

## Data Reliability

State Agencies' Computer-Generated Data Varied in Their Completeness and Accuracy

Letter Report 2014-401

COMMITMENT

INTEGRITY

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December 18, 2014

Letter Report 2014-401

The Governor of California  
President pro Tempore of the Senate  
Speaker of the Assembly  
State Capitol  
Sacramento, California 95814

Dear Governor and Legislative Leaders:

This letter report presents a summary of the results of the California State Auditor's (state auditor) assessments of the reliability of data in a wide variety of the State's information technology systems (systems) used by the state auditor for the purposes of its audits. Since October 2008 we have issued biennial reports that address the reliability of the data from the State's systems we tested as part of audits issued during 2006 through 2011. The reliability of the data from the State's systems tested during audits that were issued in 2012 and 2013 is the subject of this report.

The U.S. Government Accountability Office (GAO), whose standards we follow, requires us to assess and report on the reliability of computer-processed information that we use to support our audit findings, conclusions, and recommendations. *Data reliability* refers to the accuracy and completeness of the data, given our intended purposes for the data's use. The GAO specifies the three possible assessments we can make—*sufficiently reliable data*, *not sufficiently reliable data*, and *data of undetermined reliability*, which are defined in the text box. In assessing data reliability, we take several factors into consideration, including the degree of risk involved in the use of the data and the strength of corroborating evidence. A single system may have different assessments. For example, data that we used for one audit purpose is accurate and complete, whereas data from the same system used for a separate purpose is not.

#### Definitions Used in Data Reliability Assessments

**Sufficiently Reliable Data**—Based on audit work, an auditor can conclude that the likelihood of significant errors or incompleteness is minimal and that using the data would not lead to an incorrect or unintentional message given the research questions and intended use of the data.

**Not Sufficiently Reliable Data**—Based on audit work, an auditor can conclude that results indicate significant errors or incompleteness in some of or all the key data elements and that using the data could lead to an incorrect or unintentional message, given the research questions and intended use of the data.

**Data of Undetermined Reliability**—Based on audit work, an auditor can conclude that use of the data may or may not lead to an incorrect or unintentional message, given the research questions and intended use of the data.

Source: U.S. Government Accountability Office.

The State uses these data in many ways, which include reporting on its programs, processing payroll and personnel transactions, and managing state finances. Although we disclosed these data reliability assessments and any data limitations we identified in 20 audit reports that we issued during 2012 and 2013, this report is intended to call attention both to areas of concern, where important data are not always reliable, and to instances in which information has been reliable.

### **Many Systems Had Reliable Data for the Purposes of the Audits**

In performing 53 data reliability assessments for State systems, we determined for the purposes of the audits that the data were sufficiently reliable in 19 assessments. Therefore, for these assessments, we were able to use the data to support our audit findings, conclusions, and recommendations and to quote the data in our audit reports without qualifications about the accuracy or completeness of the information. For example, we were able to use the California Housing Finance Agency's Lender Access System without qualifications to identify the number and amount of loans awarded and disbursed, by program, as of February 29, 2012. We also concluded that the California Department of Parks and Recreation's (Parks and Recreation) payroll data, which is maintained by the California State Controller's Office in the Uniform State Payroll System, were sufficiently reliable for us to report on instances in which Parks and Recreation changed an employee's position number but did not change his or her civil service class or exempt position title. At the California Department of Public Health we were able to determine the amount of Stop Tobacco Access to Kids Enforcement (STAKE) Act penalties assessed between July 2009 and June 2012, and of those penalties we calculated the amount of penalties collected as of January 16, 2013, because we found the data from its STAKE Demand/Legal Database sufficiently reliable.

### **Many Systems Were Not Sufficiently Reliable for the Purposes of the Audits**

For 17 data reliability assessments, we concluded that the data were not sufficiently reliable. Whenever we include these data in our reports, we make the limitations of the data known so that incorrect or unintentional conclusions would not be drawn. One reason for this assessment was that the errors caused by inaccurate data exceeded the acceptable number of errors we established for the audit data to be deemed reliable for our purposes. Alternatively, we may conclude that the system has significant limitations if we determine it to be incomplete. For instance, we obtained the State Water Resources Control Board's (state water board) California Integrated Water Quality System's (water quality database) data to identify violations and enforcement actions related to water quality certifications. However, we disclosed in our audit report that we did not analyze the water quality database because after interviewing staff at the state water board we learned that, due to a data entry backlog, the water quality database does not contain all water quality certifications and related documents. Consequently, we reported that the water quality database was not sufficiently reliable for the purposes of our audit.

