



A REPORT
TO THE
MONTANA
LEGISLATURE

INFORMATION SYSTEMS AUDIT

*Statewide Accounting,
Budgeting, and Human
Resources System
(SABHRS)*

Department of Administration

JUNE 2009

LEGISLATIVE AUDIT
DIVISION

09DP-03

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LEGISLATIVE AUDIT DIVISION

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James Gillett
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June 2009

The Legislative Audit Committee
of the Montana State Legislature:

We conducted an Information Systems audit of the Statewide Accounting, Budgeting, and Human Resources System (SABHRS) maintained and operated by the Department of Administration to assist in the administration of financial and human resource records within state government. The focus of the audit was to provide assurances over SABHRS processes and ensure controls are in place to keep processes working as intended. We also reviewed some data elements in SABHRS and the recent reorganization of SABHRS support services.

This report contains a recommendation for addressing duplicate payments and another pertaining to formalizing the communication and decision-making process as it pertains to SABHRS.

We wish to express our appreciation to the Director and department staff for their cooperation and assistance.

Respectfully submitted,

/s/ Tori Hunthausen

Tori Hunthausen, CPA
Legislative Auditor

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APPOINTED AND ADMINISTRATIVE OFFICIALS

Department of Administration

Janet R. Kelly, Director

Sheryl Olson, Deputy Director

Paul Christofferson, Administrator, State Accounting Division

Nyla Johnson, Chief, SABHRS Finance and Budget Bureau

Paula Stoll, Administrator, State Human Resources Division

Randy Morris, Special Projects Manager, Human Resources Information Services Bureau

Dennis Dickenson, Acting IT Manager, Director's Office

Dominick Speranza, Database Administrator Manager, IT Services Division

REPORT SUMMARY

Statewide Accounting, Budgeting, and Human Resources System (SABHRS)

The Statewide Accounting, Budgeting, and Human Resources System (SABHRS) is an enterprise computer application implemented by the State of Montana to assist state agencies and the Montana University System to record the disposition, use, and receipt of public money and property in accordance with state law. SABHRS also assists in the administration of human resource information, including the generation of a bi-weekly payroll. The responsibilities for all SABHRS maintenance and support are divided among three Department of Administration (DOA) entities:

- ◆ SABHRS Finance and Budget Bureau, responsible for managing the financial system,
- ◆ Human Resources Information Services Bureau, responsible for the human resources system, and
- ◆ Information Technology Services Division, responsible for providing technical support.

On an annual basis an Information Systems (IS) audit is conducted to identify and test key controls over the application to ensure the system is operating as intended to maintain the integrity of business processes. IS auditors focused on modifications to SABHRS, system access, and data reviews.

This report includes recommendations for identifying duplicate payments, and implementing a formal mechanism for decision-making. The recommendation related to duplicate payments includes implementing a minimum level of protection against potential duplicate payments, as well as reconciling the potential duplicates identified during the audit. A recent reorganization split responsibility for maintaining SABHRS among the three entities noted above. This change led to a recommendation to develop a formal mechanism for decision-making and dispute resolution regarding SABHRS.

Chapter I – Introduction and Background

Introduction

On an annual basis, an Information Systems audit is conducted over controls residing within the Statewide Accounting, Budgeting, and Human Resources System (SABHRS). Included in this annual audit is a review of any modifications made to SABHRS to determine affects on functionality. The intent of the SABHRS audit is to identify and test key controls over the application to ensure the system is operating as intended. In addition to this report, we provided a limited distribution memorandum to Legislative Audit Division staff providing detailed information, controls testing and process descriptions to consider during their work. This report includes recommendations for strengthening controls and clarifying responsibilities.

Background

SABHRS is an enterprise computer application implemented by the State of Montana to assist state agencies and the Montana University System to record the disposition, use, and receipt of public resources in accordance with state law (section 17-1-102, MCA). SABHRS also assists in the administration of human resource information, including the generation of a bi-weekly payroll. The responsibilities for all SABHRS maintenance and support are divided among three Department of Administration (DOA) entities: SABHRS Finance and Budget Bureau (SFABB), Human Resources Information Services Bureau (HRIS), and Information Technology Services Division (ITSD). SFABB is responsible for managing the financial system, HRIS is responsible for the human resources system, and ITSD is responsible for providing technical support.

