

**Preliminary Analysis of Factors Contributing
to Exceedances of Interim P Levels in
A.R.M. Loxahatchee National Wildlife Refuge**

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Everglades TOC Meeting

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Consent Decree Interim P Levels for LNWR Marsh

Objective:

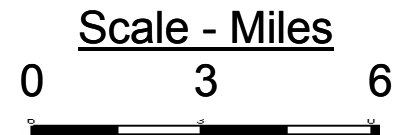
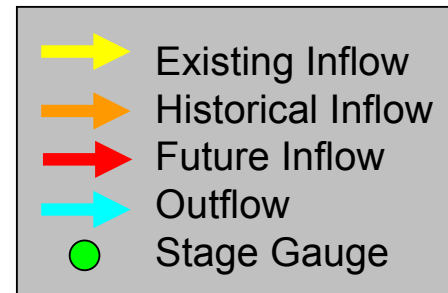
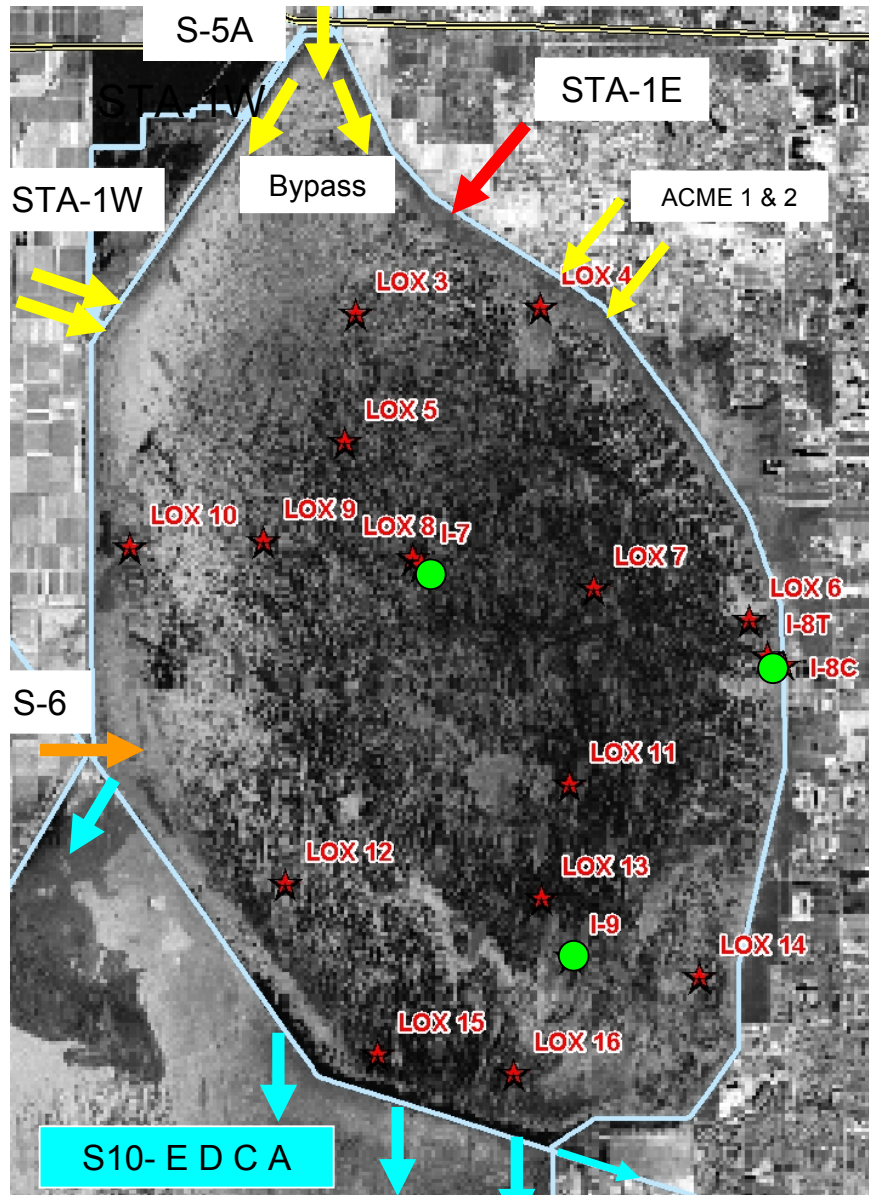
Provide Water Quality Equivalent to 1978-1979
Base Period for Outstanding Florida Waters
Effective February 1999

