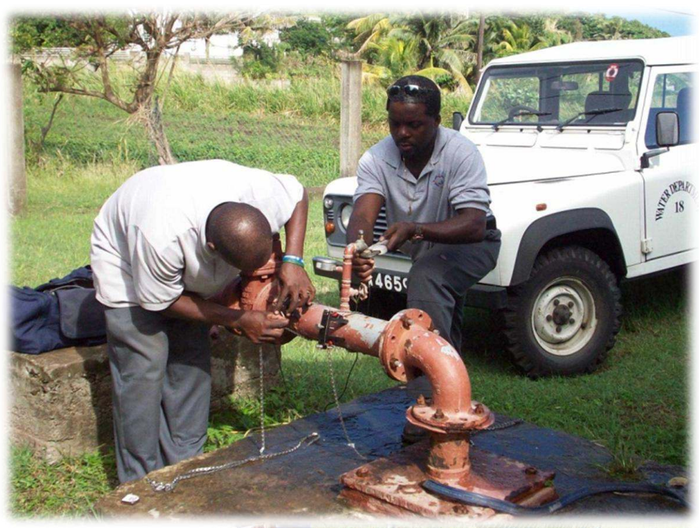
SAVE WATER. SAVE ENERGY!

ENERGY USE FOR WATER SERVICES

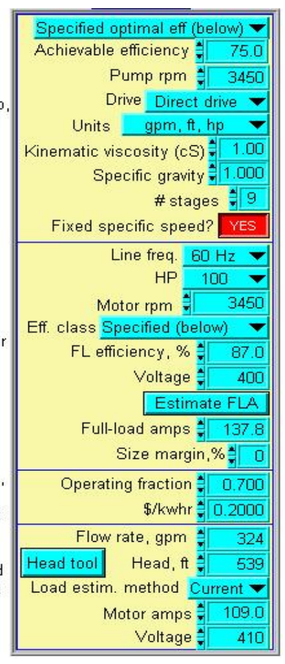
- Providing drinking water requires A LOT of energy
- WSD is one of the largest users of electricity in St. Kitts
- Energy is needed to:
  - ✓PUMP water from wells to storage reservoirs
  - ✓DISINFECT / TREAT water
- Energy use is affected by :
  - ✓DEPTH of the well
  - ✓HEIGHT of storage reservoirs
  - ✓DISTANCE of consumers from water sources
  - ✓CONDITION of the entire water system
- Energy costs represent 30-50% of total production costs of water
- Wasted water = wasted energy!



Staff tracking energy use of pumps

COMMITTED TO ENERGY EFFICIENCY!

- Improving energy efficiency will help EXISTING infrastructure continue to meet water demands
- Using energy wisely ensures an affordable, reliable water supply into the future
- Ways to improve energy use by the WSD:
  - ✓Systematic tracking of energy use
  - ✓Optimization of pumping systems
  - ✓Minimize water losses
  - ✓Adequate maintenance of all systems
  - ✓Capital investment in latest energy efficiency technologies including state of the art pumps and water meters
  - ✓Training and education



	Condition A Existing	Optimal	Units
Pump efficiency	55.5	75.0	%
Motor rated power	100	60	hp
Motor shaft power	79.4	58.8	hp
Pump shaft power	79.4	58.8	hp
Motor efficiency	87.0	93.5	%
Motor power factor	88.0	89.4	%
Motor current	109.0	73.8	amps
Motor power	68.1	46.9	kW
Annual energy	417.5	287.4	MWh
Annual cost	83.5	57.5	$1000
Annual savings potential, $1,000		26.0	
Optimization rating, %		68.8	

Data indicates a pump efficiency of 56% if this can be increased to the original rating of 75%, potential annual energy savings of US$26,000 could be realized.

Using software to optimize pumps

Installation of automated tank level controls to prevent overflowing of storage reservoirs