

CALIFORNIA DEPARTMENT OF WATER RESOURCES

Review Report

INTERNAL CONTROL REVIEW

January 1, 2017, through December 31, 2017



BETTY T. YEE
California State Controller

June 2019



BETTY T. YEE
California State Controller

June 28, 2019

Karla Nemeth, Director
California Department of Water Resources
1416 9th Street
Sacramento, CA 95814

Dear Ms. Nemeth:

The State Controller's Office (SCO) reviewed the internal control of the California Department of Water Resources' (DWR) Accounts Payable, Accounts Receivable, Procurement, Division of Engineering (DOE), and Operations and Maintenance Division to determine whether DWR has adequate internal control over financial operations and activities to safeguard the State from theft, abuse, or losses; and is complying with applicable laws, rules, regulations, policies, and procedures. The review period was January 1, 2017, through December 31, 2017.

We noted that DWR:

- Devotes excessive resources to providing consulting services for projects that are not fully developed and does not have a project scoping and planning component in place to ensure that projects are properly prepared and budgeted prior to being submitted to DOE for engineering services (see Finding 1);
- Has difficulty recruiting and retaining staff, especially engineers, due to competition with other state agencies and the private sector (see Findings 1 and 2); and
- Faces environmental regulations that prevent projects from starting or being completed in a timely manner (see Findings 1 and 2).

We also identified a deficiency in reporting emergency repair costs that is not significant to the audit objectives but warrants the attention of management. This issue is discussed in the Observation section of this report.

We issued a draft report with our conclusions, findings, and recommendations on February 28, 2019. Cindy Messer, Chief Deputy Director, responded on behalf of the DWR to our findings and recommendations in a letter dated March 21, 2019. Her response, as a whole, is included as an attachment to this report. We have commented on your responses to our recommendations and have included those comments throughout the Findings and Recommendations section of this report.

DWR should develop a detailed corrective action plan within six months of this report to address the issues noted in Findings 1 and 2 and the Observation. The action plan should be submitted to SCO to determine if a follow-up review is necessary.

If you have any questions, please contact Andrew Finlayson, Chief, State Agency Audits Bureau, by telephone at (916) 324-6310 or by email at afinlayson@sco.ca.gov.

Sincerely,

Original signed by

JIM L. SPANO, CPA
Chief, Division of Audits

JLS/as

Attachment

cc: Cindy Messer, Chief Deputy Director (via email)
California Department of Water Resources
David Whitsell, Chief, Internal Auditor Office (via email)
California Department of Water Resources
Joel Ledesme, Deputy Director, State Water Project (via email)
California Department of Water Resources
Kathie Kishaba, Deputy Director, Business Operations (via email)
California Department of Water Resources
David Duval, Chief, Operations and Maintenance Division (via email)
California Department of Water Resources
Behzad Soltanzadeh, Assistant Division Chief, Operations and Maintenance Division (via email)
California Department of Water Resources
Vinay Behl, Chief, Division of Fiscal Services (via email)
California Department of Water Resources
Jeanne Kuttel, Chief, Division of Engineering (via email)
California Department of Water Resources
Dave Kearney, Chief, Business Services Office (via email)
California Department of Water Resources

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Review Report

Summary

The State Controller's Office (SCO) reviewed the internal control of the California Department of Water Resources' (DWR) Accounts Payable, Accounts Receivable, Procurement, Division of Engineering (DOE), and Operations and Maintenance (O&M) Division to determine whether DWR has adequate internal control over financial operations and activities to safeguard the State from theft, abuse, or losses; and is complying with applicable laws, rules, regulations, policies, and procedures. The review period was January 1, 2017, through December 31, 2017.

We noted that DWR:

- Devotes excessive resources to providing consulting services for projects that are not fully developed and does not have a project scoping and planning component in place to ensure that projects are properly prepared and budgeted prior to being submitted to DOE for engineering services (see Finding 1);
- Has difficulty recruiting and retaining staff, especially engineers, due to competition with other state agencies and the private sector (see Findings 1 and 2); and
- Faces environmental regulations that prevent projects from starting or being completed in a timely manner (see Findings 1 and 2).

