

# IEP Data Management Plan

## Basic Information

Year: 2020; PEN: 281; Date Updated: 2019-05-30; Start Date: 2020-06-01

## Study Title

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

## Principal Investigator

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

Brittany Davis, Department of Water Resources; Brittany.E.Davis@water.ca.gov, 916-376-9823.

## 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."*

Same as above.

## 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. Include approximate size (in MB) of the resulting data set.*

Discrete and continuous water quality/flow data, nutrient data, contaminants, phytoplankton identification and enumeration, zooplankton identification and enumeration, primary productivity measurements/nutrient growth rates, and pesticide data will all be collected before, during and after Yolo Bypass Flow pulse events. Caged hatchery Delta Smelt growth, survival and behavior will be monitored before and after the flow action. Collections occur every other week typically the months of July, August, September, and October or November should the action be delayed. Estimate of the size of the data collected per year (2-3MB).

## 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.*

DWR North Central Region – Flow/Stage data from: Yolo Bypass at Lisbon (CDEC: LIS) and Ridge Cut Slough at Knights Landing (CDEC: RCS), DWR – EMP Real-time

Monitoring Section – Continuous Water Quality Data: Sacramento River at Rio Vista Bridge, DWR - DayFlow

USGS Continuous Data - Flow and Stage (NWIS: TOE, LIB, CCH, LCT, RYI, SDI).

## 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).*

Zooplankton, chlorophyll, discrete and continuous water quality (WQ), and nutrients metadata are available on the DWR website (IEP Data and Metadata Table; <https://water.ca.gov/Programs/Environmental-Services/Interagency-Ecological-Program/Data-Portal>). Zooplankton, Chlorophyll and associate WQ are listed under Yolo Bypass Fish Monitoring Program: Lower Trophic, whereas nutrients and phytoplankton are listed under the Environmental Monitoring Program. Metadata for special analysis of zooplankton, primary productivity, and pesticides tasks are available upon request by SFSU (Kimmer and Wilkerson) and USGS (Orlando) task leads. Pesticide USGS Pesticide Fate and Research Lab <https://ca.water.usgs.gov/projects/PFRG/AnalyticalMethods.html>. Metadata for caged Delta Smelt monitoring will be available upon request from the study PI.

## Storage and 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.*

All data is stored both DWR shared drives, cloud based drives, and external hard drives.

## Archiving and 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.*

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. Between 2019 and 2020 data will be migrated to a new KISTERS company database and data management framework (MS SQL/Oracle-relational database structure) – this database will have DWR server backup and cloud based storage capabilities.

## Access and 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 will be shared through deliverables including IEP workshop presentations, summary reports, and reports for contractors. Interagency collaborators will also generate presentations, reports, and/or publications on data and results. All data will be open access to public through our DWR website and/or upon request from project PI. For historical Flow Action data we hope to publish data to an online repository following guidance of IEPs Data Utilization Work Group.

## **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).*

Water quality, nutrients, zooplankton, phytoplankton, continuous water quality, pesticide, and Delta Smelt datasets will be maintained, and available as excel spreadsheets (.xls, .xlsx, and .csv). Data do initially go into a databases: 1) HYDSTRA database: HYXPLORE.exe for Continuous water quality data. 2) Access database for Lower Trophic samples of zooplankton, chlorophyll and water quality, LowerTrophicSampling\_Yolo2015\_DB.mdb; 3) acoustic telemetry data of Chinook Salmon is in a VEMCO Vue database: YB\_2019.vdb; and 4) nutrients and chlorophyll will be in the Water Data Library.

## **Quality Assurance**

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

Zooplankton and phytoplankton data: All data is QA/QCed by contractor BSA Environmental using their internal methods prior to submittal (QA/QC records are submitted to project PI w/ final ID/enumeration results). The data is then reviewed by project PI and entered into database – after entry a final reviewer verifies all data is entered and accurately. Water quality discrete and continuous (includes flow) data: All discrete water quality is reviewed by project PI and entered into database or spreadsheets – after entry a final reviewer verifies all data is entered and accurately. Continuous data is entered into HYDSTRA database where QA/QC procedures are completed – identified in DWR Water Quality Evaluation Section QAPP (methods available upon request from PI). Nutrients data: All nutrient data analysis results are QA/QCed using established DWR Bryte Laboratory methods (methods available upon request from PI). Special phytoplankton, nutrient and pesticide data tasks completed by SFSU and USGS will follow QA/QC methods established by the contract PIs and available upon request.

## **Rights and Requirements**

*A link to or instructions to locate the agency's rights and requirements for data use.*

NA.