



TAPInternational

# FY 2022- 2024 Risk Assessment

November 10, 2021

Final Risk Assessment Results



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# Executive Summary

## Why the Assessment Was Conducted

The Valley Water Board Audit Committee (BAC) advances open and accountable government through accurate, independent, and objective audits that seek to improve the economy, efficiency, and effectiveness of Valley Water operations. To support the oversight and monitoring role of the BAC and of the Board of Directors, Valley Water established an Independent Auditor function in 2017 and since inception, TAP International, Inc. has served as the Independent Auditor.

Professional auditing standards describe the use of a risk-based approach for creation of an audit work plan. An annual audit work plan identifies areas that need an audit to help prevent the occurrence of potential problems in the future. Risk areas identified in the assessment represent potential opportunities to conduct audits that will provide objective analysis and recommendations to help enhance the efficiency and effectiveness of Valley Water operations.

A risk assessment for audit planning is not considered a formal audit, and thus, no findings or recommendations are included in this report. The results are considered by auditors for audit planning purposes.

## How the Assessment Was Conducted

The 2021 risk assessment process consisted of two phases: (1) administration of a survey in which 59 Valley Water internal and external stakeholders identified current and emerging challenges facing Valley Water, and (2) evaluation of Valley Water activities across the top challenges and other areas. Individual Board Directors and dozens of Valley Water employees across executive, manager, and supervisory levels contributed to this assessment, and over 75 documents were reviewed over a three-month period, to form the basis of the results discussed in this assessment. In total, about 100 persons participated in the risk assessment between the two phases.

## What the Assessment Found

The stakeholder survey identified six top current and/or emerging challenges for Valley Water. The most frequently cited challenges include:

1. Emergency management in response to severe weather and/or natural disasters
2. Environmental damage caused by humans and climate change (applicable to environmental sustainability)
3. Aging or inadequate water delivery infrastructure
4. Cybersecurity
5. Surface water supply shortages or contamination
6. Contamination or shortages of groundwater



Among the most identified impacts of these challenges on Valley Water operations, survey respondents reported, would likely be an increase in the cost to provide services and/or cost overruns for capital projects. Survey participants also identified activities – for example, the most frequently selected activities were initiatives to ensure cybersecurity and expanded use of data to inform strategic and operational decision making – that with effective implementation, could help address the challenges identified. Appendix A describes how the survey was conducted and the complete survey results.

Valley Water has implemented many activities across the stakeholders' top challenges and other areas to help prevent environmental harm, to protect the quality and availability of Valley Water's water supply, and to improve property and information technology security, which are highlighted throughout this report. Key issues and concerns remain that led to identifying a range of suggested audits (31) for potential completion through Fiscal Year (FY) 2024 to further reduce Valley Water risks. The nature and number of audits to be completed will be determined by the Board of Directors, in consideration of Board priorities and funding availability.



# **Risk Assessment Approach**

## Risk Assessment Approach

Using the results of a stakeholder survey administered under phase one of this risk assessment, TAP International further evaluated the top six challenges as well as another area -- data management and accuracy – in phase two of the risk assessment as shown in Figure 1 below. To conduct the second phase of the risk assessment, TAP International interviewed 40 Valley Water managers, staff, and various Board Directors to collect and evaluate information about Valley Water’s mitigation activities across the seven areas, as well as gaps or overlaps in these areas that could benefit from an audit. The results were then assessed to determine the likelihood that an audit is needed and, if an audit were conducted, the impact that it could have to further mitigate risk(s). Notably, these seven areas evaluated do not align perfectly with Valley Water’s organizational structure; more than one Valley Water unit or division may perform activities related to a particular area. For example, Valley Water’s Division of Emergency, Safety, and Security is responsible for ensuring comprehensive, integrated, risk-based, emergency management for the staff and critical infrastructure of Valley Water. However, each Valley Water unit is responsible for planning and implementing their unit’s specific field-level response to emergencies. The heat maps included in this report reflect these cross-functional relationships and do not necessarily reflect areas for potential audit in one division or unit.

**Figure 1. Designated Scope of Work for Further Risk Assessment**

- |  |  |
|--|--|
| 1. Emergency Preparedness/Disaster Planning      | 2. Financial Management                        |
| 3. Environmental Sustainability                  | 4. Strategy Development, Planning & Innovation |
| 5. Aging Infrastructure-Capital Project Planning | 6. Data Management & Accuracy                  |
| 7. Information Technology & Management           |  |

Throughout the risk assessment, TAP International considered the following questions:

- **Strategy**—Are current and emerging challenges guided by short and long-term strategy development? Are there gaps in current management plans developed? Do management plans appropriately respond to changes in the operating or business environment? Does plan development account for technical and human resources needs to address areas of concern?
- **Financial Management**—Is there an opportunity to improve how Valley Water manages, invests, spends, and accounts for its financial resources?
- **Reputation**—Can performance potentially fall short of community expectations? Has project value been assessed prior to commitment of resources?

- **Operational Information Security**—Are Valley Water’s information systems and networks protected against unauthorized access, use, disclosure, disruption, modification, inspection, recording, or destruction?

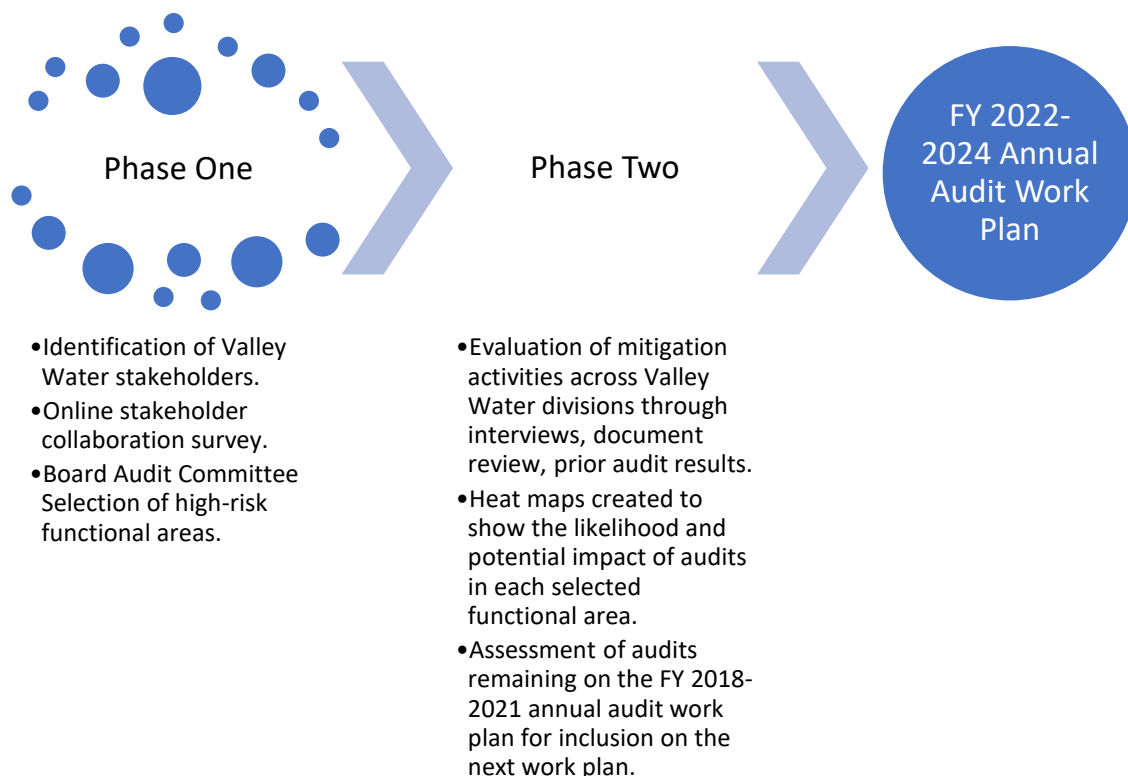
TAP International also considered factors to assess the potential for an audit, including:

- **Relevance**—Does the audit have the potential to affect Board decision-making or impact Valley Water customers and residents?
- **Best Practices**—Does the audit provide the opportunity to compare current performance to best practices?
- **Return on Investment**—Does the audit have the potential for cost savings, cost avoidance, or revenue generation?
- **Improvement**—Does the audit have the potential to result in meaningful improvement in how Valley Water operates?
- **Risk**—If the audit was conducted, can audit recommendations potentially reduce risks?

TAP International also collected information related to audits remaining on the FYs 2018-2021 audit work plan to assess their potential inclusion on the FY 2022-2024 annual audit plan.

Figure 2 illustrates the key activities implemented to complete the risk assessment.

**Figure 2: Risk Assessment Approach for Audit Planning Purposes**

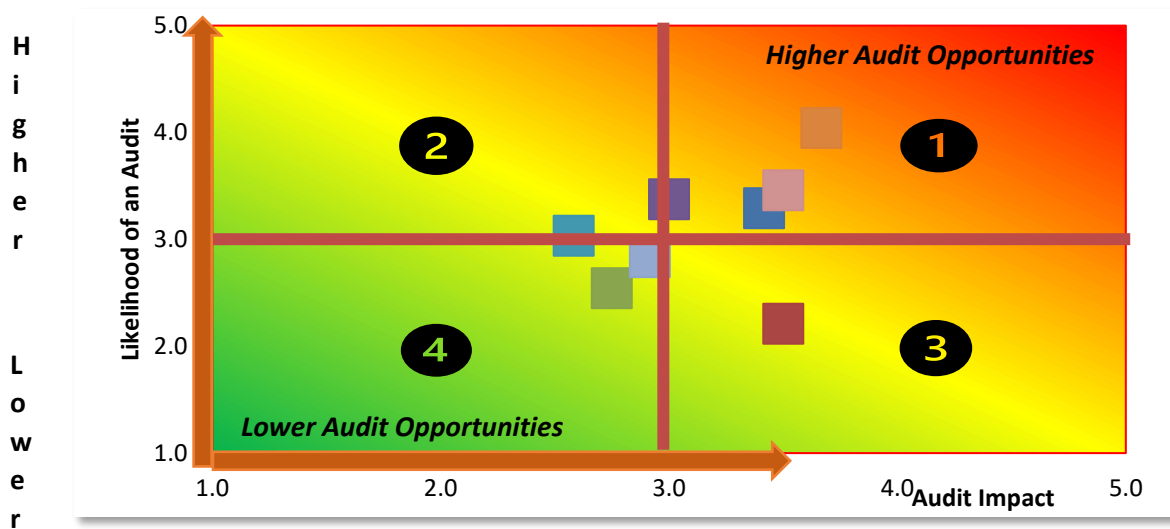




## How to Read a Heat Map

Heat maps are used to illustrate the evaluation results in each of the seven Valley Water areas assessed. A heat map shows both the likelihood that an audit is needed and, if an audit is performed, the potential impact of an audit in helping Valley Water address current and emerging challenges. Throughout this report, we provide heat maps to illustrate “risk scores” among specific types of activities within each of the seven areas. As shown in Figure 3 below, the vertical line (Y axis) represents the likelihood (on a scale of 1-5) that an audit could likely identify opportunities for improvement and the horizontal line (X axis) represents the potential impact (on a scale of 1-5) of those improvements. The overall “risk” score for each area can fall in one of four quadrants depending on the likelihood and impact scores.