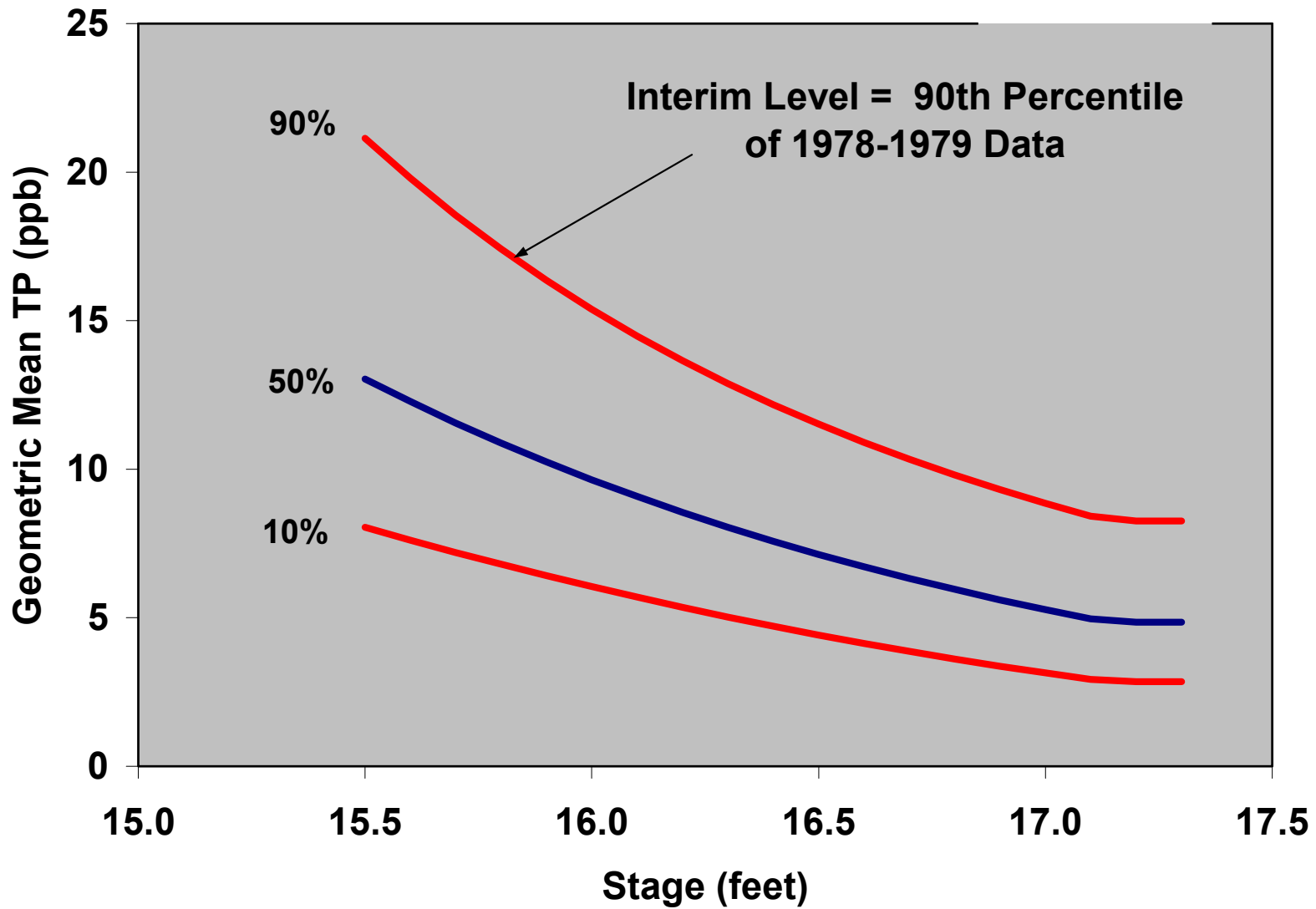
Based upon Geometric Mean of Data from 14 Sites Monitored in 1978-1983

Statistical Model Accounts for Variations Present in the 1978-1983 Data:

Water Level (Stage)
Increasing Trend
Other Random Variations (Natural, Man-Induced, Sampling, etc.)

Interim Levels Set at 90th Percentile of 1978-1979 Data





Consent Decree Interim P Levels LNWR for Marsh

Monthly "Exceedance" if Marsh P > Interim Level & Stage > 15.1 ft

If More Than One Exceedance Occurs in a 12-Sample Interval:

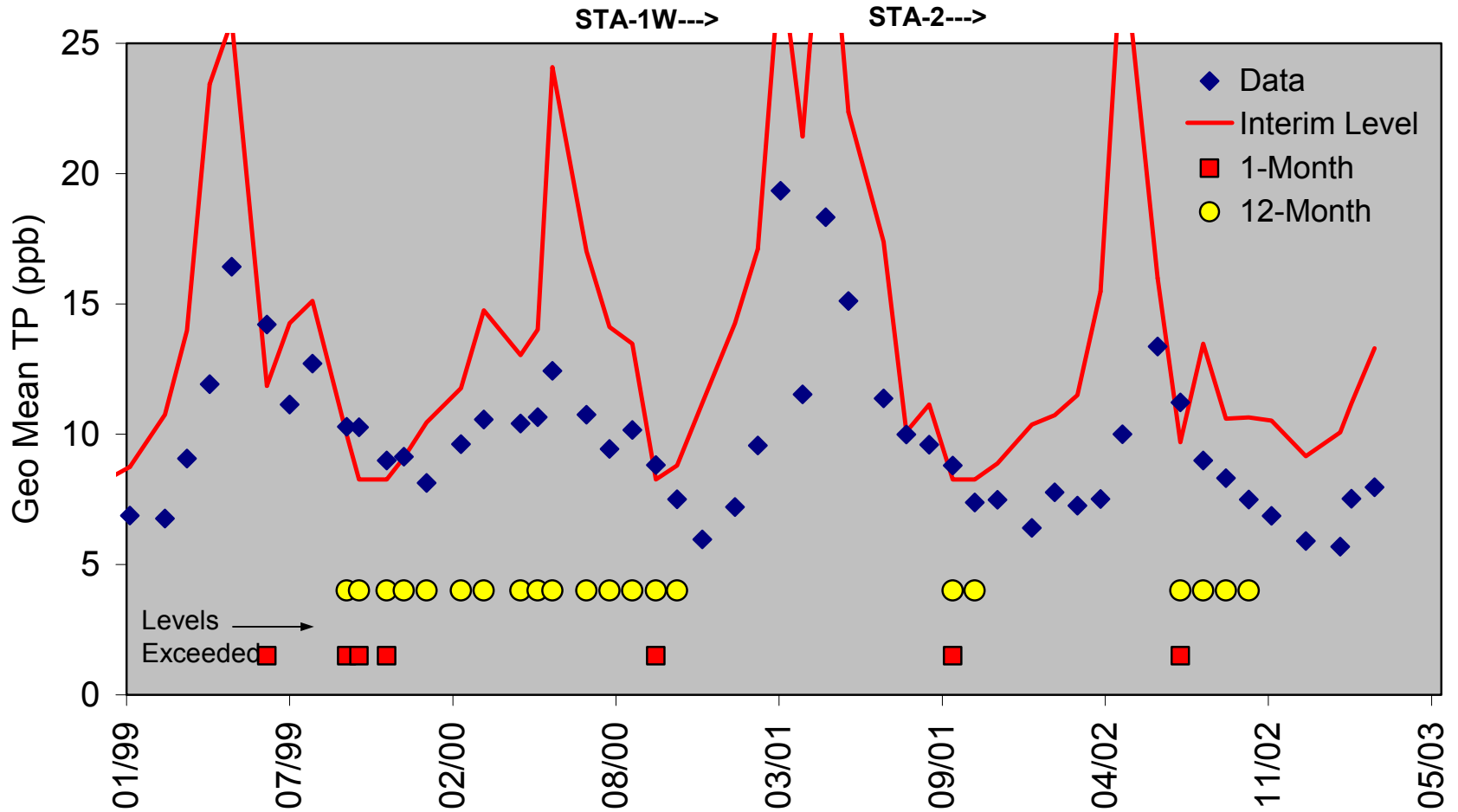
TOC members determine whether there is:

