



Laboratory Supplemental Information Sheet

This information sheet is intended for laboratories who are analyzing groundwater samples from CCGC member wells. The following information is intended to summarize the monitoring requirements of the CCGC Monitoring Work Plan and associated QAPP to ensure consistent data collection and analysis. It is a requirement that all laboratories analyzing samples for compliance with the Irrigated Lands Regulatory Program be certified for the specific methods being performed and data must be loaded to GeoTracker.

Sample Collection

- Submit collection Standard Operating Procedure (SOP) to CCGC to ensure comparability with CCGC QAPP.
- Samples must be collected using clean hands method and collected as close to the well head as possible and prior to any filters or water treatment systems.
- Latitude / Longitudes must be recorded at the well location at the time of sample collection.
- Field instruments must be calibrated within 24 hours of sampling.
- Collect well construction information (if available) – e.g. total depth, screened intervals, depth to water.
- Determine from CCGC member the following information: CCGC Member ID, Ranch name, GlobalID, Field Point Name, and Field Point Class. The CCGC has provided this information to the member as part of **Form 2B** in their membership packet if it has already been sampled.
- Determine what analysis is required (if well was previously sampled by CCGC, this is indicated on **Form 2B** in the membership packet).
 - If the well has not been sampled before, full suite of constituents must be analyzed (MRPs Table 3).
 - If well has been sampled before, Nitrate (as N) **or** Nitrate + Nitrite (as N) only is required.
- Complete a Chain of Custody (COC) form and submit with the samples.

Laboratory Analysis

- Samples must be analyzed according to EPA approved methods and the laboratory must be certified to perform analysis.
- Meet all laboratory quality control requirements (see Page 2).
- Utilize Preparation Batch number to associated environmental samples to QC samples.

Data Submittal

- Load the following files to GeoTracker within 60 days of sample collection:
 - 1) EDF Flat File Format: Laboratory Results (Environmental and Quality Control)**
 - EDFFLAT: contains all of the data fields from the SAMPLE, TEST, RESULTS, and QC files of the relational format in one large “flat” file. Utilize Preparation Batch number in the EDF field “LABLOTCTL”.
 - EDFCL: contains control limit information concerning the QC results.
 - EDFNARR (optional): provides a means to transfer descriptive information about analyses that do not easily fit in a standardized format. This file is optional and can be submitted as needed.
 - 2) Location Measurement File: Well Coordinates (Latitude and Longitude)**
 - GEO_XY: provides field location measurements data.
 - 3) Groundwater Well Measurements File: Depth to Groundwater Surface and Status**
 - GEO_WELL: provides field measurements from groundwater wells.
- Submit **GeoTracker files** (EDF, GEO_XY and GEO_WELL) and **Chain of Custody Forms** to CCGC <mailto:director@centralcoastgc.org>.
- Files names should follow the following convention: CCGCMemberID_GlobalID_YY_MMDD

CCGCMemberID = the CCGC membership identification number, GlobalID = GlobalID associated with well results; list all GlobalIDs included in the file, YY_MMDD = date of sample collection (e.g. 17_0501)



Laboratory Supplemental Information Sheet (cont'd)

CCGC Monitoring Work Plan - Sample Collection and Analysis Requirements

Constituent	Reporting Limit	Units	Sample Container and Volume	Initial Preservation/ Holding Requirements	Maximum Holding Time	Analytical Method
pH	0.1	pH Units	NA	NA	NA	Field or Laboratory Measurement (EPA General Methods)
Specific Conductance	2.5	µS/cm	NA	NA	NA	Field or Laboratory Measurement (EPA General Methods)
Total Dissolved Solids	10	mg/L	1000 mL Polyethylene	Store at ≤ 6°C	7 days	Field or Laboratory Measurement (EPA General Methods)
Total Alkalinity as CaCO ₃		mg/L	1000 mL Polyethylene	Store at ≤ 6°C	14 days	EPA Method 310.1 or 310.2
Calcium	0.05	mg/L	125 ml Polyethylene	Preserve HNO ₃ pH <2, store at ≤ 6°C	6 months	EPA 200.7, 200.8, 200.9
Magnesium	0.02	mg/L	125 ml Polyethylene	Preserve HNO ₃ pH <2, store at ≤ 6°C	6 months	EPA 200.7, 200.8, 200.9
Potassium	0.1	mg/L	125 ml Polyethylene	Preserve HNO ₃ pH <2, store at ≤ 6°C	6 months	EPA 200.7, 200.8, 200.9
Sodium	0.1	mg/L	125 ml Polyethylene	Preserve HNO ₃ pH <2, store at ≤ 6°C	6 months	EPA 200.7, 200.8, 200.9
Chloride	0.1	mg/L	1000 mL Polyethylene	Store at ≤ 6°C	28 days	EPA Method 300 or EPA Method 353.2
Sulfate (SO ₄)	1.0	mg/L	1000 mL Polyethylene	Store at ≤ 6°C	28 days	EPA Method 300 or EPA Method 353.2
Nitrate as N <u>or</u> Nitrate + Nitrite as N	0.1	mg/L	1000 mL Polyethylene	Store at ≤ 6°C <u>or</u> Preserve H ₂ SO ₄ pH <2, store at ≤ 6°C	48 hours (28 days preserved)	EPA Method 300 or EPA Method 353.2

Constituent	Matrix Spike/Lab Control Spike Frequency	Accuracy/ Recovery	Lab Duplicate Frequency [†]	Precision
pH	NA	±0.5 units	NA	±0.5 units
Specific Conductance	NA	±5%	NA	±5%
Total Dissolved Solids	NA	NA	1 per batch	RPD ≤ 25%
Total Alkalinity as CaCO ₃	NA	NA	1 per batch	RPD ≤ 25%
Calcium	1 per 10 samples, minimum 1 per batch	70-130%	1 per 10 samples, minimum 1 per batch	RPD ≤ 25%
Magnesium	1 per 10 samples, minimum 1 per batch	70-130%	1 per 10 samples, minimum 1 per batch	RPD ≤ 25%
Potassium	1 per 10 samples, minimum 1 per batch	70-130%	1 per 10 samples, minimum 1 per batch	RPD ≤ 25%
Sodium	1 per 10 samples, minimum 1 per batch	70-130%	1 per 10 samples, minimum 1 per batch	RPD ≤ 25%
Chloride	1 per 10 samples, minimum 1 per batch	80-120%	1 per 10 samples, minimum 1 per batch	RPD ≤ 25%
Sulfate (SO ₄)	1 per 10 samples, minimum 1 per batch	80-120%	1 per 10 samples, minimum 1 per batch	RPD ≤ 25%
Nitrate as N <u>or</u> Nitrate + Nitrite as N	1 per 10 samples, minimum 1 per batch	80-120%	1 per 10 samples, minimum 1 per batch	RPD ≤ 25%