**Figure 3: Sample Heat Map**



Activities that appear in Quadrant 1 of a heat map, as explained in Figure 4 below, have the highest need for an audit that could likely have the greatest impact on Valley Water operations. It is important to note that our assessment and results reported are for audit planning purposes only and should not be construed as audit findings.

**Figure 4: Heat Map Legend**

<b>1</b>	Higher need for an audit and greater impact on outcomes. The Board Audit Committee should prioritize these areas in subsequent audit work.
<b>2</b>	Higher need for an audit, but lower impact on outcomes. The Board Audit Committee has the option to include these areas or Valley Water functions in subsequent audit work.
<b>3</b>	Lower need for an audit but higher impact on outcomes. The Board Audit Committee should consider the cost-effectiveness of audit outcomes before initiating an audit.
<b>4</b>	Lower need for performance audit assistance and lower impact on outcomes. The Board Audit Committee should monitor areas for potential audits in the future.

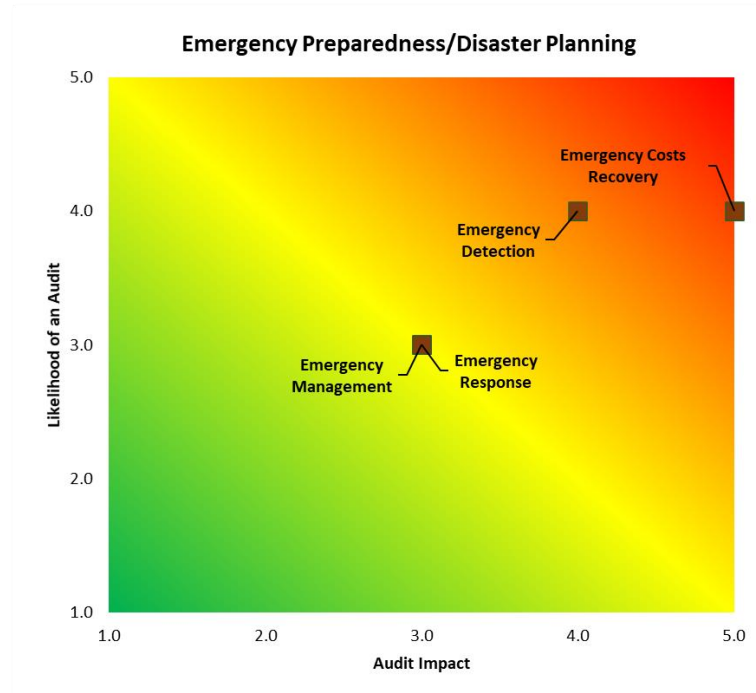


# Assessment Results

## Stakeholder Identified Risk Area: Emergency Preparedness/Disaster Planning

### Emergency Response, the Most Frequent Challenge Cited by Stakeholders

A public agency's response to unexpected or dangerous events or natural disasters depends on organizational structures, plans, and procedures to mitigate the event on the public and the environment. Stakeholders unanimously agreed that Valley Water's ability to respond to emergencies or disasters is a current or emerging challenge facing Valley Water. All stakeholders that responded to the survey identified "emergency management in response to severe weather and/or natural disasters" as a likely current or emerging challenge to Valley Water's achievement of its key strategic goals.<sup>1</sup>



### Valley Water Divisions and Units Agree with Stakeholder Survey Results

Valley Water management and staff agreed that emergency preparedness and response is a high-risk area, citing the challenges to operations presented by recent events (such as the 2017 winter flooding, recent annual large-scale wildfires, COVID-19 pandemic and 2021 drought). Staff explained that these recent events have had a substantial impact on Valley Water's operations, in particular the workloads of staff providing emergency response services.

Current or planned efforts to mitigate the risk of interruptions to overall operations from severe weather or natural disasters include:

- Maintaining the Districtwide Emergency Operations Center (EOC) (and alternate) for operational readiness.
- Use of cross-functional teams of Valley Water divisions/units with responsibilities to coordinate emergency response to specific types of emergencies (flood, power outage, wildfire).

<sup>1</sup> See 2021 Valley Water Stakeholder Collaboration Survey for Audit Planning, July 2021 for additional information.



- Including clauses in key contracts to ensure the agency receives priority response and service for key supplies and service.
- Establishing mutual aid type agreements, for example, with other local water agencies for water treatment if Valley Water is unable to provide services.
- Valley Water is part of the Emergency Incident Command System used by the County, State and Federal agencies deploying mutual aid as necessary during emergencies. Valley Water has staff in key leadership positions in Cal-WARN, statewide resources for water agencies; staff leadership in the state's largest public sector procurement association to assist with cooperative contract options as needed.
- Establishing and implementing an annual process to update Division/Unit Emergency Actions Plans and coordinate these updates with the Information Technology Division (ITD).
- Completing emergency management training for all Valley Water workers designated as disaster workers.
- Undertaking capital projects for flood protection and preservation of flood conveyance capacity including seven projects under construction and 14 in the planning/design stage at the time of our assessment.
- Participating in inter-agency training exercises at the state and countywide level for emergency operations during a flood event.
- Planned implementation of at least two additional flood forecast points as part of a flood warning system.

Many staff praised the work of the Division of Emergency, Safety, and Security for their emergency preparations and operations, and their support for individual units who are responsible for preparing their own field response. While the Office of Emergency Services (OES) meets annually with field units to help them update their plans, OES is not responsible for planning field units' specific prevention, detection, response, and recovery activities.

### **Key Issues Identified**

Assessment of Valley Water's response to recent events by units and divisions identified:

- **Lost opportunities for federal and state cost reimbursement.** Valley Water management reported that since March 2020, Valley Water has utilized an EOC cost tracking structure that has a specific EOC activation budget and payroll charge codes to separate emergency-related cost from standard operating costs. Cost Recovery application has been submitted to the California State Treasury for COVID-19, and additional cost recovery applications are being finalized for submittal to the Federal Emergency Management Agency for applicable recovery expenditures. Valley Water



Management also reported that best practices have been developed during the COVID-19 emergency in regard to cost tracking and recovery, which will be utilized moving forward for current and future emergencies. Nonetheless, across managers and staff interviewed, the capabilities of divisions to properly account for emergency response and recovery activities to successfully obtain federal or state cost reimbursement vary. Some divisions have defined the cost recovery processes while other divisions have organizational culture issues that have prevented implementation of updated cost recovery processes. Staff explained that the gaps in recovery-related processes have led Valley Water to miss reimbursement opportunities from prior flood events.

- **Need for additional staff during emergencies to prevent significant backlog of work.** Valley Water management reported that the use of temporary staff and other staffing strategies have been implemented to supplement critical work areas as appropriate during the COVID-19 emergency, including implementing business continuity strategies during the pandemic that helped prioritize work in essential functions. Other managers and staff explained that individual staff workloads increase during all types of emergencies, often for substantial periods of time, without the field unit receiving additional staff support. Staff have reported working longer than normal hours and deferring tasks that could increase risks in other areas.
- **Planning for procurement during emergencies.** Field units are responsible for planning of their own procurement needs during an emergency response. Some staff reported that their unit had proactively established on-call contracts or arrangements with Valley Water's warehouse for emergency services and supplies, including technical assistance, while others reported that they do have the same type of contracts in place. A best practice shared by the manager of one unit is to plan for extra procurement needs for disaster response equipment, for example, extra parts that could be needed to repair critical machinery during an emergency. It is unclear to what extent the emergency response plans of Valley Water field units address procurement needs although Valley Water management reported having contracts that require vendors to prioritize services and supplies should events occur.

Staff noted that neighboring local agencies had pre-approved the delegation of a limited authority from the Board to executive managers to procure certain services or supplies up to a pre-approved dollar threshold. An advantage to proactively establishing this type of delegation of authority allows the agency to respond quickly to an emergency while preserving transparency and accountability for procurements within the organization.

- **Need to re-evaluate division and unit roles and responsibilities for detection activities.** One unit continues to screen all mail received for Valley Water to detect hazardous substances when the unit is primarily responsible for warehousing supplies and inventory management, including continuing to procure personal protective

equipment and related resources for the current COVID-19 pandemic. While Valley Water has demonstrated agility in its response efforts by establishing an Emergency Steering Committee (ESC) in 2019 and assigned the responsibility of reviewing after action reports (AAR) and improvement plan (IPs), including weekly status meetings to coordinate emergency response activities, we were unsuccessful in identifying post implementation and assessment reports for issues and events that provided the rationale for having the General Service unit continue to monitor mailings for toxic substances.

