



Introduction

In February 2002, a number of changes were made to the computational scheme. The documentation was updated to describe these changes. The text describing the old computational scheme is colored red below.

Dayflow* is a computer program developed in 1978 as an accounting tool for determining historical Delta boundary hydrology. Dayflow output is used extensively in studies initiated by the Department of Water Resources (DWR), the Department of Fish and Game (DFG), and less frequently by other State and Federal agencies [e.g., U. S. Bureau of Reclamation (USBR)] and private consultants.

In 2000, the software used to perform Dayflow calculations was rewritten in Java. Input data was stored in a HEC-DSS file, and output was written to an ASCII file.

The Dayflow program presently provides the best estimate of historical mean daily flows: (1) through the Delta Cross Channel and Georgiana Slough; (2) past Jersey Point; and (3) past Chipps Island to San Francisco Bay (net Delta outflow). The degree of accuracy of Dayflow output is affected by the Dayflow computational scheme and the accuracy and limitations of the input data. The input data include the principal Delta stream inflows, Delta precipitation, Delta exports, and Delta gross channel depletions. Both monitored and estimated values are included as described in this Dayflow program documentation. Currently, flows are not routed to account for travel time through the Delta. All calculations involving inflows, depletions, transfers, exports, and outflow are performed using data for the same day. All Dayflow summary reports distributed through January 1985, providing flow data through August 1984, and data for September 1984 reported herein were generated according to the algorithm described in the Computational Scheme section.

Dayflow program documentation is presented as follows:

1. Computational Scheme
2. Summary Tables of Monthly Data
3. Input Data Documentation
4. Methodology for Dayflow Output Generation
5. Summary of Equations

*This program has also been referred to as the DAYFLO and DAY FLOW model.

The Dayflow computational scheme was developed to derive three types of quantities:

- ⇒ Net Delta Outflow estimates at Chipps Island
- ⇒ Interior Delta flow estimates at significant locations
- ⇒ Summary and fish-related parameters and indices

Computational Scheme part 1: Net Delta Outflow Estimates at Chipps Island (QOUT)