

## PROGRESS REPORT:

### Harmful Algal Bloom Dynamics in the Gulf of Maine

Student: Jennifer Brown

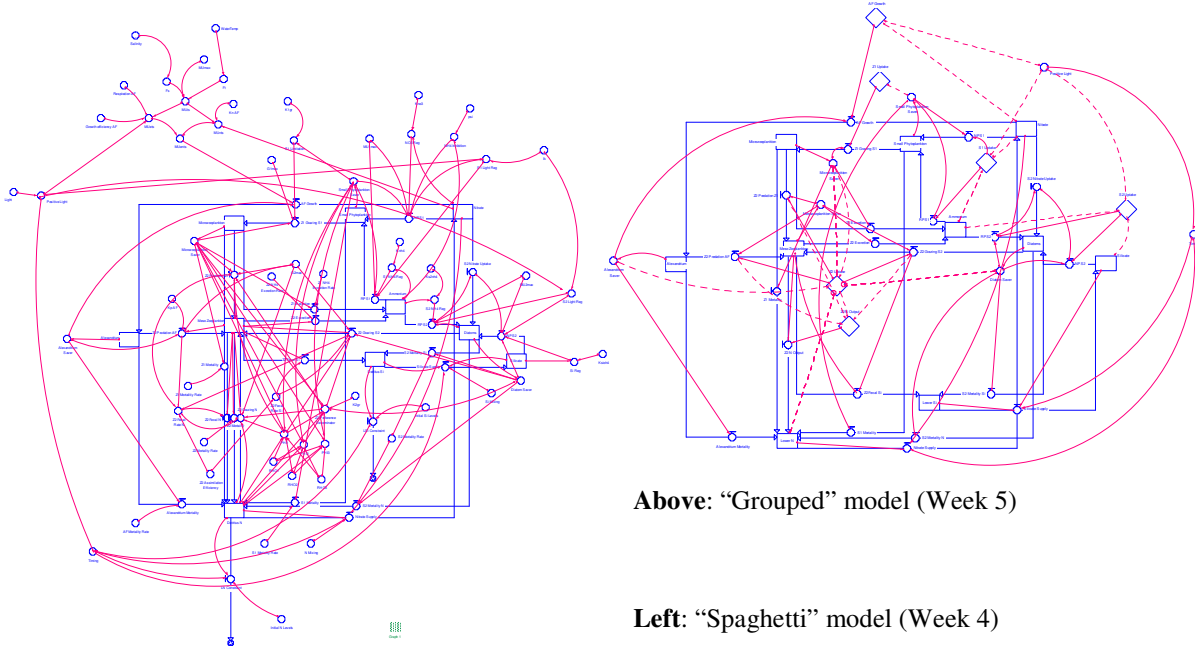
Advisor: Dr. Fei Chai

Reporting Period: June 23 - July 3, 2008

### Outline

#### Week 5:

- Worked on debugging the Stella model
- Grouping processes resulted in a model with less “spaghetti” features
- Changed algorithm for  $\zeta_1$ ,  $\zeta_2$ , and  $\zeta_3$  (Z2 food type preferences) from reading “S1” to “S2”. This was a mistake in Dr. Chai’s paper; Z2 consumes S2, not S1.
- Adjusted initial nutrient ratios to correct the bloom concentration of S2, which had been too high

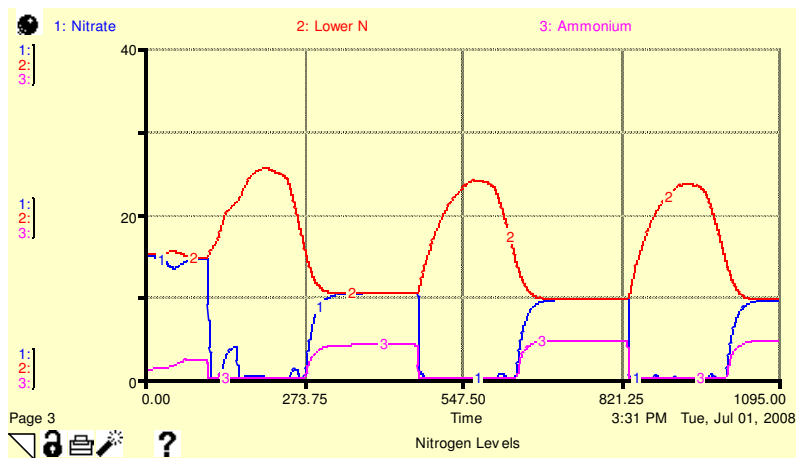


Above: “Grouped” model (Week 5)

Left: “Spaghetti” model (Week 4)

## Week 6:

- Rechecked all algorithms and eliminated some redundant processes
- Corrected nutrient flow rates from S2 to Z2, which had been causing a nutrient “leak” in the model from nitrate to silica
- Looked at print-outs of 3D model output, for several types of experiments
- Set up accounts in Triton and Viz, read documentation for NetCDF files on which 3D output is stored



Current model output for nutrient levels

