



Stage 2 Alternatives Analysis

California Department of Technology, SIMM 19B.2 (Ver. 3.0.7, 02/28/2022)

2.1 General Information

1. **Agency or State Entity Name:** 3940 - Water Resources Control Board, State

If Agency/State entity is not in the list, enter here with the [organization code](#).

[Click or tap here to enter text.](#)

2. **Proposal Name:** Updating Water Rights Data for California (UPWARD)

3. **Department of Technology Project Number (0000-000):** 3940-104

4. **S2AA Version Number:** Version 1

5. **CDT Billing Case Number:** 6wx

Don't have a Case Number? [Click here to get one.](#)

2.2 Submittal Information

1. **Contact Information**

Contact Name: Cheryl Holden

Contact Email: Cheryl.Holden@waterboards.ca.gov

Contact Phone: 916-327-0003

2. **Submission Type:** New Submission

If Withdraw, select Reason: [Choose an item.](#)

If Other, specify reason here: [Click or tap here to enter text.](#)

Sections Changed if an update or resubmission: (List all the sections that changed.)

[Click or tap here to enter text.](#)

Summary of Changes: (Summarize updates made.)

[Click or tap here to enter text.](#)

3. Attach [Project Approval Executive Transmittal](#) to your email submission.

4. Attach [Procurement Assessment Form](#) to your email submission.

See attachment: [S2AA-2.2.4-Procurement_Assessment_Form](#)

5. **Conditions from Stage 1 Approval** (Enter any conditions from the Stage 1 Business Analysis approval letter issued by CDT or your AIO):

None

2.3 Baseline Processes and Systems

1. **Current Business Environment (Describe the current business environment of which the effort will be understood and assessed in 500 words)**

The Updating Water Rights Data for California (UPWARD) system is designed to replace Electronic Water Rights Information Management System (eWRIMS), Report Management System (RMS), Water Rights Online Forms (WROF) and Cannabis General Order (CGO).

The eWRIMS system tracks water rights and contains information on water right permits and licenses issued the by Water Board. It provides the public and staff access to water rights information by combining a tabular database with a Geographic Information System (GIS).

The eWRIMS GIS component provides spatial access to water right permit and license information via web-based maps. GIS application customers can search for and view the location and attributes of water rights and the location of points of diversion (POD) on a map or aerial image. The application also provides stream tracing attribute filtering, coordinate conversion and map content manipulation. .

The eWRIMS Report Management System (RMS) tracks information on water rights in California. eWRIMS RMS is a user account and password protected system developed for water users to submit their reports. These reports are used by the Division of Water Rights to update ownership records, determine compliance with the terms and conditions of the water right, document usage claims, and determine the amount of water beneficially used.

The Water Rights On-line Forms (WROF) is a Survey Wizard based application designed to digitize public Division of Water Rights forms. The WROF survey portal was designed for external users to submit Water Right related information normally entered using paper forms. The WROF portal gives external users the ability to update their eWRIMS data and track the status of their requested changes.

Cannabis General Order (CGO) is a Survey Wizard based application designed to serve the application needs of the Division of Water Quality and the Division of Water Rights. Cannabis General Order and Small Irrigation Use Registration survey portal was designed for collection of applicant registration for both Water Right and Water Quality information for growers interested in cultivating cannabis starting January 1, 2018.

Relevant documentation is available within the following attachments:

S2AA-2.3.1-Business_Capability_Model
S2AA-2.3.1-Business_Capabilities_Mapped_to_Current_Apps
S2AA-2.3.1-Current_State_Architecture
S2AA-2.3.1-Apps_and_Sys_Diagram
S2AA-2.3.1-High_Level_Process_Flow
S2AA-2.3.1-Data_Object_Inventory
S2AA-2.7.4-MarketResearch_Piloting_Water_Rights_Info_System_for_CA_July2021
S2AA-2.11.8-Data_Conversion_Requirements

Tip: Current Environment costs will be asked for in the Financial Analysis Worksheet to be completed in Section 2.12.

Attach relevant documentation to email submission (i.e., business process, workflow, problem analysis, user/stakeholder list, research findings). If these types of documents are not available, please indicate “Not Available,” and explain the reason below:

Not available reason: [Click or tap here to enter text.](#)

2. Technical Context (Describe the technical environment of which the effort will be understood and assessed in 500 words)

The current baseline systems described in section 2.3.1 above are custom applications designed to support application processing, licensing, geospatial data submission and reporting, and record management associated with California water rights. eWRIMS, WROF and CGO provide information to both internal and external users, while eWRIMS GIS and eWRIMS RMS serve a public user base. All eWRIMS systems are currently hosted on-site, while WROF and CGO are hosted at CDT.