- **Need for greater physical security surveillance of Valley Water property, facilities, and infrastructure.** While Valley Water has proactively dedicated a unit, hired a new manager and additional staff, and began installing needed surveillance cameras and other equipment for some facilities, more work remains. Staff explained that current gaps leave Valley Water vulnerable to untimely detection of security concerns should events occur. Valley Water management reported that gaps have been identified through 3rd party and internal assessments, which are presently in the process of being addressed through the CIP. Until these gaps are mitigated, security surveillance risks remain high.
- **The ability of Valley Water to operate a virtual EOC.** While Valley Water has implemented a virtual EOC to enhance operational readiness<sup>2</sup> and management reported that EOC documentation has been updated to reflect virtual EOC operations, Valley Water's Emergency Operations Plan, Crisis Management Plan and EOC Activation/Deactivation Process are in final stages for updating. Until these plans are complete, reputational and operational risks remain high for Valley Water. An independent verification on the extent that Valley Water activities align with established guidance issued by Federal Emergency Management Agency is needed to ensure that plans, when completed, can effectively mitigate communication, operational, and response risks.

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<sup>2</sup> Valley Water Virtual EOC was activated in March 2020 and utilizes Zoom for communication and coordination, and Egnyte (encrypted SharePoint) for EOC Documentation. Valley Water created 52 EOC Action Plans, one for each Operational Period and activated multiple Virtual EOCs, separate teams for the Drought, as well as a potential flood event in January 2021.

## Stakeholder Identified Risk Area: Environmental Sustainability

### Water Supply, Contamination, Environmental Damage and Climate Change Among the Top Challenges Facing Valley Water

Environmental sustainability programs and activities help to ensure that future generations have the natural resources available to live an equal, if not better, way of life as current generations by balancing the economic, social, and environmental needs of a community.

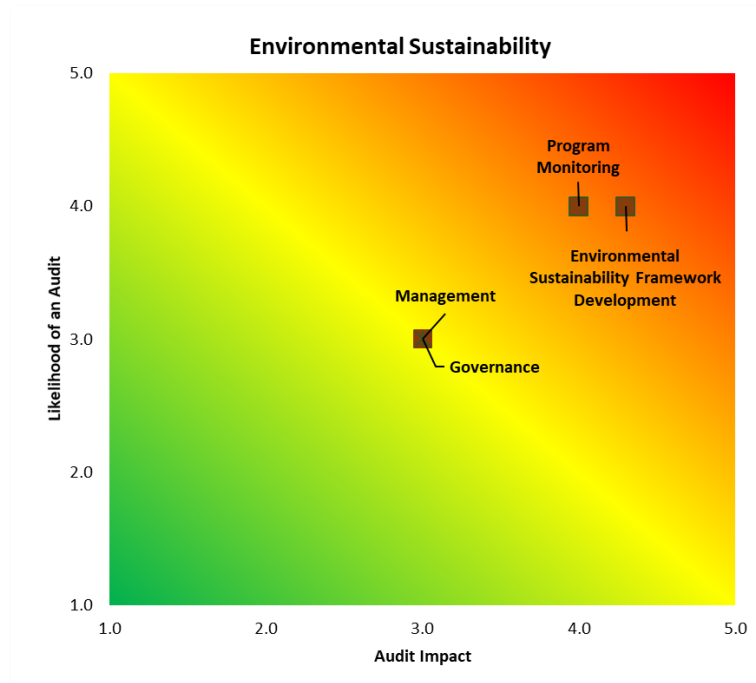
Three environmental sustainability challenges (environmental damage caused by humans and climate change; surface water supply or contamination; and contamination or shortages of groundwater) were among the six most often identified current or emerging challenges facing Valley Water.<sup>3</sup>

Most Valley Water divisions share responsibility for environmental sustainability. Many of Valley Water's activities are funded by its Safe Clean Water Program, including grants to external parties and partnership funding. The FY 2022 Valley Water budget allocates more than \$45 million for activities to protect and restore creek, bay, and other aquatic ecosystems.

### Valley Water Divisions and Units Agree with Stakeholder Survey Results

Environmental sustainability is a high-risk area for Valley Water, with staff and managers frequently describing risks due to the current drought risks to Valley Water operations from environmental damage, water supply shortfalls, and degraded water quality. At the same time, divisions and units described many efforts to mitigate these risks, including:

- Implementing water conservation outreach programs where Valley Water staff work directly with consumers and water retailers to reduce water usage.
- Working with the State of California to have enforcement authority on water conservation initiatives within Valley Water's area of authority.



<sup>3</sup> See 2021 Valley Water Stakeholder Collaboration Survey for Audit Planning, July 2021 for additional information.

- Providing timely information on water supplies and quality during the current drought and past flood events.
- Proactively establishing contracts for purchases of imported surface water. Valley Water relies highly on imported surface water supplies. On average, about 40 percent of Valley Water's water supply is from imported water resources.
- Establishing proactive surveillance testing for emerging contaminants, like PFAS<sup>4</sup>, which seep into groundwater. State standards allow for very low amounts of PFAS to be present in groundwater. Valley Water has established a cross-functional team to discuss how Valley Water can proactively address the threat posed by PFAS, for example, through surveillance testing and monitoring or partnering to help advance treatment technologies. Valley Water's lab is already certified to test for this contaminate. Also, Valley Water is working with the Water Quality Board when regulatory action is needed to address sources of contamination.
- Assessing the risk of groundwater and surface water contamination from homelessness, determining that fecal contamination does not usually affect the quality of groundwater but is a more acute concern for surface water.
- Initiating long-term planning efforts to address climate change. Valley Water adopted a Climate Change Action Plan (CCAP) in July 2021, which states that climate changes will impact local and imported water supplies, challenging Valley Water's water supply reliability, complicating flood protection efforts, potentially degrading water quality and threatening habitat mitigation efforts. According to the CCAP, the next task is to develop an Implementation Program for the updated CCAP, that includes specific actions and a system for monitoring progress established.

### Key Issues Identified

The assessment identified key issues related to Valley Water's environmental sustainability efforts. These issues include:

- **Limited use of sustainability indicators.** A sustainability indicator can allow measurement of environmental, economic, or social systems for monitoring progress at addressing the challenges of sustainability. A Board Director conveyed the need for additional information about the extent to which Valley Water is consistently monitoring the impacts from its actions to reduce greenhouse gases across the entire agency and all projects, including any unintended consequences from these efforts.
- **Need for expertise in regulatory permitting.** Due to drought conditions, Valley Water has not had enough surface water to recharge the groundwater basin, however if and

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<sup>4</sup> Per- and Polyfluoroalkyl Substances. These are a group of manufactured chemicals used in industry and consumer products. These chemicals break down very slowly and can build up in people, animals, and the environment over time.



when water supplies are available, Valley Water would need to obtain regulatory permits (that were previously allowed to expire) in order to use percolation ponds and perform creek releases. Operations is responsible for obtaining the permits from the appropriate agencies, which can be a time-consuming regulatory process. Staff have explained that better regulatory expertise is needed within Valley Water to help secure these permits, so that when supplies are available for groundwater recharge, there is not a delay due to the time to obtain regulatory permits. Staff explained that without use of the percolation ponds, a long-term impact is that more reliance will be needed on imported water. There is also the long-term impact of potential ground subsidence.

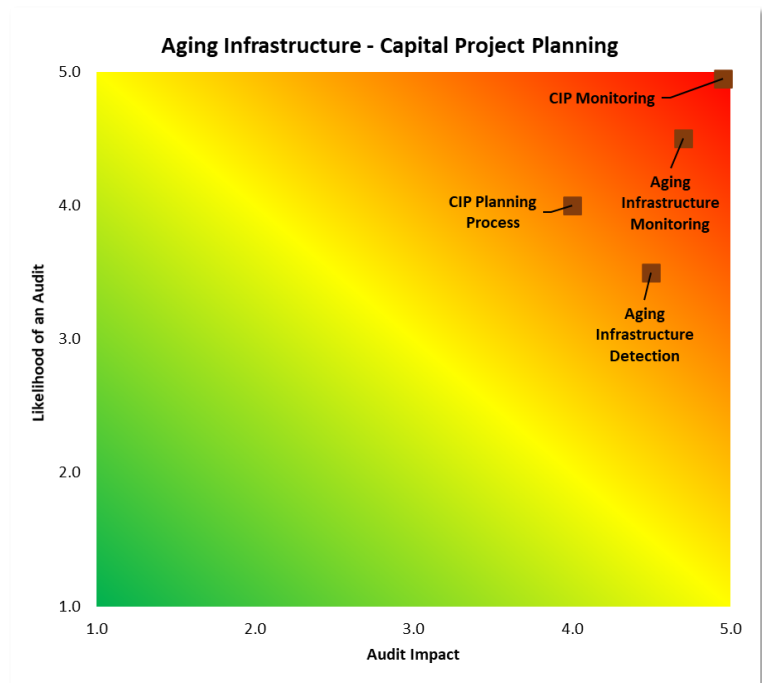
- **Need to validate methodologies for estimated water usage.** Unmetered groundwater pumping requires the use of estimates to track usage. While the formulas used to produce these estimates are periodically reassessed internally to ensure accuracy, no independent evaluation or audit has been performed for verification purposes.

## Stakeholder Identified Risk Area: Aging Infrastructure—Capital Project Planning

### **Aging Infrastructure Among the Top Challenges to Valley Water with Stakeholder Concerns about Capital Project Completion**

Infrastructure includes organizational frameworks and systems, such as water treatment and delivery. Government plays a key role in building and maintaining infrastructure because it is an investment that has a multiplier effect throughout the community, generating lasting economic, social, and environmental benefits. It is an

area that does not come to the forefront of issues until a crisis has occurred or something does not work. These systems tend to be capital intensive and high-cost investments. Among stakeholders, “aging or inadequate water delivery infrastructure” was one of the three most identified current or emerging challenges for Valley Water. Further, many stakeholders equally expressed concern over possible “delays to delivery projects and services” and a “limited ability to complete capital projects” as a result of the challenges facing Valley Water.<sup>5</sup>



### **Valley Water Divisions and Units Agree with Stakeholders about Aging Infrastructure and Related Capital Project Planning**

Consistent with Valley Water stakeholders, staff across Valley Water divisions and units agreed that aging infrastructure poses a high risk to Valley Water.

The Capital Improvement Program (CIP) is a projection of Valley Water’s capital funding requirements for 68 projects totaling \$8.021 billion planned from FY 2022 through FY 2026. The capital projects address water supply, flood protection, aging infrastructure, water resources stewardship, buildings and grounds, and information technology projects. Notable examples of efforts to mitigate the risk of aging infrastructure include:

- Retrofitting Anderson Dam for seismic safety
- Replacing 70 miles of aged water pipeline

<sup>5</sup> See 2021 Valley Water Stakeholder Collaboration Survey for Audit Planning, July 2021 for additional information.