In addition, based on our review of Oroville Dam repair costs and discussions with DWR management, we observed that DWR is able to start and complete projects expeditiously during a crisis or emergency. In these situations, DWR resources are made readily available and accessible to address the emergency conditions. DWR is able to suspend or defer regulatory environmental requirements in an emergency. However, emergency projects are more costly (see the Observation).

Background

The responsibility of the DWR is to manage the water resources of California in cooperation with other agencies, in order to benefit the State's people and to protect, restore, and enhance natural and human environments.

In 1956, the California State Legislature passed a bill creating DWR to plan, design, construct, and oversee the building of the nation's largest state-built water development and conveyance system. Today, DWR protects, conserves, develops, and manages much of California's water supply, including the State Water Project (SWP), which provides water for 25 million residents, farms, and businesses.

Working with other agencies and the public, DWR develops strategic goals and plans of action for conserving, managing, developing, and sustaining California's watersheds, water resources, and water management systems. DWR also works to prevent and respond to floods, droughts, and catastrophic events that would threaten public safety, water resources, water management systems, the environment, and property. Balancing the State's water needs with environmental protection remains a long-term challenge.

Objective, Scope, and Methodology

The objective of our review was to assess internal control processes and procedures. These processes and procedures ensure that DWR has adequate internal control over financial operations and activities to safeguard the State from theft, abuse, or losses and is complying with applicable laws, rules, regulations, policies, and procedures.

The review period was January 1, 2017, through December 31, 2017.

To achieve our objective, we:

- Gained an understanding of the DWR's legal, regulatory, and compliance requirements affecting DWR and evaluate whether DWR is in compliance;
- Determined whether DWR has formal accounting processes and procedures for its headquarters and field offices;
- Determined DWR's key internal controls for Accounts Receivable, Procurement, Accounts Payable, DOE, and O&M Division; and
- Evaluated the effectiveness and efficiency of these internal controls.

We accomplished our objective through various methods including, but not limited to:

- Reviewing applicable sections of the State Administrative Manual, Government Code, Public Contract Code, and other relevant laws, rules, and regulations;
- Obtaining and reviewing written policies and procedures related to each operating cycles, and internal controls;
- Conducting onsite visits to inquire about, observe, and understand roles and responsibilities of employees responsible for internal controls and functions;
- Requesting and reviewing financial records and documentation;
- Testing internal controls;
- Examining processes and procedures for claims schedules submitted for reimbursement to the SCO to determine whether internal controls provided adequate evidence of review and approval for reimbursement. Selected a non-statistical haphazard sample of 10 contracts from a population of 3,587 contracts and tested 60 related claim schedules to verify that internal controls were adequate. Errors found in the samples selected were not projected to the intended (total) population;
- Performing analytical procedures on financial records; and
- Reviewing prior audit results.

We limited our review of the DWR's internal controls to gaining an understanding of the transaction flow and claim preparation process as necessary to develop appropriate procedures.

Conclusion

Our review noted that DWR:

- Devotes excessive resources to providing consulting services for projects that are not fully developed and does not have a project scoping and planning component in place to ensure that projects are properly prepared and budgeted prior to being submitted to DOE for engineering services (see Finding 1);
- Has difficulty recruiting and retaining staff, especially engineers, due to competition with other state agencies and the private sector (see Findings 1 and 2); and
- Faces environmental regulations that prevent projects from beginning or being completed in a timely manner (see Findings 1 and 2).

We also identified a deficiency in reporting emergency repair costs that is not significant to the audit objective but warrants the attention of management. This issue is discussed in the Observation section of this report.

**Follow-up on
Prior Review
Findings**

An audit report issued July 12, 2016, by the Department of General Services (DGS) on DWR's Delegated Purchasing Program, noted one procurement finding for the DWR's not ensuring full compliance with DGS Delegated Purchasing Authority and not following state requirements governing Non-IT and IT procurement. DWR took corrective action to address this finding. The DGS audit also noted an observation that contained issues relating to invoices not being date-stamped. We designed our review to confirm whether the DWR took corrective action on this observation. Based on our review, the issue still exists.

