

*TRANSFORMING THE WATER AND SEWERAGE
CORPORATION IN PREPARATION FOR
EXTERNAL REGULATION*

*3RD ORGANISATION OF CARIBBEAN UTILITY
REGULATORS (OOCUR) ANNUAL CONFERENCE*

*NOVEMBER 2 - 4, 2005
NASSAU, BAHAMAS*

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INTRODUCTION

In May 2004 the Government of the Bahamas, appointed a new General Manager, Mr. Abraham Butler, to lead the Water and Sewerage Corporation (WSC). A key strategic initiative in his New Roadmap for WSC is to transform the organization into a measurement-managed organization that provides quality service and enjoys a reputation for consistently high performance.

An Act of Parliament established WSC in 1976. WSC is a fully owned Government Corporation that presently operates as both a service provider and self-regulator with limited external oversight by several governmental agencies.

In preparation for eventual external regulation and to achieve the objective of transforming WSC into a measurement-managed organization, the Internal Control and Compliance (IC&C) Division was established in May 2004 as an expansion of the prior Internal Audit Department. The IC&C Division is lead by an Assistant General Manager who serves at the executive management level. The Division consists of both the traditional internal auditing function that is carried out by the Financial/Internal Audit Department and a new Department, the Service/Technical Compliance Department.

The Service/Technical Compliance Department is responsible for assessing the performance of each Department within WSC by auditing the Department's performance based on an agreed set of Performance Standards/Targets and determining the level of compliance.

EXISTING REGULATORY ENVIRONMENT

WSC operates as essentially a self-regulator with limited external regulation by a series of other governmental agencies that either lacks the resources, regulatory powers, political will or combination of all three to regulate another governmental agency.

The existing regulatory environment as described by the 2003 Water Management Consultants¹ Report is as follows: -

- ✓ **Government Responsibility for Regulatory Policy** – The Cabinet, all appeals and reviews are ultimately referred to Cabinet.

¹ Water Management Consultants in association with Crown Agents and Holowesko & Company (2003), *Strategy for a Regulatory Framework for the Integrated Management of Groundwater and Control of Pollution*.

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- ✓ **Economic and Consumer Protection Regulation** – The Public Utilities Commission (PUC) is responsible but it has not commenced regulation within the water and sewerage sector as yet.
- ✓ **Health and Environmental Regulations** – A series of Governmental agencies including WSC, the Department of Environmental Health Services (DEHS), the Bahamas Environment, Science and Technology (BEST) Commission, the Ministry of Public Works & Utilities (MOPW&U) and the Attorney General's Office all have some responsibilities for health and environmental regulations; however these responsibilities are fragmented and there is no single body responsible for setting standards and monitoring compliance. Further, there is no substantive punitive system in place to encourage compliance.

As noted in the May 2002 Thames Water Report², the PUC expressed the opinion that they did not foresee the commencement of economic regulation for the water and sewerage sector for another six (6) years.

DEVELOPMENT OF INTERNAL PERFORMANCE MONITORING AND REPORTING SYSTEM

1. COMPLIANCE AUDITING FRAMEWORK

Two (2) Auditors, a Service Auditor and a Technical Auditor, who are responsible for auditing the performance of each Department within WSC based on an agreed set of Performance Standards/Targets, staff the Service/Technical Compliance Department.

Each Department is defined as either a Service Department or a Technical Department depending on its primary functions – example, the Billing Operations Department is defined as a Service Department and the Construction Department is defined as a Technical Department.

2. AGREED COMPLIANCE AUDIT KITS

For each Department, there is a Compliance Audit Kit that was agreed upon by the Division Head (Executive Manager) responsible for the particular Department and the AGM-IC&C³ in consultation with the respective Department Head and Auditor.

² Thames Water Overseas Consultancy Limited (2002), *Water and Sewerage Corporation Corporate Business Plan 2002 – 2012*.

³ Assistant General Manager – Internal Control and Compliance

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Each Audit Kit is based on a measurement system that measures the top eight (8) functions of the Department with the last two (2) measures being Record-Keeping and Reporting.