SABHRS includes two subsystems: Financial and Human Resources Management. Within each of these subsystems are modules providing different functionality to SABHRS users. The Financial subsystem includes:

- ◆ General Ledger (GL) - Acts as a single repository of all financial transaction records entered into SABHRS, including payables and receivables. When a transaction is entered, a journal line is generated. The journal line is then posted to the GL, where it can be used in a number of accounting functions including reconciliations and maintenance.
- ◆ Accounts Payable (AP) - Responsible for the processing of vouchers and payment to state vendors. The AP also transmits voucher data through interfaces with the GL and Warrant Writer.
- ◆ Accounts Receivable (AR) - Processes incoming payments and bills customers. AR data is transferred and posted to the GL.

- ◆ Purchasing - Stores vendor information, purchase orders, recurring contracts, and procurement card information for all state agencies. Purchasing functionality included processing purchase order information into the AP module. Purchasing transaction data is posted to the GL in the form of journals.
- ◆ Asset Management (AM) - Stores assets and calculates depreciation, gains, losses, and trade-in values.

The Human Resources Management (HRM) subsystem includes four modules:

- ◆ Human Resources (HR) - The HR module is where all personnel, job position, and employment records are entered and maintained.
- ◆ Time and Labor (TL) - Employee's time is entered, validated, and approved within this module, resulting in actual compensation for employees.
- ◆ Benefits Administration - Responsible for defining what benefits (medical, retirement, leave, etc.) an employee is eligible for.
- ◆ Payroll - Responsible for calculating earnings, deductions, and net pay based on information entered within the other three HRM modules.

All of these modules include functionality relied on by agency finance and HR users in the management of financial and human resources.

Audit Objectives

This information systems audit addressed the following objectives:

1. Verify the implementation status of previous audit recommendations.
2. Confirm modifications to SABHRS have not negatively affected baseline processes and the department has developed and implemented change management controls.
3. Verify access to the system is controlled and limited to those with a valid business requirement.
4. Review select data elements as identified through audit work.
5. Determine if reorganization has had any negative impact on SABHRS operations.

Audit Scope and Methodology

This audit focused on modifications made to SABHRS functionality since our last audit. We also reviewed user access, which is ever-changing and presented an increased risk with the recent reorganization. Finally, we performed data analysis to identify potential data integrity issues regarding SABHRS data and rates. When our data analysis results in questions requiring review at the agency level, we provide the results to Legislative Audit staff for their review during agency audits. Such was the case when our audit work identified records with negative depreciation, and account balances

that differed from state policy. These have been provided to audit staff for consideration during agency audits.

Methodology included interviewing staff, query and analysis of SABHRS data, and observation of SABHRS operations. We evaluated the control environment using state policies and criteria established in the IT Governance Institute's Control Objectives for Information and Related Technology (COBIT). The audit was conducted in accordance with Government Auditing Standards published by the United States Government Accountability Office (GAO).

Prior Audit Recommendations

In the previous SABHRS audit report (08DP-03), we made two recommendations to DOA. Both recommendations addressed SABHRS incompatible access privileges. One of the objectives of this year's audit was to verify the implementation status of these two prior audit recommendations.

We recommended the department develop and implement procedures and controls to address conflicting access roles in SABHRS. The department has developed and implemented procedures for identifying and removing conflicting access roles, as well as controls to ensure agency users cannot be assigned conflicting access roles. The procedures for granting access to the HR module now requires a comparison of what the user currently has and what access is being requested to ensure users are not assigned conflicting access roles.

We also recommended the department remove programmer access allowing modification to programming code and database tables in the production environment and instead develop and implement procedures to provide temporary programmer access in emergency situations. The department has implemented this recommendation.

Management Memorandum

During the course of our audit, we made an observation regarding measuring the success of the reorganization of SABHRS services, which we believe warrants management attention. This observation is not included as a recommendation in this report, but was presented to the Department of Administration for its consideration.