For additional technical context, see the following attachments:

- [S2AA-2.3.2-eWRIMS](#)
- [S2AA-2.3.2-eWRIMS_GIS](#)
- [S2AA-2.3.2-eWRIMS_RMS](#)
- [S2AA-2.3.2-WROF](#)
- [S2AA-2.3.2-CGO](#)
- [S2AA-2.3.2-eWRIMS_Server_Diagram](#)
- [S2AA-2.3.2-eWRIMS_GIS_Server_Diagram](#)

Attach relevant documentation to email submission (i.e., logical system environment diagrams, system interactions, business rules, application flows, stakeholder information, data flow charts). If these types of documents are not available, please indicate “Not Available,” and explain the reason below:

Not available reason: [Click or tap here to enter text.](#)

3. Data Management (Enter the information to indicate the data owner and custodian of the current system, if applicable.)

eWRIMS:

Data Owner Name: [Sanjeet Singh](#)

Data Owner Title: [Staff Services Manager I](#)

Data Owner Business Program area: [Data Governance Section, Division of Water Rights](#)

Data Custodian Name: [Jonnel Medina](#)

Data Custodian Title: [Information Technology Specialist III](#)

Data Custodian Technical area: [Special Projects, Division of Information Technology](#)

Security - Data Classification and Categorization [Yes](#)

Security - Privacy Threshold & Impact Assessment. [No](#)

eWRIMS GIS:

Data Owner Name: [Sanjeet Singh](#)

Data Owner Title: [Staff Services Manager I](#)

Data Owner Business Program area: [Data Governance Section, Division of Water Rights](#)

Data Custodian Name: [Jeff Kapellas](#)

Data Custodian Title: [Information Technology Specialist III](#)

Data Custodian Technical area: [GIS Unit, Division of Information Technology](#)

Security - Data Classification and Categorization [Yes](#)

Security - Privacy Threshold & Impact Assessment. [No](#)

eWRIMS RMS:

Data Owner Name: [Sanjeet Singh](#)

Data Owner Title: [Staff Services Manager I](#)

Data Owner Business Program area: [Data Governance Section, Division of Water Rights](#)

Data Custodian Name: [Jonnel Medina](#)

Data Custodian Title: [Information Technology Specialist III](#)

Data Custodian Technical area: [Special Projects, Division of Information Technology](#)

Security - Data Classification and Categorization [Yes](#)

Security - Privacy Threshold & Impact Assessment. [No](#)

WROF:

Data Owner Name: [Sanjeet Singh](#)

Data Owner Title: [Staff Service Manager I](#)

Data Owner Business Program area: [Data Governance Section, Division of Water Rights](#)

Data Custodian Name: [Jonnel Medina](#)

Data Custodian Title: [Information Technology Specialist III](#)

Data Custodian Technical area: [Special Projects, Division of Information Technology](#)

Security - Data Classification and Categorization [Yes](#)

Security - Privacy Threshold & Impact Assessment. [No](#)

CGO:

Data Owner Name: [Samuel Warner](#)

Data Owner Title: [Water Resources Control Engineer](#)

Data Owner Business Program area: [Cannabis Registration, Division of Water Rights](#)

Data Custodian Name: [Jonnel Medina](#)

Data Custodian Title: [Information Technology Specialist III](#)

Data Custodian Technical area: [Special Projects, Division of Information Technology](#)

Security - Data Classification and Categorization [Yes](#)

Security - Privacy Threshold & Impact Assessment. [No](#)

4. Existing Data Governance and Data

a) Do you have existing data that must be migrated to your new solution?

Answer (Unknown, Yes, No): [Choose an item](#). [Yes](#)

If data migration is required, please rate the quality of the data.

Select data quality rating: [Some issues identified with the existing data](#).

b) Does the Agency/state entity have an established data governance body with well-defined roles and responsibilities to support data governance activities?

Answer (Unknown, Yes, No): [Choose an item](#). [No](#)

If Yes, include the data governance organization chart as an attachment to your email submission.

c) Does the Agency/state entity have data governance policies (data policies, data standards, etc.) formally defined, documented, and implemented?

Answer (Unknown, Yes, No): [Choose an item](#). [No](#)

If Yes, include the data governance policies as an attachment to your email submission.

- d) Does the Agency/state entity have data security policies, standards, controls, and procedures formally defined, documented, and implemented?

