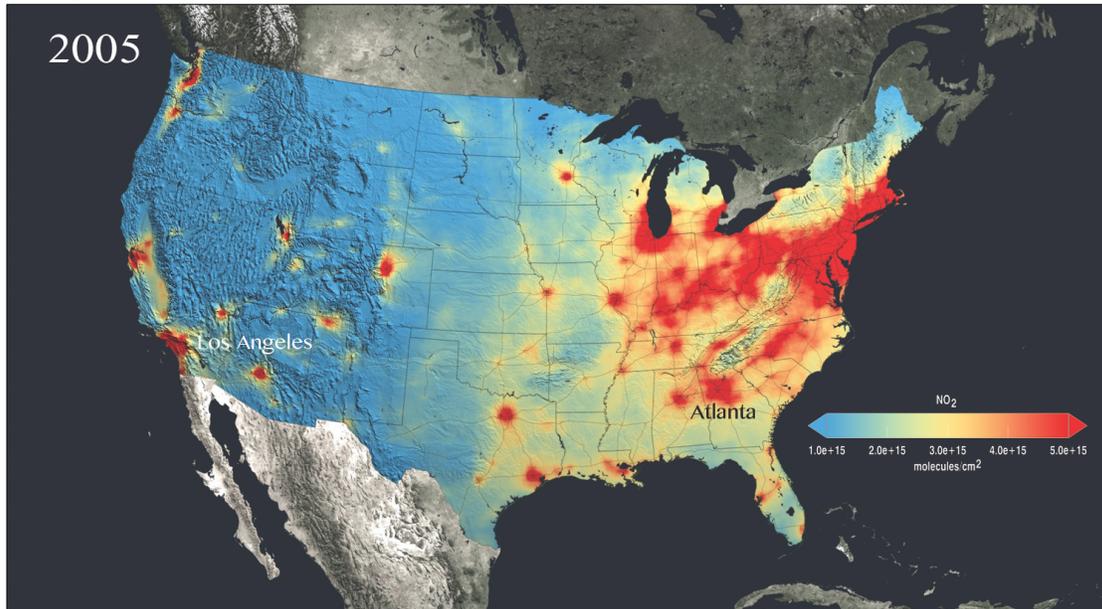


Name: \_\_\_\_\_

Date: \_\_\_\_\_

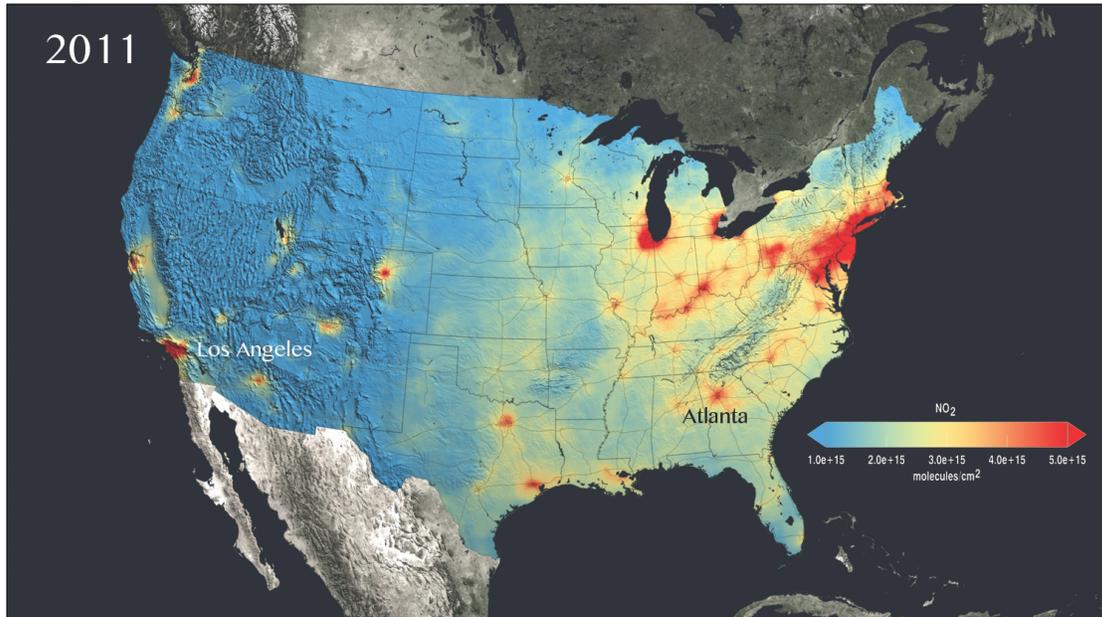
### Bad Ozone: Activity 4 Looking at Satellite Data: Comparing NO<sub>2</sub> Levels Over Time

#### Nitrogen Dioxide Concentrations in the United States in 2005



Average tropospheric column concentrations of nitrogen dioxide as detected by the Ozone Monitoring Instrument on NASA's Aura satellite for 2005. Blue and green denote lower concentrations and orange and red areas denote higher concentrations, ranging from  $1e+15$  to  $5e+15$  molecules per square centimeter, respectively.  
Image credit: NASA Science Visualization Studio.

#### Nitrogen Dioxide Concentrations in the United States in 2011



Average tropospheric column concentrations of nitrogen dioxide as detected by the Ozone Monitoring Instrument on NASA's Aura satellite for 2011. Blue and green denote lower concentrations and orange and red areas denote higher concentrations, ranging from  $1e+15$  to  $5e+15$  molecules per square centimeter, respectively.  
Image credit: NASA Science Visualization Studio.

1. Have tropospheric NO<sub>2</sub> concentrations increased or decreased from 2005 to 2011 in the following cities?

Los Angeles, CA \_\_\_\_\_ Atlanta, GA \_\_\_\_\_

2. Have tropospheric NO<sub>2</sub> concentrations increased anywhere in the U.S. from 2005 to 2011? \_\_\_\_\_

3. Overall, have NO<sub>2</sub> concentrations increased, decreased, or stayed the same in the eastern U.S. from 2005 to 2011? \_\_\_\_\_