COUNTY OF SACRAMENTO CALIFORNIA

For the Agenda of: December 6, 2016 "Communications Received and Filed" Item

To: Board of Supervisors

From: Department of Finance

Subject: Review Of Department Of Revenue Recovery's Operational Controls For Its

Cashiering And Payment Collections Process, And DMACS System

Supervisorial

District: All

Contact: Joyce Renison, Assistant Auditor-Controller, 874-7248

RECOMMENDATION

Receive and file the attached agreed upon procedures report, Review Of Department Of Revenue Recovery's Operational Controls For Its Cashiering And Payment Collections Process, And DMACS System

Respectively submitted,

Ben Lamera

Director of Finance

Attachment 1, Review of Department of Revenue Recovery's Operational Controls for its Cashiering and Payment Collections Process, and DMACS System

Agenda Date: December 6, 2016

ATT 1

COUNTY OF SACRAMENTO **INTERNAL SERVICES DEPARTMENT OF FINANCE AUDITOR-CONTROLLER**

Inter-Departmental Correspondence

November 3, 2016

To:

Connie Ahmed

Director, Department of Revenue Recovery

From:

Ben Lamera

Director of Finance

By:

Alan A. Matré

Chief of Audits

Subject:

REVIEW OF THE DEPARTMENT OF REVENUE AND RECOVERY

OPERATIONAL CONTROLS FOR ITS CASHIERING AND PAYMENT

COLLECTIONS PROCESSES AND DMACS SYSTEM

We have performed the procedures enumerated below, which were requested by the County of Sacramento, Department of Revenue Recovery (DRR), solely to assist DRR in evaluating its operational controls over its cashiering and payment collections processes (collection process) and its collection system, Debt Management and Collection System (DMACS). DRR's management is responsible for ensuring proper internal control over its collection process and DMACS. This agreed-upon procedures engagement was conducted in accordance with attestation standards established by the American Institute of Certified Public Accountants. The sufficiency of these procedures is solely the responsibility of DRR's management. Consequently; we make no representation regarding the sufficiency of the procedures described below either for the purpose for which this report has been requested or for any other purpose. This report is applicable solely to procedures referred to below and is not intended to pertain to any of DRR's other operations, procedures, or compliance with laws and regulations. The procedures we performed for DRR are summarized as follows:

We reviewed DRR's security/access over DMACS.

Finding: We noted DRR does not have proper security/access to DMACS. See Attachment I, Findings and Recommendations.

We reviewed the separation of duties within DMACS which included collections. monitoring, authorization, and collection support.

Finding: We noted several issues with DRR's collection, monitoring, authorization, and collection support and the lack of separation of duties over DMACS. See Attachment I, Findings and Recommendations.

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• We reviewed the cashiering and payment collections for DRR.

Finding: We noted issues with DRR's cashiering payments process regarding its payments received by mail. We also noted issues with DRR's payment collections process. See Attachment I, *Findings and Recommendations*.

We were not engaged to, and did not, conduct an audit or examination, the objective of which would be the expression of an opinion on the accounts or items referred above and on the previous page. This report relates only to DRR's internal control as it pertains to DRR's collection process and DMACS, and does not extend to DRR's other operations as a whole. Had we performed additional procedures, other matters might have come to our attention that would have been reported to you.

DRR and DTech's responses to the findings identified during our procedures are described in Attachment I, *Findings and Recommendations*. We did not perform procedures to validate DRR and DTech's responses to the findings and, accordingly, we do not express opinions on the responses to the findings.

This report is intended solely for the information and use of the Sacramento County Board of Supervisors, Sacramento County Executive, and DRR and DTech's management. It is not intended to be and should not be used by anyone other than these specified parties. However, this restriction is not intended to limit distribution of this report, which is a matter of public record.