For each of the ten (10) functions, the following is established: -

- ✓ **Performance Standard/Target** – A concise, clearly understood Performance Standard/Target.
- ✓ **Evidence** – The data sources that will be used to determine whether the Performance Standard/Target is being achieved or not.
- ✓ **Sample Size** – The number of samples (Audit Sample Requirement) that the Auditor will utilize to determine the Compliance Percentage for each function. It is intended that the Auditor will randomly select a sample that is representative of the total population set.

3. COMPLIANCE AUDIT SCHEDULING

The Compliance Audits are scheduled on a semi-annual basis and the 6-Month Schedule is circulated to all Division Heads. Further, the following steps are taken prior to the commencement of the audit to foster buy-in by the Department Head and to remove any element of surprise: -

- ✓ **Audit Notification** – An electronic (email) notification is issued ten (10) working days or more prior to the commencement of the audit.
- ✓ **Pre-Audit Briefing Session** – A meeting is held five (5) working days or more prior to the commencement of the audit. The purpose of the meeting is to review the Compliance Auditing Standard Operating Procedure (SOP) and the Audit Kit with the Department Head and to address any concerns.
- ✓ **Audit Data/Information Request Form** – A form detailing the evidence and samples required for the audit is issued three (3) working days or more prior to the commencement of the audit.

4. DETERMINATION OF THE AVERAGE COMPLIANCE SCORE

Using the Compliance Audit Kit, the Auditor is responsible for determining the Compliance Percentage for each function using the following formula:-

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$$\frac{ASR - NCS}{ASR} = CP$$

Where,

ASR – Audit Sample Requirement
NCS – Number of Non-Compliant Samples
CP – Compliance Percentage

The Average Compliance Score (ACS) is then determined by calculating the average of the functions measured. It must be noted that some functions cannot be measured for a variety of reasons. The general rule is that an ACS is determined if six (6) or more functions were measured.

5. REPORTING METHODOLOGY

Each completed Compliance Audit Report is forwarded to the General Manager and the Chairman of the Board’s Audit Committee and includes the following: -

- ✓ **Auditor’s Findings** – This includes the Compliance Score for each function and related findings.
- ✓ **Responses to the Auditor’s Findings** – The audited Division’s comments are incorporated within the Report after each of the ten (10) functions.
- ✓ **Compliance Scorecard** – The scorecard details the score for each function, the Average Compliance Score and defines the interpretation of the scores as outlined below: -

SCORE RANGE	INTERPRETATION OF PERFORMANCE STANDARD/TARGET ACHIEVEMENT
0% – 20%	Poor
21% - 50%	Unmet
51% – 80%	Partially Met
81% - 99%	Almost Met
100%	Fully Met

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- ✓ **Action Plan** – After each audit and prior to the submission of the Audit Report, an Action Plan Meeting is held to agree upon an Action Plan to correct compliance failures and to agree upon any minor amendments to the Audit Kit.

ONGOING AND SUBSTANTIALLY COMPLETED KEY PROCESSES

The Compliance Auditing process is presently in the third round of semi-annual audits with the first round having started in June 2004. Several key processes are ongoing and others have been substantially completed as detailed below.

1. PROGRAM BUY-IN

If the Compliance Auditing process is to be successful, it was understood early in the process that buy-in from Division Heads and Department Heads was essential. This was especially important, as the Middle Managers of WSC including the Department Heads are unionized. Further, other than the Managers in the Accounting & Finance Division who have played a role in the annual External Audit, there was no precedence at WSC regarding the active monitoring and reporting on the performance of each Department. Some of the steps taken to improve buy-in include: -

- i. Defining the purpose of the Compliance Audits. This included clarifying that the audits are not intended for punitive purposes but rather to identify compliance failures and to plan and implement strategic plans to correct these failures.
- ii. Involving the Division Head and Department Head at each step of the process.
- iii. Comments received by Division Heads and Department Heads have been incorporated in the process for the second and third round of Compliance Audits.

2. IDENTIFICATION OF CORE FUNCTIONS/OUTPUTS

This involves agreeing with the Division Heads on the most important core functions/outputs of the respective Department. Early on in the process it was established that functions that cross Departmental and Divisional lines but are fundamental to WSC achieving its Corporate Goals would be measured in the most appropriate Department even if that Department did not have full control for the achievement of the related Performance Standard/Target.

