

Water Quality in the Weir Estuary, 2002 (Indicators for Eutrophication)



Volunteers:

Jim Shipsky

Vinn Dunn

Anne Murray

Judeth Van Hamm

Rob Gilman

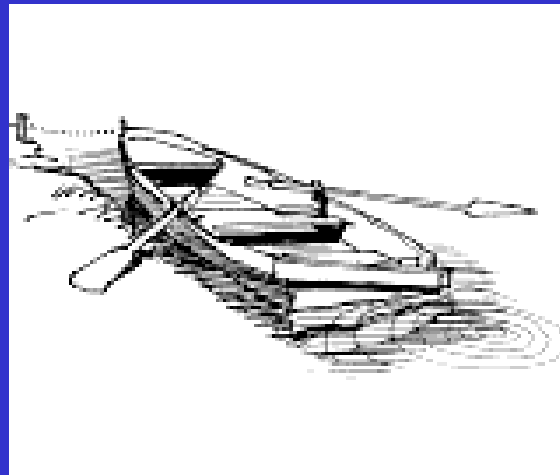
Mike Spillane

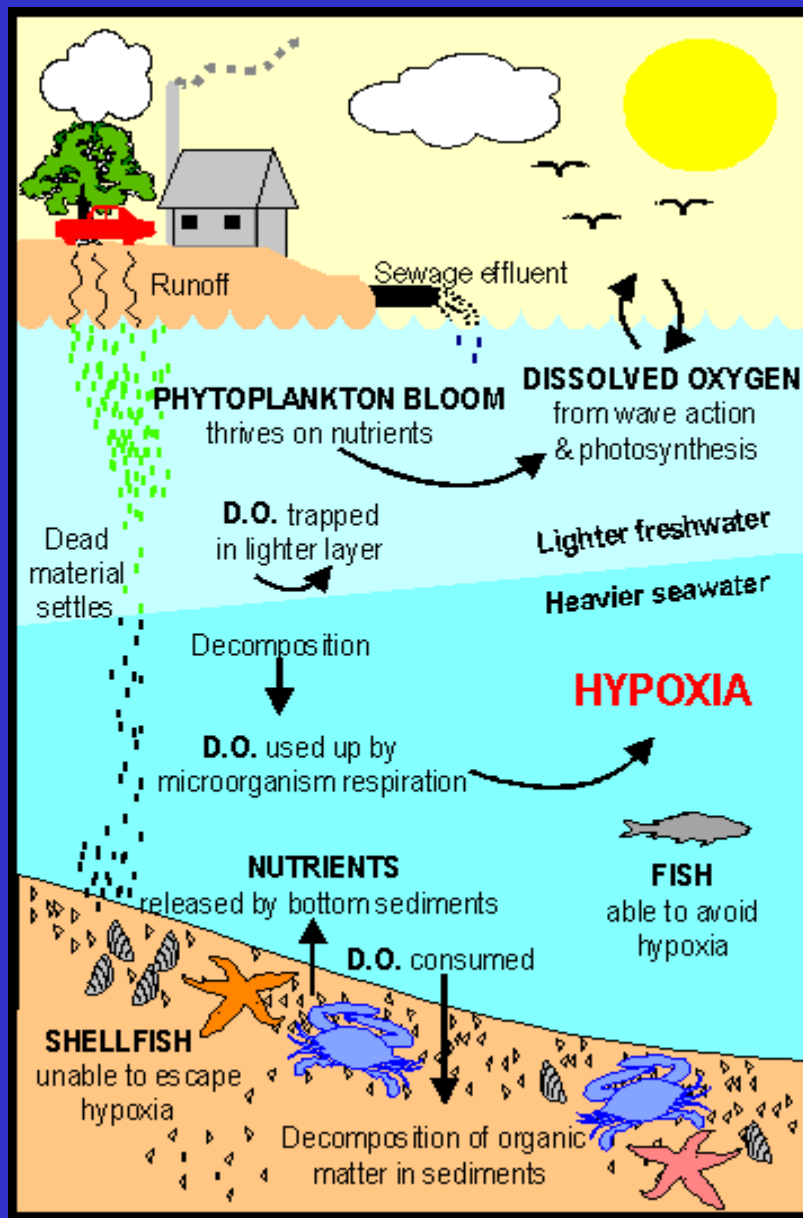
Jennifer DeLucia

Lawry Reid

Jason Burtner

Sam Woods





PHYTOPLANKTON BLOOM

thrives on nutrients

DISSOLVED OXYGEN

from wave action & photosynthesis

D.O. trapped in lighter layer

Lighter freshwater

Heavier seawater

Decomposition

HYPOXIA

D.O. used up by microorganism respiration

NUTRIENTS

released by bottom sediments

FISH

able to avoid hypoxia

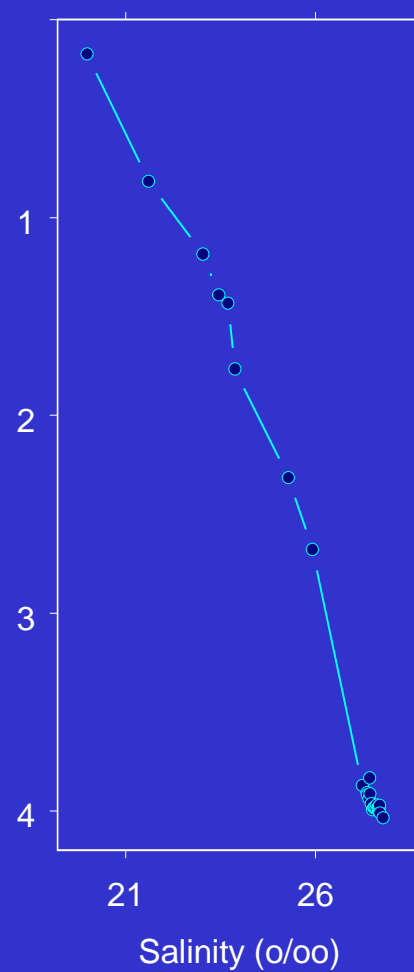
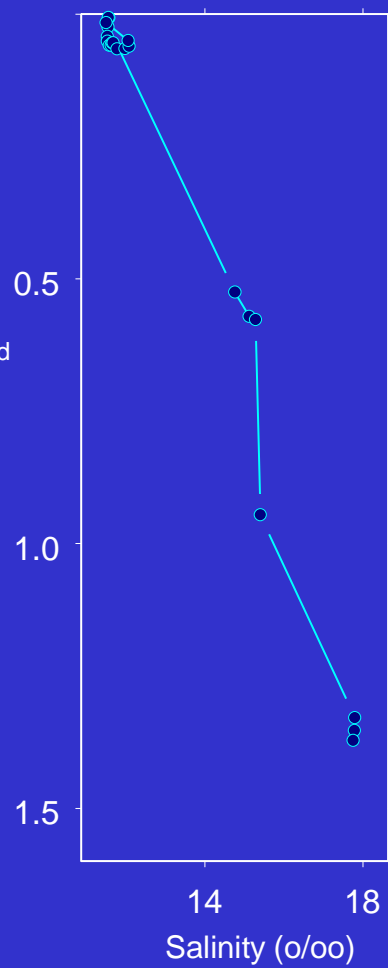
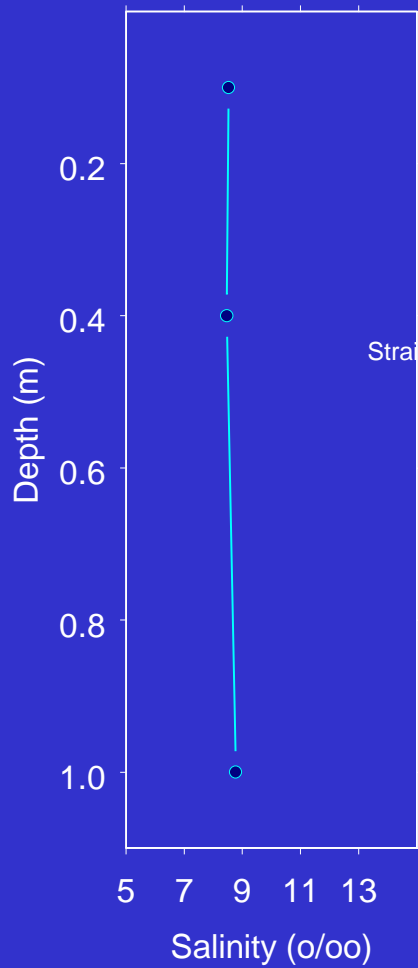
D.O. consumed

