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State Water Resources Board

Updating Water Rights Data for California (UPWARD) Project

Special Project Report

January 2025

CALIFORNIA
Water Boards
STATE WATER RESOURCES CONTROL BOARD
REGIONAL WATER QUALITY CONTROL BOARDS

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1.1 Project Background/Summary

The State Water Board is responsible for preserving, enhancing, and restoring the quality of California's water resources and drinking water for the protection of the environment, public health, and all beneficial uses, and to ensure proper water resource allocation and efficient use, for the benefit of present and future generations. The State Water Board includes several Divisions and Offices to support and implement its responsibilities, including the Division of Water Rights, Division of Drinking Water, Division of Water Quality, Division of Financial Assistance, Division of Administrative Services, Office of Enforcement, Office of Information Management and Assessment, and Office of Research Planning and Performance, amongst others.

The Division of Water Rights (Division) is responsible for administering the State's water rights priority system, and for protecting public trust resources including sustaining environmental in-stream flows and protecting habitat and species. The Division oversees multiple types of water use permits for over 40,000 water users and is responsible for ensuring priority users have the opportunity to beneficially use water during times of water shortage. In cases of extreme water shortage, the Division enforces the priority process by limiting water use of lower priority (sometimes referred to as 'more junior') right holders.

The Division has faced many drought-related challenges that impact the protection of senior water rights and environmental and public trust resources. Public and regulated entities lack access to water right files which are kept as paper records in Sacramento. Furthermore, the lack of quality assurance and quality control resulted in data inaccuracies as high as 85% in some watersheds. Although the State Water Board has reporting authority to allow for automatic uploads of telemetered water use data, the current environment is not prepared for this input and cannot integrate real-time water use data as required by legislation.

The primary customers of the system are water rights reports. There are more than 40,000 water rights holders, who use the system to request water rights and report on water usage. Water right consultants (Agents) assist water rights holders in managing and reporting on their water rights and usage. Additionally, the general public, including water researchers, will access the system to gather water usage data for various uses.

1.2 Project Status

The UPWARD project is divided into two Phases. Phase 1 development and User Acceptance Testing (UAT) is complete, and the functionality has been in production since May 2024. Phase 2 is complete, and the functionality was pushed to production Oct. 21, 2024.

All 4 project objectives have been addressed by the code that has been developed and will be pushed to production; with the exception of map digitization, which was descoped from the project by Change Request 032.

- Objective 1 – Develop a geospatial water right data management system that integrates point of diversion, place of use and reported volumetric data.
- Objective 2.1– Greater accuracy of reported data, better QA/QC protocols that reduce user error.

- Objective 2.2 - Reduce staff time needed to revise, track, enforce and verify reported data, and reduce staff time to outreach to reporters.
- Objective 3 – Provide a platform for stakeholders to identify, track, and review water transfers.
- Objective 4 – Digitize paper water right records and attach geospatial information such as point of diversion and/or place of use.

System integration expenditures by the end of Phase 2 are expected to be $23M and licensing expenses are expected to be $3.5M.

1.3 Reason for Proposed Change

The UPWARD project is under budget by ~$1.6M. This cost savings was realized by not using $1.3M of the original System Integrator budget and a reduction of licensing costs by $0.3M. The Water Board plans to cut over to the new system on June 30, 2025. There are opportunities to improve the system User Interface/User Experience (UI/UX), reintroduce the descoped map digitization process, which was previously descoped, and gain system integrator support for project cutover.

1.4 Proposed Project Change

1.4.1 Proposed Project Change Summary

The Water Board seeks to leverage the additional time and funds to:

- **Final Data Conversion:** Enhancements include Deloitte resources to perform the final data conversion into CalWATRS before go-live and ensure that any data conversion enhancements made during Phase 3 are properly incorporated into the final data conversions.
- **Data Conversion Enhancements:** Enhancements to improve data quality for previously converted data or to add additional data not converted in previous phases.
- **Map Digitalization:** This scope of work was descoped from Phase 2 under CR032. The scope is being brought back as an enhancement in Phase 3 to connect the map digitization workflow and processes to the overall digitization pipeline.
- **User Interface/ User Experience (UI/UX) Support:** Enhancements for UI/UX include resources to aid the State in improving layouts and language across all CalWATRS systems
- **Missing Legacy GIS Data:** Enhancements to address missing legacy GIS data include resources to aid the State in identifying previously developed processes that may not work as expected due to missing data and/or methods to collect missing GIS data using the CalWATRS system.
- **Annual Fee Penalties:** Enhancements to implement the fee schedule for newly approved late fee penalties that were added by the State in the Fall of 2024 to CalWATRS.
- **Staff Workflow Enhancements:** Resources to aid the State in enhancing the workflows built into Salesforce.
- **Digitization and ECM Enhancements:** Resources to improve the digitization and ECM portions of CalWATRS through enhancements.
- **Stream Trace Enhancements:** Resources to improve the stream trace functionality through enhancements.

