STA-6 Performance Analysis

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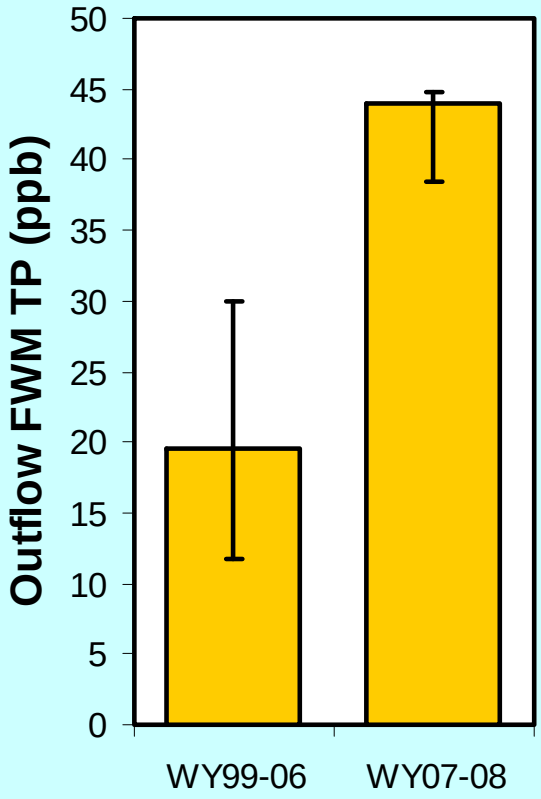
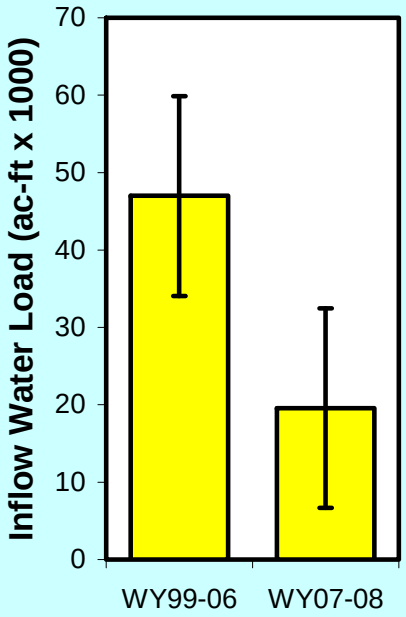
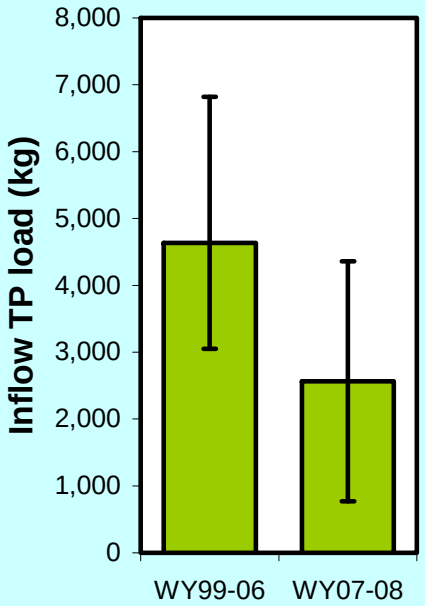
STA-6 Analysis