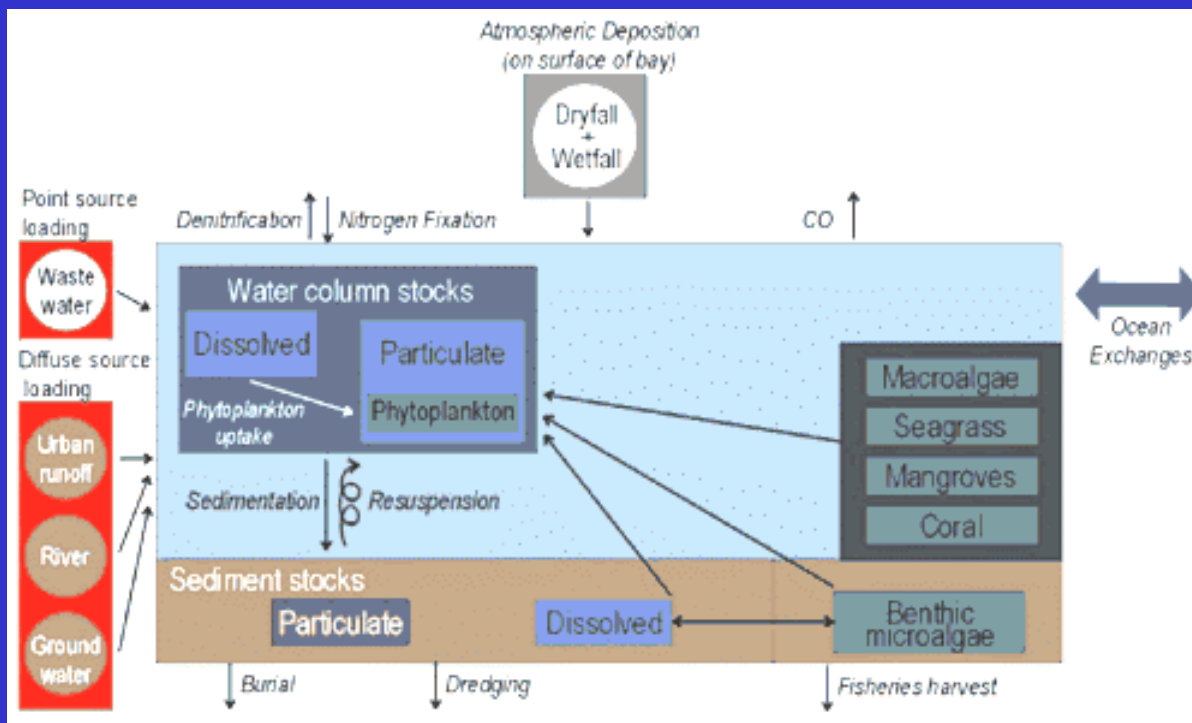
SHELLFISH

unable to escape hypoxia

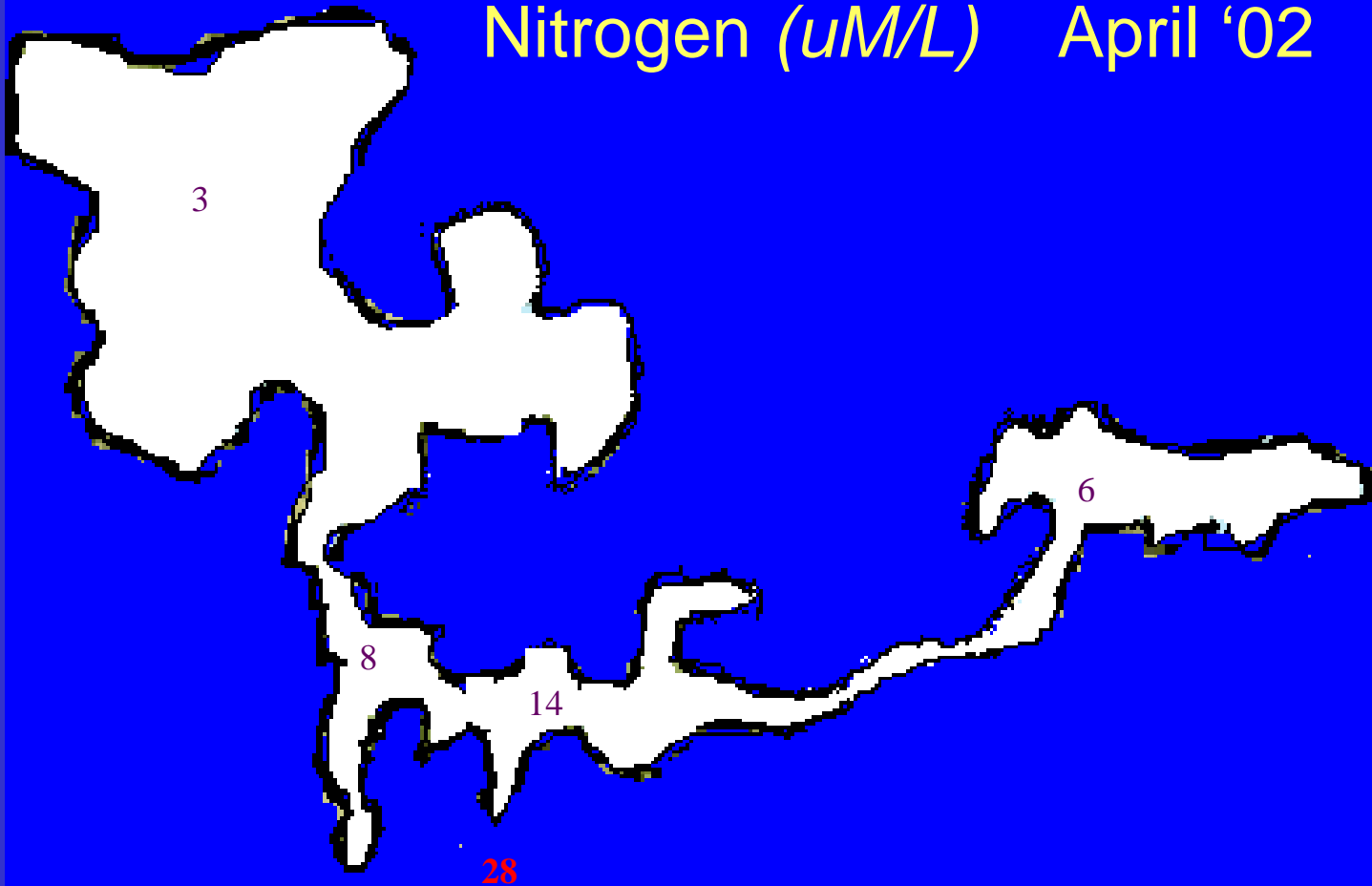
Decomposition of organic matter in sediments