Attachment I, Findings and Recommendations

FINDINGS AND RECOMMENDATIONS

Background:

The County of Sacramento (County), Department of Recovery (DRR) implemented the Debt Management and Collection System (DMACS) as DRR's collection system in 2009. The County's Department of Finance, Auditor-Controller Division (Auditor-Controller) is tasked with doing a Relief of Accountability for all County departments. Since the Auditor-Controller has never reviewed DMACS, it is considered necessary to review the operational controls within DRR's DMACS to perform the Relief of Accountability, and DRR's cashiering and payment collections process.

1. No Separate Access Login Information for DMACS.

Comment

During our review, we noted DMACS' users login information is the same login information as their Windows login. DMACS should require a different login information than the Windows login to provide a second level security access for DMACS. Per the County Information Technology Security Policy, it mentions "Use Different Passwords on Different Systems". As such, DRR and DTech were not in compliance with the County Information Technology Security Policy.

Recommendation

We recommend DRR and Department of Technology (DTech) require different login information for DMACS from Windows to provide DMACS with a second level security access and to be in compliance with the County Information Technology Security Policy.

DRR's Management's Comment

DTech indicated the current County Information Technology Security Policy has been revised and the separate login requirement has been removed. DTech anticipates the new policy will soon be approved, in which case DRR will already be in compliance with the new policy.

DTech's Management's Comment

In the past, it was desirable to have separate logins for each system. DMACS was designed and developed to use Active Directory (AD) authentication. This provides a secure infrastructure for application authentication and gives DTech the ability to enforce strong password requirements and efficiently disable an employee's access to all applications upon separation from the County. DTech has drafted a new IT Acceptable Use policy which is currently under review with the County Executive Office. The new policy removed the reference to additional application specific login credentials.

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2. Mailed in Payments

Comment

DRR notates the total number of checks received after mailed in payments are opened and sorted on an excel worksheet. In addition, DRR notates the total amount of checks, and total number of checks and amount of checks returned to the Payer for incomplete checks on another excel worksheet. However, these worksheets were not used to perform the daily reconciliation by DRR's Cashiering Supervisor. We further noted that these worksheets only provide totals of the number of checks and amounts of mailed in payments and does not detail each mailed in payment. By not notating each mailed in payment on its own line on a check payment receipt log, DRR is unable to easily track which payments are missing, entered incorrectly in DMACS, returned to payers, etc.

Recommendation

We recommend DRR prepare a detailed mailed in payments receipt log, and reconcile the mailed in payments receipt log to the deposit made to County Treasury and entered in DRR's DMACS.

DRR's Management's Response

The detailed mailed in payments receipt log is unnecessary as DRR has clarified procedure to maintain sufficient controls. Procedure was clarified to require all mail-in payments be included in the calculator tapes that are generated to tabulate the number and value of mail-in payments received, and that tapes are to be reconciled against payments posted in DMACS and turned over to Treasury. Reconciliation procedures were also clarified to require notation of payments that cannot be accepted, due to lack of signature or other technicality, on the calculator tapes. The DRR Cashiering Supervisor is responsible for verifying calculator tapes are reconciled with the Treasury Deposit, the transactions posted in DMACS, and the funds in the cashier drawer. This is in addition to the existing EXCEL worksheet documentation DRR maintains.

The system enhancement to capture all transactions will be scheduled for review in Fiscal Year (FY)2017-18, after DTech completes work needed to implement recent Grand Jury recommendations, and other mandated or required deadline driven work.

3. Monitoring User Access In DMACS

Comment

During our review, we noted the monitoring process for DRR's user access has not been fully implemented. DRR runs a Daily Transaction Report from DMACS, which has the users'

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names and transactions the users processed for that day. The Daily Transaction Report is to be reviewed by the users' supervisor to ensure the users' transaction types processed in DMACS were appropriate. However, there was no supporting documentation indicating the monitoring process was being performed.

In addition, the automated DMACS transactions and developers' user access were not being monitored by DTech to ensure the automatic transactions and developer access/changes were appropriate.

