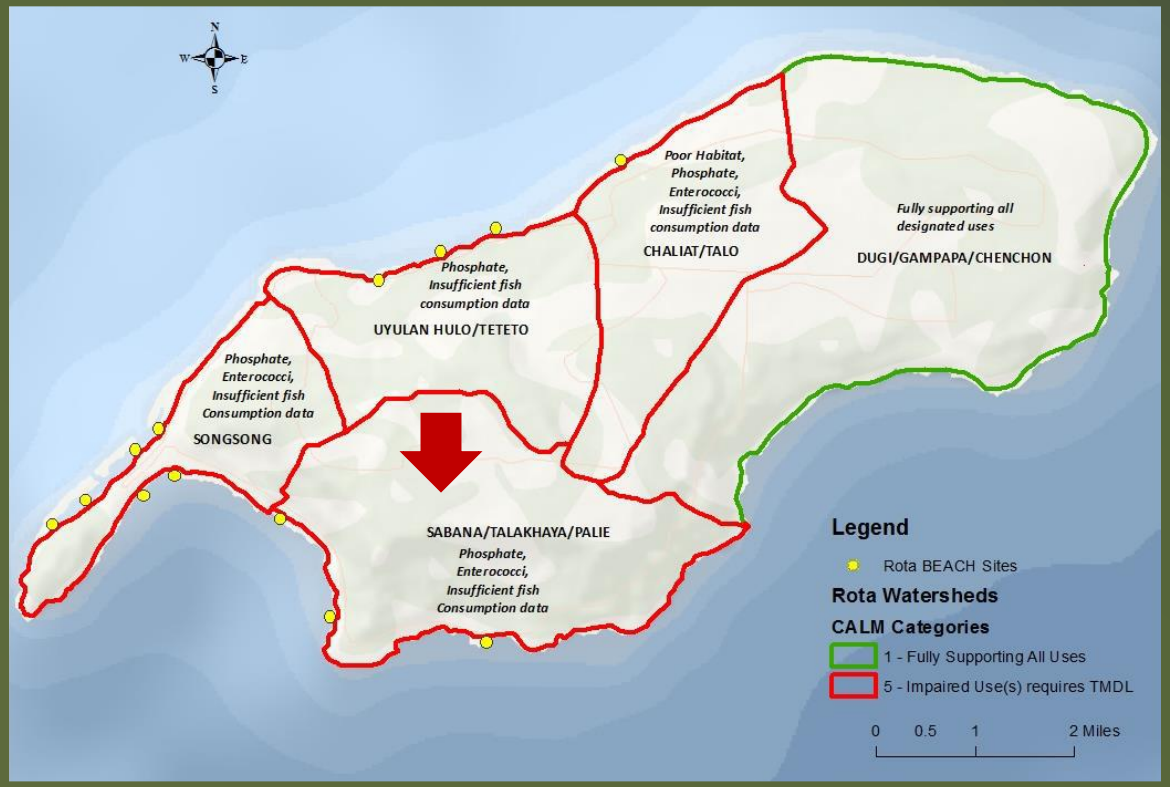


Four (4) priority watersheds identified in CNMI.

Three (3) on Saipan:

- Achugao (*new*)
- Garapan (West Takpochao)
- Laolao

One (1) on Rota:

- **Talakhaya**

Talakhaya Watershed Management History

Conservation Action Plan (CAP) written in 2012 (revised 2015).

CAP challenges: i) lack of key agency participation, ii) lack of progress monitoring, iii) lack of coordination (Watershed Coordinator turnover).

Notable CAP accomplishments:

- Talakhaya Revegetation Project
- Leveraged funding through grants that referenced CAP
- Talakhaya Watershed Soil Loss Assessment
- Infrastructure improvements (e.g. road repair)
- Field agents
  - Reduced fires and other illegal activities
- Outreach & Education Campaigns
  - e.g. "Real Hunters Don't Burn"

WMP Approach

5-year plan to address watershed impairments and their causes.

Watershed Management Planning (as compared to CAP) takes a more integrated approach more inclusive of human/infrastructure-based objectives.

➢Meeting A-i criteria

Updates initiated in 2018 collaboratively between BECQ-DCRM, CNMI National Coral Reef Management (Malcolm Johnson), and Rota agency and community stakeholders.

WMP informed by previous CAP, management and scientific literature, environmental monitoring data, and stakeholder (agency and community) meetings.