Selected Salinity Profiles Weir Estuary May 2002

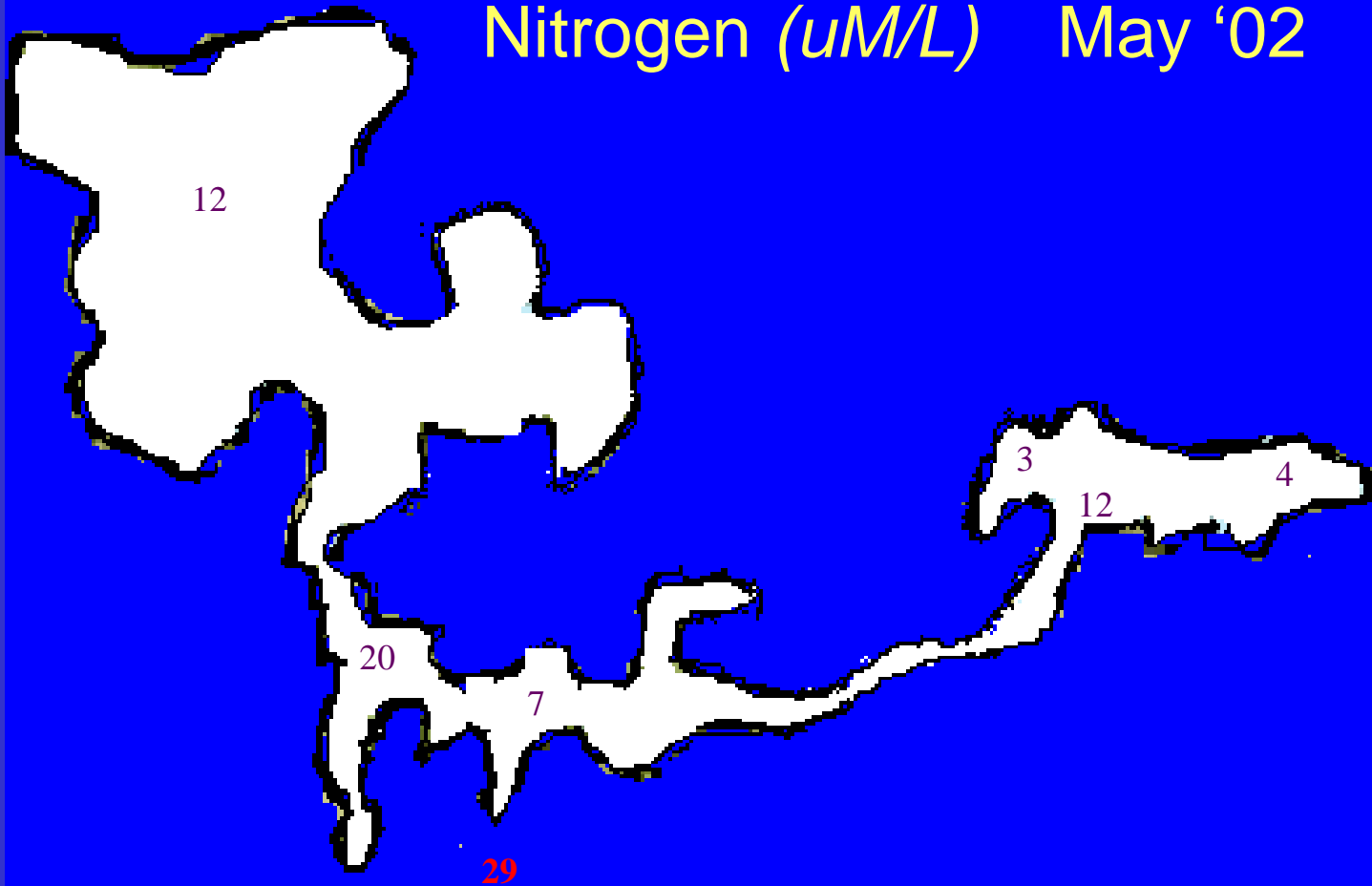




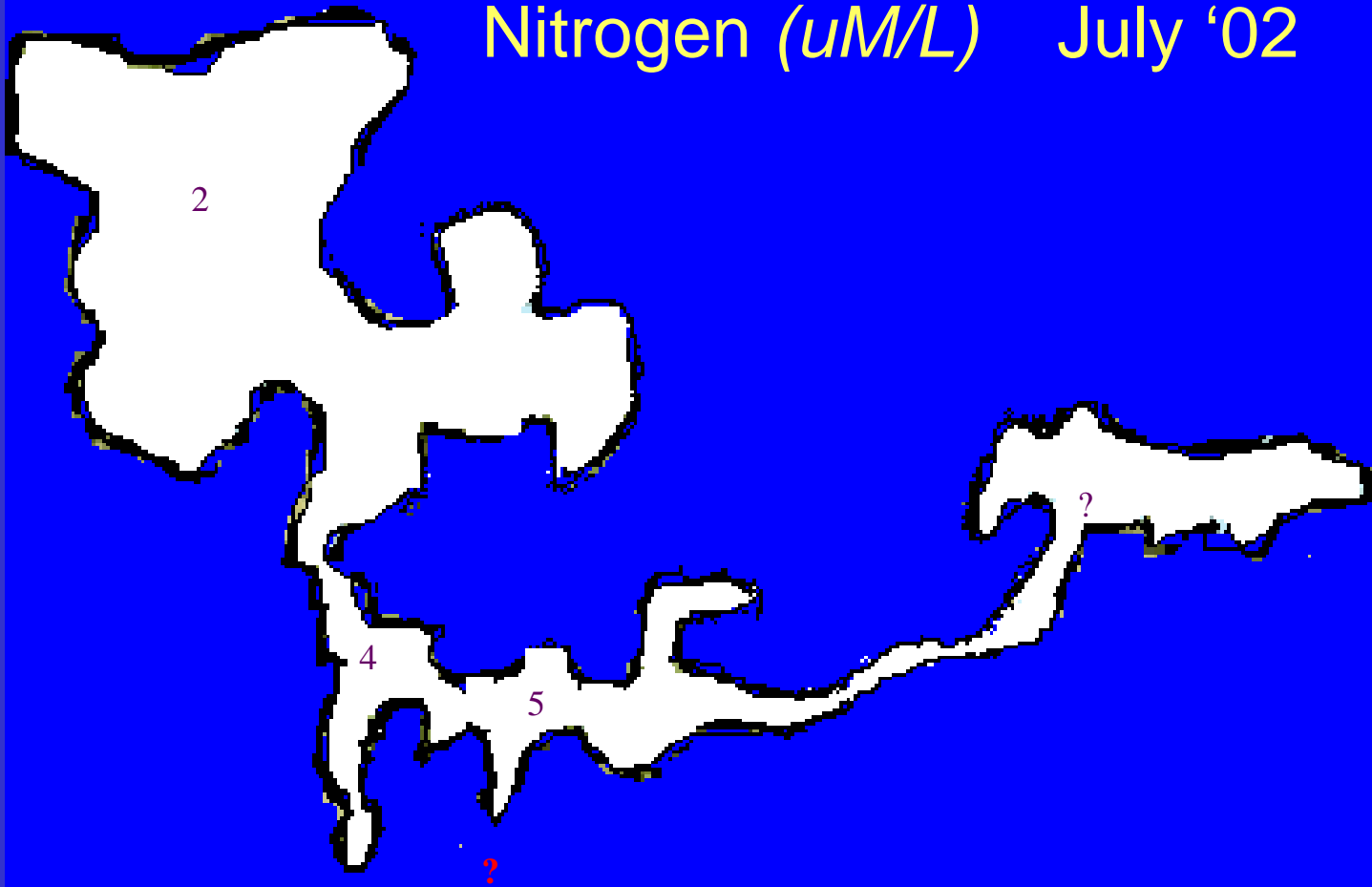
Dissolved Inorganic Nitrogen ($\mu\text{M/L}$) April '02



