

The Stormwater Management Device Toolkit for Neighborhood Groups and Homeowner Associations in the Coral Bay Watershed, St. John, USVI



Harold's Way road, Lower Bordeaux Subwatershed during a 2017 rain event four days after Hurricane Maria



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Executive Summary

The Coral Bay Community Council (CBCC) proposes to develop and implement ‘The Stormwater Device Toolkit’, a management strategy from the [2021 Coral Bay Watershed Management Plan](#)¹ (WMP), previously funded by the Department of Interior – Bureau of Reclamation (DOI-BR), for use by voluntary neighborhood groups and homeowners associations to address the prevention of erosion and flooding issues in the Coral Bay watershed management area on St. John island in the US Virgin Islands, through better long-lasting written documentation and tools to encourage routine maintenance practices, for two years to be completed by December 2024. St. John is in a long drought period interspersed with extreme rainfall events, therefore stormwater issues and maintenance of stormwater drainage devices like culverts and best management practices (BMPs) is not top of mind, but is very important for preventing destructive flooding and erosion in the future on an ongoing basis.

These potential severe erosion and flooding issues can cause damage to the community’s infrastructure and roads and heavily impacting residents, especially those living in lower elevations where housing is more affordable for lower income earners. Muddy, excessive stormwater flows also impact shoreline businesses, visitors and Coral Bay’s diverse and sensitive marine ecosystem in its 5 square mile bay. This project emphasizes good stormwater management practices from “Ridge to Reef” and will also reduce potential negative impacts to the neighboring the federal Virgin Islands National Park lands and the waters of the Coral Reef National Monument which is partially in Coral Bay and impacted by any land-based pollution, including that from improperly functioning stormwater devices.

Since the hurricanes of 2017, it has been observed that with natural changeovers of residents, the location of culverts, other stormwater structures, and best management practices (BMPs) established from 2010 to 2012 along many of the private roadways are now forgotten. Routine maintenance may not be carried out, if current residents are unaware of their existence and maintenance needs for safety in rainstorms.

Because this infrastructure and BMPs have been collectively forgotten in some neighborhoods, a solution has been proposed with this project. To ensure this valuable information on where the devices are and how to maintain them is understood by the residents who have the responsibility complete this maintenance (whether they know it or not), Coral Bay Community Council, (CBCC) is partnering with Watershed Consulting Associates, LLC (WCA) to develop permanent ways to share this information and to assist neighborhoods in identifying, maintaining, and improving stormwater devices along their roads and in their neighborhood.

¹<https://coralbaycommunitycouncil.sharepoint.com/Shared%20Documents/PUBLIC/WMP%20Plan%202021%20report%20links/WMP%20Plan%20Documents%202021/Coral%20Bay%202021%20Watershed%20Management%20Plan%209%2029%2021b.pdf?CT=1648738794153&OR=ItemsView>

Background

Most of the network of roads in our watershed are privately owned and privately maintained by homeowners without the benefit of consistent legal obligations within deeds or local laws, or formal homeowners associations (HOAs). Therefore, over the last 19 years our nonprofit watershed management agency, the, CBCC has been extremely useful in this remote community on the far side of the National Park on St. John in providing guidance, encouragement and a conduit for government grant-funded projects to improve stormwater drainage and ground water recharge mainly to reduce the negative impacts of erosion on property and to protect ocean environmental resources.

St. John is one of three main Caribbean islands that make up the US Virgin Islands (USVI) archipelago. While more than half of the island is part of the Virgin Islands National Park and is therefore protected from development, rapid growth in other parts of the island throughout the 1990s caused extreme environmental pressures while the population increase outpaced government capacity to provide adequate public services and infrastructure improvements. From 1990-2000, the Coral Bay Watershed (on the island's east side) experienced close to 80% growth, making it the fastest growing area in the USVI. The construction boom lacked adequate regulations to govern appropriate road standards, stormwater runoff controls, slope stabilization needs, natural resource protection, or solid waste management. As a result, the torrential rains that are a common part of the island's climate readily wash out roads and carry excess surface runoff from hillside developments. Now with climate change, rainfall patterns have shifted to being more unpredictable and more extreme -- with longer periods of drought interrupted by more intense rainfall events.

Fresh water resources are limited on St. John. The few active groundwater wells coupled with residential rainwater harvesting on the island are insufficient to meet all domestic and commercial needs year-round. Agriculture is very limited due to the challenging topography and soils coupled with limited freshwater availability. Potable water is piped to the west side of St. John from neighboring St. Thomas Island where reverse osmosis is used for desalination by the public utility. None of this water reaches Coral Bay unless it is trucked over the 8 miles of hills by a fleet of private trucks. Rainwater captured from roofs in cisterns is the most commonly-used source for washing, cooking, and gardening purposes, and the majority of homes have purification systems to bring cistern-stored water to EPA drinking water standards; others used bottled water (Coldren 2015).

As there is high resident turnover from residents aging out, and the passage of time, as well as the impacts of the 2017 hurricanes and COVID pandemic, our staff has found that the history and experience of stormwater device maintenance needs may have been lost or forgotten in many of the more than fifteen private neighborhoods that have access road and stormwater maintenance responsibilities. Even along secondary public roads, experience has shown very limited maintenance will be done by the local government, and residents need to provide their own maintenance and improvements to ensure access to their homes. Previous stormwater device construction work and the necessary maintenance practices have a tendency to be forgotten over time. This leads to improperly functioning stormwater drainage devices such as

clogged culverts and drainage ways. Their failure usually means that water runs along the roads rather than being directed by the culverts or other devices into natural flow paths (the ghuts) allowing percolation to recharge the groundwater table. When these devices cannot function due lack of maintenance, stormwater high in the watershed flows past them and continues along the roads causing flooding and erosion issues downstream in the lower portions of the watershed.

Project Location

The island of St. John is in the USVI Caribbean archipelago (18.3480° N -64.7132° W) and is part of the United States Geological Survey (USGS) Hydrologic Unit Codes (HUC) 21020001. More than half of the island of St. John is protected in the 7,000+-acre Virgin Islands National Park. An additional 12,000+ acres of protected underwater Coral Reef National Monument adds to the park within the waters of Coral Bay. The Coral Bay watershed management area comprises of three watersheds – Coral Bay, Lameshur Bay, and Mennebeck Bay and the Coral Bay Waters and totals 3,000 acres of land on the east side of St. John (Figure 1).

Roughly 50% of the approximately 800 housing structures in the Coral Bay watershed are vacation rental properties, serving as the backbone of the local tourist economy. St. John is a well-known vacation destination sought after for its beaches, fishing, boating, camping, and water sports. It also contains important environmental features, including forests, salt ponds, beaches, mangroves, seagrass beds, algal plains, and unique coral reef systems.

The island is very steep – with slopes averaging 30 percent across the island – making it sensitive to erosional forces. Housing development on these steep slopes exacerbates the mobility of sediment from the hillsides into the Bay – causing sediment loading and deleterious impacts to coral ecosystems. The risk of downstream flooding is also high.

These watersheds have steep slopes (Figure 2) and limited, rural residential development with a year-round population of around 1,000 and a seasonal (December through May) increase in population as winter residents and tourists arrive in the area. The population is estimated to triple to over 3,000 in the main tourism season and be over 2,000 with visitors during the rest of the year.

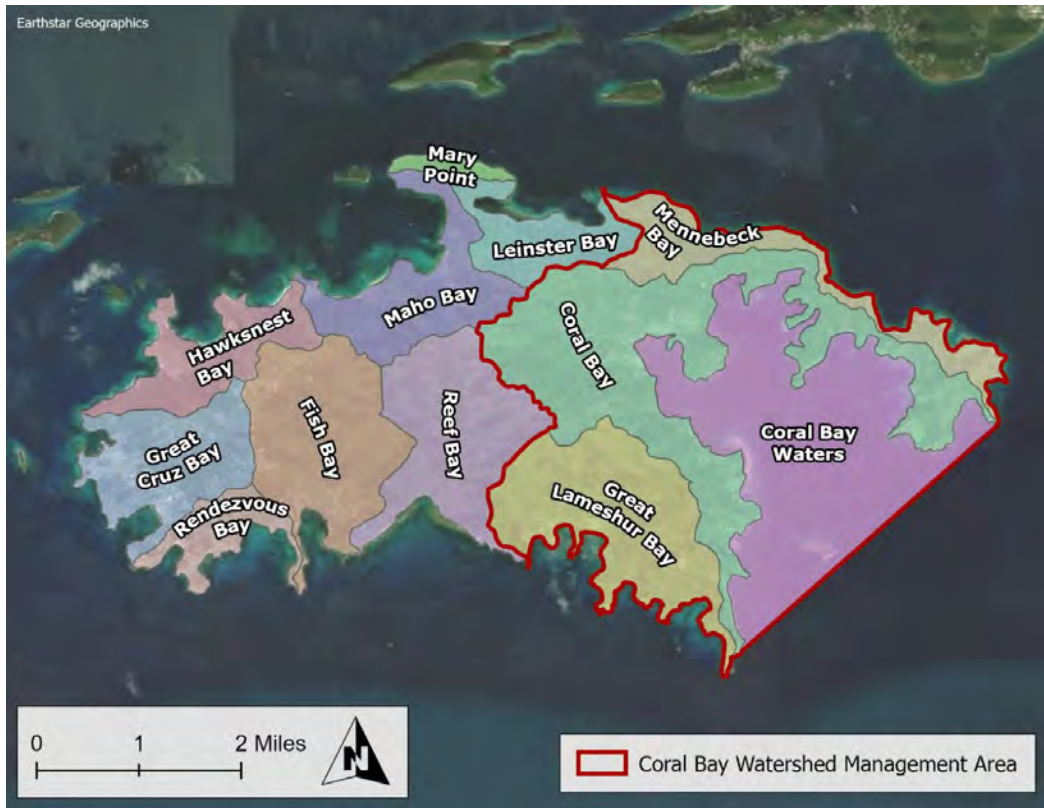


Figure 1. Map of St. John watersheds and the Coral Bay Watershed Management Area (outlined in red).

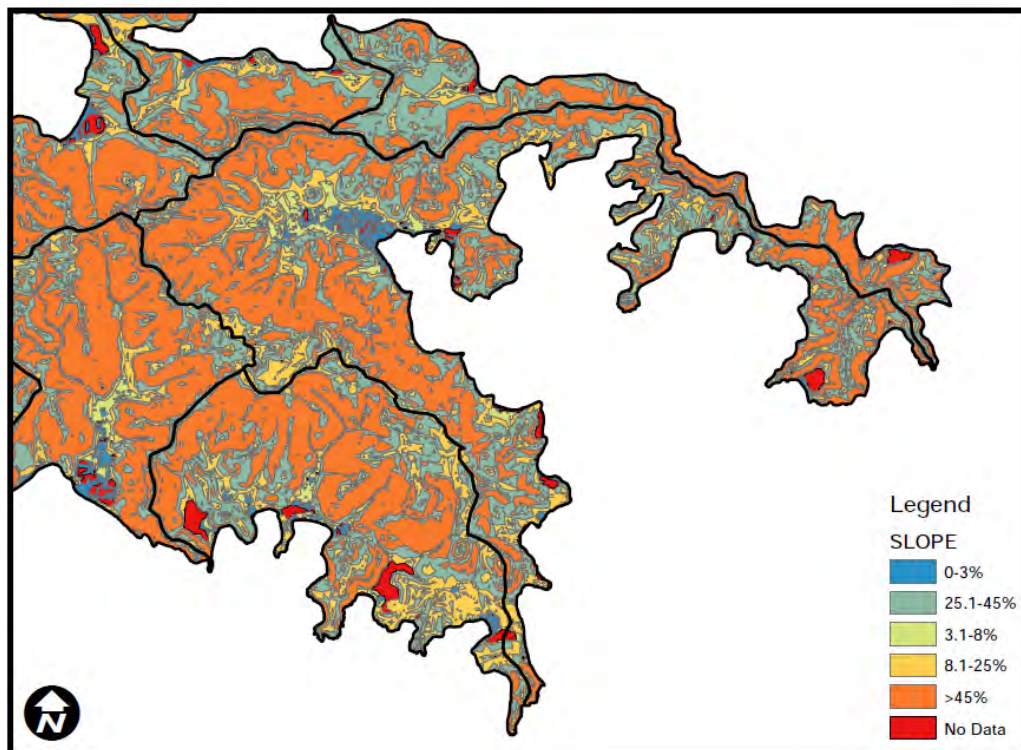


Figure 2: Slope conditions in the Coral Bay management area on St. John.