- Building the Rinconada treatment plant
- Implementing detection systems to ensure water quality and water supply

To include capital projects in the CIP, Valley Water implements an annual planning process that includes many steps that begin with the initial identification of projects by Valley Water staff. Ultimately, division executive management generally decide whether to send a capital project to the Capital Improvement Program Committee (Committee) for review and inclusion into the CIP.

According to information contained in the CIP plan, the CIP planning process itself is designed in part to meet the Board's priorities and contribute to the objectives of Valley Water's various programs, and to identify funding for the duration of the projects. Alignment of these objectives can be assured based on implementation of the CIP planning processes described in an ISO procedure.<sup>6</sup>

### Key Issues Identified

The assessment identified key issues and concerns about the capital improvement process and aging infrastructure. These include:

- **Justification of capital improvement projects.** The current CIP process has led to projects wherein many interviewed staff have questioned their need, whether past projects have accomplished their intended goals, and raised concern that the current CIP is not right sized for Valley Water's availability of resources, including staffing availability.
- **Potentially unnecessary work performed.** The Financial Services Unit must prepare 15 financing plans, some through 2037, on capital improvement projects shown in the CIP when many of the projects may not be initiated within the expected timeframe. Project costs also include planning costs which could be substantial given the time needed to move a project from planning to construction.
- **Gaps in inclusive engagement.** There is limited or no participation by Valley Water support units, such as General Services and Real Estate Services in CIP planning that has led to supply and service delivery management issues.

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<sup>6</sup> The ISO procedure describes the following key steps: • Management review and approval, to ensure staff proposed projects are aligned with Board policies and approved program plans; • Validation of projects to ensure there is a business case for doing the project and that a capital investment is the best solution; • Review of all projects, including continuing and newly proposed projects, to ensure the projects in the CIP reflect Board priorities; • Financial analysis, to determine the capacity of Valley Water's capital funding sources to fund the proposed capital projects.

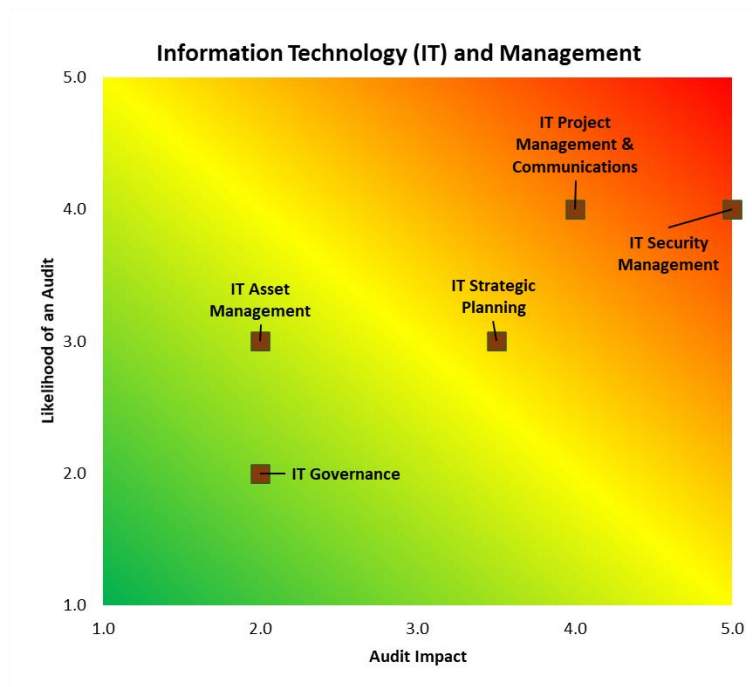
- **Absence of defining and measuring success on CIP projects.** Valley Water management and staff reported that many CIP projects do not have measures defined to assess project success that ensure intended goals and objectives have been met. `
- **Absence of robust capital project monitoring.** While staff provide status reports, formal program monitoring would evaluate costs versus benefits, including whether project outcomes accomplished their intended goal or purpose.
- **Having insufficient detection systems to monitor infrastructure operations.** While staff reported having sufficient systems in place for monitoring water treatment and water systems, additional detection systems could benefit from physical security and pipeline maintenance. Valley Water is in the process of installing surveillance equipment and fiber optics into pipelines, but staff have raised concerns about quality assurance and the need for a better process that systematically monitors Valley Water's aging infrastructure. One Board Member interviewed also raised a concern about whether Valley Water had systems in place to recognize the risks to the infrastructure.



## Stakeholder Identified Need: Information Technology and Management

### Ensuring Cybersecurity Topped List of Efforts to Help Valley Water Prepare for Current or Emerging Challenges

Stakeholders viewed cybersecurity as one of the top emerging challenges facing Valley Water and security breaches among the most concerning effects on Valley Water operations. To best prepare for the current or emerging challenges, more stakeholders identified “initiatives to ensure cybersecurity” as very or somewhat likely to help compared to all other efforts presented in the survey. Also, among the top five efforts included two strategies that rely on information technology management: “accelerated use of digital tools and automation of Valley Water operations” and “strategies to promote transparency and enhance information dissemination.”<sup>7</sup>



The ITD provides planning, design, and operational support and maintenance of Valley Water’s: (1) physical technology infrastructure and cyber security posture management; and (2) software application portfolio. The division is overseen by the Office of the Chief Operating Officer (COO) of Information Technology & Administrative Services (IT & AS). The FY 2022 operating and capital budget for the ITD is \$26.1 million and has 38 positions. According to the FY 2022 budget, Valley Water reports that it is many years behind on Information Technology due to a lack of human resources combined with a large amount of technical debt, creating challenges for modernization projects. As a result, ITD management said that it has had to prioritize some Information Technology projects based on operational needs and risks and defer others.

### Valley Water Staff was Mixed on Information Technology Risks

Valley Water management and staff had mixed responses applicable to the magnitude of information technology and cybersecurity risks to Valley Water. Some staff reported the likelihood of an occurrence was low but agreed with survey results that the impact should an

<sup>7</sup> See 2021 Valley Water Stakeholder Collaboration Survey for Audit Planning, July 2021, for additional information.

event occur was high. Other Valley Water staff agreed with the survey and said that information technology and cybersecurity were moderate to high challenge areas with information security and disaster recovery being the most pressing issue.

ITD management and staff reported that there are several projects underway to help mitigate cybersecurity risks and update the Valley Water information security infrastructure, including:

- Completing disaster recovery and business continuity project plans and implementing projects to address identified gaps.
- Updating the physical security of the information technology assets
- Developing an Information Technology Governance Review Board and refreshing the Information Technology Strategic Plan
- Developing an IT asset inventory
- Planning consolidation of computer applications used within Valley Water
- Nearing completion of multi-factor authentication for all users' access to the Valley Water network at the time of our review<sup>8</sup>
- Procuring a vendor for yearly security audits of the corporate environment (business network within Valley Water) and the SCADA (Supervisory Control and Data Acquisition) network (the current contract will expire this year)
- Implementing projects to address prior audit recommendations

Until these projects are completed and fully executed, the cybersecurity and IT risks remain high.

### Key Issues Identified

While Valley Water continues to make progress in developing its organizational capability for understanding and managing cybersecurity risk, it faces challenges in two key areas.

- **Alignment with IT security best practices.** The uncertainty of whether Valley Water's enterprise risk management program is largely consistent with best practices, such as National Institute of Standards and Technology (NIST) guidance, including whether acceptable risk appetites and risk tolerances have been formally documented and approved by the Board of Directors. Although ITD management states that their cybersecurity program is in alignment with NIST and ISO, independent verification is needed.
- **Agency-wide IT control and security assessments.** IT control and other security risks have not been assessed on all Valley Water information systems. While critical financial

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<sup>8</sup> As of 11/1/2021, ITD management reported this project is completed.

systems and Valley Water's SCADA network are continuously monitored, the assessment process excludes other information systems, including home-grown systems and those implemented independently by other divisions. The categorization of these systems' risk is unknown and facilitate the development of a comprehensive Valley Water system security plan. ITD management explained that gaps are present when Valley Water utilizes no cost tools or acquire licenses for tools via P-card or check requests without ITD's knowledge.

- **Absence of independent monitoring of the status of prior audit recommendations.** The ITD has undertaken yearly security audits of both the business network as well as the SCADA system. The audits produced various findings and recommendations that Valley Water management said are being addressed, after delays in Valley Water's attention due to responding to the COVID-19 pandemic that required the division to refocus its resources on enhancing network reliability and computer resources available to staff. To ensure that critical and high priority vulnerabilities are remediated in a timely fashion, best practices include regular independent monitoring and independent status reporting to Boards and executive management in addition to management progress reporting.
- **Accomplishing effective project management and communication.** The ITD is in the process of implementing multiple projects to improve Valley Water's infrastructure, security, and business continuity. However, staff across Valley Water reported that although the ITD puts forth their best effort, the division is hampered by insufficient staffing levels to respond to work requests and to complete projects in a timely manner.

Valley Water staff and management were consistent in comments regarding the ERP implementation, citing uncertainty about its overall success related to delivering the functionality that was originally anticipated, the quality of the communication strategies administered, and the delays that have occurred which can be attributed, in part, by having multiple changes in project managers and lead consultants for the various modules. Staff also reported concerns with unrealistic schedules being established, concerns about the extent and quality of system testing being performed, and whether Valley Water will actually enforce the use of the ERP system or still allow continued use of manual business processes. Finally, staff explained that the implementation is a very large project and despite the best of intentions, it has been difficult to dedicate resources to the project and to also keep operations going, creating operational and managerial risks.

A Valley Water executive explained that the ERP implementation has had its challenges, but that efforts are underway to support the successful delivery of the project through enhanced communication activities, assignment of a new project manager who has brought greater transparency and effective communication to the project, and enhanced oversight of the project schedule that included, at the time of our

assessment, plans to “go live” with the ERP system on October 11, 2021. Management subsequently reported a new “go-live” date of January 3, 2022. ITD management further explained that they will not go live with an ERP system that does not work.

