

ATTACHMENT 20: DEMONSTRATION SCENARIOS

DEMONSTRATION BACKGROUND AND SYSTEM CONTEXT

The Division of Drinking Water (DDW) regulates over seven thousand (7,000) public water systems (PWS) in California. With WaterTAP, DDW intends to shift to an all-electronic compliance tracking, reporting, and communications platform for interactions between the regulators (DDW) and the regulated entities (PWS), as well as workflow within DDW. WaterTAP will become the database of record for PWS inventory.

DDW's primary functions include conducting field inspections, issuing operating permits, reviewing plans for new facilities, ensuring timely water quality sampling and operational data reporting, reviewing water quality data, making compliance decisions, taking enforcement actions for non-compliance, and supporting water system security. WaterTAP will be used to modernize and consolidate the various data systems to create a one-stop-shop platform for external and internal users for information access and storage.

Drinking Water Quality Compliance

Drinking water regulations and requirements are generally based on water system type (community, transient non-community, non-transient non-community), water system size (population served and/or number of service connections) and source water type (surface or groundwater). DDW regulates water systems that serve at least fifteen (15) service connections or twenty-five (25) people at least sixty (60) days of the year and these water systems are considered PWSs.

The general regulatory framework requires PWSs to collect water quality samples and submit the samples to an Environmental Laboratory Accreditation Program (ELAP) certified laboratory for analysis and report non-laboratory-analyzed operational data to DDW directly. Laboratory-analyzed data will continue to be submitted using the existing [California Laboratory Intake Portal](#) (CLIP) and WaterTAP will need to receive/view data from CLIP. WaterTAP will be the compliance determination system for data received through CLIP as well as for data received through WaterTAP. Non-laboratory analyzed operational data will be submitted by PWSs to DDW directly through WaterTAP. Both data submitted via CLIP and via WaterTAP will need to be viewable within WaterTAP and available for use in various data analytics and calculations.

To use electronic submitted data (instead of hard copies) to comply with regulatory reporting requirements, WaterTAP must be designed and implemented consistently with Federal Cross-Media Electronic Reporting Rule ([CROMERR](#)) requirements.

An overview of CROMERR is accessible at <https://www.epa.gov/cromerr/overview-cromerr>.

Per the United States Environmental Protection Agency (US EPA), the key performance-based criteria for

CROMERR are:

1. Criteria for establishing a copy of a record,
2. Integrity of electronic documents,
3. Opportunity to review and repudiate copy of the record,
4. Validity of electronic signature, and
5. Determination of the identity of the individual is uniquely entitled to use a signature device.

The following scenarios are provided to demonstrate the Bidder's ability in customizing and developing features to meet the WaterTAP requirements.

- Background information of DDW's regulatory processes is provided to help provide context and there is no expectation that the demonstrations will show DDW's process, but instead that they will show like or similar processes to accomplish the scenarios identified below.
 - This is for informational purposes only, to assist in providing context for the scenarios below as demonstrations are prepared.
- Screenshots in place of live demonstrations will not be scored.

No demonstration data will be provided for any scenario demonstration. The Bidder must create their own demonstration data.

SCENARIO 1 - ADMIN MODULE / ACCOUNT MANAGEMENT

The Bidder must demonstrate using a technical approach of a subset of functionality as described below based on the respective Bidder's Phase 1 Proposal responses to EXHIBIT C: FUNCTIONAL AND NON-FUNCTIONAL REQUIREMENTS.

Background Information / Context

Contact Management and Credentialing

There will be three (3) distinct administrator level user groups in WaterTAP:

- Department of Information Technology (DIT) Administrator – DIT staff to manage and administer the IT infrastructure system for WaterTAP.
 - For the purposes of this demonstration, the DIT Administrator's role is for information purposes only and will not have any tasks to demonstrate in this scenario.
- DDW Administrator – Owner of WaterTAP, who will use a low-code, no-code environment to customize and implement WaterTAP to support DDW's various regulatory functions.
- PWS Administrator – Complies with CROMERR requirements, each PWS will have a legally

responsible person that will grant and manage access to WaterTAP so that only approved PWS staff can access and submit compliance data and other information on WaterTAP.