We further noted manual changes by DRR and automatic changes by DTech to debtors' demographics information were not being monitored to ensure that changes to debtors' information were accurate and appropriate.

Monitoring user access ensures transactions and changes that occur in DMACS are appropriate. As such, the risks of unauthorized transactions and/or changes could occur without management's knowledge.

Recommendation

We recommend DRR establish and implement written procedures for DRR's monitoring of DRR's users' access in DMACS to encompass all entries and changes made in DMACS. In addition, we recommend DTech establish and implement written procedures for DTech's monitoring of the automated DMACS transactions and developers' user access for appropriateness. We further recommend proper supporting documentation be maintained when DRR and DTech's monitoring process has been completed daily.

We further recommend DRR establish and implement written procedures for the manual and automatic changes to debtors' demographics information to include manual changes be reviewed and approved prior to entering in DMACS, and automatic changes be sporadically reviewed by DRR for accuracy and appropriateness at least daily.

DRR's Management's Response

Recommended procedure revisions will be implemented by the end of December 2016. DRR supervisors will spot check manual and automated demographic updates on a daily basis. It is impractical to pre-approve all updates due to the extremely large volume.

DTech's Management's Response

DTech will establish and implement written procedures by the end of December 2016 for DTech's monitoring of the automated DMACS transactions and developers' user access for

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appropriateness. Supporting documentation in the form of a log will be maintained with the results of DTech's daily monitoring.

Developers require full access to the production DMACS for the purpose of updating the database schema. Currently, four developers have full access to the production DMACS. This will be reduced to one primary developer and one backup developer (in the absence of the primary developer). All other developers will be granted read-only access to the production DMACS.

4. DMACS Daily Balancing Screens

Comment

During our review, we noted one County Treasury's cashier's DMACS "Daily Cashiering Balancing" screen and DRR's Cashiering Supervisor's DMACS "Daily Summary Balancing" screen do not include \$1,177 cash payments received and posted to debtors accounts on July 8, 2016. However, DRR's Cashiering Supervisor's DMACS "Daily Income Summary" screen included the \$1,177 cash payments received and posted to the general ledger. We were informed that the reason the DMACS "Daily Cashiering Balancing" screen did not capture all payments received was due to the cashier executing the save button in the middle of the day. In addition, after the execution of the save button, payments received and posted to debtors accounts will not show on DMACS "Daily Cashiering Balancing" screen. A proper system should be able to generate the same screens once payments are posted to debtors accounts regardless of when the save button was executed. Since two of the screens did not capture the \$1,177 cash payments received and posted on DMACS "Daily Cashiering Balancing" and "Daily Summary Balancing" screens, it appears that these two screens were not capturing all the payments posted for that day. As such, the County Treasury cashier was not able to balance its cash payments received and any overages/shortages could not be determined.

Recommendation

We recommend DRR request DMACS' Balancing screens to capture all payments posted to debtors' accounts when generated to ensure cashiers can balance at the end of the day, and be able to determine any overages/shortages for that day.

DRR's Management's Response

DRR will provide refresher training, by the end December 2016, to all appropriate staff in the proper "closing out" and discrepancy reconciliation procedures. DRR will request a DMACS enhancement to display a confirmation message that will prompt the user to confirm that they are closing out for the day, which will prevent accidental premature closing out. The system

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enhancement will be scheduled for review in FY2017-18, after DTech completes work needed to implement recent Grand Jury recommendations, and other mandated or required deadline driven work. Current reconciliation procedures will be clarified to extend proper documentation of discrepancies related to premature closing out.

5. Authorization of User Access

Comment

During our review, we noted two DMACS' Active Directory security group work roles (Active Directory list), "ProbationUserRole" and "ProbationManagerRole", had the same individuals listed under both security group work roles. However, the manually tracked user security work role access list (user access list) DTech provided did not have a "ProbationManagerRole" list, only a "ProbationUserRole" list. As such, proper tracking of user access in DMACS were not properly maintained.