- **Gaps in IT Strategic Planning.** Best practices include clear definition of the criteria used to prioritize information systems designated for recovery should a disaster or other event occur that affect the ability to access, process, and communicate information. While development of a disaster recovery plan is underway, the methodology and criteria used to prioritize systems have led staff to question the priority rankings.

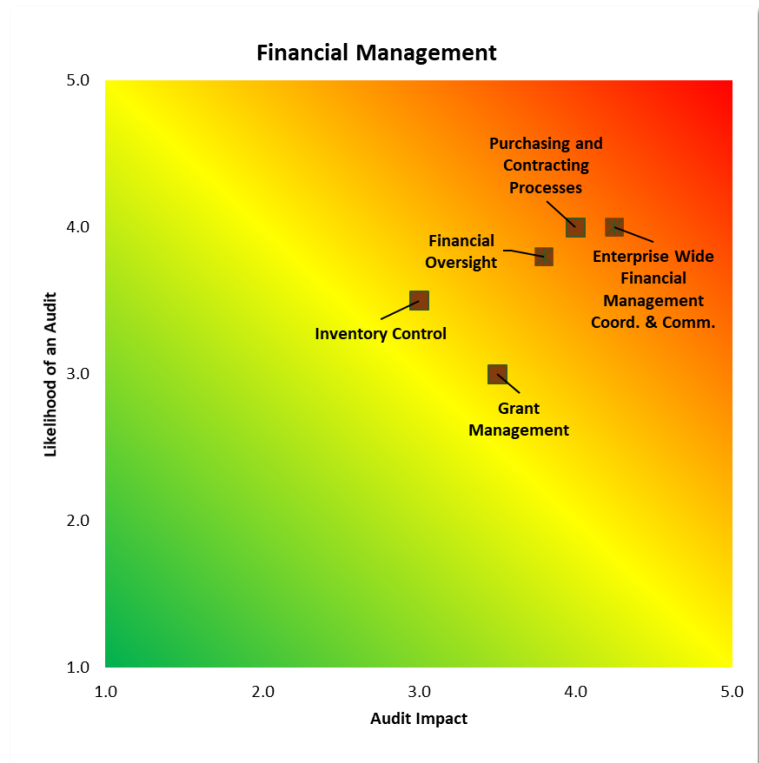


## Stakeholder Identified Concern: Financial Management

### Financial Risk of Capital Projects a Top Concern Among Stakeholders

Valley Water finances planned capital improvement projects primarily through bonds, loans, revenues generated from the purchase of water, and from state and federal grants.

Stakeholders commonly identified the “increased cost to provide services or cost overruns for capital projects” among the possible effects from current or emerging challenges. Some stakeholders also identified the “loss of revenue or intergovernmental funding” as a possible effect. Among the most cited efforts to likely help Valley Water was “new federal government infrastructure investment.”<sup>9</sup>



The Financial Planning and Management Services Division (FPMS) secures the financing of the capital projects identified on the CIP. Presently, Valley Water has funds totaling \$1.9B for the implementation of various projects through FY 2021. The Board of Directors approves the budget and funding for capital projects, including cost overruns.

### Valley Water Staff Agree with Stakeholders that Capital Project Financial Management is a Risk

Valley Water staff generally agreed with survey results that the financial risk associated with capital projects is a high-risk area, citing increased costs, project prioritization, and the volume of projects undertaken as creating the cause for concern.

Efforts reported by stakeholders to better oversee financial management of capital construction projects include:

- Move to biannual budgeting of capital improvement projects versus annual budgeting. After completion of a study on capital projects budgeting practices, Valley Water has opted to commit funding for a two-year period, which can help mitigate potential project delays. Some staff raised concern about committing expenditures for a 10-year

<sup>9</sup> See 2021 Valley Water Stakeholder Collaboration Survey for Audit Planning, July 2021 for additional information.

period of time to contractors involved with the capital projects but authorizing the revenues for a short period of time.

- Implementation of the ERP system intended to improve financial management as well as capital project management.
- Development of a Financial Management Plan.
- Additional staff resource with the transition of one temporary staff to a full-time position.

### Key Issues Identified

Other financial-related activities within Valley Water, many of which are outside of the management of FPMS, were also identified as areas of high concern. These concerns include:

- **Procurement and contracting process.** Standing orders are used for the acquisition of commodities or services that are needed on an ongoing basis when the specific item(s), quantity, and frequency of need are known in advance. Valley Water's use of standing orders has a high risk of cost overruns because divisions and units that use them routinely amend the standing order budget amount, which cannot exceed \$75,000. Staff have raised concern that when this occurs, it circumvents the formal procurement process, which could lead to purchasing supplies at higher cost. A contributing factor to this issue was the lack of available spending and trend reports by vendor for review by divisions and units. To solve the issue, Valley Water uses a web-based platform to receive weekly procurement reports and the ERP system implementation is intended to develop reports by commodity classification. Valley Water is also working on solutions to expand outreach of eligible bidders rather than just relying on the same long-time small group of bidders. Until these activities are implemented, the use of standing orders poses a financial risk to Valley Water.

Another area of concern raised by staff includes the adequacy of internal controls governing P-Cards, which historically is a high-risk area. In addition, a Board Director raised questions about the spending level of outsourced legal services. The District Counsel said that he is working with FPMS on regular reporting of budget-to-actual expenditures for outsourced legal services.

- **Inventory management.** There are multiple reasons why inventory management is an important financial management issue. Effective inventory management promotes (1) overall efficiencies, by spending less time sifting through files, avoiding sending spreadsheets to one another, leveraging space, or not having to visit the warehouse every time stock is needed—all of which have been concerns raised by Valley Water staff, (2) knowing where the inventory is located given that Valley Water does not have centralized inventory management functions; and (3) having advance notice of supply

needs and meeting delivery dates, which staff have said has been an issue for capital projects leading to project delays.

Valley Water has taken actions to improve inventory management, such as purging items sitting on shelves for over 20 years, implementing improved forecasting and changing the approach to inventory counting to allow better identification of discrepancies, but these actions have taken place at Valley Water's main warehousing facility because other facilities are under the control of other Valley Water divisions. Understanding the impact that decentralizing inventory management has on financial management, availability of supplies, and the risk of equipment misuse and theft requires further assessment.

- Financial oversight.** In last several years, a Board Director has raised concerns about the audited financial statements issued by the Valley Water's external financial auditor, which is a certified public accounting firm with experience in the government sector. One of these concerns included how the consolidated annual financial report (CAFR) was presented. The assessment identified that the CAFR was prepared in accordance with Generally Accepted Accounting Principles as promulgated by the Government Accounting Standards Board (GASB). GASB guidelines differ in how audited financial reports are prepared and presented for government agencies versus private sector statements. Government-related audits establish that revenues and expenses are accurate and reasonable while private-sector audits show that the profitability and financial stability of a company are presented correctly. For government agencies, having this type of information would require computation based on the revenue and expenses information contained in the consolidated annual financial statements. Some government agencies request fiscal health assessments as part of the annual financial statements and others do not. While Valley Water presents information in its consolidated annual financial report on historic trends in revenues and expenditures as well as property tax rates, a full set of fiscal health ratios, except for debt ratios, are not included.

While Valley Water's Procurement and Contract's evaluation team found the current external auditor best met the desired bid qualifications, the assessment identified that Valley Water financial management risks are increasing, as evidenced by financial growth of Valley Water, the size of the capital improvement plan budget, the multiple mega-capital projects planned or underway, and the absence of adequate internal controls identified in prior audits and assessments, as reported by other companies. Further review is needed on whether the same or other types of qualifications for certified public accounting firms are needed to assist Valley Water in future financial oversight because of these risks.

- Rate-setting alignment with capital projects likely to be completed.** Valley Water funds capital projects, such as the P3 (purified) water project, using revenues from wholesale

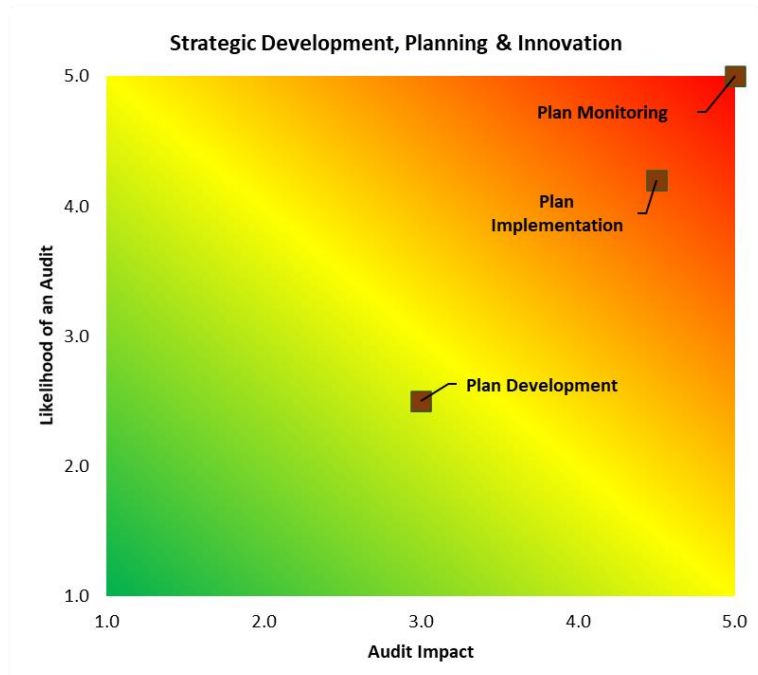
water sales. The rate setting process depends on many factors, including the need for water supply and treatment capital projects to meet projected demand. Staff explained that the costs of projects listed on the CIP can influence water rates, but given the size of the current CIP, water rates could be set too high because there is high risk that projects on the CIP will be deferred or not completed, especially when staff reported that available resources have been reassigned to the larger capital projects.