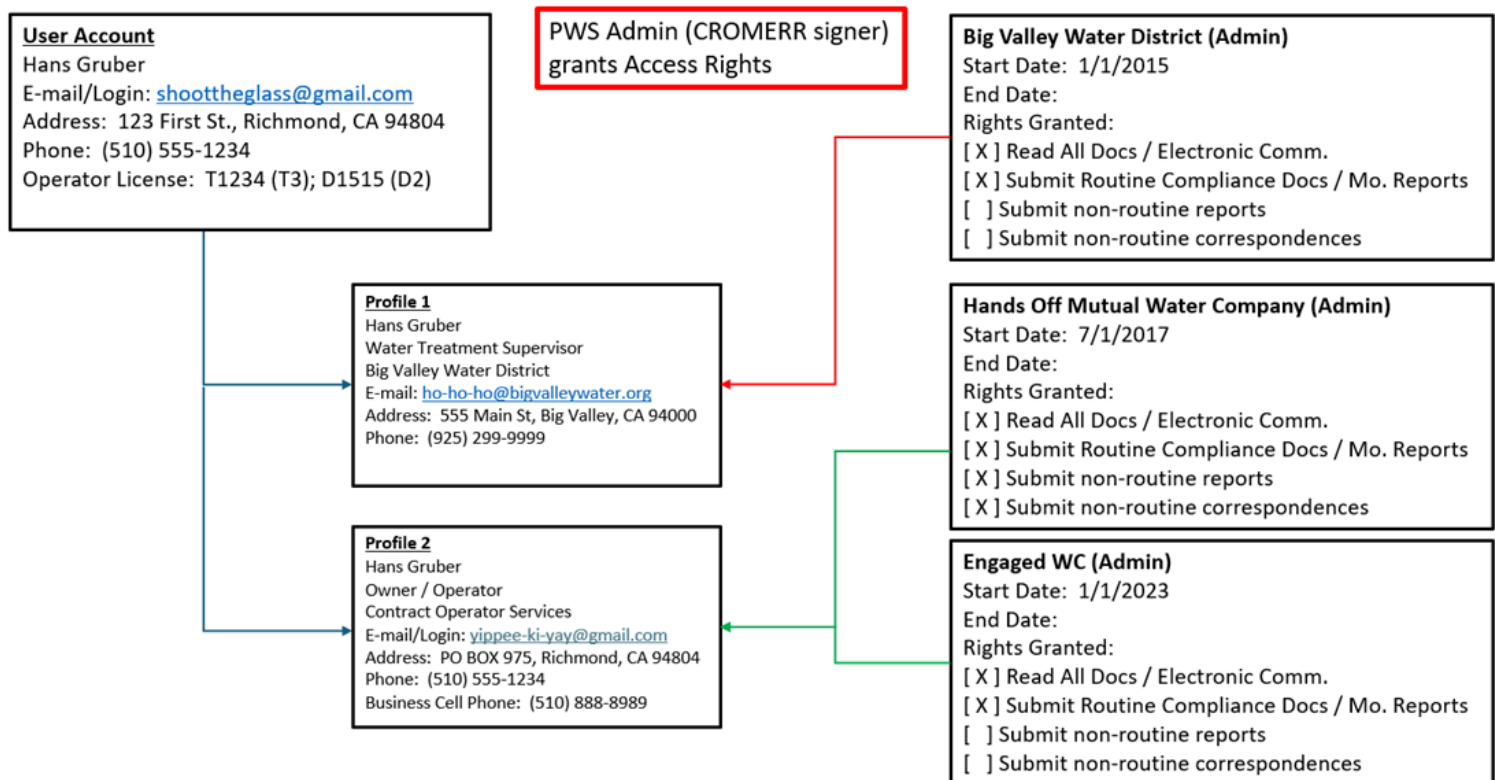
NOTE: A single person can be an administrator of multiple PWSs.

Demonstration Steps:

1. For the DDW Administrator role, demonstrate the ability to:
 - a. Configure all user accounts, profiles, permissions, etc.
 - i. Review/approve/modify/reject requests from users of WaterTAP for administrative-level access.
 - ii. Configure which responsibilities may be delegated for each user role type for all users.
 - iii. Review/approve/modify/reject access for any user of WaterTAP.
 - b. Approve requests to link user accounts to one (1) or multiple case management files (for our purposes, this will be to associate a single person as the PWS Administrator for one (1) or multiple PWS's).
 - c. Configure a list of standard roles/permission types and associated user types.
 - d. Deactivate user accounts, restrict access to users when improper activity is reported/detected.
 - e. Verify user credentials are current
 - i. If it is expired or not valid, WaterTAP will suspend user access.
 - f. Create and configure entities and establish associations with user accounts, including both linking multiple relationships to a single (1) controlling entity and linking a single relationship to a user account.
 - g. The ability to limit the creation of duplicate accounts without using personally identifiable information.
 - h. Ability to change / update user account information for any user.
 - i. Ability to view the history of all changes of roles and permissions associated with a profile, and the dates of when those changes were made and by whom.
 - j. Ability to change roles and permissions associated with any user.
 - k. Ensure the address associated with any PWS user account is a valid US-based address that meets all United States Postal System (USPS) requirements.
 - l. Demonstrate the ability to manage users.
 - i. Ability to view each user's current granted permissions and history.
 - ii. Copy / paste end-users permission profiles to other end-user permission profiles to save time when deploying complex permission profiles without recreating them.

2. For the **future PWS Administrator** role, demonstrate the ability to:
 - a. Create an account in WaterTAP.
 - b. Establish Multi-Factor Authentication (MFA) login.
 - c. Create up to one hundred and fifty (150) different role/title-based profiles in WaterTAP (see Figure 20-1).
 - d. From the role/title-based profiles, submit a request to the DDW Administrator to be a PWS Administrator for one (1) or more PWS(s).

Figure 20-1 – User Profile Example



3. For the **approved PWS Administrator** role, demonstrate the ability to:
 - a. Log into WaterTAP with MFA.
 - b. Review and update information related to the approved PWS Administrator profile.
 - c. Review information related to my water system(s).
 - d. Update information related to my water system(s).
 - e. Submit a request for information change.
 - f. Be able to have one (1) or multiple user profiles / roles / permissions within a single user account.
 - g. Review and approve or deny requests for users to be associated with my water system.
 - h. Be able to delegate specific authorities to any single user associated with my water system. Specifically, the authority to individually view, upload, prepare, edit, and/or submit documents and data on behalf of the approved PWS Administrator should be demonstrated for any single authority and any grouping of authority:

- i. Ability to individually view a single user associated with my water system's authorities.
 - ii. Ability to change a single user associated with my water system's authorities.
4. For the **approved single user**, without any delegated specific authority, demonstrate the ability to:
 - a. Log into WaterTAP with MFA.
 - b. Illustrate the lack of authority to individually view, upload, prepare, edit and/or submit documents and data.
5. For the **approved single user** with newly delegated specific authority, demonstrate the ability to:
 - a. Log into WaterTAP with MFA.
 - b. Once the approved PWS Administrator changes the approved single user's authority, demonstrate the single user's ability to now have the newly delegated authority to individually view, upload, prepare, edit and/or submit documents and data.
6. For the **approved PWS Administrator** role, demonstrate the ability to:
 - a. Demonstrate the ability for the PWS Administrator to manage users.
 - i. Ability to view each user's current granted permissions and history.
 - ii. Copy / paste end-user permission profiles to other end-user permission profiles to save time by allowing existing profile configurations to be reused without recreating them.

