

28 February 2019

MEMORANDUM

To: Cosumnes Subbasin Working Group

From: Anona Dutton, P.G., C.Hg., EKI Environment & Water, Inc. (EKI)
John Fio, EKI
Kristyn Lindhart, EKI

Subject: **Quality Assurance and Quality Control (QA/QC) Plan**
Cosumnes Subbasin, Sacramento County, CA
(EKI B80081.00)

As described in “EPA Requirements for Quality Assurance Project Plans” (EPA QA/R-5), a QA/QC Plan integrates technical and quality aspects of a project, including planning, implementation, and assessment. The QA/QC Plan provides a structured system of policies and procedures to ensure the work process, products, and services satisfy stated specifications and expectations. For the Cosumnes Subbasin Groundwater Sustainability Plan (GSP), the specifications are defined by the Sustainable Groundwater Management Act (SGMA), and the expectation is that long-term groundwater sustainability is achieved within the Cosumnes Subbasin.

The SGMA requires that entities involved in the development and implementation of a GSP follow associated “best management practices” that employ the “best available science.” As defined, best management practices (BMPs) are technologically and economically effective, practicable, and based on best available science. The use of best available science is required in virtually every aspect of the GSP and refers to the use of sufficient and credible information and data, specific to the decision being made and the time frame available for making that decision, “that is consistent with scientific and engineering professional standards of practice” (23 CCR §351(h)). Development and analysis of reliable technical information is essential to ensuring that the Cosumnes Subbasin GSP will not only meet SGMA regulations but will support the achievement of long-term groundwater sustainability within the Cosumnes Subbasin. Moreover, the Cosumnes Subbasin GSP content information must be sufficiently detailed and readily comparable with other GSPs (23 CCR §350.4(b)).

This QA/QC Plan ensures that work products and deliverables related to the Cosumnes Subbasin GSP are developed using standardized methodologies that are appropriate to each individual work product and undergo review for conformance with applicable standards. The work products and standards for this QA/QC Plan include:

- Data collection and compilation to ensure data being used is the best available science (23 CCR§ 351(h));
- Maintenance of a project bibliography, which will list references and technical studies used to develop the GSP (23 CCR§354.4(b));
- Reporting standards for the Data Management System and Geodatabase (23 CCR §352.4);
- Development of the water budgets (23 CCR §354.18), numerical modeling (23 CCR §352.4(f)), and other GSP components; and,
- Preparation of written work products and graphics including map-based figures (23 CCR §352.4(d)).

For each of the above work products, at least one EKI staff member who did not perform the original work will review and provide updates/comments on the work. The review will assess whether the work: (1) supports compliance with the SGMA Regulations, (2) was developed using the best available information and science (23 CCR §351 (h)), (3) meets appropriate technical and industry standards (23 CCR §352.4), (4) is sufficiently detailed and readily comparable with other GSPs (23 CCR §350.4(b)), (5) is presented in “plain language” (23 CCR §351 (w)), (6) contains all appropriate Plan contents (23 CCR §354), and (7) reports information using descriptive text, tables, and/or graphics, as specifically required in the GSP Regulations (e.g., water budget information will be reported in both tabular and graphical formats (23 CCR §354.18). Upon a final review by a senior EKI staff member, the draft work product will be updated and presented to the Cosumnes Subbasin Technical Advisory Committee (TAC), Working Group, and Basin stakeholders.

As described in our Work Plan, each major work product for the Cosumnes Subbasin GSP will be developed in a transparent and collaborative fashion such that the TAC and Working Group have the opportunity to provide additional QA/QC and input. The work effort of each major task or subtask will be documented as summarized below.

- **Technical Presentations** will be made on a regular basis to the TAC and Working Group to provide for an open and transparent process and opportunity for input as key elements of the GSP are being developed. This approach ensures that there will be “no surprises” when the Draft Technical Memoranda (see below) are reviewed, which streamlines the review and revision process because major issues have been vetted by all parties during the development stage.
- **Draft Technical Memoranda (TM)** and associated tables and figures will be submitted for review and comment by the TAC and Working Group. The Draft TMs reflect input received from the associated technical presentations and drafted accordingly to support key GSP elements. The Draft TMs will not be finalized; rather the suggested revisions to the Draft TMs will be incorporated as appropriate into the appropriate chapters of the Draft GSP.

- The **Cosumnes Subbasin GSP** will be compiled from the existing GSP components along with additional components such as Administrative Information (23-CCR §354.4–354.6), documentation of notice and communication (23-CCR §354.10), and “additional plan elements” (as applicable, and listed in CWC §10727.4). The GSP will be structured to conform with the GSP regulations, GSP Annotated Outline, and Preparation Checklist for GSP Submittal. As described below, the GSP submittal process includes multiple review levels to ensure input from TAC, Working Group, and Basin Stakeholders.
 - **Administrative Draft GSP** prepared for TAC and Working Group review and revised based on comments received.
 - **Public Draft GSP** provided to Basin stakeholders as required by CWC §10728.4 for review and feedback. Per CWC §10728.4, a public hearing will be held at least 90 days after providing notice to a city or county within the area of the proposed plan.
 - **Adopted GSP** and associated deliverables will be submitted to DWR by the Working Group on behalf of the GSAs.

During the GSP development process selected work products, resources and underlying data will also be made available for public review and input on the Working Group website (<http://cosumnes.waterforum.org>).