



Natural Resources Conservation Service
U.S. DEPARTMENT OF AGRICULTURE

NRCS Virgin Island State Technical Committee Meeting



September 24, 2024
Research & Technology Park UVI

FARM PRODUCTION AND CONSERVATION
FSA | NRCS | RMA | Business Center

Agenda

1. **Director's Welcome – Frank Velazquez**
2. **Roll Call – Mario Rodriguez**
3. **Introduction to STCM – Frank Velazquez**
4. **Open Business – Frank Velazquez**
 - a) NRCS Financial Assistance Recap – Frank Velazquez
 - b) NRCS Engineering Projects updates – Mario Rodriguez
 - c) Equity Subcommittee updates – Cristhian Muñoz Martinez
 - d) U.S. Caribbean Climate Hub Update-- *Dr. William Gould*
 - e) Wildlife, Wetlands & Forests Subcommittee updates – Ivan Llerandi & Sean Kelly
 - f) Caribbean Geographic Area Rate Cap (GARC) for Wetland Reserve Easements (WRE) – Javier Cruz / Open Discussion
5. **New Business – Mario Rodriguez**
 - a) USVI Department of Agriculture – Identifying high priority production areas & collaboration opportunities– *Louis Petersen*
 - b) U.S. Fish & Wildlife Service
 - National Wildlife Refuges System updates – Silmarie Padrón
 - Caribbean Ecological Sciences Field Office updates – Lourdes Mena
 - c) *Arte Suelo Ser* – Agreement project updates & collaboration opportunities – *Zoelie Ocasio*
 - d) Soil Health and Edge-of-Field Monitoring - *Dr. Mario Flores Mangual*
 - e) State Agencies Identified Priorities for 2025 – Open Discussion
6. **Adjournment**

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Natural Resources Conservation Service
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NRCS Financial Assistance Recap

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CONSERVATION STEWARDSHIP PROGRAM RC

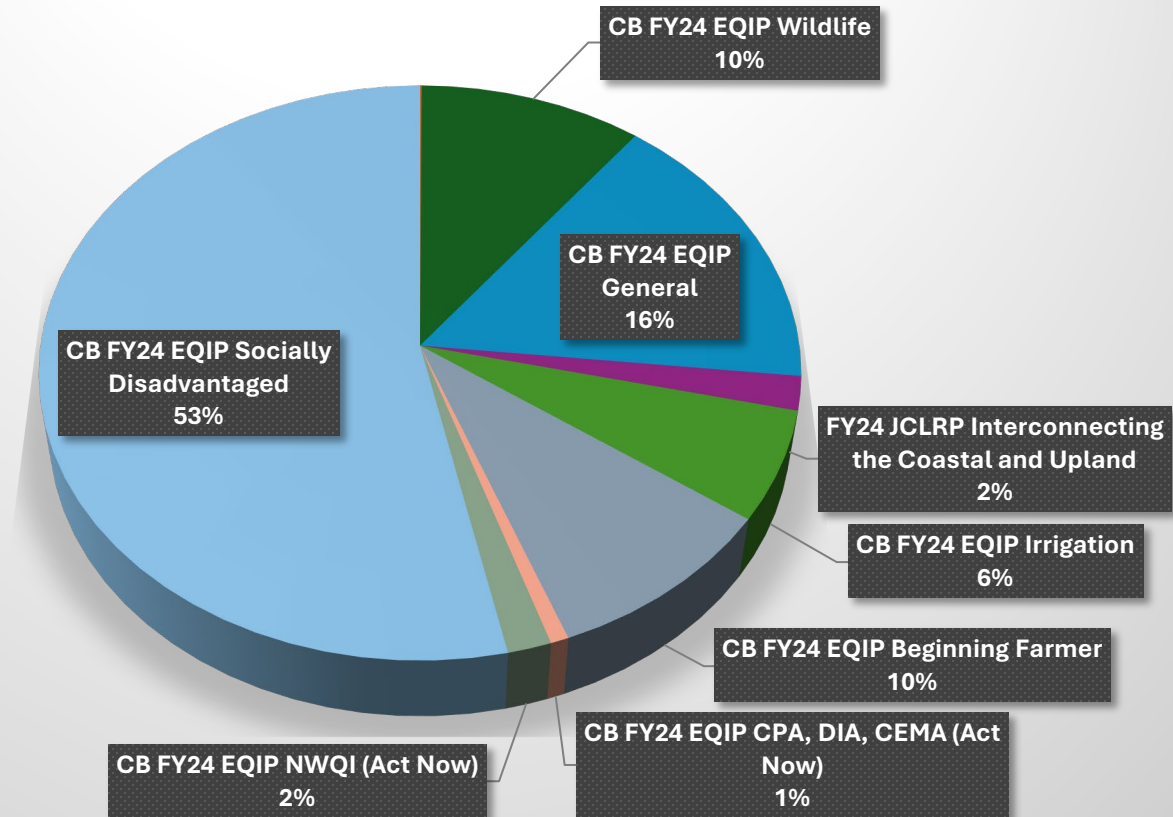
CSP State Priority Resource Concerns – Caribbean Area

State Priority Resource Concerns CSP Agland
Degraded Plant Condition
Pest Pressure
Livestock Production Limitation
Field Sediment, Nutrient, and Pathogen Loss
Storage and Handling of Pollutants
Soil Quality Limitation
Concentrated Erosion
Wind and Water Erosion

State Priority Resource Concerns CSP NIPF
Degraded Plant Condition
Pest Pressure
Fire Management
Aquatic Habitat
Terrestrial Habitat
Soil Quality Limitation
Concentrated Erosion
Wind and Water Erosion

EQIP Allocation per Account in (%)