- Grant management activities.** Valley Water stakeholders discussed concerns regarding the timeliness of grant reimbursements to Valley Water grantees as well as processes for reporting and invoicing when Valley Water is the recipient of a grant. Valley Water has taken action to address grantee concerns and have reported reducing the time required to reimburse grantees, which now averages about 13 days to approve invoices for payment. A formal follow-up review is needed to verify prior audit recommendations.
- Financial management coordination and communication.** Valley Water staff and management said there were sometimes difficulties with coordination and communication between the FMPS and other divisions and units. Examples were with coordination of timing for project funding needs and being included in the planning process for projects and services that will affect FMPS staff workloads. Without closer coordination for project funding needs, FMPS staff cannot effectively schedule time and workloads to accomplish the tasks necessary for timely project funding. Similarly, without FMPS staff involvement in the planning process for projects and service programs, such as the tuition reimbursement program, effective scheduling for workload needs cannot be done.
- Efforts to increase the resilience of Valley Water's water supply may also increase financial risks and managerial risks.** Valley Water may encounter budget shortfalls if the drought persists into 2022 because of declining revenues caused by mandatory water usage restrictions and the need for Valley Water to purchase additional water supplies to meet reduced availability. The FY 2020-21 budget contains funding of \$10M for a drought reserve fund, within the Water Utility Enterprise fund, to minimize possible water charge impacts during a possible drought emergency. Should another drought year occur, then there may be a need for more incremental water supply purchases. Combined with the 15 percent water reduction from 2019 use levels called for by the Board, this would create significant shortages in revenue relative to the budget. The completeness of projections of Valley Water's plan for risk mitigation strategies is not fully known.

## Stakeholder Identified Need: Strategy Development, Planning, and Innovation

### Increased Agility in Operations a Key Effort to Help Valley Water

Good plans outlining strategies to address current and future operations are fluid, not rigid and unbending. A key purpose of strategy development is to lay out the elements of a plan in a logical and transparent way, including providing space for decision-makers to outline strategic operations and tradeoff for deliberations before deciding a specific strategy. Survey participants cited, among the most common efforts likely to help Valley Water respond to current and emerging challenges, the ability for



Valley Water to move more quickly and easily as an organization. Stakeholders also frequently identified the “accelerated use of digital tools and automation of Valley Water operations” among the efforts likely to help address identified challenges. About 75 percent of 59 survey participants (stakeholders) also identified “gaps in the knowledge, skills and abilities of the workforce” as an effect on Valley Water’s operations of current and emerging challenges.<sup>10</sup>

Divisions and units across Valley Water either assist in strategy development or assume responsibility for developing their own strategies to address challenges faces Valley Water.

### Valley Water Staff Mixed on Survey Results

Valley Water staff generally differed in their responses when discussing strategy development. Some staff conveyed operational risks have occurred without greater involvement in strategy development activities. Greater involvement of support units in project planning would help support units better anticipate increases in workload; having this adequate lead time would also help support units ensure resources and equipment are available when needed.

Other staff reported active strategy development among divisions and units. The assessment identified at least 12 examples of management planning across a wide range of areas including safe and clean water, communication, water supply, water quality, information technology, emergency response, financial management, environment, and more. Internal staff, consultants, or committees comprised of internal and external stakeholders were involved in these planning efforts. Other staff reported that some plans in place require updating given

<sup>10</sup> See 2021 Valley Water Stakeholder Collaboration Survey for Audit Planning, July 2021 for additional information.



their age. For example, one plan used by land use and survey is over 20 years old. Similarly, ITD is in the process of procuring a consultant to help refresh a nine-year-old critical infrastructure plan.

### **Key Issues Identified**

While Valley Water has made notable progress in strategy development, the assessment identified key issues and concern. These include:

- **Documenting institutional knowledge and knowledge transfer.** Staff explained that while the divisions and units are putting forth their best effort to stay on top of issues, staff retirement and turnovers have eroded Valley Water’s technical expertise to develop creative solutions to new problems. Some staff further explained that due to all of the demands placed on staff and management, Valley Water has grown accustomed to reacting to issues as they occur versus proactively preventing their occurrence. For instance, staff do not have information available that describe the full extent to which flood protection could be enhanced from additional environmental mitigation, or the specific impact on future pumping with new state requirements to monitor groundwater ecosystems.
- **Hiring of experienced professionals.** Staff and Board members expressed concern about the need for strategies to hire technically competent and experienced professionals to fill critical positions across Valley Water divisions. Information shared by staff was mixed on the factors that have prevented experienced staff from joining the Valley Water workforce, such as losing potential retirement benefits and lower compensation. However, information that would describe the extent that contributing factors have prevented hiring of these professionals can increase the effectiveness of plan development aimed at recruiting and hiring experienced technical professionals.
- **Organizational culture.** There was general consensus among staff that organizational culture has historically influenced the effectiveness of change management or implementation efforts, and that some divisions are better than others in implementing change. Staff explained that some units may have new management plans or business processes in place, but staff may not fully implement them.
- **Limited monitoring of management plan implementation.** The assessment identified the absence of comprehensive and routine monitoring and reporting on the progress of plan completion. For units that have performed routine plan monitoring, staff described successful processes because meetings are frequent, involve other Valley Water units, and impacts are discussed.
- **Having insufficient time and staff to fully implement plans developed.** Staff responsible for implementing activities prescribed by management plans raised concern about the unit’s capability to fully implement them on a timely basis given their workload completing day-to-day activities. Backlogs of work reported by staff across Valley Water

varied from days to over six months. The assessment identified that the number of initiatives, goals, and objectives for some of the plans reviewed may not be right sized in comparison to available time and staff to implement activities. Strategies reported to address this challenge generally included implementing the task when time permits.

- **Absence of completion dates for plans under development.** Staff across units have reported that management plan development have been underway in their respective units, one of them for several years, but no completion dates have been finalized. The extent to which plans are underway without milestones established for their completion is unknown and could benefit from review.
- **Absence of management plan development.** The assessment identified that some units could benefit from management plan development. One unit reported the need for reshaping and planning given the added functions and responsibilities assigned to them, which has eroded their primary mission. Staff also reported that some units are siloed, such as Real Estate Services Unit (RESU), Community Projects Review Unit (CPRU), and the two units administering land use survey and GIS mapping, which need potential restructuring and re-organization. TAP International recommended in prior audits the need to consolidate RESU and CPRU activities. A Valley Water executive participating in this assessment explained that RESU and CPRU would likely need another Valley Water executive to oversee operations.
- **Need for data management strategy.** Valley Water has not developed a data management strategy that would comprehensively facilitate “open” data to external stakeholders or its internal staff. Open data is the concept that some data should be available to everyone to use (internal and external) for all types of activities, such as analysis, monitoring, workload planning, and performance measurement. While Valley Water produces reports in multiple areas, having greater access to more detailed information can prove beneficial to identify early warning signs of potential issues and problems. Staff reported multiple situations where the absence of information has had adverse impacts on workload planning and allocation among staff, as well as supply chain management challenges because equipment and supplies were not available at the time needed on capital projects, contributing to project schedule delays.

Until plans are fully developed, implemented, and monitored for their effectiveness, concerns and challenges described in this report remain as high potential for subsequent auditing.

## Stakeholder Identified Need: Data Management & Accuracy

### Strategic Use of Data to Inform Decision Making Identified as a Key Effort to Address Challenges Facing Valley Water

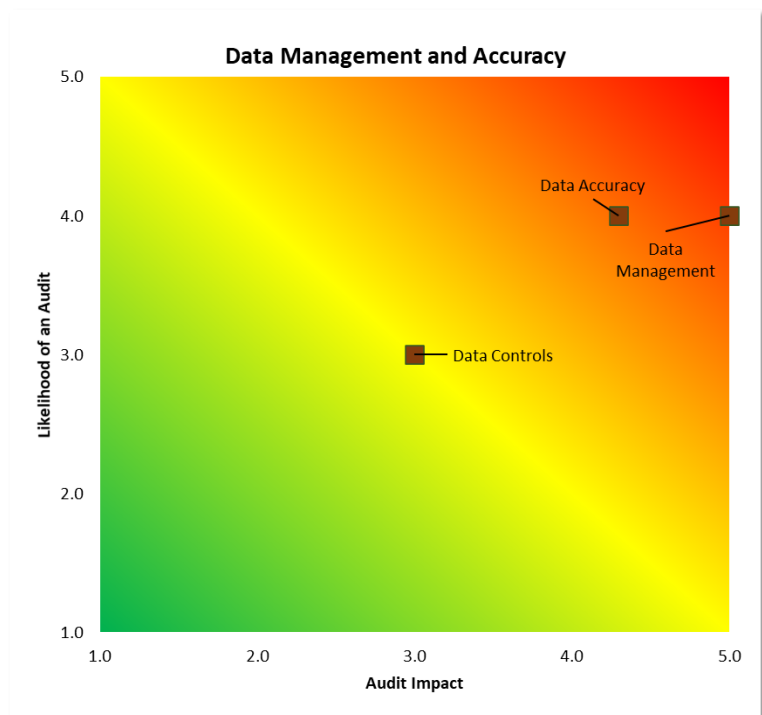
Having accurate data is a key element of an effective decision-making process. Ensuring data quality relies on implementing proactive processes that include quality control efforts both in manual and electronic form. Each Valley Water division and unit is responsible for the accuracy of the data they collect, record and use.

Stakeholders most frequently cited three efforts related to data accuracy and management among those likely to help Valley Water best prepare for its current and emerging challenges. Among stakeholders, the “expanded use of data to inform strategic and operational decision making” was the most popular effort to “very likely” help Valley Water prepare for challenges. Also, among the top five efforts were “strategies to promote transparency and enhance information dissemination” and “more agile operations and organizational structure,” which both rely on data accuracy and information sharing.<sup>11</sup>

Most data collected and used by Valley Water staff is either recorded across multiple information systems developed and/or supported by the ITD or maintained on MS Excel spreadsheets created by staff across Valley Water. The extent to which data that is maintained using MS Excel is unknown by Valley Water, but critical information such as IT inventory, grants management and administration, project management, and other project/program data is at least partially manually maintained and tracked.

### Valley Water Staff Mixed on Data Accuracy as a Key Area

Analysis of information provided by Valley Water staff show different experiences on the issue of data management as a key effort to address challenges depending on the main activities of the unit. The timing of receiving information, and how data is stored and updated are critical issues for many units, and for others, no significant concerns were identified. The differences



<sup>11</sup> See 2021 Valley Water Stakeholder Collaboration Survey for Audit Planning, July 2021 for additional information.

can be attributed to whether the unit relies on information generated to plan for and/or deliver a service.