Answer (Unknown, Yes, No): **Yes**

See attachment (zip): S2AA-2.3.4d-Security_Policies

If Yes, attach the existing documented security policies, standards, and controls used to your email submission.

- e) Does the Agency/state entity have user accessibility policies, standards, controls, and procedures formally defined, documented, and implemented?

Answer (Unknown, Yes, No): **Unknown**

If Yes, attach the existing documented policies, accessibility governance plan, and standards used to the email submission.

5. Security Categorization Impact Table

Consult the [SIMM 5305-A Information Security Program Management Standard - Security Categorization Impact Table](#).

Attach a table (in PDF) that categorizes and classifies the agency/state entity's information assets related to this effort (e.g., paper and electronic records, automated files, databases requiring appropriate protection from unauthorized use, access, disclosure, modification, loss, or deletion). Each information asset for which the agency/state entity has ownership responsibility shall be inventoried and identified.

See attachment: S2AA-2.3.5-Security_Classification_Table

6. Security Categorization Impact Table Summary

Consult the [SIMM 5305-A Information Security Program Management Standard - Security Categorization Impact Table](#) to provide potential impact levels of the following areas:

Confidentiality: **Medium**

Integrity: **Medium**

Availability: **Medium**

7. Technical Complexity Score: 2.5

See attachment: S2AA-2.3.7-SIMM_45_Appendix_C_Complexity_Assessment

(Attach a [SIMM Section 45 Appendix C](#) with Business and Technical Complexity sections completed to the email submission.)

2.4 Requirements and Outcomes

See Attachments:

- S2AA-2.4-MidLevel_Requirements
- S2AA-2.4-Personas_JourneyMaps
- S2AA-2.4-Business_Capability_Objective_Mapping
- S2AA-2.4-Metrics_KPIs

2.5 Assumptions and Constraints

Relevant assumptions and constraints help define boundaries and opportunities to shape the scope and complexity of the project.

Assumption: Additional project funding is approved

Description/Potential Impact: Without additional funding, reassessment of proposed solutions and reprioritization and phased implementation of product functionality will be required.

Assumption: UPWARD Core Team members will be available throughout the project during standard business hours and project activities will be a top priority.

Description/Potential Impact: It is assumed that the SWRCB UPWARD core team will remain allocated to project activities, with project activities being their highest priority. Consistent and predictable availability is critical to ensuring efficient and timely implementation and overall project success.

Assumption: SWRCB PAL core team and selected vendor team will remain unchanged throughout the project.

Description/Potential Impact: Changes in team membership will require knowledge transfer and additional training. This may cause delays within affected project areas.

Assumption: Vendor team is experienced with geospatial data input/output.

Description/Potential Impact: The success of this project depends heavily on the effective management of geospatial data. Experience in this area is critical to an efficient implementation that meets business requirements related to geospatial features and functionality.

Assumption: Risks and issues will be documented and managed throughout the project.

Description/Potential Impact: Potential risks and proposed alternative solutions should be documented to ensure efficient resolution if risks are encountered. Issues and solutions should be documented to ensure issues that are encountered during the project are resolved.

Assumption: Organizational change management will facilitate a smooth transition to the new system by its users with minimal disruption to business process efficiency.

Description/Potential Impact: Proper change management is necessary to allow for a smooth transition to the new system and prevent workflow issues.

Assumption: All necessary system functionality is accounted for within functional and non-functional requirements.

Description/Potential Impact: System will be developed to address functional and non-functional requirements established by the program. Development and implementation costs will be calculated based on these requirements. Additional functionality may not be possible if not accounted for in early stages of project planning, and dependent processes may be compromised.

Assumption: New system will adhere to SWRCB's security policies.

Description/Potential Impact: System data will be protected from unauthorized access.

Assumption: Supporting contracts and procurements will be completed on schedule.

Description/Potential Impact: Contract and procurement delays will create delays in the overall project schedule.

Assumption: New system will be compatible with and perform acceptably within existing IT infrastructure.

Description/Potential Impact: Existing hardware, software, and network components must accommodate the features and functionality of the new system, as well as the anticipated resource demands placed upon the new system post-implementation.

Assumption: New system will integrate and interface with external systems and applications as needed to support business requirements.

Description/Potential Impact: Integration and interfacing is critical for the transmission of data and information across systems. A need to identify unplanned, alternative solutions may delay project implementation.

Constraint: Project budget.