"substantial evidence of error or extraordinary natural phenomena"

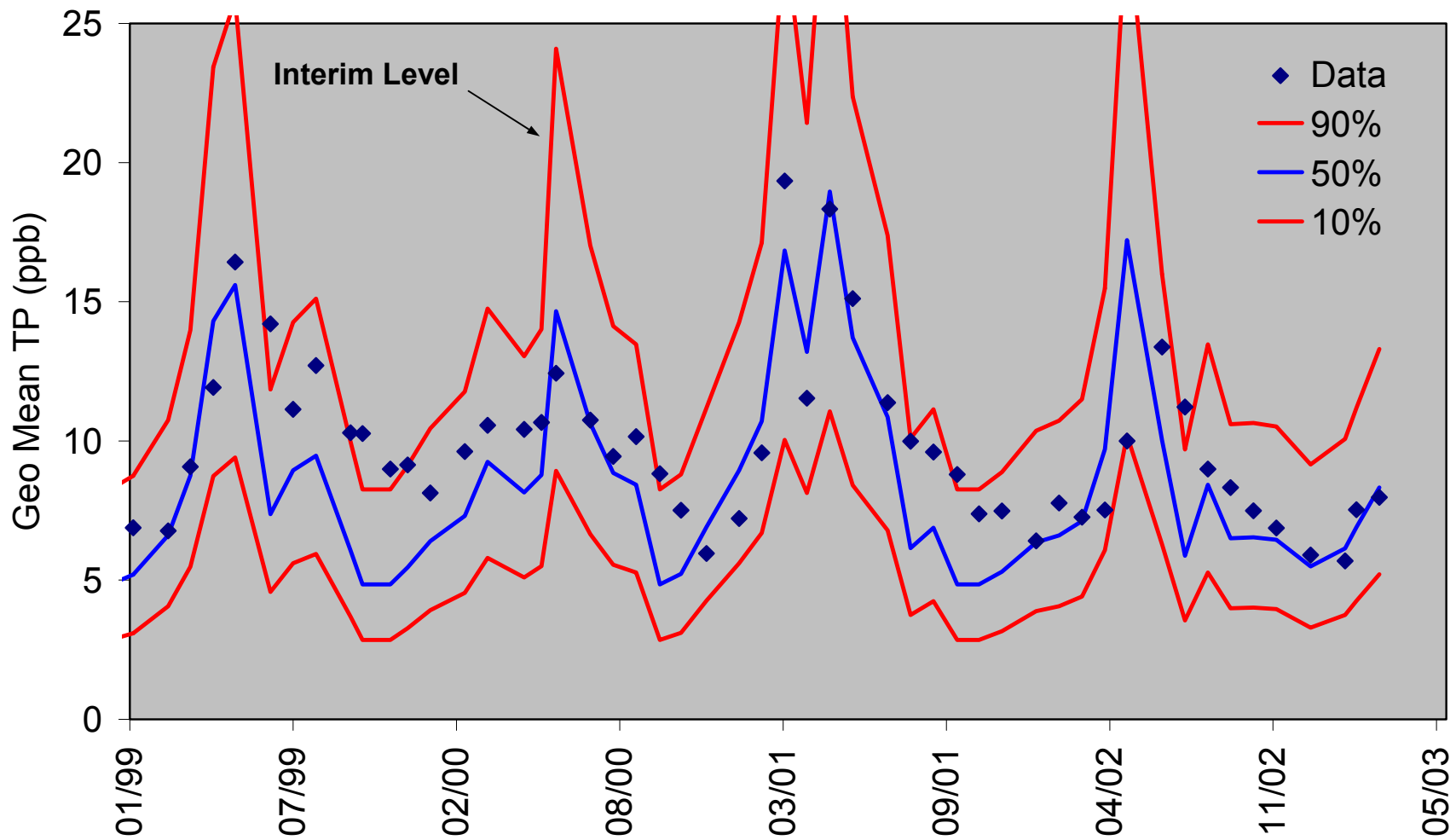
Then Make Appropriate Recommendations to Their CD Principals:

potential actions: none, diagnostic, remedial, etc.

