# Impact of Low Flow on DO in January-February of 2003

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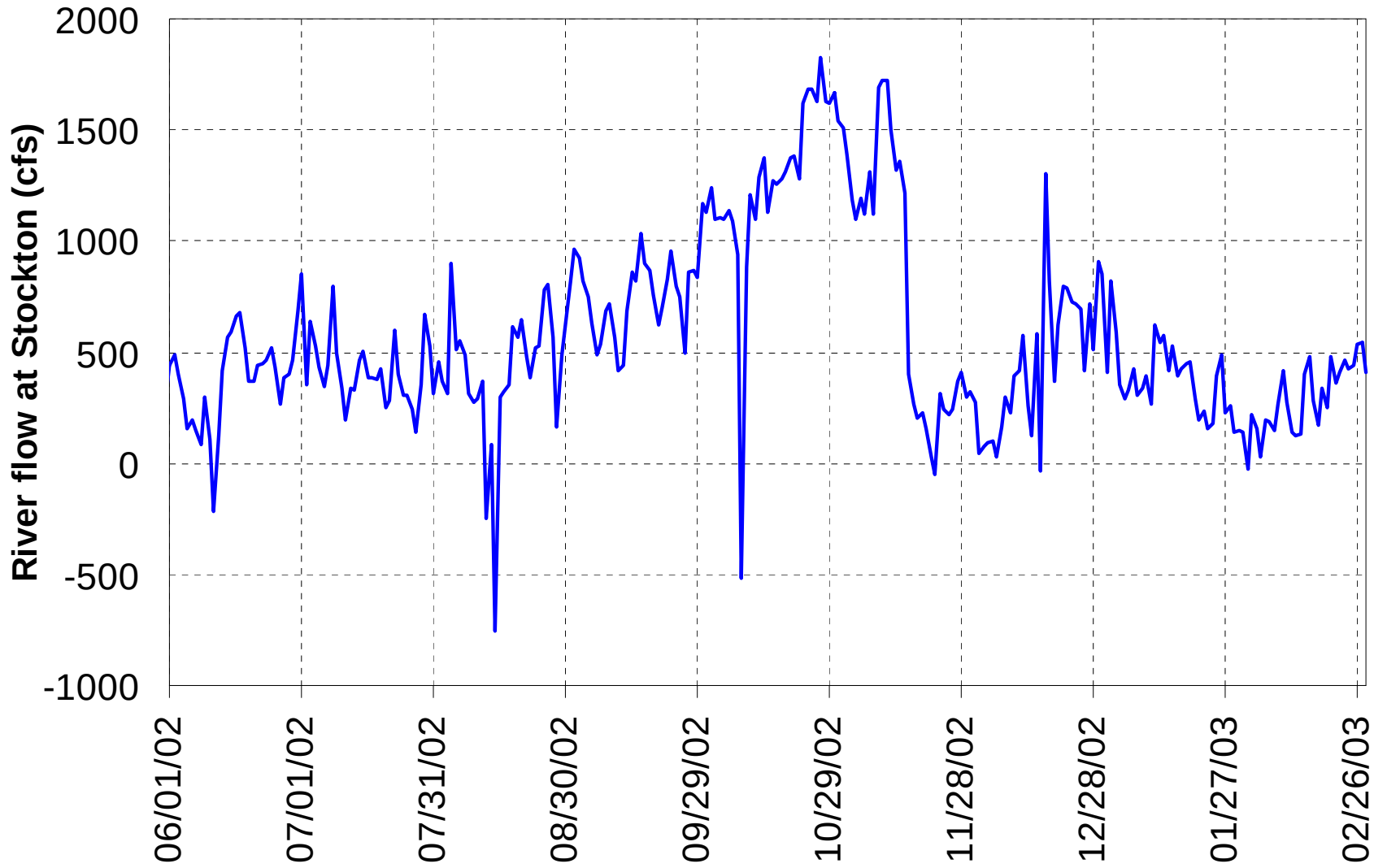
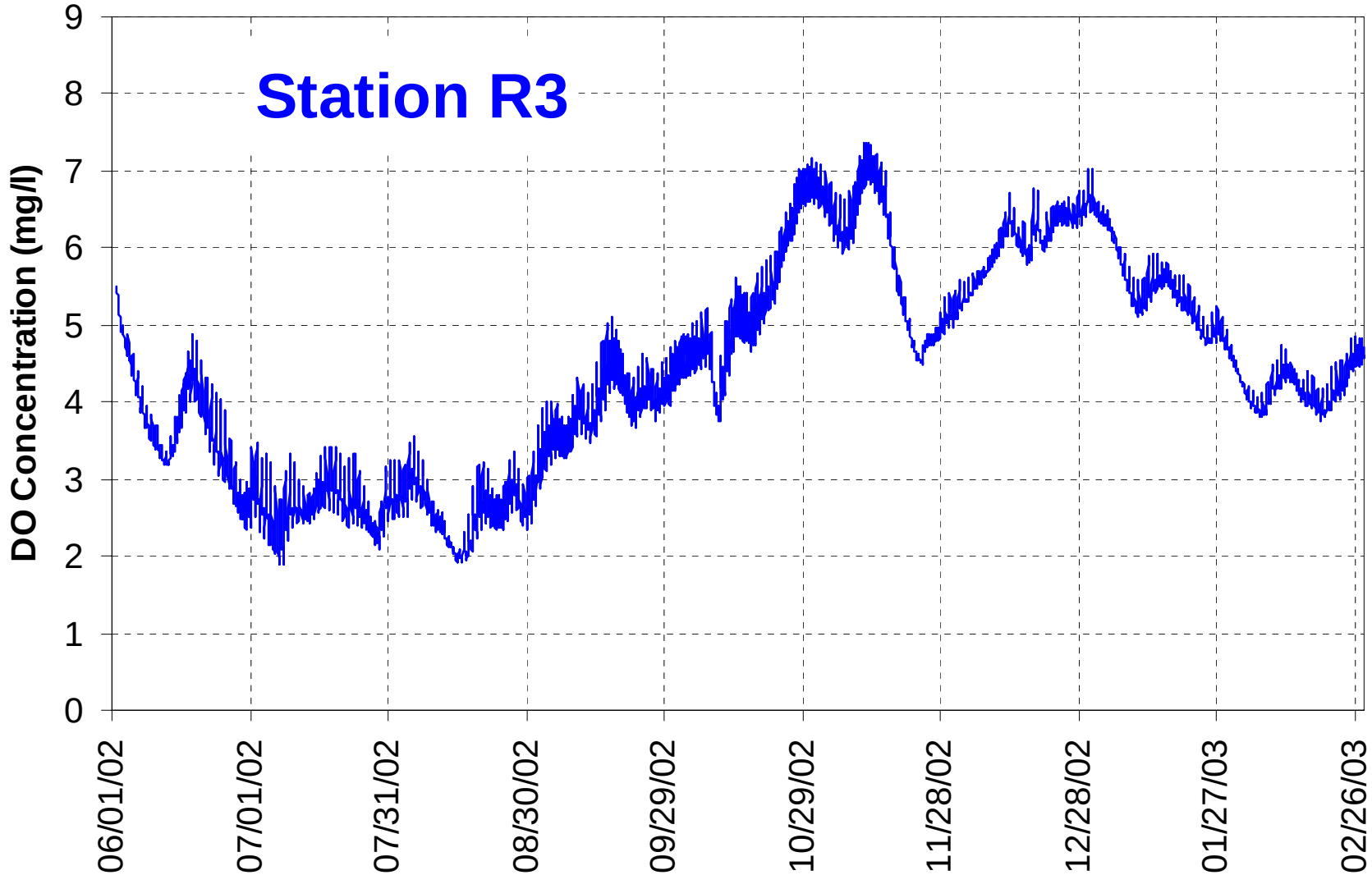
# Approach

- Retrieve the 2003 UVM flow from USGS.
- Substitute the 2002 UVM flow with the 2003 UVM flow.
- Use 2002 weather, Stockton waste loads and water quality of San Joaquin River.
- Use the 1 D model to simulate the DO response to low flow in DWSC.

# UVM Flow of San Joaquin River



# Simulated DO in DWSC



# Conclusion

- Low flow in November 2002 drive DO from 7 mg/l to 4.6 mg/l.
- Higher UVM in December 2002, help bring DO up from 4.6 to 6.5 mg/l.
- Low flow in January and February 2003 drive DO from 6.5 mg/l to 4 mg/l.
- Ammonia and BOD loads from Stockton and upstream San Joaquin River and perhaps warmer weather must account for further depression of DO to less than 1 mg/l.