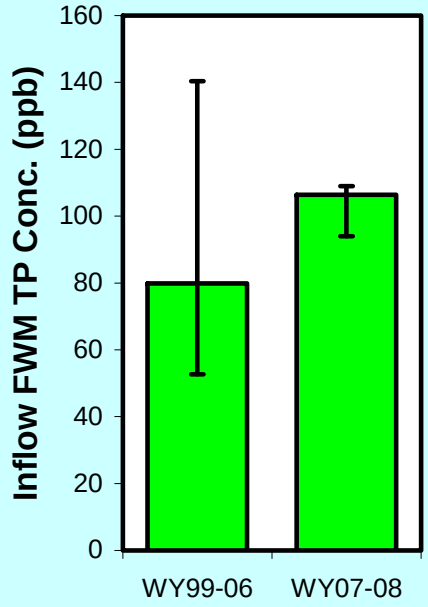
The Issue



Possible Operational Drivers







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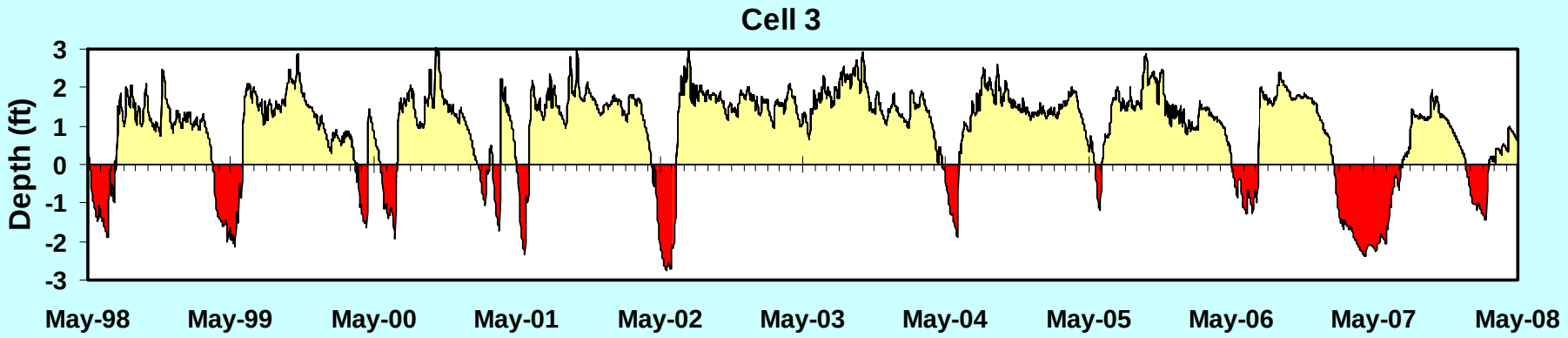
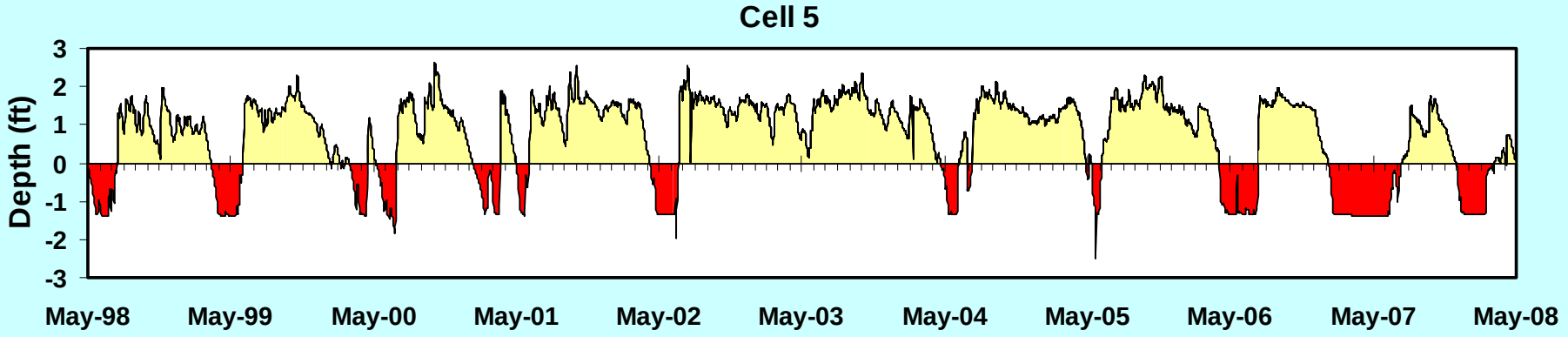
Duration of STA Dryout - the Smoking Gun?





Analysis patterned after Goforth (2008)

