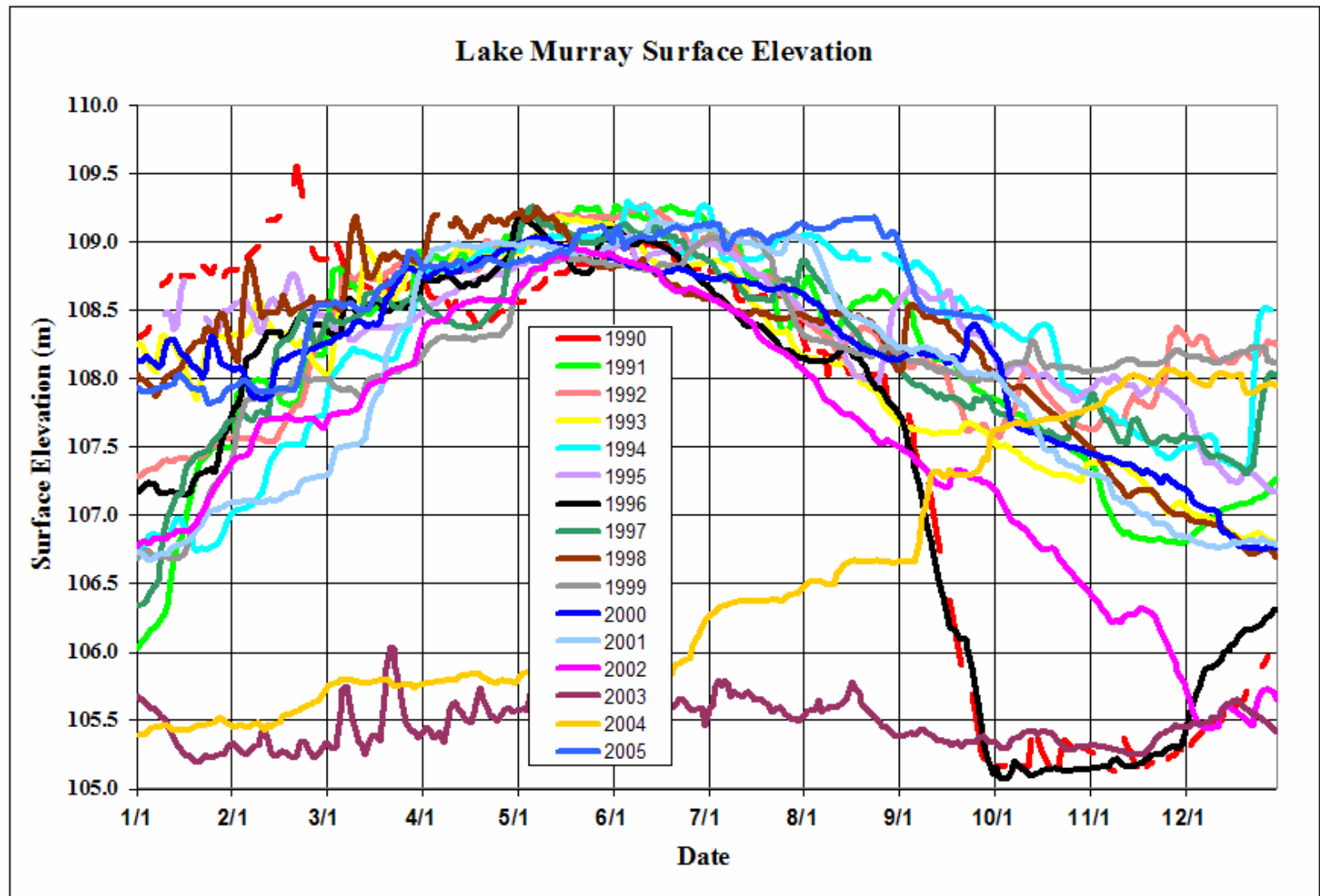


Update on Analyses of Factors Contributing to Historical Fish Kills in Lake Murray

Andy Sawyer and Jim Ruane, REMI

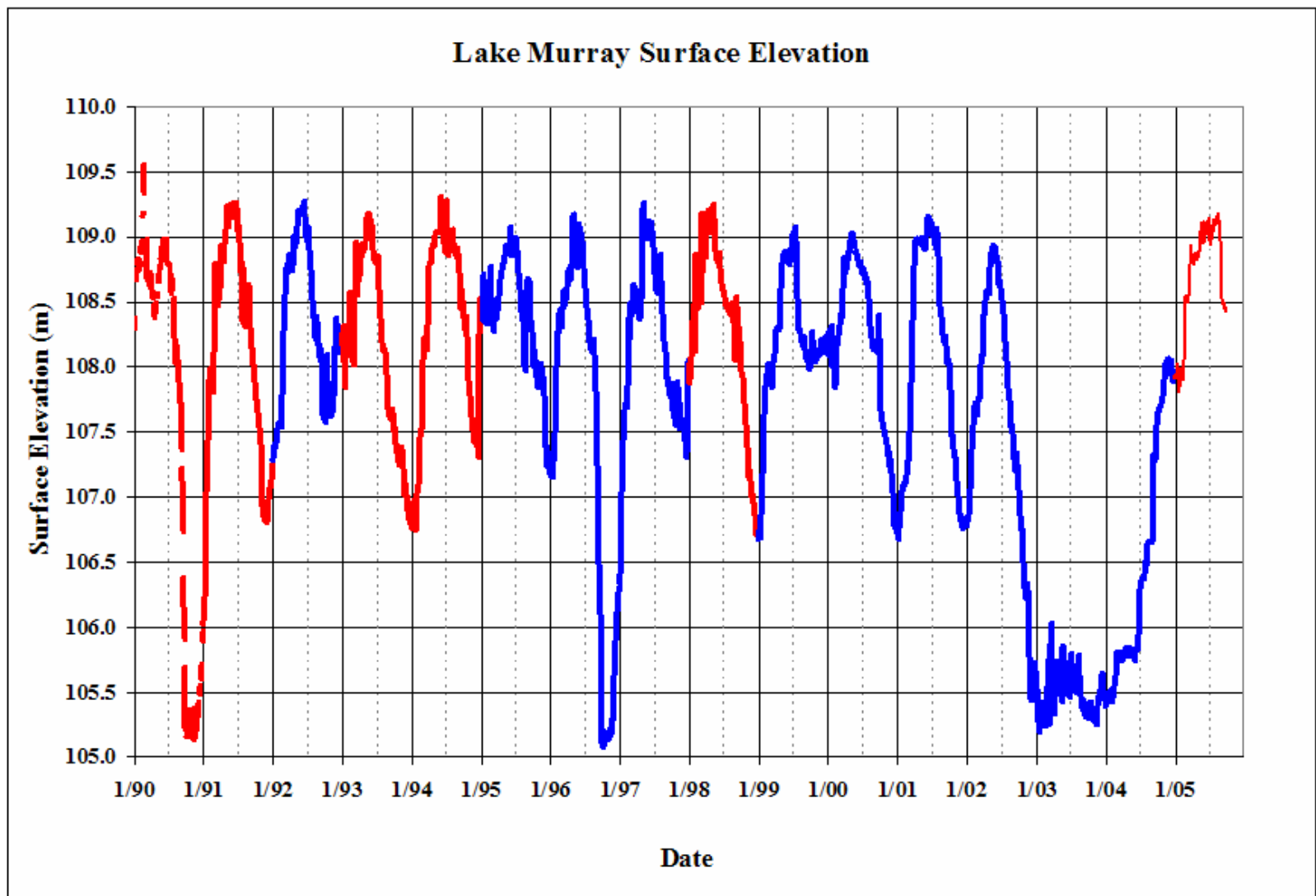
November 13, 2006

Lake Murray Surface Elevation 1990-2005



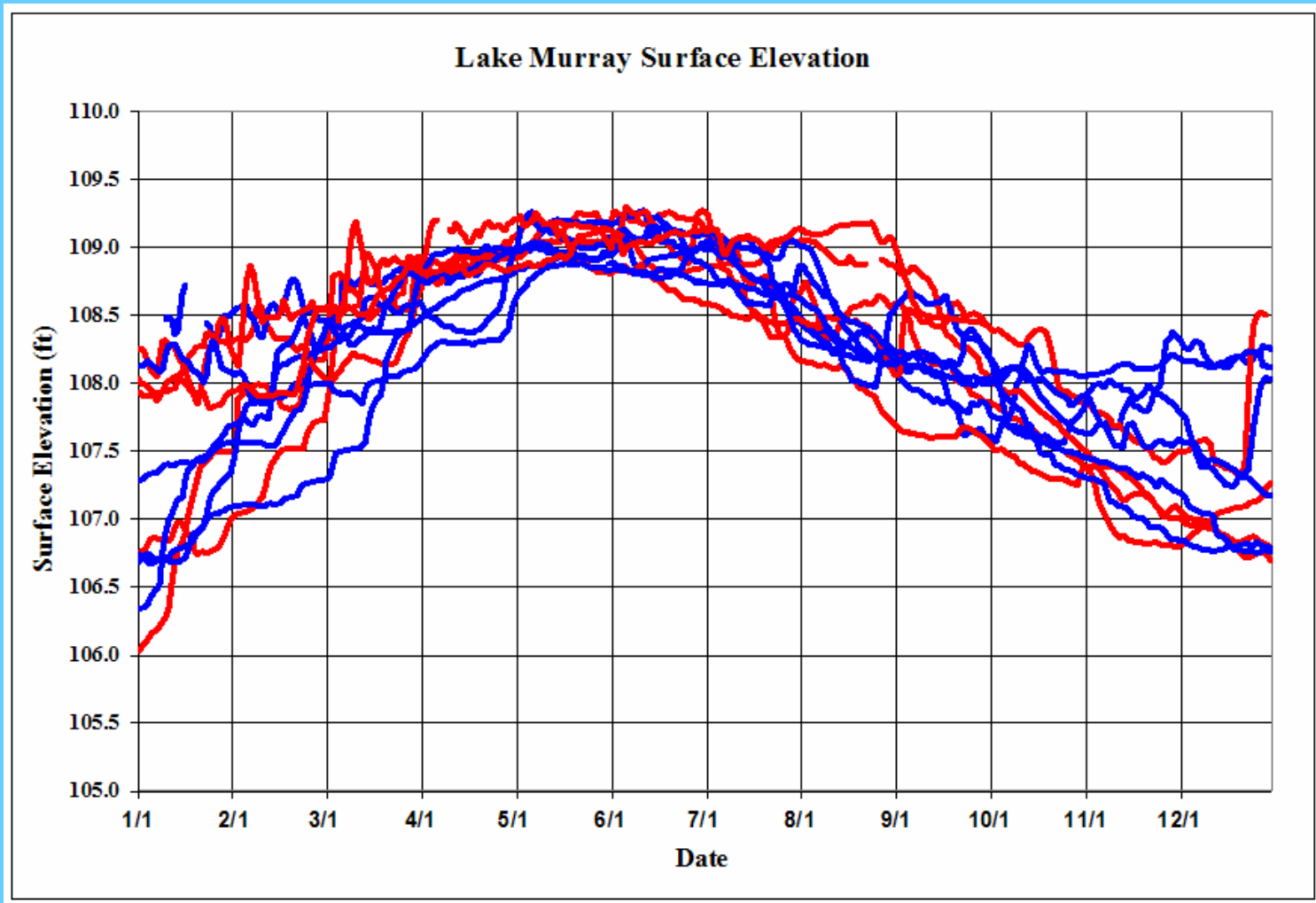
Lake Murray Surface Elevation 1990-2005

Years with documented striped bass kills are red

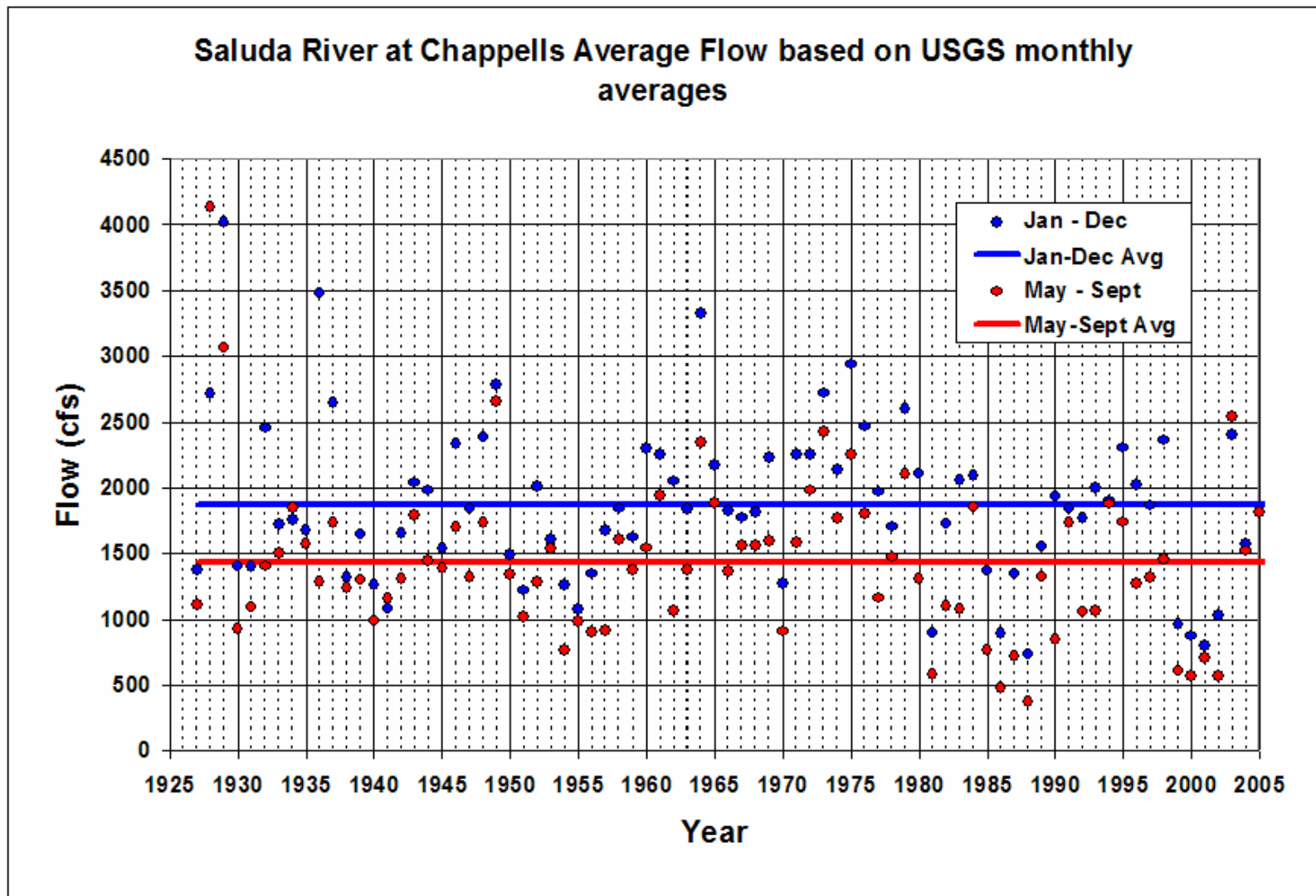


Lake Murray Surface Elevation 1990-2005

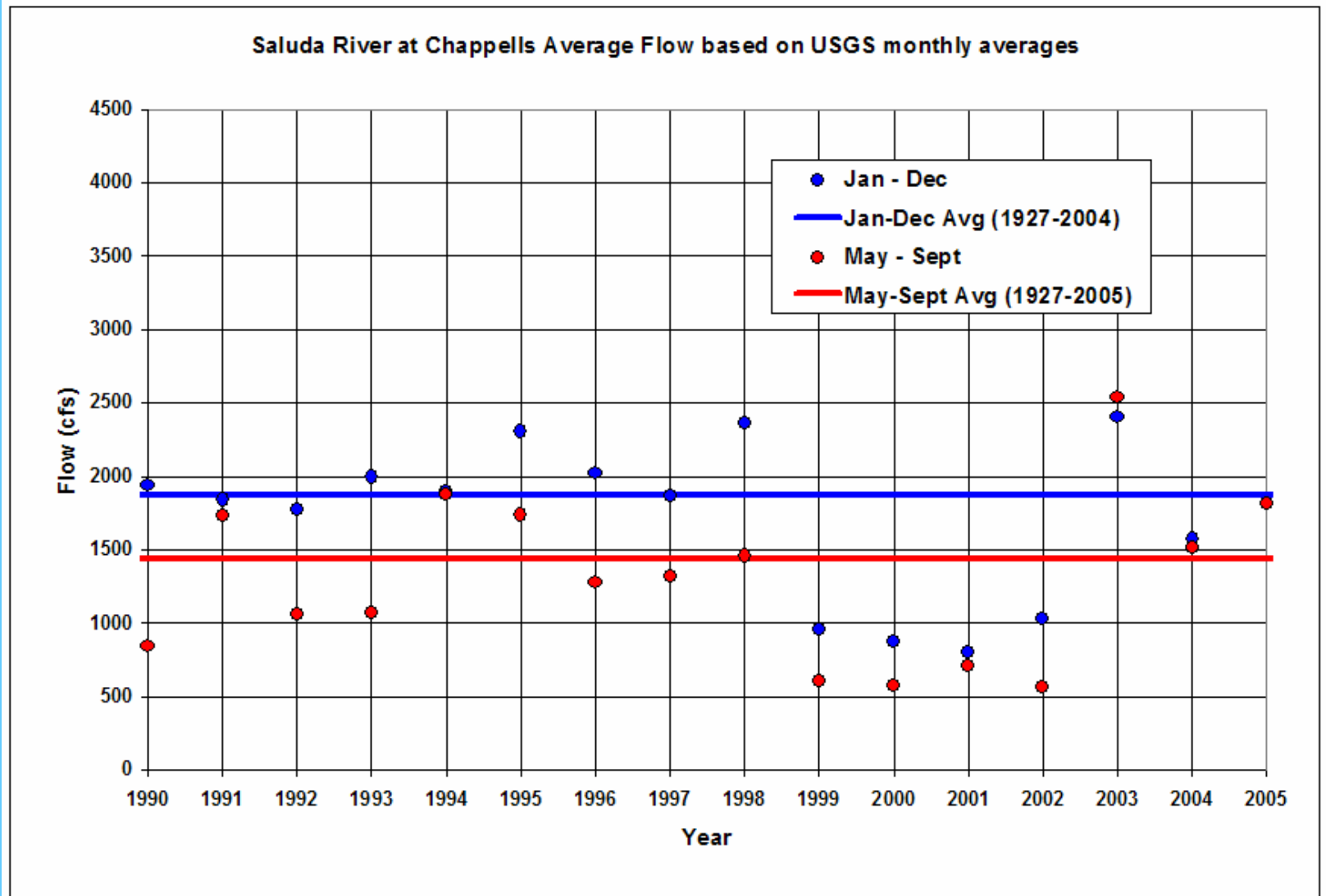
Typical Years Only (no special drawdowns)
Years with documented striped bass kills are red