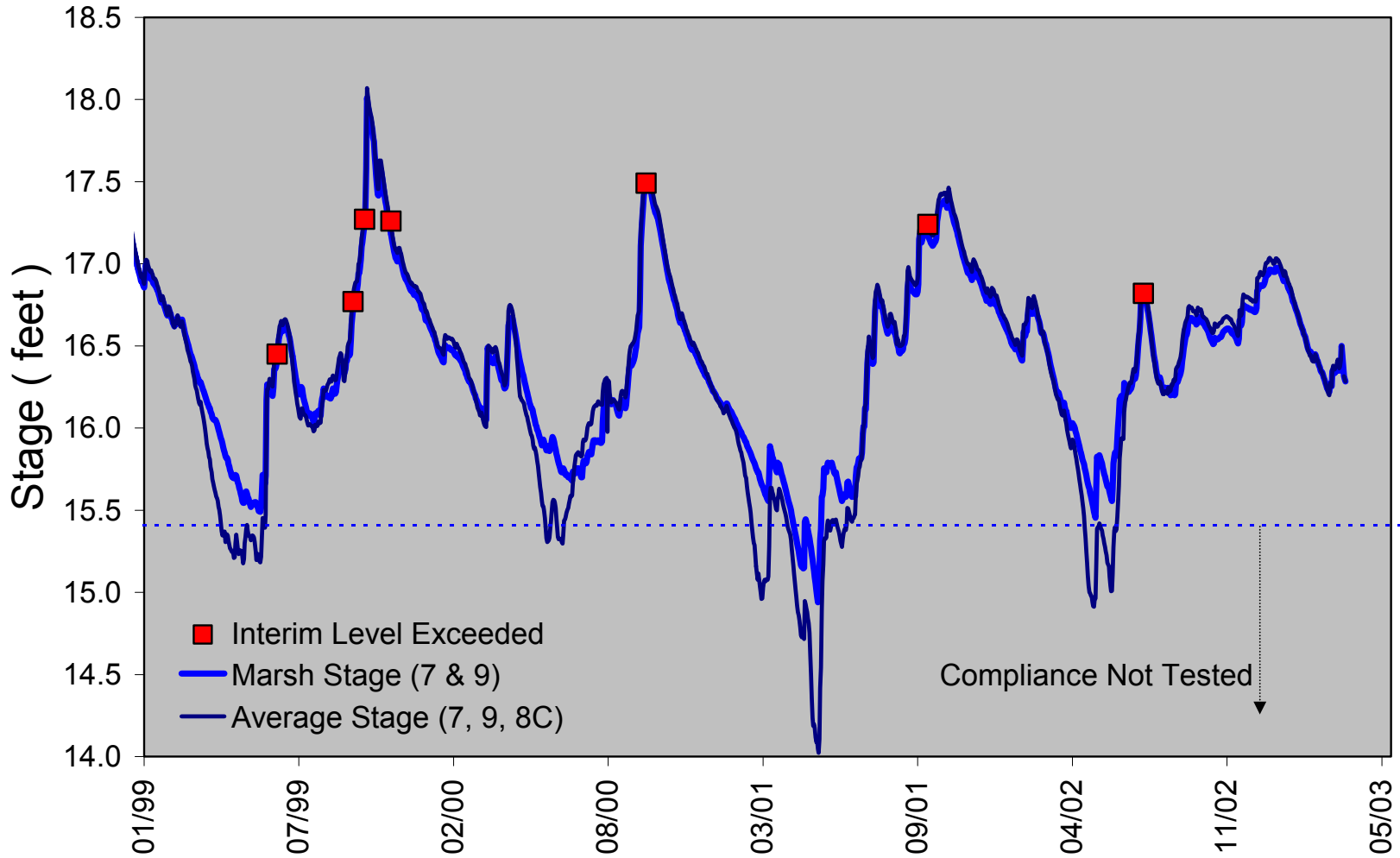
Compliance with Interim Marsh P Levels



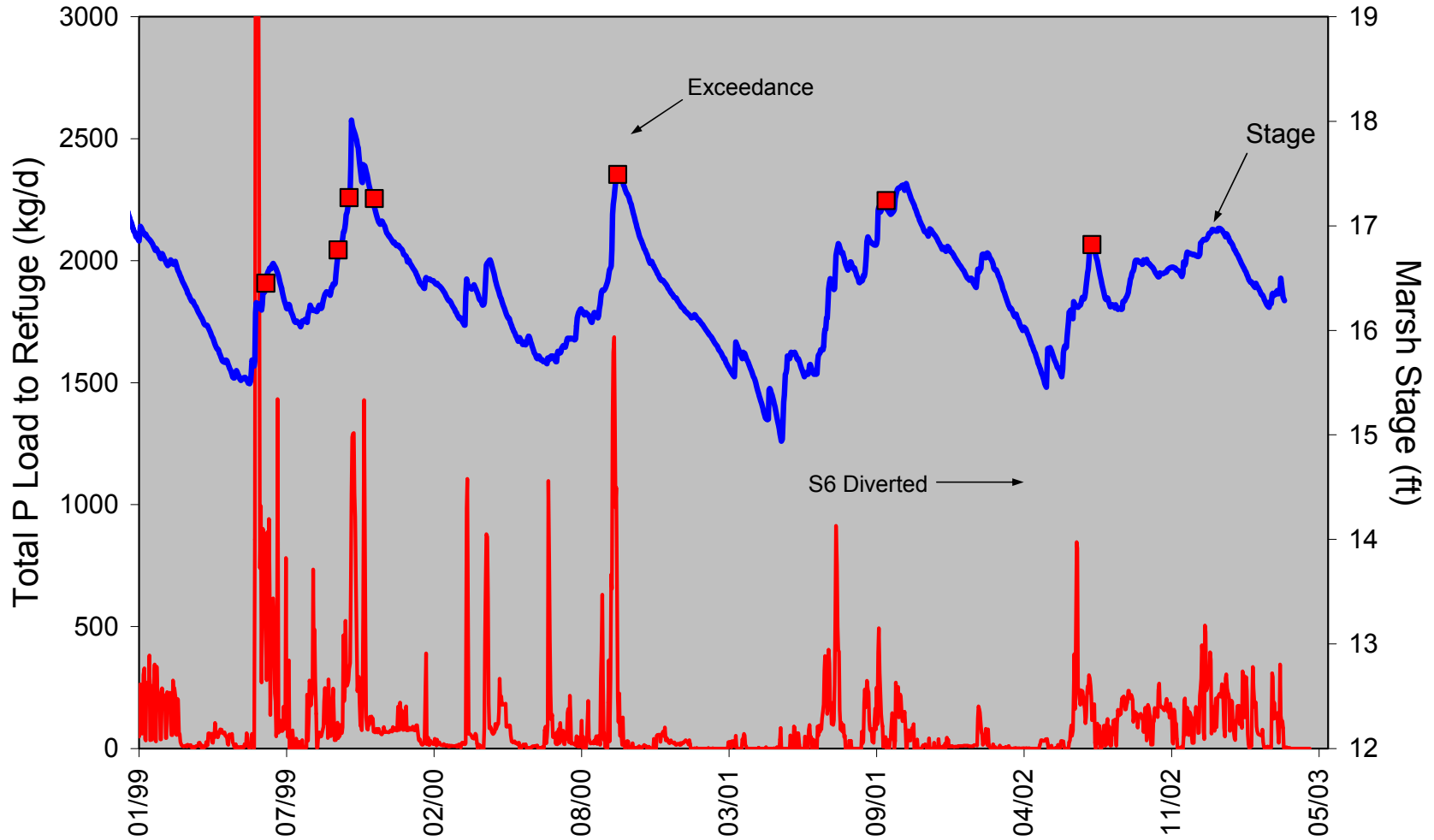
Data vs. Confidence Interval for 1978-1979 Conditions