The FY 2022 budget identifies many efforts across Valley Water divisions to integrate and/or share data collected across various Valley Water programs and units, as well as modernization projects. The new ERP system implementation previously discussed in this report, serves as a notable example. The new enterprise-wide information system is intended to capture financial management, work order, and workflow process data.

Different staff experiences were identified on the issue of data accuracy. Strong data input controls were identified to ensure its quality. Examples include:

- Checking that data input matches data output related to water treatment monitoring.
- Cross-referencing checks between the meter read and the data recorded in the SCADA.
- Conducting calibration checks on water treatment monitoring equipment.
- Conducting quality assurance reviews of reports generated applicable to water treatment and water quality monitoring.
- Comparing direct measurement of water levels to detect errors in water estimates provided by agricultural water users.

### Key Issues Identified

Valley Water staff identified other areas that need attention. These include:

- **Need for increased data accuracy controls and processes.** Limited or no procedures were in place to ensure data quality of information recorded and maintained in their unit. For the most part, the employee preparing the report or entering the data into a spreadsheet is responsible for ensuring that the data is correct.
- **Need to enhanced data integrity.** Data management to ensure a single source of truth is also limited within Valley Water. Due to the disparate systems, it is not known where the single source of information resides. This can cause reporting irregularities as different units may use different sources of data.
- **Gaps in data oversight.** Formal processes have not been developed to support staff responsibility for reviewing technical data that is outside their area of expertise. Outsourced technical studies ordered on capital projects have been found to have incorrect data because of limited knowledge of the subject matter by the contractor's project manager to detect errors or anomalies in the data. These errors were corrected by having Valley Water staff replicate the work performed by external land surveyors, which led to added costs and project delays.

None of the Valley Water staff that discussed data accuracy issues reported that the Board received reports or memos that contained inaccurate data. In TAP International's review of

Board memos involving real estate transactions and claim related decision, information shared in the memos was not always complete, which would help convey a full understanding of the issue under review. Board members participating in this risk assessment questioned the timeliness of information presented by staff to the Board. Staff appear to wait until an issue is resolved before informing the Board. Informing the Board in a timelier manner could allow the Board the opportunity to align their activities or efforts with those of staff.



### FY 2018-2021 Audit Work Plan Review

The FY 2018 – 2021 annual audit work plan included 19 potential audits for Board of Director review and authorization. The Board of Directors authorized implementation of five performance audits and one investigation. Three desk reviews on the agenda preparation process for committee, hiring of executive staff, and grants management, were also completed.

The remaining 13 audits were reviewed as part of the FY 2022 – 2024 audit planning assessment. As shown in the Figure 5 below, six of these audits are no longer needed because of efforts by Valley Water during the prior three years were sufficient to lower the risks that implementing an audit at this time may not effectively leverage audit resources.

**Figure 5. FY 2018 – 2021 Audits Recommended Excluded from the FY 2021 – 2024 Annual Work Plan**

<b>FY 2018 – 2021 RECOMMENDED AUDIT</b>	<b>FACTORS CONSIDERED THAT AN AUDIT IS NO LONGER NEEDED AT THIS TIME</b>
<b>BILLING AND COLLECTIONS</b>	<ul style="list-style-type: none"> <li>At the time of our review, Valley Water had a project underway to develop and strengthen internal controls related to billing and collections.</li> </ul>
<b>SAFE CLEAN WATER AUDITS</b>	<ul style="list-style-type: none"> <li>Valley Water, through passage of Measure S, is required to conduct three independent audits of the Safe, Clean Water and Natural Flood Protection Program.</li> </ul>
<b>COMMUNITY ENGAGEMENT (2 AUDITS)</b>	<ul style="list-style-type: none"> <li>Valley Water has expanded community engagement, outreach, and communication internally and externally to within Valley Water and the surrounding community. While the stakeholder survey conducted as part of this audit planning assessment cited communication activities as a critical success factor to meeting challenges, Valley Water has in place key protocols, partnerships, and lines of communication in place. Should problems occur resulting from the potential challenges identified by stakeholders, it would be an opportunity to evaluate the effectiveness of communication activities implemented.</li> </ul>
<b>CLASSIFICATION OF CONFIDENTIAL INFORMATION</b>	<ul style="list-style-type: none"> <li>Valley Water hired a successor to the recently retired District Counsel. With new leadership, it provides an opportunity for changes to business practices and operations.</li> </ul>
<b>LOCAL WORKFORCE HIRING</b>	<ul style="list-style-type: none"> <li>In August 2021, the Valley Water Board of Directors approved the draft project labor agreement (PLA) governing wages, benefits, work rules, and other terms and conditions of employment for construction projects. The agency-wide agreement applies to all Covered Projects where the engineer's estimate or the cumulative bid amount submitted by the contractor(s) awarded a Construction Contract(s) for a covered project exceeds two million dollars (\$2,000,000), which will cover nearly all capital projects at Valley Water.</li> </ul>

For the remaining seven audits shown on the prior annual audit work plan, Valley Water has implemented efforts to address specific concerns, but the risk of potential problems to occur

remain sufficient high that audits continue to be recommended. In Figure 6, we list the audit area and the information supporting its continued presence on the FY 2018 – 2021 work plan.

**Figure 6. FY 2018 – 2021 Audit Areas Recommended for Inclusion in Next Work Plan**

<b>FY 2018 – 2021 AUDIT AREA</b>	<b>FACTORS CONSIDERED THAT SUPPORT CONTINUING NEED FOR AN AUDIT</b>
<b>HOMELESSNESS</b>	<ul style="list-style-type: none"> <li>Watershed operations and maintenance note in FY 2022 that encampment abatement work came to a halt due to CDC recommendation to suspend cleanups during the COVID-19 pandemic.</li> <li>Staff continues to raise concerns about the health and safety of staff responsible for cleanup of homeless camps.</li> <li>Homelessness continues to grow statewide prompting community wide and Valley Water efforts to form partnerships to address the issues.</li> </ul>
<b>CAPITAL PROJECT BUDGETING PRACTICES</b>	<ul style="list-style-type: none"> <li>The FMPS is responsible for preparing financing packages through 2037 on capital projects on the CIP plan when many projects may not likely be completed, creating an opportunity for improvement with a subsequent audit to identify potential alternatives.</li> <li>Cost estimates developed during their initial development of potential capital projects have been significantly underestimated by the time the project is implemented.</li> </ul>
<b>SCADA</b>	<ul style="list-style-type: none"> <li>While assessments have been performed by Valley Water and plans are currently under development, auditable areas remain on the status of prior audit recommendations, and progress at plan completion and implementation.</li> </ul>
<b>RISK MANAGEMENT OPERATIONS</b>	<ul style="list-style-type: none"> <li>Valley Water continues to have siloed risk management activities.</li> <li>Risk management in many other public agencies report directly to the executive director to ensure alignment with strategic goals and objectives.</li> <li>Citizens have routinely raised concern about the denial of claims for reimbursement for property damage.</li> </ul>
<b>ENCROACHMENT PERMITTING PROGRAM</b>	<ul style="list-style-type: none"> <li>Board of Director request to ensure the new program development for encroachment permits is consistent with Board directed guiding principles.</li> </ul>
<b>EQUIPMENT/ASSET MAINTENANCE</b>	<ul style="list-style-type: none"> <li>Valley Water has experienced failures across its pipeline causing significant localized damage to, and subsidence of, the roadway structure, including failure of replacement parts.</li> </ul>
<b>WATERFIX FINANCIAL IMPACT</b>	<ul style="list-style-type: none"> <li>Changing political environment and current challenges with project development and implementation requires comprehensive assessment of financial risk to Valley Water.</li> </ul>



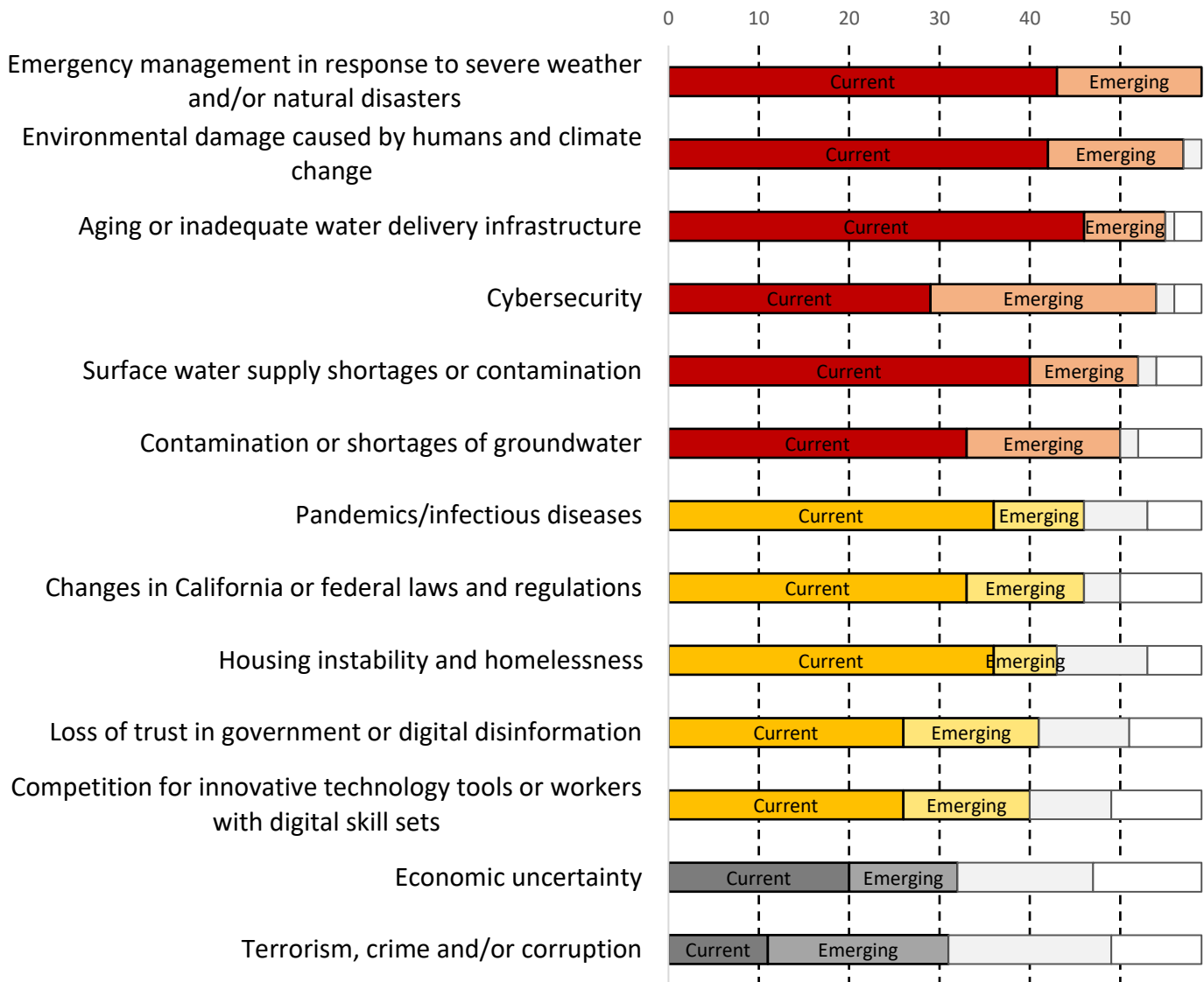
Madrone Channel  
Water you see here  
replenishes South County's  
groundwater supplies.