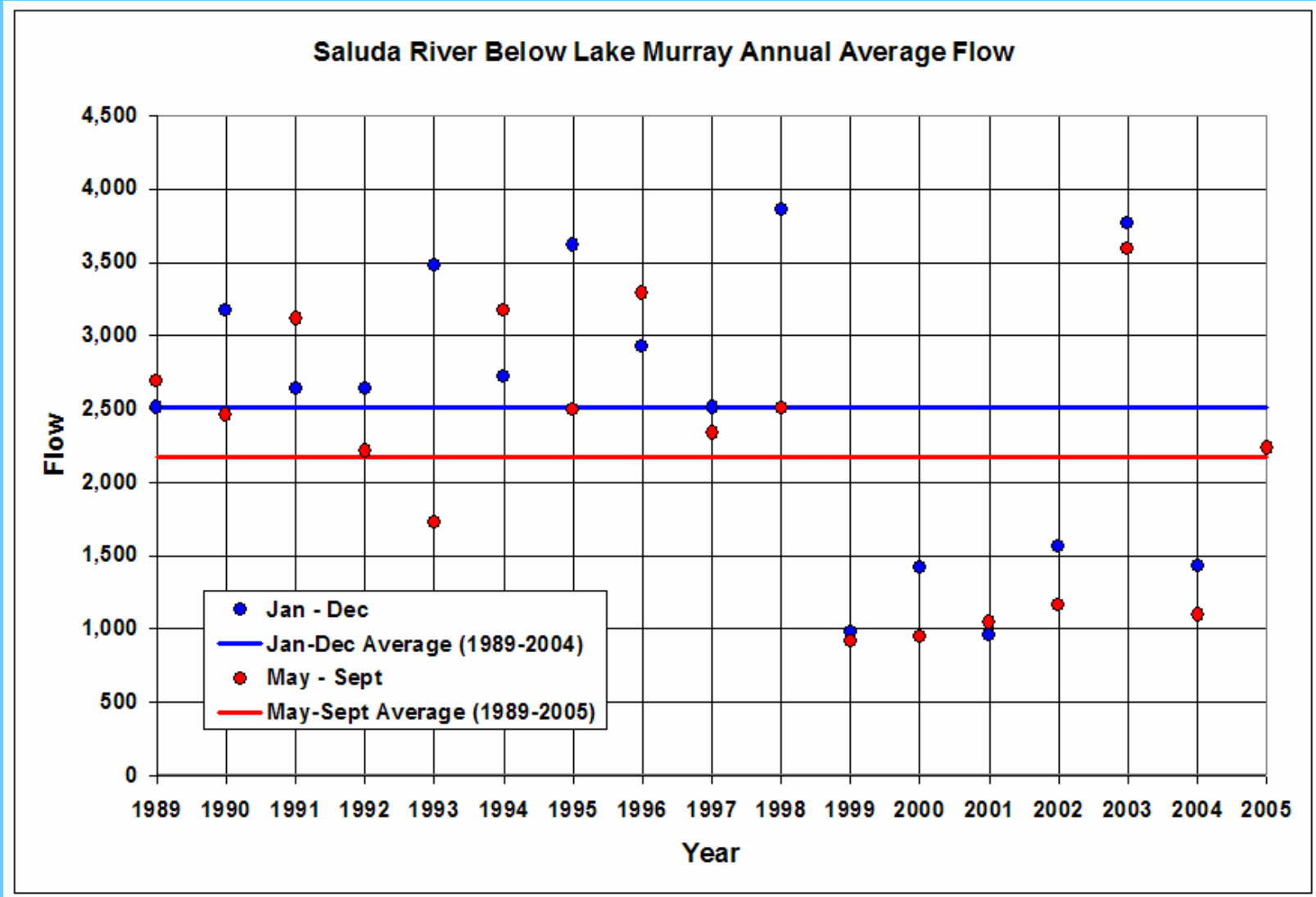
Average Annual Flow – Saluda River at Chappells



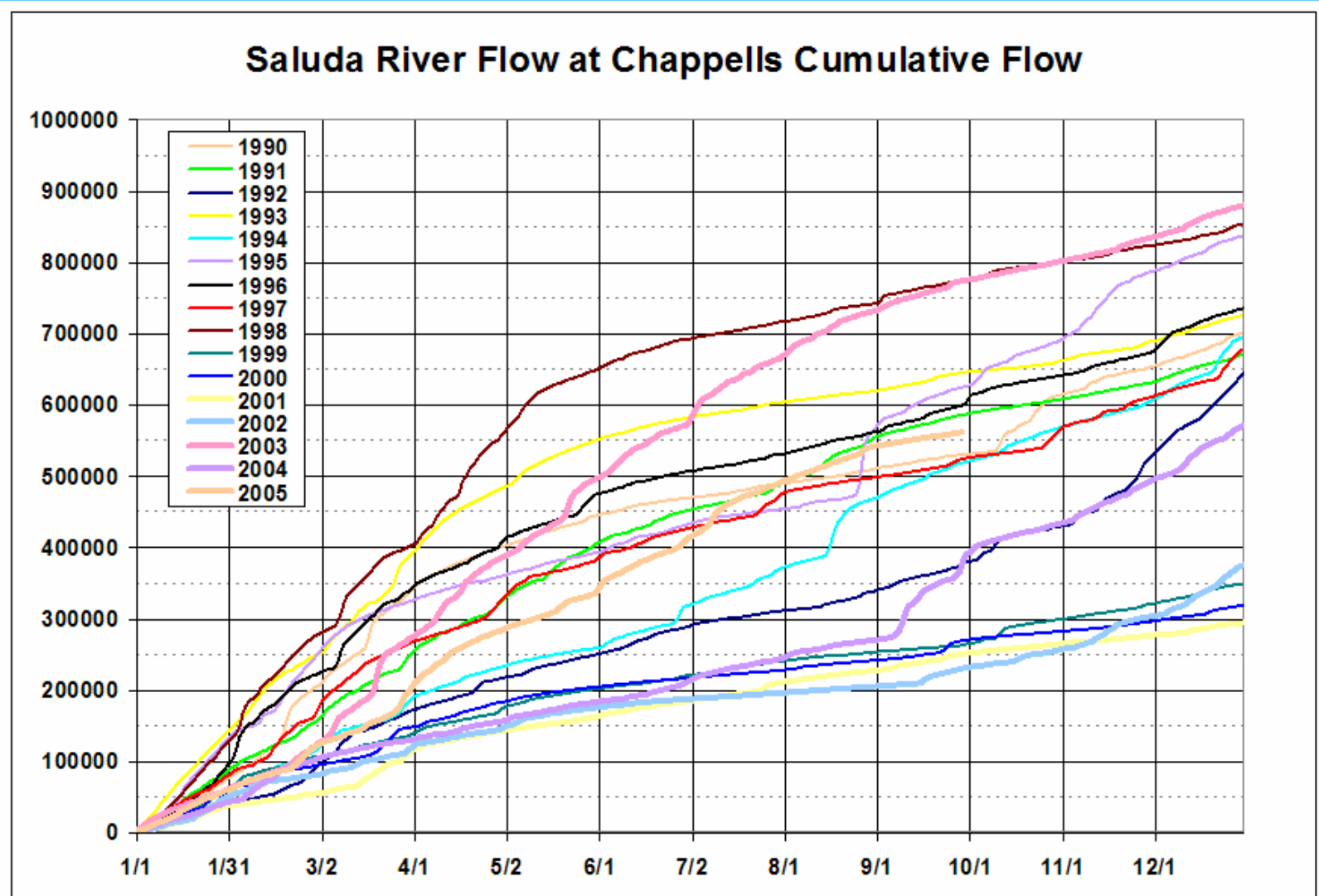
Average Annual Flow – Saluda River at Chappells 1990-2005