- **Advanced GIS Enhancements:** Resources to improve the functionality of GIS portions of CalWATRS and/or adjust existing GIS features.
- **User Registration and Account/Contact Merge:** Enhancements to improve the data connected to user accounts and contacts, and development of a process to register existing water right holders into CalWATRS.

The proposed changes will add time to the current system development schedule – extending it through June 2025. This will result in:

- A more useable and business-friendly system
- Reduce the risk of cutover being conducted about 6 months after system Go-live
- Ensure data input into the legacy system between October 2024 and June 2025 is migrated into CalWATRS
- Meet the map digitization objective

1.4.2 Proposed Project Change Details

1.4.2.1 Final Data Conversion (OOM-1) Priority 1

Enhancements include Deloitte resources to perform the final data conversion into CalWATRS before go-live and ensure that any data conversion enhancements made during Phase 3 are properly incorporated into the final data conversions.

The areas in the application impacted by this enhancement include User Management, GIS, Databricks, PostgreSQL Database, and ECM.

Estimated level of effort is 2,743 hours at a cost of $388,704.

1.1 Development Impacts

1.1.1 All Work Team Tasks: All project team tracks will participate in the following task for this enhancement:

- There will be a UAT and Prod conversion happening once in Product Increment 4 (PI4) and another time in PI5.
- Pre- production Activities
- 2 weeks of UAT Conversion
- 2 weeks of Production conversion
- Hyper Care
- Environment readiness and validations

1.1.2 Data Conversion Team tasks:

- Prod and UAT Data clean up
- Source data validation
- UAT Data Conversion
- Prod Data Conversion
- Smoke Test
- Conversion validation and health check summary
- Create and share Reconciliation Report from UAT and Prod

1.1.3 Technical Team tasks:

Technical and Build team will support code deployment and help make sure the SIT, UAT and Prod environments have the latest code and configuration. If there are any data conversion blockers, they will work with Data, GIS and ECM teams to facilitate a smooth conversion process.

1.1.4 GIS Team Tasks:

- Source data validation
- UAT GIS Data Conversion
- Prod GIS Data Conversion
- Smoke Test
- Conversion validation and health check summary
- GIS mapping of converted objects to PostgreSQL
- GIS mapping of converted objects to GIS OIDs and GUIDs
- GIS mapping of converted objects to SF ID and Upsert

1.1.5 ECM Team tasks:

- Identify delta documents
- Extract WR IDs for the delta documents
- Water Boards to migrate delta documents to Staging
- Migrate documents form Staging to ECM
- Extract reference entities from the legacy system
- Update reference entities in ECM for existing docs

1.4.2.2 Data Conversion Enhancements (OOM-002) Priority 2

Enhancements to improve data quality for previously converted data or to add additional data not converted in previous phases.

The areas in the application impacted by this enhancement include Databricks and PostgreSQL Database.

Estimated level of effort is 3,601 hours at a cost of $267,960.

2.1 Development Impacts

2.1.1 Data Conversion Team Tasks:

- Discovery, design, development and validation of legacy data enhancements
- Updating relevant documentation – data mapping sheet, run book, validation report, error framework
- SIT and UAT support
- Prod Data Conversion
- Smoke Test
- Conversion validation and health check summary
- Create and share Reconciliation Report from UAT and Prod

1.4.2.3 Map Digitalization (OOM-003) Priority 1

This scope of work was descoped from Phase 2 under CR032. The scope is being brought back as an enhancement in Phase 3 to connect the map digitization workflow and processes to the overall digitization pipeline.

The areas in the application impacted by this enhancement include GIS, PostgreSQL Database, DocuEdge, ECM and AWS Infrastructure. There are addition impacts to training requiring knowledge transfer with SWRCB GIS staff.