# Appendix A: Stakeholder Survey

**Appendix A:****2021 Valley Water Stakeholder Collaboration Survey Results (for Audit Planning)**

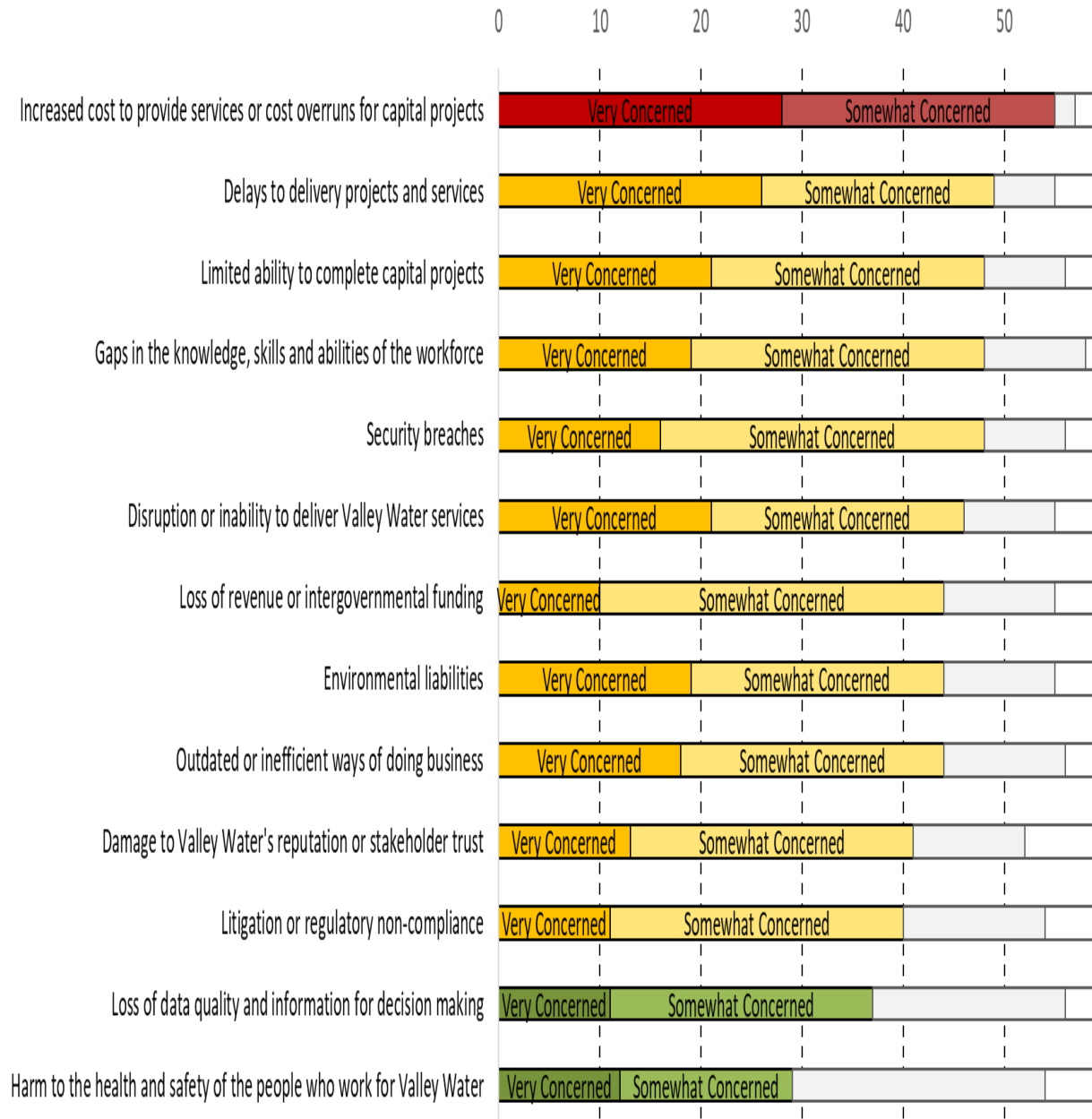
<b>Stakeholder Group</b>	<b>Number of Respondents</b>	<b>Percent of Total</b>
Capital Construction	1	2%
Nonprofit Grantees	13	22%
Professional Services Consultants	19	32%
Public agency & state/federal partners	4	7%
Sponsorships	6	10%
Water retailers & supply consultants	7	12%
VW Executives	9	15%
<b>Grand Total</b>	<b>59</b>	<b>100%</b>

### Q1: What are the current or emerging challenges to Valley Water's achievement of its key strategic goals?

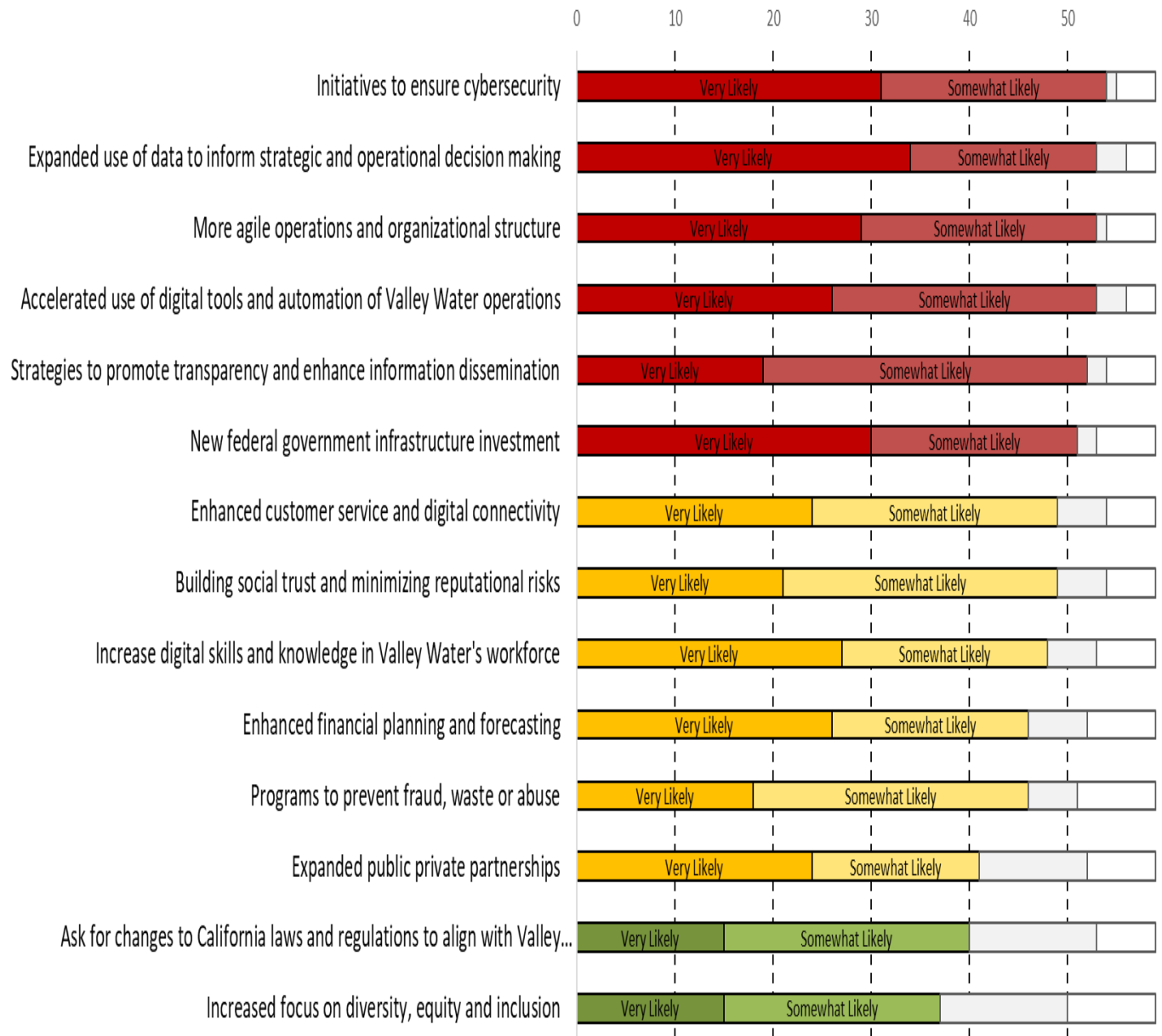




Q2: How concerned are you about the possible effects on Valley Water's operations from these challenges?



**Q3: Which efforts are likely to help Valley Water best prepare for the current and emerging challenges that you've identified?**



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