Additionally, in assessing the reliability of the Oracle Financial System (Oracle) and the Phoenix Financial System (Phoenix) data, we identified pervasive weaknesses in selected information system controls that the Administrative Office of the Courts (AOC) and the superior courts have implemented over their information systems. As stated in our December 2013 report, we expected that the AOC and superior courts would have well-developed plans, policies, and procedures related to information systems controls. However, we found that some of the AOC's plans were either nonexistent, or in one case, the plan had not been updated since 1997. Further, in its reviews of the superior courts, the AOC repeatedly identified the same concerns with the superior courts' plans, policies, and procedures, some dating back to 2003. The results of our review indicate that there is an unacceptably high risk that data from the applications the AOC and superior courts currently use to perform their day-to-day operations could lead to an incorrect or improper conclusion. Therefore, we determined the data were not sufficiently

reliable, regardless of the purpose for which the data are used. Moreover, the weaknesses we identified, including practices we do not divulge because of their sensitive nature, could compromise the security and availability of these information systems, which contain confidential or sensitive information, such as court case management records, human resources data, and financial data.

In some circumstances we recommended that the audited agency take corrective action. For example, to strengthen and continuously monitor the effectiveness of the controls over its information systems, we recommended that the AOC implement all of the best practices related to general and business process application controls as outlined in the GAO's *Federal Information System Controls Audit Manual* no later than December 31, 2014.<sup>1</sup> In addition, we recommended that the AOC immediately begin implementing improvements to its controls over access to its information systems and place these improvements into effect by February 2014. Finally, we recommended that the AOC provide guidance and routinely follow up with the superior courts—requiring updates every six months until all identified issues are corrected—to ensure that they make the necessary improvements to their general and business process application controls.

### **We Were Unable to Determine the Reliability of Data for Some Audits**

For 17 data reliability assessments, we concluded that the data had undetermined reliability. In many cases, the data were of undetermined reliability because we limited our testing due to the impracticality or prohibitively high cost of fully testing a system when source documents were housed at numerous locations throughout the State, the system contained summary-level data, or the system was primarily paperless and thus hardcopy documentation was not available for review.

For example, data from two California State University (CSU) systems were of undetermined reliability. We did not perform accuracy and completeness testing for CSU's Common Financial System because the system contains summary-level data and we determined that it would not be cost-effective to trace this summary-level data back to the individual transactions that support the total. Likewise, we could not assess data reliability for CSU's Common Management System by tracing to and from supporting documents because the system is primarily paperless. Alternatively, following GAO guidelines, we could have reviewed the adequacy of selected system controls to determine whether data were entered reliably. However, because it was cost prohibitive, we did not conduct these reviews.

The Table beginning on the following page summarizes selected information from the data reliability assessments contained on the state auditor's Web site. Additional information on the Web site further describes any limitations we identified in the data. Although we recognize that these limitations may affect the precision of the numbers we present in our reports, there is sufficient evidence in total to support our audit findings, conclusions, and recommendations.

<sup>1</sup> General controls are the policies and procedures that apply to all or a large segment of the AOC's and the superior courts' information systems and help ensure their proper operation. Business process application controls are directly related to a specific computerized application—Oracle and Phoenix, in this case—and help to ensure that transactions are complete, accurate, secure, and available.

