WATER FOR BARBUDA SCHOOLS

DISTRICT 7030 CONFERENCE

PORT OF SPAIN, TRINIDAD

APRIL 28 -29, 2017

WATER FOR BARBUDA SCHOOLS

- THE PROBLEM
- PROJECT BACKGROUND
- A LITTLE BIT ABOUT BARBUDA
- PROJECT SPECIFICS
- COSTS AND FUNDING
- ONGOING SUPPORT

Caribbean360

Antigua drought leaves main reservoir with six weeks water supply

CARIBBEAN360 FEBRUARY 26, 2014

ST JOHN'S, Antigua, Wednesday February 26, 2014, CMC – The Antigua Public Utilities Authority (APUA) has embarked on a water rationing programme after indicating that the main reservoir has approximately six weeks of water supply left.

APUA said that decreasing surface water reserves has forced it to reduce the volume of water distributed to consumers and warned that the service would be "depressed islandwide from 10pm-4 am (local time) daily until water conditions improve".

No end in sight to A&B's water crisis

January 7, 2015 Tameika Malone

Antigua Public Utilities Authority (APUA) said it could be months before residents start to have water running from their taps on a regular basis, and an official said Antigua & Barbuda will continue to be gripped by a water crisis if there is not a significant amount of rainfall soon.

APUA Production Engineer Ian Lewis said the country's main surface water source, Potworks Dam, is at about one-third of its capacity, and that the situation is compounded because the annual dry period runs from January to June

Caribbean swelters under worst drought in five years

Associated Press in San Juan
Wednesday 24 June 2015

Forecasters expect quieter hurricane season this year which means less rain to help refill dry reservoirs and water withering crops

The worst drought in five years is creeping across the Caribbean. From Puerto Rico to Cuba to St Lucia, crops are withering, reservoirs are drying up and cattle are dying while forecasters worry that the situation could only grow worse in the coming months.

THE PROBLEM

- LOW RAINFALL (< 40 INCHES PER YEAR)
- APUA CANNOT SUPPLY WATER CONSISTENTLY
- RESERVOIRS AND DAMS OFTEN EMPTY
- OVER 70% OF WATER SUPPLY FROM SEAWATER DESALINATION
- WATER RATIONING IN THE DRY SEASONS (DECEMBER TO MARCH AND MAY TO JULY)

THE PROBLEM

- RAINWATER HARVESTING PRACTICED FOR CENTURIES
- SOME PUBLIC SCHOOLS HAVE STORAGE CISTERNS BUT MISSING EAVESTROUGHS AND PUMP SYSTEMS TO DISTRIBUTE THE WATER
- PUBLIC WATER SUPPLY CAN BE OFF FOR OVER A WEEK IN DRY SEASONS

THE PROBLEM

- PUBLIC WATER SUPPLY CAN BE OFF FOR OVER A WEEK IN DRY SEASONS
- SCHOOLS SOMETIMES HAD TO CLOSE FOR PUBLIC HEALTH REASONS

PROJECT BACKGROUND

- WATER AND SANITATION IS ONE OF SIX RI FOCUS AREAS
- PROJECT EXECUTED IN PARTNERSHIP WITH THE EMBASSY OF SWITZERLAND
- BACK-UP WATER SYSTEMS INSTALLED IN:

  - 4 PUBLIC SCHOOLS IN ANTIGUA

  - SALVATION ARMY HOME FOR ABUSED AND ABANDONED GIRLS

  - PRIMARY SCHOOL AND DAYCARE IN BARBUDA
- BACK-UP WATER SYSTEMS PREVIOUSLY INSTALLED IN 3 PUBLIC SCHOOLS IN 2010

BACK-UP WATER SYSTEMS FOR ANTIGUA SCHOOLS

REPAIRING EAVESTROUGHS

WATER STORAGE TANKS

PUMP SYSTEMS

BACK-UP WATER SYSTEMS FOR ANTIGUA SCHOOLS

T.N. Kirnon Primary School (2010)

Urlings Primary School (2010)

