

ESW-Water Supply Team

CEE 402 - Fall 2004 Project Highlights

Dale Meck



Outline

- Overview of CEE 402 Water Supply Project (work done in the Fall of 2003)
- Experiences in Honduras in January 2004
- Project & Trip Reflections
- Ongoing Work & Future Directions

CEE 402 Water Supply Project

- Project Origins

- Dr. Monroe Weber-Shirk
- Jacobo Nuñez
- Agua Para el Pueblo



April 15, 2004

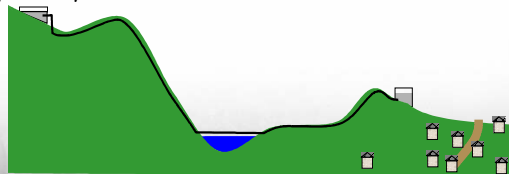
ESW Water Supply Group - Engineering College Council Presentation

3

CEE 402 Water Supply Project

- Project Motivations

- ~21% of the rural population was without access to clean water before Hurricane Mitch (1998). This hurricane, however, damaged over 1,600 of the existing piped water systems.
- Access to safe drinking water decreases the risk of serious waterborne diseases, such as cholera, typhoid fever, and dysentery.



April 15, 2004

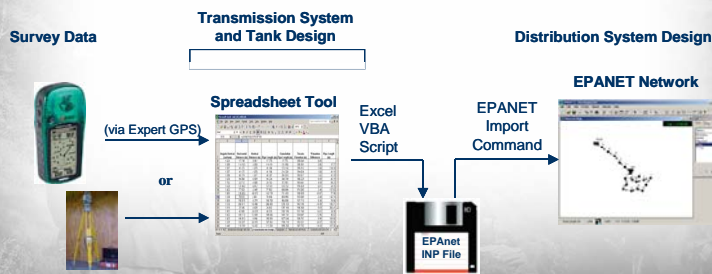
ESW Water Supply Group - Engineering College Council Presentation

4

CEE 402 Water Supply Project

- Fall 2003 Accomplishments

- GPS or Theodolite Survey Data
- EPANET export feature
- Spanish Translation
- Preliminary User Guide



April 15, 2004

ESW Water Supply Group - Engineering College Council Presentation

5

Honduras Experience

- conducted initial surveys/site investigations
- viewed completed projects
- learned about APP design process & funding sources

April 15, 2004

ESW Water Supply Group - Engineering College Council Presentation

6

Honduras Experience

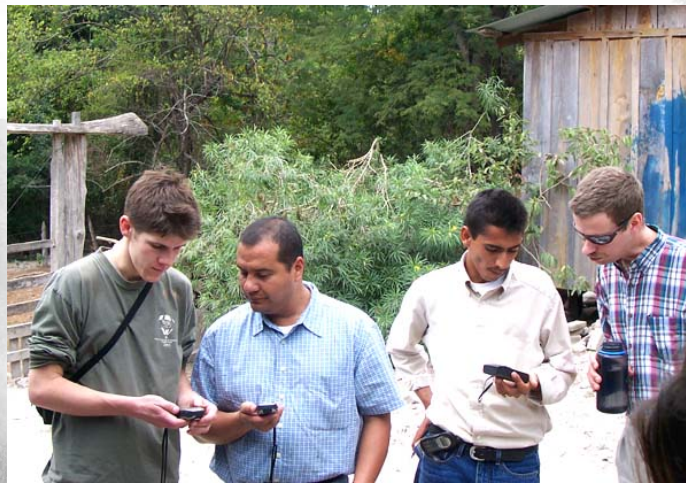


April 15, 2004

ESW Water Supply Group - Engineering College Council Presentation

7

Honduras Experience



April 15, 2004

ESW Water Supply Group - Engineering College Council Presentation

8

Honduras Experience



April 15, 2004

ESW Water Supply Group - Engineering College Council Presentation

9

Honduras Experience



April 15, 2004

ESW Water Supply Group - Engineering College Council Presentation

10

Reflections

- Professionalism of Agua Para el Pueblo
- Challenges of international partnerships specifically in technical engineering projects
- Educational benefits
 - Engineering research & design experience in the real world
 - Project management, organizational, and communication skills
 - Public service experience

April 15, 2004

ESW Water Supply Group - Engineering College Council Presentation

11

Ongoing Work

- Pressure break feature - user specified locations or automatic design
- Support for horizontal theodolite angles - allows aerial view of pipeline path
- Research into GPS survey methods for distribution systems
- Graphical, user-friendly, *free* application to replace commercial product Expert GPS
 - may also eventually grow to encapsulate EPANET and spreadsheet portions of design tool
- Research into waste water management strategies, chlorination tank design, possibility of an APP web site

April 15, 2004

ESW Water Supply Group - Engineering College Council Presentation

12