

Payroll Audit:
Improve Timekeeping Accuracy

December 2012



Steve March
Multnomah County Auditor

Audit Staff
Craig Hunt



Office of Multnomah County Auditor

Steve March
County Auditor

501 SE Hawthorne Room 601
Portland, Oregon 97214
Phone: (503) 988-3320

Fran Davison
Judith DeVilliers
Nicole Dewees
Craig Hunt
Jennifer McGuirk
Marc Rose
Mark Ulanowicz

Date: December 12, 2012

To: Jeff Cogen, Multnomah County Chair
Commissioners Kafoury, Smith, Shiprack, and McKeel
Michael D. Schrunk, District Attorney; Daniel Staton, Sheriff
Joanne Fuller, COO

From: Steve March, Multnomah County Auditor

Re: Payroll Audit: Opportunities for efficiencies and improvements

In Fiscal Year 2012 the County processed approximately \$455 million in payroll expenditures, or 41% of total County expenditures. This work needs to be accomplished efficiently, on-time and error-free. Even a small percentage of timekeeping errors can quickly add up to significant costs. Correcting any discovered errors is expensive, but undiscovered errors likely carry the higher price tag.

Compared to industry standards, the County's error-rate is higher than the norm which provides the County the opportunity to improve overall payroll operations. One reason errors occur is because employees and supervisors do not always fulfill their timekeeping responsibilities. The County should expect more from employees to properly record their time and supervisors to help ensure its accuracy.

Errors also occur because timekeeping processes are outdated. Timekeeping is largely a manual process where employees record their time on paper timesheets and route them to supervisors for review. We believe the County should leverage available technology to fully automate these processes and bring them into alignment with best practices. In this way the County will realize substantial savings by reducing both errors and payroll processing costs.

The root causes of timekeeping errors can be addressed by using employee and manager self-services. These allow employees to view and maintain their own information while managers view and approve both time and requested leave in a paperless, real-time environment. This improves efficiencies, is more sustainable and increases data quality.

This audit was conducted by Craig Hunt. We appreciate the assistance we received from the Department of County Management, Central Payroll, and other department staff.

C: Sherry Swackhamer, DCA; Karyne Kieta, DCM;
Mark Campbell, DCM; Susie Cameron, DCM Central Payroll

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Payroll Audit

Executive Summary

The objectives of this audit were to determine the root causes of time and attendance errors in the County and find ways to reduce them. Accurately and efficiently tracking work and leave hours involves all 5,680 County employees. When payday arrives, all employees should be paid on time with no errors. In FY12 payroll expenditures were approximately \$455 million and accounted for approximately 41% of total County expenditures.

The number of time and attendance errors in the County is too high. We looked at a sample of these errors to determine their root causes. We found that employees are not getting their work time and leave correctly calculated, coded and turned in on time; supervisors are not detecting errors when they review timesheets; and timekeepers are expected to perform these key employee and supervisor responsibilities. We also found that the County has not leveraged available technology to reduce errors and processing costs. Instead, the County uses time and attendance processes that are outdated and inefficient. Given its number of employees, size of payroll expenditures, number of manual processes and current error rates, the County could realize substantial savings by fully automating its time and attendance processes.

Employee and manager self-services (ESS/MSS) address the root causes of time and attendance errors. ESS provides individual employees access to view and maintain their own information. With MSS supervisors view and approve staff's time and requested leave in real-time without the delays of routing paper. ESS/MSS encourages employee and supervisor responsibility and reduces costs by improving time and attendance process efficiencies, decreasing paper and its associated storage costs, and increasing data quality.

The County's SAP system already has ESS/MSS capabilities. Although there have been some movements towards ESS/MSS, effective implementation will require a significant culture change that needs sufficient, high-level sponsorship, planning and involvement that appears absent now.

We recommend that the County use available technology to fully automate time and attendance processes and provide employees and supervisors the tools they need to better fulfill their responsibilities. The County should deploy more employee and manager self- services (ESS/MSS) and set its implementation up to succeed with sufficient support and planning. Central Payroll may be able to redirect some of its customer service workload to employees and use any time gained for additional monitoring of time and attendance errors and for targeted training.

Background Payroll administration in the County is largely decentralized and is administered using both automated and manual systems. The County's enterprise system SAP combines personnel and pay information with approved timesheets to prepare 24 payrolls for approximately 5,680 employees (including on-call staff) every year. The County's payroll environment is complex. In addition to federal and state regulations, the County has pay rules from 10 separate union agreements.

Personnel costs account for approximately 41% of the County's annual expenditures. Exhibit 1 shows total personnel costs for FY09 through FY12.