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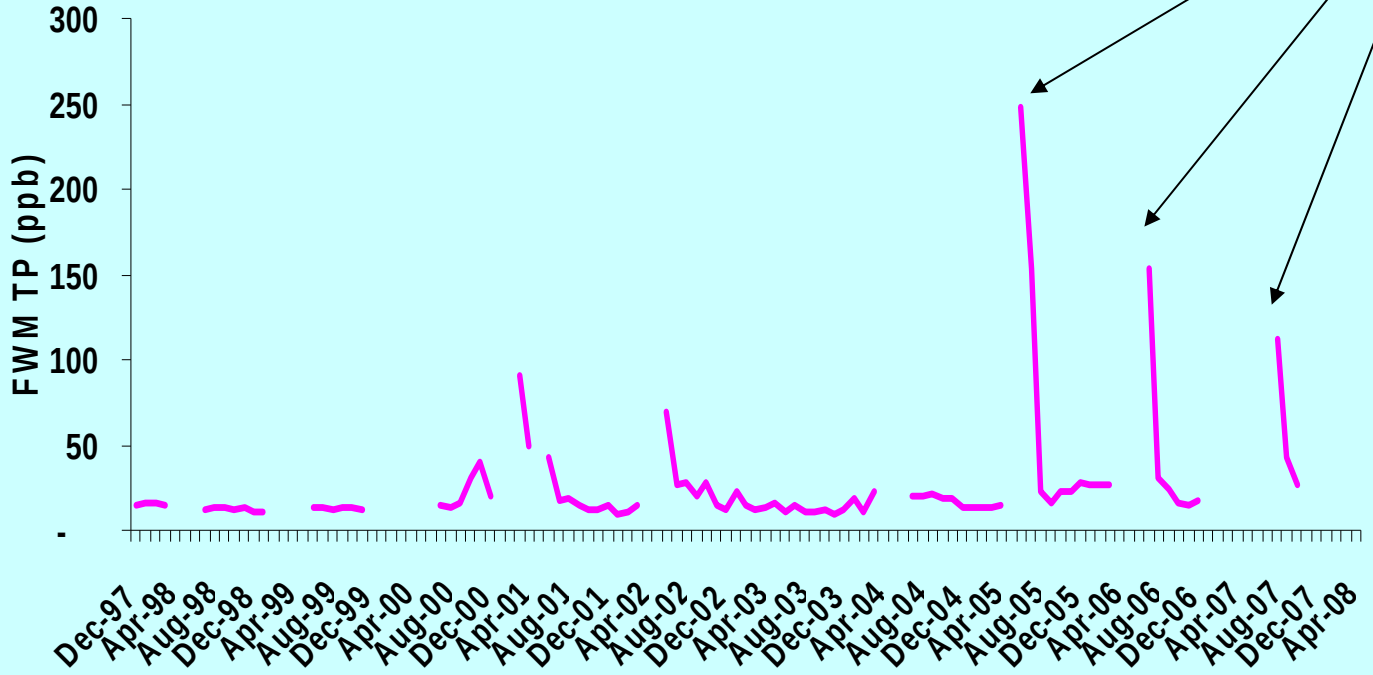

"First Flush":