SCENARIO 2 - DATA / DOCUMENT SUBMISSION

The Bidder must demonstrate using a technical approach of a subset of functionality as described below based on the respective Bidder's Phase 1 Proposal responses to EXHIBIT C: FUNCTIONAL AND NON-FUNCTIONAL REQUIREMENTS.

Background Information / Context

WaterTAP will be used for data and document submissions, including acting as an intake portal for large data sets such as PWS lead service line inventories (one record per service address). It is expected that large data files, upwards of one million (1,000,000) records will need to be submitted all at once or in batches. WaterTAP will need the capability to intake large data sets both in a single submission, over multiple piecemeal submissions, and batch submissions while flagging / preventing duplicate submissions.

PWS users will need to be able to submit data and documents via WaterTAP in the following situations:

1. A single, one-time submission of machine-readable data.

2. A single, one-time submission of a document.
3. WaterTAP prompted submission of machine-readable data at an established dynamic frequency.
4. WaterTAP prompted submission of a document at an established dynamic frequency.
5. WaterTAP prompted submission of data in batch.
6. WaterTAP prompted submission of documents in batch.

Demonstration Steps:

The Bidder is expected to demonstrate the type of documents that may be utilized by their proposed solution.

Demonstrate the ability of the DDW Administrator to:

1. Set up a data reporting form with a pre-defined valid value type (e.g., demonstrate any two (2) of the following: alpha-numeric, text only, number only, date) and demonstrate how to create and modify valid ranges of results per field.
2. In a no-code environment, set up a data schema for data submission.
3. Assign different data reporting forms and/or configured document templates based on the characteristics of a record.
4. Configure and apply a retention policy on a per-document type or data type basis.
5. Configure deadlines for data reporting forms and configure document templates.
6. Configure conditional data logic / branching for data collection.

Demonstrate the ability for approved user(s) to submit data and documents by:

1. Adherence to CROMERR requirements:
 - a. Per US EPA, key performance-based criteria for CROMERR are:
 - i. Criteria for establishing a copy of record,
 - ii. Integrity of electronic documents,
 - iii. Opportunity to review and repudiate copy of record,
 - iv. Validity of electronic signature, and
 - v. Determination of the identity of the individual who is uniquely entitled to use a signature device.
 - b. Including the ability to review data / documents prior to submission and requiring electronic signature for submission, as well as the ability to review submitted data / documents after submission.
2. Capability to intake large data sets, of up to a million (1,000,000) records, both in a single submission and over multiple piecemeal submissions while flagging / preventing duplicate submissions.

3. Capability to display previously submitted data side by side with a new submission.
4. Ability to ingest a large data set, similar to the complexity of the provided files found in the Data Examples Folder in the EXHIBIT H: DATA CONNECTIONS, with a minimum of a million (1,000,000) records in a single submission.
5. Demonstrate real-time validation of invalid values (but allow the approved user to still submit values that have been flagged as invalid).
6. Ability to save draft documents or data submissions as in progress status and come back later to complete the submission.

Demonstrate the ability for a staff role to:

1. Be able to implement a systematic process for the entire lifecycle of documents from creation to disposal, to ensure documents are organized, secure, accessible, and up-to-date.
2. Ability to push/pull data from disparate systems through WaterTAP.
3. Add customized “notes” to submissions which are only viewable by internal staff.
4. Track adherence to deadlines for data / document submissions.
5. Use an efficient paperless document storage and management system, with simplified metadata for streamlining, “filing” and “retrieving” appropriate documents / data.
6. Attach submitted data and documents to a specific case file. Demonstrate at least one (1) data file and one (1) document file.
7. Maintain version history of submissions.

SCENARIO 3 - NO CODE ELECTRONIC DATA FORM CREATION, Q&A FORMAT, DATA FIELD VALIDATION, FORM VALIDATION AND CROMERR SUBMISSION PLUS CREATE OUTPUT DATA TABLES CONTAINING ONE OR MORE SELECTED FIELDS

The Bidder must demonstrate using a technical approach of a subset of functionality as described below based on the respective Bidder's Phase 1 Proposal responses to EXHIBIT C: FUNCTIONAL AND NON-FUNCTIONAL REQUIREMENTS.

Background Information / Context

It is envisioned that the following steps will be taken to create a new electronic reporting requirement in WaterTAP:

1. Create a new reporting requirement and modify an existing requirement.
2. Identify the applicability of the requirement (PWS characteristics).
3. Identify the data elements and valid values needed to satisfy the new requirement.
4. Identify how each data element should be stored (as a new data point/new stand-alone table or as

a new data point value in an existing table).