Technical Project Description

The Coral Bay Community Council (CBCC) is a local 501(c)(3) nonprofit organization and existing watershed group, established in 2003 by a group of volunteer residents with the purpose of acting as a watershed management association that seeks to address threats to water quality in the Bay and the subwatersheds that contribute to it. Tackling solid waste and wastewater disposal, potable water resources, sedimentation and erosion, wetland restoration, and roadside vegetation, the CBCC takes a comprehensive “Ridge to Reef” approach to watershed management as shown in Figure 3.

Over the past 19 years, the organization has built partnerships across sectors and with diverse stakeholder groups. With funding from federal agencies including: the Department of Interior – Bureau of Reclamation (DOI-BR), the National Oceanographic and Atmospheric Administration (NOAA), the Environmental Protection Agency (EPA), and the National Fish and Wildlife Foundation (NFWF), the Virgin Islands Department of Planning and Natural Resources (DPNR), CBCC has been involved in creating three watershed management plans, the first in 2008 (Center for Watershed Protection 2008), a follow-up plan in 2014 with a focus on marine debris and sediment loading in the EPA nine elements format, and the major 2021 update of the plan. The 2021 plan update was completed with the technical guidance and in partnership with the WCA, in the wake of two back-to-back hurricanes (Irma & Maria) that hit the island in 2017, causing severe damage. The [2021 Coral Bay Watershed Management Plan](#)² (WMP) and the accompanying [Community Handbook](#)³ was based on the community’s vision for a resilient future with stakeholder input (business leaders, residents, local government, and the scientific community) and their four main concerns to address pollution caused by sediment, bacteria and other contaminants from such as solid waste and wastewater sources and drinking water supplies, and the critical need for community facilities including roads. This work was funded by under a DOI-BR WaterSMART Cooperative Watershed Management Program Phase I grant of \$99,000 and a DPNR-Coastal Zone Management (CZM) grant of \$18,000, coupled with \$30,000 of CBCC funds from the 400+ members of CBCC through their dues and donations, and over \$100,000 in volunteer professional time from WCA. Building relationships with the community, local business, government agencies and professional and developing the updated plan was completed over a two-year period (2019-2021) during hurricane recovery phase and the COVID pandemic. This stormwater management device Toolkit project is an important next step in actionable watershed management activities outlined in the 2021 Coral WMP.

Numerous on-the-ground projects have resulted from these plans including restoration activities, erosion control projects, drinking water supply, wastewater treatment, and solid waste management improvements, marine debris clean up, and outreach and education to

²<https://coralbaycommunitycouncil.sharepoint.com/Shared%20Documents/PUBLIC/WMP%20Plan%202021%20report%20links/WMP%20Plan%20Documents%202021/Coral%20Bay%202021%20Watershed%20Management%20Plan%209%2029%2021b.pdf?CT=1648738794153&OR=ItemsView>

³<https://coralbaycommunitycouncil.sharepoint.com/Shared%20Documents/PUBLIC/WMP%20Plan%202021%20report%20links/WMP%20Plan%20Documents%202021/Community%20Handbook%20for%20the%202021%20Coral%20Bay%20Watershed%20Management%20Plan%2011%2019%20%2021published.pdf?CT=1648738798366&OR=ItemsView>

homeowners and contractors on responsible slope stabilization – in all more than \$3 million in projects led by CBCC. Further, in 2022, CBCC received funding via the US Federal Emergency Management Agency (FEMA) Hazard Mitigation Grant Program (HMGP) to contract for an H&H study of the core parts of the watershed to guide future development and road and stormwater managements projects by government and private landowners.

The role of CBCC’s board of volunteers and our volunteer president and staff – a group of ordinary folks working together to addressing concerns and issues - is to forge real solutions that change actual practices and actions through collaboration and partnerships that accomplish:

- Planning activities and written plans,
- Education and outreach and technical expertise available to community residents, contractors, landscapers, property owners and potential developers,
- Implementation of Best Management Practices (BMPs)
- Infrastructure improvements and repairs
- Cleanup hurricane and other debris harming the environment, and
- Community participation and volunteerism in a variety of grassroots, culturally and environmentally sensitive programs for children and adults
- Advocacy and “watchdogging” for good development and land and water use practices that follow environmental laws and regulation.



Figure 3. Elements and activities of the Ridge to Reef watershed management approach. This conceptual diagram also depicts water increasing in volume, strength, and velocity as it flows downstream/downhill and the

importance of a “Ridge to Reef” watershed management approach to reduce the impacts to the land and waters below.

CBCC goals in this proposed project are to:

- 1) make the management strategies developed in the 2021 Coral Bay WMP actionable to reduce stormwater and flooding impacts from “Ridge to Reef” and increase groundwater recharge;
- 2) support and encourage residents who are collectively responsible for maintaining their access roads and managing stormwater drainage to form and utilize formal and informal road maintenance groups or HOAs to pool the costs and responsibilities;
- 3) educate residents about proper stormwater device management and options;
- 4) provide useful tools that are sustainable over time as residents age or properties are sold to new owners -- to ensure that valuable historical information is not lost;
- 5) prepare residents for the more unpredictable and extreme drought/rainfall events caused by local climate change; and
- 6) assist neighborhood groups and HOAs to be aligned for larger sources of funding, such as the FEMA’s HMGP, by having up-to-date, adequate and easily accessible road improvement and maintenance records.

Under the *Task B – Watershed Restoration Planning*, CBCC will develop a toolkit for voluntary neighborhood groups HOAs, and residents (including formal or informal HOAs) that will provide:

- Easy-to-read stormwater maps illustrating the locations of culverts and other important stormwater infrastructure, both on paper and online.
- Information about installation and maintenance records.
- Guidance on actions and timeframes for maintenance and visual checks.
- How to get support to address new concerns.
- Ability to share photos and updates.
- Archive of past permit, plans, costs, etc. – to FEMA HMGP and other grant program requirements
- Help figure how to do it on the ground, with the absence of clear deed language or common law/regulations -- for sharing and covering access road and long-term stormwater maintenance costs.
- Help identify ways to have easier permitting processes to conduct work in a timely and constant manner

To ensure its user-friendliness, easy access and resiliency, the toolkit will be available in both physical (paper) binders for each subwatershed, HOA, or neighborhood group and on-line through an application tool that can be used both on CBCC’s website and on individuals’ phones.

Additional objectives for this project include:

- 1) build upon past [successful stormwater management projects](#)⁴ with the volunteer neighborhood groups and HOAs
- 2) provide clarity and practical solutions to confusing local permitting requirements for private road maintenance as it has become more cumbersome;
- 3) develop an inspection and maintenance program for existing stormwater structures across the watershed; and
- 4) review and redistribute all previous sediment reduction materials and advice.

Criterion A – Watershed Group Diversity and Geographic Scope

Historically, CBCC has sought to develop a consensus about common issues of concern among the diverse small community – especially focused on securing quality government services within the larger Coral Bay watershed (Figure 1). It is an active volunteer-led organization, with several employees, involved in community planning, advocacy, and environmental restoration. The group engages directly with affected stakeholders through public meetings, hosting a website and e-newsletter focused on environmental issues on the island, demonstrating good stewardship through on-the-ground projects, and providing workshop and training opportunities for property owners, renters, businesses, contractors, and local government agency staff on St. John. The organization’s approach has identified the most pressing problems through watershed management planning efforts as well as seeking input from the government agencies who manage the island and the residents and visitors who use the island’s resources.

In addition to working with the territorial DPNR, and Department of Public Works (DPW), CBCC has sought and received the assistance of federal agencies, including the National Oceanic and Atmospheric Administration (NOAA) and the United States Environmental Protection Agency (USEPA), the US Department of Agriculture (USDA) and the US Department of Agriculture (USDA) and FEMA). Funding from these Agencies has allowed CBCC to begin making progress to address the most pressing environmental concerns on the island. Taking action to address these issues, CBCC has implemented projects to reduce sediment loading, erosion and flooding impacts, created a landscaping guide for erosion control, and led a community process to determine improved solid waste disposal and drinking water and wastewater treatment options that avoid water quality conflicts, create a solid waste, drinking water and wastewater management plans and most recently, the updating of the Coral Bay watershed management plan in 2021 described above (funded through this WaterSMART grant program and partially funded by DPNR).

CBCC seeks to provide accessible information to stakeholders in the watershed. In 2013, CBCC hosted a community visioning effort led by the American Institute of Architects in Coral Bay. Participants included local politicians, leaders in regional government, developers, public school representatives, and full- and part-time residents. The resulting document proposed a future vision for the watershed – as suggested by the experts leading the public meetings. [Visioning](#)

⁴ <https://coralbaycommunitycouncil.org/stormwater-management/stormwater-management-hurricane-recovery/neighborhood-stormwater-management-projects/>

[activities](https://coralbaycommunitycouncil.org/coral-bay-vision-for-our-future/)⁵ continued from 2019 to 2021 as the starting point for discussion and basis for the 2021 Coral Bay WMP. The community's vision remained relatively unchanged and concluded that Coral Bay should work to provide a healthy environment for all. To do this, the 2021 WMP focuses on key threats identified by the community: pollution caused by sediment, bacteria and other contaminants from such as solid waste and wastewater sources and drinking water supplies, and the critical need for community facilities including roads, to replace and upgrade those lost in the 2017 hurricanes, while reducing pollution potential. The Stormwater Device Toolkit was developed as an action solution to address the need for better maintenance to accomplish the community's vision in and improving transportation access and water resources and quality and reducing and flooding impacts. As this network of rural roads is privately maintained with little government attention, the work of our nonprofit is even more critical.

Building partnerships and active participation of the community, government agencies and stakeholders is imperative to the success of all watershed projects, which takes substantial time to foster and sustain. As such, it is the first step in EPA's watershed planning guidance, and will be continued throughout this project. With the active involvement (local knowledge, time, and funds) and best practices of the community residents, property owners, and businesses and the support and authority of the territorial and federal government agencies, this proposed watershed management strategy, the Stormwater Device Toolkit becomes actionable. Letters of support for this project from DPNR, project partners, WCA and existing neighbor groups and HOAs are attached.

As the acknowledged watershed management agency for Coral Bay, CBCC is responsible for continuing the facilitation and implementation of the 2021 watershed plan with cooperation and support from many partners and stakeholders. CBCC is supported by the dues and donations of 400+ residents and property owners and applies for competitive government and foundation grants to accomplish this leadership and watershed work. All of CBCC's work and outreach is structured inclusively to reach all parts of this small community. Further, education, outreach, and research are shared beyond the watershed through the cooperating partners below, and meetings and the internet, so that the whole USVI can benefit from the proven best management practices, strategies, scientific research, and lessons learned.

CBCC has continued to encourage collaboration and provide connectivity among local and federal agencies professionals and other stakeholders by hosting 1-hour quarterly conference calls established during the 2021 Coral Bay WMP planning project. CBCC also continues to participate in the territory-wide planning activities, research projects, monitoring programs and informational and training workshops and conferences.