**Views of
Responsible
Officials**

We issued a draft review report on February 28, 2019. Cindy Messer, Chief Deputy Director, responded by letter dated March 21, 2019 (Attachment), partially agreeing with the audit results. This final audit report includes the DWR's response.

Restricted Use

This review report is solely for the information and use of DWR and the SCO; it is not intended to be and should not be used by anyone other than these specified parties. This restriction is not intended to limit distribution of this report, which is a matter of public record, and is available on the SCO website at www.sco.ca.gov.

Original signed by

JIM L. SPANO, CPA
Chief, Division of Audits

June 28, 2019

Findings and Recommendations

FINDING 1— Excessive labor hours and other barriers to completing projects in a timely manner

DWR does not have a consistent project-scoping process to ensure that project requests are properly prepared and budgeted prior to being submitted to DOE for execution. DWR's DOE provides consulting services on projects for various DWR divisions. Projects that DWR divisions bring to DOE for consulting services are not fully developed, and often require unplanned time spent with project managers to gain a better understanding of the project's budget, scope, and design requirements.

DWR also indicated that it has difficulty recruiting and retaining staff, especially engineers, due to:

- Competition with other state agencies for college-graduating engineers;
- Employees leaving DWR for the private sector as a result of pay differentials; and
- Recruitment and retention problems resulting in increased workloads for current staff.

The additional time required for project execution, coupled with difficulties in recruiting and retaining staff, results in some projects not being completed on time.

Additionally, lengthy environmental permitting processes often prevent projects from being completed in a timely manner. DWR faces a myriad of state- and federal-imposed environmental restrictions that add long delays and prevent projects from starting construction (see the Observation).

Recommendation

We recommend that DWR:

- Continue to improve the project-scoping and planning phases prior to seeking engineering services from DOE to ensure that projects are properly prepared and budgeted;
- Develop strategies to maintain high-priority workloads during and after emergency situations, as it is imperative that an emergency situation does not delay other high-priority projects; and
- Work with regulators and control agencies to adjust policies and allow for additional project delivery methods, including those for emergency and high-priority projects, to address challenges related to the State's aging infrastructure.

DWR's Response

We do not agree with the description of the finding regarding “DWR does not have a consistent scoping-process...”. DWR does have a well-established process but, due to the unique aspects of any given project, the standard process cannot always be applied. This results in inefficiencies.

- A) DWR agrees with the recommendation to continue to improve this process. To accomplish this, DWR's Division of Engineering has created a dedicated Project Management unit to coordinate planning and scope development with all divisions. In addition, DWR is currently working to implement a Portfolio & Project Management software tool that is broad enough to be used department-wide along with updated policies and procedures to strengthen the project-scoping and planning phases. This software tool is expected to go live in the summer of 2019 and will include broad based end-user training for project managers.
- B) DWR agrees with this recommendation. DWR is already working to address a broad range of strategies to be able to address emergency situations so as to not impact other high priority work. This includes, but is not limited to, increasing current staffing levels via added positions from approved budget change proposals, executing architectural and engineering contracts to provide additional technical resources to support a broad range of projects, and implementing risk-informed decision making as it relates to project prioritization and execution. All of these strategies are intended to improve DWR's ability to address unforeseen emergencies and to reduce emergencies' impact on other priority work.
- C) DWR agrees with this recommendation and has requested additional authority for a variety of alternate project delivery methods. Currently, DWR has authority for design-build specifically for Salton Sea projects and is seeking Construction Manager/General Contractor authority.

SCO Comment

The finding remains unchanged.

DWR indicates that unique aspects of a given project prevent it from having a consistent project-scoping process. However, it agrees with the recommendation.

**FINDING 2—
DWR lacks
resources to
perform operation
and maintenance
projects**

DWR O&M Division lacks the resources to properly execute its detailed five-year plan for operation and maintenance projects as part of its developing Asset Management Plan. DWR has a plan to operate and maintain its assets, but lacks the necessary resources that would allow it to execute the plan in a timely and effective manner. Projects in this asset management plan are constantly being re-prioritized based on public safety, lack of resources, environmental permitting, and emergency situations.