Average Annual Flow – Saluda River Below Lake Murray

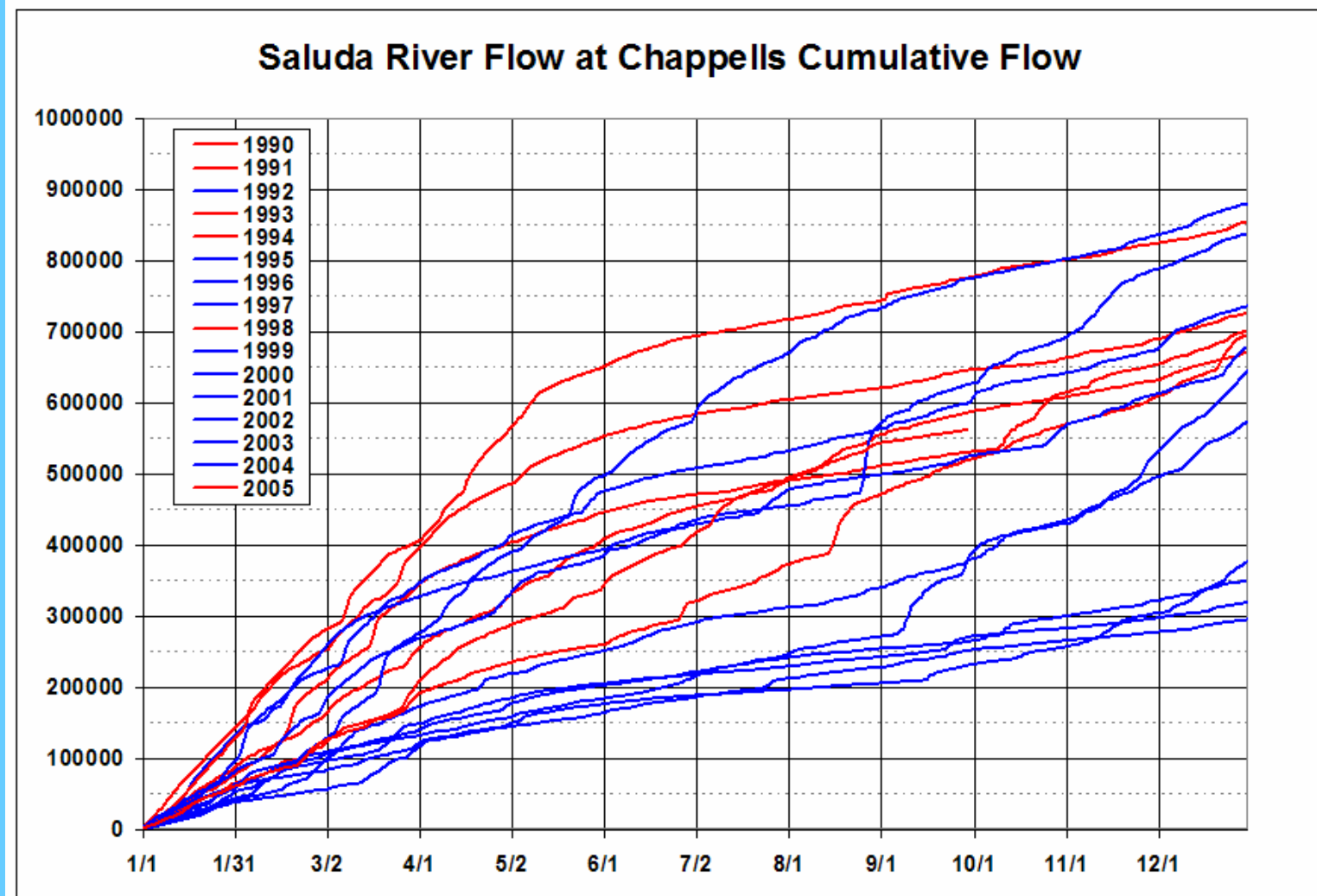


Cumulative Inflow



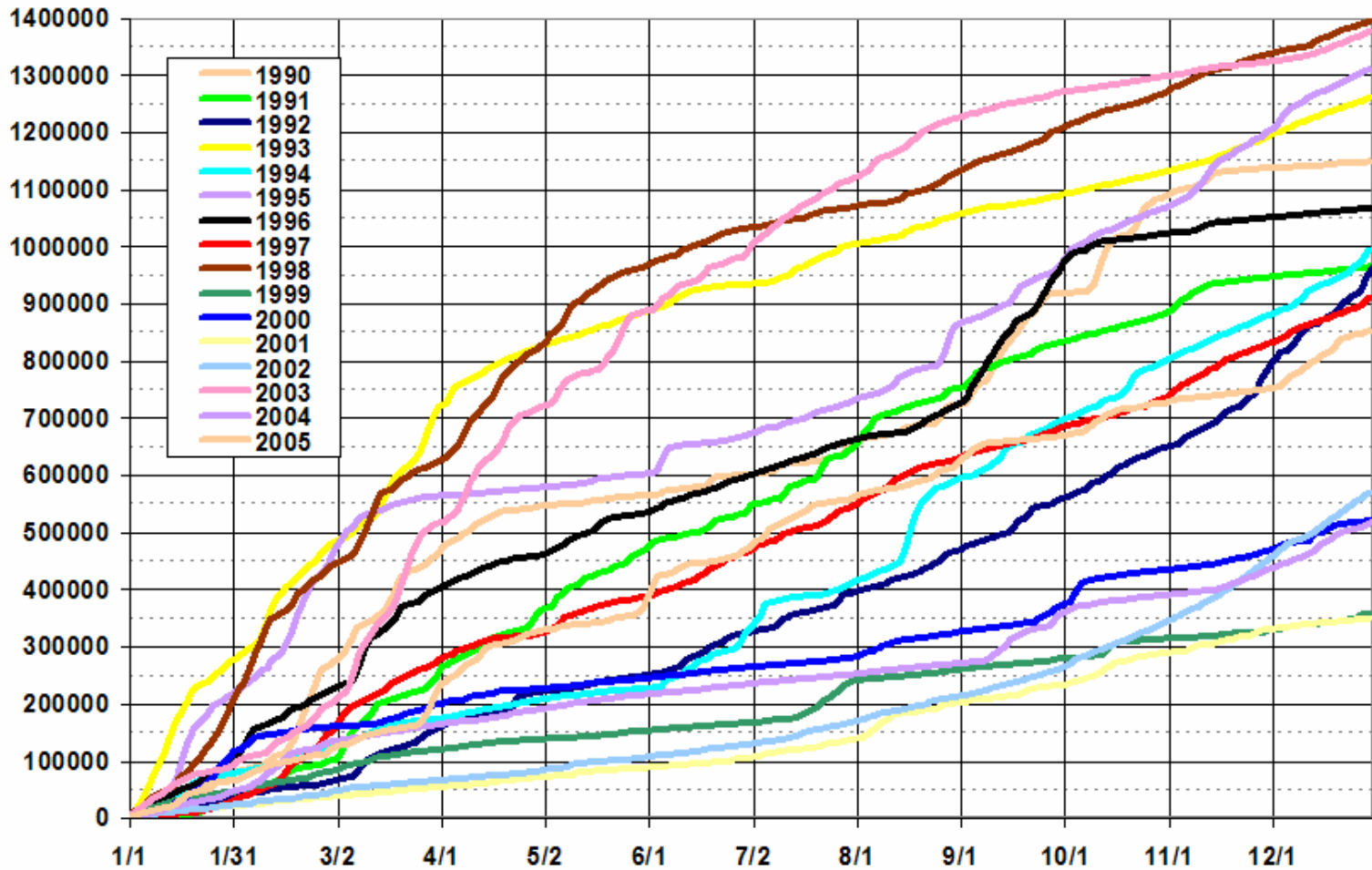
Cumulative Inflow

Years with documented striped bass kills are red



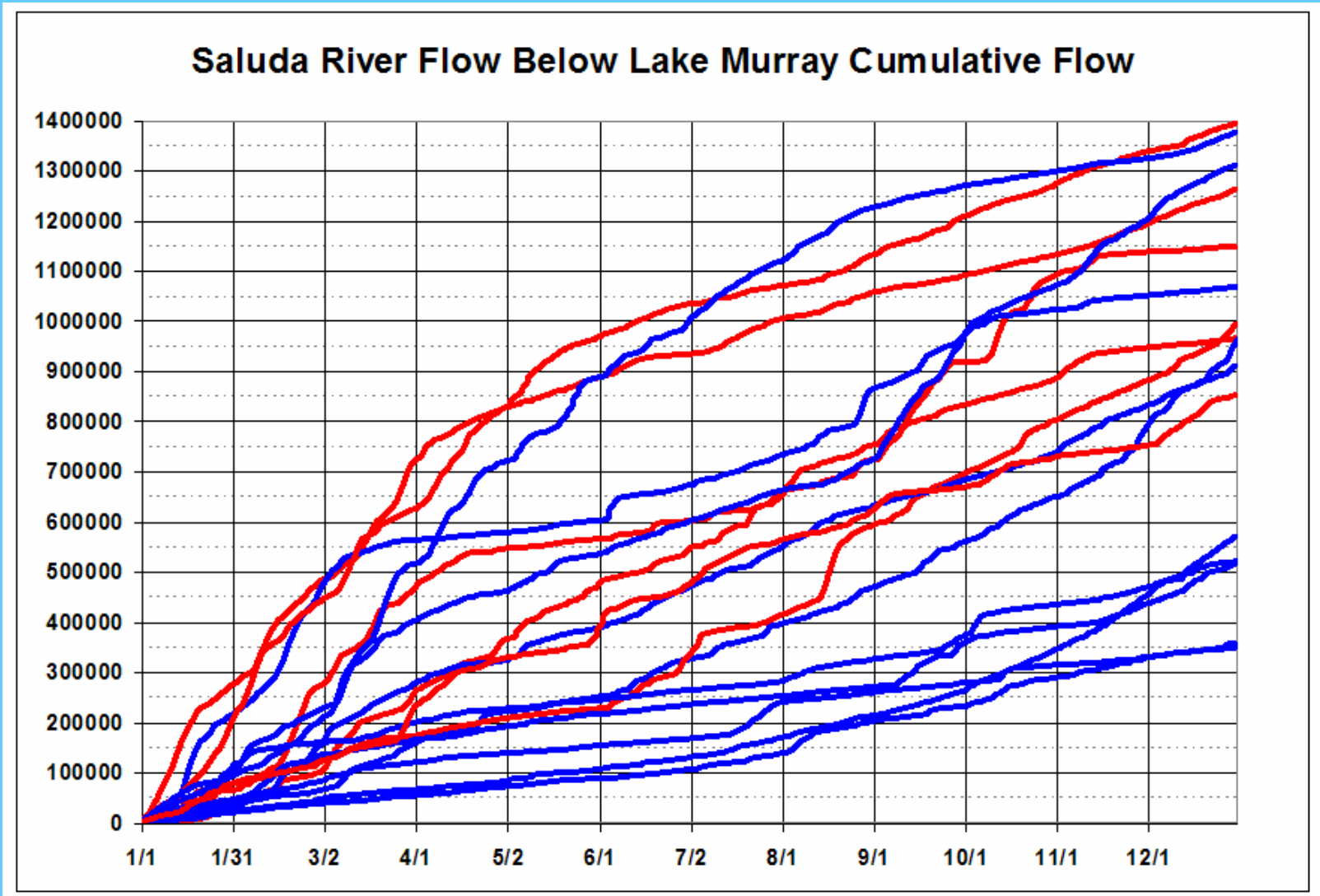
Cumulative Outflow

Saluda River Flow Below Lake Murray Cumulative Flow

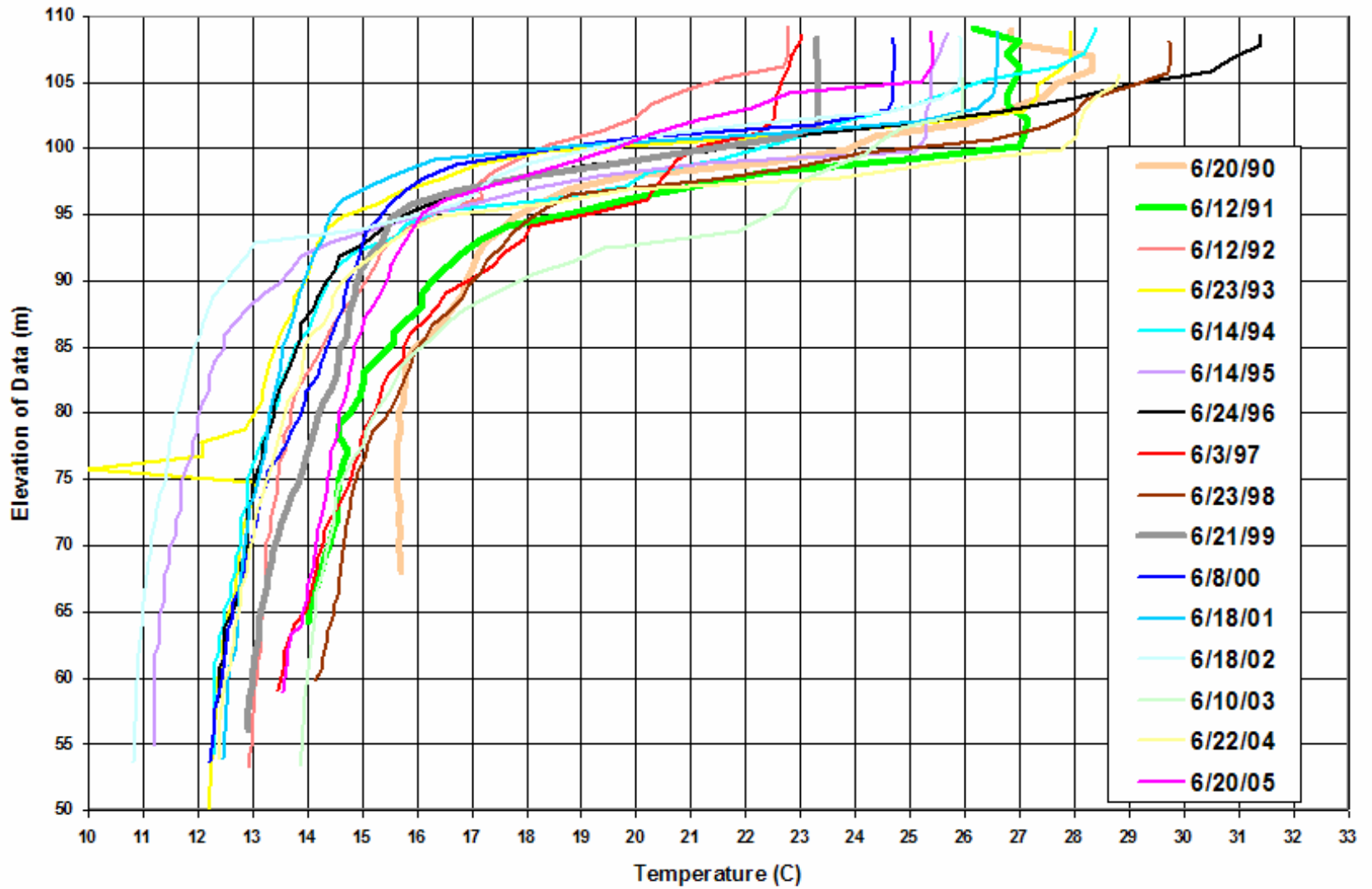


Cumulative Outflow

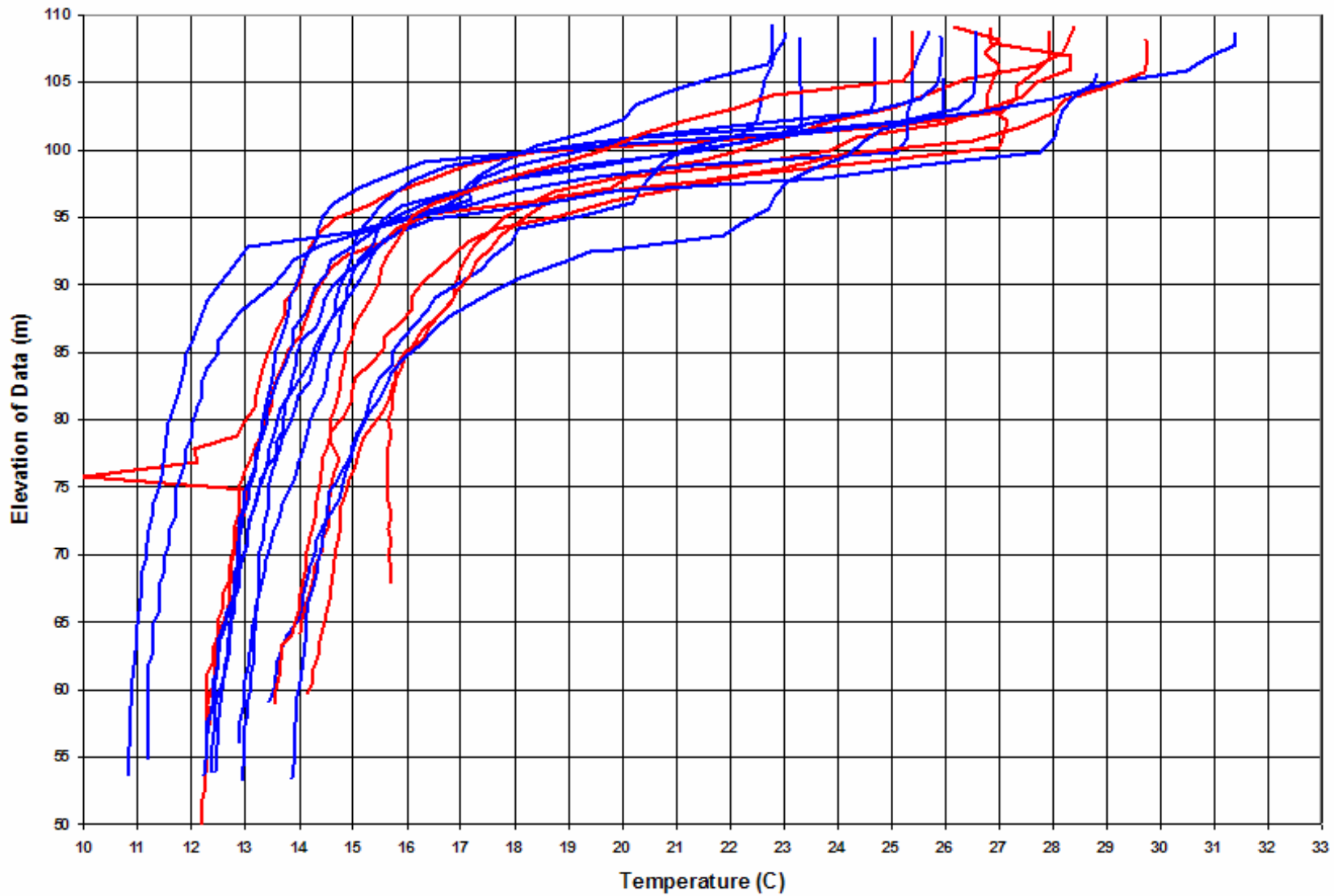
Years with documented striped bass kills are red



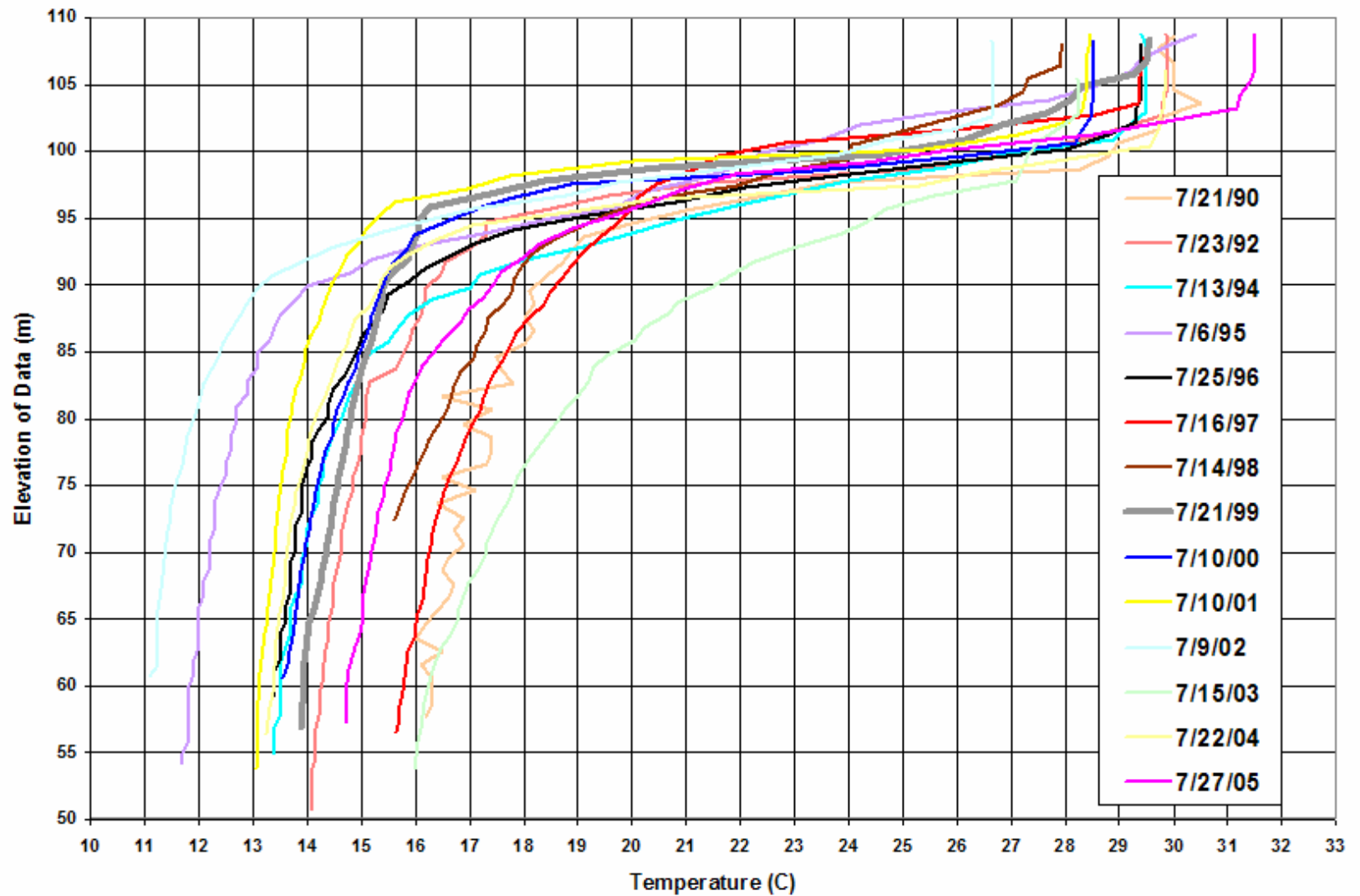
Murray Forebay Temperature Profiles - June