Chapter II – System Changes

Introduction

Each year we review modifications to the Statewide Accounting, Budgeting, and Human Resources System (SABHRS) that have occurred since the last audit. Based on this year's review of system modifications, we determined that SABHRS has not been updated to a different version and many of the core processes remain unchanged. Our audit work then focused on functionality affected by minor system modifications made since the last audit, as well as areas requiring continual review such as system access.

System Changes

System changes include changes from vendor provided updates, user requested changes, and implementation of new system functionality. We reviewed all system changes that were implemented since our previous audit. We identified 11 changes in the Financial subsystem and 16 changes in the Human Resources Management subsystem (HRM).

We also reviewed department change management procedures to ensure controls are in place. Department procedures require a formal request for change, documentation of changes to be completed, testing of all changes in a test environment that matches the production database, approval of all changes, and subsequent migration into the production database. We reviewed documentation for five system changes to ensure change management procedures were followed. Our sample included changes from all three Financial modules modified this year (General Ledger (GL), Accounts Payable (AP), and Accounts Receivable (AR)), as well as a user requested change and a vendor provided update to the HRM subsystem. We noted all necessary documentation indicating change management procedures were followed.

CONCLUSION

Based on our review of system changes in SABHRS, modifications have not negatively affected baseline processes, and the Department of Administration has developed and implemented change management controls.

System Access

While a system change might be reviewed only once to ensure it is working, other changes (like system access) require ongoing review to provide continued assurance.

According to industry reports, one of the greatest threats to information security is employees. Employees typically have access to a company's personal computers and computer networks, and they often know precisely what information is valuable and where to find it. Managing system access is the first line of defense against the misuse of information. Managing system access includes identifying access needs and capabilities, granting access to the system, monitoring access, and reviewing and adjusting access as needed. Montana Operations Manual (MOM 2-9900) guidance suggests management ensure adequate separation of responsibilities, and IT Governance Institute's Control Objectives for Information and Related Technology (COBIT) suggests a division of roles and responsibilities in areas of risk to ensure no single user has access to compromise the system and users are limited to access relevant to their specific job duties.

We reviewed the following to ensure SABHRS access is controlled and appropriate:

- ◆ access to modify the state's vendor table
- ◆ access to create and approve new/changed AR customer accounts is segregated
- ◆ access to modify a GL journal
- ◆ access to initiate and approve an inter-unit journal is segregated
- ◆ access to initiate on-cycle and off-cycle payroll processing has an identified need
- ◆ only authorized employees can update and modify HR rates
- ◆ write access to the four voucher tables and the payment table is limited
- ◆ activity of users with access to change/re-issue warrants is logged and reviewed
- ◆ access to the staging tables is limited

CONCLUSION

Based on our review, access to the system is controlled and is limited to those with a valid business requirement. However, our review of these controls identified two areas where further audit work was necessary.

AR Customer Accounts

In addition to MOM policy and COBIT suggestions to create a separation of responsibilities, the Department of Administration's Financial Roles and Responsibilities policy specifies that no user with access to create an AR customer account will have access to approve an AR customer account. We identified one user

with access to create/change and approve AR customer accounts. For business reasons, State Accounting Division (SAD) management decided access for the individual is required and therefore knowingly allow and accept the risk involved with the access. To compensate for this incompatible access, SAD personnel developed queries to view names of individuals who have created/changed and approved AR customer accounts. The queries are run manually from the SABHRS application at the discretion of SAD management.

Reissued Warrants

The second area where further audit work was conducted related to department monitoring of activities of users with access to change and reissue warrants. The department's control is a query identifying warrants that have been created or changed by SAD staff, and then comparing the addresses on the warrants with the addresses of SAD staff to ensure there are no matches. The queries are run manually from the SABHRS application at the discretion of management.

Summary

State policy (MOM 2-9900) guides managers to develop methods to minimize identified risks. In both cases noted previously, department management identified risks and established compensating controls through the use of queries for monitoring activity of users. While there is no department policy or procedure for documenting use of the queries and review of monitoring results, the department has taken steps to minimize identified risks. While we did not identify any problems with the queries, there was no way for auditors to verify use of the queries and review of results due to the lack of documentation. Therefore, we cannot conclude on the effectiveness of these controls as a method of minimizing identified risks.

