Institutional and Organisational Strengthening of WASCO Saint Lucia and Regional Water Utilities

Saint Lucia

Strategic issues 5. Mission

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PROJECT SCOPE AND OBJECTIVES

OVERALL PROJECT OBJECTIVE
By the end of 2019, WASCO is ready to undertake a long term and sustained NRW Reduction Program

IMMEDIATE OBJECTIVES
Improved organisational and technical capacity in WASCO for NRW Reduction

A Institutional & organisational strengthening
B Improved network management
C Hydraulic modelling
D GIS and Asset Management

Regional Exposure through CAWASA
AGENDA

1. Organizational Issues
2. Bottlenecks in Northern Production and Transmission System
3. Northern Line
4. Vieux Fort Project
5. SCADA System
ORGANIZATIONAL ISSUES
• No institutionalized organisational structure
• Not always clear responsibilities and information flows
• Lack of interaction and communication between and within departments
**Structure and Responsibilities**

**Recommendations**

1. Regular update of *organisational charts* → one responsible person to follow up

2. Definition of *responsibilities, tasks and information flow* for each department and unit
+ qualified and motivated staff
- Insufficient no. of staff at most technical departments
- More engineers needed in all technical departments

Recommendations
1. at least one Engineer in each technical department
2. Rename 'Leak Detection Unit' → 'Network Monitoring Unit'
3. More crews for LDU North and South
4. New role: Network Administrator at WSD
BOTTLENECKS IN NORTHERN PRODUCTION AND TRANSMISSION SYSTEM
**TRANSMISSION SYSTEM JCD - THEOBALT**

DN 600 from Junction Tank to Vannard

- approx. 5.3 km
- bad condition, poor design
- 600mm: limited hydraulic capacity (!)
Recommended: DN800

- Maximum hydraulic capacity
- Standardisation for easy O&M

Rough estimation: 12.7 Mio EC$
WTP Theobalt

- 7 of 10 filters out of operation, due to mechanical defects. High risk of supply failure.
- Possibility of backwash water recycling should be investigated. Water savings interesting especially for dry season.
- SCADA system to be repaired / upgraded.
NORTHERN LINE
Issues
• **Old, worn out 14” pipe-section** (from 1970ies, many leaks)
• **Sole** transmission to northern area
• **Growing demand, limited hydraulic capacity**

Recommendation
Replacement with increased hydraulic capacity

To do
• **Estimation of Water Demand 2040**
• **Hydraulic Analysis**
  → **Outline design of future system**
VIEUX FORT
More than 20 Mio USD for new production and storage facilities

But
Old network, high NRW

Recommendation
1. Rehabilitation and restructuring of distribution system
2. Role-out of NRW strategy to start in VF
3. Extension of new SCADA system
SCADA SYSTEM
SCADA system is highly recommended for efficient operation of supply system. 
(*MAGFLOW and Pressure Logger with transmitter*)

+ Better understanding of system behaviour  
+ Optimisation of tank and pump management  
+ Reduction of required manpower in field (bulk meter reading, pump operation, ...) → cost saving