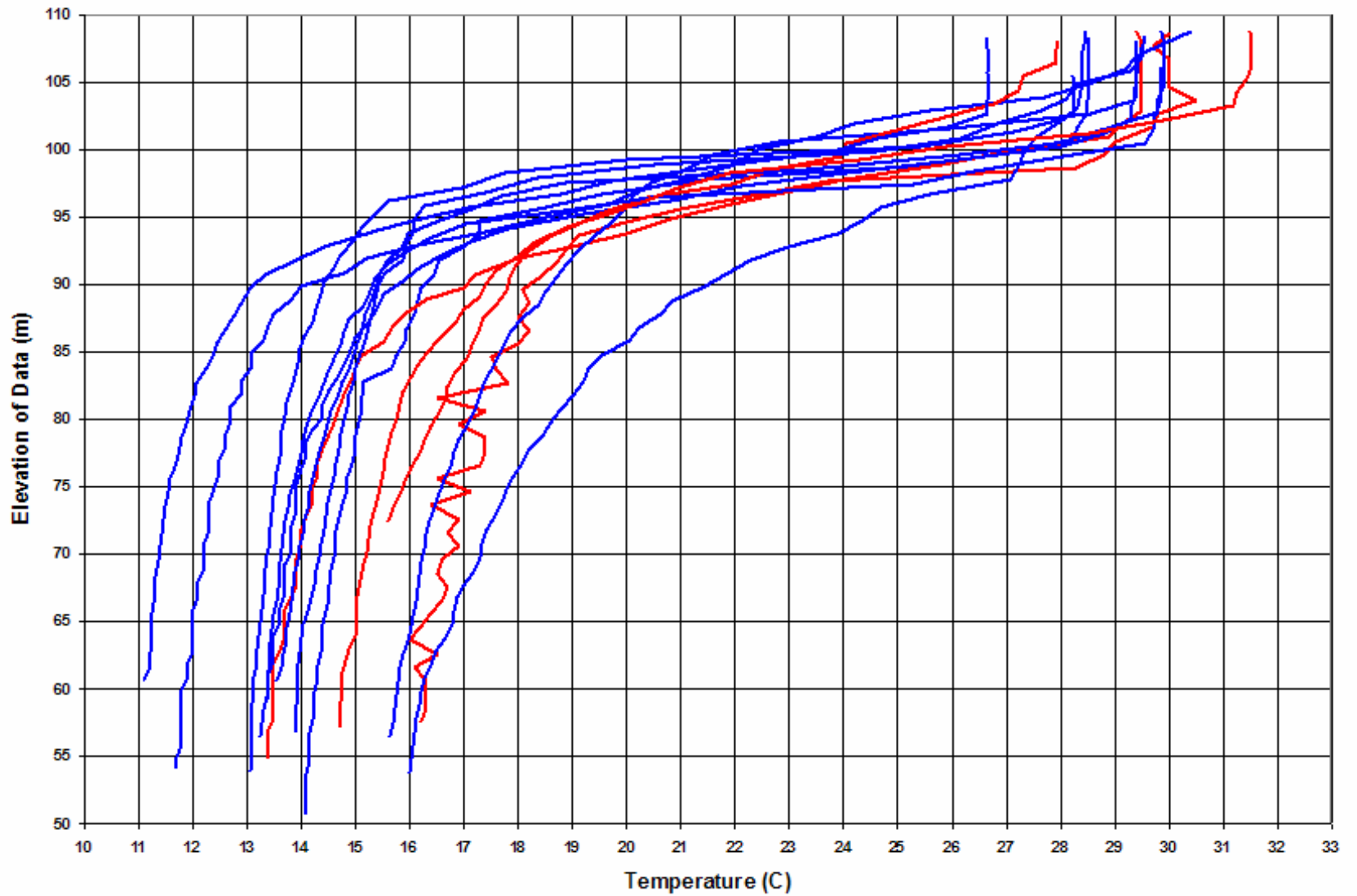
Murray Forebay Temperature Profiles - June



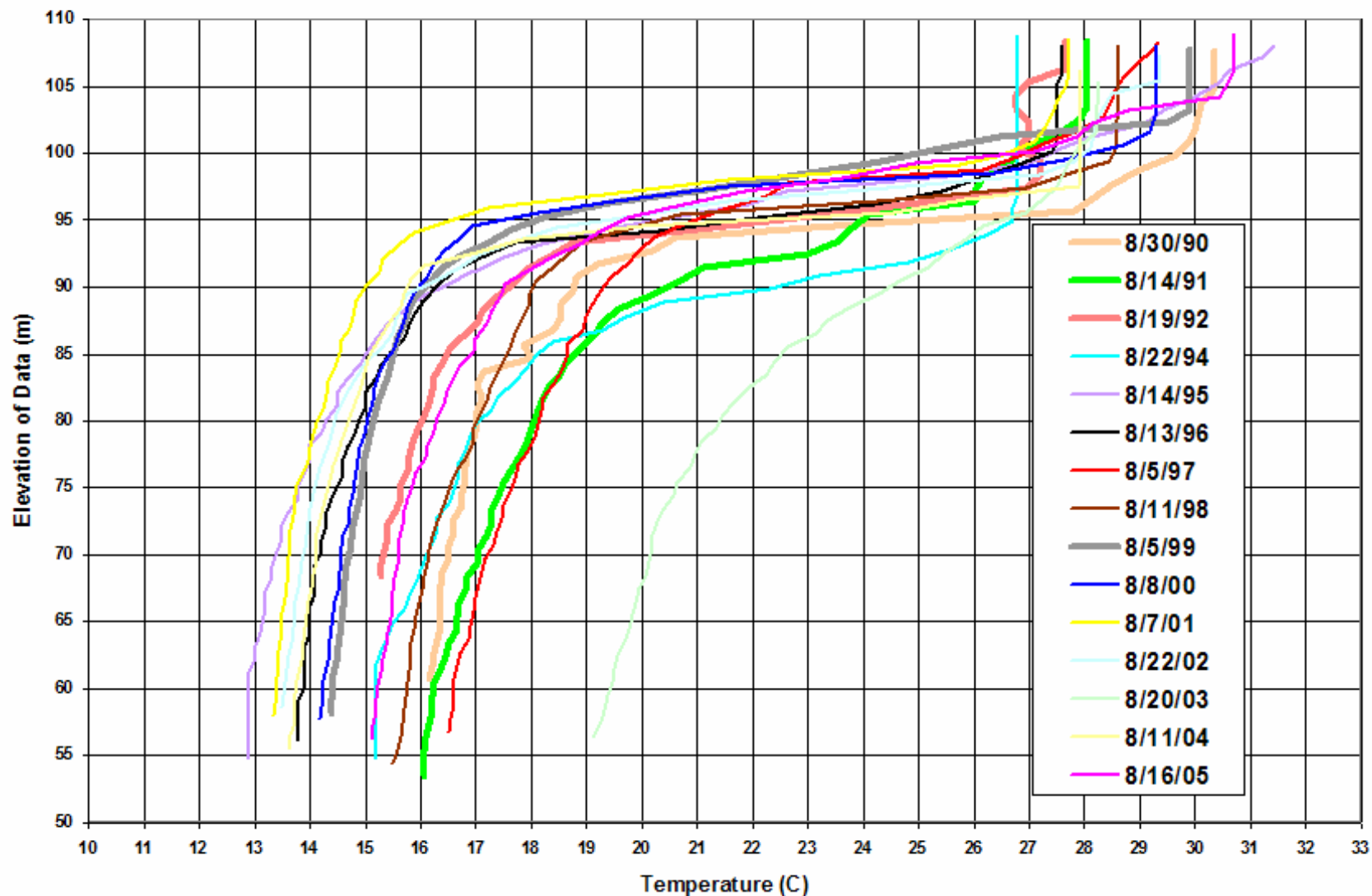
Murray Forebay Temperature Profiles - July



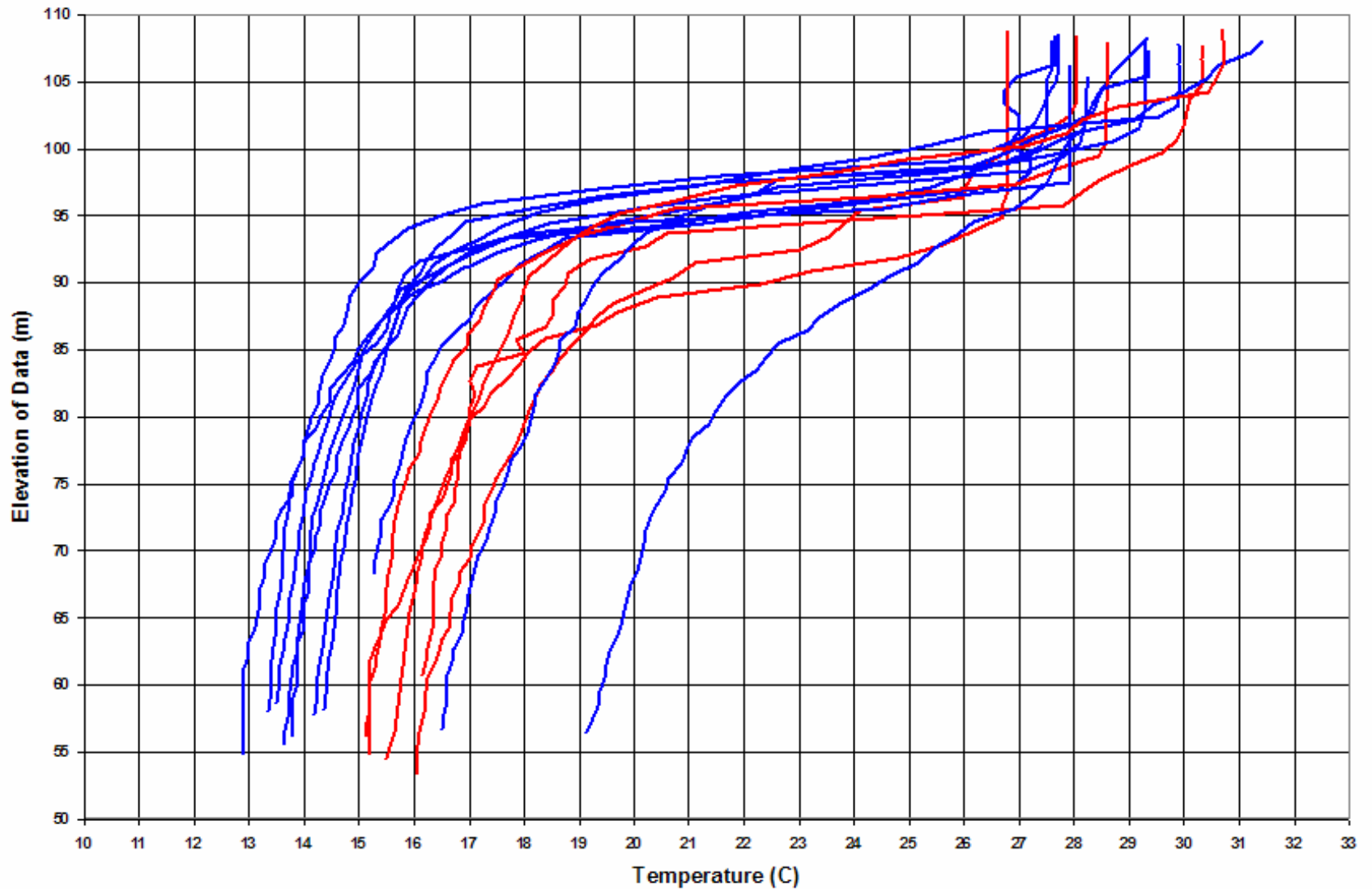
Murray Forebay Temperature Profiles - July



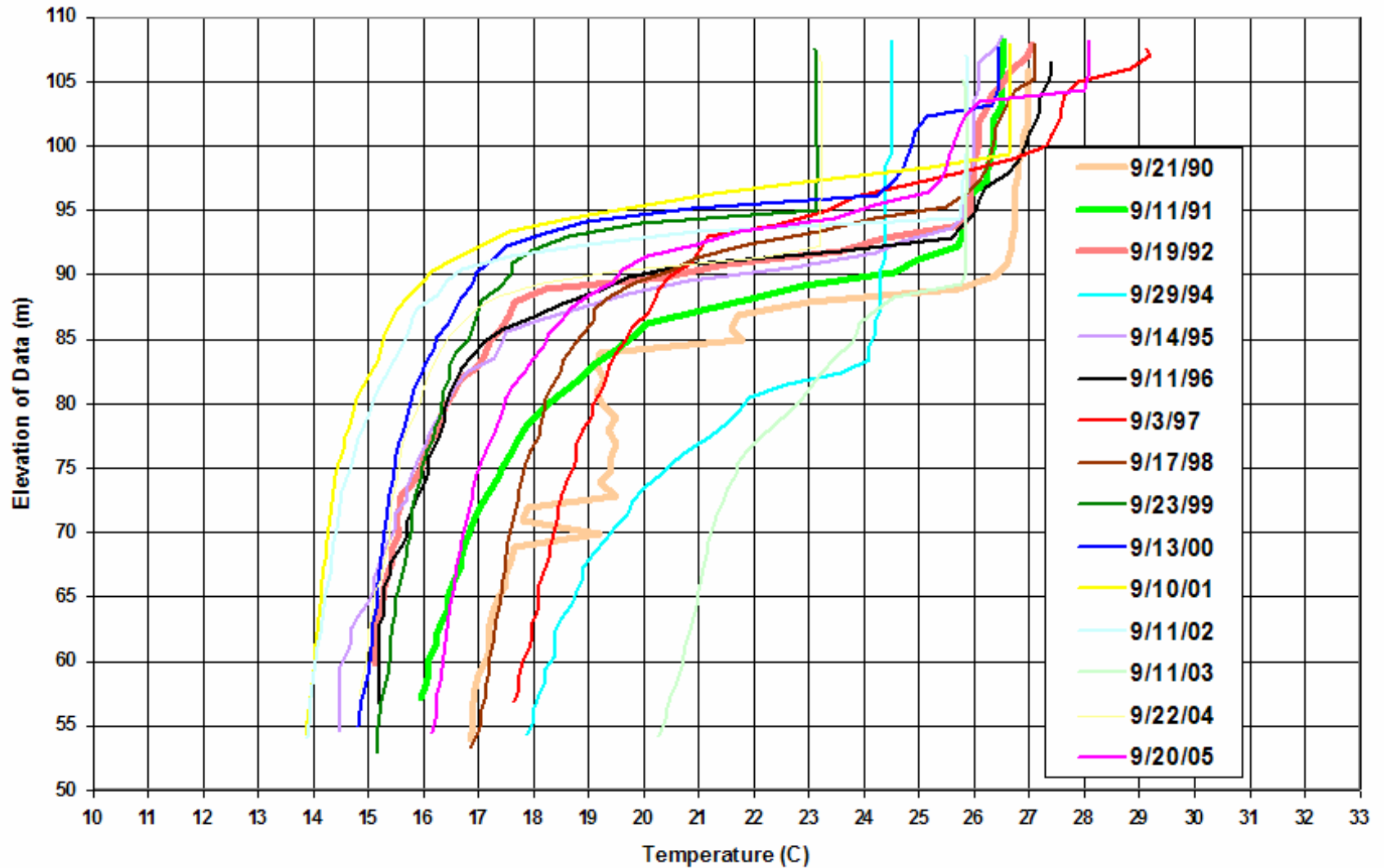
Murray Forebay Temperature Profiles - August