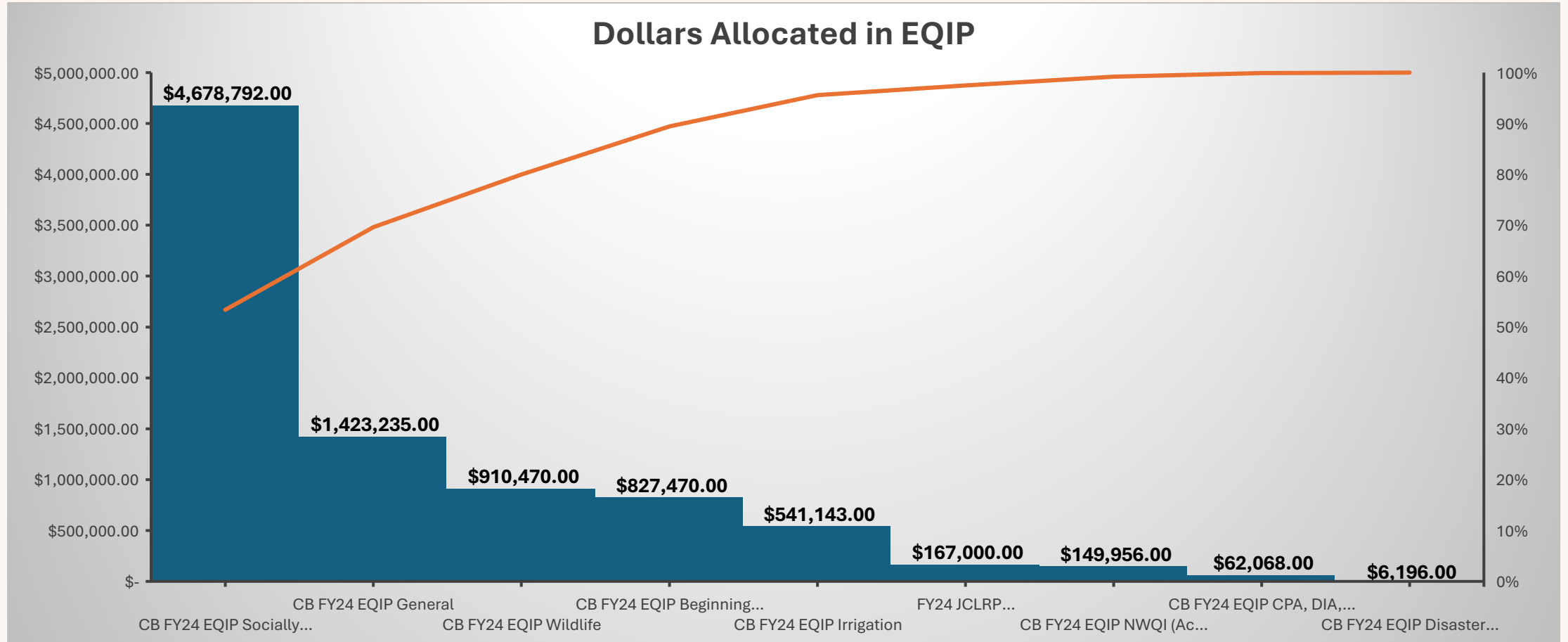
EQIP Reg Allocated



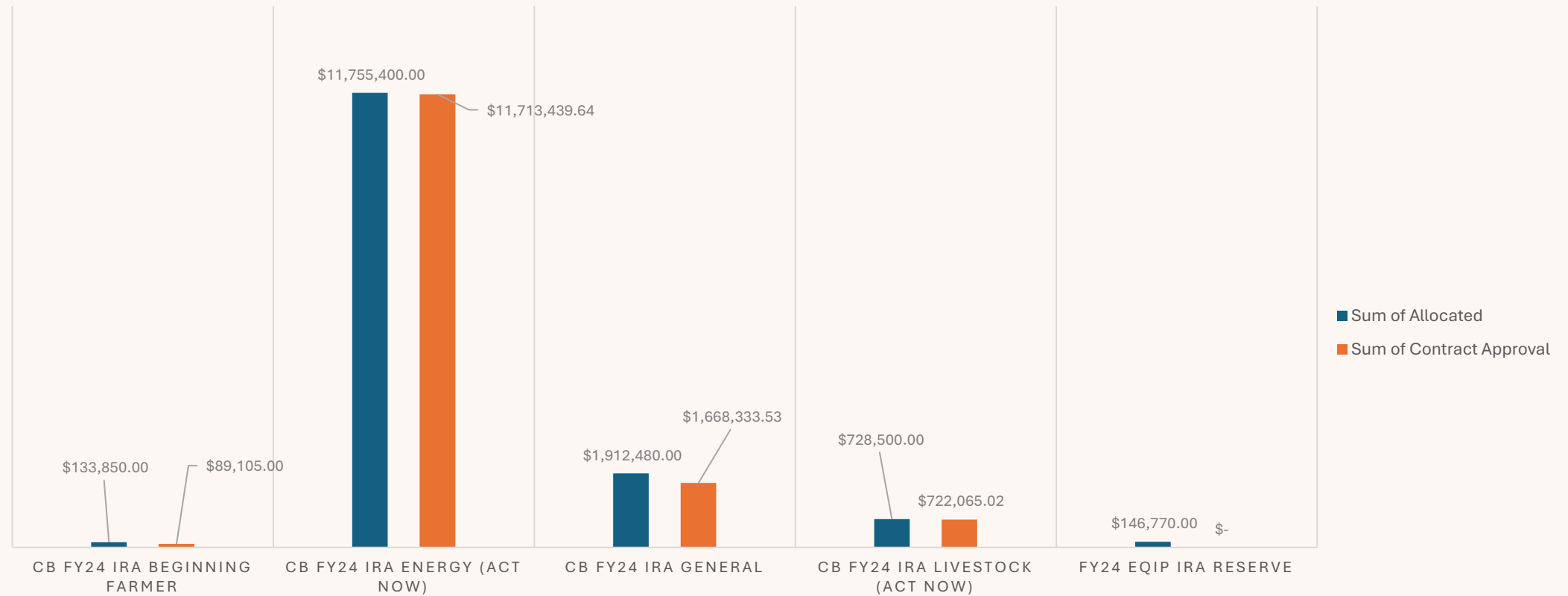
EQIP FUND DISTRIBUTION AND OBLIGATION

Account Name	Allocated	Contract Approval
Caribbean	\$ 9,559,656.00	\$ 8,329,231.99
CB FY24 EQIP Disaster/Emergency (Act Now)	\$ 6,196.00	\$ 6,196.00
CB FY24 EQIP Wildlife	\$ 910,470.00	\$ 644,443.58
CB FY24 EQIP General	\$ 1,423,235.00	\$ 1,423,235.00
FY24 JCLRP Interconnecting the Coastal and Upland	\$ 167,000.00	\$ 117,457.00
CB FY24 EQIP Irrigation	\$ 541,143.00	\$ 541,143.00
CB FY24 EQIP Beginning Farmer	\$ 827,470.00	\$ 825,177.00
CB FY24 EQIP CPA, DIA, CEMA (Act Now)	\$ 62,068.00	\$ 62,068.00
CB FY24 EQIP NWQI (Act Now)	\$ 149,956.00	\$ 149,950.20
CB FY24 EQIP Socially Disadvantaged	\$ 4,678,792.00	\$ 4,559,562.21