**Table**  
**Summary of Reliability Assessments for Audits Issued in 2012 and 2013**

AGENCY*	INFORMATION SYSTEM†	RELIABLE FOR AUDIT PURPOSES?‡	AGENCY PURPOSE OF DATA§	AUDIT NUMBER
<b>BUSINESS, CONSUMER AFFAIRS AND HOUSING</b>				
California Department of Housing and Community Development (HCD)	HCD's data as maintained in the California Department of Finance's (Finance) California State Accounting and Reporting System (CALSTARS)	Yes	An automated organization and program cost-accounting system to accurately and systematically account for all revenue, expenditures, receipts, disbursements, and property of the State.	<a href="#">2012-037</a>
	Cumulative Proposition 1C and Proposition 46 Bond Awards Reports (bond awards reports)	Yes	The bond awards reports are a point-in-time status of all Proposition 1C and Proposition 46 funds and are the basis of the information reported annually to the Legislature and the information provided on the California Bond Accountability Web site.	<a href="#">2012-037</a>
California Housing Finance Agency (CalHFA)	Lender Access System	Yes	The Lender Access System is utilized in the reservation, tracking, and purchasing of CalHFA's subordinate loans, except the School Facility Fee Program.	<a href="#">2012-037</a>
	California Homebuyer's Downpayment Assistance Program (CHDAP) Subordinate System	Yes	CalHFA uses the CHDAP Subordinate System to track information relating to CHDAP loans that have been submitted for resubordination when the first mortgage is refinanced.	<a href="#">2012-037</a>
	Residential Development Loan Program (RDLP) Status Report	Yes	CalHFA uses the RDLP Status Report for the purpose of tracking the RDLP loans awarded and disbursed.	<a href="#">2012-037</a>
	School Facility Fee (SFF) System	Undetermined	The SFF System was developed in-house to track the review, approval, and disbursement of SFF funds.	<a href="#">2012-037</a>
<b>CORRECTIONS AND REHABILITATION, CALIFORNIA DEPARTMENT OF</b>				
California Department of Corrections and Rehabilitation (Corrections)	Offender-Based Information Tracking System (OBITS)	No	OBITS is Correction's primary database for tracking and reporting data on youth under the jurisdiction of the Division of Juvenile Justice. This includes population characteristics, statistical reports and trends, actual confinement time, board actions, and facility/parole movements. This data is also used for the development of population projections, legislative proposals, and departmental planning for proposed budget needs.	<a href="#">2011-129</a>
	Offender-Based Information System (OBIS)	No	To capture and maintain all adult offender information from the time that the offenders are committed to Corrections through the time of their discharge, OBIS subsystems track the following: commitments at the receiving centers, offender demographics, offenders movements, and release dates.	<a href="#">2011-129</a>
<b>ENVIRONMENTAL PROTECTION</b>				
State Water Resources Control Board (state water board)	California Integrated Water Quality System (water quality database)	No	The state water board uses the water quality database for tracking activities of the certification program and other state water board programs.	<a href="#">2012-120</a>

AGENCY*	INFORMATION SYSTEM†	RELIABLE FOR AUDIT PURPOSES?‡	AGENCY PURPOSE OF DATA§	AUDIT NUMBER
<b>GOVERNMENT OPERATIONS</b>				
California Department of General Services (General Services)	Tracker database (Tracker)	Undetermined	To support its work, General Services' Division of the State Architect (division) uses Tracker to manage projects, which includes tracking project applications, key dates—such as plan approval and construction start and end dates—and the types of project closure. Tracker also generates invoices and calculates the fees owed to the division for certain aspects of its work.	<a href="#">2011-116.2</a>
	Activity Based Management System (ABMS)	No	ABMS is an integrated enterprise-wide client server database and application system that allows General Services to consolidate and maintain its human resources and fiscal data in one system.	<a href="#">2011-120</a>
<b>HEALTH AND HUMAN SERVICES</b>				
California Department of Developmental Services (Developmental Services)	Developmental Services' data as maintained by the California State Controller's Office (state controller) California Leave Accounting System	Yes	To perform a variety of functions necessary to accurately track leave system eligibility, state service credits, and leave benefit activity.	<a href="#">2012-107</a>
	Developmental Services', Corrections', the California Department of State Hospitals', and California Department of Social Services' (Social Services) data as maintained by the state controller's Uniform State Payroll System (payroll system)	Yes	To process the State's payroll and personnel transaction documents.	<a href="#">2012-107</a>
	Fairview Developmental Center's (Fairview) Incident Reporting Management Application	Yes	To document and track incidents, such as resident abuse.	<a href="#">2012-107</a>
	Fairview's Incident Reporting Information System	Yes	To document and track incidents, such as resident abuse.	<a href="#">2012-107</a>
	Porterville Developmental Center's Risk Management Database	No	To document and track incidents, such as resident abuse.	<a href="#">2012-107</a>
	Sonoma Developmental Center's (Sonoma) New Incident Reporting Management Application	Yes, No <sup>ll</sup>	To document and track incidents, such as resident abuse.	<a href="#">2012-107</a>
	Sonoma's Incident Reporting Information System	Undetermined	To document and track incidents, such as resident abuse.	<a href="#">2012-107</a>
	Sonoma's Office of Protective Services Microsoft Excel files	No	To document and track incidents, such as resident abuse.	<a href="#">2012-107</a>
	Developmental Services' Developmental Centers Division's Microsoft Excel files	Undetermined	To document and track incidents, such as resident abuse.	<a href="#">2012-107</a>