CONCLUSION

We conclude, while further improvement could be achieved by documenting control procedures and results of monitoring, the Department of Administration has implemented monitoring controls to mitigate risks presented by excessive access to the Accounts Receivable module and access to change or reissue warrants.

Chapter III – Data Reviews

Introduction

We identified several data elements that initially presented potential areas of risk including:

- ◆ duplicate payments to vendors
- ◆ payment amounts over invoice amounts
- ◆ changes to reissued warrants
- ◆ matching addresses between users and vendors
- ◆ unique employee ID numbers
- ◆ assets with a negative depreciation
- ◆ account balance outside of normal policy ranges

This chapter discusses a potential issue with duplicate payments.

Duplicate Payments

The Statewide Accounting, Budgeting, and Human Resources System (SABHRS) is used by every agency and university to pay vendor submitted invoices. Overpayment to a vendor can occur when duplicate payments are issued based on a single invoice, either through error or intentionally. To determine if duplicate payments have been made, we performed data analysis on SABHRS invoice and voucher data fiscal year 2006 and newer, which included over seven million records, to identify duplicate payments. We imported the records into a computer assisted audit tool and filtered out all invoices that were not approved or were closed prior to posting to ensure only actual payments were included in our review. We used the audit tool to filter out voucher records sharing the same invoice number, vendor, payment amount, and invoice date. This resulted in 103 records with 48 total invoices having potential duplicate payments totaling \$51,306.90.

SABHRS includes functionality to identify duplicate payments. Agencies can choose to configure SABHRS to identify duplicate payments based on any combination of the following criteria:

- ◆ Vendor Number
- ◆ Invoice Date
- ◆ Invoice Gross Amount
- ◆ Invoice Number
- ◆ Business Unit

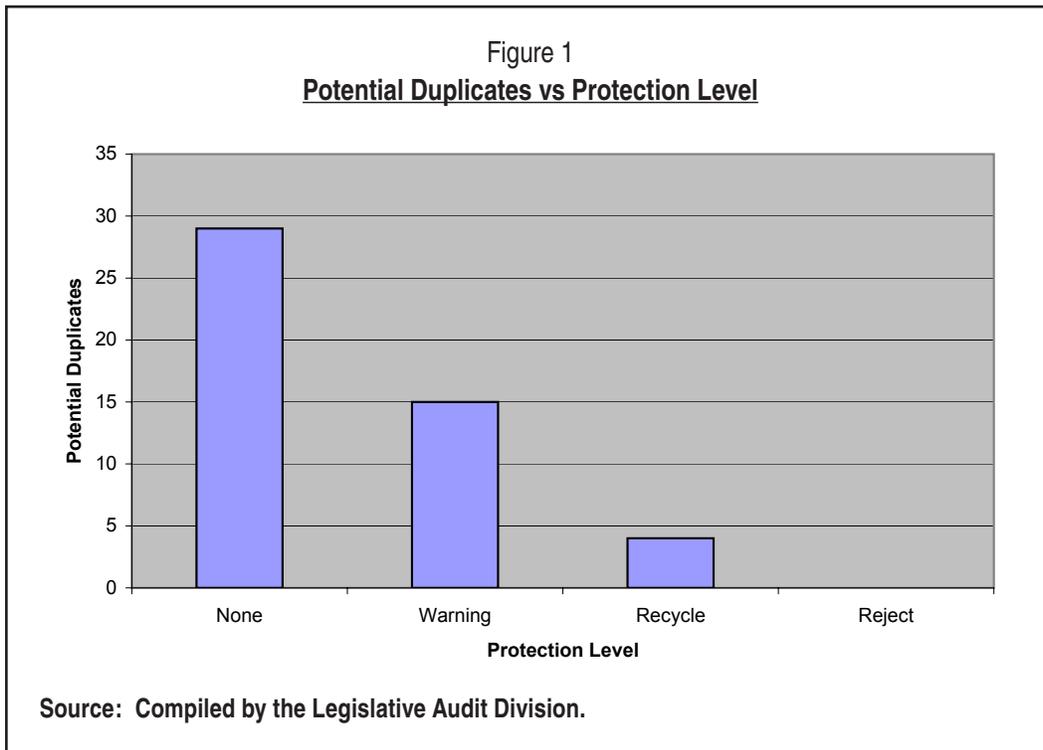
Agencies determine the course of action SABHRS will take when payments are identified as possible duplicates, based on the agency's choice of the criteria above.

