VI. IEP Data Management Plan

YEAR:	PEN:	DATE UPDATED:
2019	072	2018-05-02

STUDY TITLE:

Environmental Monitoring Program (EMP) – Discrete Water Quality

PRINCIPAL INVESTIGATOR: Individual(s) responsible for the project. Include name, agency, e-mail, & phone.

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POINT OF CONTACT: Individuals who data users should contact for access to the data or questions about the data. Include name, agency, e-mail, & phone number or write "same as above."

Jenna Rinde; DWR; Jenna.Rinde@water.ca.gov; 916-376-9644
Morgan Martinez; DWR; Morgan.Martinez@water.ca.gov; 916-376-9736
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DATA DESCRIPTION: A very brief description of the information to be gathered; the nature and scale of the data that will be generated or collected.

Since 1975, the Interagency Ecological Program's (IEP) EMP has collected discrete water quality data within the Sacramento-San Joaquin Delta, Suisun Bay, and San Pablo Bay. The number of stations monitored has varied over time in response to programmatic reviews and new water right decisions. The EMP monitors physical and chemical discrete water quality constituents and chlorophyll at 24 fixed sites. Four floating stations are sampled based upon specific conductance criteria at the bottom of the channel to capture the entrapment zone. The approximate size of the data is 300,000 KB.

RELATED DATA: Optional. Existing datasets that you incorporate into analysis and reporting for this program element, existing data that are relevant to your study, or data that are collected simultaneously.

IEP's EMP is a comprehensive monitoring program in the San Francisco Bay-Delta Estuary that entails monthly sampling of benthos, phytoplankton, zooplankton, and continuous and discrete water quality. Discrete water quality data is collected at the same time as phytoplankton and zooplankton. The zooplankton data is managed by the California Department of Fish and Wildlife (PEN: 077). Benthos and continuous water quality are sampled near some of the discrete water quality stations.

METADATA: A description of the metadata to be provided along with the generated data, including the metadata standards used. Provide the file name and information on how users can access the metadata (e.g., a link).

Discrete water quality data can be accessed from DWR's Water Data Library (WDL) at http://wdl.water.ca.gov/bdma/meta/discrete.cfm. Data is entered into DWR's Field and Laboratory Information Management System (FLIMS) using MS Access 2016 software and then imported into WDL, an Oracle database. Data from WDL can be exported in MS Excel, HTML format or text files, which can then be saved as different file formats like .xlsx, .csv, .pdf, and others.

STORAGE & BACKUP: A description of the short-term storage methods and backup procedures for the data, including the physical and electronic resources to be used for the short-term storage of the data.

Data is stored on hard copy data sheets and electronically in Microsoft Access 2010 in .mdb format. The .mdb files are backed up daily on the vessel's computer's hard drive and also transfered by USB to DWR's Division of Environmental Sciences (DES's) server that is stored and backed up daily by the Division of Technology Services (DTS). At the end of each monthly water quality run, all of the hard copy data sheets are compiled to be scanned as a .pdf onto DES's server. Discrete water quality data is entered into FLIMS using MS Access 2016 software and then imported into WDL.

ARCHIVING & PRESERVATION: The procedures for long-term archiving and preservation of the data, including succession plans for the data should the expected archiving entity go out of existence.

The discrete water quality data on WDL is stored permanently in an Oracle database and is backed up once a year that is managed by DTS. Laboratory reports from Bryte Laboratory are stored under DES's server that is stored by DTS that is backed up daily. Hard copy data sheets are scanned after each field run and also stored on the DES server. Historic reports and datasheets are scanned and stored on a DES server, while the hard copies are stored internally in the DWR/DES warehouse. The DWR is a long-established agency with no anticipated end date of existence.

ACCESS & SHARING: A description of how data will be shared. Include (1) access procedures, (2) embargo periods, (3) technical mechanisms for dissemination (e.g., website addresses, listserv information), (3) whether access will be open or granted only to specific user groups, and (4) a timeframe for data sharing and publishing.

Data from 2010 to present is available on WDL at http://wdl.water.ca.gov/waterdatalibrary/waterquality/index.cfm. Data mandated by Water Right Decision 1641 is open. It typically takes one month for Bryte Laboratory to report the laboratory results, therefore, data is usually published approximately 1-2 months after a field run. Data requests prior to 2010 can be sent to jenna.rinde@water.ca.gov or morgan.martinez@water.ca.gov

FORMAT: Formats in which the data will be generated, maintained, and made available. Include BOTH general data type (e.g., spreadsheet, relational database) and file format (extension). Include approximate size (in MB) of the resulting data set.

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QUALITY ASSURANCE: Brief description of procedures for ensuring data quality. Provide links to Quality Assurance Project Plan and/or QA/QC Standard Operating Procedures.

All field data is entered into FLIMS, which integrates the field and laboratory data. Bryte Laboratory manages the QA/QC for the laboratory constituents. When lab reports are received, EMP conducts a monthly check to ensure data completeness. EMP staff confirm that the data in WDL properly match what was written on the field sheets. If errors occur then they are corrected in WDL prior to making data public. A further QA/QC process is in the progress with the development of a Quality Assurance Project Plan.
Bryte Laboratory QA/QC protocols can be found here:
https://www.water.ca.gov/LegacyFiles/waterquality/drinkingwater/docs/brytelab_qa_manual_2012.pdf

RIGHTS & REQUIREMENTS: A link to or instructions to locate the agency's rights and requirements for data use

None.