5. Create a no-code electronic data “form”.
6. In parallel, create a no-code Question and Answer to prompt each group of responses (desirable).
7. Notify PWS of the new reporting requirement.
8. Track PWS response to the new reporting requirement (opening file, starting the process, completing the process). Send reminders, when appropriate.
9. CROMERR compliant submittal and acknowledgement.
10. Routing submitted data to the relevant DDW office/unit/staff for review and for acceptance or rejection.
11. Acknowledge acceptance of data to PWS.
12. Identify problem(s) with submittal and send the form back to PWS for corrections and identify a new due date for corrections.

No-code Electronic Data Form

DDW is required to collect a wide variety of data and information from a variety of PWS's. The information required from a PWS may vary based on many factors and is often dependent on whether a condition presented is true or false.

As DDW transitions to WaterTAP, current reporting forms will need to be redesigned and set up in WaterTAP to collect data. Some reporting forms are recurring and will remain the same over time. Other reporting forms may be updated each calendar year or another other predefined time period.

Demonstration Steps:

Demonstrate the ability, in a no-code environment, of the DDW Administrator to:

1. Enter a set of questions to create an electronic data reporting form.
 - a. The allowable format of the answers (number, text field, phone number, addresses, city, zip code, other special format) can be defined with an allowable range of values (positive numbers only, within a range of numbers), if applicable.
 - i. Some combination of data fields may need to be validated together, i.e., United States Postal Service (USPS) address verification.
2. Create, modify, and remove a multi-level electronic form in a development environment:
 - a. Level 0 – general Information (all PWS Administrators must answer). Identify field labels to be used (existing or new).
 - b. Level 1 – if the answer to one of the Level 0 questions in the general information is **true**, then ask the following series of questions and if the answer to any of the Level 1 questions is **false**, demonstrate both no additional questions and ask a different series of questions. (Using an if-then-else logic to set up questions).

- c. Level 2 – demonstrate the ability for additional questions based on the answer to Level 1 questions.
3. Use a natural language type process to prompt respondents for responses and allow additional text or examples to be provided.
 - a. Examples shall be linked via hyperlink in WaterTAP for staff to access, and,
 - b. Examples shall be linked via a hyperlink outside WaterTAP and hosted on an external website.
4. As data is entered and the user tabs/moves away from the field, present potential data error alerts (red squiggly underline).
5. When a user completes all the fields, present a summary view and any remaining data error(s).
6. Ability for a DDW Administrator to set up a data reporting table with rows and columns that are customary for spreadsheet users.
7. Ability to create and modify reminders, configure the conditions that trigger an event, and what the reminder notification messaging is.
8. Allowing the setting of tab order for efficient data entry (move down or move right each time tab is pressed) to minimize mouse clicks.
9. Ability to accept an upload process to copy data (upwards of one million (1,000,000) records) from an Excel spreadsheet into the reporting form.
10. Ability to ingest a .csv or .xml format to accept data when a machine-readable data file is required.
11. Ability for a Question/Answer interview format to provide additional assistance to PWS users.
12. Ability to show the submittal of the required information via a CROMERR compliant method.

Workflow Tracking / Oversight Management

Demonstrate the:

1. Ability to notify the responsible users of readiness of data records for review.
2. Ability to present the compliance status with a requirement – no action taken by PWS, in-progress, completed.
3. Ability to route and re-route collected forms to internal users for review and acceptance.
4. Ability to show the creation of an output report that will assist internal users in reviewing data.
5. Ability to create a user-friendly view of collected data to facilitate review by internal users.
6. Ability to display a related (previous year's) report side-by-side that will assist internal users in reviewing the data.
7. Ability to allow internal users to accept or reject submitted data.
8. Ability to allow internal users to send back rejected data form(s) with comments and provide a new due date.

Transparency

Demonstrate the:

1. Ability to display reported information for public users.
2. Ability for internal users to display the “status” of compliance with the requirement (submitting data progress tracker).

SCENARIO 4 - NO CODE BUSINESS RULES BUILDING ENGINE

The Bidder must demonstrate using a technical approach of a subset of functionality as described below based on the respective Bidder's Phase 1 Proposal responses to EXHIBIT C: FUNCTIONAL AND NON-FUNCTIONAL REQUIREMENTS.

Background Information / Context

The applicability of drinking water regulations is generally based on a series of criteria and the monitoring requirements are based on water system size, population served and/or number of service connections, the source water type being treated and the type of treatment that is provided.

In addition, there may also be increased monitoring requirements based on an initial monitoring result or a monitoring “event” – the average of initial and confirmation samples. Detections of one analyte may also trigger increased monitoring of a different analyte.

As an example, the recently adopted hexavalent chromium maximum contaminant level can provide some insights on water quality monitoring. The frequently asked questions (https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/docs/cr6-mcl-public-faq.pdf) also provides additional information about the new regulation.

In this case:

1. The hexavalent chromium Maximum Contaminant Level (MCL) is applicable to community & nontransient non-community water systems.
2. Community and nontransient non-community water systems must complete initial sampling by April 1, 2025. PWS's are required to collect one sample by this date unless a qualifying sample can be grandfathered.
3. If the single sample is above the MCL value, a water system may collect confirmation samples.
4. If the single sample or average of the samples (initial + confirmation) is above the MCL value, the water system is required to begin quarterly monitoring.
5. If the running annual average is above the MCL, the water system has exceeded the MCL and must submit a compliance plan.