Exhibit 1

Total Personnel Costs

FY09	FY10	FY11	FY12
426,590,000	425,390,000	449,630,000	455,220,000

Source: SAP

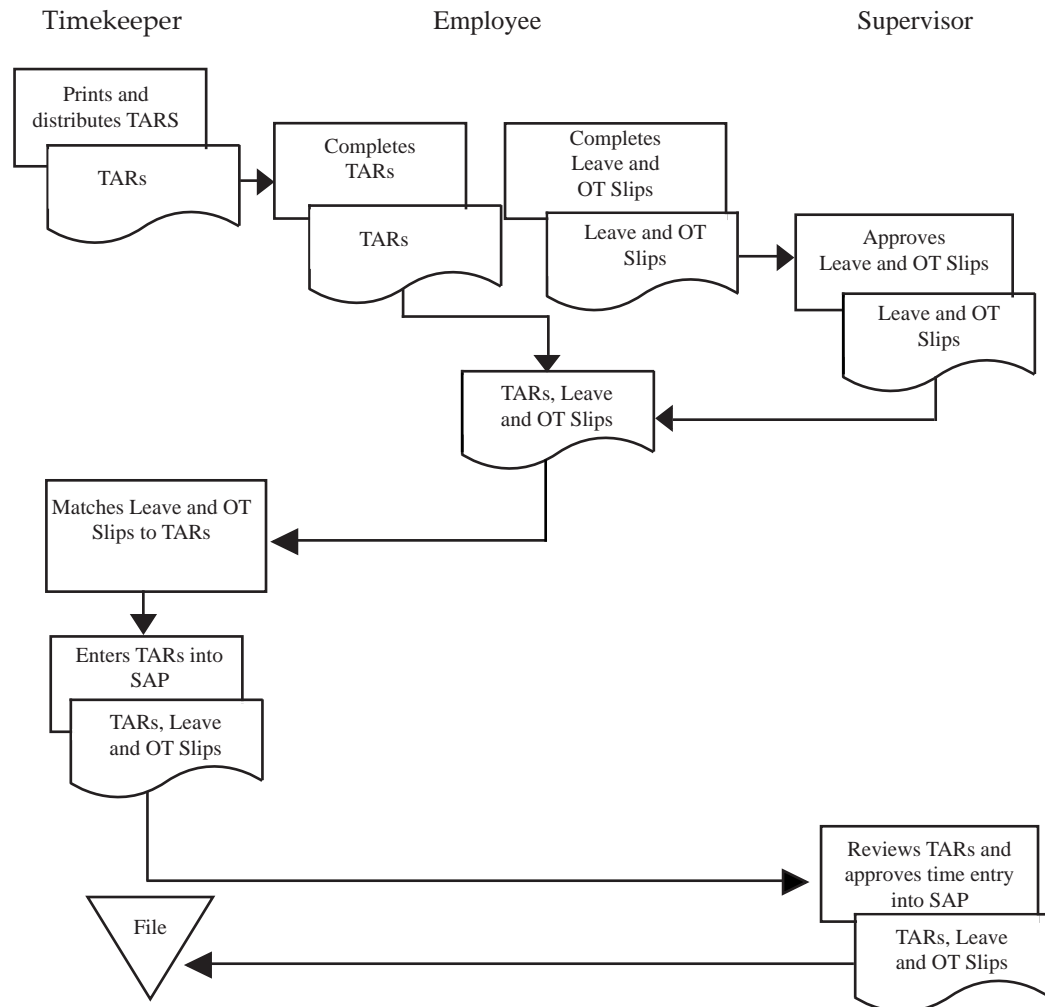
Time and attendance tracking The processes used to track time and attendance information must accurately and efficiently record employees' time. Currently, employees manually track their time and leave, supervisors review and approve employee timesheets and timekeepers input time information into SAP.

Program timekeepers send employees either a SAP-generated time and attendance record (TAR) or a similar paper form to complete. Throughout the pay period, employees submit leave or overtime request forms to their supervisors for their approval. At the end of each pay period, supervisors review and sign the TAR. Approximately 15% of employees are exempt from earning overtime and do not track their daily hours on a TAR but rather report exceptions to their scheduled time. Timekeepers gather signed timesheets, leave and overtime requests or exceptions and enter them into SAP. Once supervisors review and approve timekeepers' time entry into SAP, the payroll data is released to Central Payroll for further review. Exhibit 2 on page 4 illustrates the number of times that paper TARs, leave and overtime slips may change hands.

Timekeeping processes can vary for different departments. For example, the Library has a more centralized time entry system that uses fewer timekeepers. Supervisors still review and approve timesheets, but send them to one central location for entry into SAP. A global approver then approves time entry into SAP instead of employees' direct supervisors. The Sheriff's Office also has a more centralized time and attendance system.

SAP automatically calculates gross pay, employer paid obligations, employee deductions and withholding based on approved pay rates, time entry, and various insurance and benefit rates. SAP also automatically calculates accruals for sick, vacation, and holidays based on each employee's status and time entry.

Typical time and attendance process



Source: Auditor's Office analysis

Central Payroll processing SAP processes payroll based on time entry from the departments and pay rates maintained by the SAP Support Team. Central Payroll (CP) reviews time and attendance data recorded on SAP to help ensure it is accurate before finalizing payroll. Presently, CP has approximately 5.8 FTE dedicated to the payroll function. CP reports to the Chief Financial Officer who, in turn, reports to the Chief Operating Officer.

For each semi-monthly payroll, CP spends three days examining time and attendance data on SAP to ensure all time entry has been received and appears to be accurate. CP staff review SAP flagged transactions such as overtime generated, unpaid leave recorded, partial day absences, out-of-class payments, flextime recorded and other potential errors. When errors are found, CP notifies departmental human resources and timekeepers to make any needed corrections and later verifies the corrections were made on SAP. CP runs a variety of other reports and SAP simulations to check for time and attendance errors.

CP also makes adjustments to payroll for any overpayments or underpayments that are discovered after the payroll is finalized. For example, an employee may notice an error on their paystub when they receive their paycheck. In certain circumstances CP charges departments a fee for these types of errors.