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The number of changes in Core Functions to be measured has decreased significantly between the second & third rounds as compared to the first and second rounds which indicates that overall agreement as to the core functions of WSC are being established, although there is still some further refinement required.

3. **DEVELOPMENT OF PERFORMANCE STANDARDS/TARGETS**

This process was perhaps the most engaging and will continue to require further development, as the overall process is refined.

One of the principal challenges that had to be addressed early in the process was how would the Performance Standards/Targets be set. The Performance Standards/Targets were established based on: -

- ✓ **Established Standards** – In cases where there are known and accepted local and/or international standards, those would be used.
- ✓ **No Readily Available Standards** – In cases where there are no readily available local and/or international standards, internal standards would be established at a level required to provide consistently high quality service to our customers.

There was and continues to be a view among some that if the standards are set too high, persons will become discouraged if they continue to have substantial compliance failures and eventually support for the entire Compliance Auditing process would falter. While this view is noted, no substantial changes have been made to entertain this view.

4. **IDENTIFICATION OF DATA SOURCES TO MEASURE THE ACHIEVEMENT OF THE PERFORMANCE STANDARDS/TARGETS**

While the Compliance Auditing process is essential to transforming WSC into a measurement-managed organization, it is not intended that the process becomes an additional burden on the Departments via the collection, recording and filing of substantial amounts of new data. Rather it is intended that existing data sources, where possible, would be utilized.

Those Departments that were not keeping any records of their outputs however would now have to do so to provide an audit trail.

Using the principle **“you get what you measure”**, it was important that the data source used for each measurement was the most appropriate to determine whether the Performance Standard/Target is being met or not.

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5. DATA SOURCE SAMPLING METHODOLOGY

As outlined earlier in the Paper, the assessment of compliance is based on an audit of a prescribed number of samples from the agreed data source rather than an audit of all of the samples available (total population set).

This has required a delicate balance to ensure that sufficient samples are being reviewed such that they are representative of the whole while at the same time limiting the number of samples to control the workload of the Auditors. The typical range of total number of audit samples for the Audit Kits range from approx. 200 to 1,000.

Further, to reduce the possibility of Auditor bias, the samples are selected as randomly as possible. The Pre-Audit Briefing Session is also used to assist the Auditor with an understanding of the total population set for each audit sample requirement so that the randomness could be established when the samples are requested via the Audit Data/Information Request Form.

There is still some ongoing discussion regarding large population sets that are recorded in databases as to whether the total population set should be used and audit a sample set to ensure that the data was correctly entered. This will be established during the third round as it has been proven that the databases can be used to quickly determine compliance or non-compliance and the auditing of a sample set would be a part of the thrust towards validating the integrity/reliability of the data being provided. The validation of data integrity/reliability is an outstanding key process and will be discussed further below.

PLANNED SYSTEM REFINEMENTS

The Compliance Auditing process is seen as a developmental project where refinements are made based on internal lessons learnt and Best Practice results obtained from external sources – research, training, conferences, etc.

Several key processes remain outstanding that must be addressed to improve the Compliance Auditing process as detailed below.

1. VALIDATION OF DATA INTEGRITY/RELIABILITY

Presently no substantial auditing efforts are made to validate the data provided. The data is accepted as reliable on the premise that it is obtained from system reports and manual reports that are maintained by

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the Departments as part of their functional responsibilities and therefore not prepared specifically for the audit process.

To improve the validity of the data, it is proposed that an Audit Clerk routinely conduct unannounced visits to validate: -

- i. Adherence to data collection schedule and location.
- ii. Data collection and recording methodology.

2. LINKING THE COMPLIANCE AUDIT RESULTS TO A CORPORATE BENCHMARKING PROGRAM

While the Compliance Audit Reports do provide the General Manager and the Board's Audit Committee with a viewpoint into the functional outputs of each Department, there is still a need to provide an overall viewpoint of all outputs from all Departments via one single system rather than having to read approximately 30+ separate reports.

To achieve this goal, a Corporate Benchmarking System is being developed to utilize the results of the Compliance Audits along with other business intelligence results as inputs into a Corporate Benchmarking System. This would also facilitate a wider distribution of the performance results of the organization to all stakeholders – Active Customers, Potential Customers, Media, Government, Board, Management, Staff, etc.