EQIP Regular Allocation in Dollars



IRA FUNDING ALLOCATION +92% Obligation





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Watershed Program Update

Sept/2024

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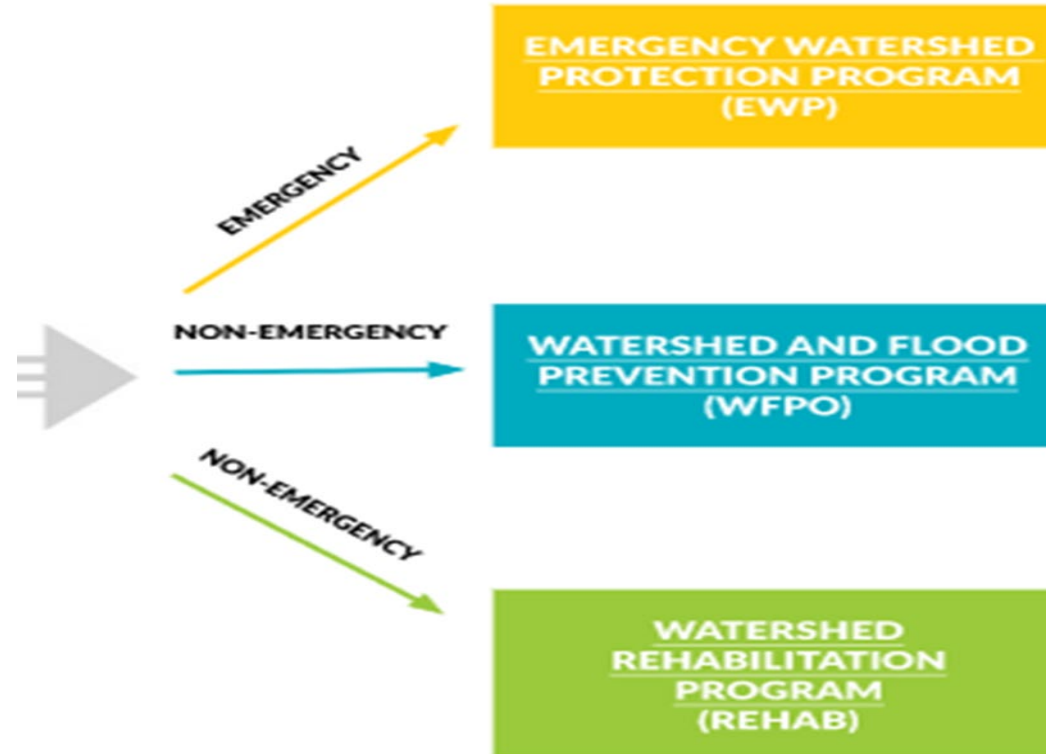
An aerial photograph of a rural landscape. A winding river flows through the center, surrounded by lush green fields and dense forests. A small farm with several buildings is visible on the left bank. The sky is filled with soft, white clouds, creating a misty atmosphere. The overall scene is peaceful and scenic.

USDA NRCS Watershed Programs

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USDA-NRCS Watershed Programs