CP administers federal and state withholding taxes, garnishments, bankruptcies, deferred compensation and processes catastrophic leave donations. CP posts summary payroll transactions to SAP, processes W-4s, verifies 3rd party inquiries about employee income and employment, answers employee payroll questions, conducts periodic trainings and manages all direct deposits, manual paychecks, and employee paystubs.

Approximately 97% of County employees receive their regular payroll checks via direct deposit and 91% receive an electronic paystub. These percentages compare favorably with best practice metrics. In addition to regular payrolls, CP issues manual checks for off-cycle payrolls. Off-cycle payrolls are mostly driven by final termination checks and employee underpayments.

Results The objectives of this audit were to determine the root causes of time and attendance errors in the County and find ways to reduce them. The County's error rate is high because employees and supervisors are not fulfilling their timekeeping responsibilities and time and attendance processes are outdated and inefficient. Any detected errors are costly to fix and the price tag for undetected errors is likely higher.

The County can achieve savings by better leveraging technology to more efficiently and accurately track time through automated, daily time entry along with employing more employee and manager self-services. As employee self-services are implemented, CP may be able to shift some of their resources away from providing services for employees to additional monitoring of time and attendance errors and targeted training.

Time and attendance errors All employees should be efficiently paid on time with no errors. The County's inherent risk of payroll errors is high because of its complex environment. Accordingly, the County should have well functioning time and attendance processes in place to prevent and detect any errors in a timely manner.

We found the number of time and attendance errors in the County is high. According to a study sponsored by the American Payroll Association, the total error rate for top payroll performers is 2%. We conservatively estimated the County's error rate and found it was almost twice as high at 3.8%. See Appendix A for more details.

Time and attendance errors can be detected before or after the payroll is finalized or remain undetected. Errors discovered before payroll is finalized generally cost less to fix than those detected later. When errors are caught after the payroll is complete, CP may be required to issue off-cycle manual checks for underpayments or track and recover overpayments from employees' next paychecks. Correcting errors is labor intensive regardless of when the error is caught. CP staff, timekeepers, employees, supervisors and departmental human resource staff are all involved correcting errors.

Undetected payroll errors also occur and could be the most costly. While reviewing TARs in our test sample of 92 errors, we found four additional errors (4.3%) that had not been detected. These errors could not have been found by CP and could only have been discovered by employees, supervisors or timekeepers. In addition, when CP staff audit County programs' payroll data each pay period, some CP staff find more errors than others. This indicates some errors may be getting through CP's error discovery process. Finally, given the number of errors that are occurring, it is likely some will remain undetected.

Causes of errors Inaccurately reporting the number of hours for overtime, straight time, leave time, and flex time are some of the more common types of time and attendance errors. Many of these errors occur because employees turn in their TARs or any modifications to their TARs late. Employees are often required to estimate several days time on their TARs so that timekeepers can timely enter it into SAP. When estimated time on their TARs is different from their actual time, employees can be late getting the changes approved by their supervisors and delivered to the timekeeper before the payroll deadline.

Late information increases errors, decreases efficiency and lowers morale. When employees do not punctually turn in their TARs, timekeepers must spend time trying to contact them. In addition, CP cannot proceed with their work until supervisors approve all their employees' time on SAP. Supervisors are frequently late making these approvals. For the payroll ended September 15, 2012 there were over 700 employees with late approvals.

Employees also had difficulty calculating the correct number of leave hours to record on their TARs when their leave banks were low. Employees must make a number of manual computations to fully exhaust sick or vacation accruals before taking any unpaid leave and cannot always rely on the leave bank balances that are printed on their TARs. When leave banks are low, employees and supervisors need access to current leave bank balances and years of service for an accurate calculation and review.

Employees, timekeepers and supervisors made other types of errors. Employees used incorrect time and attendance codes or wrote the wrong number of hours on their TARs. Timekeepers did not always accurately input employees' timesheets into SAP and supervisors did not catch these employee and timekeeping errors during their reviews. After analysis of all the reasons why time and attendance errors occurred in our test, we found two root causes:

1. Employees and supervisors are not fulfilling their timekeeping responsibilities.
2. Manual, paper-based time and attendance processes are not aligned with best practices.

Employee and supervisor responsibilities

Employees are not held responsible for getting their work time and absences correctly calculated, coded and turned in on time. Supervisors are not detecting errors when they review timesheets. There is a strong expectation throughout the County for timekeepers to perform these key employee and supervisor responsibilities.

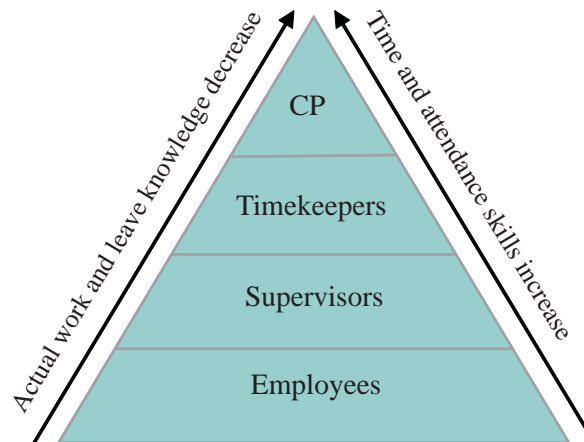
Rule 3-12 of County Human Resource policies clearly delineates responsibilities of employees, supervisors and timekeepers. Employees are responsible for correctly completing their timesheet. When employees make errors supervisors should catch most of them when they review timesheets for completeness and accuracy. Supervisors should verify that all hours worked in the pay period are recorded including any overtime worked and leave taken. Supervisors should also ensure compliance with union contracts, personnel rules, and wage and hour laws. Finally, supervisors should approve all time and attendance data on time.

