

Scott Point Waterworks District

DUE DILIGENCE ASSESSMENT

AREA COMPONENT	DESIRED OUTCOME	KEY RISKS	MITIGATION
1. Management Capacity			
A	Accountability, Staffing, O Clear plan of organization, control, and duties between management and operation of the system	Misunderstanding of respective duties of District and operator causes failure. Inability to attract trustees. Operator not willing to contract	NSSWD contract specifies duties of operator. Job description for district officers
B	Management Programs ar Plan Plans to operate and manage system: SOPs, Asset Inventory & condition, ERP, Source to tap assessment, Regulatory compliance program, 5 yr Op	Physical risks not identified and acted on causing contamination or system failure	Documents prepared and reviewed by trustees annually
C	Effective External Linkage Active outreach to help customers and stakeholders understand issues. Build effective relationships with technical assistance providers and regularoty agencies	Misunderstanding of actions. Issues arise without warning.	About 1/3 of properties represented at AGM. Regular newsletters and info on website. Dialogue with NSSWD on issues.
D	Staff Knowledge and Traincurrent Water system literacy. Knowege and training to manage operations and understand regulatory requirements. Commitment to training to stay		Reliance on professional staff at NSSWD.
2. Financial Capacity			
A	Annual Budget Preparation and approval of annual budget that includes cash reserves, emergency reserve, capital reserve		Standing agenda for preparation & approval
B	Asset Management Plan Basic asset inventory, priority list for repairs/replacement, annual budget	no identification of long term needs	Asset plan reviewed annually
C	Financial Plan Forecast of revenues and expenses for 10 years including asset renewal, regulatory changes, project reserves and toll planning	Inability to predict cash flow results in deficit and drastic toll changes.	10 year Plan reviewed annually
D	Water Rate Structure Tolls and charges cover full cost of service including building reserves	Charges are inadquate to fund reserves. Unsale and unpredictable tolls and charges	Rate structure reviewed annually. Has linkage to 10 year Plan
E	Fiscal Management Can measure costs and reveenus. Keep adequate books and records and financial controls	Fiscal mismanagment, fraud	small number of transactions, monthly reconciliation of bank statement, 2 signatures on checks, review of A/R, separate bookkeeper and billing admin
F	Insurance Adequate insurance for claims for injury & damage. Liability, D&O, Property, Boiler & Machinery	losses in excess of reserves	annual review of max loss with Aon, use of Water Council program

3. Technical Capacity

A	Source Protection	Source is adequately protected from contamination	External contamination from run-off or aquifer undetected	bi-weekly chlorine residual, well protection from run-off, facilities locked
B	Source Quantity	Sufficient quantity to meet current and future demands	Increased demand results in well over-pumping	District fully developed, water use closely tracked and reported
C	Source Quality	Best available water source being used. Treatment challenges	Treatment gets costlier, inability to use sources	Can adjust amounts from each source
D	Treatment Infrastructure	Removes and/or neutralizes hazards, in good condition and has not exceeded useful life	Treatment failure	Demonstrated treatment effectiveness, Asset schedule in place.
E	Distribution Infrastructure	System in good condition, not exceeded useful life, prevents contamination, delivers water quantity and pressure,	Distribution failure causes excess water loss and/or large unbudgeted expense. Cross connection causes contamination.	Regular monitoring of leakage rate and main condition.
F	Alarms and Security Devices	real time pressure, level, quality monitoring, illegal entry alarms	Failures go undetected causing larger issues	Bi-weekly operator checks, resident reporting of issues

4. Operational Capacity

A	Operating Staff	Operators have appropriate knowledge, skills and training	Mistakes lead to failures, contamination. Out of compliance	NSSWD contract requires them to supply qualified operators. NSSWD has operator training plan
B	Water Testing & Monitoring	water quality testing and monitoring in accordance with regulations and best practices	Not testing for areas of risk	Water testing plan approved and monitored by VIHA. Annual Water Quality Report prepared and filed. Testing results posted to website.
C	Data Recording and Logging	Detailed monitoring and recording of operational conditions	Inability to trace problem occurrences	
D	Routine Checks, Maintenance	Thorough checks to assess condition and ensure system is operating properly and operational adjustments made. Inventories of chemicals, supplies maintained. Inspect, clean, maintain, calibrate and adjust chemical feeds as needed.	Problems with operations and treatment go undetected leading to contamination or over-use of chemicals	Duties of operator are specified in Contract
E	Facility Maintenance	Facilities and grounds kept clean and equipment accessible at all times	Failure to maintain reflects lack of attention to routine duties of all types	Inspection by trustees
F	On-going Training	Operators, administrators receive ongoing training to stay current on regulations, standards, best practices	Operators make mistakes resulting in contamination or unnecessary repairs. Trustees are unaware of their responsibilities	NSSWD operator training. Trustees review Improvement District Manual, attend CWSA or BCWWA seminars