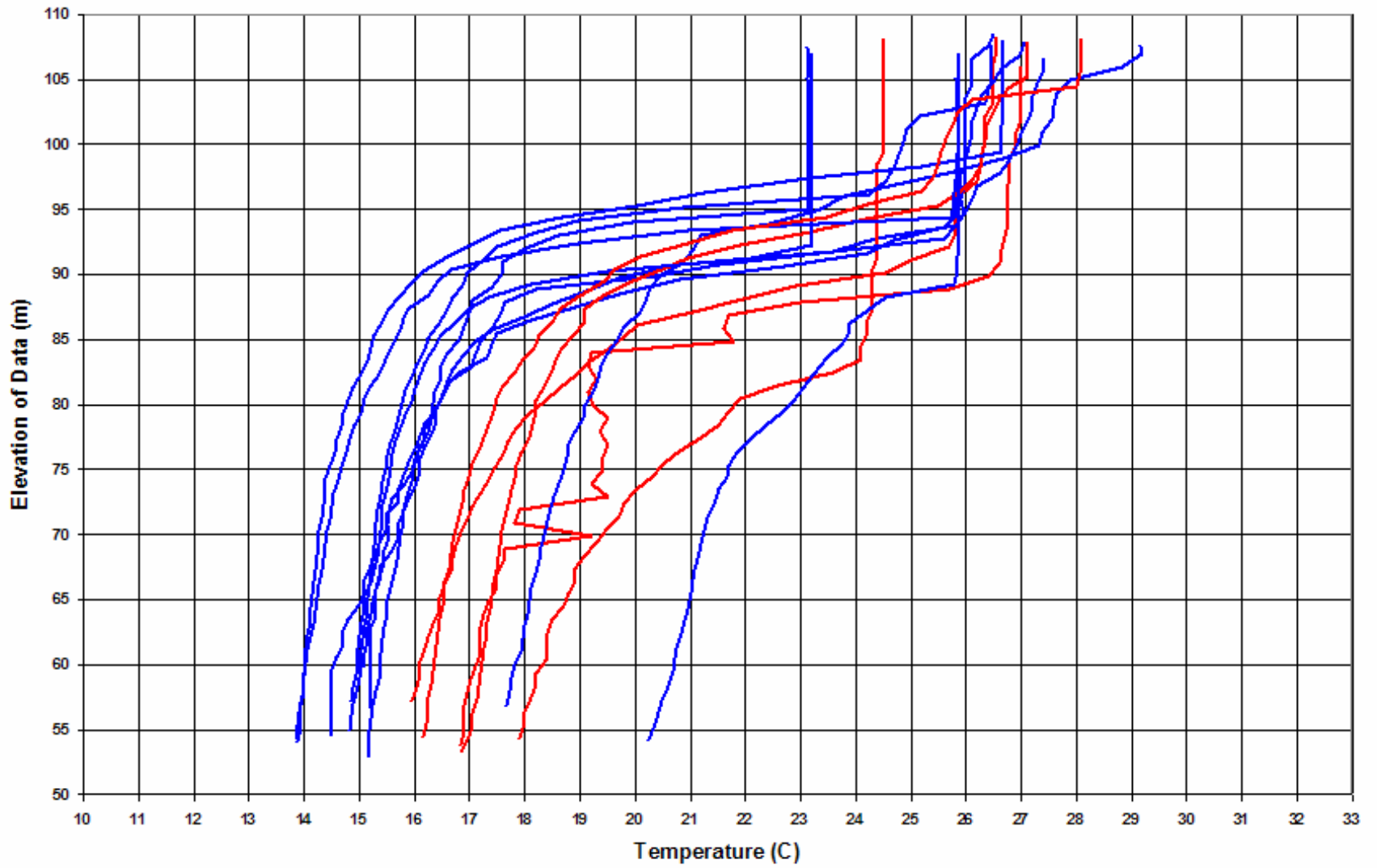
Murray Forebay Temperature Profiles - August



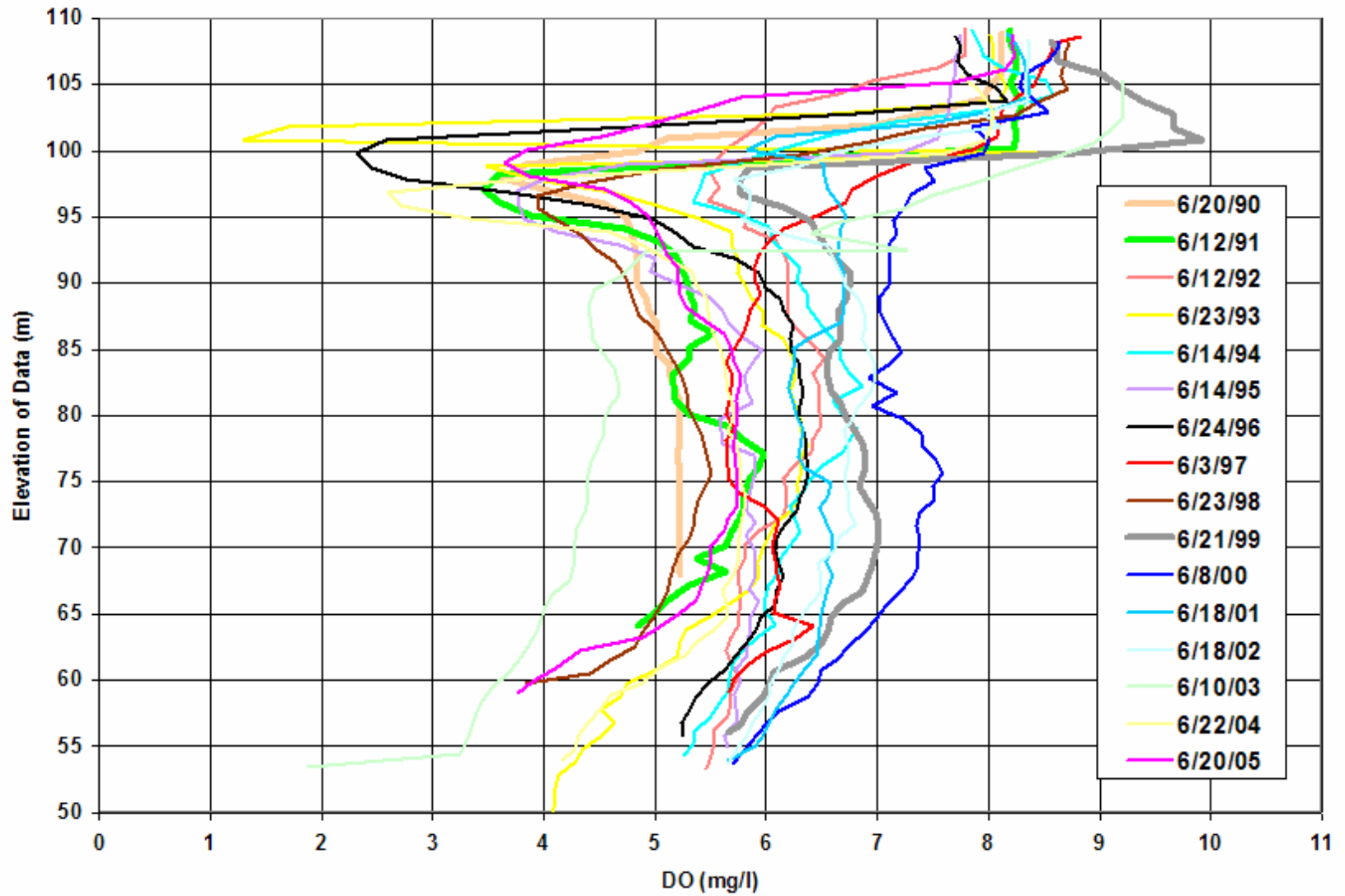
Murray Forebay Temperature Profiles - September



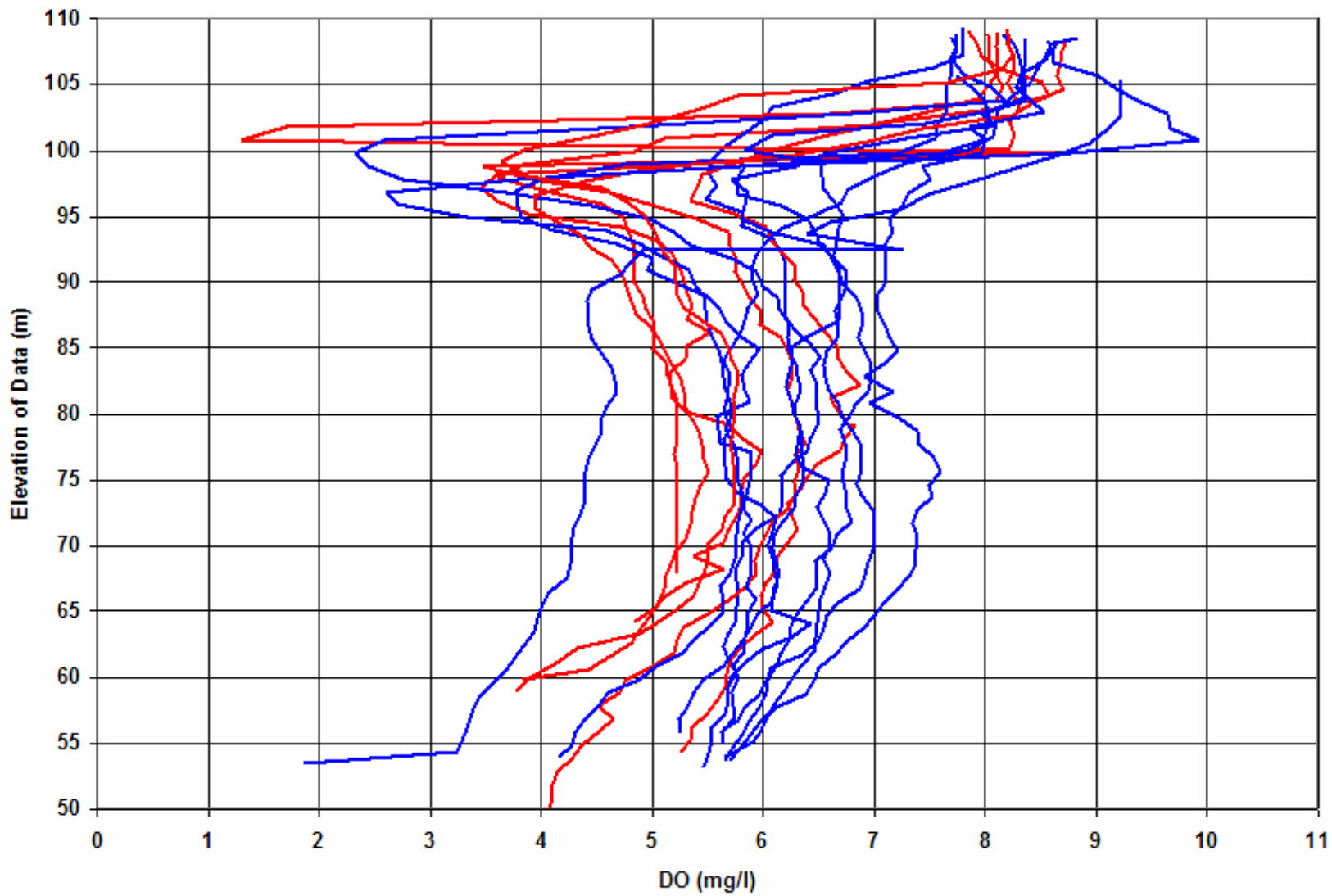
Murray Forebay Temperature Profiles - September



