IEP Data Management Plan

Project Element Number:

281

Year:

2024

Date Updated:

05/19/2023

Start Date:

06/01/2023

Study Title

North Delta Flow Action: Role of improved Yolo Bypass Flows in Delta Food Web Dynamics.

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Data Description

Discrete and continuous water quality and flow data, nutrient data, phytoplankton identification and enumeration, zooplankton identification and enumeration, primary productivity measurements/nutrient uptake rates, and pesticide data will be collected before, during, and after Yolo Bypass managed and non-managed flow pulse events. Collections occur every other week typically during the months of June, July, August, September, and October or November. Estimate of the size of the data collected per year is 2-3MB.

Related Data

DWR North Central Region – Flow, stage, dissolved oxygen, and chlorophyll data from: Yolo Bypass at Lisbon (CDEC: LIS) and planned installation at Road 22 (expected operation in 2023).
DWR – EMP Real-time Monitoring – Continuous Water Quality Data: Sacramento River at Rio Vista Bridge
USGS Continuous Water Quality Data - NWIS: TOE, LIB, RYI, SDI.

Metadata

Metadata for the IEP: Zooplankton zooplankton, phytoplankton. and discrete water quality (WQ) are available on the Environmental Data Initiative (EDI) website [https://portal.edirepository.org/nis/mapbrowse?scope=edi&identifier=494].

Metadata for nutrients, and continuous WQ are available by request from the Principal Investigator (Eric Holmes). Metadata for primary productivity and pesticides are available upon request by SFSU (Frances Wilkerson) and USGS (Jim Orlando) task leads. Pesticide USGS Pesticide Fate and Research Lab [https://ca.water.usgs.gov/projects/PFRG/AnalyticalMethods.html]. Pesticides metadata are also available from USGS NWIS [https://waterdata.usgs.gov/nwis] or from the USGS ScienceBase-Catalog [https://www.sciencebase.gov/catalog/item/608840acd34e5611588f8ca5].

Storage and Backup

All data are stored on DWR shared drives and cloud-based drives (SharePoint) in addition to publicly accessible data repositories (EDI, WDL, CNRA, etc.). In addition, we store paper and digitized copies of field data sheets at the DWR West Sacramento Office.

Archiving and Preservation

All datasheets and databases are housed in DWR facilities on servers in electronic form. These servers experience data back-ups daily. In addition, all datasheets and databases are saved on an external hard drive to provide another back-up to the servers.

Discrete nutrients and chlorophyll data will be available in the Water Data Library [https://wdl.water.ca.gov/waterdatalibrary/Map.aspx]. Flow data are available from California Data Exchange Center [https://cdec.water.ca.gov/]. Contaminants data are available from USGS NWIS [https://waterdata.usgs.gov/nwis], directly from the Jim Orlando (task lead), or from the USGS ScienceBase-Catalog [https://www.sciencebase.gov/catalog/item/608840acd34e5611588f8ca5].

Format

Flow, water quality, nutrients, zooplankton, phytoplankton, continuous water quality, and pesticide datasets will be maintained and available as excel spreadsheets (.xls, .xlsx, and .csv). Data are initially are stored in the following databases: 1) Excel spreadsheets for Lower Trophic samples of zooplankton, chlorophyll and water quality, 2) nutrients and chlorophyll (.csv) on the Water Data Library [https://wdl.water.ca.gov/waterdatalibrary/Map.aspx]; 3) flow data (.csv) from California Data Exchange Center [https://cdec.water.ca.gov/]; contaminants data (.csv) on USGS NWIS [https://waterdata.usgs.gov/nwis].

During 2023-2024, all previous study data not yet published on the Environmental Data Initiative (EDI) will be published and archived as suggested by the IEP DUWG. All datasets described above will be published and available on EDI in a flat-file format (.csv).

Quality Assurance

All zooplankton and phytoplankton data undergo QA/QC by contractor ICF using their internal methods prior to submittal (QA/QC records are submitted to project PI w/ final ID/enumeration results). The data are then reviewed by project PI and entered in a database. After entry, a final reviewer verifies all data are entered accurately.
Water quality discrete and continuous (includes flow) data: All discrete water quality data are reviewed by the project PI and entered in a database or spreadsheets. After entry, a final reviewer verifies all data are entered accurately. Nutrient data analysis results undergo QA/QC using established protocols of DWR Bryte Laboratory (methods available upon request from PI). The QA/QC procedures for nutrients analysis and discrete water quality are documented in the project's Quality Assurance Project Proposal (completed and effective December 2023). Continuous data are entered into HYDSTRA database where QA/QC procedures are completed as identified in DWR Water Quality Evaluation Section QAPP (methods available upon request from PI). Special phytoplankton, nutrient and pesticide data tasks completed by SFSU and USGS will follow QA/QC methods and QAPPs established by the contract PIs (available upon request from Frances Wilkerson (SFSU) and Jim Orlando (USGS).

Access and Sharing

Data will be shared through deliverables including IEP workshop presentations, annual stakeholder meetings and stakeholder emails, and summary reports, including the Summer Fall Seasonal Report for the 2019 BiOps. Interagency collaborators will also generate presentations, reports, and/or publications on data and results. All data will be open access to public upon request from project PI. For historical data we plan to publish data via a synthesis project on the online repository, Environmental Data Initiative, following guidance of IEPs DUWG.

Rights and Requirements

N/A