

Exhibit A

PRELIMINARY WORK SCOPE

Task 1: Program Administration

Program administration includes project management, coordination, and planning meetings.

Task 1 Deliverables:

- a) Quarterly Progress Reports and invoices
- b) Final Reports

Task 2: Flood ALERT System Training for San Joaquin County Streams and Rivers

To maximize DWR's prior investments and to help ensure long-term operational success, a training program for the user community, system operators, and maintenance personnel is proposed. The training is aimed at key stakeholders such as emergency operations, first responders, public works staff, agency officials, and the general public. The objective is leveraging data provided by the ALERT system to support informed flood response decision-making in San Joaquin County (County). Early training will provide an overview and enough information to start gaining experience. Later sessions leverage experience gained by the users since the initial training. This basic experience forms the foundation needed to address more advanced concepts necessary for long term system success.

The training is intended to occur in four sessions over a 24-month period. The first session will be scheduled for early fall in advance of the flood season followed by a second training sometime during the middle of flood season as schedules permit. The third and fourth sessions will occur in similar fashion during the following flood season. Each session will be designed as a two to three-day workshop.

The following outline lists the topics covered in the training. The exact composition for each training session will adjust according to audience needs. Evaluation forms completed by workshop attendees will be used to gauge workshop effectiveness.

Training Course Outline:

1. Contrail Software
2. ALERT & ALERT2 Theory and Operation
3. Maintenance Techniques Overview
4. Power Systems
5. Care and Calibration of Tipping Bucket Rain Gages (Precipitation)
6. Care and Calibration of Pressure Transducers (Stream Elevation)
7. Bubbler Gage, Shaft Encoders, UltraSonic, Radar Level Sensors (Stream Elevation)

8. Radio Frequency Considerations
9. Radio Repeaters
10. Maintenance Data Analysis
11. ALERT Data Transmitter

Task 2 Deliverables:

- a) Agendas, showing dates completed, of the four two to three-day training sessions
- b) Sign-in sheets of all participants in the course
- c) Memorandum summarizing completed workshop, issues encountered, and recommendations for improvement

Task 3: Installation of Stream Gages and Inundation Mapping

The County is expanding and upgrading the ALERT flood threat detection and flood response system. In addition, the County is developing inundation mapping to improve support for emergency flood response in the County. These maps are intended to provide information about the real extent of flooding which will aid emergency officials, first responders, and the general public in anticipating and reacting to a developing flood threat.

In the process of developing these inundation maps, it was determined that while the existing United States Geological Survey (USGS) stream gages in the area were sufficient to support the necessary hydraulic models, the gages are not positioned in locations to optimize use of the inundation maps. USGS gages located upstream and downstream of the critical flood inundation areas provide stage and flood data supporting hydraulic models. However, during a flood event, gage data upstream or downstream from a specific neighborhood may not have the same context to that neighborhood. Placing a stream gage directly in the target neighborhood, tied to the neighborhood-level inundation maps, will provide stream level information that will be a more appropriate match for the neighborhood-level maps. It will improve communication of flood risk by linking local inundation maps to the local gage, thereby eliminating the need for users to interpret data from more distant gages.

The County proposes to add up to five stream gages located where inundation maps are under development. In addition, a rain gage will be included with the new stream gages.

County will use the results from the Northern California ALERT2 Network Design and Transition Plan, for the Legal Delta, to plan the new ALERT2 rain/stream gages. The data will be shared with DWR and the National Weather Service (NWS) to support regional weather and flood forecast efforts. Information from these gages will be made available to the California Data Exchange Center (CDEC) website.

Subtask 3.1: Develop Inundation Mapping

The first step will be to develop inundation mapping supporting emergency flood response planning in the County at the proposed gage locations. The hydraulic modeling will be leveraged from earlier rounds of DWR emergency response grants and will be utilized provide information about extents of flooding to aid emergency officials, first responders and the general public in anticipating and reacting to a developing flood threat. Inundation mapping for each gage location will be prepared upon finalization of the selection of gage locations.

Subtask 3.2: Locate, Procure and Install ALERT2 Rain/Stream Gages

Critical locations and information needs will be identified, including critical stream stages and desired advanced warning times. Once the locations of the stream gages have been confirmed, the team will coordinate the process to upgrade to ALERT2. Inundation mapping will be related to stream gage locations to aid in identification of potential flood extents. The final step will be to procure, install, and verify operation of new and/or upgraded equipment.

Task 3 Deliverables:

- a) Hydraulic models and inundation mapping for each gage location
- b) Report listing all identified locations for new rain/stream gages and justification for the selected locations
- c) Up to 5 new ALERT2 rain and stream gages installed with an installation report to verify successful operation of all new/upgraded equipment
- d) Pictures of equipment and example data reports
- e) Cut sheets and specifications for purchased material

Task 4: Countywide Flood Fight Resource Stockpile and Containers

This task would involve implementing a flood fight resource stockpile and staging area system to include identification and physical development of stockpile locations, staging areas, and acquisition of materials and flood fight containers to enhance capability to protect critical infrastructure and respond to threats to levee integrity. This proposed County Flood Fight Resource Stockpile System would be coordinated so as not to conflict with the Operational Area's Stockpile System.