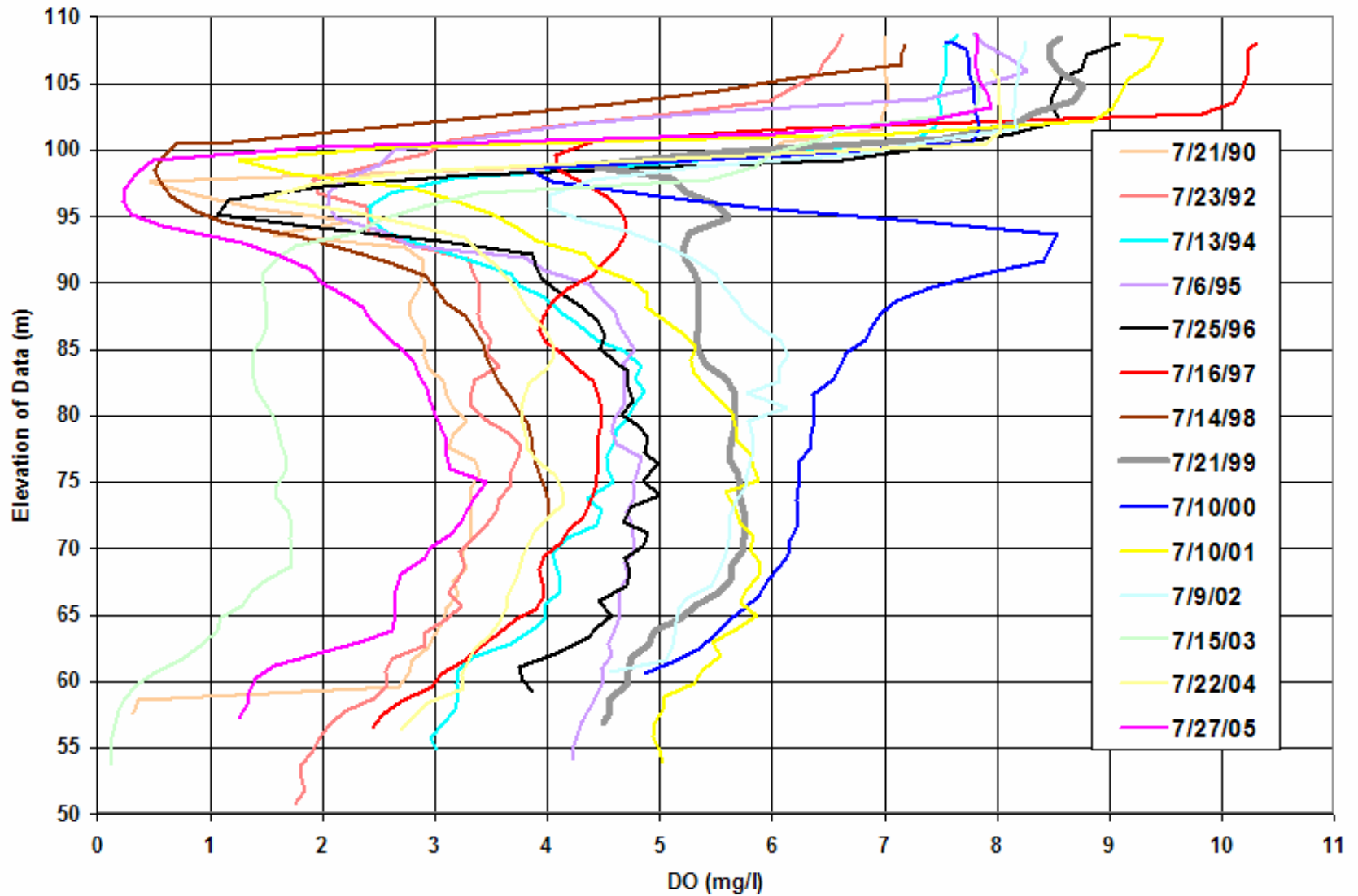
Murray Forebay DO Profiles - June



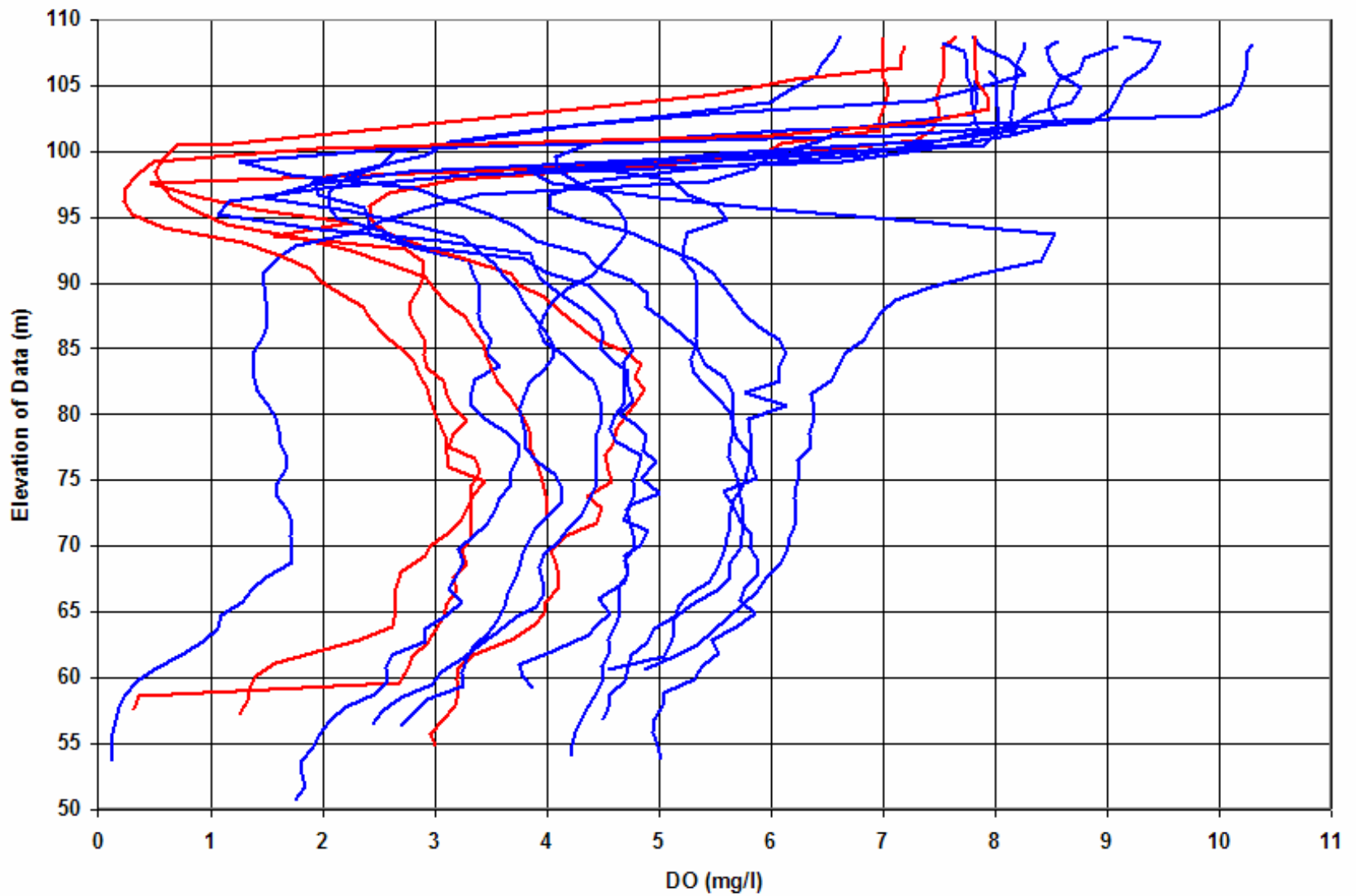
Murray Forebay DO Profiles - June



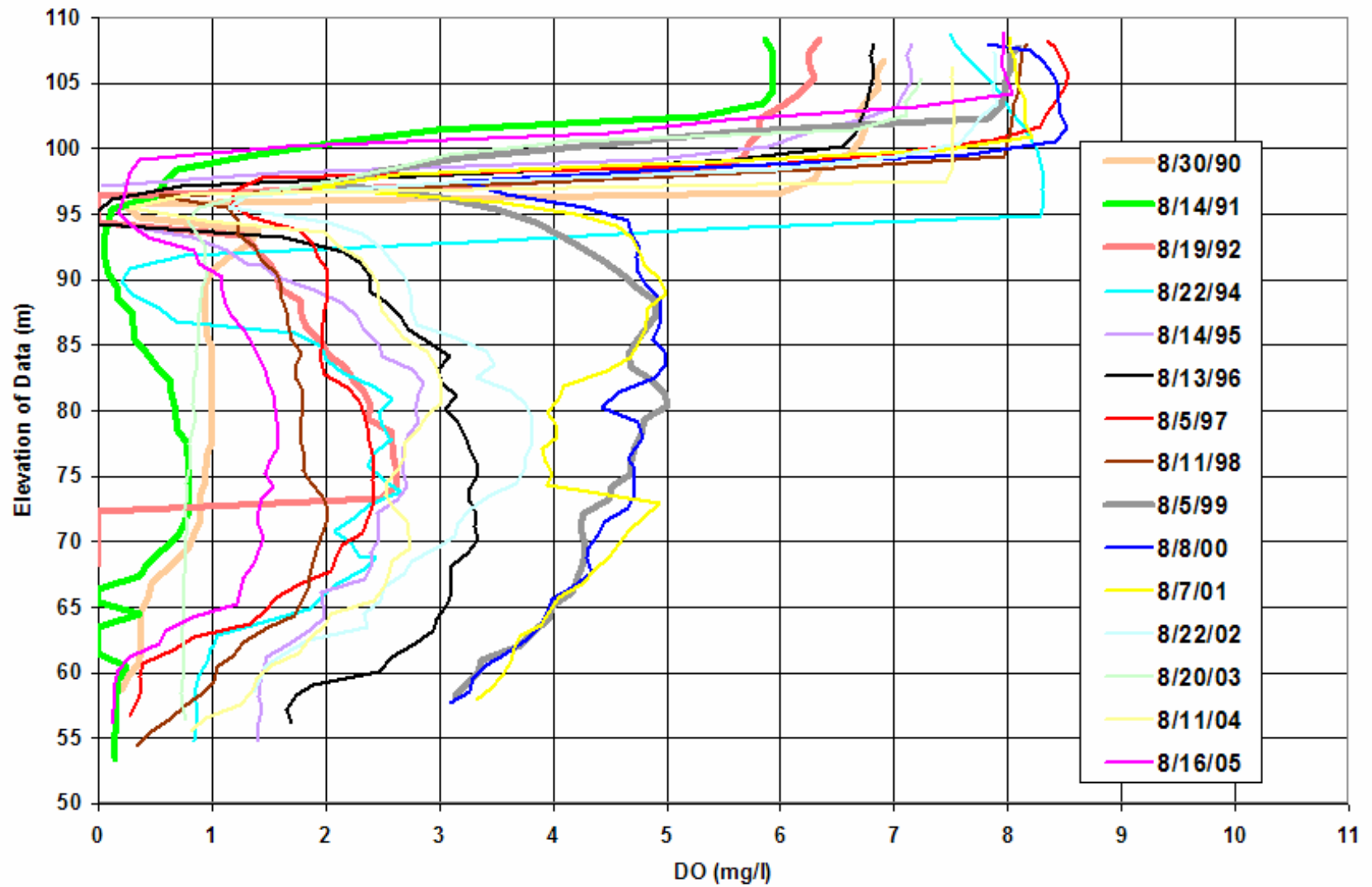
Murray Forebay DO Profiles - July



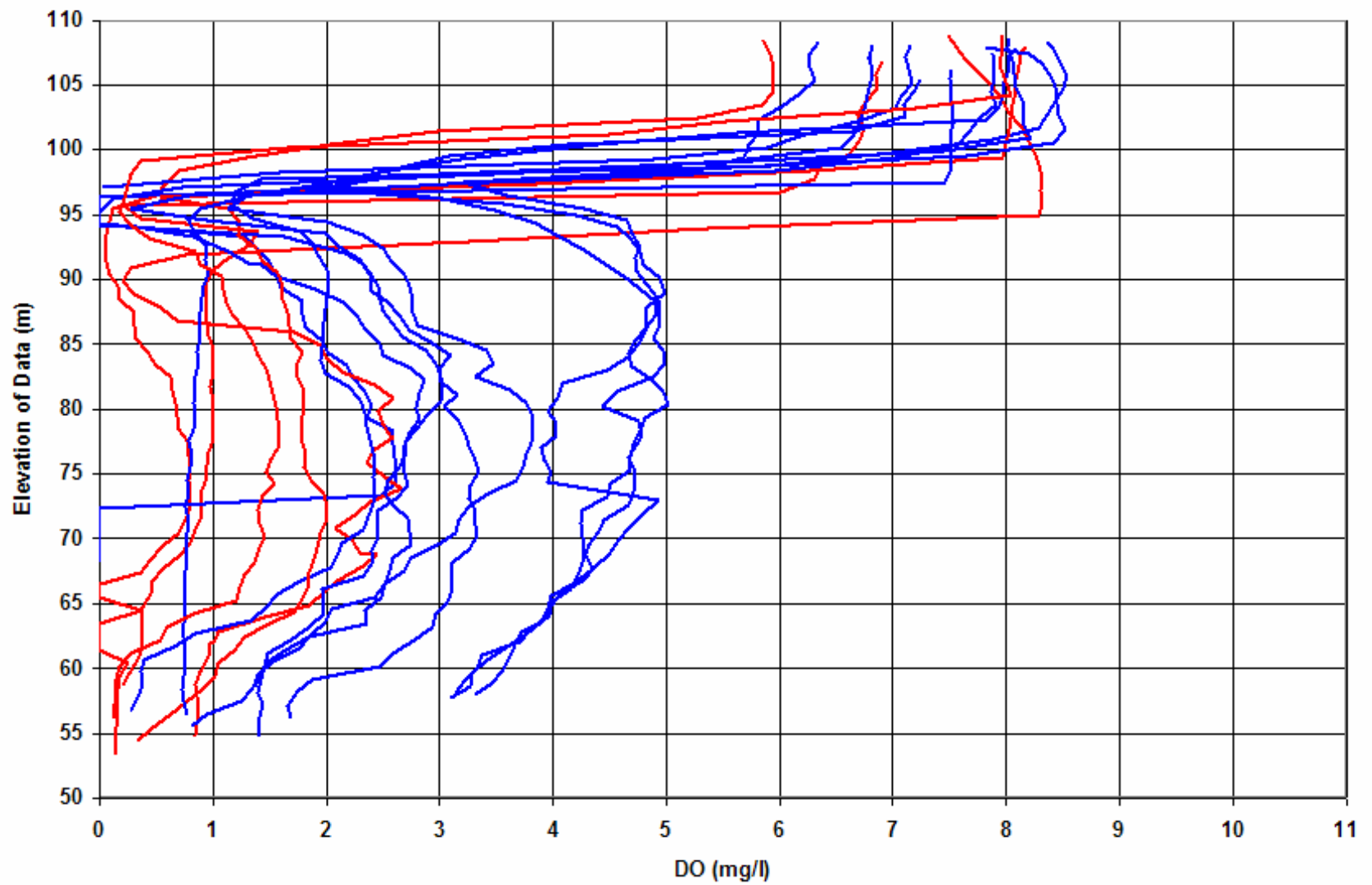
Murray Forebay DO Profiles - July



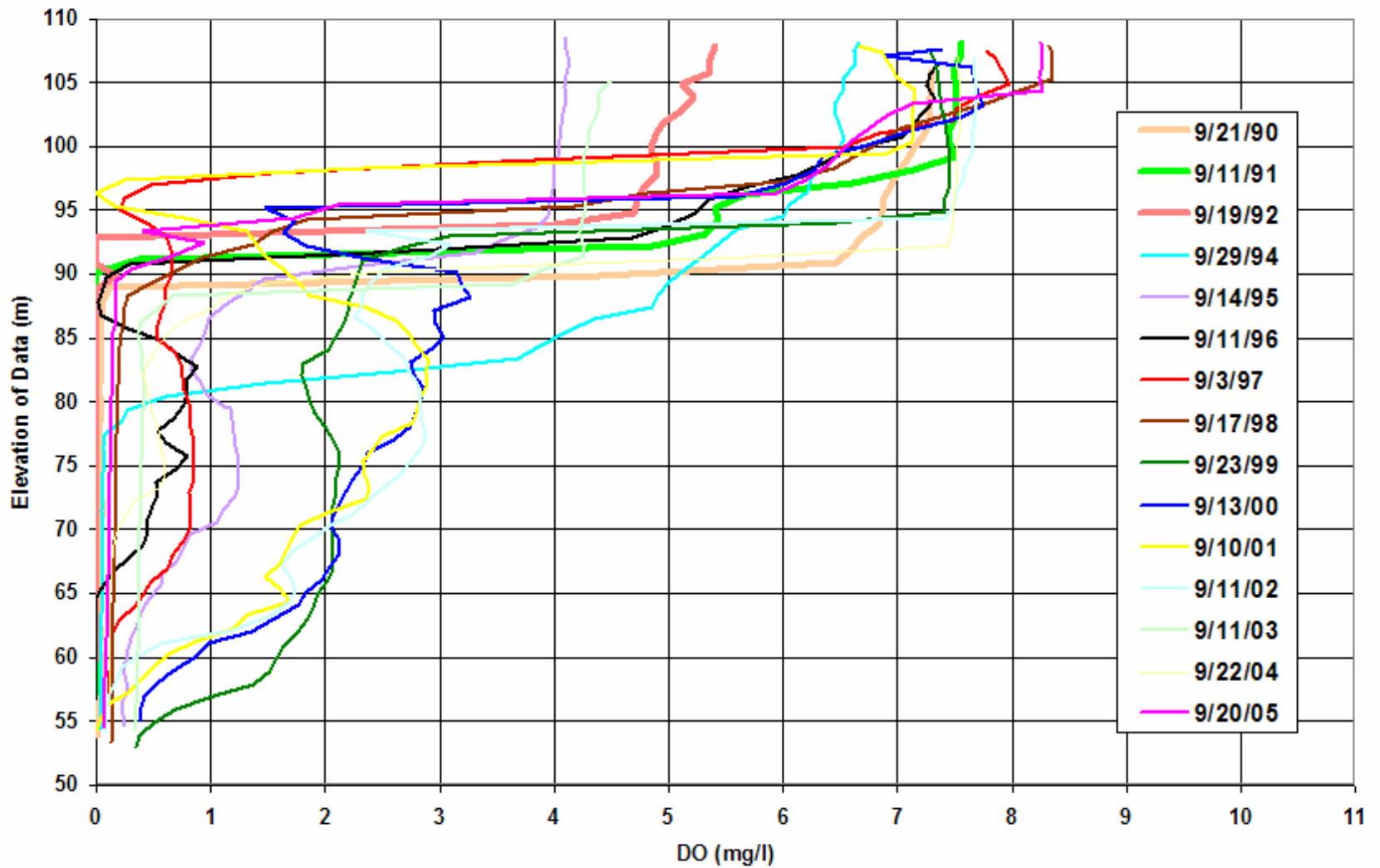
Murray Forebay DO Profiles - August



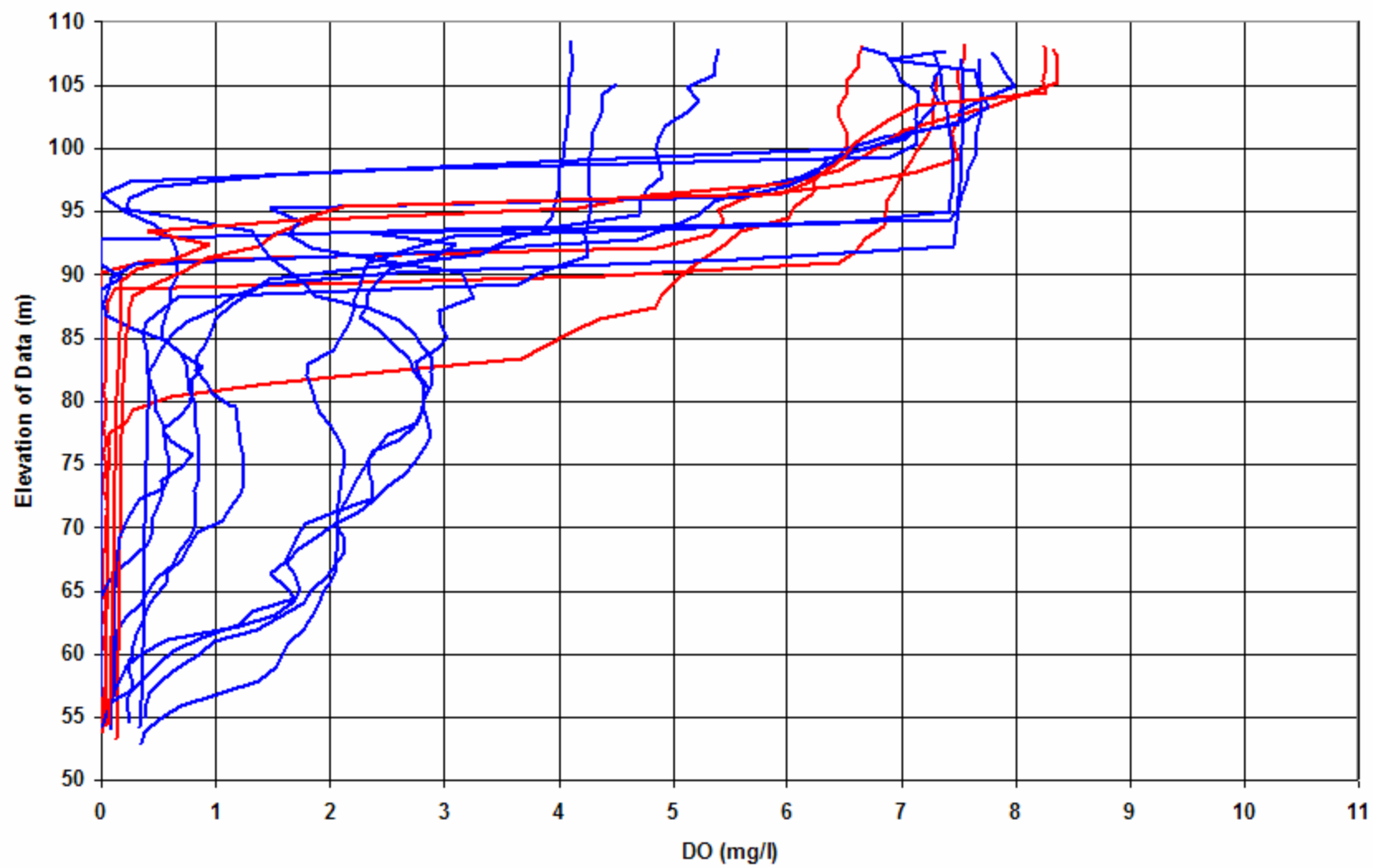
Murray Forebay DO Profiles - August



Murray Forebay DO Profiles - September

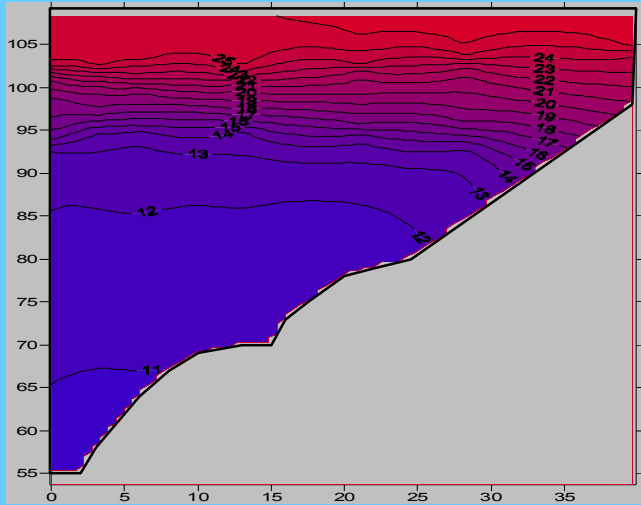


Murray Forebay DO Profiles - September

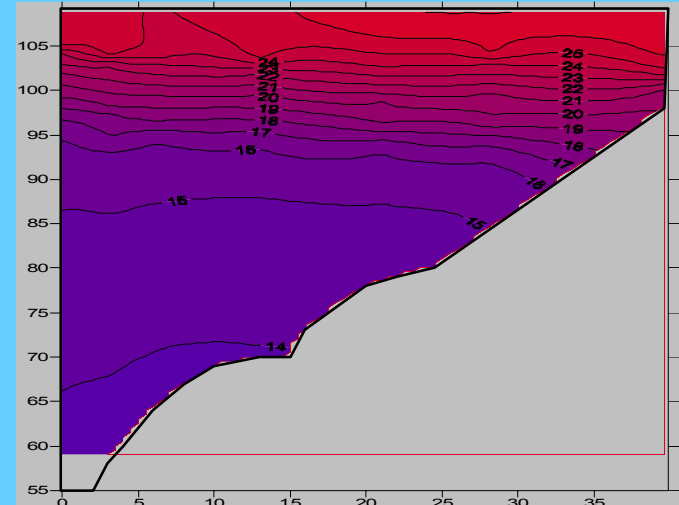


Lake Murray Contour Plots

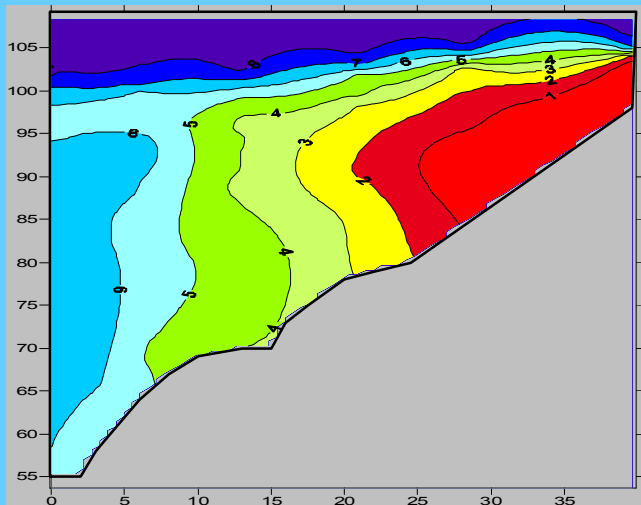
June 2002 Temperature