HR section 3-12-050 states that timekeepers are responsible for distributing paper timesheets, ensuring submitted timesheets are signed by employees and supervisors, entering time data into SAP within the published deadlines established by Central Payroll and notifying the time approver when time entry is done. Some timekeepers we interviewed felt an excessive amount of work was expected from them given the levels of cooperation from employees and supervisors.

Time and attendance processes that hold employees and supervisors responsible align with Human Resource policies and is good business practice. Exhibit 3 shows that employees and supervisors know more about actual work and leave hours than timekeepers and CP. Timekeepers and CP generally have better time and attendance skills but less direct knowledge about what actually happened. Accordingly, employees and supervisors are better positioned than timekeepers to record the proper amount of work and leave hours and CP to detect errors.

Exhibit 3

Time and Attendance Knowledge and Expertise



Source: Auditor's Office analysis

Timekeepers and CP should not be relied upon to find errors they cannot possibly detect. Instead, supervisors must actively monitor their employees' time and attendance information. When supervisors do not pay close attention, the risk of undetected time and attendance errors or fraud increases. For example, employees can report more time than they actually work, incorrectly code their time worked, or fail to reduce leave banks when they are absent. In addition, supervisors are sometimes unavailable at the end of the pay period to meet deadlines and another manager will approve employees' time without reviewing its accuracy.

Manual time and attendance processes

The other root cause of payroll errors comes from using time and attendance processes that are outdated, labor intensive, and inefficient. The best time and attendance performers leverage available technology to reduce errors and processing costs. Technology improvements must be flexible enough to take different program needs and business processes into consideration. County programs can range from a 24/7 call center that has hourly staff with variable schedules to salaried staff with fixed eight hour work days. Some programs use on-call staff while others frequently incur overtime.

Regardless of individual program needs, technology is readily available to record employee work time and leave only once rather than multiple times as is the current practice. There are several options available for automated time entry. For example, employees can enter their work time or leave using a personal computer or call in from a remote site using their cell phone. In other cases time could be electronically captured with various types of timeclocks that use swipe cards or have biometric verification capabilities. In all cases total work time and leave should be automatically calculated and made available online for supervisory review in real-time.

Automating time entry paves the way for efficient daily time entry for hourly employees--a best practice among leading payroll performers. In addition to reducing errors, timekeepers no longer need to manually send out paper timesheets, then collect, check, and input time and leave data. Employees more accurately capture their time using timeclocks or entering their time or leave requests directly into SAP. Supervisors can view and approve employee attendance and leave requests rapidly online.

Given the number of employees, size of payroll expenditures, number of manual processes and current error rates, the County could realize substantial savings by fully automating its time and attendance processes. According to our literature review, if the County fully automated its processes, it could potentially achieve savings between 0.5% and 2.0% of total payroll costs by reducing the number of errors and improving efficiency.

We could not estimate exactly how much the County could save by completely automating payroll. To be conservative, we cut the lowest estimate in half and applied it only to hourly employees' total gross pay for FY12. Using a low rate of 0.25%, the County would save approximately \$500,000 per year by fully automating time and attendance processes. See Appendix B for more detail.

Employee and manager
self-service

Employee and manager self-services directly address both root causes of payroll errors. Most leading payroll performers aggressively leverage technology that use employee and manager self-services (ESS/MSS) to reduce costs by improving efficiency, and increasing data quality. ESS/MSS also encourages employee and supervisor responsibility. SAP already has ESS/MSS capabilities. To put employees in more control of their own information the County must deploy these tools.

Employee self-services provide individual employees online access to view and maintain their own time and attendance data. Research shows that self-service access to timesheets improves employee engagement and accuracy. With manager self-services supervisors view and approve staff's time and requested leave in real-time without the delays of routing paper. ESS/MSS reduces paper and its associated storage costs as well as offers speed and convenience to employees and supervisors.

Time and attendance is just one part of ESS/MSS. According to best practice literature, Human Resources has much to gain by using ESS/MSS for many of their administrative processes such as benefits enrollment or personnel records management. Both of these functions can be shifted from a paper-based system to self-service and free managers to concentrate more on higher value strategic activities. This report focuses on time and attendance issues although many of the concepts apply to Human Resources.

ESS/MSS offers many payroll-related benefits. All information relevant to employees' pay can be obtained by employees without CP's help. For example:

- Employees enter, edit and validate their own time using electronic timesheets.
- Employees can view leave balances and request time off.
- Time and attendance information is electronically routed to supervisors who review and approve timesheets and leave requests online.
- Employees can view and print paystubs. CP would no longer have to issue paper paystubs for the 9% of County employees who do not currently receive e-paystubs.
- Employees can change bank information.
- CP can issue electronic W-2s instead of mailing them.

Currently, the County has limited ESS/MSS. Employees can electronically update their W-4s. Employees can also update their personal information and can enroll in training online.

In December 2010 the County began planning a significant ESS project called eTimesheets. eTimesheets allows employees to directly enter their work time and leave into SAP instead of filling out paper timesheets that are input by timekeepers. Project leadership selected a pilot group to test eTimesheets, but in March 2011 the project was postponed until October 2012 due to upcoming SAP upgrades. In June 2012 SAP Support delayed the project again until late spring or summer 2013 because of staff resource shortages and another SAP upgrade. We believe that the project may not have the support or planning that it needs to succeed.

