

# Delivering Sustainable Water Treatment Systems to Peri-Urban and Rural Mexico

Village Power Conference

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# The Challenge

## Providing Safe, Affordable Water to Rural and Peri-Urban Areas

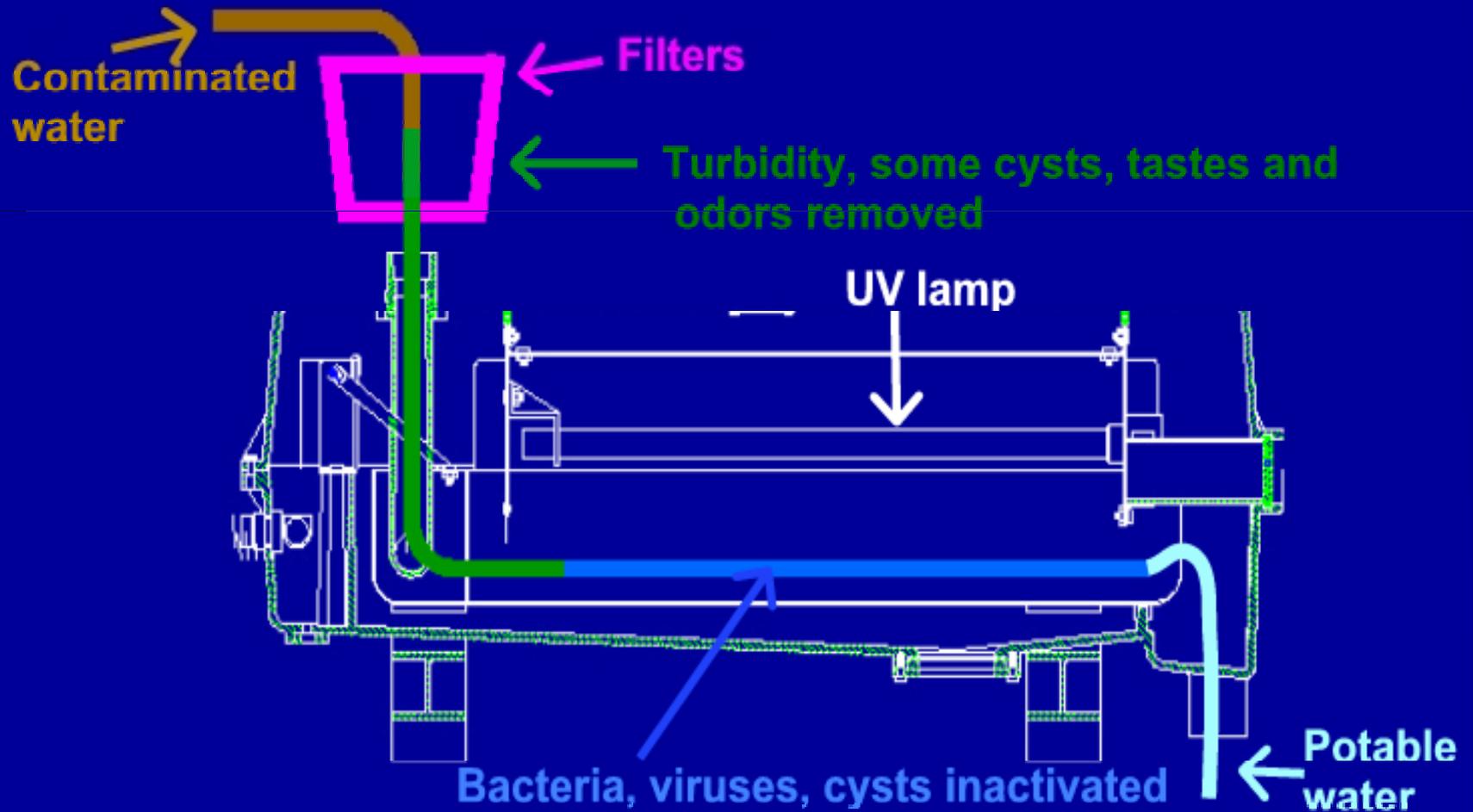
- At least 4 billion illnesses, 5 million deaths/year result from unsafe drinking water
- 4 million children die each year from waterborne diarrheal diseases
- 60 million children are stunted before maturity due to severe nutrient loss/complications from multiple diarrheal episodes
- 15 million people in Mexico lack clean drinking water

# The WHI Solution

The WHI technology converts any water into safe, affordable drinking water for pennies/liter

- WHI employs a patented, non-submerged ultraviolet energy technology to produce safe, affordable drinking water from contaminated sources
- Technology can be used virtually anywhere
- Systems can be powered by renewable sources
- WHI's experience in Mexico shows that with proper maintenance systems continue to perform well

# WHI's Patented Technology



# WHI's systems effectively treat:

- Contaminated water from centralized water systems
- Water from wells
- Water from lakes, streams and other surface sources

# Advantages

- High efficacy
- Low cost/performance ratio
- Rugged design
- Safe (no chemicals or byproducts)
- Sustainable
- Adaptable to many settings
- Low energy demand – 60-360 Watts (depending on system); can be powered by renewable sources

# Community Water Systems in Mexico



Community Water System



Modified Community Water System

# Systems are installed in many remote locations



# Parallel Installations in Mexico



# Mexican Installations (cont.)



# Business Model in Mexico

- 65 community water systems purchased by Dept. of Health and installed by WaterHealth Mexico (WHM)
- Systems operational since 1998
- Systems service 53,000 people
- Power requirement: 240-360 Watts/system
- 5 systems operate on solar power, remainder on grid
- Systems serviced by WHM under contract

# Sustainability Factors

- WHI systems have relatively low maintenance needs
- WHI provides maintenance contracts on all systems
- WHI works with public health workers to provide hygiene education
- Systems have low cost/performance ratio (pennies per liter)

# Consumer Education



Health Center  
Barra de Coyuca  
Guerrero, Mexico

# Benefits for Rural and Peri-Urban Communities

- Reduction in morbidity and mortality
- Productivity gains, health care and energy cost savings
- Rapid deployment with relatively low capital expenditures
- 50% savings in cost of potable water to households and individuals