Further, an Unfavorable Audit Findings Tracking System is to be developed in 2006 to track all unfavorable audit findings and the agreed corrective actions and their associated timelines as per the Action Plan Meetings via one single system.

3. PERFORMANCE STANDARDS/TARGETS RESEARCH

As a part of the Corporate Benchmarking System, it is proposed that appropriate comparison water and wastewater utilities would be identified. The purpose of this will be to: -

- i. Identify Best Practices with regards to Performance Standards/Targets and the practices used to achieve those standards/targets.
- ii. Develop peer-to-peer contacts and possible training opportunities.

4. PENALTIES/CONSEQUENCES FOR CONTINUOUS COMPLIANCE FAILURES

The present thrust of the program is to utilize it as a means to transform the organization into a measurement-managed organization and as a part

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of the buy-in process, there has been very limited focus on the penalties/consequences for continuous compliance failures, rather the focus has been on attempting to encourage improved performance via positive reinforcement.

However the Board and Executive Management will have to develop internal Policies and Procedures to address this element of the program over the medium-term.

PROGRAM RESULTS – FIRST AND SECOND ROUND OF THE COMPLIANCE AUDITS

Our records indicate that the program has achieved some of our initial goals, although there is still much work to be done to further refine the program and to maximize its use as a tool for improved management of WSC – using the principle, ***“if you can measure it, you can manage it”***.

1. COMPARISON OF FIRST VS. SECOND ROUND COMPLIANCE AUDIT COMPLETION RESULTS

A comparison of the number of Compliance Audits completed for the first and second rounds is outlined in the table below.

AUDIT INDICATORS	1ST ROUND	2ND ROUND
Number of Planned Audits	33	32
Number of Audits Completed	31	25
Number of Audits with an ACS	14	23
Percentage of Completed Audits with an ACS	45%	92%

The explanations for the second round results are: -

- i. Seven (7) of the 32 planned audits were cancelled either prior to or during the early stages of the audit once it became clear that the audit could not be successfully completed due to operational and/or managerial challenges.

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- ii. The two (2) Departments that were audited during the second round and an ACS could not be determined were new Departments that are still developing their functional outputs and record-keeping systems.
2. REVIEW OF SECOND ROUND DEPARTMENTAL COMPLIANCE AUDIT SCORES

The ACS results for the 23 audits completed during the second round are outlined in the table below.

<i>SCORE RANGE</i>	<i>NUMBER OF AUDITS IN EACH CATEGORY</i>	<i>INTERPRETATION OF PERFORMANCE STANDARD/TARGET ACHIEVEMENT</i>
0% – 20%	0	Poor
21% - 50%	3	Unmet
51% – 80%	17	Partially Met
81% - 99%	3	Almost Met
100%	0	Fully Met

Based on the above it can be concluded that WSC is **PARTIALLY MEETING** its Performance Standards/Targets as an organization with an average performance rating in the range of 51% to 80%.

As noted throughout the Paper, the Compliance Auditing process is a developmental program and therefore the focus was and remains on developing the process rather than an extended focus on the scores.

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CONCLUSIONS

Early indications are that the Compliance Auditing process once fully developed will play a fundamental role in the transformation of WSC into a measurement-managed organization that is prepared for external regulation. The principal outputs expected from the program over the medium-term are: -

1. Increased functional output as Division Heads and Department Heads focus on achieving their Performance Standards/Targets. The direct beneficiary of this will be our customers who would experience an improvement in the quality of service WSC provides.
2. The introduction of a management–culture that is receptive to external review and public reporting of performance results.
3. The introduction of a management tool to identify corporate strengths and weaknesses based on an accepted performance measurement system.
4. The introduction of performance results as an important tool in corporate budgeting and strategic planning activities.

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AUTHORS

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REFERENCES

1. Water Management Consultants in association with Crown Agents and Holowesko & Company (2003), *Strategy for a Regulatory Framework for the Integrated Management of Groundwater and Control of Pollution*.
2. Thames Water Overseas Consultancy Limited (2002), *Water and Sewerage Corporation Corporate Business Plan 2002 – 2012*.