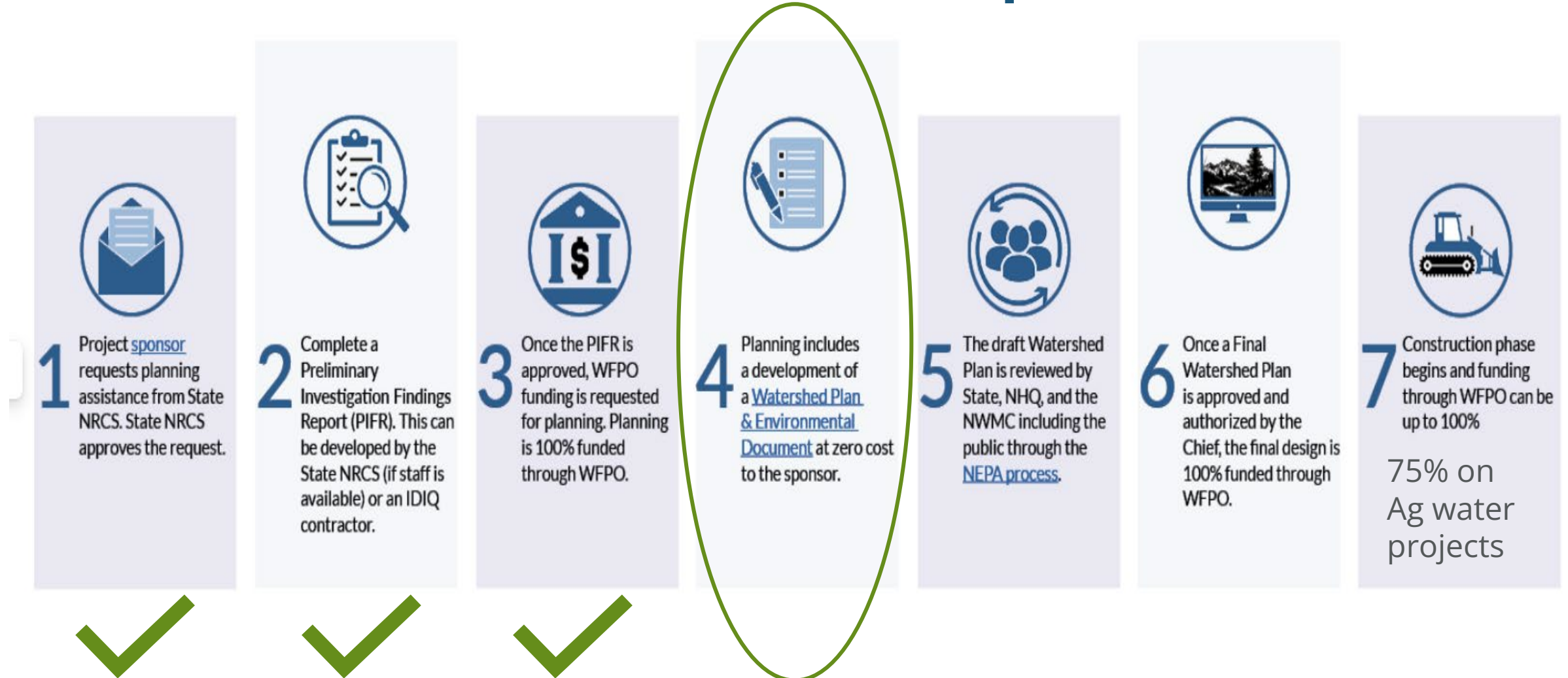


Watershed Flood Protection and Operations

**Isabela
Irrigation
Channels** repairs

Bordeaux Water
Quality and
Quantity
improvements

Watershed Flood Protection and Operations



Isabela Irrigation Channel Repairs



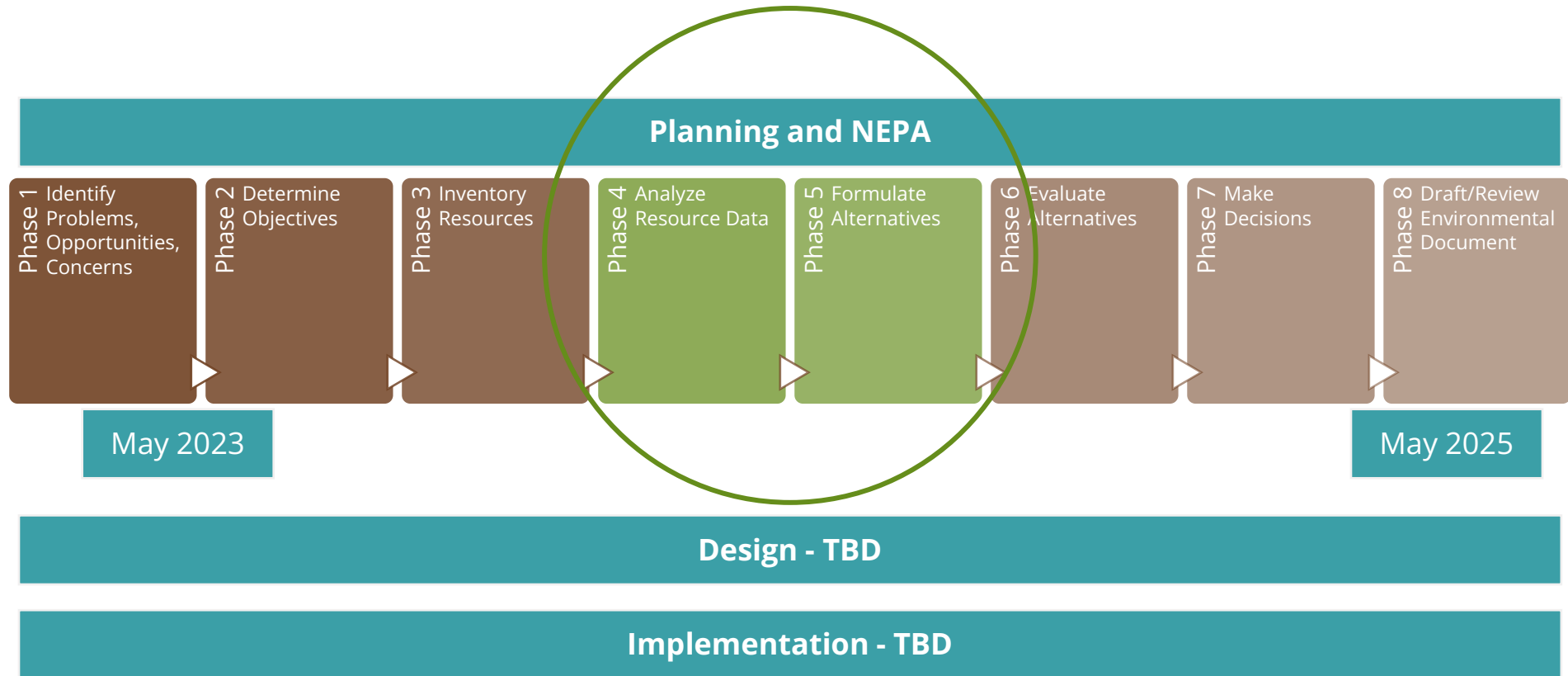
Canal Principal
and Moca Canal

15.3 miles
irrigation
channels

+ 12 miles laterals



Isabela Irrigation Channel Repairs



The proposed project is protecting future agricultural water resources in the farming community of Bordeaux





Bordeaux Farming Community Water Quality and Quantity timeline

Investigation:
PIFR
(Completed
2023)

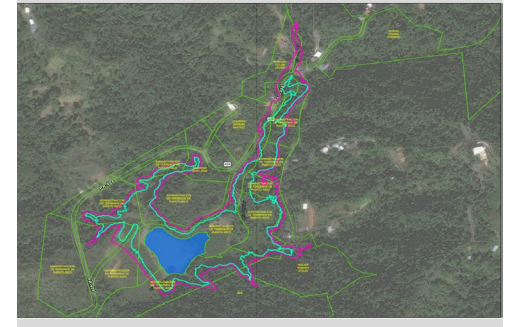
Design (2027)

Planning +
NEPA
2024-2026

Construction
(2028-2030)



Dam Rehabilitation Ajíes & Dagüey





Dam Rehabilitation Ajíes & Dagüey

Assesment
(Completed
2022)

Planning+NEPA
(2022- 2025)

Design
(2 yrs)

Construction
(2 yrs)

Phase 1 – Objective
– Goals – Purpose –
Needs

Phase 2 –
Resources
Inventory and Datan
analysis

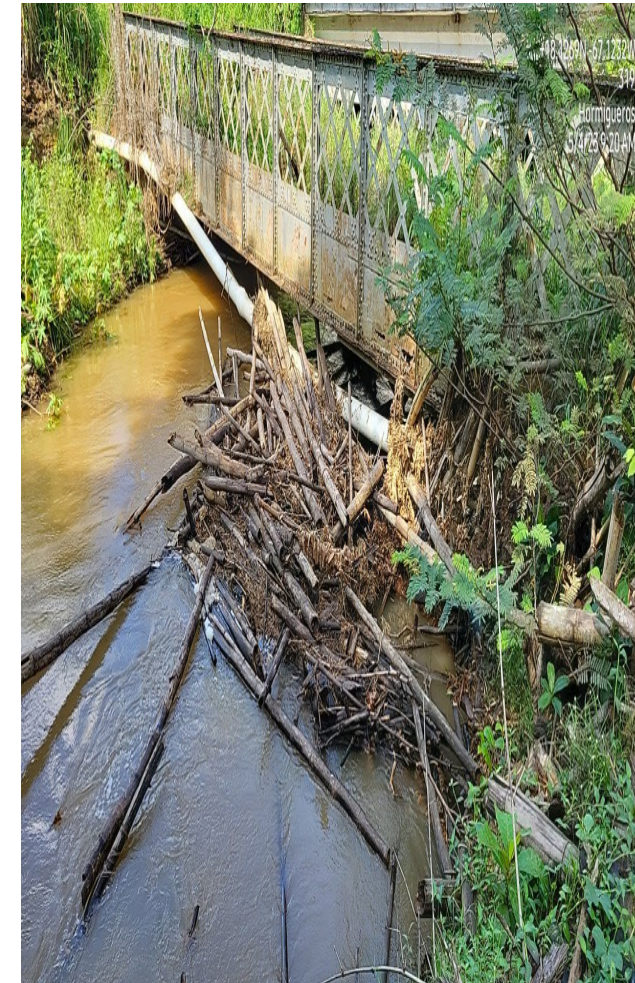
Phase 3 –
Formulation,
Evaluation ,
Alternative
Selection

**Phase 4 – Plan
preparation and
Environmental
Document
(draft)**



Emergency Watershed Protection Program

- Remove debris from stream channels, road culverts and bridges;
- Reshape and protect eroded streambanks;
- Correct damaged or destroyed drainage facilities;
- Establish vegetative cover on critically eroding lands; and
- Repair structural, enduring, and long-life conservation practices



Current Events

- **Maria** – 2 construction projects running
- **Rain even February 2022** -All work completed – closing out
- **Fiona** – Clean ups completed – structural work pending
- **Torrential Rains May 2024** – to move cases to Ernesto
- **Ernesto Tropical Storm** – ongoing sponsor request and site identification





Natural Resources Conservation Service
U.S. DEPARTMENT OF AGRICULTURE

Yilia Baucage Bou, State Conservation Engineer
Caribbean Area Watershed Program Manager
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(787) 342-6916