We further noted the user access list DTech provided had three security group work roles, "DHAUserRole", "MSAUserRole", and "SuperiorCourtUserRole", which were not listed under the Active Directory list. Therefore, we were not able to determine how the users were granted access in DMACS without going through the proper granting user access process.

We also noted the following:

- Two individuals were listed under the "CashieringRole" on the Active Directory list, but were not listed under DRR's user access list.
- One individual was listed under the "CollectionLeadRole" on the Active Directory list, but was not listed under DRR's user access list.
- Four individuals were listed under the "DOFCashieringRole" on the Active Directory list, but were not listed under DTech's user access list.
- Two individuals listed under "DOFCashieringRole" on the Active Directory list and DTech's user access list should no longer have access in DMACS due to a transfer to a different division and no longer an employee of the County.
- Five individuals listed under "CashieringRole" on DRR's user access list were not listed on the Active Directory list.

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- One individual listed under the "CollectorRole" on DRR's user access list was not listed on the Active Directory list.
- One individual listed under the "unv-drr-dmacs" (DHHS) on DTech's user access list was not listed on the Active Directory list.

Based on our observation of users from the security work role list provided by DRR, we noted the following:

- One Cashiering Supervisor security work role user had seven drop down menu options in DMACS that were not listed on DRR's security work role list and one drop down menu option that was listed on DRR's security work role list that was not in DMACS. This same user is also assigned to Disbursement Refund and had one drop down menu option in DMACS that was not listed on DRR's security work role list and one drop down menu option that was listed on DRR's security work role list that was not in DMACS.
- One Input security work role user had one drop down menu option in DMACS that was not listed on DRR's security work role list and five drop down menu options that were listed on DRR's security work role that was not in DMACS. This same user is also assigned to Disbursement Refund and had three drop down menu options that were listed on DRR's security work role list that were not in DMACS.
- A different Input security work role user than the one noted above had seven drop down menu options in DMACS that were not listed on DRR's security work role list and two drop down menu options that were listed on DRR's security work role list that were not in DMACS.

The Active Directory list is how users are granted access in DMACS. There were several differences noted above and on the previous page between the Active Directory list and DTech's and DRR's user access lists. There were users that were granted access in DMACS per the Active Directory list that was not tracked by DTech and DRR, and users that were on the user access lists that were not updated and tracked appropriately by DTech and DRR.

In addition, the drop down menu options for the user observed as noted above were not updated to reflect the current user access.

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Proper tracking of user access should be maintained by DRR and DTech to ensure that proper authorization was granted to user. By not doing so, unauthorized user could have access to menu options without management's knowledge.

Recommendation

We recommend DTech track all non-DRR staff user access and DRR track all DRR staff user access, and ensure that all their user access is authorized, updated, and correct, at least monthly. We further recommend DTech and DRR update their user access lists with the correct drop down menu options to reflect current users' accesses within DMACS.

DRR's Management's Response

DRR updated the DMACS Security Work Role Procedure, indicating how access to DMACS will be granted, keeping track of users with access, and verifying user access on a regular basis.

DRR will request enhancements to modify the drop down menus in DMACS be aligned with accounting related separation of duties functions, which for DRR are input, cashiering, adjustment, and refunds/disbursements. The system enhancements will be scheduled for review in FY2017-18, after DTech completes work needed to implement recent Grand Jury recommendations, and other mandated or required deadline driven work.

DTech's Management's Response

DTech will continue to track all non-DRR staff user access and ensure that all their user access is authorized, updated, and correct, at least monthly. DTech will work with DRR to update user access lists with the correct drop down menu options to reflect current users' accesses within DMACS.

