

Establishing a Volunteer Water Quality Monitoring Program in the Dominican Republic

Julie Wood, Charles River Watershed Association

Enmanuel Vargas, Plan Yaque

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Charles River Watershed Association

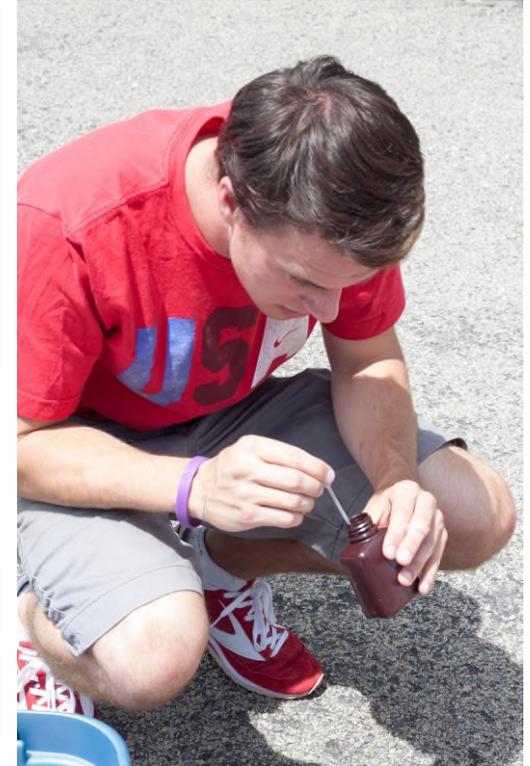
Charles River Watershed Association

- Founded 1965
- One of the countries oldest watershed associations
- Interdisciplinary staff ➡ Integrated approach
 - Scientists
 - Lawyer
 - Planner
 - Policy experts
 - Director
 - Communications and support staff
- Work closely with EPA Region 1, state agencies, and 35 watershed municipalities



Charles River Watershed Association

- Program Areas
 - Field Science
 - Blue Cities Initiative (low impact development and green infrastructure)
 - Climate Change Adaptation
 - Law, Advocacy and Policy
 - Twinning

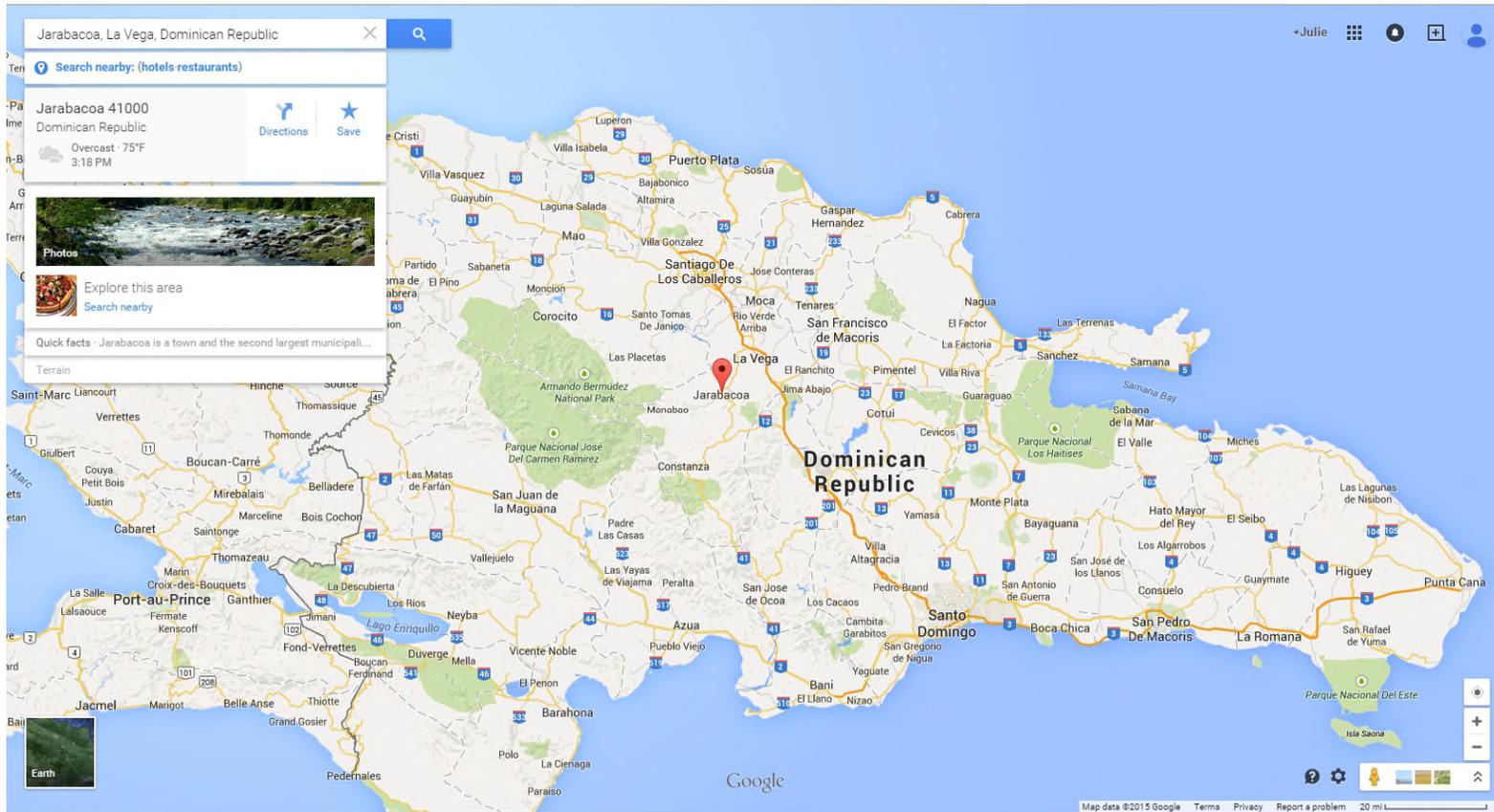


Twinning

- International River Fund Program opportunity for RiverPrize winners
- Program Design
 - Partner selection
 - Develop work plan (typically 3 years)
 - Signed MOU/agreement among partners
 - Implement work plan
 - Project reporting and evaluation
 - Raise funds or develop funding model to sustain program into the future