SABHRS includes one of three options on how to deal with duplicate payments:

- ◆ Reject – will not allow duplicate to save or post to the system.
- ◆ Recycle – will allow duplicate to be saved but will not post as a valid payment.
- ◆ Warning – duplicate payment will post, and agency will receive a warning.

The intent of this functionality is to notify agencies when a duplicate invoice is detected in the system. However, agencies are not required to use this functionality. The criterion for this process is set per business unit. A business unit is an identifier in SABHRS used by agencies to record financial activities. In order to facilitate more efficient accounting practices, some agencies create multiple business units. Currently, there are 108 business units identified in SABHRS. Of the 108 business units in the system, 16 are set to reject, 75 are set to recycle, and 17 are set to warning. Of the 108 business units, 40 have not chosen any criteria to check against or are set to give only a warning. Of the 48 possible duplicates we identified, 29 have no duplicate protection (no criteria chosen), 15 have warning set, 4 are recycle, and 0 are reject.

The chart below shows the relationship between the levels of protection chosen by agencies and the potential duplicates identified during our analysis. As the level of protection increases, the number of potential duplicates drops. At the highest level of protection (reject), no potential duplicates were identified.



State policy (MOM 2-0250.00) requires agencies to take steps to ensure a payment was not previously issued. Policy further states if a fraudulent or duplicate payment is identified, every effort should be made to recover the funds, and the breakdown in controls that allowed the improper payment should be identified and eliminated.

Although the SABHRS Finance and Budget Bureau is responsible for maintenance and upkeep of SABHRS, their philosophy is that the agencies are responsible for their own accounting and vendor payments. SABHRS provided functionality that will identify and stop payment of potential duplicates until management review and approval. However, this functionality is optional. As noted above, the majority of the possible duplicates were from agencies that had not implemented the SABHRS controls; agencies using the highest protection available (reject) had no identified duplicates in the system. However, according to department personnel, using reject can cause problems with system processing, thus limiting the reject option as a viable choice for every agency. The potential duplicates identified during our audit were provided to State Accounting Division personnel who are working with agencies to review and resolve the payments accordingly.

RECOMMENDATION #1

We recommend the Department of Administration:

- A. *Establish a statewide minimum level of protection in the system regarding identification of duplicate payments.*
 - B. *Reconcile the potential duplicate payments identified during our audit.*
-

Chapter IV – SABHRS Support Services Reorganization

Introduction

Since our last audit, the Department of Administration (DOA) reorganized Statewide Accounting, Budgeting, and Human Resources System (SABHRS) Support Services Bureau into three separate entities:

- ◆ the SABHRS Finance and Budget Bureau (SFABB) responsible for the Financial subsystem
- ◆ the Human Resources Information Services (HRIS) Bureau responsible for the Human Resources Management subsystem
- ◆ the Information Technology Services Division (ITSD) responsible for providing technical support

One of our audit objectives was to determine what affects this change in structure has had, if any, on SABHRS.

A reorganization causes change which increases risks in certain areas such as access and change control procedures. We focused on user access and communication between SFABB, HRIS, and ITSD. Based on our audit work, we determined SFABB and HRIS reviewed user access to the system, after the reorganization, to ensure only appropriate user access existed. We identified an issue related to communication between the three entities which is discussed in the next section.

Communication

Prior to the reorganization, communication regarding SABHRS was internal to a single entity: the SABHRS Support Services Bureau. The reorganization resulted in a division of SABHRS responsibilities, which increased the need for discussion and documentation of a method of communication and decision-making between the three new entities. However, during our audit, we did not identify any formal method of communication. The lack of a formal method for communication impacted the SABHRS decision-making process.