Description/Potential Impact: Stakeholders will be negatively impacted if system functionality is compromised due to budget limitations.

Constraint: Defined project scope.

Description/Potential Impact: Project scope must account for all necessary system functionality. Changes in scope may negatively impact costs and timing of solution development and implementation.

Constraint: Content accessibility.

Description/Potential Impact: System content must meet accessibility requirements to ensure useability by all stakeholders.

Constraint: Project budget allocation through March 31, 2024.

Description/Potential Impact: Project implementation costs must be assumed within the budget allocation timeframe. System enhancements beyond this date that require vendor involvement will require SWRCB to seek additional funding.

TIP: Copy and paste to add Assumptions/Constraints with Descriptions/Impacts as needed.

2.6 Dependencies

Dependencies are elements or relationships in a project reliant on something else occurring before the function, service, interface, task, or action can begin or continue.

Dependency Element: Project completion is dependent upon adequate funding through approved expenditure authority.

Dependency Description: Without adequate funding, system functionality and overall benefit of the solution will be compromised.

Dependency Element: Utility of the new system will be improved through user training.

Dependency Description: Training of both internal and external users will improve the utility and benefits realized through the implementation of the new system.

Dependency Element: Data conversion and migration cannot be completed until data baseline data is documented and prepared.

Dependency Description: Before data conversion and migration occur, data dictionaries and classifications must be prepared, a data quality assessment must be completed, and data must be cleansed.

Dependency Element: Data transmission between stakeholder entities requires established system integration and interface mechanisms.

Dependency Description: New system must be able to communicate with internal and external systems and interfaces to transmit data and information as needed to meet the needs and requirements of various stakeholders.

Dependency Element: Data quality within the new system will depend on data integrity constraints.

Dependency Description: Data integrity constraints must be implemented within the new system to prevent reporting inaccuracies associated with the storage of bad data within the database.

Dependency Element: Role-based access management requires established roles, permissions, and assignments.

Dependency Description: Access to areas within the new system will be managed inside the new system, leveraging groups/roles/permissions and using a formal request process.

Dependency Element: Successful system recovery in case of failure will depend on a backup and recovery plan.

Dependency Description: In case of failure, the system must be able to leverage scheduled and stored backups.

TIP: Copy and paste to add Dependency Elements and Descriptions as needed.

2.7 Market Research

Market Research ([CDT Market Research Guidelines](#)) determines whether products or services available in the marketplace can meet the business needs identified in this proposal. Market Research can also determine whether commercial practices regarding customizing/modifying products or tailoring services are available, or even necessary, to meet the business needs and objectives of the business.

Before undertaking a Market Research approach. Contact your PAO Manager to schedule a collaborative review to review planning to date and discuss the procurement approach.

1. **Project Management Methodology:** [Adaptive Approach \(Agile\)](#)
2. **Procurement approach recommended:** [Challenge-based Procurement](#)
3. **Market Research Approach**

Provide a concise narrative description of the approach used to perform market research.

[Challenge-based Procurement](#) included market research. Please refer to [Section 2.8](#).

4. Market Research Artifacts

Market Research Artifacts can include internet research, collaboration with other governmental entities, or other documentation.

Attach Market Research artifacts to the email submission.

Supplemental research was provided in a policy report titled "[Piloting a Water Rights Information System for California](#)" by the Berkeley Law Center for Law, Energy and the Environment in July 2021.

See attachment:

[S2AA-2.7.4-MarketResearch_Piloting_Water_Rights_Info_System_for_CA_July2021](#)

2.8 Viable Alternative Solutions

The CDT expects Agencies/state entities to conduct a thorough analysis of all feasible alternatives that will meet the proposal's objectives and requirements. Agencies/state entities should provide at minimum the three (3) most viable solutions, one (1) of which could be leveraging and/or enhancing the existing solution (if applicable).

1. Viable Alternative Solution #1

Name: [Custom](#)

Description: [A custom solution framework that integrates open-source software content.](#)

Why is this a viable solution? Please explain:

Benefits/Advantages:

- Highly customizable
- Core code has been deployed with other agencies/departments
- Configurable data validation engine
- Configurable workflow engine
- Custom reporting capabilities
- Potential low-code/no-code spatial validation and geoprocessing option for other applications

Disadvantages:

- Potential difficulty integrating with other SWRCB applications due to UPWARD-specific customization
- Potential debugging challenges due to custom code Configurable workflow engine
- Higher development cost

Approach

Increase staff – new or existing capabilities: No

Modify the existing business process or create a new business process: Yes

Reduce the services or level of services provided: No

Utilize new or increased contracted services: No

Enhance the existing IT system: No

Modify Statute/Policy/Regulations: No

Please Specify: N/A

Create a new IT system: Yes

Other: No Specify: N/A

Architecture Information

Business Function(s)/Process(es):

Administer/Manage Water Right Records

Monitor and Adjust Water Usage

Ensure Compliance

Provide Transparency and Support to the Public

Perform General Operations

Enable the Enterprise

TIP: Copy and paste or click the + button in the lower right corner to add business processes with the same application, system, or component; COTS/Cloud Technology or custom solution; runtime environment; system interfaces, data center location; and security.