Hexavalent Chromium MCL Compliance Dates
(from Table 64432-B in 22 CCR 64432)

System Size <i>(Service Connections Served on October 1, 2024)</i>	Hexavalent Chromium MCL Compliance Date
10,000 or greater	October 1, 2026
1,000 to 9,999	October 1, 2027
Fewer than 1,000	October 1, 2028

When WaterTAP is built, DDW staff and management will use WaterTAP to track every phase of the rule implementation.

https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/SWRCBDDW-21-003_hexavalent_chromium.html

For rule implementation, the steps may include:

1. Identifying applicable water systems.
2. Notifying applicable water systems of the new requirement(s).
3. Tracking and determining if initial monitoring requirements are completed.
4. If a single sample is collected and has exceeded the MCL, determine the compliance value (PWS's must notify DDW that a confirmation sample will be collected and identify in chain of custody that a sample is a confirmation sample).
5. Determining if the MCL is exceeded (either a single sample or compliance calculation) and whether a compliance plan will be required.
6. If triggered, notify PWS that a compliance plan is required and the applicable due date.
7. Tracking and determining if the compliance plans are received on time.
8. Routing a submitted compliance plan for review.
9. Documenting DDW review and comments on the acceptability of the compliance plan.
10. Identifying the next monitoring due date.

Demonstration Steps:

For demonstration purposes, we are not expecting the vendor to build the hexavalent chromium monitoring tracking and compliance determination module. However, we are looking for the vendor to demonstrate the following functionality:

Business Rules Engine

For the business rules engine (whether an action is taken, in this case, collect a sample within a given timeframe and have the laboratory analyze the sample and submit a result in a timely manner), the Bidder needs to demonstrate the:

1. Ability to establish a timeframe of when the action must be taken
 - a. Both a single occurrence bound by two dates,
 - b. Recurring occurrences at a set frequency.
2. Ability to specify the required action that must be completed during the timeframe,
 - a. Such as collecting and reporting the analysis of a water sample.
3. Ability to connect to another database to receive data
 - a. Such as analytical results and associated metadata.
 - i. The actual database for intaking water quality data is CLIP.
 - ii. It is not expected that real data be used in the demonstration but assumed the result will include:
 - A. Sample ID,
 - B. Sample date/time,
 - C. Sample submission date/time,
 - D. Sample analysis date/time,
 - E. Analytical results,
 - F. Analytical method used
 - G. Laboratory performing the analysis,
4. Ability to check the date the action that was taken is on time,
5. Ability to verify the time between two events is within the maximum allowed amount of time,
6. Ability to verify that, at the time the action was taken, the entity has the appropriate certification,
7. Ability to track and display on an ongoing basis whether a required action has been completed by the time required,
8. On the DDW regulatory dashboard, display a summary view of whether the required action has been completed by PWS's subject to the requirement.
9. Ability to generate a list of PWS's that:
 - a. Missed a deadline
 - b. Failed a requirement
10. Ability to export the list of water systems for follow-up actions.

Business Rules Engine Processing

For specified data points (e.g., where compliance decision support functionality is required within

WaterTAP) demonstrate the ability to perform data screening and mathematical calculations on both incoming data and data already received.

Data Screening, Mathematical and Comparison Operations:

1. Demonstrate the ability to evaluate whether the most recent data received is above the maximum value defined in a maximum allowable value data table through a look-up process. The maximum allowed value may be conditional based on the sample collection date or result. (Note: Allow for new or changed maximum allowed values that are date bounded).
2. Demonstrate the ability to calculate whether the most recent value received is significantly higher or lower (+/- 30%) than the historical average (such as the rolling average of the last three years).
3. Based on the most recent value, if it is over the maximum value, be able to alert and create a new work requirement (such as, collect an additional sample, issue public notification, etc.), in a predefined time period (e.g., collect another sample within the next 7 days) and alert the PWS and DDW staff of the identified issue and new work requirement that was created.
4. Demonstrate the ability to calculate a running annual average value of a set time period (such as the average of values from the last four calendar quarters). Compare the average value to the maximum allowable value.
 - a. If the value is less than or equal to the maximum allowable value, no action is required.
 - b. If the value exceeds the maximum allowable, demonstrate the ability to trigger an alert on the user dashboard.

No-Code Business Rules Development

The goal of the demonstration is to demonstrate the ability to build a set of rules in a no-code environment to apply the above requirements (applicability, action required, incoming data screening capability using embedded mathematical and comparison operations, follow-up and future actions that are created based on the submission of new data). Ideally, demonstrate a business rule builder to help facilitate the no-code rule building process.

Also, it is important to keep in mind that the overall process is dynamic and must be flexible to allow changes in the future (it should not be hard coded but use look-up functions with start and end dates instead of all business rules and values used for comparison functions).

Demonstrate the:

1. Ability to create new rules/requirements in the Business Rules Engine that will apply to all or a specific subset of entities.
2. Ability to revise existing rules/requirements in the Business Rules Engine that will apply to all or a specific subset of entities that are managed with a history tracker to ensure the appropriate rules/requirements are applied during the applicable timeframes and continuity of applying the rule/

requirements (including continuing use of analysis of data from the previous rule/requirement when evaluating the new rule/requirement).

3. Ability for the Business Rules Engine to update the applicability of an existing rule to an entity when that entity's characteristics change (i.e., a change of water system type resulting in the applicability of new requirements).
4. Ability to develop requirements in a no-code environment, with embedded calculations and data comparison functions that depend on data both internal and external to WaterTAP.

