



Office of the Washington State Auditor

Pat McCarthy

Performance Audit

Opportunities to Improve Spokane Housing Authority's Information Technology Security

July 19, 2018



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Introduction

Government organizations have become increasingly dependent on computerized information systems to carry out their operations. These systems process, store and share sensitive and confidential information, including personal and financial data, in order to deliver services to residents.

Risks to a local government's information technology (IT) environment go beyond the activities of hackers stealing credit card information or Social Security numbers, or installing malware to disrupt communications. Errors or misuse of the system by employees or contractors can also jeopardize the operation of any entity that relies on computers and networks.

Furthermore, research by Verizon Wireless in their 2017 Data Breach Investigation Report shows that the public sector reported the most cyber security incidents, and the third most confirmed data breach incidents, of any industry in 2016. A 2017 study by the Ponemon Institute, a research center that focuses on privacy, data protection and information security policy, found that governments pay an average of \$110 per record lost in a data breach.

To help Washington's local governments protect their Information Technology (IT) systems, we are offering them the opportunity to participate in a performance audit designed to assess whether there are opportunities to improve the security of their IT systems.

The Spokane Housing Authority chose to participate in this audit.

Scope and methodology

The performance audit we conducted was designed to answer the following questions:

- Do the local government's IT security policies, standards and procedures align with leading practices?
- Has the local government implemented effective IT security practices to protect its information and are they consistent with leading practices?

Comparing the Housing Authority's IT security program to leading practices

We compared the Housing Authority's IT security policies, procedures and practices to leading practices in these areas to identify improvements that could make them stronger. We selected leading practices from the Center for Information Security's Top 20 Critical Security Controls, which were developed by a broad community of private and public sector stakeholders after examining the most common attack patterns. The Top 20 Critical Security Controls are a prioritized list of control areas designed to help organizations with limited resources optimize their security defense efforts to achieve the highest return on investment.

Evaluating the Housing Authority's IT systems against external and internal threats

To determine if the Housing Authority has implemented effective IT security practices, we conducted tests to determine if controls were implemented properly and functioning effectively.

Additionally, our subject matter experts conducted tests on the Housing Authority's IT infrastructure and applications, and ranked the identified weaknesses by the severity and ease with which the identified weakness could be exploited based on their professional experience.

We gave Housing Authority management the results of the tests as they were completed, then conducted follow-up testing to determine if the Authority had successfully mitigated the weaknesses we identified.

Audit performed to standards

We conducted this performance audit under the authority of state law (RCW 43.09.470), approved as Initiative 900 by Washington voters in 2005, and in accordance with Generally Accepted Government Auditing standards (December 2011 revision) issued by the U.S. Government Accountability Office. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives. See **Appendix A**, which addresses the I-900 areas covered in the audit.

Next steps

Our performance audits of local government programs and services are reviewed by the local government's legislative body and/or by other committees of the local government whose members wish to consider findings and recommendations on specific topics. Representatives of the State Auditor's Office will review this audit with the Spokane Housing Authority's legislative body in Spokane, Washington. The public will have the opportunity to comment at this hearing. Please check the Spokane Housing Authority website for the exact date, time and location. The State Auditor's Office conducts periodic follow-up evaluations to assess the status of recommendations, and may conduct follow-up audits at its discretion.

Audit Results

The results of our audit work and recommendations were communicated to management of the Spokane Housing Authority for their review, response, and action. We found that, while the Housing Authority's IT policies and practices partially align with industry leading practices, there are areas where improvements can be made. The Spokane Housing Authority has already addressed significant issues we identified, and is continuing to make improvements.

Because the public distribution of tests performed and test results could increase risk to the Housing Authority, distribution of this information is kept confidential under RCW 42.56.420 (4), and under Generally Accepted Government Auditing Standards, Sections 7.40-43.

Recommendations

To help ensure the Spokane Housing Authority protects its information technology systems and the information contained in those systems, we make the following recommendations:

- Continue remediating identified gaps
- Revise the Housing Authority's IT security policies and procedures to more closely align with leading practices

Auditor's Remarks

The State Auditor's Office recognizes the Spokane Housing Authority's willingness to volunteer to participate in this audit, demonstrating its dedication to making government work better. It is apparent the Housing Authority's management and staff want to be accountable to the people and good stewards of public resources. Throughout the audit, they fostered a positive and professional working relationship with the Washington State Auditor's Office.

Auditee Response



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July 17, 2018

Office of the Washington State Auditor

RE: Spokane Housing Authority Local IT Security Performance Audit Response

The Spokane Housing Authority chose to participate in this performance audit for the opportunity to improve the Spokane Housing Authority's Information Technology Security. The management of Spokane Housing Authority believe that the security of personal identifiable information that is held within its' databases is of paramount importance. Management would like to thank the Office of the Washington State Auditor Local IT Security Performance Audit Team for their professionalism; collaborative audit approach; and willingness to educate on industry best practices. The Spokane Housing Authority has remediated all identified critical and high IT security gaps within its' control and continues to improve and implement best practices.

Sincerely,

Lori H. McGowan
CFO/Deputy Director



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If you or anyone in your family is a person with disabilities and you require a specific accommodation in order to fully utilize our programs and services, please contact the housing authority.



Appendix A: Initiative 900

Initiative 900, approved by Washington voters in 2005 and enacted into state law in 2006, authorized the State Auditor's Office to conduct independent, comprehensive performance audits of state and local governments.

Specifically, the law directs the Auditor's Office to "review and analyze the economy, efficiency, and effectiveness of the policies, management, fiscal affairs, and operations of state and local governments, agencies, programs, and accounts." Performance audits are to be conducted according to U.S. Government Accountability Office government auditing standards.

In addition, the law identifies nine elements that are to be considered within the scope of each performance audit. The State Auditor's Office evaluates the relevance of all nine elements to each audit. The table below indicates which elements are addressed in the audit. Specific issues are discussed in the Results and Recommendations sections of this report.

I-900 element	Addressed in the audit
1. Identify cost savings	No. The audit did not identify measurable cost savings. However, strengthening IT security could help the Housing Authority avoid or mitigate costs associated with a data breach.
2. Identify services that can be reduced or eliminated	No. The audit objectives did not address services that could be reduced or eliminated.
3. Identify programs or services that can be transferred to the private sector	No. The audit objectives were focused on improving the Housing Authority's information system security program.
4. Analyze gaps or overlaps in programs or services and provide recommendations to correct them	Yes. The audit compares the Housing Authority's IT security controls against leading practices and makes recommendations to align them.
5. Assess feasibility of pooling information technology systems within the department	No. The audit did not assess the feasibility of pooling information systems; it focused on the Housing Authority's IT security posture.
6. Analyze departmental roles and functions, and provide recommendations to change or eliminate them	Yes. The audit evaluates the roles and functions of IT security at the Housing Authority and makes recommendations to better align them with leading practices.
7. Provide recommendations for statutory or regulatory changes that may be necessary for the department to properly carry out its functions	No. The audit did not identify a need for statutory or regulatory change.
8. Analyze departmental performance, data performance measures, and self-assessment systems	Yes. Our audit examined and made recommendations to improve IT security control performance.
9. Identify relevant best practices	Yes. Our audit identified and used leading practices published by the Center of Internet Security to assess the Housing Authority's IT security controls.