Conceptual Architecture

See attachment: [S2AA-2.8-Conceptual_Architecture](#)

COTS/SaaS/Cloud Technology or Custom: [Custom](#)

Name/Primary Technology: [Custom Alternative 1](#)

TIP: Copy and paste or click the + button in the lower right corner to add system software information if the application, system, or component uses additional system software.

Explain Existing System Interfaces:

See attachment: [S2AA-2.8-As_Is_Interfaces](#)

Explain New System Interfaces:

See attachment: [S2AA-2.8-To_Be_Interfaces_Custom](#)

Data Center Location of the To-be Solution: [State data center operated by CDT](#)

If Other, specify: [N/A](#)

Security

Access

Public: [Yes](#)

Internal State Staff: [Yes](#)

External State Staff: [No](#)

Other: [No](#) Specify: [N/A](#)

Type of Information (Select Yes or No for each to identify the type of information that requires protection. See the SAM Section 5305.5 for more information.)

Personal: [Yes](#)

Health: [No](#)

Tax: [No](#)

Financial: [Yes](#)

Legal: [Yes](#)

Confidential: [Yes](#)

Other: [No](#) Specify: [N/A](#)

Protective Measures (Select Yes or No to identify the protective measures used to protect information.)

Technical Security: [Yes](#)

Physical Security: [Yes](#)

Backup and Recovery: Yes

Identity Authorization and Authentication: Yes

Other, specify: N/A

Total Viable Alternative #1 Solution Cost (copy from FAW – Executive Cost Summary tab, cells E7 through E11):

Planning Costs: \$11,628,643

One-Time (Project) Costs: \$55,028,307

Total Future Ops. IT Staff OE&E Costs: \$17,358,469

Total Proposed Cost: \$84,015,418

Annual Future Ops. Costs (M&O): \$8,618,475

2. Viable Alternative Solution #2

Name: COTS

Description: COTS solution configured to meet UPWARD business requirements.

Why is this a viable solution? Please explain:

Benefits/Advantages:

- Potentially faster deployment (less configuration due to COTS platform)
- Large user base
- Proven security and reliability
- Extensive experience with geospatial data solution implementation
- Integrated portals for internal staff, external data reporters, and public consumers
- Integrated data validation engine
- Lower development cost

Disadvantages:

- Limited configurability
- Higher licensing cost

Approach

Increase staff – new or existing capabilities: No

Modify the existing business process or create a new business process: Yes

Reduce the services or level of services provided: No

Utilize new or increased contracted services: No

Enhance the existing IT system: No

Modify Statute/Policy/Regulations: No

Please Specify: [N/A](#)

Create a new IT system: [Yes](#)

Other: [No](#) Specify: [N/A](#)

Architecture Information

Business Function(s)/Process(es):

[Administer/Manage Water Right Records](#)

[Monitor and Adjust Water Usage](#)

[Ensure Compliance](#)

[Provide Transparency and Support to the Public](#)

[Perform General Operations](#)

[Enable the Enterprise](#)

TIP: Copy and paste or click the + button in the lower right corner to add business processes with the same application, system, or component; COTS/Cloud Technology or custom solution; runtime environment; system interfaces, data center location; and security.

Conceptual Architecture

[See attachment: S2AA-2.8-Conceptual_Architecture](#)

COTS/SaaS/Cloud Technology or Custom: [COTS/SaaS/Cloud Technology](#)

Name/Primary Technology: [COTS Alternative 2](#)

TIP: Copy and paste or click the + button in the lower right corner to add system software information if the application, system, or component uses additional system software.

Explain Existing System Interfaces:

[See attachment: S2AA-2.8-As_Is_Interfaces](#)

Explain New System Interfaces:

[See attachment: S2AA-2.8-To_Be_Interfaces_COTS](#)

Data Center Location of the To-be Solution: [Commercial data center](#)

If Other, specify: [N/A](#)

Security

Access

Public: [Yes](#)

Internal State Staff: [Yes](#)

External State Staff: [No](#)

Other: No Specify: N/A

Type of Information (Select Yes or No for each to identify the type of information that requires protection. See the SAM Section 5305.5 for more information.)