Watershed Program Update
09/11/2024

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Equity Subcommittee Updates

PR State Technical Committee Meeting
September 24, 2024

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NRCS Equity Division

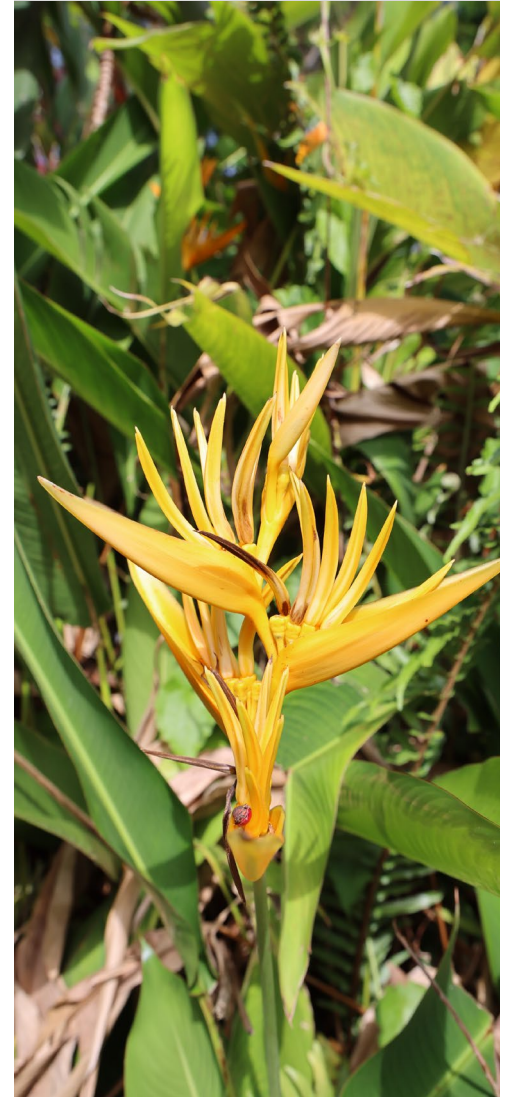
Looking Through the Lens of Others

Equity is the consistent and systematic treatment of all individuals in a **fair, just**, and **impartial manner**, including people who belong to communities that have been denied such treatment.



Equity Subcommittee

- **FY 2024 Meetings:**
 - January 10, 2024
 - April 3, 2024
- **Discussion Topics:**
 - Equity & USDA
 - NRCS Caribbean Area Equity Plan
 - Caribbean Area Equity Barriers
 - NRCS Outreach & Reporting
 - Equity Data Analysis
 - NRCS Program Ranking Pools



Equity Subcommittee

■ Current Members:

- Alliance for Agriculture
- RAFI
- Victus PR
- Hispanic-American Institute
- Rural Coalition
- VI Good Food Coalition

Join the Conversation!

Contact:

Némesis Ortiz Declet

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787-379-2571





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Subcommittee of Forestry, Wildlife and Wetlands

State Technical Committee Meeting of the U.S. Virgin Islands



Sean P. Kelly & Iván Llerandi-Román
U.S. Fish and Wildlife Service
September 24, 2024

Responsibilities of the Subcommittee

- Recommend conservation priorities of natural resources, and conservation practices.
- Provide criteria for prioritization of conservation contracts and/or projects or new initiatives
- Recommend strategies for the utilization of NRCS funds, conservation practices and/or potential needs for mitigation actions
- Develop proposals in collaboration with partners to compliment NRCS funding with funds from other agencies and/or organizations.
- Provide assistance in reviewing strategies to protect, conserve and restore wildlife species and their habitats, increase forest cover and conserve and protect wetlands.



Recent Initiatives, Initiaves in Progress and Future Initiatives

- Forest Legacy Program Advisory Committee
(Potential to also be used in USVI through VIDA)
- Caribbean Wetland Plants Guide
(Soon to be ready for distribution)
- Guide for Native Trees for Conservation Practices in PR and USVI
(Currently being translated to English)
- Off-site Methods for Wetland Determination Guide
(Completed)
- US Caribbean Hydric Soils Training
(Occurred in July 2024)



Recent Initiatives, Initiaves in Progress and Future Initiatives

- LTP-Easement Compensation Procedure for Fiscal Year 2024
Agricultural Conservation Easement Program (ACEP)
Wetland Reserve Easements (WRE) Applications.
(Discussed or to be discussed during this meeting)
- Re-activate the Subcommittee of Forestry, Wildlife and Wetlands in the USVI to promote conservation initiatives and to address specific regional concerns across St. Croix, St. Thomas and St. John.



Contact Information

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Iván Llerandi-Román

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State Conservation Biologist

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Caribbean ES Field Office

Website: <https://www.fws.gov/office/caribbean-ecological-services>



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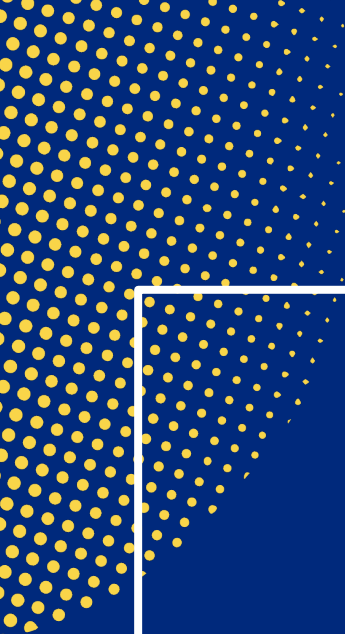
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N R C S U S V I S t a t e T e c h n i c a l

C o m m i t t e e M e e t i n g

U V I R e s e a r c h & T e c h n o l o g y

P a r k C o r p o r a t i o n

S e p t e m b e r 2 4 , 2 0 2 4



I d e n t i f y i n g H i g h P r i o r i t y
P r o d u c t i o n A r e a s a n d
C o l l a b o r a t i o n O p p o r t u n i t i e s

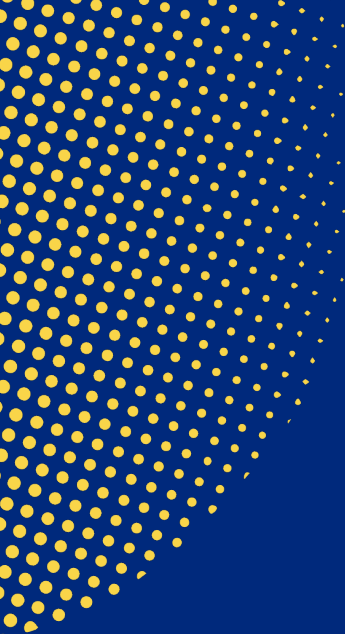
VIDA Mission Statement

To develop, support, and promote an economically lucrative agricultural industry in the US Virgin Islands while supporting farmers, consumers, and the environment.



Virgin Islands Agricultural Plan

Pursuant to Act 8404 a plan for agricultural development in the territory was authorized and approved by the USVI by the Legislature and the Governor.



High Priority Projects of the USVI **Agricultural Plan**

- **Comprehensive Irrigation System and Water Supply**
 - **Enhanced Infrastructure, Tools, and Equipment**
 - **Strategic Increase in VIDA Personnel**
 - **Support for Orchard Development Initiative**
 - **Enhanced Grant Writing Capacity at VIDA**
- 

Farmland Infrastructure Improvement Program (FLIIP)





Increased Water Storage For Farmers



Increased Water Storage For Farmers

Enhanced Water Distribution System



USDA NRCS EQIP Program



USDA NRCS EQIP Program



USDA NRCS EQIP Program



USDA NRCS EQIP Program



Urban Agriculture Initiative



St. John Community Garden Project

Collaboration Opportunities

- **MOU Between USDA NRCS for Supplemental Staffing**
- **Joint Projects Between USDA NRCS for Infrastructure Improvement Support**
- **On-going Joint Outreach and Training Activities**
- **Support for Fruit Orchard Establishment Initiative**
- **Support for Hay Field Maintenance/Rehabilitation Initiative**

St. Croix Tomato Packing Shed (1960s)



Estate Dorothea, St. Thomas (1954)



A white ceramic bowl is filled with numerous bright red hibiscus flower buds. The bowl is placed on a large, flat, greyish-brown rock. The background shows a garden with green foliage and other rocks. The text "THANK YOU!!" is centered over the flowers in a white, bold, sans-serif font.