No-Code Business Rules Engine Identification

Please demonstrate how a no-code business rule engine can be structured so that it can identify the:

1. Applicability of a rule,
2. Monitoring due dates,
3. Determination of a “compliance value” and “compliance status” that will be used to determine applicable next steps, and
4. Continued determination of the next applicable compliance step as new information is submitted.

SCENARIO 5 - WORKFLOW / PUBLIC WATER SYSTEM INTERACTION / COMMENTS WITH REQUIRED RESPONSE

The Bidder must demonstrate using a technical approach of a subset of functionality as described below based on the respective Bidder's Phase 1 Proposal responses to EXHIBIT C: FUNCTIONAL AND NON-FUNCTIONAL REQUIREMENTS.

Background Information / Context

Anyone wanting to create a new public water system or making changes to an existing public water system must submit a permit application package to DDW for review and approval.

Sections 116525 through 116550 of the Health and Safety Code provides DDW with the authority and additional information is available here as background:

https://www.waterboards.ca.gov/drinking_water/certlic/drinkingwater/Permits.html

Assuming that a public user is applying for a permit to construct a brand-new public water system. The public user is ready to submit a [Preliminary Technical Report](#) and a [Water Supply Environmental Intake Form](#). The user has created a user profile and the WaterTAP administrator has approved the user profile to submit documents to DDW via WaterTAP.

Internal staff often work in a collaborative environment, where documents may be reviewed in tandem with other staff. It is envisioned that WaterTAP will allow the sequential or simultaneous review of submittals

and allow staff to enter notes and comments that can be viewed by co-reviewers. A summary of the notes and comments can then be generated to facilitate the drafting of a formal response back to the applicant.

Demonstration Steps:

The left-most column labeled "Permit Request Process" in the tables below gives additional context to provide the Bidder with context for the demonstration. The demonstration instructions are in the right most column, labeled "Processes to Demonstrate" in the tables below.

Phase 1 — External User Interface for Submission of Request

Permit Request Process:	Processes to Demonstrate:
1. Submission of basic information — contact information details, project owner, physical address of the proposed water system, lat/long information, the expected number of users per day, the expected operating pattern of the business.	1. Submission of standardized data set, including data, document formats, and creation of a Case Management file to include all related submissions. Also, demonstrate the ability to map imported or submitted data with the configured dataset structure and allow data/documents which are updated as needed or on a recurring basis to be appended to an existing data/document label.
2. Submission of a Permit Application Form.	2. Submission of a fillable form with associated electronic content management filing and the ability to insert relevant tracking information. Also, demonstrate the ability to integrate with other software.
3. Submission of two attachments – one titled Technical Report and the other titled Environmental Report.	3. Submission of multiple documents with associated electronic content management filing.
4. Review of application by submitter prior to submission.	4. Ability to view and attest to the accuracy of submission prior to finalizing the submission.
5. Confirmation of receipt of permit application.	5. Ability to generate a receipt of submission, display it on the screen, and e-mail a copy of the receipt to the user, including the Tracking / Case Management identifier.

Phase 2 — Internal User Interface for Processing Request

Demonstrate a user-friendly interface for the DDW users that are tasked with receiving drinking water permits and associated workflow.

Permit Request Process:	Processes to Demonstrate:
1. Staff maintain a complete record of the application, which may include multiple records.	1. Ability to view application package information (i.e., multiple submissions under the same Case Management file).
2. Staff review individual submissions within the larger application.	2. Ability for the user to access each attachment and review the submitted information.
3. Staff will share the application with other staff to facilitate the review.	3. Ability to add the application to one or more other internal user's workflow.
4. Multiple reviewers may perform their review of the application concurrently.	4. Ability for multiple internal reviewers to comment and work concurrently on the same application. The comments should be collected from different reviewers and can be seen by all reviewers (collaborative review).
5. Staff may require additional submissions from the external approved user if there is missing or inadequate documentation, for example, if there are items missing from the submission such as: a. Well drillers log b. Well pump capacity test results c. Preliminary water quality test results	5. Ability to prompt the external user (i.e., the application submitter) to provide additional information.
6. Staff will document their review and findings.	6. Ability to consolidate the review into a single record, such as generating a summary list of comments that can be inserted or attached to a

	Microsoft Word document, a built-in letter generator, or other method for consolidating and formalizing feedback to the external user.
7. Staff will then add their findings to the “official record” and send a copy to the external user.	7. Ability to maintain a copy of the “official record,” display a copy of the “official record” on the signee’s dashboard and send a copy of the “official record” to external users (requesting document).

Phase 3 – Feedback Loop

The external user will need the ability to address feedback from internal users and provide additional information for review. This will include the need for the external user to at all times be able to view the status of the application review process, view any responses from DDW, and submit additional or corrected information.

Demonstrate:

1. The ability for internal and external users to view the status of a submission, including multiple preset statuses (e.g., Submitted, Under Review, Incomplete, Rejected, etc.).
2. The ability for the external user to view any responses.
3. The ability for the external user to update incorrect submissions or submit missing documentation with the associated electronic content filing.
4. The ability for the internal user to be notified of changes to the overall application and review again.

Phase 4 – Regulatory Required Response

Once the above feedback loop is complete, there needs to be the ability to establish requirements and a mechanism for the external user to demonstrate compliance with said requirements.

Specific to the context of this scenario, please also demonstrate:

- The ability for the internal user to identify a requirement and associate a timeframe for completion by the external user.
- The ability for the requirement to be displayed on the external user’s profile.
- The ability for high priority requirements to be displayed differently on the external user’s profile than low or medium priority requirements.
- The ability for the external user to submit data or documents in response to the requirement.
- The ability for the internal user to review and accept/deny the submission(s) for completing the requirement.