The Oroville Spillway incident in 2017 is an example of an emergency situation in which all required resources were diverted from other projects, causing delays to other planned projects. DWR's five-year plan contains 361 projects estimated to cost \$1.7 billion. All of these projects were postponed and the required resources were diverted to address the Oroville Spillway incident.

Emergency procedures allow DWR to suspend or defer some standard procedures, such as environmental permitting and competitive bidding, to prevent or mitigate the loss or impairment of life, health, property, or essential public services.

This shift of a projected \$1.7 billion in resources, whether due to environmental regulations (such as environmental studies and permitting) or lack of resources (such as personnel), puts other important projects with public risk considerations further behind schedule. When maintenance on SWP assets is delayed, the condition of assets further deteriorates and can result in increased costs, risk of asset failure, and risk to public safety. This puts DWR in a reactive rather than proactive pattern of operating (see the Observation).

Recommendation

We recommend that DWR:

- Establish environmental Habitat Conservation Plans for existing SWP assets;
- Maintain its existing assets in a timely, proactive, and cost-effective manner; and
- Continue to develop its Asset Management Plan and risk-informed decision process to not be merely reactionary in its resource management and project delivery methods in order to address aging infrastructure needs and maximize public safety.

DWR's Response

DWR does not agree with the finding that "DWR O&M Division is not able to properly execute its detailed five-year plan for operation and maintenance projects as part of its developing Asset Management Plan." DWR does execute the five-year plan; however, planning is a continuous process and projects are reprioritized appropriately.

DWR does not agree with the following: "DWR's five-year plan contains 361 projects estimated to cost \$1.7 billion. All of these projects have been postponed and the required resources have been diverted to address the Oroville Spillway incident." It is important to note that, at the time of the Oroville Spillway incident, DWR was dealing with several emergencies resulting from the Winter Storms of 2017. While these emergencies required an extraordinary amount of DWR resources, it is more accurate to state that other projects were impacted, rather than to say all projects were postponed.

- A) DWR agrees with this recommendation. DWR has reorganized and has dedicated staff whose primary focus is to manage activities

required to establish Habitat Conservation Plans for key State Water Project (SWP) assets. Additionally, DWR continues to proactively engage regulatory agencies to streamline and navigate through a variety of environmental processes. This will be a needed step for DWR to be able to perform maintenance required on some critical SWP assets to protect public and employee safety and preserve the integrity and extend the useful life of those assets.

- B) DWR agrees with this recommendation and continues to maintain its assets while making risk-informed decisions within our resourcing capacity and in compliance with regulatory requirements. DWR strives to continuously improve our asset management. This includes, but is not limited to, requesting additional positions to meet current and projected essential workload, executing architectural and engineering contracts to provide additional technical resources to support a broad range of projects, and implementing risk informed decision making as it relates to project prioritization and execution.
- C) DWR agrees and this remains a high priority initiative.

SCO Comment

We updated the first sentence of the finding based on DWR's response. DWR agrees with our recommendation.

Observation

OBSERVATION— Procedures to estimate and report emergency costs need improvement

DWR is able to complete projects more efficiently in emergency situations. We observed that DWR is able to start and complete projects in a timely manner during a crisis or emergency. In these situations, DWR resources are more readily made available and accessible to address the emergency conditions. Additionally, DWR is able to suspend or defer regulatory environmental requirements in an emergency. However, DWR did not have processes and procedures in place to accurately report emergency repair costs.

DWR initially reported that the Oroville Dam repair would cost \$200 million. By May 2017, the Oroville Dam emergency repairs had cost \$160 million. DWR spent an additional \$310 million on pre-project design that was not part of the estimated total project costs. These costs covered only preparing the site for construction. Plans to repair the main spillway were finalized in July 2017, and plans to repair the emergency spillway were finalized in August 2018 at an estimated \$630 million. Total costs may have been miscommunicated because DWR did not know or report the exact \$630 million estimated costs to repair the spillway until the plans were finalized. Final estimated costs to complete the Oroville Dam repair project are \$1.1 billion as follows:

Initial emergency response	\$ 160,000,000
Related recovery work, including debris removal, power line replacement, permitting, and development of access road	310,000,000
Main and emergency spillway repair	<u>630,000,000</u>
Total estimate to repair Oroville Dam	<u><u>\$ 1,100,000,000</u></u>

Operating under emergency conditions has its trade-offs. Projects completed under emergency procedures are substantially more expensive than those completed under normal conditions. Emergency procedures may involve substantial amounts of overtime labor, use of rented equipment, and purchase of materials outside of the competitive bidding process. Environmental regulations can be bypassed during emergencies; however, DWR is still bound by those regulations. As a result, DWR must pay remediation costs for any regulations that it violates. Remediation can cost more than the normal process of obtaining proper permits for a project.