ASSESSMENT	ADEQUACY		Residual Risk	Impact	Likelihood	Speed of Onset	
	1=Very Poor	5=Very Good				ACTION	Fast<6mo, Med <1 yr,
<p>Duties not reviewed for some time. NSSWD does not work pro-actively without direction. No SOPs. Only some documents send to regulators for filing/approval</p> <p>Interested residents are reasonably well informed. District does not reach out to other agencies on SSI other than NSSWD</p> <p>Need to keep trustees educated - Imp District manual, acts and regulations</p>	4	3	Review job descriptions and update as necessary. Evaluate barriers to recruiting trustees. Discuss 4 options with Maracaibo	NSSWD not willing to continue as Operator. Inability to recruit new trustees.Trustees unable to oversee operator, administrator, regulatory	Med	Probable	Med
			Work with NSSWD to understand documentation. Request NSSWD to report recommendations for 3 extra maintenance	Reliance on key NSSWD individuals. Difficulty training new Operator.	Low	Possible	Med
			More dialogue with NSSWD other water districts on common issues. Better dialogue with SSIWPA, VIHA, 3 SSIFR.	New regulatory requirements arise without awareness	Med	Probable	Fast
			3.5 Check with NSSWD about audits by CRD	Trustees unable to oversee operator, administrator, regulatory	Med	Possible	Slow
<p>Good process in place</p> <p>Asset plan is not rigourous in estimating time remaining and replacement cost</p> <p>Draft 5 year Plan prepared for first time</p> <p>Rate structure meets needs. There is no multi-year linkage to 10 year Plan</p> <p>Financial controls are appropriate for a small system. Changes contemplated to accounting system, billing admin and payment processes will require evaluation.</p> <p>have not done a total insurance needs assessment for a while</p>	4	3	Add estimate of reserves to draft 5 year plan. Extend 2 to 10 years.	Residents resistance to fund required improvements causes concerns at Ministry	Med	Possible	Slow
			4 Look at toll impact of 10 Year Plan	Small scale fraud by individuals	Lo	Possible	Fast
			Get Auditor to provide input on controls with 3 changes in process	Losses not covered by insurance	Med	Possible	Fast
			5 other water districts at time of next renewal				

<p>no cross connection program, no intrusion protection, check well seal</p> <p>Annual consumption and system leakage stable. Concerns about backwash %</p>	<p>Source to Tap Screening Tool completed. Identify cross connections. Evaluate well casing seals..</p> <p>Evaluate well security. Upgrade data loggers to well</p>	<p>Unanticipated contamination of wells from outside source</p>	<p>High</p>	<p>Unlikely</p>	<p>Fast</p>
<p>2 of 3 wells have issues. No likely option beyond desalination</p>	<p>3 monitors.</p> <p>Consider further work on escalating trailing block tolls. Put home business such as B&B on notice to</p> <p>4 preserve District rights to restrict.</p> <p>Install well flow chokes to reduce flowrate. Install continuous well monitoring. Get FLNRO approval for</p> <p>2 use of Well 1 in current condition.</p>	<p>Drought or loss of one well puts stress on supply</p>	<p>Med</p>	<p>Probable</p>	<p>Med</p>
<p>Treatment upgrade/renewal in progress. Need to understand RO life. No real work at Well#3</p> <p>Low and consistent leakage rate. Risks from growing trees over pipe. Pipe is now 50 years old on expected life of 50 years.</p>	<p>Upgrade pump houses for wildfire protection & earthquake resistance. Evaluate critical spares for</p> <p>4 treatment plants.</p> <p>Evaluate trees on ROW impacting Main. Program to replace copper service lines. Identify ground conditions impacting AC pipe. Discuss hydrant</p> <p>3 requirements with SSIFR</p> <p>Identify key requirements for alarms and examine</p> <p>1 options for SCADA</p>	<p>FLNRO order closure of Well 1</p> <p>Undetected system failure results in water loss or contamination, losses not covered by insurance, extended downtime to repair</p>	<p>Med</p>	<p>Probable</p>	<p>Slow</p>
<p>Inadequate monitoring</p>	<p>4 treatment plants.</p> <p>3 requirements with SSIFR</p> <p>1 options for SCADA</p>	<p>Excessive main leakage necessitates advanced replacement program. Inadequate infrastructure for firefighting</p> <p>Undetected system failure results in water loss or contamination</p>	<p>High</p>	<p>Possible</p>	<p>Fast</p>
<p>Dependent on NSSWD</p>	<p>5 contract renewal.</p>	<p>Inability to attract certified operators</p>	<p>Low</p>	<p>Possible</p>	<p>Slow</p>
<p>Water testing is comprehensive</p> <p>Manual recording of certain parameters is done for all wells twice per week. Not sure how maintenance is being logged.</p>	<p>5 Institute NO3 testing until proven not a problem.</p> <p>Work with operator to ensure critical information, including maintenance and repair, is being captured</p> <p>3 in logs. Examine options for SCADA</p>	<p>Not testing for existing pathogen</p>	<p>High</p>	<p>Unlikely</p>	<p>Fast</p>
<p>Dependent on operator and supervisor performing duties as specified.</p> <p>NSSWD operators appear to be taking appropriate measures</p>	<p>4</p> <p>4</p>	<p>Undetected system failure results in water loss or contamination</p>	<p>High</p>	<p>Unlikely</p>	<p>Fast</p>
<p>Current trustees are up to date ?</p>	<p>Trustees review Improvement District manual during annual review of standing agenda. Trustees to attend one seminar every 2 years?</p>	<p>Trustees without willingness to learn enough to oversee operator, administrator, regulatory</p>	<p>Low</p>	<p>Possible</p>	<p>Slow</p>