Watershed Boundary

Key Threats

Badlands Erosion

- Exposed soil at increased risk of erosion
- Related to ungulate populations (excess grazing on grasses and trees) and fires

Road Erosion

- Clogged culverts causing flooding over roads
- Lack of maintenance

Streambank Erosion

- Development encroaching on riparian buffers
- Large storm/typhoon events and subsequent flooding
- Shifts in stream courses

Turbidity

- Resulting sedimentation from upland erosion
- Reduced stream and near-shore water quality
- Sediment plumes onto reef flats

Key Threats

Ungulate Populations

- Deer and goats
- Overgrazing native vegetation
- Slowing revegetation efforts
- Invasive deer "protected" for hunting

Invasive Species

- Existing invasive species from historical introductions
- Potential introductions through port/marina/airport
- Spread of invasive species facilitated by disturbances (e.g. fires, storms, land-clearing)
- Lack of inspections and inadequate training of quarantine officers

Private Land Access

- Navigating land ownership
- Retuning conflict/tension between government agencies, conservationists, and land owners

Key Threats

Agricultural Practices

- Nutrient and pesticide runoff into streams
- No agricultural land-use monitoring
- Insufficient stream water quality monitoring
- Lack of trainings/incentives for more sustainable agricultural practices

Burning/"Wild" Fire

- Intentionally set fires to promote grazing habitat
- Slowing revegetation efforts
- Lack of information on fire dynamics to inform mitigation
- Lack of response plan
- Challenges accessing fires

Climate Change

- Exasperating above-mentioned threats
- Reduced rainfall
- Stronger storm events

"Protehi i rikesan i tano yan i tasi" – "Protect the wealth of our land and sea"

10-Year Goals

- Equitable distribution of watershed values.
- Dedication to restoration of the landscape.
- Increased knowledge of watershed systems.
- Reduction of erosion and sedimentation.
- Commitment to meet future water needs.
- Raised community awareness of watershed.
- Improved monitoring and evaluation of the watershed area.

Strategies, Objectives, & Actions

Strategy 1:

Improved land management and enforcement in cooperation with local agencies and landowners of both the Sabana Wildlife Conservation Area and Talakhaya Conservation Area.

- 1.1 Update and institutionalize conservation and resource maps for the entire Talakhaya watershed, including the Sabana Conservation Area, private land areas, and target sites for management activates.
- 1.2 Establish partnerships with private landowners in order to implement watershed-friendly best BMPS for both agriculture and grazing.
- 1.3 Develop watershed ecotourism opportunities that benefit private landowners, tour guides, governing agencies, tourists, and encourage watershed conservation.
- 1.4 Improve monitoring and enforcement of the watershed in order to reduce the human impacts of intentionally set fires, illegal poaching, and littering/dumping.

Strategy 2:

Continued support of Forestry revegetation efforts of badlands and expansion towards native reforestation.

- 2.1 Establish funding mechanisms for the revegetation project, continue annual summer planting activities, and improve upon existing revegetation procedures.
- 2.2 Develop intra-archipelago partnerships with watershed coordinators/managers/researchers on Saipan, Tinian, and Guam to promote knowledge exchange and establish archipelagic connectivity.
- 2.3 Improve remote sensing capabilities to improve reporting success of the revegetation project and better target sites for revegetation interventions.

Strategy 3:

Increased understanding of the geomorphology of the watershed to better inform strategic actions and ensure effective issue response.

- 3.1 Develop Talakhaya watershed map that highlights key geomorphological features.
- 3.2 Conduct a streambank erosion monitoring plan to identify potential intervention locations and better inform management goals.
- 3.3 Conduct research on historical and future changes to streamflow to better inform management activities.
- 3.4 Conduct Sediment trap project to establish the primary sources of erosion and develop potential intervention actions based on findings.

Strategy 4:

Enhanced stabilization of roads and culverts to reduce sedimentation and improve access of Talakhaya for both landowners and the revegetation project.

- 4.1 Identify culvert issues, determine funding sources, and replace existing culverts along the lower Talakhaya to limit blockage and sedimentation.
- 4.2 Analyze flow, erosion, and other data in both the lower (Back Road) and upper (Water Cave Road) sections to generate hydrological models to improve engineering and design of Talakhaya roadways.
- 4.3 Implement unpaved road standards throughout Talakhaya in cooperation with DPW, CUC, DLNR, and BECQ.

Strategy 5:

Bolstered collaboration with CUC and DPW to identify, monitor, and evaluate current and future water resources within the Talakhaya/Sabana watershed.

- 5.1 Establish a partnership between watershed managers and CUC in order to focus infrastructure projects on areas that benefit both residents and the watershed.
- 5.2 Develop right-of-way procedures between landowners and relevant watershed managing agencies to improve access and reduce conflict.
- 5.3 Conduct base flow study to determine average flow at sampling locations through the year, estimate effects of climate change on flow rates, and present recommendations for interventions.

Strategy 6:

Raised community awareness and educational outreach for both the planning process and the Talakhaya watershed more generally.

