REPRESENTATIVE DELTA ISLAND RETURN FLOW QUALITY FOR USE IN DSM2

MEMORANDUM REPORT
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Modeling Support Branch
Division of Planning
DEPARTMENT OF WATER RESOURCES

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pH

The aggregated MWQI data did not demonstrate distinct spatial or seasonal pattern in pH. A median value of 7.1 appears to be reasonable, with upper and lower quartile variation of about ± 0.3. This data is provided for reference only, as there are no immediate plans to model hydrogen ion fate and movement in the Delta.

Temperature

Temperature does not vary significantly by DOC subregion. Therefore, all drains were assigned a single monthly temperature value. These values were smoothed by inspection to approximate continuous changes in temperature over time. As shown in Fig 12, values vary from a minimum of 9.5 °C in January to a maximum of 23.5 °C in August. Unsmoothed data are also shown for comparison.

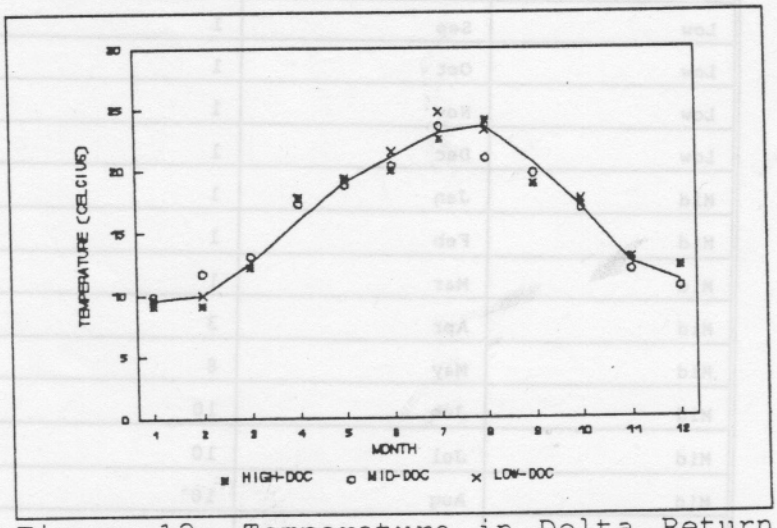

Figure 12. Temperature in Delta Return Flows: Smoothed and Unsmoothed Values by Subregion

Chlorophyll-a

Chlorophyll-a data for agricultural return flows were not available for this study. Therefore, smoothed monthly values were developed from data collected by DWR's Environmental Services Office between 1978-90. Data collected at Greens Landing (station C3) were used to represent drains in the North Delta, data collected at Jersey Point (station D15) used to represent drains in the West Delta, and data collected at Vernalis (station C10) were used to represent drains in the South Delta. Duplicate data were not included in the analysis. Smoothed monthly estimates should be revised as data becomes available for agricultural drains.