Personal: Yes

Health: No

Tax: No

Financial: Yes

Legal: Yes

Confidential: Yes

Other: No Specify: N/A

Protective Measures (Select Yes or No to identify the protective measures used to protect information.)

Technical Security: Yes

Physical Security: Yes

Backup and Recovery: Yes

Identity Authorization and Authentication: Yes

Other, specify: N/A

Total Viable Alternative #2 Solution Cost (copy from FAW – Summary tab, cell AL33):

Total Proposed Cost: \$78,394,679

3. Viable Alternative Solution #3

Name: N/A

Description: Alternative #3 does not apply. SWRCB is considering a COTS solution and a custom solution, as described in alternatives 1 and 2.

Why is this a viable solution? Please explain:

[Click or tap here to enter text.](#)

Approach

Increase staff – new or existing capabilities: Choose Yes or No.

Modify the existing business process or create a new business process: Choose Yes or No.

Reduce the services or level of services provided: Choose Yes or No.

Utilize new or increased contracted services: Choose Yes or No.

Enhance the existing IT system: Choose Yes or No.

Modify Statute/Policy/Regulations: [Choose Yes or No.](#)

Please Specify: [Click or tap here to enter text.](#)

Create a new IT system: [Choose Yes or No.](#)

Other: [Choose Yes or No.](#) Specify: [Click or tap here to enter text.](#)

Architecture Information

Business Function(s)/Process(es): [Click or tap here to enter text.](#)

TIP: Copy and paste or click the + button in the lower right corner to add business processes with the same application, system, or component; COTS/Cloud Technology or custom solution; runtime environment; system interfaces, data center location; and security.

Conceptual Architecture

Attach a copy of the conceptual architecture to your email submission.

COTS/SaaS/Cloud Technology or Custom: [Choose an item.](#)

Name/Primary Technology: [Click or tap here to enter text.](#)

TIP: Copy and paste or click the + button in the lower right corner to add system software information if the application, system, or component uses additional system software.

Explain Existing System Interfaces: [Click or tap here to enter text.](#)

Explain New System Interfaces: [Click or tap here to enter text.](#)

Data Center Location of the To-be Solution: [Choose an item.](#)

If Other, specify: [Click or tap here to enter text.](#)

Security

Access:

Public: [Choose Yes or No.](#)

Internal State Staff: [Choose Yes or No.](#)

External State Staff: [Choose Yes or No.](#)

Other: [Choose Yes or No.](#) Specify: [Click or tap here to enter text.](#)

Type of Information (Select Yes or No for each to identify the type of information that requires protection. See the SAM Section 5305.5 for more information.)

Personal: [Choose Yes or No.](#)

Health: [Choose Yes or No.](#)

Tax: [Choose Yes or No.](#)

Financial: [Choose Yes or No.](#)

Legal: [Choose Yes or No.](#)

Confidential: [Choose Yes or No.](#)

Other: [Choose Yes or No.](#) Specify: [Click or tap here to enter text.](#)

Protective Measures (Select Yes or No to identify the protective measures used to protect information.)

Technical Security: [Choose Yes or No.](#)

Physical Security: [Choose Yes or No.](#)

Backup and Recovery: [Choose Yes or No.](#)

Identity Authorization and Authentication: [Choose Yes or No.](#)

Other, specify: [Click or tap here to enter text.](#)

Total Viable Alternative #3 Solution Cost (copy from FAW – Summary tab, cell AL50):

Total Proposed Cost: [Click or tap here to enter text.](#)

2.9 Project Organization

Project planning includes the process of identifying how and when specific labor skill sets are needed to ensure that the proposed project has sufficient staff with the appropriate knowledge and experience by the time the project moves into execution. All staff identified in the following sections should be included in the Financial Analysis Worksheet to be completed in Section 2.12.

1. Project Organization Chart:

See attachment: S2AA-2.10.3_Resource_Mgt_Staffing_Plan (section 4.0)

Attach the Project Organization Chart to your email submission.

2. Is the department running this project as a matrixed or projectized organization?

[Matrixed](#)

In each of the following sections, provide a concise description of the approach to staffing the proposed project including contingencies for business/program, IT, or administrative areas to maintain ongoing operations in conjunction with the proposed project.