Sub-Task 4.1: Design of a District Regional Stockpile System (DRSS)

This sub-task includes identifying the location of long-term storage sites and pre-identified deployment staging areas with specific site inventories and response functions. High quality flood fight-based local flood emergency action plans/maps (flood safety plans) will provide the information needed for designing this more sophisticated stockpile system. Resource needs for implementing identified containment options for breach scenarios identified in flood safety plan development will be integrated into inventory plans for specific stockpile or staging locations.

The Funding Recipient will analyze completed local flood safety plans to identify scenario-based resource needs for supply staging areas that will supplement minimum standard inventories for general flood fight and public safety response needs. This effort will be coordinated with the Operational Area to ensure consistency and avoid duplication of effort. Based on this analysis, the Funding Recipient will determine long-term storage locations, operational staging areas and specific stockpile inventories.

This subtask will also establish procedures for accessing the stockpiles and use of pre-identified staging areas consistent with mutual aid and Standardized Emergency Management System (SEMS) processes in order to ensure rapid access to the right resources by field responders dealing with levee problems.

Sub-Task 4.2: Containers Acquisition

This sub-task will acquire materials and resources for the stockpile system and placement in

long-term storage areas in accordance with the system plan. Specialized containers for rapid movement of materials to staging areas will be acquired as needed. It is anticipated that up to two fully stocked flood fight containers will be procured under this subtask.

Task 4 Deliverables:

- a) District-wide flood fight and public safety stockpile system plan with pre-identified long-term storage sites, operational staging areas, and inventories
- b) District-wide stockpile access and deployment protocols and procedures
- c) Pictures of containers in their specified location on the Flood Contingency Map (FCM) the location all containers.

Task 5: Update Flood Safety Plans and Integrate LMA GIS Reference Tool

The County will be coordinating with Sacramento County to implement a GIS Framework developed by Sacramento County and DWR. Sacramento County Office of Emergency Services and their consultants have developed a web-based application called the Flood Operations Delta Decision Support System Tool (FODSST) to allow emergency managers to quickly view flood data to protect critical facilities within the Delta. The information in FODSST is based on best available flood related data collected to date from the Federal, State, and local agencies Sacramento, San Joaquin, Solano, Yolo and Contra Costa counties and Reclamation Districts located in the Delta. For this Project, the selected consultant will coordinate the tasks included herein with the County and consultant for the FODSST. This would include reviewing the work product delivered, identifying opportunities to include deliverables from this project into the FODSST, and help evaluate how the FODSST fits into training, Emergency Operations Plan – Base Plan (EOP) updates and the other related efforts identified in this request for proposals.

Once stream gages have been installed, information such as advance warning times, gages, triggers, response procedures, and monitoring gages will be incorporated into the Flood Safety Plans prepared for areas of the Funding Recipient. This task will update both elements of the Flood Safety Plan: procedures outlined in the EOP, and the GIS-based Flood Contingency Map (FCM). This task will update the EOP to be compliant with updates to the Flood Emergency Management Agency (FEMA) Comprehensive Preparedness Guide (CPG 101) version 3 (September 2021), and updates to the National Incident Management System Complexity Guidance Document, and Training Requirements.

Task 5 Deliverables:

- a) FODSST web based dashboard
- b) Updated Emergency Operations Plan – Base Plan (hard copy and PDF)
- c) Updated Flood Contingency Maps (hardcopy, PDF, and GIS Geodatabase files)

Task 6: NIMS/SEMS Training

This task would involve implementing a flood fight resource stockpile and staging area system to include identification and physical development of stockpile locations, staging areas, and acquisition of materials and flood fight containers to enhance capability to protect critical infrastructure and respond to threats to levee integrity. This proposed District Flood Fight Resource Stockpile System would be coordinated so as not to conflict with the Operational Area's Stockpile System.

Under Task 6, A single combined tabletop exercise and G0402 course will be conducted with County staff involved with flood emergency response activities within the County. The goal of the exercise will be to test flood safety plans in the aftermath of the January and February 2017 and December 2022 – February 2023 extended storm events, as well as based on recent updates made under Task 5. The G0402 course will be geared toward district management, elected members, and staff to gain a better understanding of the Standardized Emergency Management System/National Incident Management System (SEMS/NIMS) process and their agencies' role in a response effort. Following the combined tabletop and G0402 training course, an after-action report will be developed that will summarize findings, opportunities for improvements, and follow- up action items.

Task 6 Deliverables:

- a) Tabletop Exercise and G0402 course agenda
- b) Training Materials and Handouts
- c) Conduct tabletop exercise and G0402 course
- d) Final After Action Report