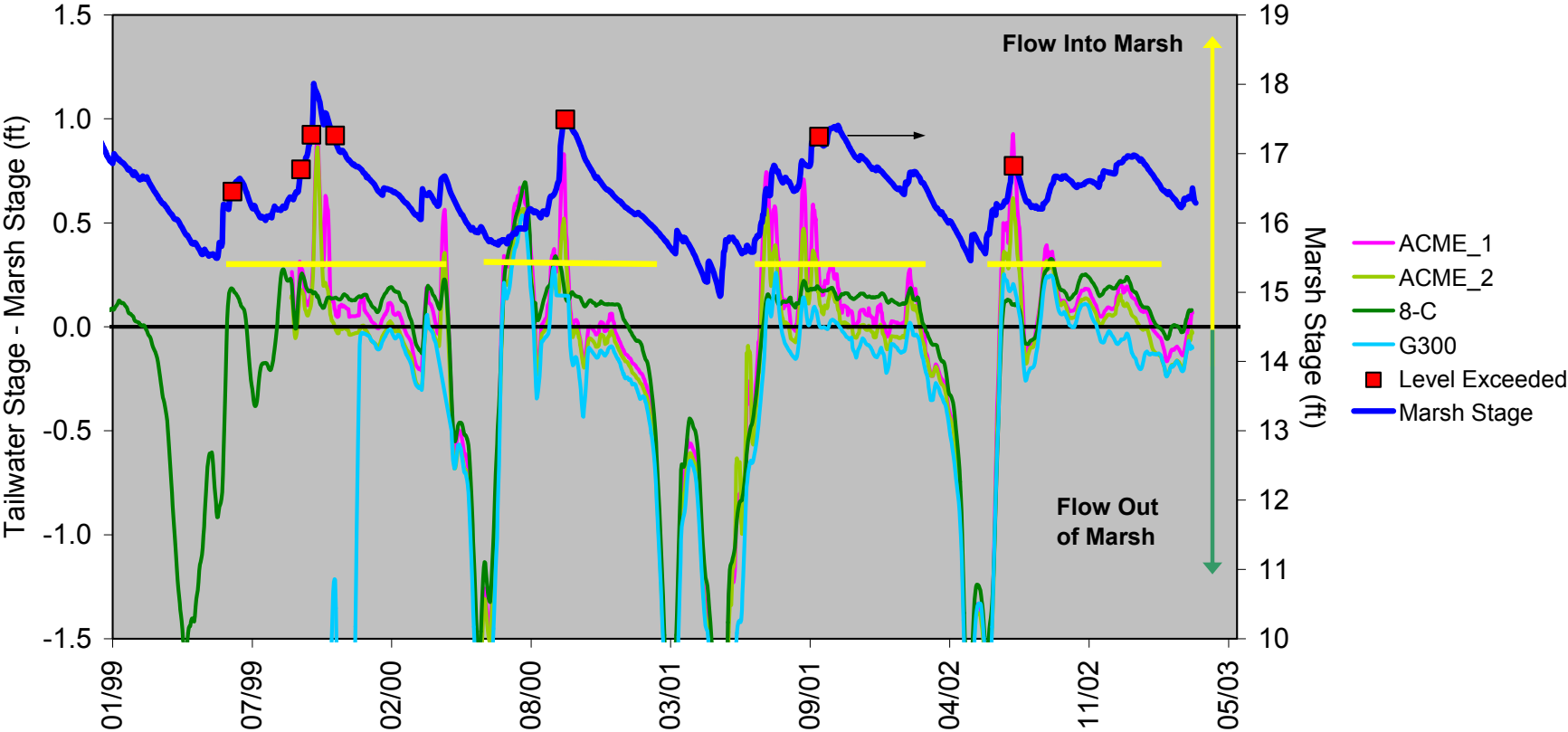
Exceedances vs. Marsh Stage



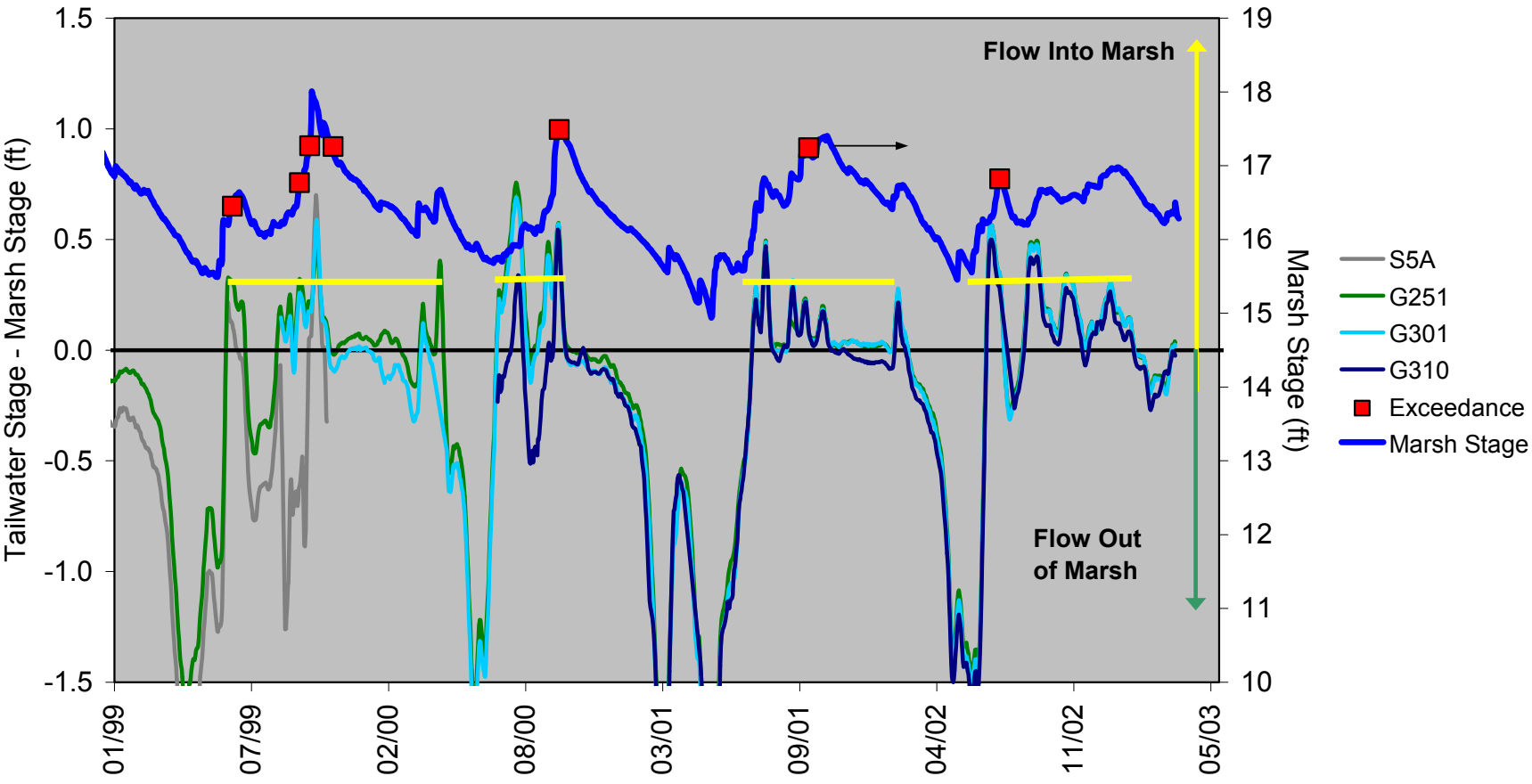
Exceedances vs. Stage & Phosphorus Load