As mentioned in Findings 1 and 2, DWR faces environmental restrictions (e.g., environmental studies and permitting) and a lack of resources that add delays and prevent projects from starting in a timely manner. When an asset fails, and thus becomes a threat to health and human services, or is unable to deliver water, that asset is repaired under urgent or emergency operating procedures. This often becomes the most efficient and effective manner in which to complete projects, as DWR can bypass restrictions and divert resources as needed.

Recommendation

We recommend that DWR update its processes and procedures for reporting emergency repair costs. Estimates should include a range of both known and unknown expected costs. Offsetting funding such as Federal Emergency Management Agency reimbursements should also be included in that estimated range to ensure that the public is not misinformed.

DWR's Response

Observation:

DWR does not agree with the statement "However, DWR did not have processes and procedures in place to accurately report emergency repair costs." DWR uses a very robust accounting system, SAP, and mature processes and procedures for reporting costs in any project. It is important to note that in an emergency of this magnitude, DWR is required to place a higher priority on obtaining the necessary procurements while utilizing the Emergency Declaration efficiencies to manage the emergency. As the emergency stabilized, we transitioned back to normal processes and procedures.

DWR awarded an initial \$275 million contract in April 2017 to Kiewit to immediately plan and mobilize crews and equipment to begin construction in May 2017. This budget allowed Kiewit to begin necessary work while the project design was completed and was not an estimate of the total project cost. Final plans for the main spillway were completed in July 2017 and final design plans for the emergency spillway were completed and approved in August 2018.

Observation Recommendation:

DWR disagrees with this recommendation to include "unknown expected" and "offset funding" in its estimates.

SCO Comment

We observed that original estimated project costs reported were far less than reported project costs to date. We understand that emergency projects of this magnitude will have many unforeseen costs. Our goal is for state agencies to consistently and accurately report project costs at any given time to ensure that the public is not misinformed.

**Attachment—
Auditee's Response to Draft Review Report**

DEPARTMENT OF WATER RESOURCES1416 NINTH STREET, P.O. BOX 942836
SACRAMENTO, CA 94236-0001
(916) 653-5791**MAR 21 2019**Honorable Betty T. Yee
California State Controller
Post Office Box 942850
Sacramento California 94250

RE: Response to the State Controller's Office Review of DWR's Internal Control Report

Thank you for the opportunity to provide the Department of Water Resources' (DWR) feedback on the draft internal control review report prepared by your staff. Generally, DWR believes the Findings and Observations are inaccurately worded and thus do not provide a correct assessment of DWR. Conversely, we believe the recommendations generally identify a workable direction. In many instances, DWR has begun work related to the recommendations and will continue to work in those areas to ensure continued improvement. Please consider our detailed responses below as you finalize your report.

Finding 1:

We do not agree with the description of the finding regarding "DWR does not have a consistent scoping-process...". DWR does have a well-established process but, due to the unique aspects of any given project, the standard process cannot always be applied. This results in inefficiencies.

Finding 1 Recommendations:

- A) DWR agrees with the recommendation to continue to improve this process. To accomplish this, DWR's Division of Engineering has created a dedicated Project Management unit to coordinate planning and scope development with all divisions. In addition, DWR is currently working to implement a Portfolio & Project Management software tool that is broad enough to be used department-wide along with updated policies and procedures to strengthen the project-scoping and planning phases. This software tool is expected to go live in the summer of 2019 and will include broad based end-user training for project managers.
- B) DWR agrees with this recommendation. DWR is already working to address a broad range of strategies to be able to address emergency situations so as to not impact other high priority work. This includes, but is not limited to, increasing current staffing levels via added positions from approved budget change proposals, executing architectural and engineering contracts to provide additional technical resources to support a broad range of projects,

and implementing risk-informed decision making as it relates to project prioritization and execution. All of these strategies are intended to improve DWR's ability to address unforeseen emergencies and to reduce emergencies' impact on other priority work.