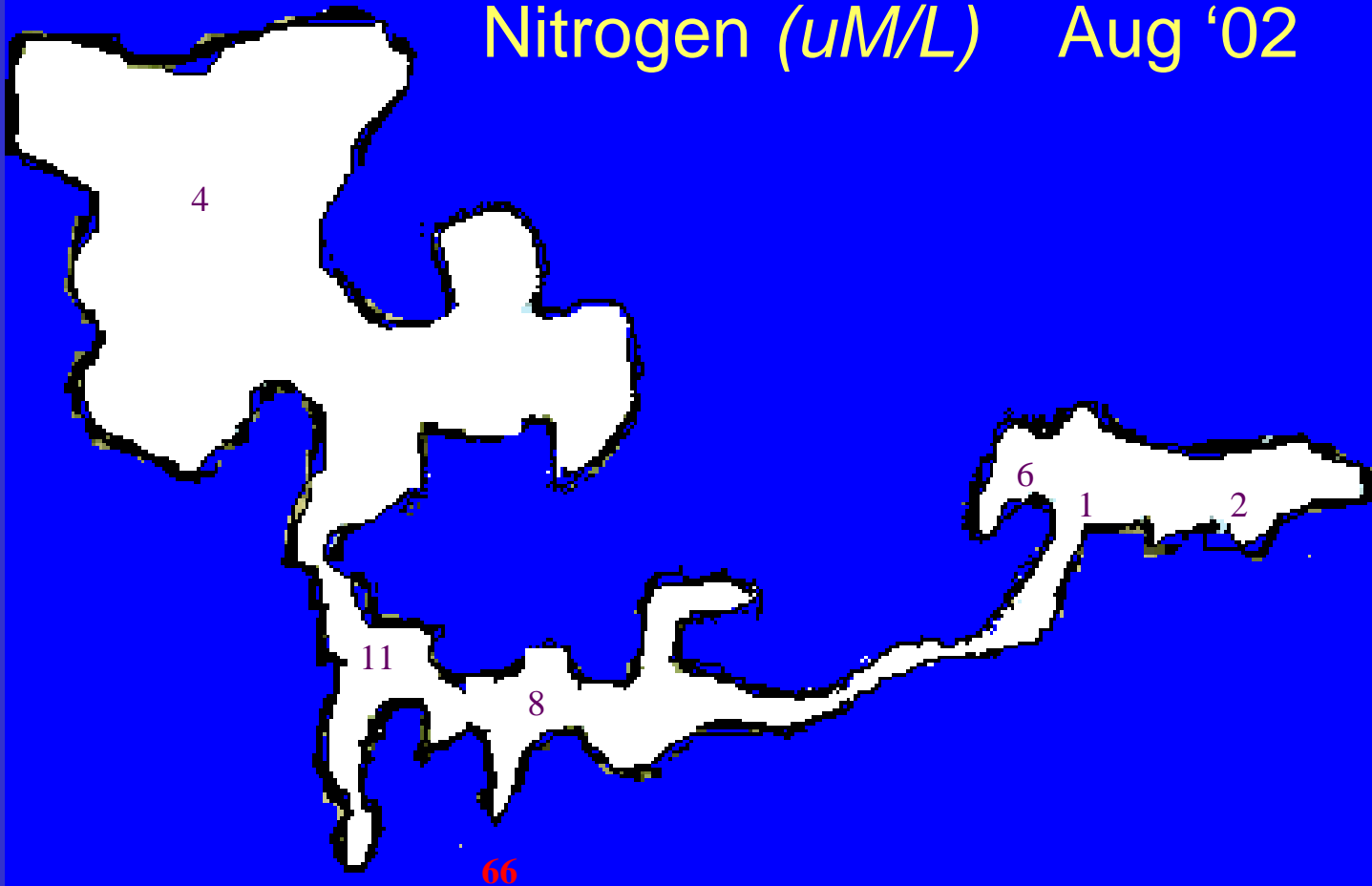
Dissolved Inorganic Nitrogen ($\mu\text{M}/\text{L}$) May '02