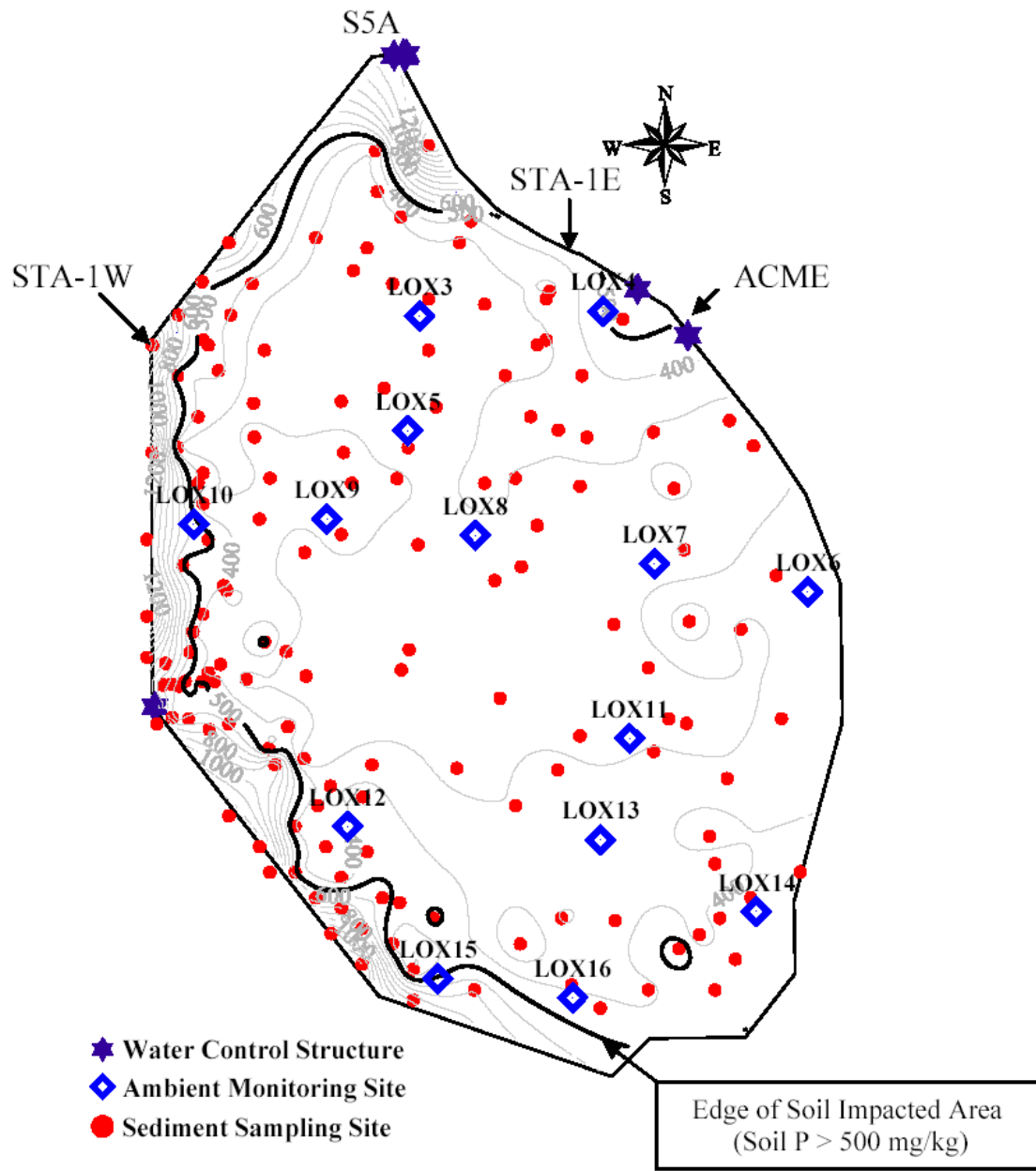


Exceedances vs. Stage Differential – East Side

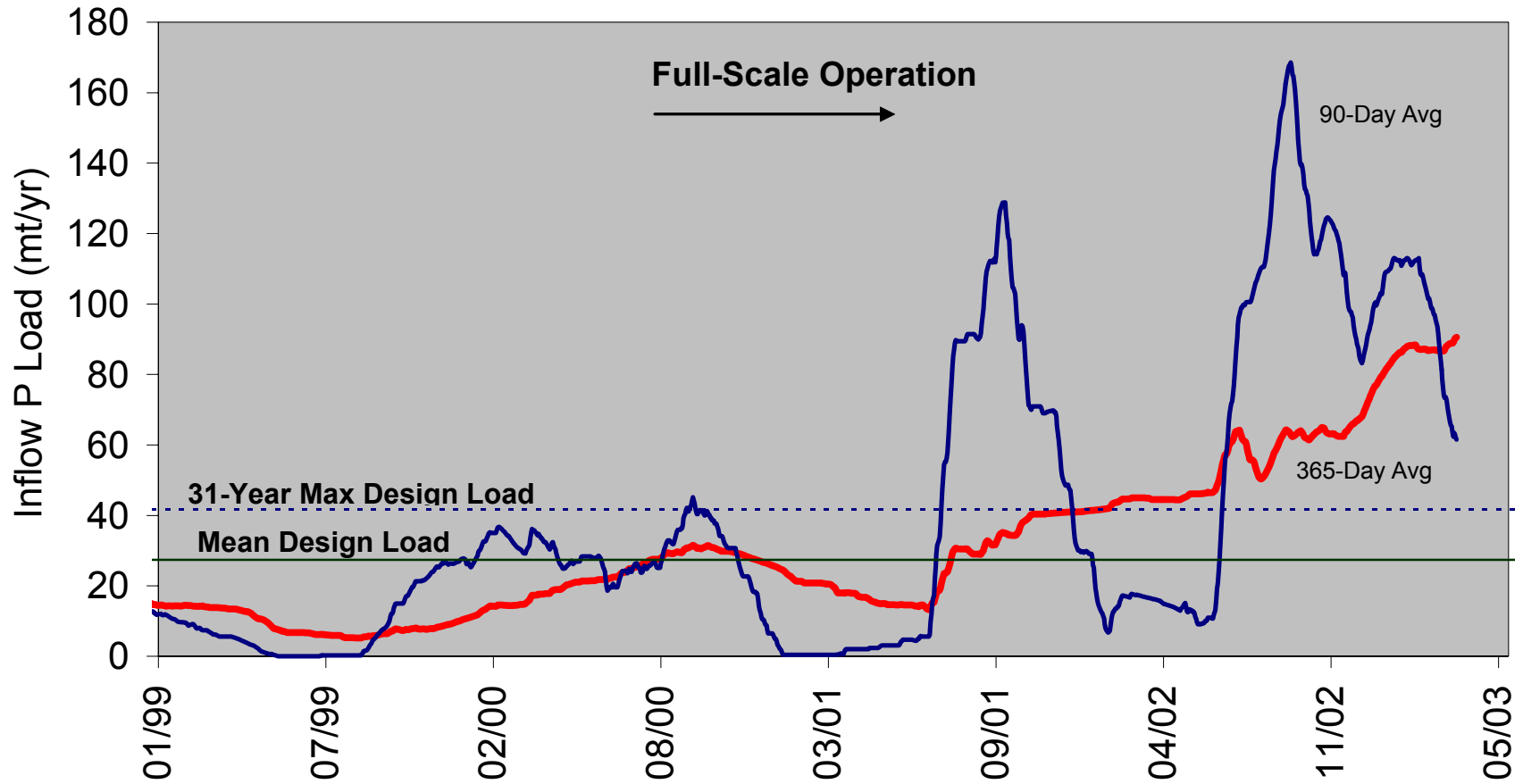