As COVID-19 restrictions have lessened, CBCC has moved out into the community with in-person workshops and events to reconnect the community. This project is an opportunity to further promote community collaboration by connecting new and existing residents with a common goal and to create pathways to government services.

During the 2021 Coral Bay WMP planning process CBCC with the help of WCA built relationships with a diverse array of stakeholders that included the local community and

⁵ <https://coralbaycommunitycouncil.org/coral-bay-vision-for-our-future/>

businesses, professionals, local and federal government agencies, various task forces, committees and working groups, universities, local and national Nongovernmental Organizational (NGOs) and local churches with facilities in Coral Bay, and local schools. The full list of partners is on page 35 to 38 in the 2021 Coral Bay WMP.

Coral Bay watershed represents a critical gateway to the Virgin Islands National Park covering the island's midsection. Development pressure is most acute on the eastern side on the steep slopes with the best views, and with slopes averaging 20% (with many over 35%), the Coral Bay watershed is potentially inundated with sediment from improperly managed construction sites, poorly-planned developments, and dirt road networks installed with little attention to long-term stability. CBCC expanded the management focus in our 2014 Watershed Management Plan to include the subwatersheds of Mennebeck and Lameshur Bays in recognition of the need for inclusive management planning of all the land to the east of the National Park (Figure 1). This proposed project will be active in the whole area as existing and new roads have diverted water into adjacent subwatersheds and the vertical and high-velocity down-hill flooding impacts all residents and visitors alike in the valleys and along shoreline below. Therefore, this project includes the entire extent of the land facing development impacts in this practical management area – east of the National Park.

Criterion B – Addressing Critical Watershed Needs

In 2007, DPNR added Coral Bay harbor to the 303(d) impaired waters list due to elevated turbidity – an official recognition of the severity of one pollution challenge the CBCC is aiming to address. Early colonial development cleared almost 90% of the island's vegetation to establish sugar cane production. While much of the deforested land has since been revegetated and about 3/4 of the island is protected as part of the National Park, stormwater runoff causing flooding issue and sediment transport to the Bay is the leading environmental concern in the watershed. The island's steep slopes and highly erodible soils make it sensitive to erosion during rainfall. Climatic conditions influence unpredictable long periods of drought (making the establishment of roadside vegetation challenging) followed by brief but intense rain events delivering huge volumes of water to the island, saturating soils, and transporting sediment plumes and wastewater contaminants into the Bay (Figure 4), thereby by-passing natural flow pathways and not recharging the groundwater. At this time, the Virgin Islands is in a 10-year drought phase. Without consistent rainfall events, stormwater impacts and flooding are not an immediate concern or unknown by many residents. Therefore, preventive maintenance, even if known, is not being completed on critical stormwater device before there is a major problem.

Poor management of development and a large percentage of dirt roads exacerbates the challenge. Hurricane threats and realities increase the planning and resiliency challenge. The Virgin Islands is experiencing more extreme and longer drought conditions and more unpredictable and heavier storm events due to local climate change causing intense flooding and stormwater damage to the public and private facilities, infrastructure, roads and ecosystems. Properly designed, installed and maintained stormwater drainage devices are critical in diverting stormwater back into the natural pathways and slowing its velocity so it has time to percolate and recharge the groundwater.

The need for continuing and expanding education on stormwater management devices stewardship is high as many new property owners are from other geographic areas and they come with little understanding about steep slope issues and maintaining their own water and wastewater systems in this remote watershed nor have the understanding that is their responsibility. Repairing and rebuilding hurricane-damaged structures has its own challenges too, especially in a location where skilled contractors and materials are not always readily available.

Historically, stormwater device locations and information were shared by word of mouth among a group (some more formal than others) of long-term residents who voluntarily conducted the maintenance and improvements. Due the “aging out” of residents, 2017 hurricanes and recently the COVID pandemic and the social distance practices, Coral Bay has experienced a high turnover of residents. New residents, due to COVID, have yet to make meaningful connections and have no knowledge of existing stormwater devices, in part due to the ongoing drought.

Permitting for maintenance and repairs has become a more difficult process for ordinary residents in the last seven years for a number of reasons, mostly not related to design. Political and ownership issues for roads remain unchanged since the 2014 review and permitting for private road maintenance has become more cumbersome. Seeking some solutions for these paperwork issues is necessary to have maintenance and repairs done under permits, rather than without required permits.

The CBCC is working consistently to address these threats. This project need identified in the 2021 Coral Bay WMP is to make information about necessary actions permanently available to the residents with responsibility and encourage group private expenditures and volunteer maintenance for critical stormwater drainage devices.



Figure 4: Photos of sediment-laden runoff entering the Bay and threatening water quality, habitat, and recreational use.

Additional environmental and flooding threats include uncontrolled development, damage from feral goats, donkeys, and pigs and invasive plant species (Reed 2015). Nine terrestrial wildlife species on the island are federally designated as threatened or endangered. Marine studies reveal the presence of 30 distinct coral species and 194 species of fish. The Bay and its surrounding waters host humpback whales, sea turtles, manatees, and dolphins and the federally endangered or threatened leatherback turtle, hawksbill, green turtle, and loggerhead turtle. High quality habitat for nesting and foraging is critical to provide much needed spaces for these species.

In 2017, two back-to-back hurricanes hit the island, causing damage to restoration sites and further highlighting the need to manage erosional forces on the island's steep slopes. Additional concerns regarding freshwater availability and road access influence development decisions as current water supply is limited and is surpassed by demand.

CBCC will work closely with residents to continue collaboration among existing neighborhood groups and residents (including formal or informal HOAs) and work to create new groups in critical areas based on findings from the 2021 Coral Bay WMP, the 2022 H&H Study and the community input. As each neighborhood group will be at different stages for developing their custom group binders, CBCC and WCA will evaluate the first 2 to 3 developed binders, the

mobile tracking application and outreach materials at the end of year 1 of the project period as mid-point milestone to ensure project deliverables and solutions are meeting the groups needs and are sustainable.

CBCC and WCA will also be working with DPNR & DPW to ensure that recommendations and permit processes are followed and to help identify more efficient ways to ensure continuous road maintenance activities in coordination with DPW and promoting best management practices.

Criterion C—Implementation and Results

Project Implementation

The project team includes CBCC's staff and volunteer president (resumes attached) and subrecipient, [Watershed Consulting Associates, LLC \(WCA\)](#)⁶. WCA is a Vermont-based environmental consulting firm consisting of a team of hydrologists, water quality scientists, and engineers with demonstrated experience in watershed investigation, green stormwater retrofit evaluations, site design, advanced hydrologic & hydraulic / water quality modeling, permitting, and GIS mapping & analysis. WCA has a proven track record of delivering complex, data intensive environmental management planning analyses that provide a targeted approach to solving water quality problems. They are known for out of the box solutions with a particular expertise in erosion and stormwater-related challenges. With additional expertise in delivering training program and measuring learning and environmental action outcomes, the WCA project team has the range of skills most applicable for the development of a management plan with a community engagement element. WCA worked with CBCC in 2017 to produce the island's first slope stabilization and erosion control manual, the [Landscaping for Erosion Control Manual for Residents](#)⁷ with funding from the NOAA Coral Reef Conservation Program and invested in and completed the 2021 Coral WMP. More recently, WCA is completing USVI DPNR's [eight other watershed management plans](#)⁸ for St. Thomas and St. Croix and was selected as the contractor to conduct CBCC's 2022 H&H Study. As a result, the Watershed team has developed relationships with the Coral Bay and Virgin Islands community, government agencies and local stakeholders; is familiar with conditions in Coral Bay; and equipped to deliver a scientifically and technically rigorous product that is simultaneously locally relevant.

The project team expects to complete the Stormwater Device Toolkit over 2 years, as creating and building relationships among the residents in the neighborhood groups and HOAs takes significant time, especially as rainfall events are unpredictable and stormwater issues and interest arise during times of heavy rainfall events. Over this timeframe, the project team will be able to widen participation and adjust messaging and methods to broaden impact.

⁶ <https://watershedca.com/>

⁷ <https://onedrive.live.com/?authkey=%21AC85qF8iiv5DrCl&cid=9F78A94DCD9236CE&id=9F78A94DCD9236CE%2181032&parId=9F78A94DCD9236CE%2114684&o=OneUp>

⁸ <https://watershedvt.maps.arcgis.com/apps/MapSeries/index.html?appid=bc4e3799113d476ea23795fe4e2239b1>

Project Tasks

The following Table 1 indicates when each task item will take place and the associated cost estimates for each.

Task 1 - Neighborhood Group / HOA Background Research & Development

This task is to develop and re-initiate groups, identify residents, interested group participants and leaders, prioritize areas and boundaries and collect data and information. CBCC will work with 5 to 10 new or existing groups to determine their needs, obtain necessary information, and identify feasible and actionable best water-saving practices and storm device improvements and maintenance. Additional meetings with local and federal government agencies and other watershed partners will be held to continue relationships and identify permitting and stormwater device maintenance solutions not only for Coral Bay, but territory-wide. This task also is to establish project goals and detail task approach, data collection and storage and communication with the subrecipient, WCA.

Subtask 1.1 - Project Kick-off Meeting

A kickoff meeting will be held with CBCC and WCA within the first month of the project to 1) discuss the project tasks, timeline, and deliverables; 2) determine data collection and management plan; 3) identify candidate neighborhood groups / HOAs (both existing and newly formed) to target for outreach; and 4) to identify foreseeable barriers and solutions.

The mapped infrastructure data collected during the 2021 H&H Study will be reviewed to help prioritize project interaction with neighborhood groups and HOAs with critical infrastructure that could cause major impacts if lack of maintenance causes devices to become clogged, as well as neighborhoods with higher concentrations of infrastructure and existing BMPs.

Deliverable(s): Meeting minutes

Subtask 1.2 - Neighborhood Groups, HOAs and Residents & Stakeholder Meetings

Throughout the entire project, CBCC will work with WCA to host meetings with stakeholders from candidate neighborhoods, both existing and potential new or informal neighborhood groups, HOAs and residents to determine participation, leadership, and needs as well as obtain historical information/records and current infrastructure knowledge. CBCC will also work with the 5 to 10 groups to determine the best methods to keeping records current, identify improvements and encourage maintenance. Additional meetings with government agencies and stakeholders may include:

- Government officials & NGOs to discuss and learn about permitting options for long term maintenance
- Government officials to take into account FEMA requirements, DPW, DPNR, and NPS needs.
- Contractors for services, cost estimation, recommendations, and future services
- Other watershed stakeholders – homeowners & business owners

Virtual meetings, telephone calls, in-person meetings, and site visits will occur throughout the project and beyond to encourage continuous collaboration and participation. Meeting platforms and schedules for each group will be identified and tried during this subtask.

Deliverable(s): Meeting minutes & Pictures of in-person meetings

Subtask 1.3 – Existing Data Collection & Data Gaps

Over the past 19 years, CBCC has worked with residents and groups to install and maintain stormwater devices and BMPs throughout the Coral Bay Watershed. CBCC with the help of WCA, will gather and organize its existing data to include and follow up on identified data gaps, including field investigations. Historically, wet/rainy season peaks from August to November and with occasional rains in April and May, therefore CBCC will conduct the majority of stormwater device field investigations and collected stormwater data gaps during these times. However, CBCC will be ready and flexible to capture rainfall events as rainfall patterns have become unpredictable. As drought condition continues, some data and information may not be available during the project period.

Deliverable(s): Information, photos and data will be added to the project database and outreach materials, respectively.

Task 2 – Toolkit Development

CBCC and WCA will build the three main features of the Stormwater Device Toolkit for this task and conduct a mid-project evaluation at the end of year 1.