AGENCY*	INFORMATION SYSTEM†	RELIABLE FOR AUDIT PURPOSES?‡	AGENCY PURPOSE OF DATA§	AUDIT NUMBER
California Department of Public Health (Public Health)	Automated Survey Processing Environment (ASPEN)	No, Undetermined <sup>III</sup>	ASPEN allows states and the Centers for Medicare and Medicaid Services to input and access both survey results and enforcement information.	<a href="#">2012-107</a>
	Public Health's data as maintained in Finances' CALSTARS	Yes	An automated organization and program cost-accounting system to accurately and systematically account for all revenue, expenditures, receipts, disbursements, and property of the State.	<a href="#">2012-111</a>
	Stop Tobacco Access to Kids Enforcement (STAKE) Demand/Legal Database	Yes	To track information regarding STAKE Act investigations conducted by Public Health's Food and Drug Branch.	<a href="#">2012-111</a>
Social Services	Child Welfare Services/Case Management System	Undetermined	A statewide computer system to automate the case management, services planning, and information gathering functions of child welfare services.	<a href="#">2011-101.2</a>
	Social Services' data maintained in Finance's CALSTARS	Yes	An automated organization and program cost-accounting system to accurately and systematically account for all revenue, expenditures, receipts, disbursements, and property of the State.	<a href="#">2012-105</a>

#### LABOR AND WORKFORCE DEVELOPMENT

California Employment Development Department (EDD)	Base Wage File	No	EDD uses the Base Wage File for multiple purposes, including to determine whether an individual is employed, whether an individual has retained employment, and that individual's wages. EDD also uses the Base Wage File to calculate Unemployment Insurance benefit payments.	<a href="#">2013-102</a>
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#### NATURAL RESOURCES AGENCY

California Department of Fish and Wildlife (Fish and Wildlife)	Fish and Wildlife's data as maintained in Finances' CALSTARS	Yes	An automated organization and program cost-accounting system to accurately and systematically account for all revenue, expenditures, receipts, disbursements, and property of the State.	<a href="#">2013-101</a>
California Department of Parks and Recreation (Parks and Recreation)	Parks and Recreation's data as maintained by the state controller's payroll system	Yes, No <sup>II</sup>	To process the State's payroll and personnel transaction documents.	<a href="#">2012-121.2</a>
	Parks and Recreation's data as maintained by the state controller's California Leave Accounting System	No	To perform a variety of functions necessary to accurately track leave system eligibility, state service credits, and leave benefit activity.	<a href="#">2012-121.2</a>
	Parks and Recreation's data as maintained in the state controller's Position Roster File	No	The Position Roster File is a file of authorized positions used by departments to track positions.	<a href="#">2012-121.2</a>

#### TRANSPORTATION AGENCY

California Department of Transportation (Caltrans)	Right-of-Way Property Management System	Yes, No <sup>II</sup>	The Right-of-Way Property Management System is designed to assist in the efficient and effective management of real property purchased for projects and airspace.	<a href="#">2011-120</a>
	Caltrans' data as maintained by the state controller's payroll system	Yes	To process the State's payroll and personnel transaction documents.	<a href="#">2011-120</a>



