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# **City of Milwaukee – Employees’ Retirement System (ERS)**

## **Business Continuity – IT Disaster Recovery Plan Audit**

**DECEMBER 9, 2015**

**EXPERIS FINANCE**  
RISK ADVISORY SERVICES  
WISCONSIN OFFICE

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## EXECUTIVE SUMMARY

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### Background

The City of Milwaukee Employees' Retirement System (ERS) has the responsibility of administering the benefits of its member constituency, which is comprised of employees and retirees of the City of Milwaukee and its related agencies.

The primary IT data center for ERS is located in the ERS offices at 789 North Water Street, Milwaukee, WI. As IT services are critical components of efficient ERS operations, ERS has adopted a Business Continuity and Disaster Recovery Policy. The purpose of the policy is, "to ensure continuity of operations in the event of catastrophic equipment failure, data loss, or disaster that makes operations at the primary office unviable." To support this Policy ERS has developed a formal Disaster Recovery (DR) Plan for ERS to use to recover its IT systems timely in the event of an unplanned event impacting the IT infrastructure or its facilities. ERS has also developed a formal Business Continuity (BC) plan to support continued business operations for critical services if the ERS offices are not available for use.

ERS has access to an alternate data processing facility, the Femrite Building, a State of Wisconsin Department of Administration data center, located near Madison, WI, to support ongoing operations should an unplanned incident at ERS offices cause an interruption of operations at the primary ERS data center. ERS sends "snapshots" of the critical systems to the Femrite data center every four hours.

In addition, ERS has a redundant recovery environment at the primary ERS data center. Should an unplanned hardware incident in the primary system cause an interruption of operations ERS could continue processing using the redundant environment.

In 2015 ERS developed a Business Continuity Plan (BC) Plan to support the continuation of business in case of a disaster, or other mishap, that makes the primary location unavailable for use. ERS maintains a Remote Office (RO) about 10.5 miles away from the primary downtown location. The RO is available as an alternate work location for staff members to perform critical services.

### Audit Scope and Objectives

An audit was conducted from November 2015 to December 2015 to evaluate the design and effectiveness of the ERS BC Plan / IT DR Plan.

The audit objectives included the following:

- Evaluate the maturity of the plan and the program
- Evaluate whether the plans and capabilities support required business functions
- Evaluate the extent to which plan content is supported by detailed procedures, capabilities, and actual practices
- Evaluate the test process and results including test scenarios, evaluation processes, issue identification, and corrective measures
- Evaluate oversight and support provided by senior management and the board

- Evaluate ERS plans for Disaster Recovery / Business Continuity enhancements and ongoing management

## Conclusion

Based on the results of the audit, the design of the ERS BC - IT DR Plan documents appeared reasonable and complete. The Executive Director has approved the ERS BC and IT DR Plan documents. The supporting recovery procedures were documented and appeared to be at a reasonable level of detail. The tools developed to support Plan testing and maintenance activities also appeared appropriate. The DR and BCP Plans have been tested a number of times and ERS has a schedule for continued testing. Test results are evaluated, action items are established to address issues, and progress in addressing issues is managed. Reports summarizing the results of the completed BC and DR exercises and the upcoming exercise schedule are prepared for the Executive Director and the A&O Committee.

Recovery time objectives for critical services were established in a Business Impact Analysis (BIA) and approved by ERS management and were used in developing the detailed recovery procedures. The backup and recovery processes at the Femrite data center, as well as the redundant recovery environment at the primary ERS data center have been designed to support recovery of all production ERS systems, and are designed to meet the recovery time objectives established by the BIA.

The Remote Office is a functional office equipped with furniture, office equipment, IT equipment, network and internet connectivity, and phones. ERS management has identified the number of staff members who would be required to continue critical services, and the RO has space to accommodate them. In addition, a number of staff members have laptop computers and are able to work from home.

The maturity of the ERS BC DR Process was also evaluated by the auditor using the CobiT Maturity Model (4.1) from the Information Systems Audit and Control Association (ISACA). The ERS BC - DR Plan was rated "Level 3: Defined". The CobiT Maturity Model (4.1) Levels range from 0 to 5 and are listed below:

- 0: None-existent
- 1: Initial / Ad Hoc
- 2: Repeatable But Intuitive
- 3: Defined
- 4: Managed and Measurable
- 5: Optimized

It should be noted that this rating is based on the plan and practices in place at the time of the audit. Continuous attention to critical services, plan updates, training, plan testing, and communications is required to ensure recovery capabilities meet the needs of the organization.

This audit of the IT DR Plan is only one part of a comprehensive risk management and control program. Recommendations are provided with the objective of assisting the Board and management in their efforts to eliminate, reduce, or mitigate overall risks. Additional detailed audit observations are provided later in this report.

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## PROCEDURES PERFORMED

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The following procedures were performed by the auditor during the period of November 2015 through December 2015. Various audit techniques were used to evaluate the design and effectiveness of the ERS BC Plan - IT DR Plan. The auditor:

- Interviewed ERS IT management and staff regarding the ERS IT DR Plan
- Interviewed ERS management regarding the ERS business continuity requirements and plans
- Interviewed ERS operations management and staff level individuals regarding participation in the BC tests
- Reviewed the ERS BCP Policy
- Reviewed the ERS IT DR Plan document
- Reviewed the ERS BC Plan document
- Reviewed the ERS Business Impact Analysis which identifies Critical Services and the associated recovery time requirements
- Reviewed the detailed procedures referenced in the ERS IT DR Plan
- Observed a portion of the October 13, 2015 ERS BC Exercise
- Reviewed tests results from October 13, 2015 ERS BC Exercise
- Reviewed tests results from ERS IT DR Plan tests – 8/27/2014, 02/25/2015, 3/17/2015
- Reviewed the contract for the ERS alternate data processing facility
- Reviewed the lease for the Remote Office
- Reviewed the ERS BC - IT DR Plan test schedule
- Reviewed BC – IT DR information in A&O Committee presentations
- Reviewed the ERS Project Management Office Guide update to address changes impacting the BC Plan and the IT DR Plan

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## **ISSUES, RECOMMENDATIONS & MANAGEMENT'S RESPONSE**

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No issues were noted for management action during the audit.