An example of an impact was a communication breakdown during the creation of a Service Level Agreement (SLA). Typically, an SLA would be in place as soon as possible to identify provision of services and costs, among other things. However, after nearly a year since the reorganization, an SLA for SABHRS had not been finalized and formally signed. While department personnel indicated development of the SLA was complex, our observations indicated managers within the three entities could not agree

on SLA language that would ensure provision of adequate support for SABHRS. The lack of a finalized SLA has not negatively impacted SABHRS, although without a formal understanding of which group is responsible for maintaining different aspects of SABHRS, there could be system availability issues. More concerning is the issue with communication between the three. All three groups will need to be actively involved in any decisions regarding SABHRS. If agreements cannot be reached, it is possible that critical updates or new functionality will be impacted, which could include not being implemented. Future plans for a major upgrade of SABHRS increases the need for a clear process for communication and decision-making.

The fact there are now three entities that have an active role in maintaining SABHRS increases the need for a more formal communication and decision-making process. However, following the reorganization, a formal methodology of communication and decision-making regarding SABHRS was not established. We noted one example of an impact to SABHRS in regard to finalizing the SLA where the three entities could not reach agreement, so the issue was finally taken to the Director for resolution. To avoid future delays and to ensure the best solution in terms of SABHRS, a formal communication and decision-making process should be defined.

RECOMMENDATION #2

We recommend the Department of Administration develop a formal mechanism for department personnel to make decisions and resolve disputes regarding the Statewide Accounting, Budgeting, and Human Resources System.

DEPARTMENT OF
ADMINISTRATION

DEPARTMENT RESPONSE

DEPARTMENT OF ADMINISTRATION
DIRECTOR'S OFFICE

A-3



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RECEIVED
JUN 08 2009
LEGISLATIVE AUDIT DIV.

RE: Information Systems Audit #09DP-03: Statewide Accounting, Budgeting, and Human Resources System (SABHRS)

Dear Ms. Hunthausen:

The Department of Administration has reviewed the Information Systems Audit of the Statewide Accounting, Budgeting, and Human Resources System (SABHRS) and the recommendations contained therein. Our response to the recommendations appears below:

Recommendation #1:

We recommend the Department of Administration:

- A. Establish a statewide minimum level of protection in the system regarding identification of duplicate payments
- B. Reconcile the potential duplicate payments identified during our audit.

Response:

- A. Concur. The State Accounting Division will implement a statewide policy, establishing the minimum duplicate payment options necessary to limit the State's exposure to possible duplicate payments in the SABHRS system. This policy will be established by September 1, 2009.
- B. Concur. The State Accounting Division will continue to work with all agencies to reconcile the potential duplicate payments identified by the audit staff.

Recommendation #2:

We recommend the Department of Administration develop a formal mechanism for department personnel to make decisions and resolve disputes regarding the Statewide Accounting, Budgeting, and Human Resources System.

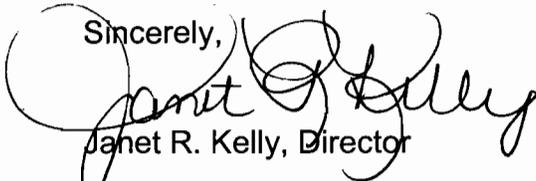
Response:

Concur. The Information Technology Services Division (ITSD) and the two SABHRS entities signed Service Level Agreements that include a formal dispute resolution process. Additionally, the Department reestablished the Information Technology Manager position to provide the necessary oversight and coordination required to identify and resolve information technology issues.

My staff and I appreciated the courtesy and professionalism of the legislative audit staff in conducting this audit. The Department always views the audit process as an opportunity for improvement and welcomes your input.

The Department's Corrective Action Plan (CAP) is attached.

Sincerely,

A handwritten signature in black ink, appearing to read "Janet R. Kelly". The signature is written in a cursive style with a large initial "J".

Janet R. Kelly, Director

Attachment