Dissolved Inorganic Nitrogen ($\mu\text{M/L}$) July '02



Dissolved Inorganic Nitrogen ($\mu\text{M}/\text{L}$) Aug '02



Dissolved Inorganic Nitrogen ($\mu\text{M/L}$) Oct. '02

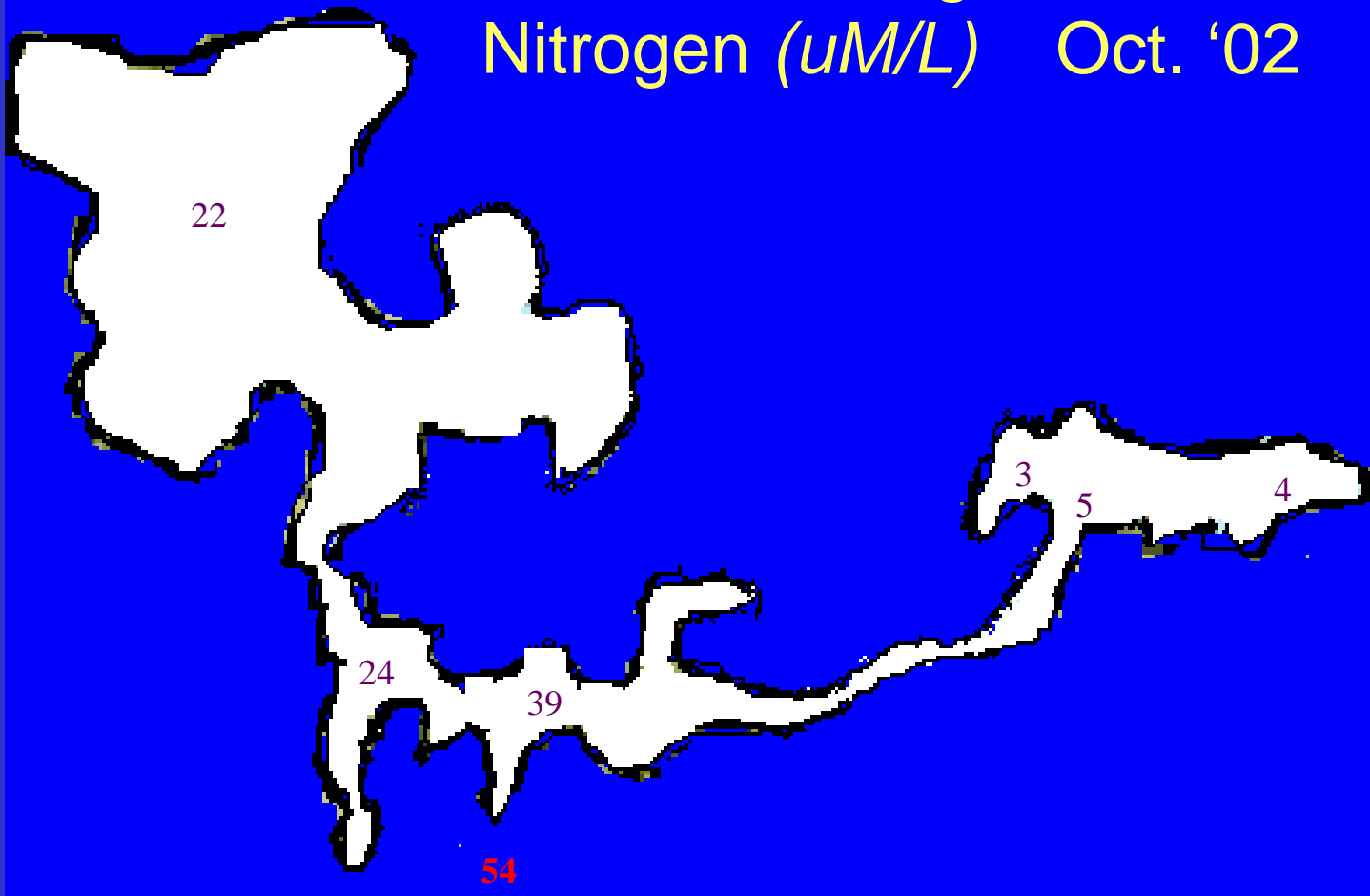
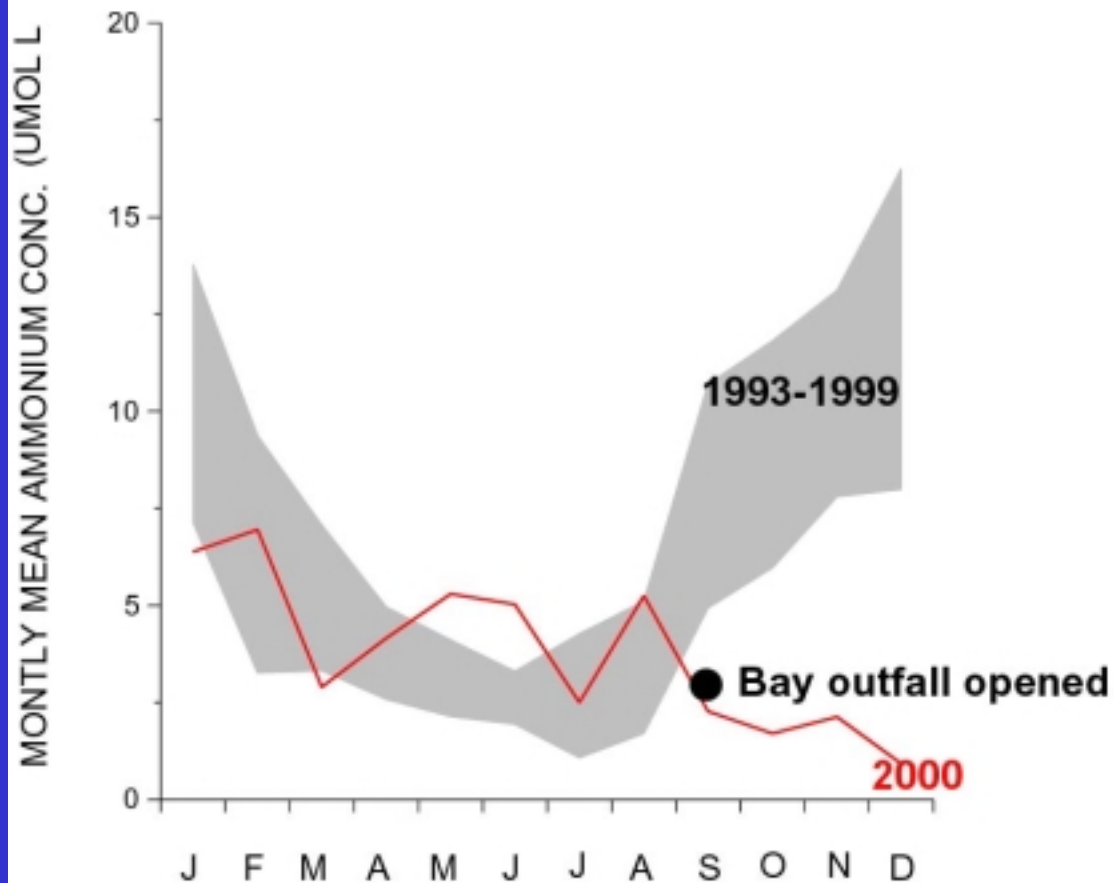
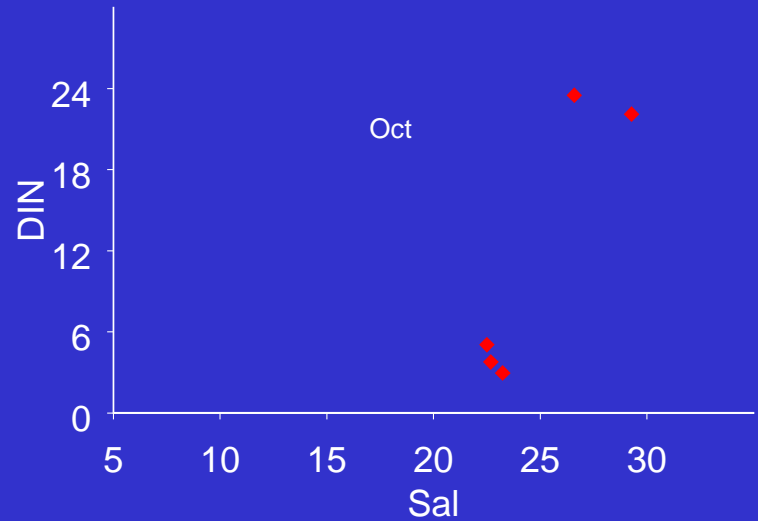
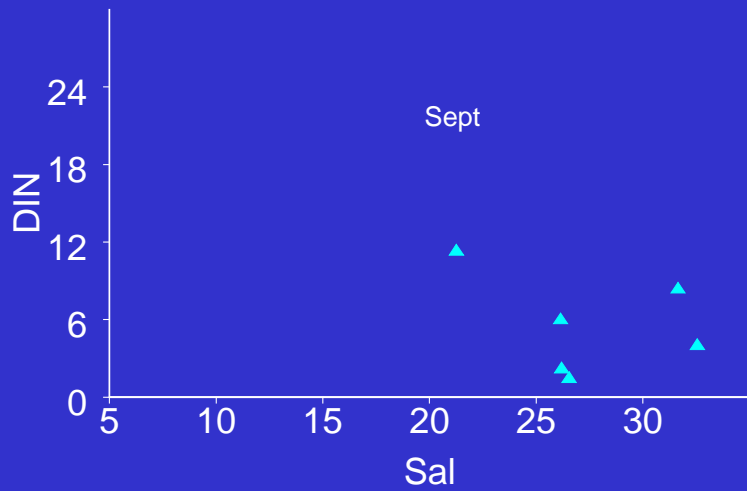
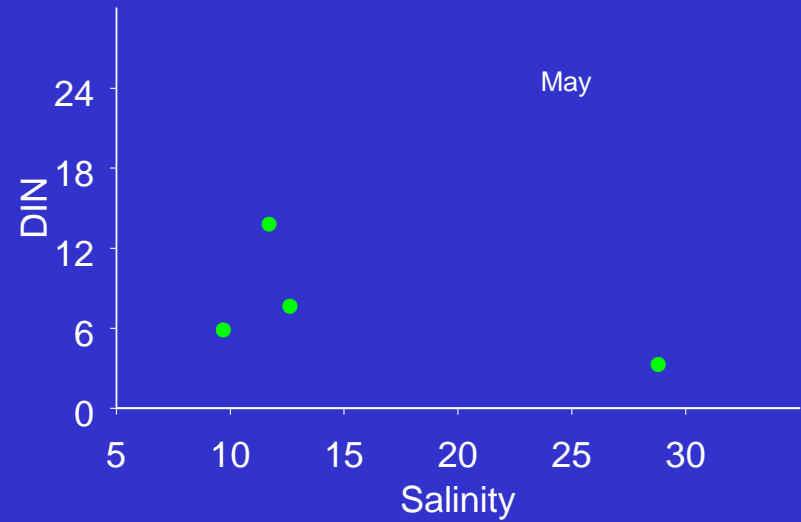
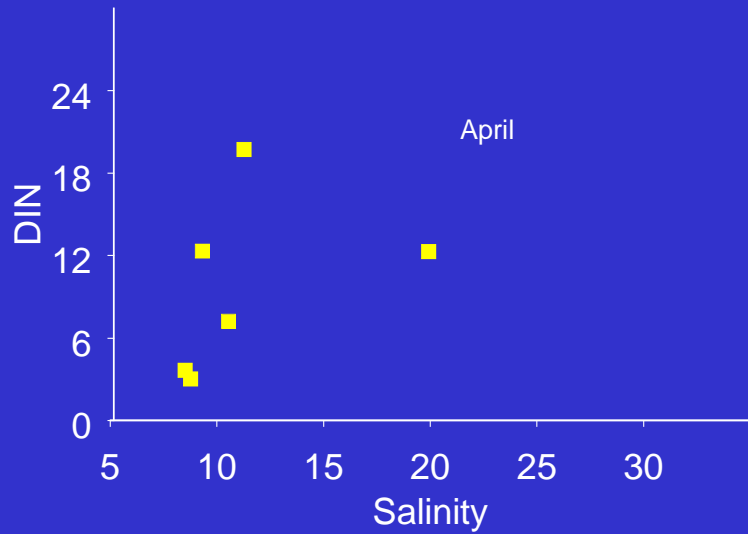