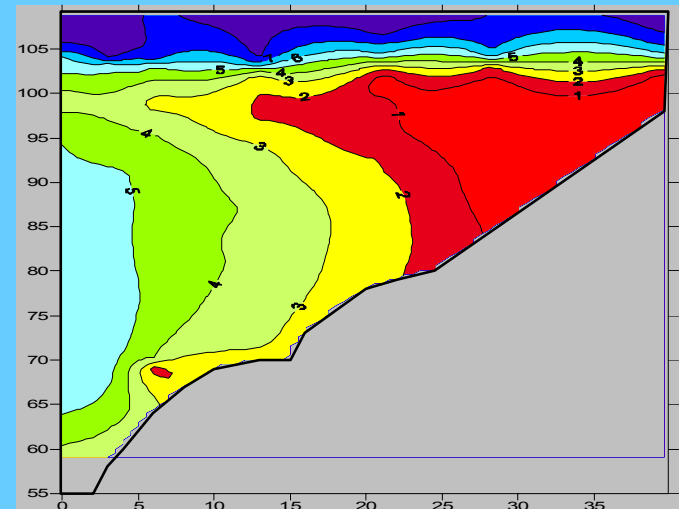
June 2005 Temperature



June 2002 DO

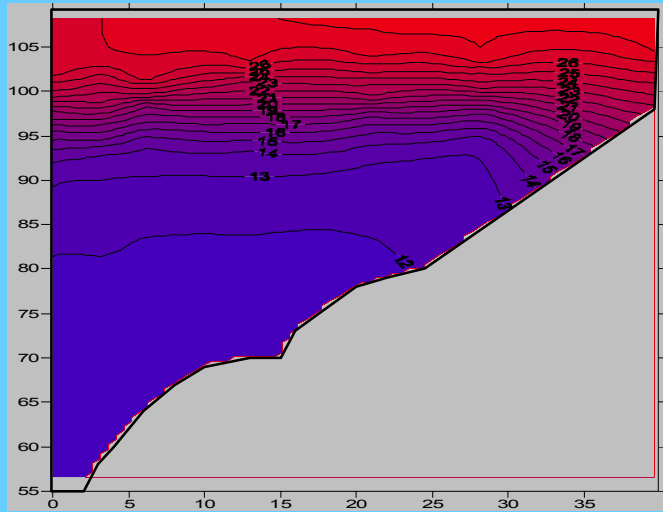


June 2005 DO

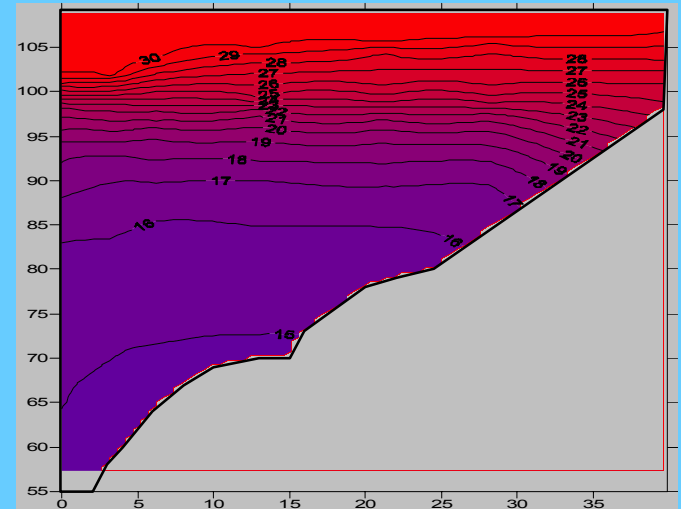


Lake Murray Contour Plots

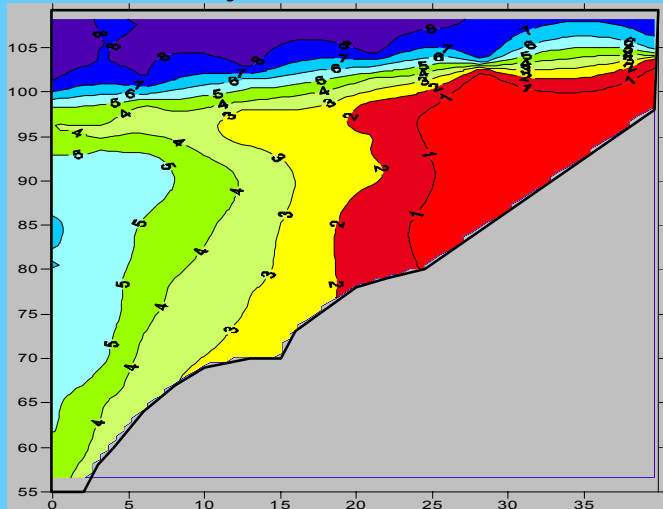
July 2002 Temperature



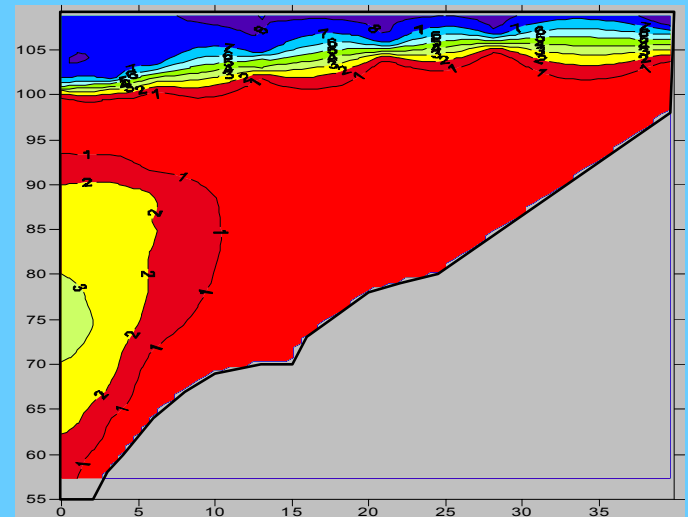
July 2005 Temperature



July 2002 DO

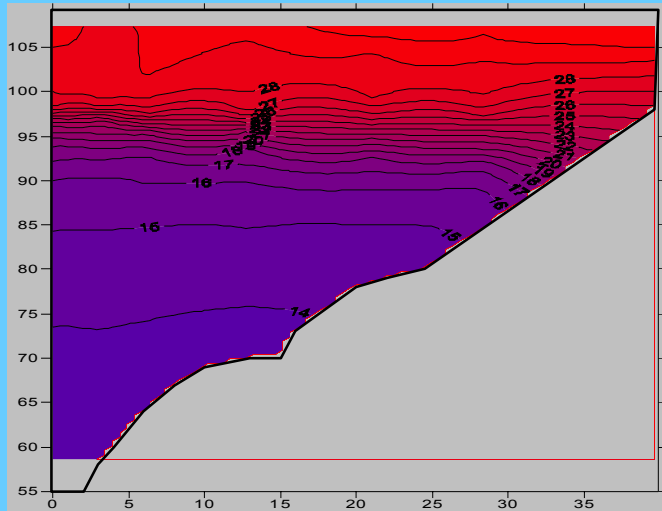


July 2005 DO

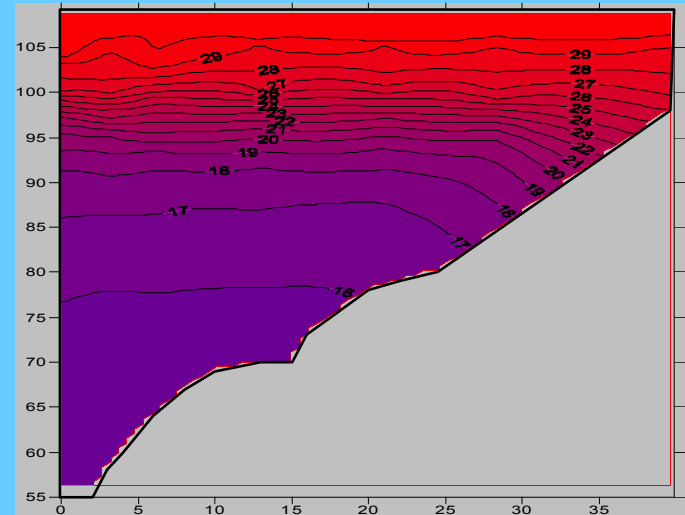


Lake Murray Contour Plots

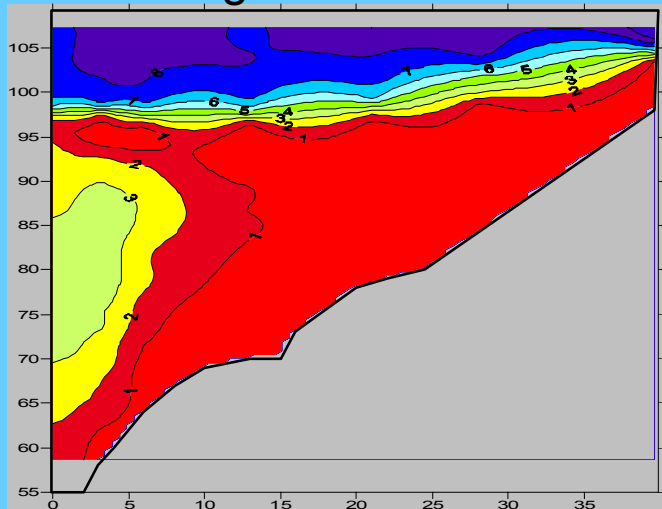
August 2002 Temperature



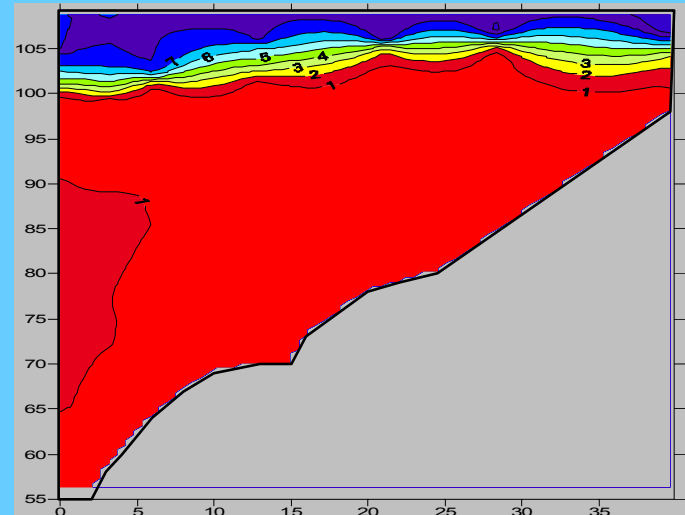
August 2005 Temperature



August 2002 DO

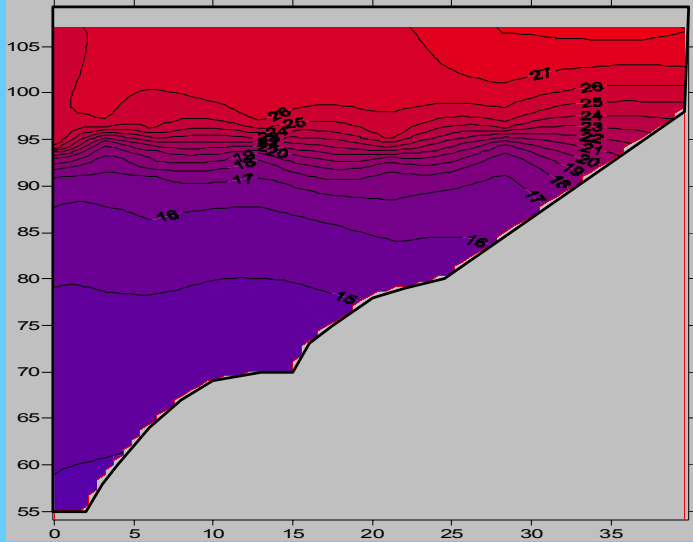


August 2005 DO

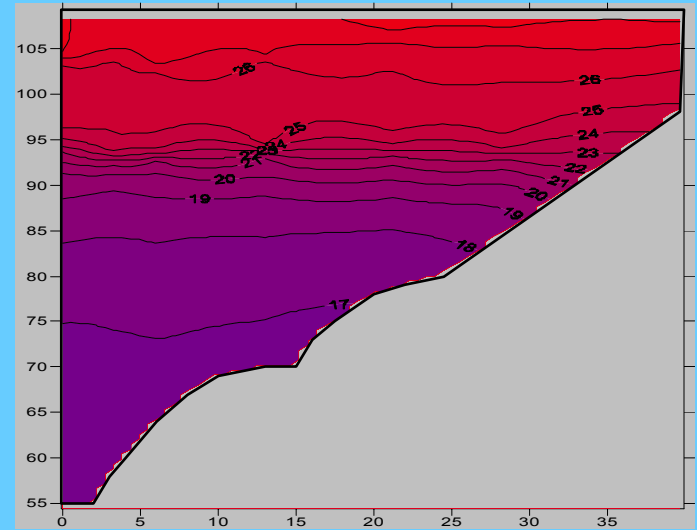