Support and planning for
employee and manager
self-service

ESS/MSS is a proven best practice and technology for its use has been available for years. The County is not making sufficient progress moving towards ESS/MSS for time and attendance processes. As a result the same paper driven, inefficient and costly processes remain in place.

Effective implementation of ESS/MSS requires a significant culture change that needs sufficient, high-level sponsorship and involvement that appears absent now. While we found project planning for eTimesheets, we did not find a comprehensive plan or strategy for ESS/MSS. To ensure success the County should have an overall strategy and plans that take both payroll and human resources needs into consideration. As the County moves closer to ESS/MSS, plans are needed to address:

Business process redesign. The return on ESS/MSS investment is dependent on how payroll processes are redesigned. Redesigns to simplify workflows must take the new functionality of ESS/MSS as well as individual program's needs into consideration.

Change management and communication. The County is introducing new ways of working where employees will do more for themselves and take ownership of their information. A plan is needed to communicate changes in employees' responsibilities and provide them support during the transition.

Marketing. Employees must be shown how ESS/MSS will benefit them and motivate them to use the new systems.

Security. Employees must know that their private information will be confidential and secure and that only they can obtain or modify their information.

Training. Employees will need to be equipped with the necessary skills to use ESS/MSS.

Flexibility. Not all employees will have access to services from their computer at work or home. A variety of access methods such as phones or kiosks should also be considered to meet the needs of employees without computers.

Rollouts. Smooth rollouts are critical to ensuring success. The County must decide which services to introduce first and how to phase subsequent services. Pilot groups can be used and any necessary adjustments made using their feedback.

Support. Employees need set procedures to follow when they require support. Support functions must have the necessary resources to offer full support especially during the first months of implementation.

Performance Measurement. Targets and measures that demonstrate changes in employee behavior should be established and tracked to monitor progress and make any adjustments.

Central Payroll's role in
reducing errors

Central Payroll (CP) is well positioned to monitor the types of time and attendance errors that are occurring in the County and has the expertise to help reduce them. Currently, CP may not have sufficient time to do this. It may be possible for CP to redirect a portion of their time towards monitoring and training and away from some activities that employees can accomplish themselves provided employees have the right tools.

All time and attendance errors pass through CP. Because CP dedicates over three days each pay period to ensuring payroll data is accurate, CP staff have a good idea of where errors are occurring and their specific causes. Error data is also readily available in CP for compilation and analysis.

CP helps reduce errors now through periodic trainings. Timekeepers reported that their classroom training was helpful although a few interviewed felt the need for a more advanced course. Using knowledge gained from their monitoring, CP could tailor advanced courses to specific types of errors or target programs with higher error rates.

CP answers many employee questions over the phone or via e-mail. Again, most employees we talked with felt CP answered their questions well. To further encourage a self-service culture and to reduce the time CP staff spend answering employee questions, CP could establish an online FAQ to help with common problems.

CP also spends time answering third-party inquiries to verify employee's income or employment with the County. We found

employment and income verification can be performed by a vendor at no cost to the employee or County. Instead of charging the County, the vendor charges the third-party requestor for the service. Consistent with self-service principles, employees are put in control over third-party access to their information that is used to verify employment or income.

Finally, CP spends time working with employees to figure out tax withholding scenarios. It may be useful for CP to provide a link to an online, easy-to-use withholding calculator. Other jurisdictions provide withholding information online. For example, the University of Washington's website lists commonly asked W-4 questions and links to an IRS withholding calculator. The University of Iowa also posts state and federal withholding information online.

Recommendations

County time and attendance improvements will require both cultural and technological changes. Although employee, supervisor and timekeeper roles and responsibilities are already well defined in Human Resource policies, significant changes are needed to practice them. To reduce the number of errors and payroll costs, time and attendance processes should be updated and made more efficient as described below.

1. Employees should be held responsible for getting their work time and absences correctly calculated, coded and turned in on time. Supervisors should be held responsible for ensuring employees' timesheets accurately reflect their time and attendance information. Timekeepers should not be required to perform employee and supervisor tasks.
2. The County should use available technology to fully automate time and attendance processes and provide employees and supervisors the tools they need to better accomplish their responsibilities.

- a. Employee hours worked or leave taken should be electronically captured so that re-entry of data is not required and total work time can be automatically calculated. Based on program needs, various types of timeclocks are available. Alternatively, employees can enter their time or absences using other electronic means such as a desktop computer.
 - b. Once automated, hourly employees should enter their time and attendance information on a daily basis.
 - c. Supervisors should be able to review time and attendance information in real-time.
3. To improve the efficiency and effectiveness of time and attendance processes the County should employ more employee and manager self-services (ESS/MSS).
 - a. To effectively implement ESS/MSS, high-level sponsorship and involvement as well as comprehensive planning is needed.
4. Supporting a culture where employees take ownership of their information in an ESS/MSS environment, CP may be able to redirect its customer service workload to employees and use any time gained for additional monitoring of time and attendance errors and targeted training. CP should:
 - a. Consider using a vendor to provide employee and income verification services. Some vendors offer these services at no cost to the County or employee and put employees in control over third-party access to their information.
 - b. Create an online FAQ to redirect the more common telephone or e-mail questions to the County's intranet for employees to look up without contacting CP. CP should include online guidance for specific errors such as computing the correct amount of leave hours when accrual banks are running low. Finally, a link should be included that addresses federal withholding tax questions.