1. Administrative

[The required skills and competencies for the UPWARD Project Administrative staff are as follows:](#)

[Budgeting – Budget staff should possess the ability to estimate and plan resource requirements \(funding, personnel, materials and supplies, workspace, etc.\) to achieve project or operational goals.](#)

Communication – Project staff with communication responsibilities should possess the ability to transmit and receive written, verbal, visual, and non-verbal information, and formulate and deliver appropriate responses to another party.

Procurement – Procurement staff should possess the ability to acquire products and services within the constraints and requirements of government code and agency policy, including development and execution of an overall procurement approach. Also, the ability to advise and monitor the execution of procurement activities to remain in compliance with code and policy.

Vendor/Contract Management – Staff with contract management responsibilities should possess the ability to prepare and monitor statements of work and service level agreements with vendors, and the ability to execute notification and remediation of breaches to those agreements. This skill can also refer to the ability to integrate the efforts and goals of various vendors towards a desired single outcome.

2. Business Program

Program staff within the SWRCB Division of Water Rights (DWR) provide program subject matter expertise necessary for requirements gathering and overall solution development. Program staff will also interact with internal project management and development teams and the vendor throughout the testing and implementation phases of the project to ensure requirements are met. These individuals will prioritize tasks associated with the project in accordance with the project schedule. Responsibilities associated with solution development and business process re-engineering will be absorbed within existing staff resources with no anticipated disruption to existing services.

3. Information Technology

While the selected vendor will provide primary system development and implementation services, SWRCB has secured five (5) dedicated IT resources to support internal tasks related to project management, business integration, application development, data management, security, and other technical areas. Additional staff will be redirected from existing resources, as needed. Ongoing maintenance and operations will be supported within SWRCB's existing technical areas and organizational structure.

4. Testing

The selected vendor will lead system testing, while user acceptance testing will be led by program staff. Comprehensive test plans and test scripts will be developed to reflect scenarios that align with business processes and functional requirements. Program staff will execute test scripts, document test results, and work with the prime vendor and other core team members to resolve issues. An IV&V contractor, in consultation with SWRCB program and technical staff, will oversee all testing to ensure functional and non-functional requirements are met.

All testing efforts assumed by SWRCB staff will be absorbed within existing resources and those recently allocated to this project with no anticipated disruption to existing services.

5. Data Conversion/Migration

SWRCB program and technical staff are responsible for data preparation prior to conversion and migration. Technical staff provide data extracts and cleansing tools to assist in the identification and correction of problematic data prior to conversion. Program staff review baseline data, make corrections within respective systems, and work with technical staff to resolve issues at the database level when necessary. The selected vendor will perform ETL functions once data has been approved by the program.

All data conversion and migration efforts assumed by SWRCB staff will be absorbed within existing resources and those recently allocated to this project with no anticipated disruption to existing services.

6. Organizational Change Management

OCM planning for the UPWARD project includes establishing a dedicated change team, identifying obstacles to change, training preparation, communication plan development, and determining the impact of the change on stakeholder groups, processes, and resources. An OCM team has been established, which will focus on these key areas to ensure a smooth transition. Additional responsibilities of the OCM team include determining change capacity and capability within the program, as well as facilitating a long-term commitment to change through metrics and a supportive culture.

All OCM efforts assumed by SWRCB staff will be absorbed within existing resources with no anticipated disruption to existing services.

7. Resource Capacity/Skills/Knowledge for Stage 3 Solution Development

This narrative should include the experience level and quantity of procurement, contract management, and budget staff who will be responsible for the Stage 3 Solution Development.

CDT's Statewide Technology Procurement (STP) team will be the lead procurement officials. The project is supported by three STP staff, including two management level staff. SWRCB has assigned two Contract Unit staff to support procurement activities, including one at the management level. SWRCB has one management level Budget Analyst and one management level Contract Manager assigned to support Stage 3 activities.

2.10 Project Planning

1. Project Management Risk Assessment

Updated Project Management Risk Score: 0.4

See attachment: S2AA-2.10.1-SIMM_45_Appendix_A_PM_Risk_Assessment

Attach Updated PM Risk Assessment to your email submission. [SIMM Section 45A](#)

2. Project Charter

Is your project charter approved by the designated Agency/state entity authority and available for the Department of Technology to review? **Choose:** 'Yes,' 'No,' or 'Not Applicable.' If 'No' or 'Not Applicable,' provide the artifact status in the space provided.