Subtask 2.1 – Neighborhood Group / HOA Binders

CBCC, with stakeholder input, will create binders for each of the selected neighborhoods to provide an organized physical paper record binder. Each record binder will include maps of stormwater infrastructure (devices) and BMPs, photos of these devices, installation and maintenance and cost records and recommended schedules and improvements, group contacts, etc. CBCC will prepare 5 to 10 binders based on experience knowledge of existing and potentially interested groups and residents. CBCC will implement the first 2 to 3 binders with the respective neighborhood groups and/or HOAs as a mid-point measurable to make adjustment as needed to ensure its success. A copy of each binder will be stored at the CBCC office and updated yearly to ensure records are duplicated and up to date during this project period and beyond.

Deliverable(s): Record Binders for approximately 5 to 10 Groups

Subtask 2.2 – “How To” Reference Section Update

Existing operations and maintenance “How To” [guidance and references](#)⁹ including [CBCC’s BMP Maintenance Brochure](#), [Landscaping for Erosion Control Manual](#) and [Resources](#)¹⁰ and information from DPNR’s Revised Environmental Handbook (expected to be published in April 2022) will be updated in the first 6 months and in the last two months of the project (for any additional information learned after the initial update) and made available online (Subtask 2.3). This section will include information pertaining to:

⁹ <https://coralbaycommunitycouncil.org/stormwater-management/stormwater-management-hurricane-recovery/stormwater-device-maintenance/>

¹⁰ <https://coralbaycommunitycouncil.org/stormwater-management/stormwater-management-hurricane-recovery/landscaping-for-erosion-control/>

- “Sink it, Slow it and Spread it” practices and stormwater devices to encourage stormwater retention and groundwater recharge
- Inspection and regular maintenance frequency
- Inspection and regular maintenance checklists
- Regular maintenance equipment checklist
- Guidance on actions to be taken if maintenance concerns outside of routine maintenance are observed
- Guidance on when a contactor should be hired to assist with maintenance needs
- Other relevant information geared towards HOAs, residents, and business owners

Deliverable(s): Online and printer-friendly updated “How To” Reference Section

Subtask 2.3 – User-Friendly Field & Data Input Application Development

A mobile tracking application, potentially using ArcGIS Survey123 software, will be developed in the first year of the project that can be used by CBCC, the residential group’s maintenance managers and members to schedule maintenance, catalog inspections and maintenance and improvement activities over time, including photos, and request support to address new concerns. The application will be pre-loaded with the mapped infrastructure and BMP dataset, which will be developed during the 2022 CBCC Hydrology & Hydraulic (H&H) Study. Information can be added by both residents and CBCC staff through this tool both online through CBCC’s website and on individual’s phones, which will provide a real-time dataset for the groups.

Deliverable(s): Draft version of the User-friendly mobile and online application

Task 3 – Toolkit Field Investigation & Implementation

During this task, CBCC and WCA will work the neighbor groups and HOAs at the end of year 1 and throughout year 2 to implement the developed tools in Task 2 and ensure they meet their needs and are user-friendly; stormwater device information is not lost and keep up-to-date and maintenance activities continue as residents and group leadership and participation change.

Subtask 3.1 – Field Test Application for Refinement

The mobile tracking application developed in Task 2.3 will be tested in the field with CBCC staff and several residents from the various groups, who will conduct stormwater device surveys along a minimum of two roads to ensure that the application is user-friendly and intuitive to use, identify confusing sections and technological errors and that collected information and photos are uploaded and stored correctly. Improvements will be made to the application following testing by WCA.

Deliverable(s): Summary of changes made to application following field testing and updated version of application

Subtask 3.2 – Toolkit Implementation

The WCA project team will schedule a week-long visit to work directly with the neighborhood groups and HOAs members in November of 2024 (during typically one of the wettest months of the year) to implement the toolkit. During this visit, WCA will meet with the groups to provide an overview of the mobile application and how to use it, the inspection and maintenance process, an explanation of why it is important that regular maintenance is carried out, and an explanation of the available online resources from Subtask 2.2 and further support options and

grant opportunities. Together with CBCC and WCA, groups will conduct field inspections of the stormwater devices within their areas and fill out the mobile tracking application at stormwater device locations. Staff will answer any questions that the neighborhood and HOA members have and discuss the inspection and maintenance schedule for the specific infrastructure that exists in their neighborhood.

CBCC will also send out timely messages (at least quarterly) reminding residents and the groups' road committee-chairman / leaders to conduct maintenance on their stormwater devices and prepare for hurricanes, both during and after the project.

Deliverable(s): 1) Completed application data from the maintenance inspections and 2) Reminder messages sent to residents and groups

Task 4 – Project Management

The following subtasks will contribute to the overall management of the project and will be conducted throughout the life of the project (January 2023 - December 2024) to ensure project tasks are completed within the project period and with the proposed budget and deliverables are met. All public documents will be made available via the CBCC's website. Additionally, all other documents will be made available to the appropriate party via email upon distribution needs and requirements.

Subtask 4.1 – Budgeting & Grant Reporting

CBCC's Environmental Projects Manager and other staff will complete all project scheduling, coordination, management, invoicing, budgeting, and reporting as part of this subtask. The benefits of the subtask include careful tracking of all project expenditures and meeting all project reporting requirements.

WCA will provide CBCC with the necessary project progress and financial information that describes the activities and expenditures that were occurred within each quarter as well as provide a summary for the mid-project sufficiency and final reporting periods of the project on a timely basis. CBCC will complete the Performance Progress Report and submit the final report along with the required financial reports to the grantor as per the requirements of the DOI-BR WaterSMART agreement.

Subtask 4.2 – Project Oversight

CBCC's assigned project manager will provide day to day project oversight. CBCC's volunteer President will provide approximately 5 hours per month in direct oversight for this project, such as progress and document reviews. The benefits of the subtask include ensuring that the appropriate oversight and cross-checking is occurring on all project activities.

Table 1. Project Timeline & Task Costs

USDA TAT 4		Jan 2023	Dec 2024	Jan 2023	Feb 2023	Mar 2023	Apr 2023	May 2023	Jun 2023	Jul 2023	Aug 2023	Sep 2023	Oct 2023	Nov 2023	Dec 2023	Jan 2024	Feb 2024	Mar 2024	Apr 2024	May 2024	Jun 2024	Jul 2024	Aug 2024	Sep 2024	Oct 2024	Nov 2024	Dec 2024				
1	Neighborhood Group / HOA Background Research & Development	Jan-23	Jan-23	Direct Cost for Task 1: \$29,612.30																											
1.1	Project Kick-off Meeting	Jan-23	Jan-23																												
1.2	Neighborhood Groups, HOAs and Residents & Stakeholder Meetings	Jan-23	Dec-24																												
1.3	Existing Data Collection & Data Gaps	Feb-23	Dec-24																												
2	Toolkit Development	Mar-23	Dec-24	Direct Costs for Task 2: \$29,362.37																											
2.1	Neighborhood Group / HOA Binders	Mar-23	Dec-24																												
2.2	How To" Reference Section Update	Jun-23	Aug-23																												
2.3	User-Friendly Field & Data Input Application Development	Apr-23	Jan-24																												
3	Toolkit Field Investigation & Implementation	Nov-23	Dec-24	Direct Cost for Task 3: \$76,924.13																											
3.1	Field Test Application for Refinement	Nov-23	Nov-24																												
3.2	Toolkit Implementation	Sep-24	Dec-24																												
4	Project Management	Jan-23	Dec-24	Direct Cost for Task 4: \$31,153.00																											
4.1	Budgeting & Grant Reporting	Jan-23	Dec-24																												
4.2	Project Oversight	Jan-23	Dec-24																												

* Indirect Cost for the Project is \$40,994.90 = Total Requested Fnding Cost of \$190,288.13

**Matching Costs Total to \$17,758.56 = Porject Budget Total of \$208,046.69

Building on Relevant Federal, State, or Regional Planning Efforts

This project will be informed by CBCC's focused 2022 H&H study (funded through FEMA HMGP funds, and called for in the 2014 Territorial Hazard Mitigation Plan) for the main portion of the Coral Bay watershed addressing water flows for future road and BMP construction and to understand potential flooding issues in future development and needed drainage improvements and maintenance efforts. The higher-level H&H assessment that was conducted for the 2021 Coral Bay WMP for erosion and sediment control will also inform this project's findings and recommendations, making both H&H studies actionable.

This project implements (both directly and indirectly) several key management strategies from the DOI-BR and DPNR-CZM-funded 2021 Coral Bay WMP. Listed below are the management strategies being pursued through this proposal, in priority order for this project. Many of the issues extend throughout the USVI and will require broader management strategies; some such strategies are suggested below and designated with an asterisk (*).

- T-EO-6: Stormwater Device Map, Survey Tool, and Handbook for Residents
- S-MP-2: Create and Continue Road Maintenance Organizations (HOAs)
- T-EO-1a: Review and Redistribute all previous Sediment Reduction Materials and Advice
- S-RE-2-3: Private Road Maintenance/Repairs permitting issues
- T-EO-7: Neighborhood Road Maintenance Training
- T-EO-9: Resident and local Professionals workshops and quick seminars
- *W-S-1: DPW Working Relationship

The task activities of this project such as building neighborhood groups and HOAs relationships and education, developing the Toolkit and conducting field inspections will also secondarily further the following management strategies and promote existing tools.

- S-R-3: Stormwater Reuse Options
- T-MP-7: Updated Mapping
- T-EO-3: Local Vegetation Landscaping Manual
- T-EO-2: Unpaved Road Maintenance Manual
- T-EO-4: Impervious Surface Disconnect Manual
- T-S-9: All Coral Bay Impervious Surface Disconnect (specific locations to be determined)
- *T-S-10: All Coral Bay Ghut Restoration (specific locations TBD)
- *S-S-1: Install sediment reduction BMPs at critical locations
- *S-S-2: Repair or pave unpaved roads.
- *S-S-3: Repair hurricane damaged roads
- W-PA-5: Permit Application Comments and Critiques
- W-PA-6: Territorial Planning Processes
- *W-PA-7: Comprehensive Land and Water Use Plan

During the project period, DPNR (a primary government agency partner) will be developing the USVI Comprehensive Land and Water Use Plan, starting with St. John, which will address water resource and use and future development conflicts. As partners, CBCC will work with DPNR to

provide practical and resilient water resource conservation and stormwater drainage solutions to decision-makers and planners that this project produces.

This year, DPNR with WCA will be completing [eight other watershed management plans](#)¹¹ for St. Thomas and St. Croix that addresses flooding and stormwater impacts. The Toolkit and its development process will be shared with our DPNR partners, so that it can be adjusted and implemented the other watersheds in the territory.

CBCC will also be working with our UVI partners, who at this time are developing the [USVI Hazard Mitigation & Resilience Plan](#) (USVI HMRP)¹², which has identified the need for more water resources as the islands continue to experience climate change impacts on its freshwater resources that heavily rely on rainfall. Groundwater resources are being investigated as the territory's brackish groundwater potentially requires less treatment and produces less waste in the Reverse Osmosis (R/O) process than ocean waters and appeared to be a more feasible option with current treatment technologies. However, concerns and more studies are needed to identify groundwater resources availability and resilient and consistent recharge solutions as much of the stormwater that is needed to recharge the groundwater system is carried off at high volumes and velocity directly to the bays along the road networks as stormwater devices are bypassed. The Stormwater Device Toolkit will be shared with UVI as a practical and resilient solution to recharge issues and for discussions future drought contingency solutions.