Estimated level of effort is 980 hours at a cost of $250,000.

3.1 Development Impacts

3.1.1 GIS Team Tasks:

The Deloitte CalWATRS GIS team will work collaboratively with its subcontractor (Avineon), and other members of the CalWATRS system development team (i.e. ECM, Infrastructure, ESRI) to develop a semi-automated workflow and accompanying standard operating procedure (SOP) that enables the georeferencing of selected digitized historical water rights maps, as well as the creation of related geospatial features within the CalWATRS system.

- This enhancement requires more emphasis on the development of the map digitization and extraction workflow, along with its related user guide (SOP) documentation, and training tutorial enabling the SWRCB team to confidently learn and implement the approach within the system to conduct future digitization of historical water rights features.
- Maps for this effort will be provided to the map digitization team by the ECM document digitization workflow. As maps are scanned and digitized through that existing ECM workflow(s), this enhancement will be developed so that select maps of interest may be identified and pulled via metadata tags (or other means of identification) into a semi-automated map digitization workflow. Once within this newly constructed workflow, these selected maps will be georeferenced using a semi-automated process to ‘rubber sheet’ the scanned digitized map image to be spatially accurate. Additionally, this related semi-automated process will be aided and guided by a wizard driven digitization workflow using repeatable GIS steps to extract geospatial water rights features (i.e. POD, POU, PORD, Lines of Conveyance)
- This process will be documented and provided to the State as part of a user guide and SOP training tutorial to help familiarize SWRCB GIS staff, to better inform them of the use of this newly created semi-automated map digitization required into the future.

3.1.2 ECM Team Tasks:

- The ECM team will work to develop integration between ECM system and the GIS system to allow the GIS process/workflow to select a document from ECM for the Map digitization process.
- Once the document is selected, the GIS workflow would allow the state to geo-reference the scanned map image and then digitize water rights GIS features from each map into the UPWARD/CalWATRS GIS database stored in PostgreSQL.

1.4.2.4 User Interface/ User Experience (UI/UX) Support (OOM-004) Priority 1

Enhancements for UI/UX include resources to aid the State in improving layouts and language across all CalWATRS systems.

The areas impacted by this enhancement include GIS, reference tables, staff layout changes, profile changes and business rule engine changes. Requirements will be gathered to document changes in the Salesforce public and Water Board staff screens and GIS Intergrations. State staff will be trained to make administrative changes to the staff screens including but not limited to layout changes, object/field description changes, profile and permission changes.

Estimated level of effort is 6,487 hours at a cost of $452,414.

4.1 Development Impacts

4.1.1 Functional Team Tasks:

- Discovery and requirement gathering
- Functional and Technical Design

4.1.2 Salesforce Team Tasks:

- Train the State staff in making the different admin changes in Salesforce staff side like layout changes, object/field description changes, profile and permission changes
- Review the tasks for downloading the Water Board changes from the agreed upon sandbox and commit the code to the Azure DevOps (ADO)
- Conduct Unit testing and make sure there is no impact to the existing functionalities.
- Develop and unit test the different salesforce changes requested
- If there are impacts, work with Water Board team and make the changes in the system accordingly.
- Develop design documentation and related artifacts
- Conduct needed deployments of components between environments

4.1.3 Testing Team Tasks:

- Create test cases in Azure DevOps for the different changes that are getting deployed to SIT environment and make sure everything is working from the story or defect prospective.
- Conduct positive and negative testing in SIT environment to make sure changes are working fine.
- Conduct smoke testing of UAT environment post-deployment to UAT

1.4.2.5 Missing Legacy GIS Data (OOM-005) Priority 2

Enhancements to address missing legacy GIS data include resources to aid the State in identifying previously developed processes that may not work as expected due to missing data and/or methods to collect missing GIS data using the CalWATRS system.

The areas impacted by this enhancement include GIS, Statement of Use, Permits, PostgreSQL, ECM and User Support Materials. Requirements will be gathered to document the Place of Use (POU) information that is missing in the Water Rights Statements, Registration and/or Permits in the Salesforce public portal, staff screens and GIS screen changes and integrations. New workflow screens will be developed to gather the missing POU information associated with the

legacy water right record. Intergration between Salesforce and GIS will be built, enabling the back-and-forth data transfer. Review, Sign and Submit buttons will be created to support the workflow. ECM metadata will be created to support the workflow.