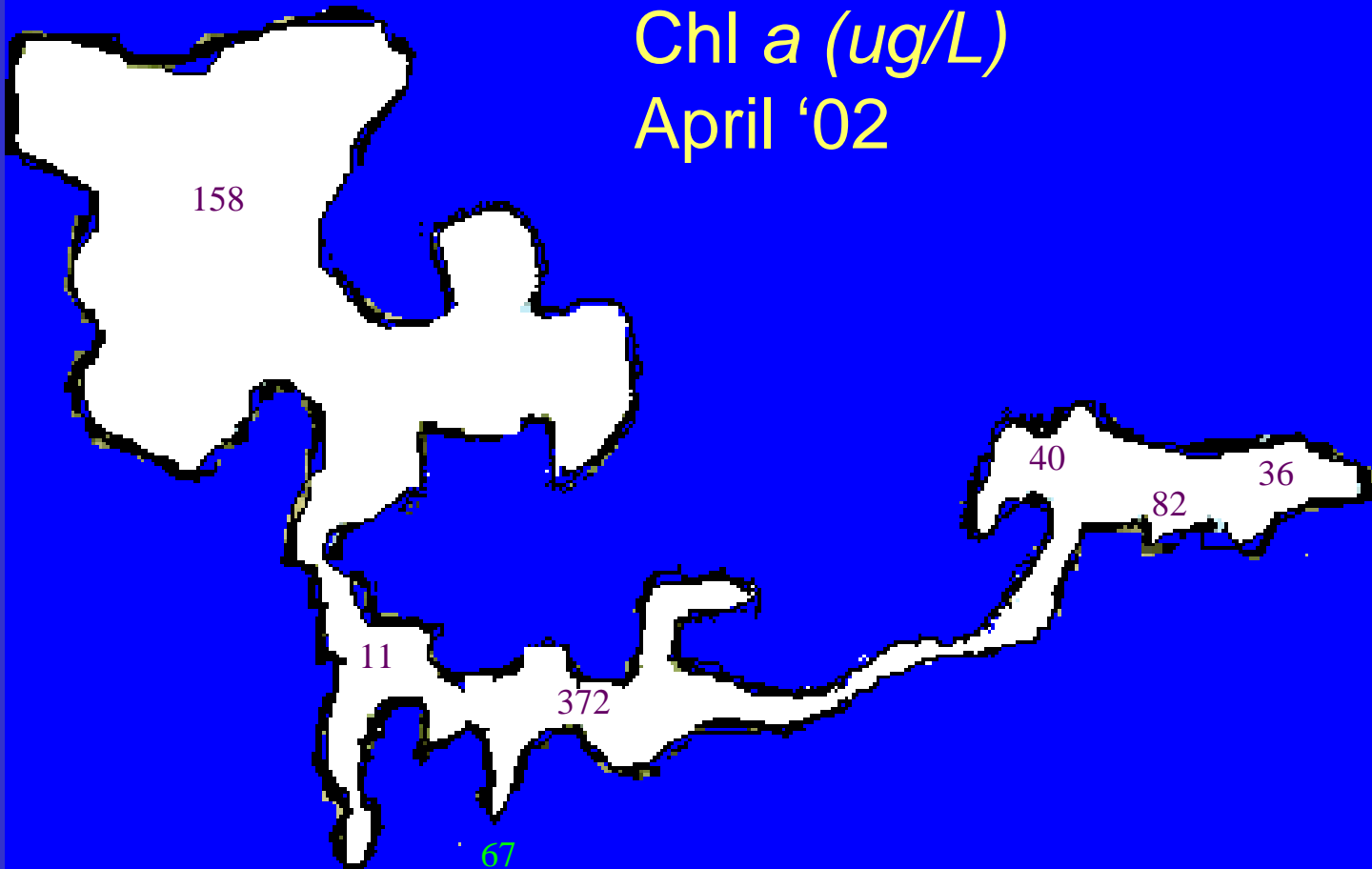
Figure IV-4 -harbor-wide average concentrations of ammonium: comparison of 2000 with the range of concentrations from 1993 through 1999



Dissolved Inorganic Nitrogen (DIN, $\mu\text{M L}^{-1}$)
vs Salinity (o/oo), **Weir Estuary 2002**