THANK YOU!!



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Photo by Alcides Morales
Roseate Tern (*Sterna dougallii dougallii*)

U.S. FISH WILDLIFE SERVICE IN THE CARIBBEAN

"CONSERVATION IS FOR TODAY AND THE FUTURE"

Silmarie Padron, Project Leader Caribbean Islands NWR Complex
Lourdes Mena, Field Supervisor Caribbean Ecological Services Field Office



Southeast Region

The mission of the U. S. Fish and Wildlife Service (FWS) is to work with others to conserve, protect, and enhance fish, wildlife, and plants and their habitats for the continuing benefit of the American people.



Divisions in the Caribbean





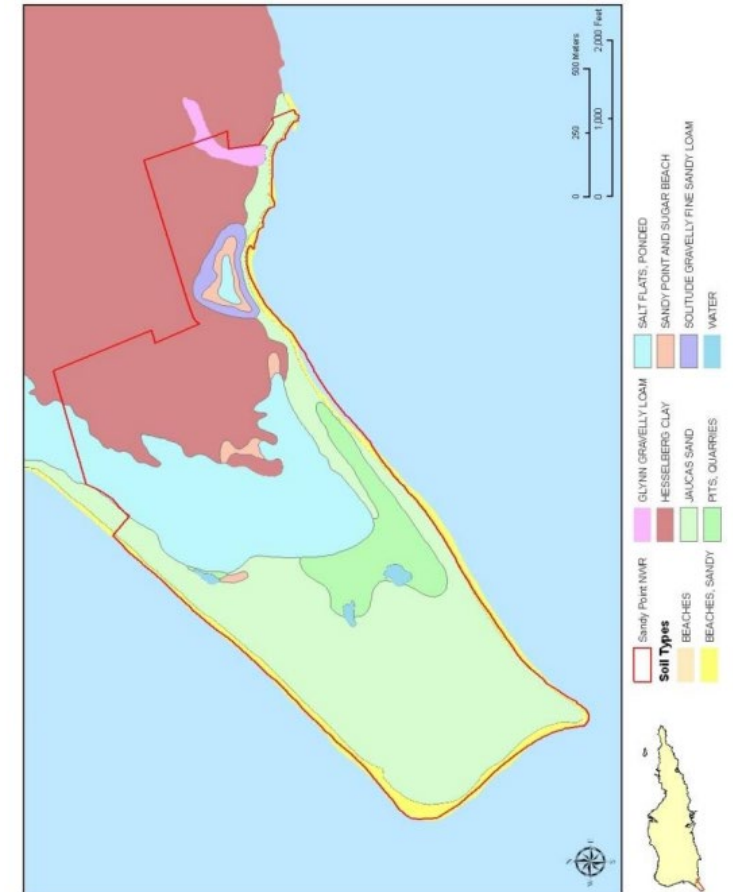
Caribbean Islands NWR Complex



Location of NWRs at USVI



Figure 6. Soils of Sandy Point NWR



Priority Areas for USFWS (NWR) in USVI

- Sandy Point NWR (383 acres): Established in 1984 to protect nesting habitat of endangered leatherback sea turtles (*Dermochelys coriacea*). Additional acres were acquired to protect the Aklis pre-historic archaeological site and a stand of the endangered Vahl's boxwood tree (*Buxus vahlii*).
- Continue the principal management objectives:
 - provide habitat and protection for threatened and endangered species, with particular emphasis on the leatherback and other species of sea turtles;
 - foster a sense of public commitment and understanding for sea turtles and the need for protection by providing opportunities for environmental education, interpretation, and compatible wildlife-dependent recreation;
 - support the Service's commitment to implement and carry out sea turtle recovery plans;
 - protect and restore habitat for a natural diversity of plant and wildlife species.

Figure 9. Principal habitats of Sandy Point NWR

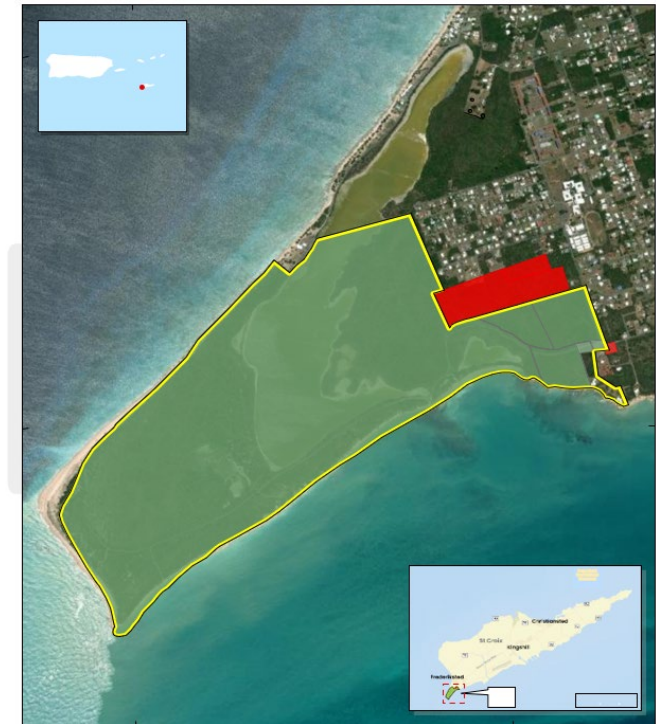
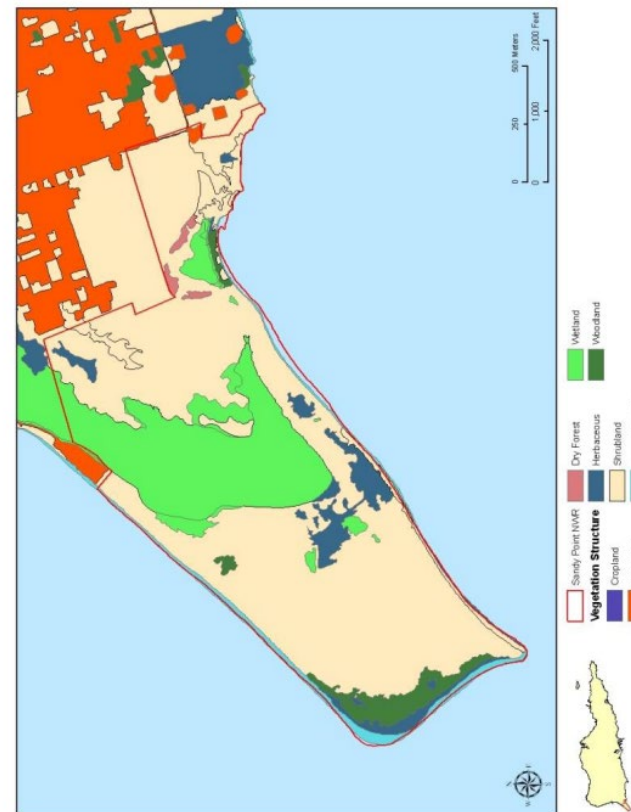


Figure 1. The yellow shaded area is the current refuge acreage. The larger red parcel includes the 7.4 acres at # 1 White's Bay and the smaller red square shows the 0.6 acre parcel at #162 Concordia WE.