Estimated level of effort is 1,400 hours at a cost of $142,639.

5.1 Development Impacts

5.1.1 Functional Team Tasks:

- Discovery and requirement gathering
- Functional and Technical Design

5.1.2 Technical Team Tasks:

- Technical and Build team will support code deployment and ensure SIT, UAT and PROD environments are updated with the latest code and configuration.

5.1.3 Salesforce Team Tasks:

- Develop new workflow screens to gather the missing POU information associated with the legacy Water rights record
- Build the integration between SF and GIS to transfer the data back and forth
- Gather the documents associated with this flow
- Create Review, Sign and Submit pages associated with this workflow

5.1.4 GIS Team Tasks:

- Develop GIS screens to gather the missing POU information associated with the legacy Water rights record
- Build the integration between SF and GIS to transfer the data back and forth

5.1.5 ECM Team Tasks:

- Create metadata needed for the new workflow

1.4.2.6 Annual Fee Penalties (OOM-006) Priority 2

Enhancements to implement the fee schedule for newly approved late fee penalties that were added by the State in fall of 2024 to CalWATRS.

The areas impacted by this enhancement include Annual reporting, Mulesoft Interfaces, CDTFA and Annual Fees. This enhancement will support a recent change approved by the Board where annual fee bill amounts will be impacted by late annual report filings. The Business Rule Engine will be updated to contain percentage increases in the Bil Amounts based upon the Annual Report. The front end and staff screens will be updated to show the annual fee bill amounts and if they were impacted by annual report late filings. Batch jobs that create annual fees will be edited to accommodate this change. Finally, any integration changes with CDTFA or their related files will be addressed through this enhancement.

Estimated level of effort is 1,608 hours at a cost of $120,068.

6.1 Development Impacts

6.1.1 Business Analyst Tasks:

- Conduct analysis to articulate and document the business needs with respect to CDTFA integrations and required changes, if needed.

6.1.2 Salesforce Team Tasks:

- Salesforce team will update front end and staff side screens and fee page layouts to reflect the new updates
- Water right records will need statuses that reflect whether the most recent annual report is late or not
- The Business Rules Engine and annual fee batches will need to be updated to reflect the changes in Bill Amounts based on late annual reports

6.1.3 Mulesoft Team Tasks:

- Mulesoft will adjust the annual fee file jobs if there are changes needed to the information being sent to CDTFA

1.4.2.7 Staff Workflow Enhancements (OOM-007) Priority 1

Resources to aid the State in enhancing the workflows built into Salesforce.

The areas impacted by this enhancement include Registration, GIS, Statement of Use, Permits, Petitions, Annual Reporting, Revocations, ECM, Help Request, Reports and Notices. Front end workflows, screen configurations and UI/UX will be updated.

Estimated level of effort is 3,246 hours at a cost of $282,367.

7.1 Development Impacts

7.1.1 Salesforce Team Tasks:

- Updating front end workflows, screen configurations, and UI/UX
- Staff side page layouts and field configurations
- Quick action buttons and process automation

7.1.2 GIS Team Tasks:

- Add or update GIS feature capabilities and attributes

7.1.3 ECM Team Tasks:

- Add or update document Taxonomy and ECM metadata

1.4.2.8 Digitization and ECM Enhancements (OOM-008) Priority 1

Resources to improve the digitization and ECM portions of CalWATRS through enhancements.

The areas impacted by this enhancement include DocuEdge, Image Trust, ECM and Notices. Digitization and document migration functionalities will be enhanced. Discovery and requirements gathering will need to be conducted.

Estimated Level of Effort is 750 hours at a cost of $87,688.

8.1 Development Impacts

8.1.1 ECM Team Tasks:

- Enhance Digitization and Document migration functionalities

8.1.2 Testing Team Impacts:

- Testing of full end-to-end functionality in Dev/SIT/UAT for ECM and Digitization functionalities

1.4.2.9 Stream Trace Enhancements (OOM-009) Priority 3

Resources to improve the stream trace functionality through enhancements.

The areas impacted by this enhancement include GIS, PostgreSQL database, and Salesforce. This enhancement provides data design enhancements, Data/Schema updates and republishing, UI/UX design enhancements and updates to the GIS Stream Trace experience to account for UI/UX changes.

Estimated Level of Effort is 592 hours at a cost of $151,930.