- 6.1 Conduct regular stakeholder meetings/workshops to provide a status update of implementation and gather information necessary to update Talakhaya WMP.
- 6.2 Develop education resources for local schools.
- 6.3 Develop a series of outreach campaigns to communicate the role of the WMP on Rota and inform the community of the importance of watershed management.

Strategy 7:

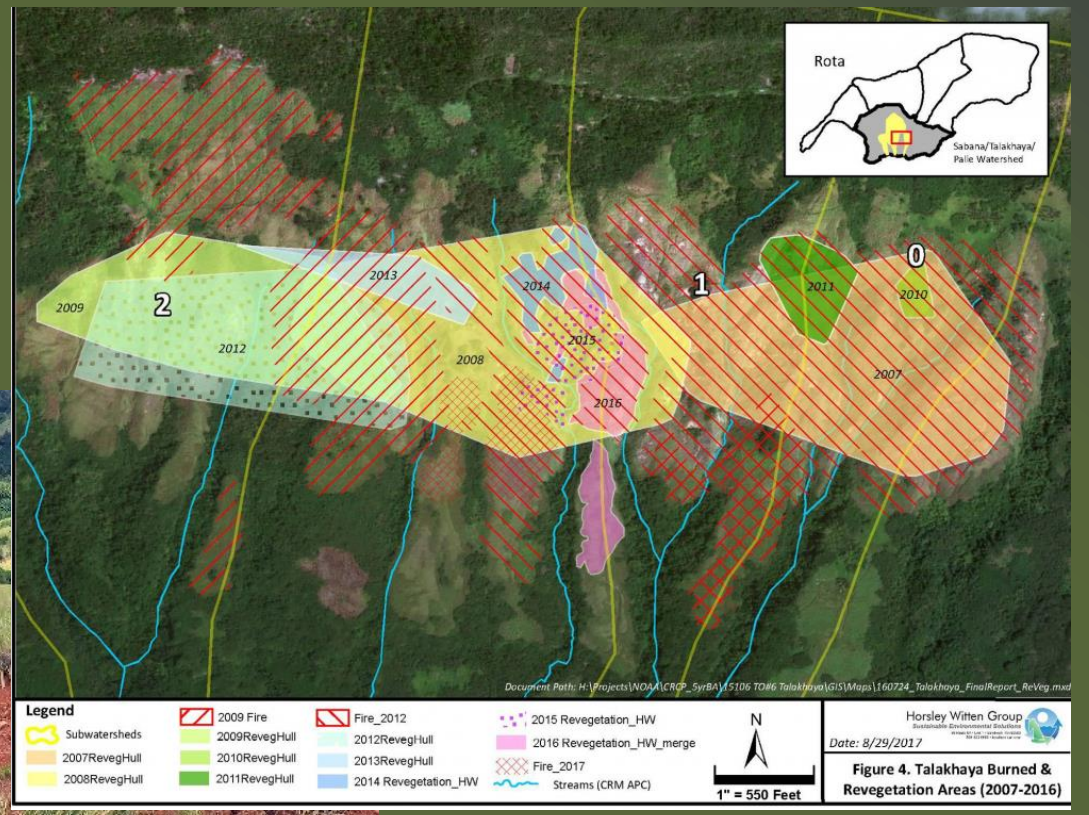
Improved monitoring of watershed processes through the development of unified monitoring plans and partnerships.

- 7.1 Hire a full-time Watershed Technician based on Rota to manage the implementation of the WMP, continue the monitoring efforts, and ensure iterative community participation in the management of the watershed.
- 7.2 Continue and improve upon current monitoring procedures to include in updated WMP and present analyzed data at stakeholder meetings.
- 7.3 Develop and finalize the remaining components of the WMP based on stakeholder feedback and implementation capabilities.

Current Projects

Revegetation Project

- Began in 2007 in order to restore upland forest cover and reduce downstream sedimentation
- Began as partnership between BECQ-DCRM (NOAA-funded) and DLRN Forestry, most recently funded by USDA Forestry
- Vetiver and bahia grasses for sediment stabilization, *Acacia* trees for nitrogen fixing
  - ➢ To be replaced with native forest species
- Challenges with site access, and sapling mortality (via fires and deer grazing)