This project also aligns with DPNR's 2020 VI Coral Reef Management Properties plan's objective: "LBSP Obj. 4: Support inter-agency development of a comprehensive public and private road and stormwater mapping system/tool consisting of existing unpaved and/or eroding roads with priority given to those with the most erosion potential into downslope coral reef habitat (or sensitive benthic communities). (DPNR-CZM, 2020 p2)"

The Stormwater Device Toolkit is a method to manage stormwater devices to reduce local sediment and wastewater Land-Based Nonpoint Source Pollutants of concern that impact the territory's and Coral Bay's water quality. This Toolkit was management strategy that was developed following the EPA's Watershed Planning and Nonpoint Source Pollutant Management Program guidance.

Additionally, the work of CBCC complements the goals and initiatives of several federal agencies.

- The US EPA seeks to reduce environmental risk. The agency funded CBCC's watershed management planning effort through the Community Action for a Renewed Environment (CARE) program in 2009-2012, which provided support to implement a number of the resulting projects.
- NOAA's work includes a prioritization of coastal restoration and the 2008 Watershed Management Plan. From 2009-2012, NOAA (through the American Recovery and

¹¹<https://watershedvt.maps.arcgis.com/apps/MapSeries/index.html?appid=bc4e3799113d476ea23795fe4e2239b1>

¹² <https://resilientvi.org/the-hmrp-plan>

Reinvestment Act (ARRA)) provided funding to CBCC to construct projects designed to reduce erosion on the island.

- The National Fish and Wildlife Foundation recognize coral reefs as valuable and threatened ecosystems, and channels funding from NOAA and EPA to selected projects. Through NFWF’s Coral Reef Conservation Fund, they provided support for CBCC to develop the updated watershed management plan in 2014.
- The USDA identifies drinking water and waste disposal services as critical for public safety and economic vitality. Through their Rural Utilities Service Program for solid waste, water supply and wastewater planning, USDA has supported CBCC in two Solid Waste Management grants in 2014 and 2017, and several TAT grants 2015 to 2022 - improve actual drinking water and wastewater system solutions.
- Local government has been supportive of CBCC’s projects through participation in Watershed Management planning activities and Department of Public Works (DPW) and DPNR partnership on some implementation projects – such as the 2021 Coral Bay WMP and drainage fixes on secondary public roads, and stormwater feature maintenance.

Criterion D—Presidential and Department of the Interior Priorities

Climate Change

The Virgin Islands is experiencing the impact of climate change right now by being in a 10-year drought pattern with intervals of extreme storm events, causing heavy downpours and microbursts. But in periods of long term drought people’s minds are not on flooding and rainfall consequences – exacerbating the potential for stormwater damages. Creating the opportunity for priority of these issues when they are not on peoples’ minds naturally is one of the purposes of this project.

This project is intentionally a more sustainable way to prepare and motivate current active residents as the population changes over time to 1) have the historical knowledge their neighborhood’s stormwater BMPs and devices, 2) to conduct the necessary continuous stormwater device maintenance and 3) be prepared with written documentation to seek funding and support to upgrade and /or install new stormwater devices and to adapt and increase resilience to the extreme drought and rains caused by the local climate change patterns that the Virgin Island is experiencing.

[Current Drought Statistics](#) ¹³for the Virgin Islands are reported to “continue to worsen across all of the USVI, with moderate drought (D1) observed at St. John, severe drought (D2) observed at St. Thomas, and extreme drought (D3) observed at St. Croix. By definition, D1, D2, and D3 are conditions that can be expected to occur every 5 to 10, 10 to 20, and 20 to 50 years, respectively.”

Disadvantaged or Underserved Communities:
[Limited Government Services and Funding](#)

¹³ <https://www.drought.gov/drought-status-updates/drought-update-puerto-rico-and-us-virgin-islands-5>

In the U.S. Virgin Islands, there is one level of government – the territorial government. Services are provided to three separate islands of which St. John is by far the smallest in population and therefore receives fewer government services. It is also more difficult for residents to access centralized services of all kinds.

The territorial government only has funding to provide limited basic government services to remote Coral Bay. CBCC has pursued grant funding to accomplish planning and environmental protection tasks. For the past 19 years CBCC has acted as the watershed agency when it comes to planning and environmental protection, and as shown in the next section has the continuing capacity to bring expertise, funds and the community together to solve problems.

Economic data

Based on the 2010 Census, the median income of households (MHI) in the USVI was \$37,254, considerably lower than the US median household income of \$49,445. St John is a non-metropolitan rural area with a 2010 Census median household income of \$40,644. The Coral Bay census subdistrict, a portion of our geographic community, had an MHI of \$37,083. Based on these figures, the service area has an MHI of 99% of the USVI MHI. By 2012, the St John NMHI was \$56,342 and the USVI MHI was \$43,606 (Community Foundation of the Virgin Islands 2015) compared to the US NMHI of \$52,400 (HUD 2015).

Average income is also low. On the last date it was available, 2013, the VI Bureau of Economic Research stated that Per Capita Personal Income was \$21,353, or 47.9% of the US average. Clearly, income is a significant issue.

In June 2014, the local elementary school was closed due to the Department of Education's desire to consolidate schools and reduce expense. Over one half of the children in the school lived in low income/ poverty conditions and the school was qualified for the "whole school" free school lunch and breakfast programs". [[Coral Bay Potable Water Supply Plan](#), p. 13]¹⁴

The displacement of many people due to the 2017 hurricanes, followed by very slow government programs to assist in rebuilding for those who lacked insurance, and COVID distancing have made it somewhat difficult to judge current conditions and needs for the populace. It is somewhat unclear what the 2020 census will say about the population as a whole.

Disadvantaged Housing Location

Persons in below average income levels are much more likely to live in the low land valleys and on flood plains and therefore are at risk of rising waters caused by the residential development and roads in the hills above them. In Coral Bay, these low-lying areas are also convenient to the bus route and generally less expensive land to purchase or rent.

¹⁴<https://coralbaycommunitycouncil.sharepoint.com/Shared%20Documents/Forms/AllItems.aspx?id=%2FShared%20Documents%2FPUBLIC%2FCBCC%2D%20Reports%20%26%20Plans%2FCoral%20Bay%20Potable%20Water%20Supply%20Plan%20CBCC%2012%2031%2015%2Epdf&parent=%2FShared%20Documents%2FPUBLIC%2FCBCC%2D%20Reports%20%26%20Plans&p=true&ga=1>

High housing cost burden and substandard housing

Prior to the 2017, the majority of long-term rentals in Coral Bay were “island” wood shacks, many of which were destroyed by the 2017 hurricanes and not cost-effective or legal under permitting rules for property owners to rebuild.

High transportation cost burden and/or low transportation access

The management area is also surrounded by the Virgin Islands National Park lands & Coral Reef National Monument waters, therefore Coral Bay is considered to be an “island on an island”. It is 8 miles from the port in Cruz Bay, along steep and curvy broken-down main public road, which is scheduled for reconstruction from the 2017 storm, but may never be fully upgraded. Transportation and supplies typically cost several times more than in a stateside rural area.

Limited labor and high labor cost

There is a long-standing need for highly skilled stormwater management experts and engineers to live and practice in the Virgin Islands. Current and past DCLA engineering business licensing practices cause lengthy time delay barriers to entry for practitioners who move here or seek to move to the Virgin Islands. There are fewer local practicing professionals and construction contractors that are available than in years past, both due to moving off island and being fully busy with post hurricane work.

Tribal Benefits

Not applicable.

Overlap or Duplication of Effort Statement

No Overlapping Activities or Duplication of Effort are planned.

Project Budget

Budget Proposal

The proposed budget is summarized in Tables 2-4 below.

Funding Sources	Amount
Non-Federal Entities	
1. Coral Bay Community Council*	\$13,200.00
2. Coral Bay Community*	\$4,558.56
Non-Federal Subtotal	\$17,758.56
Requested Reclamation Funding	\$190,288.13

*in-kind contributions

Source	Amount
Costs to be reimbursed with the requested Federal funding	\$190,288.13
Costs to be reimbursed with the applicant	\$13,200.00
Value of third-party contributions	\$4,558.56
Total Project Cost	\$208,046.69

Table 4. Budget Proposal

Budget Item Description	Computation		Quantity Type	Total Cost Requested Funds	*Total Cost Matching Funds	Total Standard Cost Category
	\$/Unit	Quantity				
Salaries and Wages (Personnel)						
CBCC Staff - Full Time	\$34	1,988	Hours	\$67,592.00		
CBCC Volunteer President	\$110	120	Hours		\$13,200.00	
Salaries and Wages Totals				\$67,592.00	\$13,200.00	\$80,792.00
Fringe Benefits						
CBCC Staff - Full Time	37% of Salaries	\$67,592.00	Percentage	\$25,009.04		
Fringe Benefits Totals				\$25,009.04	\$0.00	\$25,009.04
Travel						
Round-trip Car Barge Fees	\$65.00	4	Trip	\$195.00	\$65.00	
Mileage	\$0.585	214	Mile	\$125.19		
Travel Totals				\$320.19	\$65.00	\$385.19
Equipment						
N/A				\$0.00	\$0.00	
Equipment Totals				\$0.00	\$0.00	\$0.00
Supplies & Materials						
4" Binders	\$20.00	14	Binder	\$280.00		
Binder Divider Tabs	\$8.00	14	Pack of Tabs	\$112.00		
Prints - Black & White	\$0.50	3500	250 Page x 14 Binders	\$1,750.00		
Prints - Color	\$1.00	20	Page	\$20.00		
Storage Bins 32 L	\$30.00	3	Bin	\$90.00		
Supplies & Materials Totals				\$2,252.00	\$0.00	\$2,252.00
Contractual						
WCA - Staff Time						
Principal	\$165.00	63	Hours	\$10,395.00		
GIS Program Manager	\$125.00	102	Hours	\$12,750.00		
GIS Technician	\$110.00	90	Hours	\$9,900.00		
Water Quality Scientist	\$100.00	86	Hours	\$8,600.00		
WCA - Staff Time Totals				\$41,645.00	\$0.00	\$41,645.00
WCA - Travel Expenses						
Flights	\$800.00	4	Flight	\$3,200.00		
Car Rental	\$700.00	1	Week	\$700.00		
Parking	\$90.00	1	Week	\$90.00		
Round-trip Car Barge Fees	\$65.00	1	Trip	\$65.00		
Meals & Incidental Expenses	\$90.00	28	Per Person x 7 Days	\$2,520.00		
Lodging	\$6,000.00	1	Week	\$5,500.00	\$500.00	
WCA - Travel Expenses Totals				\$12,075.00	\$500.00	\$12,575.00
Volunteer Time						
Local Experts	\$90.00	6	Hours		\$540.00	
Residential Participants	\$28.54	114	Hours		\$3,253.56	
Volunteer Time Totals				\$0.00	\$3,793.56	\$3,793.56
Contractual Totals				\$53,720.00	\$4,293.56	\$58,013.56
Construction						
N/A						\$0.00
Construction Totals				\$0.00	\$0.00	\$0.00
Other						
Application Software Subscription	100	2	Year	\$200.00	\$0.00	
Venue Rental	200	1	Event	\$200.00	\$200.00	
Other Totals				\$400.00	\$200.00	\$600.00
Total Direct Cost				\$149,293.23	\$17,758.56	\$167,051.79
Indirect Cost						
Provisional	34%	\$120,573.23	**Direct Cost	\$40,994.90		
Total Indirect Cost				\$40,994.90	\$0.00	\$40,994.90
Total Project Cost				\$190,288.13	\$17,758.56	\$208,046.69

* Value of third-party contributions summed in Matching Funds Column

**CBCC Indirect Rate was applied to Salaries and Wages, Fringe Benefits, Travel, Supplies, Other and the first \$25,000 of the WCA Contractual Amount.

Budget Narrative

CBCC follows 2 CFR 230 (OMB Circular A-122) and other federal guidelines in its accounting system and policies. Accrual based accounting is used in a project-based QuickBooks accounting system. CBCC has a detailed policy handbook and has experience in following administrative requirements of federal grants.