SCENARIO 6 - REPORTING AND TRANSPARENCY

The Bidder must demonstrate using a technical approach of a subset of functionality as described below based on the respective Bidder's Phase 1 Proposal responses to EXHIBIT C: FUNCTIONAL AND NON-FUNCTIONAL REQUIREMENTS.

Background Information / Context

One of the primary responsibilities of DDW is to identify risks and trends related to drinking water quality at PWS's. This is done by using information from internal and external data sources and using analytical tools to analyze, display and visualize data. The analysis required could be for a single or multiple source(s), for a single water system, for a local area, regional area, or statewide and may be performed inside or outside WaterTAP. The majority of the needed analysis/reports are repetitive in nature and the ability to create, store and share canned reports that are set up by the WaterTAP administrator is critical. In addition, DDW internal users need to have the ability to create, save, copy and share ad hoc reports.

Drinking water quality can vary over time due to seasonal and environmental changes, such as those caused by use patterns, droughts, and over-drafting. There is continued interest from the public, research, and governmental entities. An effective and flexible platform must be available to facilitate the reporting, publishing, visualization, connecting, and sharing of data.

Demonstration Steps:

The left-most column labeled "Reporting Process" in the table below provides additional context to provide the Bidder with context for the demonstration. The demonstration instructions are in the right most column labeled "Processes to Demonstrate" in the table below.

Specific to the context of this demonstration, please also demonstrate the ability to:

Reporting Process:	Processes to Demonstrate:
1. Connect underlying data to data reporting and geospatial mapping tools (e.g. Tableau, Power BI, ArcGIS, etc.)	1. Demonstrate the capability to connect to and access various types of data and documents—including structured data (e.g., tabular datasets, relational databases), semi-structured data (e.g., JSON, .xml), and unstructured content (e.g., PDFs, Word documents, images)—from a range of sources. These sources may include on-premise systems (e.g., SQL Server, Oracle), cloud data warehouses (e.g., Azure, Snowflake), external APIs, electronic content management (ECM), or

	data/documents submitted through WaterTAP. The primary objective is to enable seamless integration of these data sources into reporting and visualization platforms such as Tableau, Power BI, ArcGIS or similar.
2. Allow externally built reports and visualizations (e.g. Tableau, Power BI, ArcGIS, etc.) to be viewable or retrievable from within WaterTAP.	2. Demonstrate the ability to embed reports and visualizations created in reporting platforms (e.g., Tableau, Power BI, ArcGIS) directly within WaterTAP, allowing users to view them seamlessly in the application. Additionally, show how users with appropriate permissions can access and download the underlying data associated with these reports and visualizations.
3. Internal Reporting – a. Configure a standard inventory of reports that can be retrieved directly through WaterTAP a. Configure, capture and review key performance indicators for internal reporting	3. Internal Reporting – 4. Ability to create reports directly within WaterTAP's interface, using available data sources. Users with configured permissions should be able to view these reports through the front-end and download. 5. Ability to create reports that display key performance indicators.
4. Create custom reports directly through WaterTAP	4. Demonstrate the ability to support backend collaboration features for creating reports within WaterTAP —such as sharing and archiving reports along with their underlying queries, data curation steps, and configuration settings. These capabilities should be accessible to users with appropriate permissions to support versioning, transparency, and team-based report development (backend collaboration)
5. Use frequency tracking	5. Demonstrate the ability to track user activity related to reports and visualizations - specifically, the frequency with which different types of users view

	reports/visualizations or download associated data. This should apply to both reports developed directly within WaterTAP and those embedded from external reporting platforms (e.g., Tableau, Power BI, ArcGIS).
--	--

SCENARIO 7 - PUBLIC AND AUTHENTICATED USER COMMUNICATIONS

The Bidder must demonstrate using a technical approach of a subset of functionality as described below on the respective Bidder's Phase 1 Proposal responses to EXHIBIT C: FUNCTIONAL AND NON-FUNCTIONAL REQUIREMENTS.

Background Information / Context

DDW routinely receives a wide variety of inquiries and regulatory submittals related to drinking water quality and regulatory compliance from the public and regulated entities. Communications may come in the form of an in-person meeting, a phone call, e-mail or letter. Having a centralized Customer Relationship Management (CRM) system that will help DDW staff to keep track of all forms of communication (incoming and outgoing), outstanding issues (both DDW and external parties) and the history of previous interactions will increase DDW staff's effectiveness in providing timely customer service and ensuring consistency and transparency of the service provided.

Demonstration Steps:

For the CRM, please also demonstrate the following capabilities:

1. Demonstrate a comprehensive Communications Center so that internal users can quickly search and view the various types of communication / interactions / encounters with PWS and public users.
2. Integration of automated ECM filing for a subset of e-mail communications.
3. In-platform communications tools – demonstrate a secured platform to communicate bilaterally through WaterTAP between DDW user and PWS user with communications stored in ECM.
4. Phone communication – demonstrate how a DDW user can pull up previous interactions with callers using phone numbers, caller name, e-mail address, etc. and the result/outcome/notes of the previous interactions. Items that may still be in process, etc. Display all “open and completed” service tickets. Allow DDW users to append or create a new ticket to capture additional or new information from the caller.
5. In-person communication – demonstrate how a DDW user can create a new ticket to capture questions or inquiries from in-person interactions with the public/water system personnel and allow the routing of the inquiry to the relevant person/unit for response.
6. Web-based communication – demonstrate how a public user can use a web-based form to submit

an inquiry to DDW with screening questions that can help direct the inquiry. Demonstrate how an inquiry can be re-routed by DDW if the initial routing is incorrect.