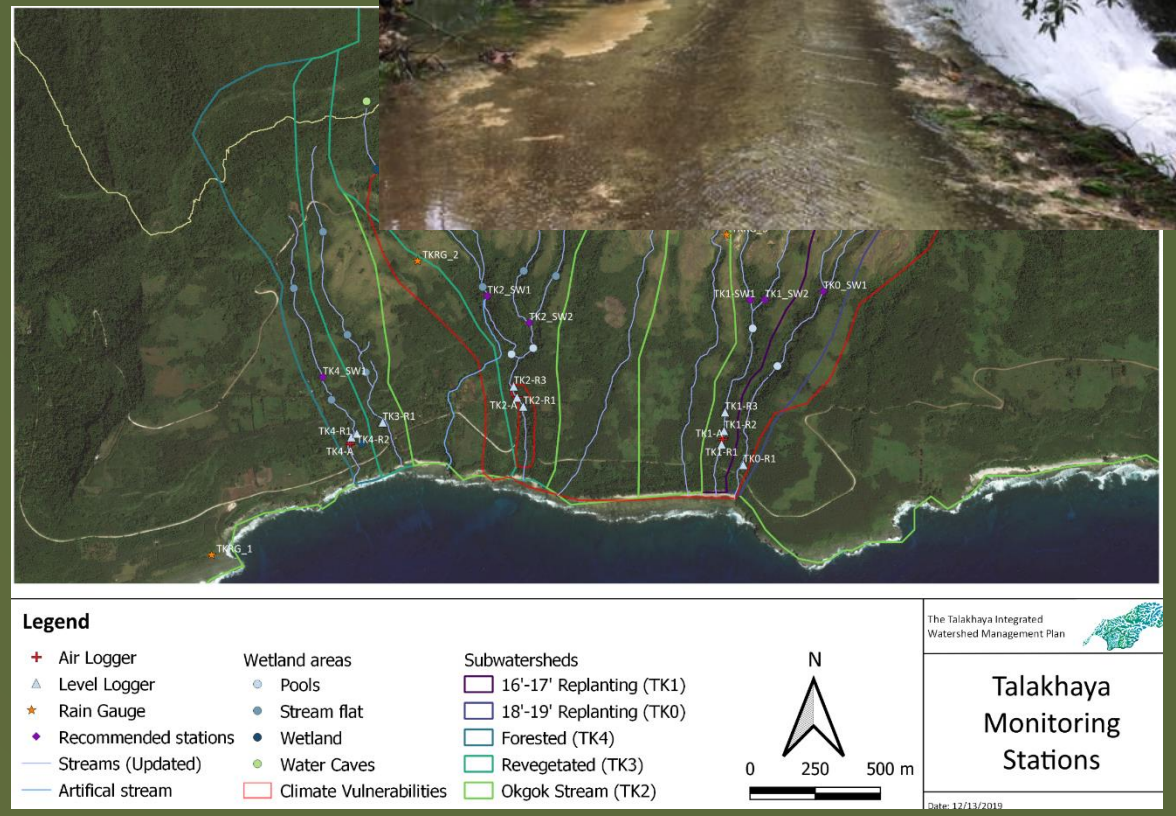


Potential Projects

Riparian Stabilization & Culvert Replacement

- Need to identify high erosion streams and specific streambank sites
  - ➢ Erosion pins – low-cost method to measure changes over time
- BMP implementation to mediate erosion
  - ➢ Ideally, extend and adapt revegetation efforts into riparian habitat

- Culverts clogged due to high debris input during extreme rain events
  - ➢ Causing flooding and channel alteration
- Need to clear and/or replace culverts to mitigate clogging
- Efforts by DPW and NRCS fell through in 2019



Next Steps

Following Public Law No. 20-20
"All master plans… prepared for public agencies shall be submitted to the [OPD] Director for processing as part of the comprehensive planning program."

1. Submitted to Council. (Sept. 30, 2020)
2. Awaiting scheduling for public review. (Tentatively Nov. 2020)
3. Shared with Governor, mayors, cooperating departments and agencies.
4. Comments acknowledged, addressed, and/or incorporated.
5. Council submitted for Governor approval, then Legislature for adoption.
6. Plan implemented!

Aiming to have Garapan and Talakhaya WMPs approved/adopted by early 2021.

Achugao and Laolao plans still in development… Stay tuned!

Roundtable

Updates, concerns, opportunities?

Annual University of Guam – Water & Environmental Research Institute (WERI) CNMI Water Advisory Council Meeting

- Tomorrow, Oct. 22, 2020 (9am-12pm). This year it will be online, and you may RSVP to Mark Lander (mlander@triton.uog.edu) and the WERI Director, John Jenson (jjenson@triton.uog.edu). Topics include

- WERI: Who we are and what we do (WERI Director)
- 1-stop searchable repository for quality climatic data for Saipan
- Stormwater studies for Saipan – Phase 1
- Engineering design considerations for West Pacific

Thank you!

Zachary B. Williams | Watershed Coordinator (BECQ-DCRM-CRI)
zwilliams@dcrm.gov.mp | (670) 664-8303