Personnel costs

CBCC will incur personnel costs to 1,988 hours by CBCC employees at a rate of \$34 per hour, and volunteer time as matching funds by the CBCC President/Executive Director at a rate of \$110 per hour. The total requested salary is \$67,592.00 with a match of \$13,200.00, totaling \$80,792.00. Personnel costs are based on planned average salary rates for CBCC personnel to conduct the tasks described above and ensure the project's success during the entire project period.

Payroll Taxes and Fringe Benefits

Payroll Taxes and Fringe Benefits are budgeted at 37% of salary and include taxes, paid leave and health insurance.

Travel

Costs for CBCC's travel are associated with the following activities:

- 1) Trips to meetings with residents, government agencies (offices located on the neighboring island, St. Thomas) and professional stakeholders and to stormwater device sites to build relationships and conduct research and field investigations (2 round trip barge fees, 179 budgeted miles) and
- 2) Picking up supplies for binders, which are chiefly available on St. Thomas (2 round trip barge fees, 29 budgeted miles).

The total requested travel is \$320.19 which includes car barge fees at \$65 dollars per round trip and total of 3 trips (\$195) and 350 budgeted miles (\$125.19) at the IRS 2022 standard mileage rate of \$0.585 with a match of \$65 (1 round trip car barge fee for picking up additional supplies). Total travel will be \$385.19.

Equipment

CBCC does not intend to purchase equipment as part of this project.

Supplies

CBCC staff will need supplies to create the seven Stormwater Device Toolkit Binders (2 sets each; one for the neighborhood groups/HOAs and one duplicate to archive that will be stored at CBCC's office in plastic bins to protect during hurricanes, etc. - totaling 14 Binders. CBCC also will prepare at additional handouts for community meetings. All cost per unit justification is based on costs listed from the office supply store located on St. Thomas and previous project costs.

- 4-inch Binders at \$20 each for 14 binders = \$280.00
- Binder Divider Tabs at \$8 each for 14 packs = \$112.00
- Black & White Prints at \$.50 each for 250 per Binder (for 14 Binders) = \$1,750.00
- Color Prints at \$1 each for 20 copies = \$20.00

- 32 Liter plastic storage bins at \$30 each for 3 bin Binders = \$90.00

Total supplies budget will be \$2,252.00.

Contractual Costs

CBCC will work with WCA team (the subrecipient), a highly qualified environmental consulting group with considerable Virgin Islands experience, particularly working with the Coral Bay and Virgin Islands communities, businesses and professional stakeholders and the local government agencies, DPNR and DWP, on watershed management plans, flooding, erosion and nonpoint pollution issues. Total requested labor will be \$41,645.00 based on the following WCA staff rates and hours to provide technical guidance for stormwater management device maintenance and improvements, updating outreach materials, developing and implementing the mobile tracking application with all collected data and information, and working with CBCC and the neighborhood groups and HOAs to ensure the mobile tracking application is user-friendly and it is working correctly.

- Principal at \$165 each for 63 hours = \$10,395.00
- GIS Program Manager at \$125 each for 102 hours = \$12,750.00
- GIS Technician at \$110 each for 90 hours = \$9,900.00
- Water Quality Scientist at \$100 each for 86 hours = \$8,600.00

Matching contractual labor costs include the value of time of local experts (6 hours of guidance from various professionals with an estimated rate of \$90 per hour) and Coral Bay residents participating in meetings, toolkit development and implementation and field investigations (114 hours of volunteer time from various residents at \$28.54 per hour). Contractual labor rates are based on past project and the following:

- 2021 Independent Sector Value of Volunteer Time (used to value residents' participation and Business Employee efforts);
- An average of the hourly rate for local engineers, architects, and contractors
- The average rate for DPNR & DPW professional staff.

The following travel costs for the WCA team to work with CBCC and the neighborhood groups and HOAs to implement the mobile tracking application and conduct field investigations to provide feasible and practical solutions for a week in November of 2024 include:

- Flights at \$800 each for 4 people (based rates for the period of travel)
- 1 x car rental at \$700.00 per week (based on local current rental rates)
- Airport parking at \$90 per week (based rates for the period of travel)
- 1 x round-trip car barge fee at \$65
- Meals & incidental expenses at \$90 per day for 4 people for 7 days (based on past projects and average government per diem rates for St. John Travel)
- Lodging at for one week for 4 people – a total of \$5,500 with a \$500 discount (as in-kind) from property owner (based on current villas rental rates and past projects and matching contributions).

Total Contractual Travel cost are \$12,575, which include \$12,075 of requested funds and \$500 matching funds.

Total contractual budget will be \$58,013.56.

Other costs

CBCC has budgeted direct other costs (\$400) for: 1) \$200 for venue rental space to host larger meetings (based on current local pricing) and \$200 for the mobile tracking application software yearly subscription for 2 years (based on local ArcGIS pricing for non-profits at \$100 per year).

Other matching costs are associated with donated venue rental space (based on current local pricing) at \$100 per event for smaller gatherings (2 events totaling \$200).

Other total costs are \$600.

Indirect costs

CBCC's negotiated indirect cost rate agreement has been included in this application as a supporting document. The requested provisional FY 2021 NICRA is 34.00%. CBCC's indirect cost rate was applied to the direct costs from the Salaries and Wages, Fringe Benefits, Travel, Supplies, Other categories and the first \$25,000 of the WCA Contractual amount (totaling \$40,994.90).

Third-Party In-Kind Contributions

Match funds are detailed in the respective standard cost categories above.

Environmental and Regulatory Compliance Costs & Other Expenses

Not applicable.

Environmental & Cultural Resource Compliance

The field data collection portion of this project will include recording existing conditions, locations of infrastructure, and extent of damage. The project team will use field data collection mobile application software to take photographs and notes with GPS-referenced locations. Publicly accessible sites will be prioritized. The project team will receive written landowner permission for any field site assessment on private property. This zero-impact data collection does not require review for environmental or cultural resource compliance.

Permits or Approvals

No permits or approvals for this work are required, as it is planning and prioritization in scope and does not include implementation or destructive or extractive field work components.

Letters of Support

CBCC has attached in the grant application Letters of Support from DPNR, WCA and the following existing neighborhood groups and HOAs that CBCC has partnered with on past project: Upper Carolina, Johnny Horn Trail, Eden, Freemans Ground and Mill Vista.

Official Resolution

CBCC has attached the official resolution adopted by the board of directors.

Conflict of Interest Disclosure

There are no existing or potential conflicts of interest exists at the time of submission.

Single Audit Reporting Statement

The Coral Bay Community Council (CBCC) financials have not been audited previously, due to the high cost of audits, and the fact that the CBCC has not exceeded the \$700,000 Federal Fund expenditure threshold for a required A-133 audit.

RACHEL M. (KOHLER) MCKINLEY

4007 Lind Point
St. John, VI 00830

Phone: +1 (340) 244-8818
Email: rmkmckinley@gmail.com

EDUCATION:	University of Missouri-Columbia May 2008 B.S. in Geological Sciences Thesis: <i>Analysis of the Relationship between Fractures and the Laramide Folding Mechanism of the Derby & Dallas Domes Oil Fields, Wind River Mountains, WY</i> Penn State World Campus Dec 2013 Postbaccalaureate Certificate in Geographic Information Systems (GIS)
SKILLS & QUALIFICATIONS:	<ul style="list-style-type: none">• Over seven years of experience in the environmental / scientific and managerial field• Completed a variety of projects within and under budget.• Can easily communicate with all ages and variety of sizes; ranging from individuals to large groups• Proficient working in all types of groups as well as individually.• Extensive background of analyzing data and producing technical reports using ArcGIS, Microsoft Office Suite, and job specific software.• Clean background and driving record• Valid United States Virgin Islands driver's license
EXPERIENCE:	<p>Environmental Projects Manager Coral Bay Community Council Feb 2018 - current <i>St. John, US Virgin Islands</i></p> <p>Developing and managing several grant-funded environmental and community projects including but not limited to: watershed & stormwater management, wastewater & drinking water technical assistance, community facilities and hazard mitigation.</p> <p>Park Programs & Special Projects Manager Cinnamon Bay Resort & Campground Nov 2016 - Sept 2017 <i>St. John, US Virgin Islands</i></p> <p>Developed and managed property-wide operational procedures, interpretative programs and events along with writing management plans for National Park Service (NPS) concessions requirements, including but not limited to: the Emergency Action Plan, the Hurricane Response Plan, the Environmental Management Plan and the Risk Management Program.</p> <p>Manager of Fun Westin St. John Resort & Villas Apr 2016 - Nov 2016 <i>St. John, US Virgin Islands</i></p> <p>Managed the operations, team members and contract vendors of three onsite areas; the pool hut, the child care facility and the gym and spa, along with developing property-wide programs, experiences and relationships with guests and team members and supporting operations of all resort departments as needed.</p> <p>Recreation Aid - Lifeguard National Park Service Jul 2015 - Apr 2016 <i>St. John, US Virgin Islands</i></p> <p>Maintained constant surveillance of swimmers, beach visitors and NPS natural resources, thereby, responding to emergency situations and providing medical care. Also educating visitors of all ages of water safety, conservation of the natural resources, island culture and logistic information.</p>

RACHEL M. (KOHLER) MCKINLEY

EXPERIENCE: (CONTINUED)	<p>Tour Guide & Sales / Rental Associate Virgin Islands Ecotours <i>St. John, US Virgin Islands</i> Mar 2015 - Aug 2015</p> <p>Dual positions which included; conducting guided hikes and snorkel trips for small to large groups of visitors and individuals of all ages, renting watersports equipment, selling retail merchandise and providing demonstrations and instructions to guests on watersports equipment and education of island culture and conservation.</p> <p>Associate Staff Professional & Field Services Supervisor EE&G Environmental Services, LLC <i>Miami, Florida</i> Nov 2012 - Feb 2015</p> <p>Dual positions which included; project manager for various types of environmental site assessments, remediation and monitoring, along with the supervising the field crew and contractors and quality assurance of data and operations.</p> <p>Contract Geologist Spotlight Geophysical Services, LLC <i>Miami, Florida</i> Mar 2011 - Nov 2011</p> <p>Conducted and coordinated geophysical field survey projects throughout the state of Florida and in Tortola, British Virgin Islands using a variety of methods, including but not limited to: electrical resistivity imaging, seismic data acquisition, ground penetrating radar (GPR) and metal detection.</p> <p>Well-site Geologist Canrig Drilling Technology Ltd. <i>Bakersfield, California</i> Nov 2011 - Nov 2012 & Nov 2009 - Mar 2011</p> <p>Produced mud log reports that comprised of lithology, gas and oil analysis while monitoring well conditions and drilling operations.</p> <p>Exploration Geologist Thompson Creek Mining Company <i>Clayton, Idaho</i> Aug 2008 - Feb 2009</p> <p>Duties included managing four drilling crews, analyzing samples in lab and in field, exploration mapping, open-pit wall slide analysis and assisting survey crews.</p> <p>Geologist Intern Association of Women Geoscientists <i>Craters of the Moon National Park, Idaho</i> May 2008 - Aug 2008</p> <p>Completed cave inventory, geologic mapping and core logging projects for the NPS.</p>
COMMUNITY SERVICE:	<p>Caribbean Oceanic Restoration & Education Foundation Caribbean Oceanic Restoration & Education Foundation (CORE) <i>St. John, US Virgin Islands</i> Oct 2015 - current</p>

Sharon L. Coldren

9901 Emmaus, St. John, VI 00830

340-513-4298

sharonc@coralbaycommunitycouncil.org

Education: M.Sc. Economics (Regional and Community Planning),
London School of Economics and Political Science, 1975

B.A., Duke University, *magna cum laude*, Independent Major in Planning, 1973

Skills: **Planning, management, financial and regulatory analysis, complex issues analysis, project management and leadership skills.**

Recent Experience (volunteer):

President and Executive Director, Coral Bay Community Council, Coral Bay, St. John. Lead 400-member community nonprofit organization, which promotes community vision, well-planned development, protection of our environment, stormwater management, and community volunteerism for many purposes. Also manage significant federal grants received from EPA, USDA & NOAA. Partnerships with Virgin Islands government agencies, including DPNR, WMA & PW. (2003 to present)

Employment Experience:

Retired from business in 1992 to go sailing in the Eastern Caribbean, exploring local cultures and nature's beauty. In 1999, we returned to Coral Bay to live in our home purchased in 1985.