9.1 Development Impacts

9.1.1 All Tracks

Most all functional tracks will support and/or contribute to certain levels in the following activities identified for this enhancement:

- Project Management/PMO
- Discovery
- Data Design
- UI/UX Enhancement
- Integration with other component systems (i.e. GIS, Salesforce)
- Environment Validations & Code Promotion
- Troubleshooting, Regression, and UAT Testing

9.1.2 Data Conversion Team Tasks:

- Update BLA and IA tables to include water right seniority and other Salesforce information

9.1.3 Technical Team

- Technical and Build team members will support code deployment and help make sure the SIT, UAT, STG and Prod environments have the latest code and configuration.

9.1.4 GIS Team Tasks:

- Discovery
- Data Design
- Application of data/schema updates and republishing
- Ability to tag upstream and downstream water right seniority
- UI/UX enhancements

- Updates to GIS Stream Trace Experience to account for UI/UX changes and widget update to add ability to trace with barriers
- Testing and refinement
- Migration and promotion
- UAT bug fixes

9.1.5 Salesforce Team Tasks:

- Ability to tag upstream and downstream water right seniority

1.4.2.10 Advanced GIS Enhancements (OOM-010) Priority 3

Resources to improve the functionality of GIS portions of CalWATRS and/or adjust existing GIS features.

The areas impacted by this enhancement include GIS, Databricks, PostgreSQL database and Salesforce.

Estimated Level of Effort is 2,451 hours at a cost of $299,754.

10.1 Development Impacts

10.1.1Data Conversion Team Tasks:

- Update sf_int tables using Databricks integrations
- Place of Facility (POF) Point of Complaint (POC) legacy data load

10.1.2 GIS Team Tasks:

- Place of facility (POF) legacy data mapping
- Point of complaint (POC) legacy data mapping
- Updating data schema, domains, ranges, and other data validations
- Enhance and merge materialized views with public layers to account for new features (POF, POC, Delta ACP etc.)
- Enhance each GIS experience to add combined SF Curated Views and Public Layers.
- Enhance the Public Overview and Water Availability Dashboard with these newly merged layers.

1.4.2.11 Unanticipated Tasks (OOM-011) Priority 1

A portion of Phase 3 funding set aside for any tasks not currently known as being required enhancements.

1.4.2.12 User Registration and Account/Contact Merge (OOM-012) Priority 1

Enhancements to improve the data connected to user accounts and contacts, and development of a process to register existing water right holders into CalWATRS.

The areas impacted by this enhancement include reference tables, staff layout changes, profile changes and business rule engine changes. Requirements will be gathered to

document changes in the Salesforce public and Water Board staff screens. State staff will be trained on how to merge contact and manage changes between legacy and CalWATRS organization parties.

Estimated Level of Effort is 1,456 hours at a cost of $160,674.

12.1 Development Impacts

12.1.1 Functional Team Tasks:

- Functional team will be working with the WB to perform a discovery and gather requirements related to this Enhancements.
- The business Analyst will be working on creating screen mockups to as part of this enhancement.
- Functional team will write the user stories that is needed for this enhancement and work with state to get those stories approved. Once approved, they will share the information with the development and testing team and clarify any questions that they may have.

12.1.2 Salesforce Team Tasks:

- User Registration module screens will be updated to incorporate the successful validation of existing water right holders.
- Update Registration to include ability to enter one or multiple PINs/IDs to claim records associated with a given account; ability to confirm information.
- Staff portal will be updated to have a queue and/or reports monitoring sign-ups & claims as determine during discover and user story sign off.
- PINs or other matching mechanism will be associated with Water Rights and rules must be created for additional record types to be "inherited" (fees / reports / MD/ petitions/ Etc.) as determine during design and user story approvals.

12.1.3 Data Conversion Team Tasks:

- Data team will be loading the Pin(s) / matching keys to claim legacy records and related tables where needed to associate multiple records from a Pin / matching key.