- C) DWR agrees with this recommendation and has requested additional authority for a variety of alternate project delivery methods. Currently, DWR has authority for design-build specifically for Salton Sea projects and is seeking Construction Manager/General Contractor authority.

Finding 2:

DWR does not agree with the finding that "DWR O&M Division is not able to properly execute its detailed five-year plan for operation and maintenance projects as part of its developing Asset Management Plan." DWR does execute the five-year plan; however, planning is a continuous process and projects are reprioritized appropriately.

DWR does not agree with the following: "DWR's five-year plan contains 361 projects estimated to cost \$1.7 billion. All of these projects have been postponed and the required resources have been diverted to address the Oroville Spillway incident." It is important to note that, at the time of the Oroville Spillway incident, DWR was dealing with several emergencies resulting from the Winter Storms of 2017. While these emergencies required an extraordinary amount of DWR resources, it is more accurate to state that other projects were impacted, rather than to say all projects were postponed.

Finding 2 Recommendations:

- A) DWR agrees with this recommendation. DWR has reorganized and has dedicated staff whose primary focus is to manage activities required to establish Habitat Conservation Plans for key State Water Project (SWP) assets. Additionally, DWR continues to proactively engage regulatory agencies to streamline and navigate through a variety of environmental processes. This will be a needed step for DWR to be able to perform maintenance required on some critical SWP assets to protect public and employee safety and preserve the integrity and extend the useful life of those assets.
- B) DWR agrees with this recommendation and continues to maintain its assets while making risk-informed decisions within our resourcing capacity and in compliance with regulatory requirements. DWR strives to continuously improve our asset management. This includes, but is not limited to, requesting additional positions to meet current and projected essential

Honorable Betty T. Yee

MAR 21 2019
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workload, executing architectural and engineering contracts to provide additional technical resources to support a broad range of projects, and implementing risk informed decision making as it relates to project prioritization and execution.

C) DWR agrees and this remains a high priority initiative.

Observation:

DWR does not agree with the statement "However, DWR did not have processes and procedures in place to accurately report emergency repair costs." DWR uses a very robust accounting system, SAP, and mature processes and procedures for reporting costs in any project. It is important to note that in an emergency of this magnitude, DWR is required to place a higher priority on obtaining the necessary procurements while utilizing the Emergency Declaration efficiencies to manage the emergency. As the emergency stabilized, we transitioned back to normal processes and procedures.


DWR awarded an initial \$275 million contract in April 2017 to Kiewit to immediately plan and mobilize crews and equipment to begin construction in May 2017. This budget allowed Kiewit to begin necessary work while the project design was completed and was not an estimate of the total project cost. Final plans for the main spillway were completed in July 2017 and final design plans for the emergency spillway were completed and approved in August 2018.

Observation Recommendation:

DWR disagrees with this recommendation to include "unknown expected" and "offset funding" in its estimates.

Our staff stands ready to work with your office to provide additional information regarding the comments above. Please work with David Whitsell, Chief, Internal Audit Office, with regard to any clarifications needed or additional questions you may have. He can be reached at (916) 653-8382 or at David.Whitsell@water.ca.gov.

Sincerely,



Cindy Messer
Chief Deputy Director

cc: See attached list.

Honorable Betty T. Yee

MAR 21 2019

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cc: Kathie Kishaba, Deputy Director, Business Operations, DWR
Joel Ledesma, Deputy Director, State Water Project, DWR
David Duval, Chief, Operations and Maintenance, DWR
Jeanne Kuttel, Chief, Division of Engineering, DWR
Vinay Behl, Chief, Division of Fiscal Services, DWR
Behzad Softanzadeh, Assistant Division Chief, Operations & Maintenance, DWR
Dave Kearney, Chief, Business Services Office, DWR
David Whitsell, Chief, Internal Audit Office, DWR
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