Outflow TP peaks for 1 – 2 months after dry-out periods

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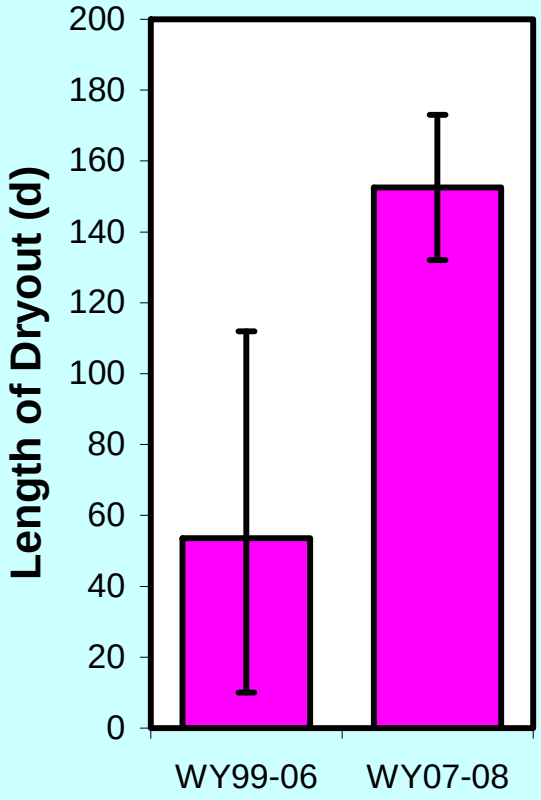
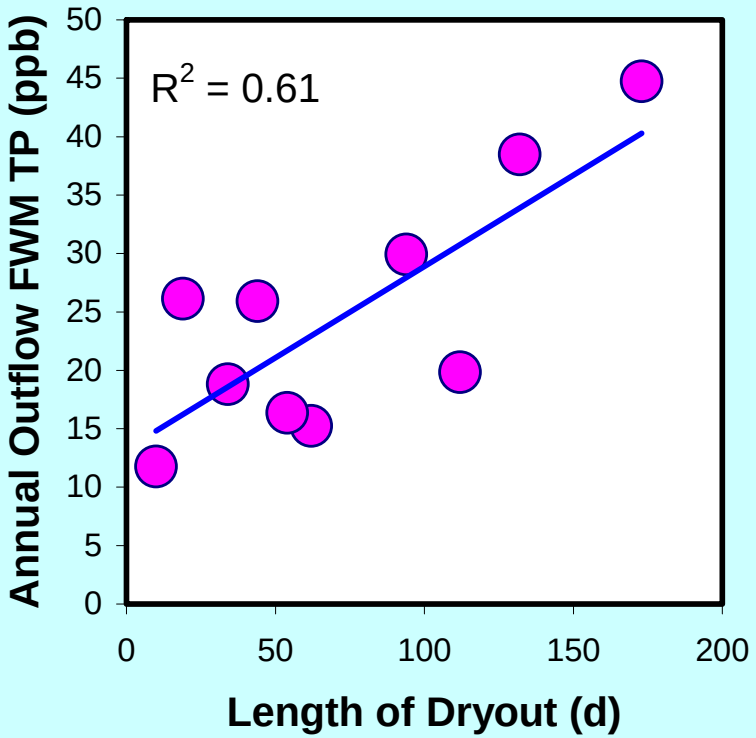
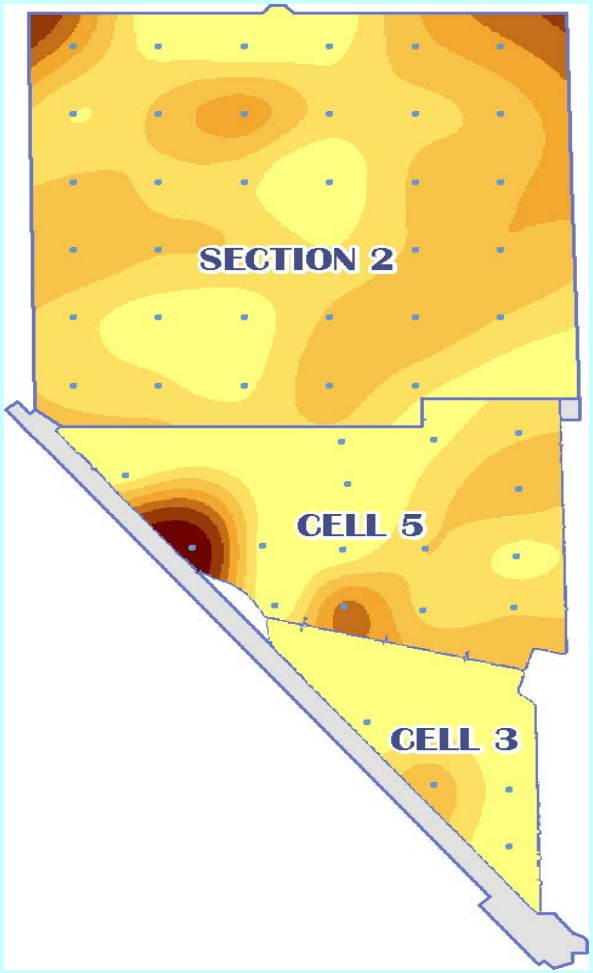
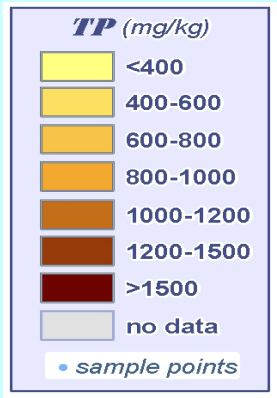




Analysis patterned after Goforth (2008)

STA-6 Soil Analysis





0-10 cm soil cores
11/08 sampling event

- Soil TP 400 – 1000 mg/kg (Cells 3 & 5)
- TP released from soil under marsh dry-out conditions:
  - Expedited soil mineralization
  - Increased amount of plant material decay upon rehydration

Preliminary Conclusions

- Decreased performance over the last 2 years is largely linked to duration of dry-out conditions.

- Longer periods of dry-out reduce the amount of time for normal flow-through conditions, thereby increasing the influence of the higher “first flush” concentrations on annual performance data.