

CHEMISTRY 253
Spring, 2015 - Dixon
Group Assignment #1

Biogeochemical Cycles Questions:

1. Looking at Figure 10-1 in Baird and Cann,
 - a) calculate the turnover time in days for water in the atmosphere (using the combined precipitation rates)
 - b) If ice is assumed to be in steady state, and if its net sinks are $25,000 \text{ km}^3/\text{year}$, what is its turnover time (in years)? How does this compare to the oceans (the only sink is evaporation)?
 - c) Rivers constitute a pretty negligible reservoir of water, why are they still important in the hydrological cycle

Note: in this example, use of a “linear” model may not be that realistic (e.g. precipitation is not directly proportional to water concentration)