Scope and Methodology

This audit was requested by Central Payroll. We initially planned to focus the audit more on Central Payroll processes. But given the number of time and attendance errors, we felt our efforts would be best spent determining the root causes of these errors and finding ways to reduce them. To accomplish our objectives we gained an understanding of time and attendance processes in five County departments. We interviewed staff involved in time and attendance processes: Human Resource managers, Central Payroll, timekeepers, and supervisors, and approvers. We also interviewed staff from General Ledger and SAP Support.

We reviewed Central Payroll and Human Resources policies and procedures and documented internal controls. We observed Central Payroll's processes for detecting and correcting time and attendance errors, obtained payroll statistics and analyzed off-cycle payrolls.

We read payroll audits from other jurisdictions and studied best practices of top performing payroll organizations. We obtained error metrics from the American Payroll Association. We reviewed literature on employee and manager self-services.

We collected time and attendance errors from Central Payroll's error discovery processes for pay periods ending May 31 and June 15, 2012 and verified the data's validity. From this data, we selected a sample of time and attendance errors from a total of 14 programs in five departments for further analysis. For each error selected, we obtained the TAR and all of its supporting documentation. See Appendix A for more detail on error testing methodology.

We conducted this performance audit in accordance with generally accepted government auditing standards. 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.

Appendix

Appendix A

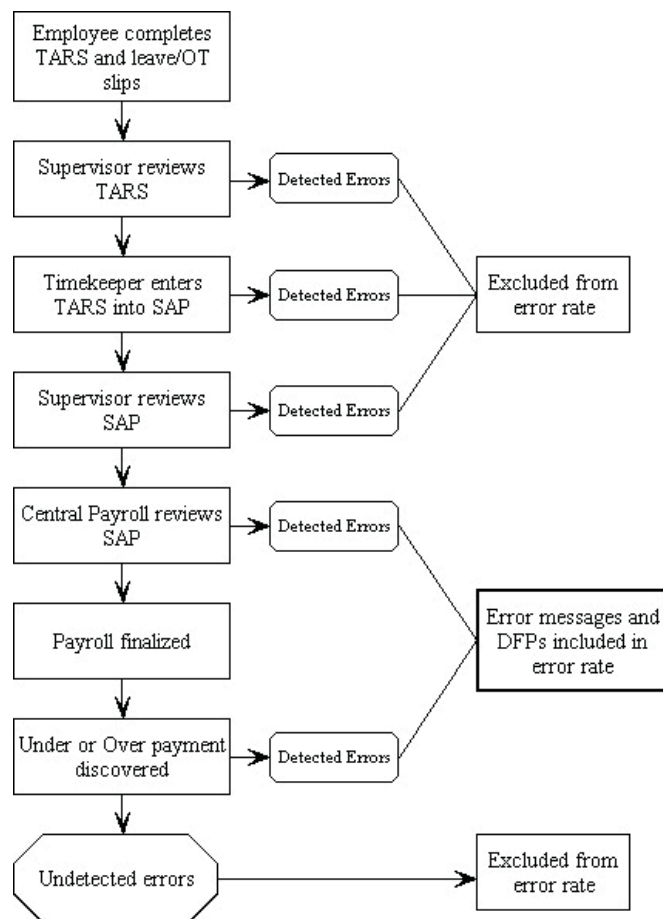
Detection of time and attendance errors

Exhibit 4 generally illustrates the County's time and attendance error detection processes. Some department processes vary from the illustration. This audit focuses on errors detected by Central Payroll (CP) before the payroll is finalized and errors detected after the payroll is finalized.

Supervisors and timekeepers examine time and attendance data a total of three times before it is released to CP. We could not estimate the number of errors detected by supervisors or timekeepers. Errors discovered after payroll is finalized are generally not the type of errors that CP would be able to detect. We also did not estimate the number of errors that go undetected.

Error detection processes

Exhibit 4



Source: Auditor's Office analysis

Data collection and error testing methodology	We examined error data from CP's review of SAP's Error Messages and DFP reports. Most time and attendance errors are discovered using these two reports however, CP also finds errors using other reports and processes.
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CP uses the Error Message Report to find errors before payroll is finalized. The Error Message Report only flags potential errors. For example, the report lists all recorded overtime. To detect actual errors five payroll staff must compare potential errors listed in the report to time and attendance data recorded on SAP. When CP finds actual errors, they notify department human resources and timekeepers to correct them.

The DFP Report details time and attendance errors detected after the payroll is finalized. For example, an employee may notice she was not paid the correct number of hours when she reviews her paystub. DFP errors result in underpayments or overpayments. For underpayments, CP either issues a manual off-cycle payroll check or reimburses the employee on the current payroll. CP recovers any overpayments from the current payroll unless the amount is too much to deduct at once from employees' paychecks. CP tracks any large overpayments and recovers them on subsequent paychecks.

As illustrated in Exhibit 5, CP reported a total of 446 errors for pay periods ending May 31 and June 15, 2012. We verified the accuracy of CP's data and computed both the percentage of errors per FTE and per employee count. The error rate based on FTE generally overestimates the percentage of errors while the rate based on employee count tends to underestimate the percentage of errors.

