Operational Metrics

The table below provides some characteristics of the 3 plants as it pertains to the envisioned WRS.

Wastewater Treatment Plants	Three (3) locations • 29 - staff at NEWPCC (Operators, Area leads & Supervisors) • 9 - staff at SEWPCC (Operators, Area leads & Supervisors) • 6 - staff at WEWPCC (Operators, Area leads & Supervisors) Operators perform process activities and collect data through manual entry (moving around the plant taking readings), and through importing values from the DCS and LIMS (spreadsheet published once a day).
Users	WRS system is anticipated to support approximately 50-60 named users. Daily usage (95% of the time) is 4 users per plant, plus 3 users at head office.

Control Parameters (Data Points) by process.

1. North End Water Pollution Control Centre (NEWPCC) processes:
    1.1. Dry - Dewatering, Digesters, Boilers & HLW Buildings
    1.2. Main - Main, Primary, Grit & UV Buildings
    1.3. Wet - Secondary, Reactors & SBR Buildings
2. South End Water Pollution Control Centre (SEWPCC) processes:
    2.1. Prim - Primary Pump & Screen, Grit & Primary Areas
    2.2. Sec - Secondary, Reactor & UV Areas
    2.3. UV - Ultra Violet
3. West End Water Pollution Control Centre (WEWPCC) processes:
    3.1. Plant
    3.2. Pond

North End Water Pollution Control Centre				
Data Source	LIMS	Dry	Main	Wet
Manual Entry		93	95	75
DCS		42	15	32
Manual Entry today, could be from DCS		59	29	41
LIMS (approx.)	113			
Calculated/Expressions		10	5	

South End Water Pollution Control Centre				
Data Source	LIMS	Prim	Sec	UV
Manual Entry		94	52	9
DCS		30	5	0
Manual Entry today, could be from DCS				
LIMS (approx.)	58			
Calculated/Expressions		3		

West End Water Pollution Control Centre			
Data Source	LIMS	Plant	Pond
Manual Entry		35	7
DCS		20	0
Manual Entry today, could be from DCS			
LIMS (approx.)	83		
Calculated/Expressions		7	

	Total For All Plants			
Data Source	NEWPCC	SEWPCC	WEWPCC	Total
Manual Entry	263	155	42	460
DCS	89	35	20	144
Manual Entry today, could be from DCS	129			129
LIMS (approx.)	113	58	83	254
Calculated/Expressions	15	3	7	25

A subset of the total Control Parameters has targets and limits set, which are currently displayed on charts.

Charts to be configured

Total For All Plants			
Data Source	NEWPCC	SEWPCC	WEWPCC
Control Parameter (approx.)	30	25	14

*Each parameter should have an Upper Alarm Limit, Lower Alarm Limit, Upper Warning Limit, Lower Warning Limit and Target.