Exceedences vs. Stage Differential – West Side

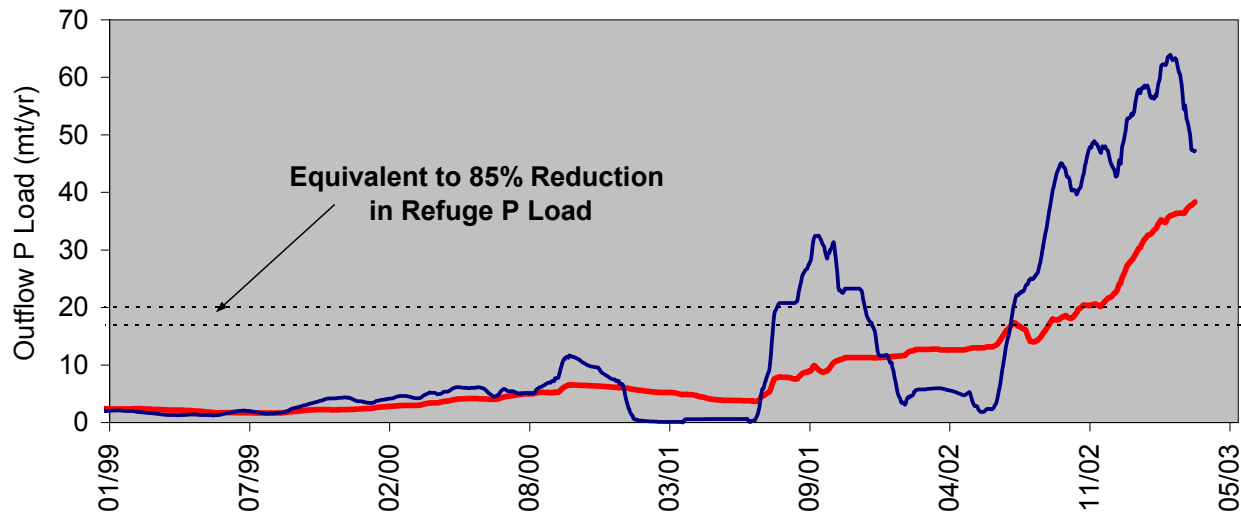
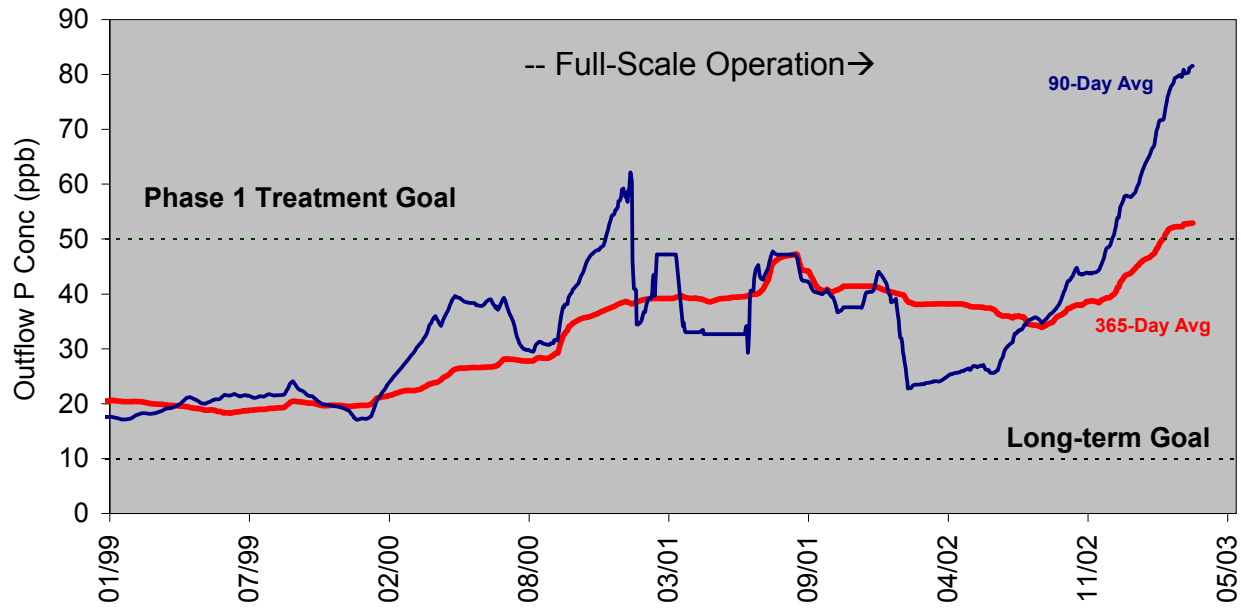