Number of errors for pay periods ending
May 31 and June 15, 2012

Exhibit 5

	DFP Report Errors	Error Message Report Errors	Total Errors	FTE Error Rate	Employee Count Error Rate
District Attorney	4	13	17	4.6%	3.5%
County Assets	15	21	36	6.7%	5.7%
Human Services	21	52	73	6.3%	5.3%
Community Justice	27	45	72	6.8%	5.2%
County Management	5	10	15	4.1%	3.3%
Community Services	15	18	33	8.4%	5.2% ¹
Health	37	64	101	5.5%	3.3%
Library	40	22	62	5.2%	3.7%
Sheriff's Office	22	10	32	2.4%	2.2%
Non-Departmental	0	5	5	3.0%	2.0%
Total Errors	186	260	446		

Source: Auditor's Office analysis

The most common types of errors were incorrect leave/unpaid leave hours, overtime hours, or straight time charged, 9/80 clock times not entered correctly and incorrect premiums.

From these 446 errors we selected a sample of 92 cases based primarily on departments and programs that had the highest percentage of errors. We obtained TARs and all supporting documentation from a total of 14 programs in five departments. We spoke with five Departmental Human Resource Managers, four HR Maintainers, six supervisor/approvers, one global approver and 14 timekeepers about their time and attendance processes.

Although we were examining errors that had already been detected in our sample of 92 TARs, we found an additional four errors that had gone undetected. We contacted CP to facilitate the error correction process for these additional errors.

¹ FTE and Employee Count error rates exclude Election Workers

After analyzing the 92 TARs and their supporting documentation, we determined a total of 82% of errors were caused by:

- Employees or supervisors submitted information late (35%).
- Employees miscalculated leave hours and unpaid leave (19%).
- Employees entered the wrong time codes or number of hours worked (17%).
- Timekeepers incorrectly input information into SAP (11%).

We further analyzed the errors in our sample to determine their root causes. We found that employees and supervisors are not fulfilling their timekeeping responsibilities and the County has outdated time and attendance processes that are not aligned with best practices.

Error Metric

The County's error rate does not compare favorably to the error metric in the 2009 Hackett Group Payroll Performance Study sponsored by the American Payroll Association (APA). Participants in this study represented a range of employees and industries. Our conservative estimation of the County's error rate (3.8%) is almost twice as high as the APA's all-inclusive error rate.

We did not find a metric that exactly aligned with our methodology. The 2009 APA error metric is 2% and includes the total number of all errors in payroll processing. In addition to time and attendance errors, the APA metric also includes system errors, third party interface errors, tax penalties, direct deposit rejects and number of W-2cs.

We calculated a conservative error rate for the County. As illustrated in Exhibit 4 above, we only included errors detected by CP in their Error Message Report and those errors discovered after payroll was processed in the DFP Report. We did not include any errors CP found in other reports or processes or any errors found by supervisors or timekeepers before payroll was finalized. We estimated the County's error rate in Exhibit 6 below.

Exhibit 6

County's estimated error rate

Estimated employee numbers processed	11,657
DFP Report errors	186
Error Message Report errors	260
Total DFP and Error Message errors	446
Error Rate	3.8%

Source: Auditor's Office analysis based on the number of errors for pay periods ending May 31 and June 15, 2012

Appendix B

Exhibit 7 below illustrates processes where savings could be realized by switching to a fully automated time and attendance system. The most expensive time and attendance tasks are currently performed manually: recording time worked, requesting leave or overtime, inputting time into SAP, approving paper timesheets, tracking and filing all documentation, and correcting errors.

Exhibit 7

Manual Time and Attendance Processes

Process	Current Manual System	Automated System
Recording time worked	Timekeepers print paper timesheets and distribute them to employees. Employees write their time worked or leave taken for each day on the timesheet, code it, add the totals for the pay period and should turn it in by the required due date.	Employees use a computer that validates time as it is entered and computes totals for the pay period. When appropriate, employees could also use a worksite time clock that automatically feeds into a computer.
Requesting leave or overtime	Employees complete paper leave or overtime forms and then route them to their supervisors for approval. Timekeepers gather slips to make sure all leave reported on timesheets have approved leave/OT slips. When leave/OT slips are missing, they must be located.	Employees request leave or overtime in real-time online. Supervisors review and approve requests as they are made. Transactions are automatically recorded on employees' time records and retained. Employees and supervisors can review leave requested and taken as well as leave time available online.
Inputting time into SAP	Towards the end of the payperiod, timekeepers gather employees' paper timesheets and supporting leave/OT slips. Timekeepers check the accuracy of timesheets and must contact employees to correct any errors they might have made. Timesheets are entered into SAP increasing the chance of transcribing errors especially when hand-written data is difficult to read.	Employees input time electronically, so timekeepers no longer need to perform data entry.

Approving paper timesheets	Timekeepers route timesheets and supporting leave/OT sheets to supervisors. Employees are often required to forecast several days time so that timekeepers have enough time to gather, input, and route timesheets to supervisors. Once signed, timesheets and supporting documentation are routed back to timekeepers.	Employee pay data is totaled and made available to their supervisors in real-time without any delays of routing paper. Supervisors can immediately review and approve timesheets as soon as employees record their time. Forecasting time is not necessary.
Tracking and filing all documentation	Timekeepers file all paper timesheets, leave/OT slips and any other supporting documentation.	This step would be unnecessary.
Correcting errors	Central Payroll discovers errors and contacts department human resources or timekeepers. Supporting documentation is pulled from files, and employees are contacted. The timekeeper corrects the timesheets after any changes are made and supervisors approve the change.	Pulling timesheets and their supporting documentation from files, as well as manually correcting and routing them would be unnecessary.