Pitney Bowes, Stamford CT, **Various Director-level positions in strategic and new business planning**, expertise in regulatory affairs, 1988 to 1992.

Technical Support Services, Inc., Ossining, NY, **Director of Corporate Planning**. In small entrepreneurial company, handled business planning and acquisition strategy and negotiations. 1986 to 1988.

AT&T and subsidiaries, Morristown, NJ, Various **new business planning and marketing** and market management positions, regulatory affairs in new market environment, 1981 to 1986.

American Council on Education, Washington, DC, **Policy planning, research, and regulatory affairs** affecting college and student finances. Writing and publishing on college financial management and policy. 1974 to 1981

Redstone Central Railroad Company, Uniontown, PA., Developed planning policy and innovations for planned new community development. Organized educational and environmental planning groups. Assisted in negotiations with HUD and state governments. 1971-1972

Low Income Housing Corporation of North Carolina, Durham, NC, Researched the political process of rezoning residential land. 1971

Personal Profile:

Married with grown children and 5 grandchildren

Member of Board of Directors - Rotary Club of St. John 2009-2011

Member of Board of Directors -Virgin Islands League of Women Voters, 2010-11

Own and manage several residential rental properties.

Member Rotary Club of St. John, Historical Society and other supporter of other local organizations.

Upper Carolina Landowners Association, Manage 160+ member association handling road repairs and beach maintenance, maintain voluntary monetary participation at about 70%. (2000 to 2005 and 2014 – 2015)



United States Department of the Interior

OFFICE OF THE SECRETARY

Washington, DC 20240

Nonprofit Organization Indirect Cost Negotiation Agreement

EIN: 66-0637620

Date: 10/19/2020

Organization:

Coral Bay Community Council
9901 Emmaus
St. John, VI 00830

Report Number: 2020-0608

Filing Ref.:

Last Negotiation Agreement
dated: 06/08/2020

The indirect cost rates contained herein are for use on grants, contracts, and other agreements with the Federal Government to which Public Law 93-638 and/or 2 CFR Part 200 apply subject to the limitations contained in Section II.A. of this agreement. The rates were negotiated by the U.S. Department of the Interior, Interior Business Center, and the subject organization in accordance with the authority contained in applicable regulations.

Section I: Rate

Start Date	End Date	Rate Type	Name	Rate	Base	Location	Applicable To
01/01/2019	12/31/2019	Final	Indirect	34.00 %	(A)	All	All Programs
			Indirect	34.00 %	(A)	All	All Programs
01/01/2021	12/31/2021	Provisional	Indirect	34.00 %	(A)	All	All Programs
			Indirect	34.00 %	(A)	All	All Programs

(A)*Base: Modified Total Direct Costs: All direct salaries and wages, applicable fringe benefits, materials and supplies, services, travel, and up to the first \$25,000 of each subaward (regardless of the period of performance of the subawards under the award). MTDC excludes equipment, capital expenditures, charges for patient care, rental costs, tuition remission, scholarships and fellowships, participant support costs, and the portion of each subaward in excess of \$25,000.

Treatment of fringe benefits: Fringe benefits applicable to direct salaries and wages are treated as direct costs; fringe benefits applicable to indirect salaries and wages are treated as indirect costs.

Treatment of paid absences: The costs of vacation, holiday, sick leave pay and other paid absences are included in the organization's fringe benefit rate and are not included in the direct cost of salaries and wages. Claims for direct salaries and wages must exclude those amounts paid or accrued to employees for periods when they are on vacation, holiday, sick leave or are otherwise absent from work.

Section II: General

- A. **Limitations:** Use of the rate(s) contained in this agreement is subject to any applicable statutory limitations. Acceptance of the rate(s) agreed to herein is predicated upon these conditions: (1) no costs other than those incurred by the subject organization were included in its indirect cost rate proposal, (2) all such costs are the legal obligations of the grantee/contractor, (3) similar types of costs have been accorded consistent treatment, and (4) the same costs that have been treated as indirect costs have not been claimed as direct costs (for example, supplies can be charged directly to a program or activity as long as these costs are not part of the supply costs included in the indirect cost pool for central administration).
- B. **Audit:** All costs (direct and indirect, federal and non-federal) are subject to audit. Adjustments to amounts resulting from audit of the cost allocation plan or indirect cost rate proposal upon which the negotiation of this agreement was based will be compensated for in a subsequent negotiation.
- C. **Changes:** The rate(s) contained in this agreement are based on the accounting system in effect at the time the proposal was submitted. Changes in the method of accounting for costs which affect the amount of reimbursement resulting from use of the rate(s) in this agreement may require the prior approval of the cognizant agency. Failure to obtain such approval may result in subsequent audit disallowance.
- D. **Rate Type:**
1. **Fixed Carryforward Rate:** The fixed carryforward rate is based on an estimate of the costs that will be incurred during the period for which the rate applies. When the actual costs for such period have been determined, an adjustment will be made to the rate for a future period, if necessary, to compensate for the difference between the costs used to establish the fixed rate and the actual costs.
 2. **Provisional/Final Rate:** Within six (6) months after year end, a final indirect cost rate proposal must be submitted based on actual costs. Billings and charges to contracts and grants must be adjusted if the final rate varies from the provisional rate. If the final rate is greater than the provisional rate and there are no funds available to cover the additional indirect costs, the organization may not recover all indirect costs. Conversely, if the final rate is less than the provisional rate, the organization will be required to pay back the difference to the funding agency.
 3. **Predetermined Rate:** A predetermined rate is an indirect cost rate applicable to a specified current or future period, usually the organization's fiscal year. The rate is based on an estimate of the costs to be incurred during the period. A predetermined rate is not subject to adjustment.
- E. **Rate Extension:** Only final and predetermined rates may be eligible for consideration of rate extensions. Requests for rate extensions of a current rate will be reviewed on a case-by-case basis. If an extension is granted, the non-Federal entity may not request a rate review until the extension period ends. In the last year of a rate extension period, the non-Federal entity must submit a new rate proposal for the next fiscal period.
- F. **Agency Notification:** Copies of this document may be provided to other federal offices as a means of notifying them of the agreement contained herein.
- G. **Record Keeping:** Organizations must maintain accounting records that demonstrate that each type of cost has been treated consistently either as a direct cost or an indirect cost. Records pertaining to the costs of program administration, such as salaries, travel, and related costs, should be kept on an annual basis.
- H. **Reimbursement Ceilings:** Grantee/contractor program agreements providing for ceilings on indirect cost rates or reimbursement amounts are subject to the ceilings stipulated in the contract or grant agreements. If the ceiling rate is higher than the negotiated rate in Section I of this agreement, the negotiated rate will be used to determine the maximum allowable indirect cost.
- I. **Use of Other Rates:** If any federal programs are reimbursing indirect costs to this grantee/contractor by a measure other than the approved rate(s) in this agreement, the grantee/contractor should credit such costs to the

Section II: General (continued)

affected programs, and the approved rate(s) should be used to identify the maximum amount of indirect cost allocable to these programs.

J. Other:

1. The purpose of an indirect cost rate is to facilitate the allocation and billing of indirect costs. Approval of the indirect cost rate does not mean that an organization can recover more than the actual costs of a particular program or activity.
2. Programs received or initiated by the organization subsequent to the negotiation of this agreement are subject to the approved indirect cost rate(s) if the programs receive administrative support from the indirect cost pool. It should be noted that this could result in an adjustment to a future rate.
3. This Negotiation Agreement is entered into under the terms of an Interagency Agreement between the U.S. Department of the Interior and the cognizant agency. No presumption of federal cognizance over audits or indirect cost negotiations arises as a result of this Agreement.
4. Organizations that have previously established indirect cost rates—exclusive of the 10% *de minimis* rate—must submit a new indirect cost proposal to the cognizant agency for indirect costs within six (6) months after the close of each fiscal year.

Section III: Acceptance

Listed below are the signatures of acceptance for this agreement:

By the Nonprofit Organization

Coral Bay Community Council

DocuSigned by:
Sharon Coldren
CF562049314049D...

Signature

Sharon Coldren

Name:

President

Title:

10/22/2020

Date

By the Cognizant Federal Government Agency

US Department of Agriculture - RD Water and
Environmental Programs

DocuSigned by:
Craig Wills
B47DB1F4A5DB4BF...

Signature

Craig Wills

Name:

Division Chief

Indirect Cost Services Division

Title:

10/20/2020

Date

Negotiated by: Victor Avila
Telephone: (916) 930-3822

Next Proposal Due Date: 06/30/2021

Date: 3/30/22

Department of Interior (DOI) -Bureau of Reclamation (BR)
Water Resources and Planning Office
Submitted electronically with CBCC's Grant application

Subject: Letter of Support for CBCC's Grant Application for The Stormwater Management Device Toolkit for Neighborhood Groups and Homeowners Associations in the Coral Bay Watershed

Good Day,

I am writing this letter to support the Coral Bay Community Council's (CBCC) application for the DOI-BR grant to develop and implement a toolkit for neighbor groups and homeowners' associations (HOAs) that will create permanent and continuous ways to assist these groups in identifying, maintaining, and improving stormwater devices along their roads and in their neighborhood such as swales, culverts, etc. Enabling residents to effectively manage the stormwater resources in these subwatersheds is critical to the US Virgin Islands watershed management work.

The Virgin Islands Department of Planning and Natural Resources has worked closely and in partnership with the Coral Bay Community Council in its watershed management efforts over the last 15 years and looks forward to cooperating on this project too.

As the Education and Outreach Coordinator for the Virgin Islands Department of Planning Natural Resources – Division of Coastal Zone Management (DPNR-CZM), it is important that we continue to work collaboratively with CBCC, as we have done for many projects over the years, to encourage and assist residents in maintaining and improving the storm devices and roadways and restoring natural drainage and adding resilience from storm impacts. Helping residents follow laws and regulations and best management practices will be a significant benefit and help reduce the constant environment impacts of sediment from steep-slope erosion entering the bay's waters.

This project represents an actionable watershed management strategy, identified in the 2021 Coral Bay Watershed Management Plan, partially supported by DPNR-CZM. Further, this toolkit links up well with our new Environmental Handbook and other territory-wide project outreach efforts.

Sincerely,



Kristina "Kitty" Edwards
Education and Outreach Coordinator



March 31, 2022

Coral Bay Community Council
9901 Estate Emmaus
St. John, VI 00830

RE: *WaterSMART Residential Stormwater Project Grant Support*

Dear Rachel:

I am writing to express our interest and support for a project application under the U.S. Department of the Interior's WaterSMART (Sustain and Manage America's Resources for Tomorrow) Program for the Coral Bay Watershed on St. John, U.S. Virgin Islands. The project is focused on developing a structured process and resource toolkit for neighborhood associations and residents to operate and maintain critical stormwater infrastructure in their communities.