To date, 164 species of birds have been recorded in the area



Interest:

- Conservation Easement Programs:
 - Expand Sandy Point NWR to Service mechanism (Expansion process or Conservation Easement Programs).
 - Puerto Rico:
 - Cabo Rojo Salt Flats: Potential conservation plan and practices (WRP site)
 - Lajas: Sierra Bermeja
- Participate in State Technical Committee Meetings and Local Working Groups.
- Opportunities: Implement CIG projects (e.g., agroforestry and wildlife) and Watershed Management Plan adjacent to public lands.



Thank You

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786-847-3314

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ARTE-SUELO-SER

The virtual Soil Museum of the Caribbean: *nurturing the connection between soils and humans through a synergy between sciences and arts*



NR22F3520001C007





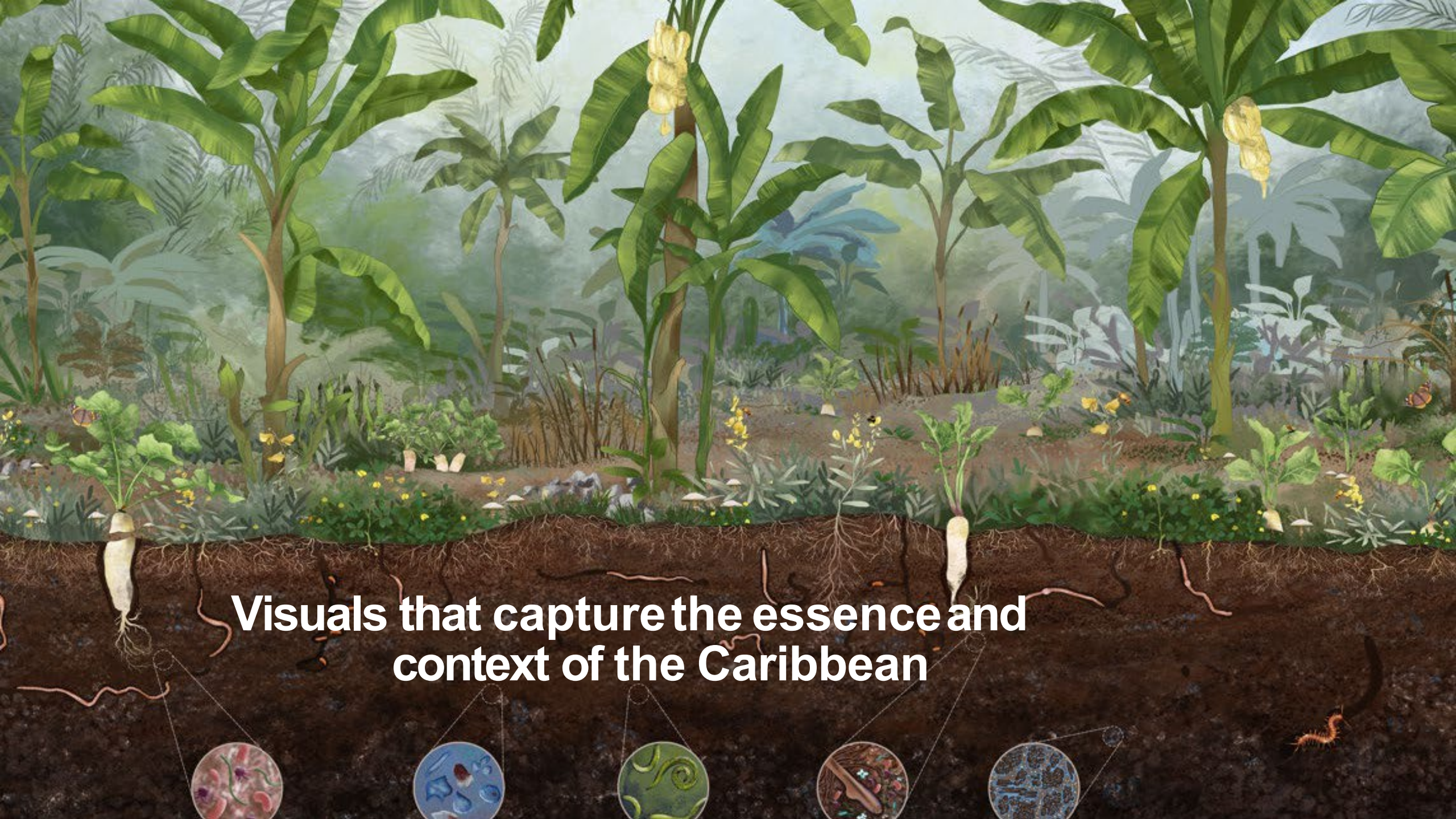
- Arte-Suelo-Ser ("Art"- "Soil"- "Being") is a non-profit organization established in 2020 that integrates soil sciences within the arts, humanities, social and natural sciences.
- Our mission is to educate with a **culturally responsive teaching approach** about the importance of soils to the human well-being and ecosystem services.
- We believe that one way to manage our resources sustainably and protect them from misuse is by raising awareness about them and promoting how soil legacy contributes to our society and future generations.

OBJECTIVES

1.Virtual website but a virtual Museum



Art by Mariely Vargas



**Visuals that capture the essence and
context of the Caribbean**

Creating a museum through a network of collaborations



aesthetics
climate*regulation
concrete
pets
fresh*air
primary*production
biodiversity
nothing
recreational
food
spiritual&inspiration