Lake Murray Contour Plots

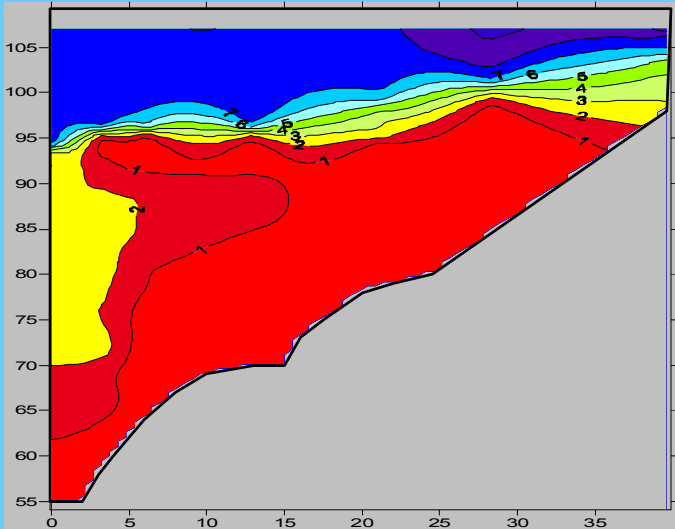
September 2002 Temperature



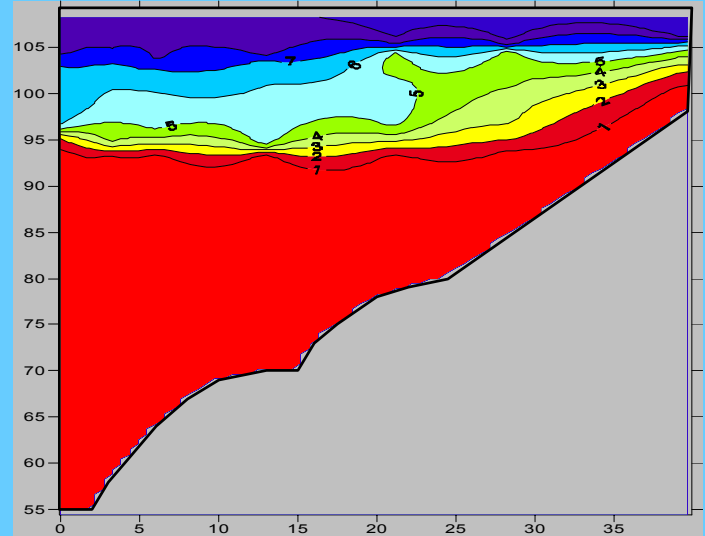
September 2005 Temperature



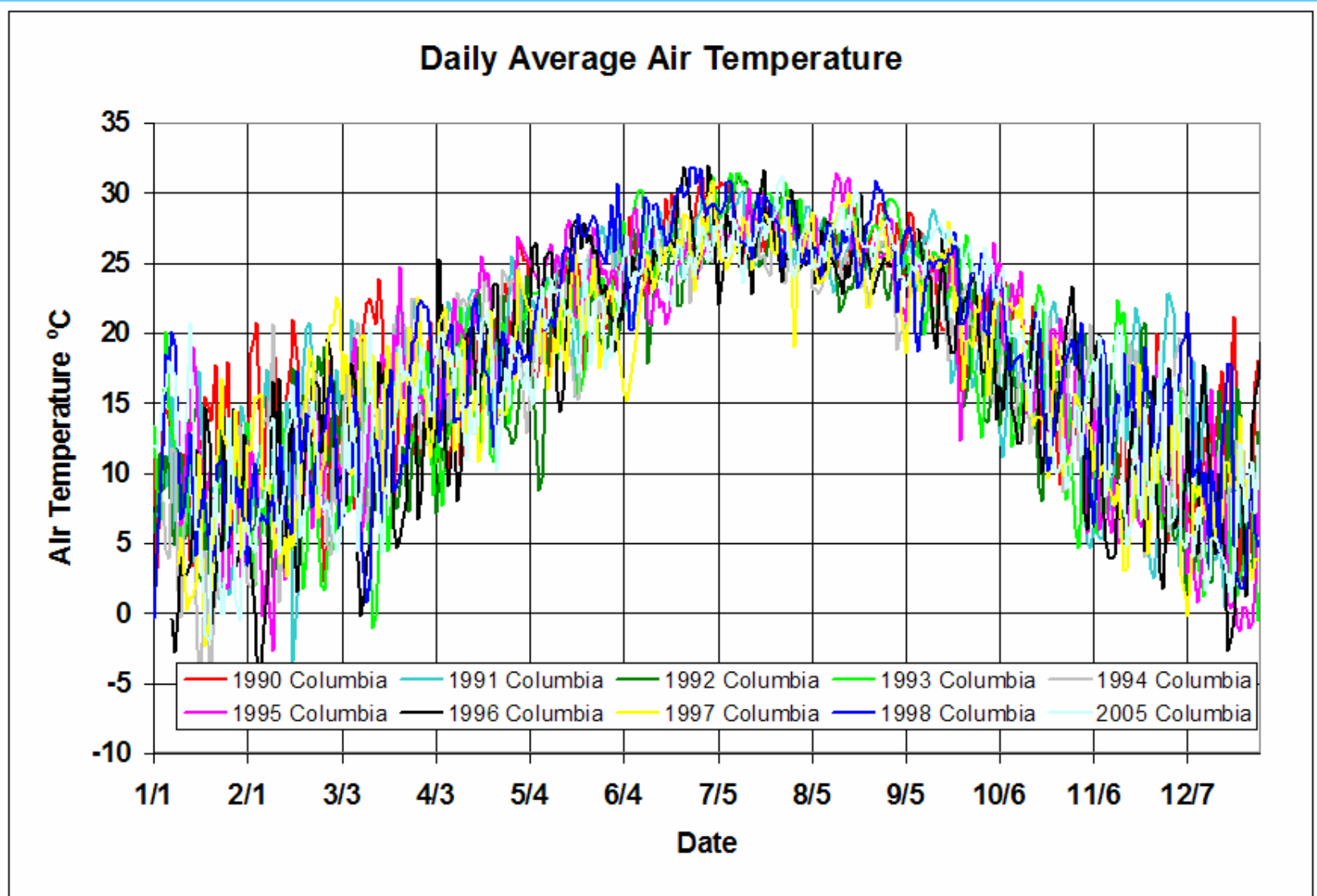
September 2002 DO



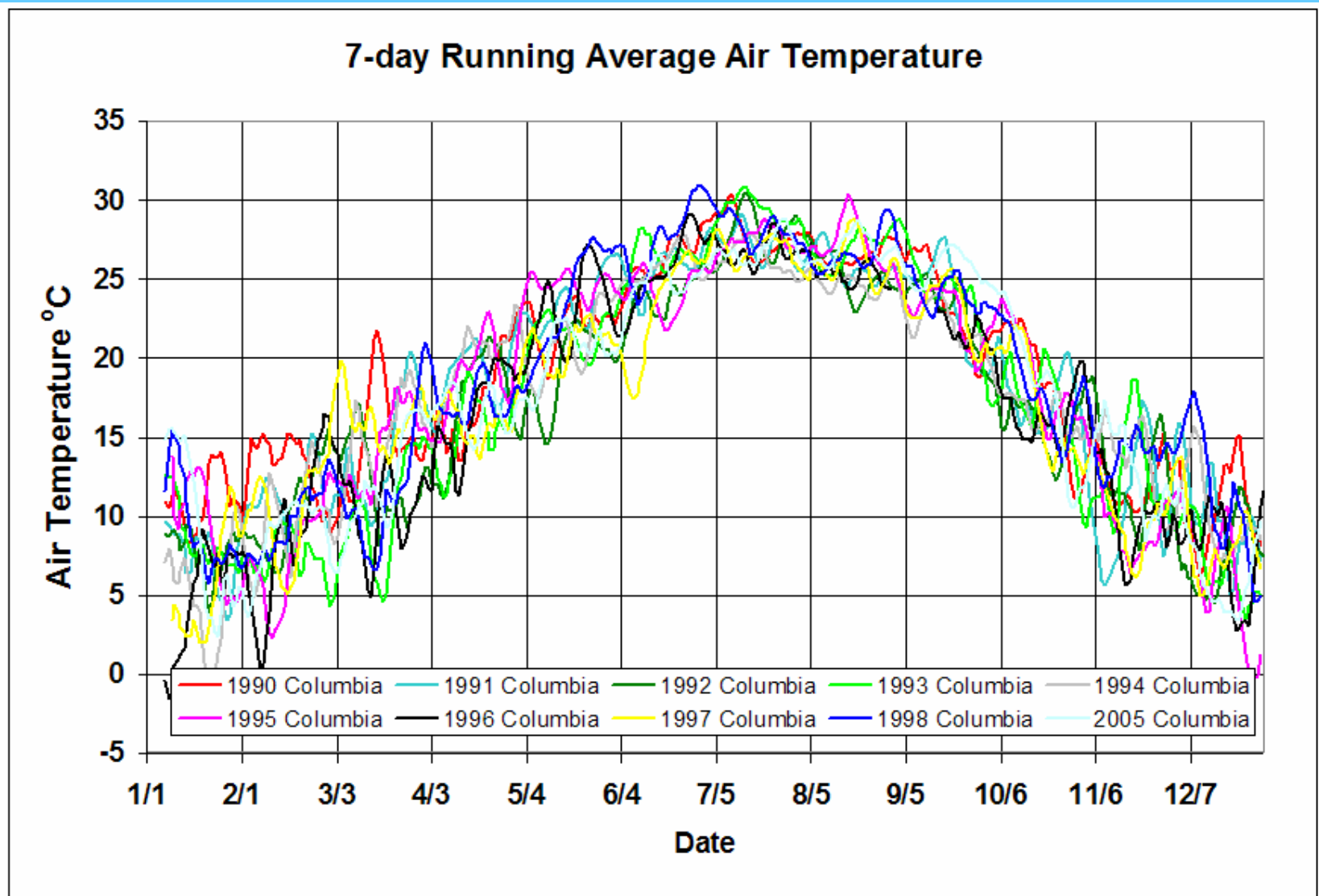
September 2005 DO



Columbia, SC Daily Average Air Temperature

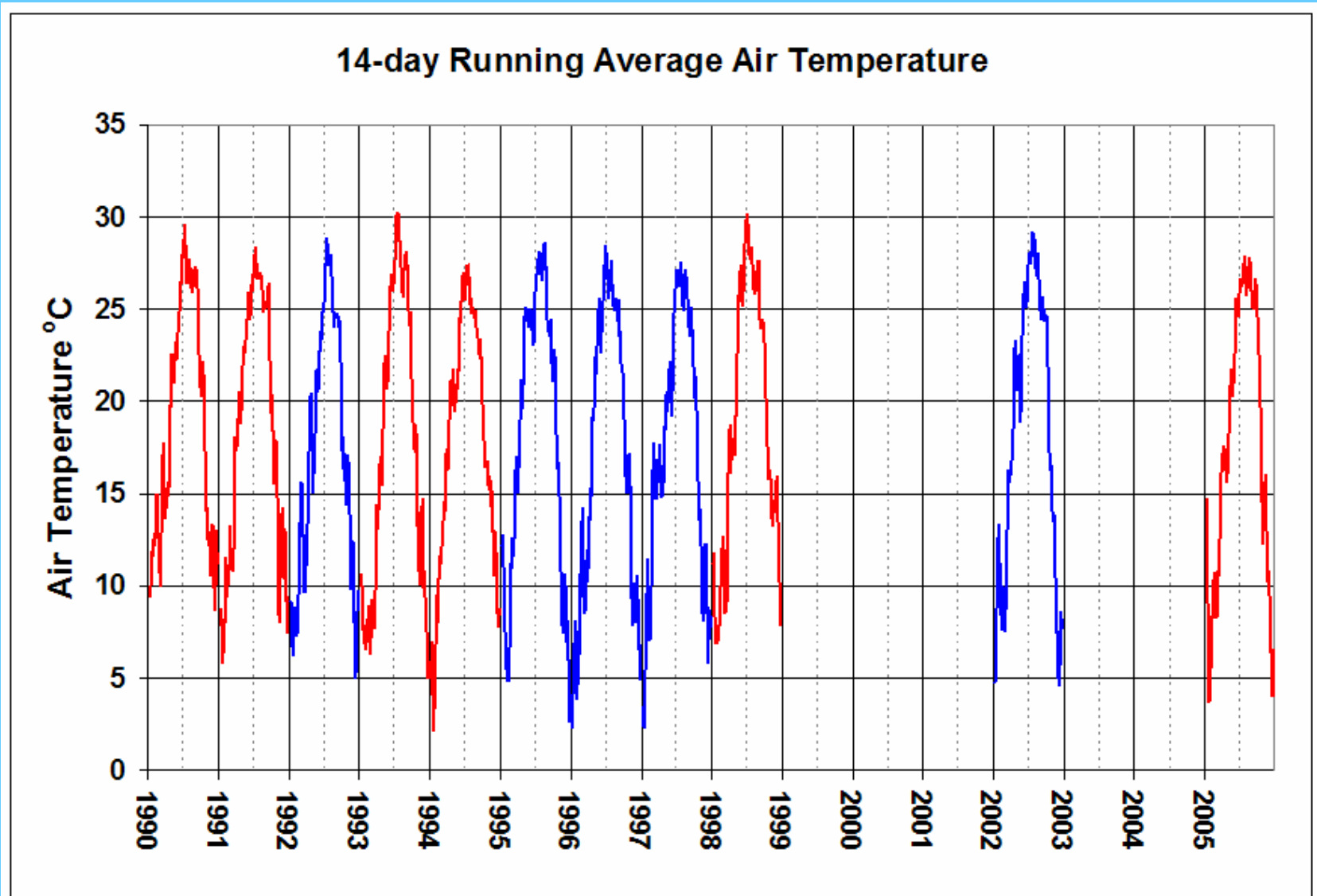


Columbia, SC 7-day Running Average Air Temperature

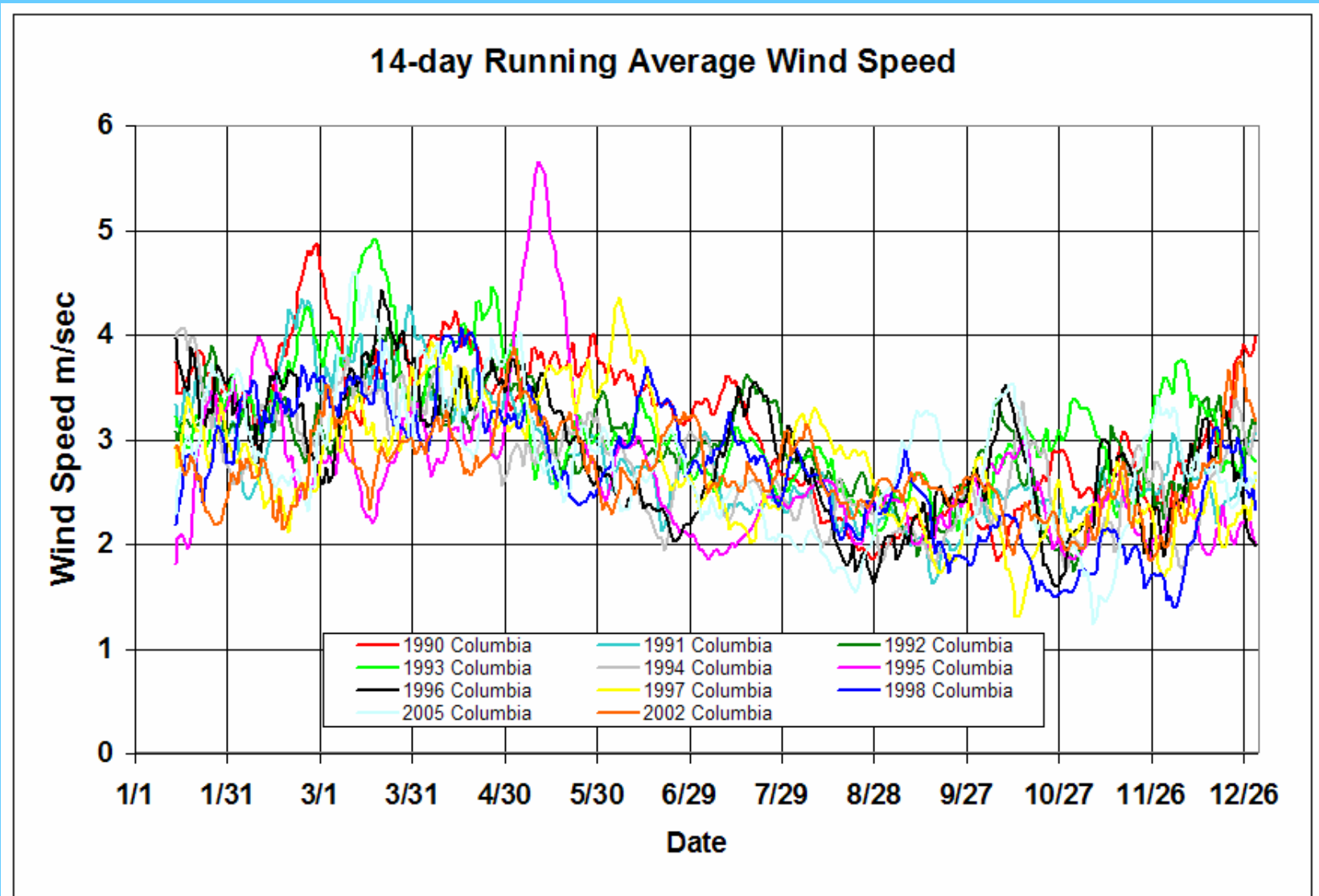


Columbia, SC 14-day Running Average Air Temperature

Years with documented striped bass kills are red



Columbia, SC 14-day Running Average Wind Speed



Next Steps

- Continue analyzing flow and met data
- More detailed analysis of operations
- Model selected years