6. DRR's Separation of Duties for DMACS' Security Work Roles

Comment

DMACS has different module access (drop down menu options) for each user based on assigned user job responsibilities (security work roles). These different security work roles listed in DMACS for DRR are Accountant, Adjustments, Cashiering, Cashiering Supervisor, Collection Lead, Collection Supervisor, Collection Support Supervisor, Collector, Disbursement Refund, DMACS Executive Secretary, Input, and Manager. During our review of proper separation of duties within DMACS' user access, we noted that several users had drop down menu options that did not pertain to their assigned work roles. We noted the following on the next page:

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- Twenty-three users had more than one security work role assigned to them per the summary of the security work role list provided by DRR. Examples noted below:
 - o Two users had Cashiering, Disbursement Refund, and Input security work roles assigned to them on DRR's user access list.
 - o A different user had Adjustments, Cashiering, and Input security work roles assigned to them on DRR's user access list.

Based on the security work role list provided by DRR, we noted the following:

- The Accountant security work role had three users with user access to perform input, disbursement/refund, and adjustments. Two of three users in the Accountant security work role had user access to cashier payments.
- The Adjustments security work role had seven users with user access to perform input and disbursement/refund.
- The Disbursement Refund security work role had eight users with user access to perform input.
- The Collection Support Supervisor security work role had three users with user access to perform input, disbursement/refund, and adjustments.
- The Collection Lead security work role had one user with user access to perform input.
- The two Executive Secretaries for DRR had user access to collections.
- The Manager security work role had five users with user access to perform input, disbursement/refund, and adjustments.

Proper internal control dictates that separation of duties involving posting payments, posting adjustments, posting disbursements/refunds, and posting account charges need to be separated. By not having sufficient separation of duties in DMACS, the risk of misappropriation of funds and incorrect debtor account balances could occur and not be detected in a timely manner.

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Recommendation

We recommend DRR require user access' drop down menu options be granted based on users' job responsibilities. We further recommend DTech and DRR coordinate access to the drop down menu options based on users' job responsibilities, and all other information and data is restricted to view access only.

DRR's Management's Response

DRR will request enhancements in early FY2017-18 to modify the drop down menus in DMACS be aligned with accounting related separation of duties functions, which for DRR are input, cashiering, adjustment, and refunds/disbursements.

7. <u>DTech's Separation of Duties for DMACS' Security Work Roles</u>

Comment

DTech has five users in DMACS under the security work role, "Admin3Role", which had all user access from cashiering payments, inputs, adjustments, disbursements, etc., and programming user access. Proper internal control dictates that program developers should be limited to programming access and do not have any access to any other drop down menu options in DMACS. By not having sufficient separation of duties in DMACS, the risk of misappropriation of funds and incorrect debtor account balances could occur and not be detected in a timely manner.

Recommendation

We recommend the program developers' access be restricted to programming access only in DMACS. We reiterate the recommendation from Finding 6.

DTech's Management's Response

Developers require full access to the production DMACS for the purpose of updating the database schema. Currently, four developers have full access to the production DMACS. This will be reduced to one primary developer and one backup developer (in the absence of the primary developer). All other developers will be granted read-only access to the production DMACS.

8. <u>Drop Down Menu Options</u>

Comment

During our review, we noted that two drop down menu options, Collector's Workstation and Accounting Workstation, in DMACS allowed users to change debtors' demographics, such as names, addresses, etc., once the users are in either of the two drop down menu options.

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Proper internal control dictates that only authorized individuals be allowed to change debtors' demographics when necessary, and restrict all other user access to view access only. Since many, if not all, users have access to either the Collector's Workstation or Accounting Workstation, debtors' demographics could be changed without management's knowledge. In addition, several users had other drop down menu options access where the potential risk of misappropriation of funds could occur.

Recommendation

We reiterate the recommendation from Finding 6.

DRR's Management's Response

The recommendation to separate demographic updates from other functions needs to be further reviewed due to the large volume of updates that are required. The monitoring and supervisory review of updates may be sufficient controls.

