Gravity-Fed Water Distribution System
Bucori, Panama

Mission Statement
Create a pipe network that will distribute water from 3 springs to the neighborhood of Central Bucori. Water will be treated individually at home.

Community Background
Bucori, Panama is located in the Ngabe-Bugle Comarca

- 202 full time residents, 58 part time
- 7 neighborhoods in Bucori
- Main mode of transportation: Canoe
- 2 hours to nearest city, Chiriqui Grande

Current source of drinking water
- Rain water collection
- Creek water

Water Committee
- 7 members required per Panamanian government
- Currently 5 elected members, 3 members are active

Spring Boxes:
- Concrete spring boxes will capture and protect water
- 3 springs will provide water to holding tank

Holding Tank:
- Volume: 22 m³ (~6,000 gallons)
- Dimensions: L x W x H 3.92m x 3.92m x 2.36m

Piping Network:
- System will consist of:
  - 31 homes and 7 community buildings
  - 2" and 1.5" PVC - SDR 26 pipe
  - 8 stream crossings, 1 river crossing and 1 valley crossing within the pipe network

Water Treatment:
- 1 ml of chlorine treats 1 L of water
- A family of 5 will need 250 ml of chlorine a day

Design

Cost Estimation and Schedule
- The project will take approximately 40 work days
- The total cost estimate is approximately $15,300
- Grant obtained by Peace Corps Volunteer
- Monthly water bill: $1.00 USD/month towards maintenance
- Water treatment: $3.50/week per family

Conclusions
- Improve quality of life
  - Ease of water access
  - Increased health benefits
- Education will be provided by Peace Corps Volunteer
- Maintenance of the system
- Importance of sanitizing drinking water

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