*Scientific essays (Roberto Carrera,
Beverly Alvarez, Kidany Sellés, and
more)*



**a synergy between
sciences and arts**

Ana Rivera



a synergy between sciences and arts

Jose Almodóvar

2. Educational short film: Bayamon



Team

Margaret Mair
Directora y Productora

Raisa Bonnet
Directora de Fotografía

Margarita Aponte
Sonidista

Jorge André Santiago
Asistente de Cámara

Jennifer Cardé y Teresa Ocasio
Asistentes de producción

--
Manuel Matos y Yomaries González
Científicos invitados

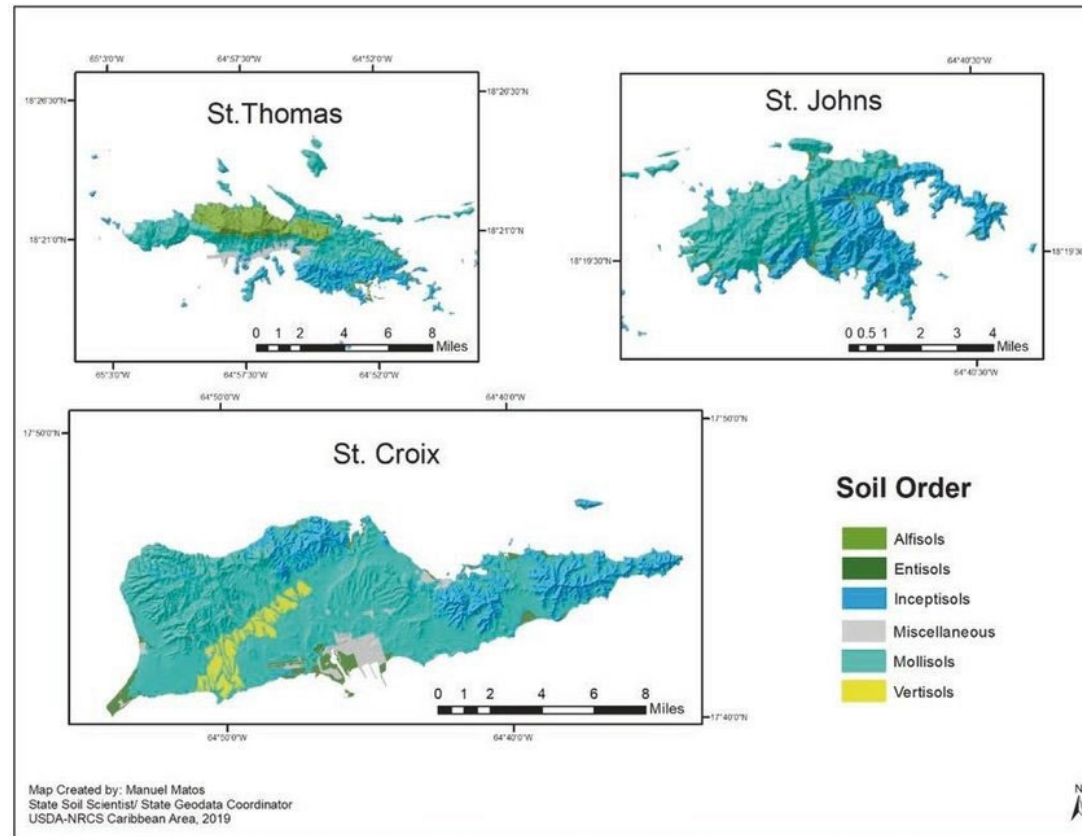
Carlos López
Agricultor invitado

Amara Abdal Figueroa
Artista invitada

2. Educational short film: Victory soil

March 2025

Alana Toro Ramos
Omar Iloy



A close-up photograph of a hand holding a clump of dark brown soil. Several thin, light-colored roots are visible extending from the soil. The background is a blurred green, suggesting an outdoor setting. The text "blend an artistic, scientific, and educational perspective" is overlaid in white in the upper left corner.

**blend an artistic, scientific, and
educational perspective**

Still picture from the short

3. Soil Heritage Project

Creating a living lab through collaborative agreements

Puerto Rico “San Pedrito”

U.S. Virgin Islands



4. Lesson Plans - Workshops for educators

March 2025

Caribbean Soil Museum
Arte-Suelo-Ser Inc.

info@artesueloser.org

Guide for Educators

The Architecture of Soils



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Guide for Educators

Painting with Nature: Exploring Soil Diversity



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Guide for educators

Discovering Soil Chemistry: Evaluating Soil pH with Purple Cabbage



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F2: Exhibition about soil health



This call is part of the Learning and Research Program of the Caribbean Soils Museum, led by Arte-Suelo-Ser, with financial support from USDA-NRCS



Form:



Congress Arte Suelo Ser 2024

Join us – December 14th



info@artesueloser.org

787-800-5863



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SERVICIO DE
EXTENSION AGRICOLA
COLEGIO DE CIENCIAS AGRICOLAS

Soil health and edge-of-field runoff monitoring of a small ruminant farm with different grazing densities



**Outreach Activity 2024
At UVI on October 18
8:30 am to noon
Room 133 in the Research and
Extension Center (REC) building**

Dr. Mario Flores Mangual

<https://www.uprm.edu/soil-health>



Project objectives

- **Monitor the soil health** parameters in a small ruminant farm with two plots with different grazing densities to characterize the effects of these densities on soil health.
- **Monitor soil erosion and runoff** (quality and quantity) to demonstrate the off-farm effects of small ruminants grazing densities in the Caribbean and showcase the benefits of edge-of-field monitoring.
- **Evaluate the RUSLE2** performance with the acquired data from the **edge-of- field monitoring**.
- **Identify the soil health indicators that correlated** the best with **runoff** quantity and quality to possibly establish them as proxy indicators of soil erosion and runoff in non- instrumented sites.



Outreach Objectives

- Introduce them to the Project
- Review Soil Health results
- Familiarize them with the installation, equipment, and data from Edge of Field Monitoring
- Discuss potential project opportunities



Instruments



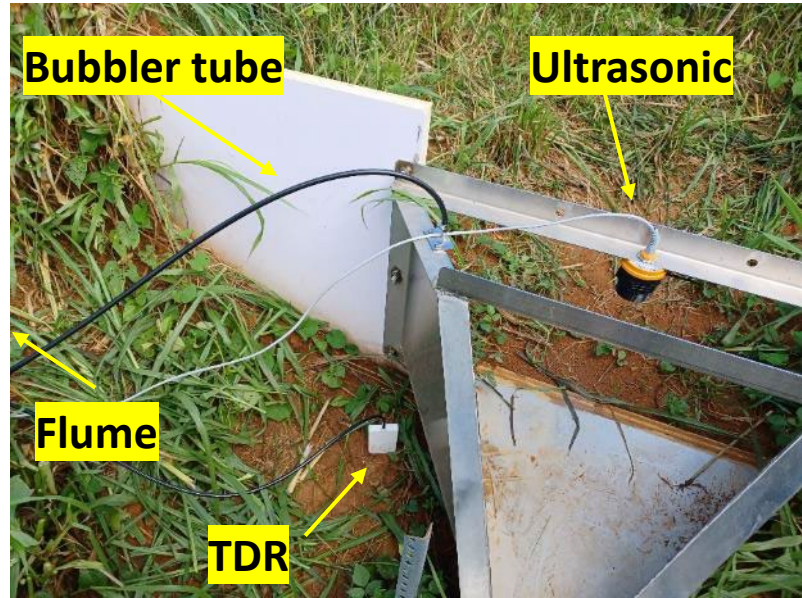
ISCO 3700
Water sampler



Tubing installation for
Water sampler



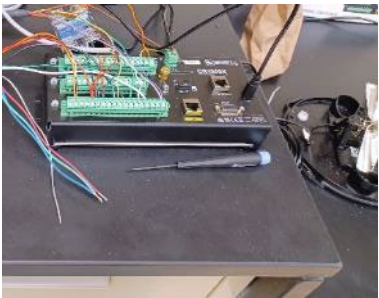
Instruments



Tube for bubbler, TDR and ultrasonic



Ultrasonic
calibration



Datalogger



Bubbler enclosure

Treatments and sampling





**SERVICIO DE
EXTENSION AGRICOLA**
COLEGIO DE CIENCIAS AGRICOLAS

Mario L. Flores Mangual

- Email: mario.flores1@upr.edu
- Phone: 787-832-4040, ext. 2526
- Office: Edificio Piñero, Office: 216A, UPR-Mayagüez Campus, Mayagüez
- Project Webpage: <https://www.uprm.edu/soil-health/>



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Natural Resources Conservation Service
U.S. DEPARTMENT OF AGRICULTURE

NRCS Virgin Islands State Technical Committee Meeting



September 24, 2024

FARM PRODUCTION AND CONSERVATION
FSA | NRCS | RMA | Business Center

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