[Project Charter \(Approved\):](#) Yes

Status: Completed

See attachment: S2AA-2.10.2-Project_Charter

Attach a copy of the Project Charter to your email submission.

3. Project Plans

Are the following project management plans or project artifacts approved by the designated Agency/state entity authority and available for the Department of Technology to review?

Choose: 'Yes,' 'No,' or 'Not Applicable.' If 'No' or 'Not Applicable,' provide the artifact status in the space provided.

Note: For Low to medium complexity and cost projects, discuss with your PAO manager the option of submitting a Master Project Management Plan in place of individual plans.

[Scope Management Plan \(Approved\):](#) No

Status: Draft in progress.

[Communication Management Plan \(Approved\):](#) No

Status: Draft in progress.

[Schedule Management Plan \(Approved\) :](#) No

Status: Draft in progress.

[Procurement Management Plan \(Approved\):](#) Yes

Status: Approved

See attachment: S2AA-2.10.3-Procurement_Mgt_Plan

[Requirements Management Plan \(Approved\):](#) No

Status: Draft in progress.

[Stakeholder Management Plan \(Draft\):](#) No

Status: Draft in progress.

[Governance Plan \(Draft\):](#) Yes

Status: Approved

See attachment: S2AA-2.10.3-Governance_Mgt_Plan

[Contract Management Plan \(Draft\):](#) No

Status: Draft in progress.

[Resource Management Plan \(Draft\)](#): Yes

Status: Approved

See attachment: [S2AA-2.10.3_Resource_Mgt_Staffing_Plan](#)

[Change Control Management Plan \(Draft\)](#): No

Status: Draft in progress.

[Risk Management Plan \(Draft + Risk Log\)](#): Yes

Status: Approved

See attachments:

- [S2AA-2.10.3-Risk_Mgt_Plan](#)
- [S2AA-2.10.3-Risks_Issues_Log](#)

[Issue and Action Item Management Plan \(Draft + Issue Log\)](#): Yes

Status: Approved

[Cost Management Plan \(Approved if planning BCP approved\)](#): No

Status: Draft in progress.

4. Project Roadmap (High-Level)

Attach a high-level Project Roadmap showing remainder of planning phase and transition into execution phase to the email submission.

See attachment: [S2AA-2.10.4-High_Level_3yr_Plan](#) (draft)

- a) Planning Start Date: [7/1/2021](#)
- b) Estimated Planning End Date: [11/30/2022](#)
- c) Estimated Project Start Date: [12/1/2022](#)
- d) Estimated Project End Date: [9/30/2024](#)

2.11 Data Cleansing, Conversion, and Migration

If in Section 2.3 (above) the answer to the question “Do you have existing data that must be migrated to your new solution?” was marked “Yes,” please complete this section.

The California Department of Technology recommends having a Data Consultant start data cleansing, conversion, and migration activities as soon as possible.

Identify the status of each of the following data activities. If “Not Applicable” is chosen, explain why the activity is not applicable or if “Not Started” is chosen, explain when the activity will start and its anticipated duration:

1. Current Environment Analysis: Completed

[Click or tap here to enter text.](#)

2. Data Migration Plan: Completed

[Click or tap here to enter text.](#)

3. Data Profiling: Completed

[Click or tap here to enter text.](#)

4. Data Cleansing and Correction: In Progress

[Click or tap here to enter text.](#)

5. Data Quality Assessment: In Progress

[Click or tap here to enter text.](#)

6. Data Quality Business Rules: In Progress

[Click or tap here to enter text.](#)

7. Data Dictionaries: Completed

See attachments:

- [S2AA-2.11.7-eWRIMS_Data_Dictionary](#)
- [S2AA-2.11.7-RMS_Data_Dictionary](#)

8. Data Conversion/Migration Requirements: Completed

See attachment: [S2AA-2.11.8-Data_Conversion_Requirements](#)

2.12 Financial Analysis Worksheets

Attach [F.2 Financial Analysis Worksheet\(s\)](#) to the email submission.

See attachment: [S2AA-2.12-Financial_Analysis_Worksheets](#)

End of agency/state entity document.

Please ensure ADA compliance before submitting this document to CDT.

When ready, submit Stage 2 and all attachments in an email to ProjectOversight@state.ca.gov.

Department of Technology Use Only

Original "New Submission" Date: 10/5/2022

Form Received Date: 10/5/2022

Form Accepted Date: 10/5/2022

Form Status: Completed

Form Status Date: 1/10/2023

Form Disposition: Approved

Form Disposition Date: 1/10/2023