BACK-UP WATER SYSTEMS FOR ANTIGUA SCHOOLS

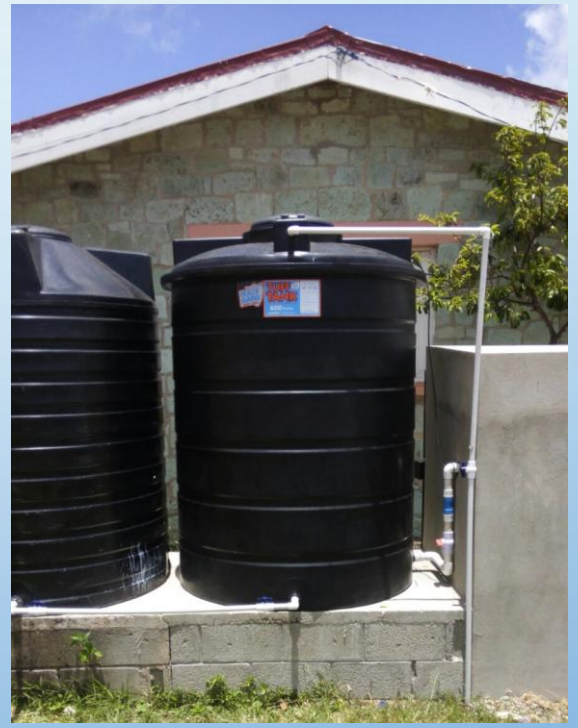
Freetown Primary School (2016)

Seaview Farm Primary School (2016)

BACK-UP WATER SYSTEMS FOR ANTIGUA SCHOOLS

Freemans Village Primary School (2016)

Bethesda Primary School (2016)



BACK-UP WATER SYSTEM FOR GIRLS HOME

ABOUT BARBUDA

- LOCATED 27 MILES NORTH OF ANTIGUA
- AREA: 62 SQ MILES (160 SQ KM)
- POPULATION: 1,600
- HIGHEST ELEVATION: 124 FT (38 M)
- ONLY TOWN: CODRINGTON
- CODRINGTON LAGOON 16.5 MILES LONG AND SITE OF ONE OF LARGEST FRIGATE BIRD SANCTUARIES

PROJECT SPECIFICS

- MAINS SUPPLY FROM APUA INTERMITTENT AND OFTEN BRACKISH

- EXISTING RAINWATER CISTERNS WERE IN POOR STATE OF REPAIR WITH NO OPERABLE WATER PUMPS

PROJECT SPECIFICS

- PRIMARY SCHOOL: 230 STUDENTS
- PRESCHOOL: 50 STUDENTS
- DAYCARE: 26 INFANTS

BUCKETS FOR COLLECTING WATER

DAYCARE WATER CISTERN

PROJECT SPECIFICS

EXISTING WELL ACROSS STREET

SOLAR POWERED WELL PUMP

REVERSE OSMOSIS SYSTEM

PROJECT SPECIFICS

RAINWATER CISTERNS

WATER FILLING CISTERNS

NEW PUMP SYSTEM

BARBUDA WATER PROJECT SITE LAYOUT

PROJECT COSTS AND FUNDING

Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

Embassy of Switzerland in the Dominican Republic

US$8,083 Project Funding

ROTARY CLUB
ROTARY
INTERNATIONAL
ANTIGUA SUNDOWN

Project Management & Coordination

Climate *innovation* Center
Caribbean

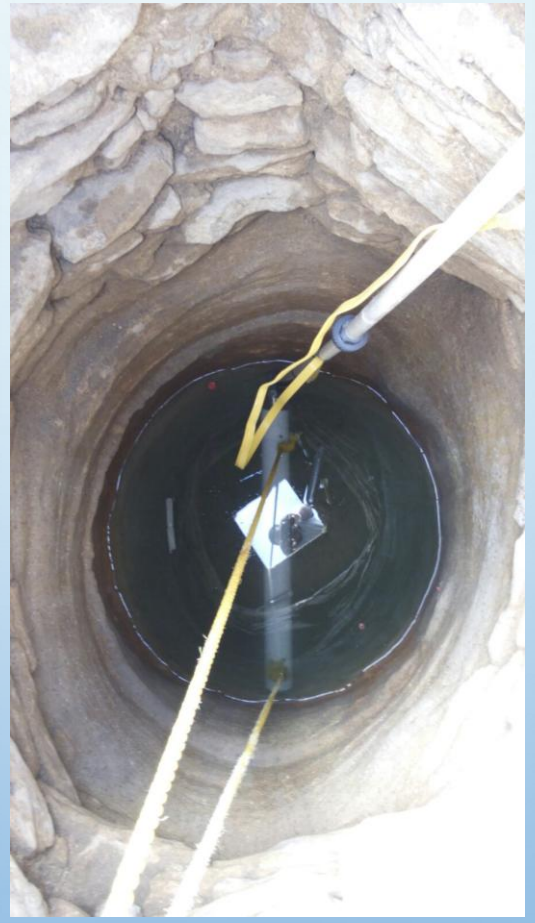
US$11,120 Proof of Concept Funding

cwt

Design & Installation

ONGOING SUPPORT

- CODRINGTON LAGOON NATIONAL PARK RANGERS TRAINED IN OPERATION AND MAINTENANCE
- ONGOING TECHNICAL SUPPORT AND SUPPLIES TO BE PROVIDED BY INSTALLER
- SYSTEM OPERATING RELIABLY SINCE SEPTEMBER 2016



THANKS FOR YOUR ATTENTION