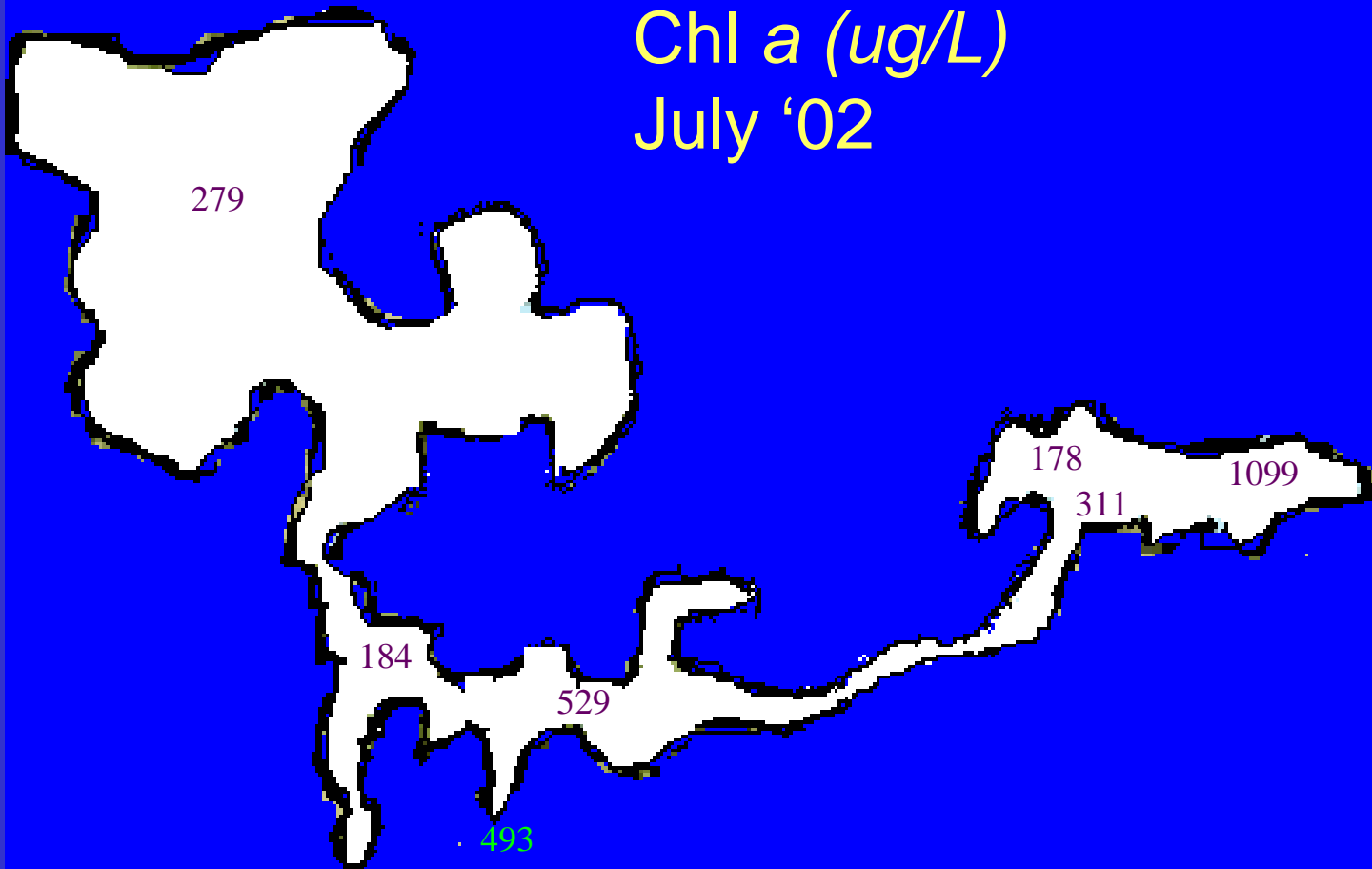
Chl a (ug/L)
April '02



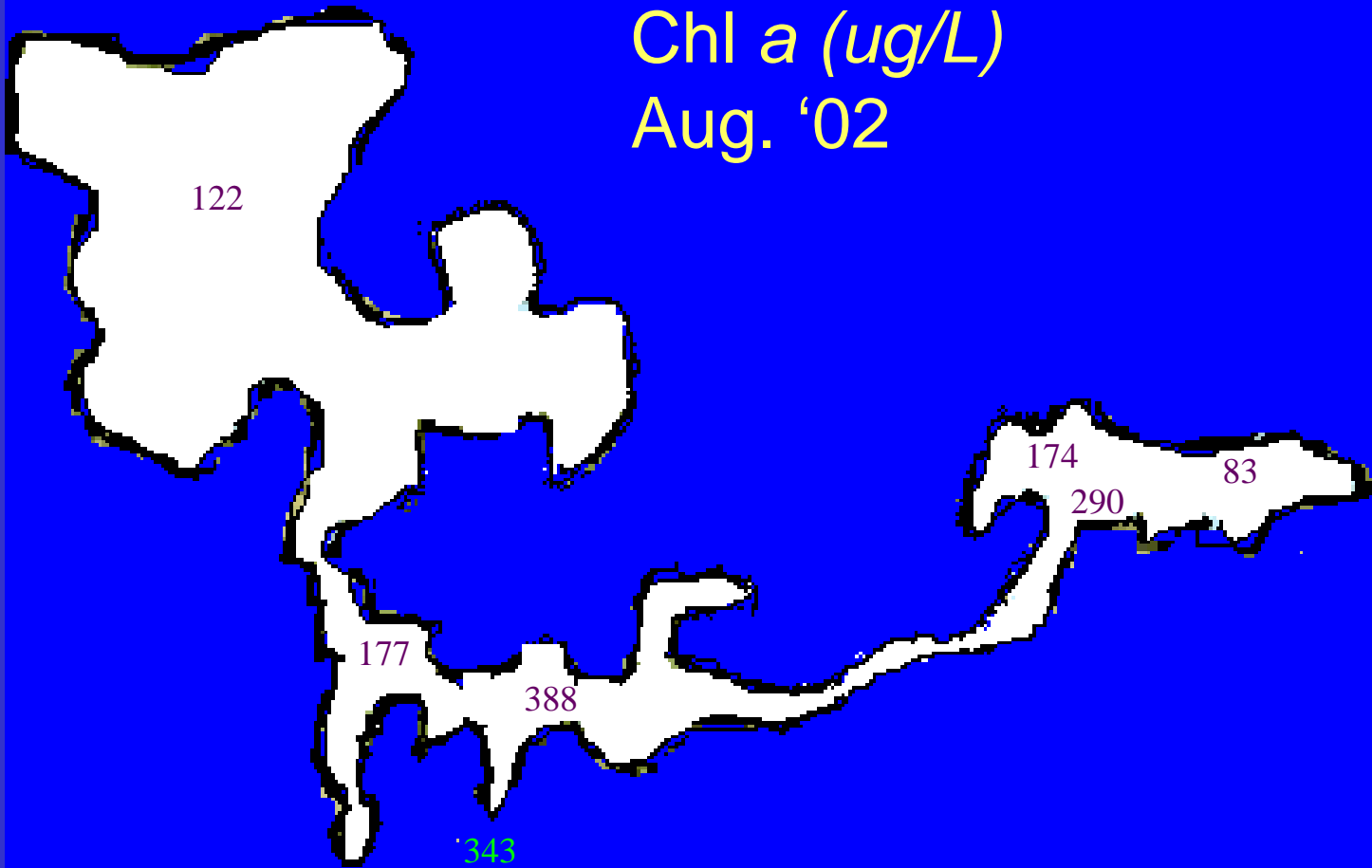
Chl a (ug/L)
May '02



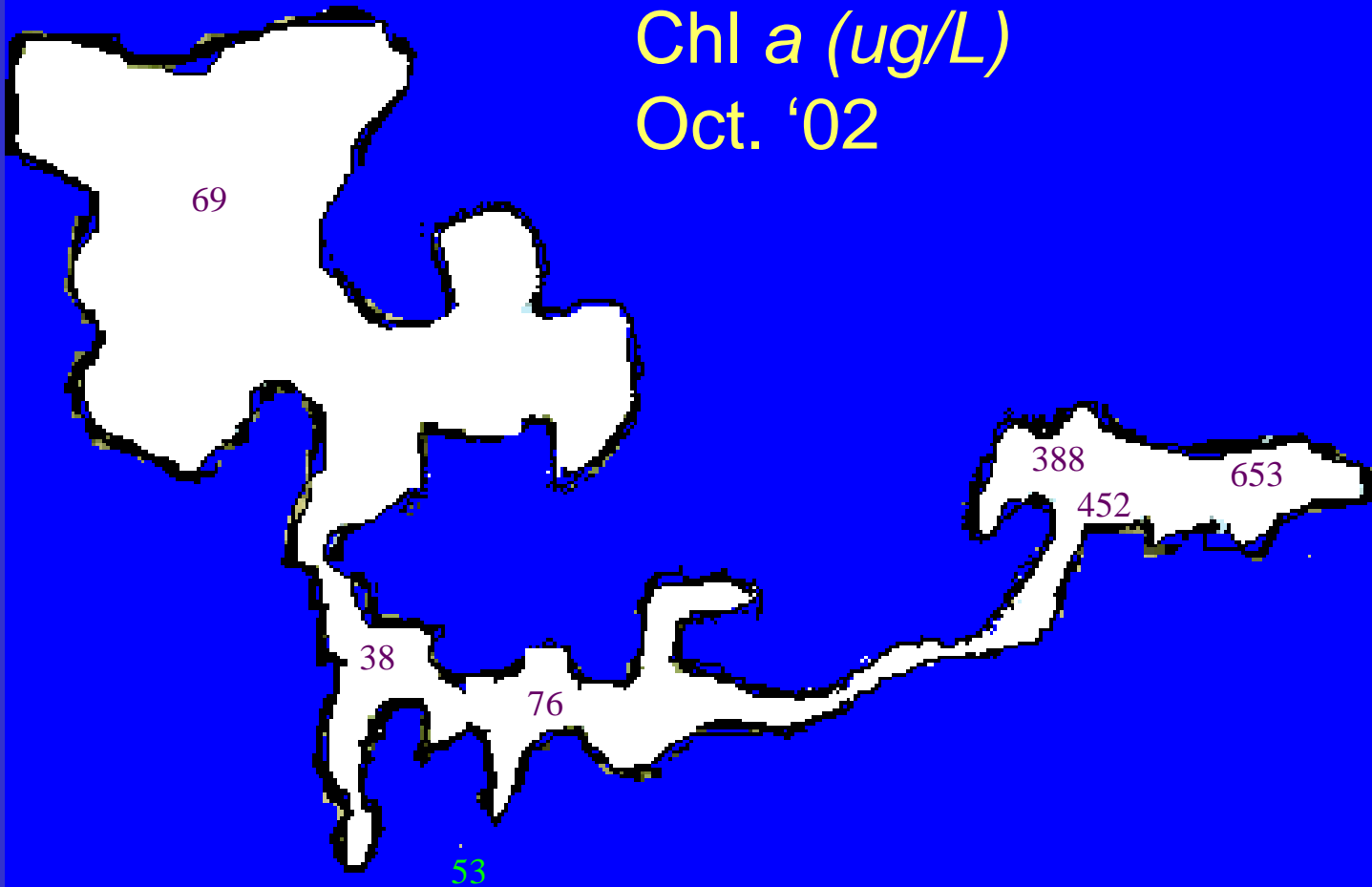
Chl a (ug/L)
July '02

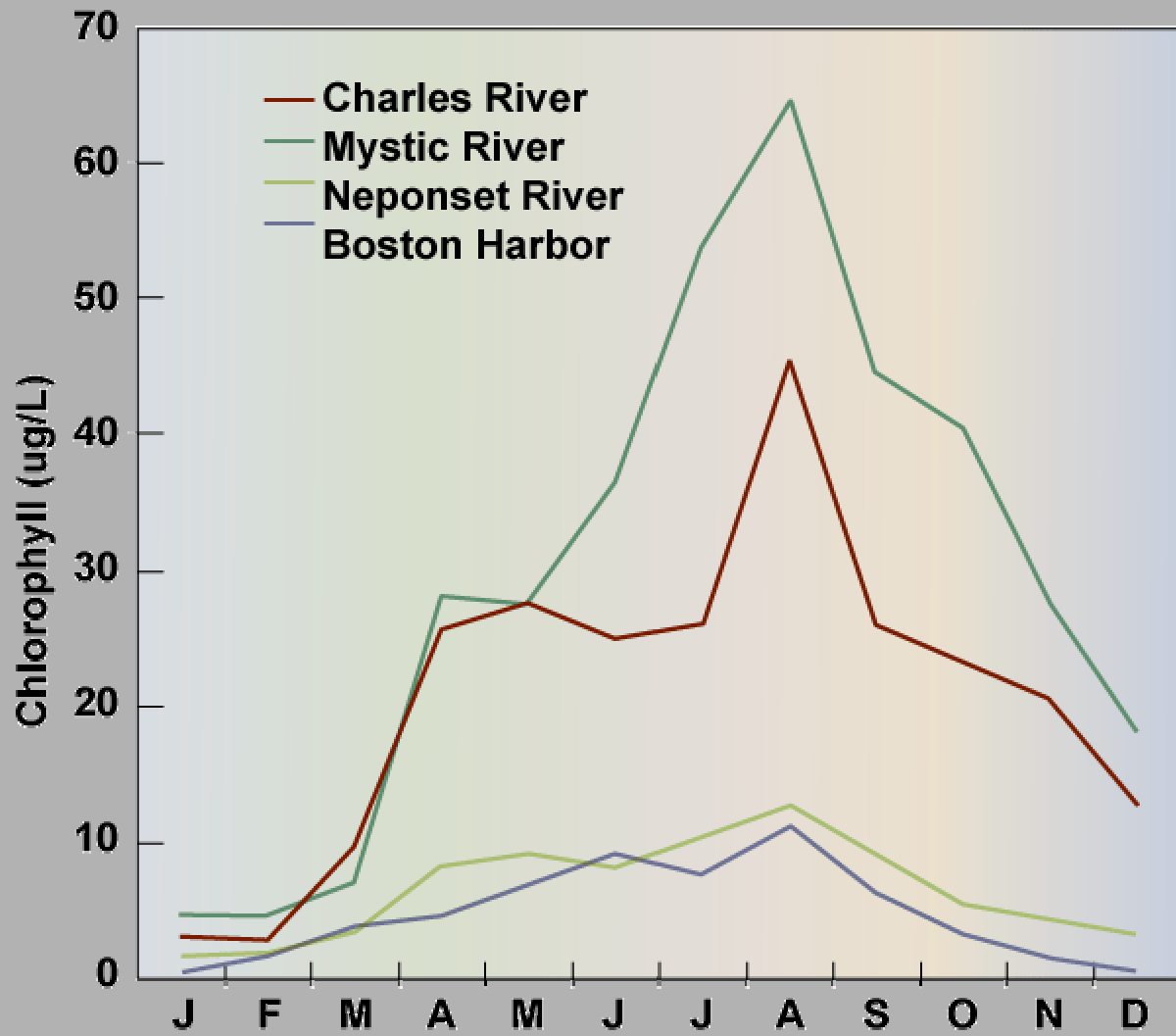


Chl a (ug/L)
Aug. '02



Chl a (ug/L)
Oct. '02







In situ monitoring of:

Temperature