7. Demonstrate the ability to create a profile for a non-WaterTAP public user to help consolidate inquiries that may have been submitted on multiple channels (e.g. phone call and e-mail).

SCENARIO 8 - GENERAL SYSTEM OPERATIONS

The Bidder must demonstrate using a technical approach of a subset of functionality as described below based on the respective Bidder's Phase 1 Proposal responses to EXHIBIT C: FUNCTIONAL AND NON-FUNCTIONAL REQUIREMENTS.

Background Information / Context

It is envisioned that WaterTAP will be the daily starting point for DDW's internal and external users to access all DDW communications and tracking/reporting/data systems. Once a user is authenticated by WaterTAP, WaterTAP must allow users to access other Water Board's hosted DDW data systems without requiring the user to log-in again.

As the main portal of information, WaterTAP will be used in the office and in the field by PWS and DDW staff and must be accessible using the most common and popular operating systems, internet browsers, and devices. While different operating systems (OS), browsers, and devices can be used, the general feel and user experience should be as similar as possible.

With some PWS's and facilities outside the cellular/Wi-Fi coverage area, WaterTAP must allow users to sync and update locally stored data and allow WaterTAP to operate in both online and offline modes. While in offline mode, users must be allowed to review, prepare and update information that was last synced and allow new information to be stored on the device. The locally stored updated/new information will then be submitted and synced once internet access is established again.

To assist users in completing tasks and finding information, search and help functions must be made available.

To allow the import and export of data, WaterTAP must allow DDW administrators to define and configure import and export data file formats, including but not limited to .csv and .xml formats.

Demonstration Steps:

Demonstrate general system operations through:

1. Ability to use the interface via a computer, mobile phone, and tablet, including both iOS and Android. Compare and contrast the user's experience while completing the same tasks within the different devices.

2. Ability to utilize WaterTAP through at least three major browsers. Compare and contrast the user's experience for completing the same tasks within the different browsers.
3. Ability to provide an Americans with Disabilities Act (ADA) compliant user experience for various devices and browsers.
4. Ability for users to customize their dashboard view, for both internal and external users.
5. Ability for users to search for data and/or documents pursuant to their permissions.
6. Ability for the user to access another system, without a secondary login, that is embedded in WaterTAP.
7. Ability to utilize an .xml file generator.
8. Ability to reuse generated .xml format.
9. Ability to configure and export specified datasets to external systems.
10. Ability to reuse the configuration to create new / updated datasets for export.
11. Ability to import data in a no-code environment to existing tables.
12. Ability to append data in a no-code environment to existing tables.
13. Ability to use both basic and advanced search functions within WaterTAP.
14. Ability for users to find context specific help: menu, tips, etc.
15. While already logged into WaterTAP,
 - a. Ability to launch other applications without prompting the user to sign in again.
16. Ability to use the application in offline mode.
 - a. Allow end-users to view information.
 - b. Allow end-users to fill out forms in an offline format and sync with WaterTAP once back online.

SCENARIO 9 - DRAFT DOCUMENT COLLABORATION, REVIEW AND FINALIZATION

The Bidder must demonstrate using a technical approach of a subset of functionality as described below based on the respective Bidder's Phase 1 Proposal responses to EXHIBIT C: FUNCTIONAL AND NON-FUNCTIONAL REQUIREMENTS.

Background Information / Context

Draft Document Review

DDW staff utilize document templates and mail merge functions for the creation of standard customized business documents. Each customized document can further be routed to team members where simultaneous or sequential editing (track changes), reviewing, and commenting is possible. Documents are finalized with electronic signature and filed into an ECM system.

It is envisioned that WaterTAP will be the starting point for all formal documentation. WaterTAP will be used

to launch the process for creating all formal communications and documents.

Currently, DDW staff will start drafting a document using one of the available document templates, add in the relevant details of the situation and then route the document to DDW management team for review. It is typical that only invited staff should have access to the document and track changes, versioning and comment features will be available to help facilitate the simultaneous review and editing of the draft document.

Once the document is ready to be finalized, it is converted into a PDF document and digitally signed.

After a document is signed, all comments and previous versions of the document must be deleted. It is further envisioned that WaterTAP will guide DDW staff in processing the signed document, help issue the signed document to the PWS and store the document in an ECM system with appropriate attributes. A unique identifier (such as a serial number) should also be attached to each final document so that it can be retrieved easily from WaterTAP and ECM systems in the future.

Demonstration Steps:

As a DDW administrator, demonstrate the:

1. Ability how WaterTAP can be configured with different prescribed templates when different conditions are met.
 - a. e.g., a situation is approved and denied.
2. Ability to see how a template can be populated with data.
3. Ability to add pre-filled data based on my permissions.
4. Ability to edit pre-filled data.
5. Ability to allow additions of customized text or paragraphs.
6. Ability for a draft to be saved.
7. Ability to track changes.
8. Ability to prepare documents for final signature (accept all changes).

After the document is electronically signed, demonstrate the ability:

1. To guide users in issuing documents via:
 - a. Electronically via PDF,
 - b. Hardcopy printing, and
 - c. Filing to an ECM system.