The need for this project is highlighted in the 2021 Coral Bay Watershed Management Plan (WMP) that Watershed Consulting in partnership with the Coral Bay Community Council developed. The WMP underscores the need for an effective and repeatable process for residents to efficiently maintain critical stormwater infrastructure, recognizing that over time the stormwater infrastructure, homeowner community contacts, and residents will change resulting in lost data, ineffective maintenance, and reduced water quality. This project will greatly help to improve stormwater management and water quality in the Coral Bay Watershed and throughout the Virgin Islands. As part of other WMP's we are presently working on in the Virgin Islands, we recognize the same need for more robust residential stormwater management, so it is anticipated that this work can help not only in Coral Bay but beyond to other Virgin Islands communities.

Thank you for including us on this important project that will build off the groundwork developed under the 2021 Coral Bay WMP to improve water quality in region.

Sincerely,

Andres Torizzo

A handwritten signature in black ink, appearing to read "Andres Torizzo", written in a cursive style.

Principal, Hydrologist



UPPER CAROLINA LANDOWNERS ASSOCIATION

15604 Upper Carolina, ST JOHN, VI 00830

Email: UpperCarolina@hotmail.com

March 28, 2022

To: Department of Interior - Bureau of Reclamation -Water Resources and Planning Office
To be Submitted electronically with CBCC's Grant application

Subject: Letter of Support for CBCC's Grant Application for The Stormwater Management Device Toolkit for Neighborhood Groups and Homeowners Associations in the Coral Bay Watershed

To whom it may concern:

I am writing as a the President for Upper Carolina Homeowners Association Inc. (UCLA) to indicate our support for the Coral Bay Community Council's application for the project to develop and implement a stormwater maintenance device "toolkit" for neighborhood groups and homeowners' associations.

We and other neighborhood groups have worked with CBCC since 2008 to improve our water resource management and stabilize our drainage and access roadways. This latest project will help to create a management and record system that can be shared more permanently with the volunteer residents who manage the critical roadway, culvert and drainage maintenance and improvements.

In our neighborhood, over the years we have experienced significant damage to our roads due to misdirected stormwater costing UCLA thousands of dollars for repairs. We currently have a need for major repairs on our damaged roads.

Having good practices and records of road and stormwater device maintenance and improvements and expenditures not only provides better access to our homes and businesses, but, as we have realized after the 2017 hurricanes, also provides important documentation for disaster recovery funds and planning.

We strongly support CBCC's application and look forward to being a potential participant in this project.

Sincerely,

Sue A. Gant

President
Upper Carolina Landowners' Association Inc.

Robert Bettencourt
9901 Emmaus
St John, VI 00830

Date: March 25, 2022

To: Department of Interior - Bureau of Reclamation -Water Resources and Planning Office
To be Submitted electronically with CBCC's Grant application

Subject: Letter of Support for CBCC's Grant Application for The Stormwater
Management Device Toolkit for Neighborhood Groups and Homeowners
Associations in the Coral Bay Watershed

To whom it may concern:

I am writing as a member of the Johnny Horn Trail home owners group to indicate our support for the Coral Bay Community Council's application for the project to develop and implement a stormwater maintenance device "toolkit" for neighborhood groups and homeowners' associations.

We and other neighborhood groups have worked with CBCC since 2008 to improve our water resource management and stabilize our drainage and access roadways. This latest project will help to create a management and record system that can be shared more permanently with the volunteer residents who management the critical roadway, culvert and drainage maintenance and improvements.

In our neighborhood we worked closely with CBCC for the study, engineering plans, approval and road construction to stabilize a steep section of the Johnny Horn Trail (dirt road access to our homes) and control the water runoff and reduce erosion in order to help protect Coral Bay.

Having good practices and records of road and stormwater device maintenance and improvements and expenditures not only provides better access to our homes and businesses, but, as we have realized after the 2017 hurricanes, also provides important documentation for disaster recovery funds and planning.

We strongly support CBCC's application and look forward to being a potential participant in this project.

Sincerely,

Robert Bettencourt

Mary Vargo
10907 Estate Eden
St. John, VI 00830
maryvargo@gmail.com

Date: March 27, 2022

To: Department of Interior - Bureau of Reclamation - Water Resources and Planning Office
To be Submitted electronically with CBCC's Grant application

Subject: Letter of Support for CBCC's Grant Application for The Stormwater Management Device Toolkit for Neighborhood Groups and Homeowners Associations in the Coral Bay Watershed

To Whom it May Concern:

I am writing as a resident and homeowner in the Estate Eden neighborhood to indicate our support for the Coral Bay Community Council's application for the project to develop and implement a stormwater maintenance device "toolkit" for neighborhood groups and homeowners' associations.

We and other neighborhood groups have worked with CBCC since 2008 to improve our water resource management and stabilize our drainage and access roadways. This latest project will help to create a management and record system that can be shared more permanently with the volunteer residents who management the critical roadway, culvert and drainage maintenance and improvements.

In 2019-2020, the Eden neighborhood raised more than \$33,000 as part of a matching grant received by CBCC to improve drainage and redirect stormwater to prevent erosion on our mainly dirt road. Our neighborhood is made up of about 20 owners and does not have a formal HOA. We rely on volunteers to maintain approx. 0.25 mi. of shared roadway. Maintenance is done "as needed" with limited communication and no real schedule or planning. A management system with historical records would benefit all owners and would be timely given recent changes in ownership of some properties, as well as ongoing and expected new construction.

Having good practices and records of road and stormwater device maintenance and improvements and expenditures not only provides better access to our homes and businesses, but, as we have realized after the 2017 hurricanes, also provides important documentation for disaster recovery funds and planning.

We strongly support CBCC's application and look forward to being a potential participant in this project.

Sincerely,



Mary Vargo

Matthew Crafts
16803 Freeman's Ground
St. John, VI 00830
crafty134@juno.com

Date: March 27, 2022

To: Department of Interior - Bureau of Reclamation - Water Resources and Planning Office
To be Submitted electronically with CBCC's Grant application

Subject: Letter of Support for CBCC's Grant Application for The Stormwater Management Device Toolkit for Neighborhood Groups and Homeowners Associations in the Coral Bay Watershed

To Whom it May Concern:

I am writing as a resident and homeowner in the Freeman's Ground neighborhood to indicate our support for the Coral Bay Community Council's application for the project to develop and implement a stormwater maintenance device "toolkit" for neighborhood groups and homeowners' associations.

We and other neighborhood groups have worked with CBCC since 2008 to improve our water resource management and stabilize our drainage and access roadways. This latest project will help to create a management and record system that can be shared more permanently with the volunteer residents who management the critical roadway, culvert and drainage maintenance and improvements.

Our neighborhood in Upper Freeman's Ground has six houses, two of which are vacation rentals, and there are several more landowners with property along the half mile of shared roadway (mostly dirt with some paved sections). We do not have a formal HOA. Maintenance is done as needed, and those doing the work occasionally request financial contributions. In 2018, our neighborhood raised funds to have a retaining wall constructed to stabilize the hillside and direct stormwater to a proper channel following damage caused during the 2017 hurricanes. Funds were matched by a grant received by CBCC. A toolkit to assist with recordkeeping and maintenance needs would be valuable to our homeowners and landowners.

Having good practices and records of road and stormwater device maintenance and improvements and expenditures not only provides better access to our homes and businesses, but, as we have realized after the 2017 hurricanes, also provides important documentation for disaster recovery funds and planning.

We strongly support CBCC's application and look forward to being a potential participant in this project.

Sincerely,



Matthew Crafts

JANE ISRAEL
9901 EMMAUS
ST. JOHN, VI 00830

March 29, 2022

To: Department of Interior - Bureau of Reclamation -Water Resources and Planning Office

To be Submitted electronically with CBCC's Grant application

RE: Letter of Support for CBCC's Grant Application for The Stormwater Management Device Toolkit for Neighborhood Groups and Homeowners Associations in the Coral Bay Watershed

To whom it may concern:

I am writing as a representative of the Mill Vista homeowners to indicate our support for the Coral Bay Community Council's application for the project to develop and implement a stormwater maintenance device "toolkit" for neighborhood groups and homeowners' associations.

We and other neighborhood groups have worked with the Coral Bay Community Council (CBCC) since 2008 to improve our water resource management and stabilize our drainage and access roadways. This latest project will help to create a management and record system that can be shared more permanently with the volunteer residents who management the critical roadway, culvert and drainage maintenance and improvements.

In our neighborhood we have been very active in collectively working to maintain our estate road right of way which services the 17 parcels in our neighborhood. To this end we have:

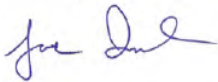
- Periodically collected funds and hired a machine operator to properly pitch the estate road as needed and clean out existing culverts.
- Participated with CBCC in the NOAA-ARRA watershed/stormwater management project to do repairs and improvements to the road known as Mill Vista Road in 2010 - 2012. This work was conducted after the road sustained significant erosion and rutting from Hurricane Earl and Tropical Storm Otto. The neighborhood homeowners contributed funds to further the paving work conducted under the NOAA grant project.
- The neighborhood residents worked hard to repair our road after the damage caused by Hurricanes Irma and Maria, and Tropical Storm Jose in 2017. Our residents spent over 200 hours clearing and cleaning the road and installing Gambian baskets and cistern block retaining walls in the weeks following Hurricane Irma; as well as funding needed materials and much needed machine work.

- Most recently, in 2021, the Mill Vista homeowners contributed over \$60,000 and volunteered hundreds of hours to complete paving of the sections of the road and installing stormwater control devices in sections that were not paved in 2010-2012.

Having good practices and records of road and stormwater device maintenance and improvements and expenditures not only provides better access to our homes and businesses, but, as we have realized after the 2017 hurricanes, also provides important documentation for disaster recovery funds and planning.

We strongly support CBCC's application and look forward to being a potential participant in this project. We hope CBCC will be able to obtain the needed funding to expand their fantastic stormwater management efforts in our watershed. Please accept this letter of evidence of our full support.

Sincerely,

A handwritten signature in blue ink, appearing to read "Jane Israel".

Jane Israel
Representative for the Mill Vista Neighborhood Homeowners



CORAL BAY COMMUNITY COUNCIL

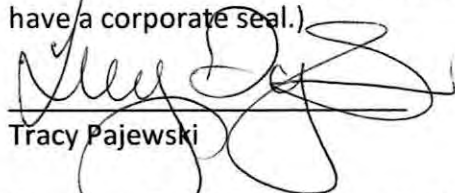
Mail: 9901 Emmaus, St. John, VI 00830
8-1 Emmaus, St. John, U.S. Virgin Islands
CBCC@CoralBayCommunityCouncil.org Phone 340-776-2099
www.CoralBayCommunityCouncil.org
- CBCC is a 501(c)(3) nonprofit organization -
- CBCC is an equal opportunity provider and employer -

Resolution pertaining to: The Stormwater Device Toolkit for Neighborhood Groups, Homeowner Associations and Residents in the Coral Bay Watershed, St. John, USVI

Resolved that: Sharon Coldren, the president of the Coral Bay Community Council, Inc. (CBCC) is the official authorized to commit the organization to the financial and legal obligations associated with receipt of a financial assistance award from the Department of Interior – Bureau of Reclamation (DOI-BR) through the WaterSMART Cooperative Watershed Management Program Phase I Grant: Notice of Funding No. R22AS000163

- The CBCC Board of Directors has reviewed the application, approves and supports it.
- CBCC will work with DOI-BR to meet established deadlines for entering into a grant or cooperative agreement.

I, Tracy Pajewski, Secretary of [Insert name of organization], a [insert name of state] corporation, do hereby certify that the resolution set forth above is a true and accurate copy of a resolution adopted by the board of directors of the Coral Bay Community Council in a duly executed action by written consent without a meeting effective March 28, 2022. In witness whereof, I have executed this certificate this 29th day of March 2022. (CBCC does not have a corporate seal.)



Tracy Pajewski

Secretary, Coral Bay Community Council