Salinity

Dissolved Oxygen

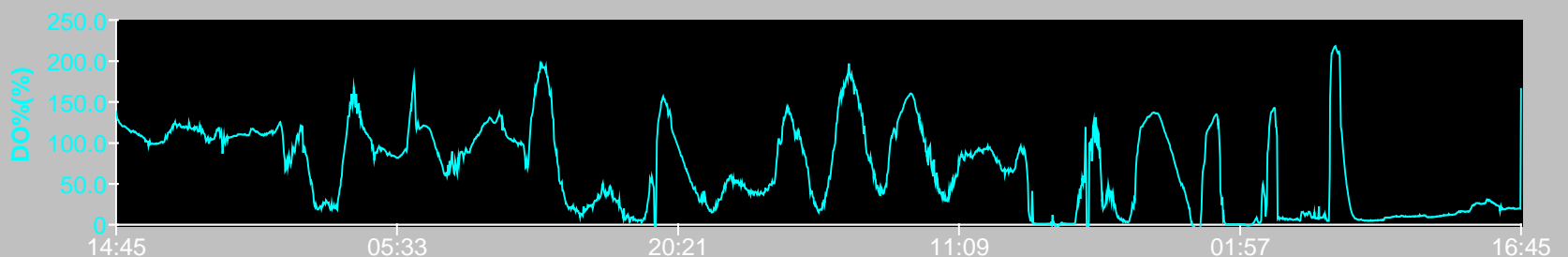
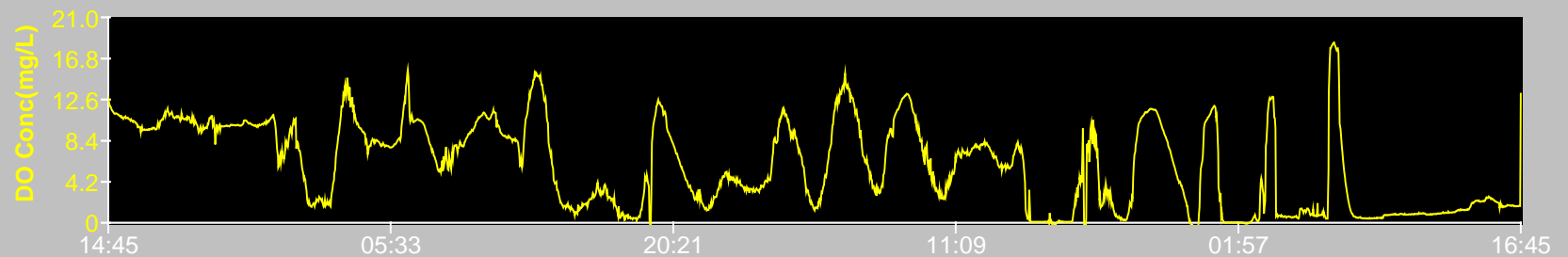
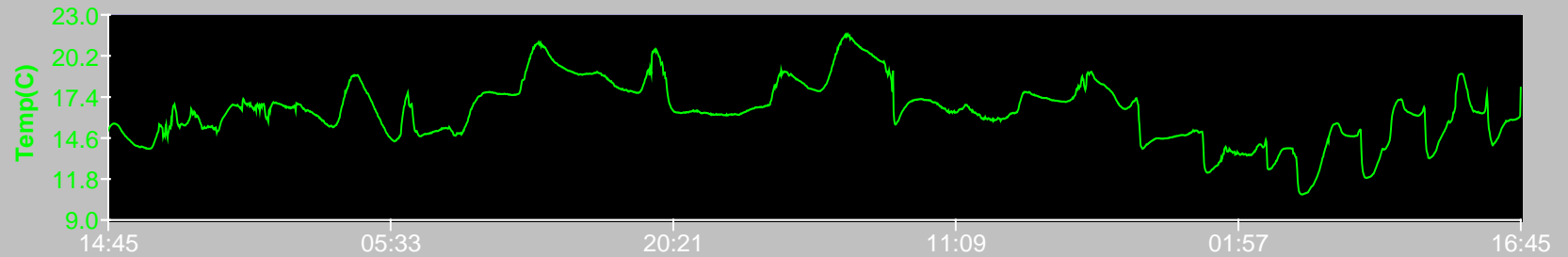
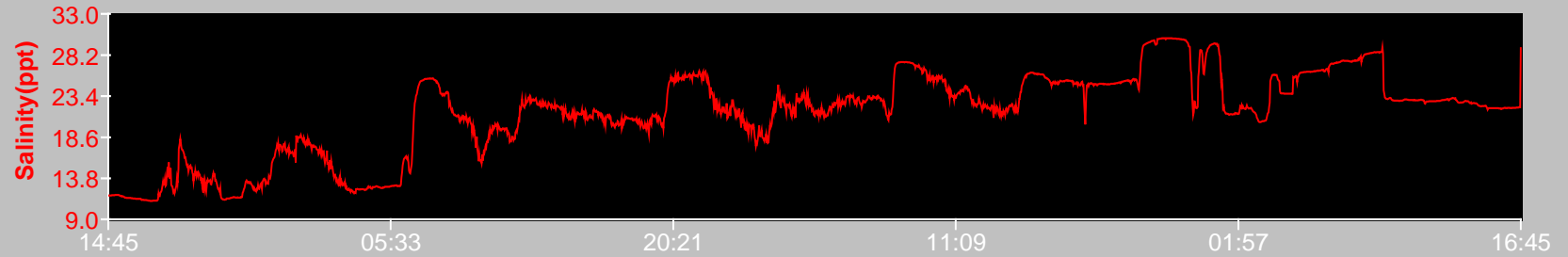
Depth

Can add:

Turbidity probe

Chlorophyll probe

SPMY03A.DAT



04/28/03 05/03/03 05/07/03 05/12/03 05/17/03 05/21/03

DateTime(M/D/Y)