Jarabacoa, Dominican Republic



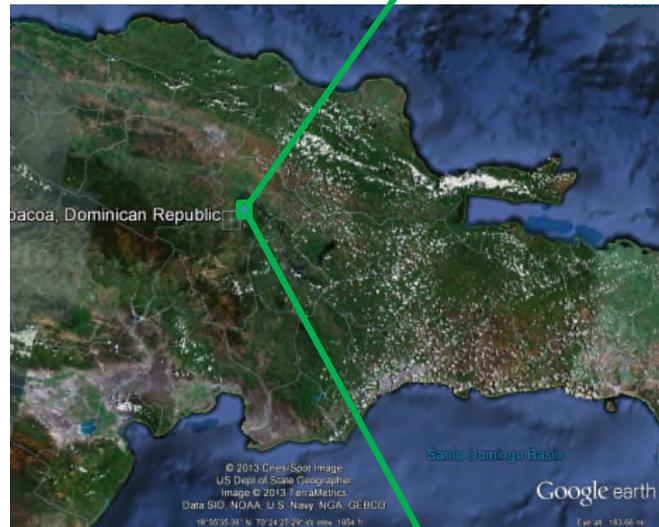
Jarabacoa City is located in the highlands of the Cordillera Central in the west central portion of the Dominican Republic

- Population approx. 30,000
- Domestic tourist destination
- Highly valued for its surrounding broadleaf and pine forest, with a great diversity of endemic and native flora and fauna
- Hydrologic alterations and urban pollution threaten water quality, public recreation and downstream reservoirs

Primary Partners

- Charles River Watershed Association (CRWA), Boston, MA
- The Nature Conservancy (TNC), Santo Domingo, Dominican Republic
- Escuela de Medio Ambiente y Recursos Naturales (EMARN) – National Environmental School of the Dominican Republic, Jarabacoa
- Plan Yaque – Regional Planning Agency for the Yaque del Norte watershed, Jarabacoa





Project Goals

- Restoration of Jarabacoa's urban streams
- Education/awareness about the value of rivers
- Change in public's behavior
- Serve as a model for activities throughout the Yaque del Norte watershed



Establishing Volunteer Water Quality Monitoring in Jarabacoa

Challenges

- No **established models** of volunteer monitoring in the county
- No water quality **expertise** at Plan Yaque (host organization)
- No commercial **labs** in area
- Limited access to **equipment** on the island
- Significantly polluted and negative **attitudes** toward water bodies
- Potential volunteer network mainly **non-technical** people, primarily youth
- No dedicated local **funding**



Establishing Volunteer Water Quality Monitoring in Jarabacoa: Training

Critical Component #1: Training!

- Targeted Plan Yaque staff and their partners (including local and federal officials)
- Trained program staff/organizers before recruiting volunteers
- Training topics included program design, site selection, monitoring methods, data management, and data reporting
- CRWA conducted one training directly to volunteers but primarily focused on building capacity at Plan Yaque
- Refresher trainings, review of equipment and protocols are a part of every in person visit



Establishing Volunteer Water Quality Monitoring in Jarabacoa: Dedicated Staff

Critical Component #2: Dedicated Staff

- CRWA and Plan Yaque each secured some funding to establish a volunteer coordinator position
- Volunteer coordinator responsibilities:
 - Volunteer recruitment and training
 - Data management and reporting
 - Equipment maintenance and purchases
 - Conducts sampling with the volunteers



Establishing Volunteer Water Quality Monitoring in Jarabacoa: Equipment

Critical Component #3: Equipment

- CRWA obtained \$10K in grant funding to purchase equipment
- Unique constraints:
 - Replacement/maintenance supplies and parts available in DR
 - Simple to use but provide high quality data
 - Free/inexpensive to maintain
 - Educational/instructive
 - Able to take on a commercial flight (no acid!)
- Designed and purchased sampling team t-shirts



Establishing Volunteer Water Quality Monitoring in Jarabacoa: Program Details



- Volunteers are primarily high school and college students
- Starting to engage more adult residents as volunteers
- Volunteers work on teams of 3-4 people
- Measure temperature, depth, secchi depth, pH, nitrate-nitrite, visual assessment
- Monthly sampling on pre-scheduled dates
- Plan Yaque staff run volunteer samples for:
 - Turbidity
 - *E.coli*
 - Conductivity

Program Accomplishments

- 45 current volunteers
- Sampling since mid-2014
- Educational signage at each monitoring site
- Volunteers have become involved beyond water quality monitoring
- Volunteer training guide
- Data used to guide restoration activities and track improvements



Lessons Learned

- Strong, dedicated local partners are critical
- Allow time for all partners to get to know each other and build trust
- Take time to understand the local culture
- Support the program: equipment, staff, training
- Share examples of the value and power of data in your own work

Thank You to our Funders!

- International River Foundation
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- Blossom Fund



Thank you!
Julie Wood
Charles River Watershed Association
jwood@crwa.org
781-788-0007