Source: Auditor's Office analysis

In addition to the inefficiencies illustrated in Exhibit 7, the current manual systems throughout the County are also more prone to error. Those errors that are caught must go through a laborious process to correct and those that remain undetected are likely a significant cost to the County. Forecasting and manually calculating time, routing and storing paper, and not taking full advantage of employee and manager self-services increase costs as well as the number of payroll errors.

Forecasting time versus daily time entry. County programs often require employees to turn timesheets into timekeepers one to four days before the pay period ends. Employees must complete timesheets early because timekeepers need sufficient time to gather all timesheets and leave/OT slips, check their accuracy, input them into SAP and route them to supervisors for approval by the required deadline set by Central Payroll.

Forecasting time is inefficient and causes errors. When employees' actual work or leave hours does not match up with their forecasted time, they must complete leave slips and make changes to their timesheets. These changes typically occur close to payroll deadlines leaving little time to get the paper routed to have the changes approved, corrected and entered into SAP.

A fully automated time and attendance system would make daily time entry more feasible. Employees could electronically submit their time worked or leave/OT requested each day. Supervisors can review and approve time entry in real-time eliminating the need to forecast time and to route paper.

The risk of errors also increases when employees complete their timesheets at the end of the pay period instead of daily. For example, assume an employee is sick for four hours on the second day of the pay period and forgets to send a leave slip to their supervisor. Days later, the employee records a full day of work on their timesheet. When the supervisor reviews the timesheet at the end of the pay period, she does not remember the employee went home sick. The employee is more likely to record the correct time on the day it is worked. But when employees record the wrong time, supervisors are better equipped to catch the errors with real-time reviews.

Manually calculating time. Manually calculating time is also inefficient and causes errors. Many employees manually figure their time worked on their paper timesheets. We spoke with one program with over 100 employees that sign in and out on a paper log to track their time. Timekeepers gather the logs and manually compute employees' time worked. According to the American Payroll Association, the error rate can be high in these circumstances—and many errors would likely go undetected. Whether hourly employees use some type of time clock, phone or computer, start and stop times can be digitally captured and directly fed into a computer that automatically calculates time worked.

Routing paper. Routing paper for reviews and signatures takes time and can be frustrating. At the beginning of the pay period, timekeepers print, sort and distribute timesheets. Towards the end of the pay period, timesheets must be gathered and matched to leave and OT slips. Delays are caused when employees forget to submit their information or make errors. Timekeepers must determine who did not turn in their timesheets or made errors then notify them—sometimes several times. Supervisors can forget to review and approve time data by the payroll deadline. Once this process is completed all of the paper must be stored. With today's technology these cumbersome processes are unnecessary.

Employee and manager self-service. Organizations that fully automate their time and attendance processes often use employee and manager self-services (ESS/MSS). Other jurisdictions that implement ESS/MSS streamline inefficient processes, empower employees and improve payroll data accuracy. Employees record their time only once; timekeepers are not required to decipher and enter timesheet data into SAP. Employees can also view their work history and leave balances online and call Central Payroll less frequently to request information. Routing timesheets and leave slips is no longer necessary and supervisors have more current information about their employees.

Response to Audit



Department of County Management

MULTNOMAH COUNTY OREGON

501 SE Hawthorne Boulevard
Portland, OR 97214

TO: Steve March, County Auditor
Craig Hunt, Principal Auditor

FROM: Joanne Fuller, Chief Operating Officer
Mark Campbell, Chief Financial Officer

DATE: November 20, 2012

SUBJECT: Response to Payroll Audit

The Department of County Management and the Finance and Risk Management Division have received the final Payroll audit report. We appreciate the time spent by your staff on this audit and are pleased that there were no negative findings in the Central Payroll Office.

However, we would like to address the recommendations you made regarding time and attendance processes.

Recommendation 1 – *Employees should be held responsible for getting their work time and absences correctly calculated, coded and turned in on time.*

We will be directing all employees to review the personnel rules regarding timekeeping responsibilities and will be directing department managers to hold accountable those that do not take this responsibility seriously.

Recommendation 2 – *The County should use the available technology to fully automate time and attendance processes and provide employees and supervisors the tools they need to better accomplish their responsibilities.*

As you stated in your report the project to implement employee self-serve for timekeeping in SAP has had some set-backs due to the need to implement upgrades to the system and the shortage of staff resources. This project is scheduled to start back up in spring of 2013. This project remains a priority for the county.

Recommendation 3 – *To improve the efficiency and effectiveness of time and attendance processes the County should employ more employee and manager self-services (ESS/MSS).*

An upgrade to the SAP system is currently being tested and will be implemented by mid-summer. This upgrade will provide more functionality for implementing ESS/MSS. Some of the projects that we plan to implement in addition to the ESS for timekeeping, is the ability for employees to view their deposit notices and W2 forms on-line.

Recommendation 4 - *Supporting a culture where employees take ownership of their information in an ESS/MSS environment, CP may be able to redirect its customer service workload to employees and use any time gained for additional monitoring of time and attendance errors and targeted training.*

The payroll manager will be investigating the feasibility of using a vendor to provide employment verifications and will be evaluating the training needs of the timekeepers to target specific training where needed. The payroll site on the County's intranet will be reviewed and updated to include work aids for calculating accruals, guidance on calculating tax withholding, how to read your paycheck, and a FAQ's will be added.

Once again, we want to thank you for the time and effort taken to compile this report. Your findings are very thorough and we appreciate the recommendations you have made for process improvements.

cc: Susie Cameron, Central Payroll Manager