AGENCY*	INFORMATION SYSTEM†	RELIABLE FOR AUDIT PURPOSES?‡	AGENCY PURPOSE OF DATA§	AUDIT NUMBER
<b>OTHER DEPARTMENTS, OFFICES, AND UNIVERSITIES</b>				
Administrative Office of the Courts (AOC)	Oracle Financial System (Oracle)	No	The AOC and the eight other judicial entities we reviewed use Oracle to issue purchase orders and record certain procurement activity. Further, the AOC uses procurement data from Oracle to generate the semiannual reports it provides to the Joint Legislative Budget Committee and the California State Auditor on behalf of the Judicial Council of California (semiannual reports).	<a href="#">2013-302 &amp; 2013-303</a>
	Phoenix Financial System (Phoenix)	No	The superior courts generally use Phoenix to issue purchase orders and record certain procurement activity. Further, the AOC uses data from Phoenix to compile the semiannual reports.	<a href="#">2013-302 &amp; 2013-303</a>
California Department of Education	California Longitudinal Pupil Achievement Data System (CALPADS)	Undetermined	CALPADS was created to enable California to meet federal requirements delineated in the No Child Left Behind Act of 2001, which increases accountability for student achievement.	<a href="#">2011-117</a>
	California High School Exit Examination results	Undetermined	To provide for the development, administration, scoring, analysis, and reporting of the exit examination.	<a href="#">2011-117</a>
California Department of Justice (Justice)	Automated Criminal History System (criminal history system)	No	The criminal history system houses the personal description record, narrative and numeric data associated with criminal arrest, applicant, registration or custody fingerprint submissions sent to Justice for search through the Automated Fingerprint Identification System. The criminal history system also houses the disposition data that corresponds to arrest entries.	<a href="#">2011-129</a>
	Juvenile Court and Probation Statistical System (JCPSS)	Undetermined	JCPSS is designed to collect, compile, and report statistical data on the administration of juvenile justice in California. It provides information on a juvenile's process through the juvenile justice system from probation intake to final case disposition.	<a href="#">2011-129</a>
	Mental Health Firearms Prohibition System (mental health database)	Undetermined	The mental health database is an inquiry-only database containing firearms eligibility information on persons prohibited from owning or possessing firearms due to a mental health disorder per sections 8100 and 8103 of the California Welfare and Institutions Code.	<a href="#">2013-103</a>
	Armed Prohibited Persons System (APPS database)	Undetermined	The APPS database houses information on persons who purchased or acquired a handgun(s) on or after January 1, 1996, or registered an assault weapon(s), and subsequently became prohibited from owning and/or possessing firearms under state or federal law.	<a href="#">2013-103</a>

AGENCY*	INFORMATION SYSTEM†	RELIABLE FOR AUDIT PURPOSES‡	AGENCY PURPOSE OF DATA§	AUDIT NUMBER
California Emergency Management Agency (Cal EMA)	Response Information Management System (RIMS)	Undetermined	Cal EMA uses the mission request tasking form in RIMS to order and coordinate state agency resources to respond to and assist local governments and other state agencies in emergencies and disasters.	<a href="#">2011-103</a>
	Lotus Notes Invoicing System	Yes, No <sup>  </sup>	Cal EMA uses the invoicing system to process local agencies' reimbursement requests for resources provided during an emergency response.	<a href="#">2011-103</a>
California State Controller's Office	Budgetary/Legal Basis System	Yes, Undetermined <sup>  </sup>	The Budgetary/Legal Basis System tracks financial data, indexes, funds, etc. on a budgetary/legal basis. It is manually updated based on data from numerous sources.	<a href="#">2011-123</a> <a href="#">2012-110</a> <a href="#">2012-121.1</a>
California State University	Common Management System (CMS)	Undetermined	CMS is used for all human resource business processing, including workforce administration (hires, separations, transfers, etc.), position management, and benefits administration. In addition, CMS is used for student administrative processes, including enrollment, grading, advising, and financial aid.	<a href="#">2012-113</a>
	Common Financial System (CFS)	Undetermined	CFS is used for all finance processing within the California State University, including general ledger, procurement, accounts receivables/payables, and billing.	<a href="#">2012-113</a>

\* Some of the departments have changed their names subsequent to the issuance of our audits during 2012 and 2013. For these departments and purposes of this report, we will refer to the department by its current name.

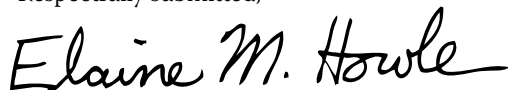
† Some departments may have replaced their information systems (system) subsequent to the issuance of our audits during 2012 and 2013.

‡ In those instances where the assessment is *No* or *Undetermined*, we recognize that the data limitations we identified may affect the precision of the numbers we presented in our reports. However, there was sufficient evidence in total to support our audit findings, conclusions, and recommendations.

§ The data reliability assessment relates to the purpose for which we tested the system's data during the audit. The department's use of the system's data usually, but not always, is similar to our use of the system's data.

|| A single system may have different assessments. For example, data that we used for one audit purpose is accurate and complete, whereas data from the same system used for a separate purpose is not.

Respectfully submitted,



ELAINE M. HOWLE, CPA  
State Auditor