Summary Table

OOM #	Title	WB Priority	Cost
001	Final Data Conversion	1	$388,704
002	Data Conversion Enhancements	2	$267,960
003	Map Digitization	1	$250,000
004	UI/UX Support	1	$452,414
005	Missing Legacy GIS Data	2	$142,640
006	Annual Fee Penalties	2	$120,068
007	Staff Workflow Enhancements	1	$282,367

008	Digitization and ECM Enhancements	1	$87,688
009	Stream Trace Enhancements	3	$151,930
010	Advanced GIS Enhancements	3	$299,754
011	Unanticipated Tasks	1	$281,801
012	User Registration and Account/Contract Merge	1	$160,674
		TOTAL	$2,886,000

1.5 Feasible Alternatives

The team could simply maintain the current system developed during Phase 1 and 2. However, the current system, while meeting the project objectives, has many opportunities for more user-friendly screens and business process. Not improving the current UI/UX could impact public perception of the new system when it is rolled out to water rights holders.

Additionally, the project would lose $1.3M in unused funding from descoped items and the unanticipated task fund. The Phase 2 descoped map digitization functionality would not be built in the system which would prevent the State from being able to georeference digitized maps within CalWATRS.

Overall, the Water Board has a unique opportunity with unused funding and additional time before Go-Live to make our good new system excellent.

1.6 Implementation Plan

The team will work with the SI to identify the high-level epics of changes and activities. These will feed a high-level schedule for November 2024 through August 2025. The project team will determine the specific changes, via the current agile process.

2.0 Updated Project Management Plan

2.1 Project Manager Qualifications

This SPR has no impact on the Project Manager qualifications. The Water Board will retain the same Project Manager.

2.2 Project Management Methodology

The project team will continue to leverage a hybrid project management methodology. This hybrid approach defines high level epics through a short discovery phase and then iteratively develops functionality using a Scrum development methodology. This methodology is defined in Deloitte's proposal response and contract.

2.3 Project Organization

This SPR has no impact on the Project organizational structure. The Water Board will retain the same organizational structure.

2.4 Project Priorities

The project priorities for Phase 3 are identified in the summary table above. Efforts have been assigned a 1, 2, or 3 priority level by the Product Owner in consultation with the project team.

2.5 Project Plan

2.5.1 Project Scope

The project scope is increasing by the activities outlined in the Proposed Change section.

2.5.2 Project Assumptions

This SPR has no impact on the Project assumptions.

2.5.3 Project Phasing

The Upward Project has been using a phased development approach which included Phase 1 and 2. This proposal seeks to add and Phase 3, using sprints of 1 month in duration.

2.5.4 Project Roles and Responsibilities

This SPR has no impact on the Project Roles and Responsibilities.

2.5.5 Project Schedule

The High-Level project schedule is provided below. The Detailed Project Schedule can be found in Appendix A.

2.6 Project Monitoring and Oversight

The Upward Project has been using a phased development approach which included Phase 1 and 2. This proposal seeks to add and Phase 3, using 1-month sprints.

2.7 Project Quality

This SPR has no impact on the types of Project Quality efforts. The only change is that UAT will be conducted in every sprint, not only at the end of a Product Increment.

2.8 Change Management

This SPR has no impact on the change management for the project. The project will follow the change management process outlined in the Project Plan.

2.9 Authorization Required

The Steering Committee has approved CR 033, which is the input into this SPR.

2.10 Updated Risk Management Plan

This SPR has no impact on the Risk Management Plan for the project. The project will follow the risk management plan outlined in the Project Plan.

2.11 Risk Register

This SPR has no impact on the risk register for the project. The risk register will continue to be updated according to the Risk Management Plan.

2.12 Updated Financial Analysis Worksheets (FAW)

Executive Cost Summary Changes:

Line Item	Stage 4 FAW	SPR FAW	Change	Reason for Change
Planning Cost (One-Time)	$9,955,996	$9,789,659	-$166,337	Slight reduction in costs due to lower than forecasted OE&E costs, internal salaries, and cost of Gartner services.
Project Cost (One-Time)	$41,449,449	$48,991,173	$7,541,724	See 'Project Cost Changes' table below
Future Ops (Continuing)	$10,994,472	$7,636,463	-$3,358,009	See 'Future Ops Cost Changes' table below
TOTAL	**$62,399,917**	**$66,417,294**	**$4,017,378**	

Project Cost Changes:

Line Item	Stage 4 FAW	SPR FAW	Change	Reason for Change
Redirected Staff	$3,820,644	$5,409,648	$1,589,004	PAL Stage 4 (S4) FAW assumed only 3 months of staffing in FY 24/25 based on forecasted Phase 2 production release date of September 30, 2024. SPR FAW represents full 12 months through June 30, 2025. Where possible, the SPR FAW also represents actual costs.
New Staff	$4,313,776	$6,027,310	$1,713,534	S4 FAW assumed only 3 months of staffing in FY 24/25 based on forecasted Phase 2 production release date of September 30, 2024. SPR FAW represents full 12 months through June 30,

				2025. Where possible, the SPR FAW also represents actual costs.
OE&E	$1,733,375	$4,023,750	$2,290,375	S4 FAW assumed only 3 months of OE&E in FY 24/25 based on forecasted Phase 2 production release date of September 30, 2024. SPR FAW represents full 12 months through June 30, 2025. Where possible, the SPR FAW also represents actual costs. Redirected OE&E were included at the direction of DOF.
Consulting (Intradepartmental - CDT)	$423,000	$832,875	$409,875	S4 FAW represented an estimate through September 30, 2024. SPR represents actual cumulative CDT expenditures at the time of this SPR plus estimated upcoming invoices through June 30, 2025.
Consulting (External)	$27,332,056	$28,587,032	$1,254,976	S4 FAW included $24,332,056 for implementation vendor (Deloitte) deliverables and $3M for project management and IV&V services. SPR FAW represents cumulative Deloitte expenditures at the time of this SPR plus confirmed upcoming invoices through June 30, 2025, utilized unanticipated task funding, Phase 3 enhancement costs, and actual and confirmed upcoming expenditures for external project management and IV&V services, totaling $28,525,874.
IT (Licensing, Tools, Hosting)	$3,826,598	$4,110,558	$283,960	S4 FAW represented anticipated licensing, tools, and hosting necessary to

				support system development. The SPR FAW represents an increase in costs. This is primarily due to the purchase of Salesforce Feedback Manager, which was not originally forecasted. This was a 3-year license purchased in 2023-2024. Through the course of discovery and development, the team determined that they needed Feedback Manager to meet the survey creation needs of the project. AWS hosting costs paid directly to CDT, however, were not included in the S4 FAW but are included in the SPR FAW. The additional Salesforce Feedback Manager and AWS fees offset a slight reduction in cost due to vendor scope reduction and selection of cost-effective alternatives.
TOTAL	**$41,449,449**	**$48,991,173**	**$7,541,724**	

Future Ops Cost Changes:

Line Item	Stage 4 FAW	SPR FAW	Change	Reason for Change
Redirected Staff	$0	$0	$0	
New Staff	$1,140,453	$1,345,665	$205,212	First year Future Ops changed from FY 24/25 (partial) to 25/26 in line with staffing cost adjustments described in the Project Costs section above. Predefined FAW formula adjusted costs based on FY and the reduction of FYs represented from 1.75 to 1. Increase is due to an adjustment in personnel costs.

OE&E	$1,270,500	$717,000	-$553,500	First year Future Ops changed from FY 24/25 (partial) to 25/26 in line with OE&E cost adjustments described in the Project Costs section above. Predefined FAW formula adjusted costs based on FY and the reduction of FYs represented from 1.75 to 1.
Consulting (Intradepartmental - CDT)	$0	$0	$0	
Consulting (External)	$4,806,783	$2,753,876	-$2,052,907	First year Future Ops changed from FY 24/25 (partial) to 25/26. Predefined FAW formula adjusted costs based the reduction of FYs represented from 1.75 to 1. Other changes reflected in the SPR FAW include the removal of Enhancements (-$600,000) and addition of external project management services (+$350,000).
IT (Licensing, Tools, Hosting)	$3,776,736	$2,819,922	-$956,814	First year Future Ops changed from FY 24/25 (partial) to 25/26. Predefined FAW formula adjusted costs based the reduction of FYs represented from 1.75 to 1. The SaaS Licensing, Tool and Hosting costs are estimated based on AWS FedRamp (150k), OwnData -($26k), Salesforce Master Contract ($4.3k), Jmeter/Blazemeter ($12k), ReCaptcha ($10k), Twilio ($12k), and an additional 50 Salesforce Licenses ($79.8k). Most of these tools are currently being used and the estimates are based on the vendor BAFO and/or current costs. The CDT AWS hosting cost is $743k and based on doubling

				the actual costs over the past 6 months. This results in the increase of ~$1M.
TOTAL	**$10,994,472**	**$7,636,463**	**-$3,358,009**	