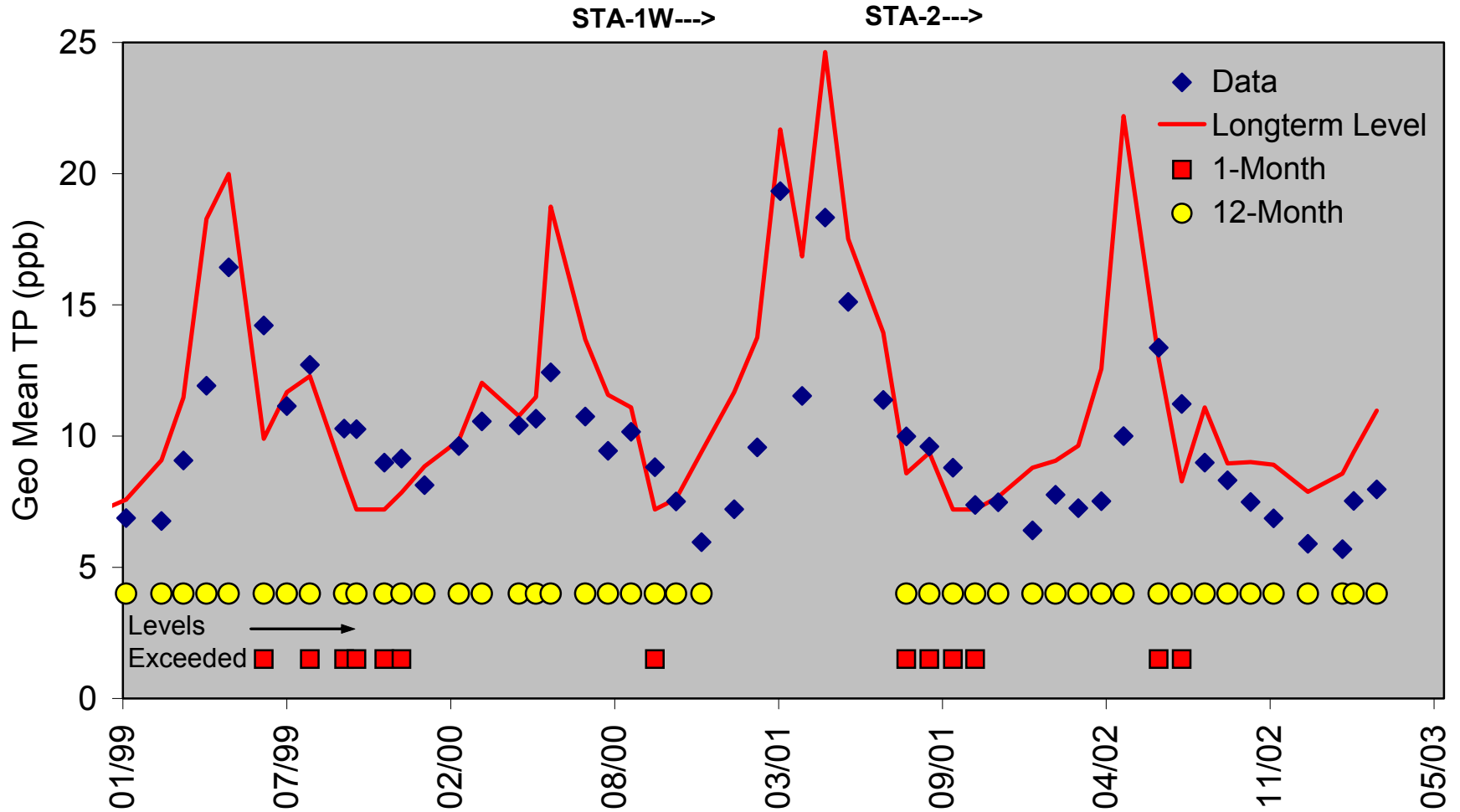
Recent P Loading to STA 1 West



Recent Performance of STA-1 West



Comparison with Long-term Levels



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Questions for TOC Consideration:

Is there ?

"substantial evidence of error or extraordinary natural phenomena"

Recommended Actions ?

none

diagnostic

remedial