9. Collections Process

Comment

We noted that the Collection Support staff will assist the Collection Enforcement Customer Services Agents, when needed, to perform the outbound calls to debtor when debtors are late on their payment. The Collection Support staff has access to perform adjustments, disbursements, payments, etc. As such, the Collection Support staff should not be performing outbound calls to debtors when they have access to change debtors' accounts. By not having sufficient separation of duties through the collections process, the risk of misappropriation of funds and incorrect debtor account balances could occur and not be detected in a timely manner.

Recommendation

We recommend the collections process be separated to where the outbound calls are performed by DRR staff that does not have the ability to post any changes to debtor accounts.

DRR's Management's Response

Staff that have the ability to post changes to debtor accounts are used only on an infrequent exception basis when coverage is needed.

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10. System Generated Security Work Roles and Users' Drop Down Menu Options Access

Comment

We were informed by DTech's IT Analyst/Programmer and DRR's Accounting Manager that a system generated security work role's drop down menu options access lists and individual users' drop down menu options access lists could not be generated. Drop down menu options access lists for security work roles and individual users should be system generated so users' access is easily tracked and accurate. Since DTech and DRR were not able to provide a system generated security work roles or individual users' drop down menu options access lists, we were not able to determine if users' access was correct in DMACS.

Recommendation

We recommend DRR request DTech to create a system generated security work role and individual users' drop down menu options access lists to easily and accurately track users' access in DMACS.

DRR's Management's Response

DRR will request enhancements in early FY2017-18 to modify the drop down menus in DMACS be aligned with accounting related separation of duties functions, which for DRR are input, cashiering, adjustment, and refunds/disbursements.

11. Outside Agency Technical Assessment Report

Comment

Eclipse Solutions Inc. (Eclipse Solutions) performed a technical assessment of the technology components of DMACS at a point-in-time from the time period between August and October 2011. Eclipse Solutions' "County of Sacramento, Department of Revenue Recovery, Debt Management and Collection System (DMACS) Technical Assessment" (DMACS Technical Assessment) report dated December 20, 2011 noted several issues that we believe should be reported in our report. The following issues are noted below and on the next page:

From the Executive Summary section:

• "The system's data integrity is lacking, requiring manual cleanup scripts to be run on a near daily basis. This calls into question the validity of the data at any given state since the creation/update of records does not guarantee that the record is in a valid business state. System changes are complicated in that

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changes affecting manual-cleanup objects may be impacting more than just the apparent application functionality."

• DMACS will be expensive to maintain and our [Eclipse Solutions] recommendation would be to not extend DMACS functionality until the main security and application risks are mitigated.

From the Risks section:

- "The system is at risk for unauthorized system administration access to the DBMS and system Data. DMACS uses the system administrator 'sa' account to execute all database queries. Since all database calls use Dynamic SQL, this means that a fully permissioned account is executing each call in an application that does not verify the contents ('scrub') of inputs, making a SQL injection very possible."
- The system is at risk for security compromises. Security was not a design consideration. For example, user name and passwords are stored in plain text in the application code base (the 'sa' password exists in 93 files)."

From the Security section:

- Under the Observation ID 4.5_1, "All database connections use the system administrator ('sa') account. The 'sa' account has the ability to perform any action against a SQL Server instance. Consequently, it should never be used for an application account."
- Under the Observation ID 4.5_4, "No authentication on XML services. The lack of authentication or encryption would mean anyone with knowledge of the transaction would be able to spoof any service."

We believe the issues we noted from Eclipse Solutions DMACS Technical Assessment report above and on the previous page are related to the Findings we noted in this attachment. We did not test or perform any procedures to determine if any of Eclipse Solutions recommendations to the issues noted above and on the previous page, and on their DMACS Technical Assessment have been implemented.

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Recommendation

We recommend DRR mitigate the security and application risks as noted in Eclipse Solutions DMACS Technical Assessment report immediately.

DRR's Management's Response

DRR will request DTech review the Eclipse report and make recommendations to DRR by December 31, 2016, including record of items that have been addressed and items that will not be implemented and reasons.