

### Answers to Questions posed in Lab 4:

#### Lab 4, Slide 2

##### Doubling TSS in the Rum River

- What happens to the chlorophyll in the water column?
  - It is reduced in the summer months
- How has the Secchi depth changed?
  - It is been reduced by 50%. This makes sense since the increase in TSS will increase turbidity and reduce Secchi depth.
- How has the fishing changed?
  - Although most of the game fish will not be affected, large reductions in Sculpin, Bluegill, and Walleye are predicted.
- Any other impacts?
  - Total Nitrogen and total Phosphorus are slightly decreased in the summer months

#### Lab 4, Slide 3

- Why is the biomass greater than in the control?
  - Plants were P limited in the control scenario and in the perturbed this is no longer the case.
- What is the impact on nuisance algae?
  - The blue-greens are considered the nuisance algae. To answer this question it is helpful to examine the difference graph. By doubling the total phosphorus, the blue green algae, both periphyton and phytoplankton are increased. Even though the blue-greens may double, results indicate that even doubling the TP doesn't lead to much blue green biomass.
- What is impact on phytoplankton?
  - The amount of phytoplankton is increased greatly in the warmer months of the year. The only exception is the Low-nutrient Diatoms, which appear to experience a collapse during the warmest months.
- How has the fishing changed?
  - Many more small fish, but a smaller increase in game fish.

- Any other impacts?
  - Large increases in Mayflies and Gastropods/Rotifers.