**State of California California Natural Resources Agency**

**M e m o r a n d u m**

Date: October 14, 2022

To: Files

From: **Department of Water Resources**

Subject: DSM2 Historical Update 2018-2021

The Bay-Delta Office (BDO) updated DSM2 input datasets to December 2021. The dataset in this release spans the period 01/01/1990-12/31/2021.

This update was conducted in the same fashion as previous updates. It consists of the following steps:

1. Obtain Delta and Suisun Marsh consumptive use data. This release contains updates to the Suisun Marsh Channel Depletions (SMDC) model which results in slight differences in output locally.
2. Download boundary inputs from CDEC

* Boundary inflows
* Exports
* Martinez stage
* Boundary inflows EC

1. Obtain and update Mokelumne inflow from EBMUD or from USGS, if available.
2. Obtain and update Montezuma Slough Salinity Control Gate operations from CNRA website.
3. Obtain South Delta temporary barriers operations, including drought emergency barrier, if applicable, from Temporary Barriers Program (O&M, DWR)
4. Obtain Delta Cross Channel operation from USBR and drought emergency barrier (False River in 2021)

All downloaded data were checked for gaps and outliers - data was modified to correct those.

Reported gate operations are fine-tuned by comparing stage and flow at upstream and downstream gages. This often results in minor modifications of reported data.

## Version Naming Change

DSM2 is changing its versioning scheme to allow for the code to be versioned separately from the historical input setup. To this end this release follows the new versioning scheme.

Starting with this update, historical inputs will be released at a more frequently and will be versioned with the pattern of [year].[number]. For instance, this release is 2022.01 as it is the first release in 2022.

DSM2 version used to run and validate each historical dataset release will be referenced in the release notes.

Source code used for this update:

DSM2 v8.2.2, HYDRO and QUAL

<https://github.com/CADWRDeltaModeling/dsm2/releases/tag/v8.2.2>

<https://data.cnra.ca.gov/dataset/dsm2-v8-2-2>