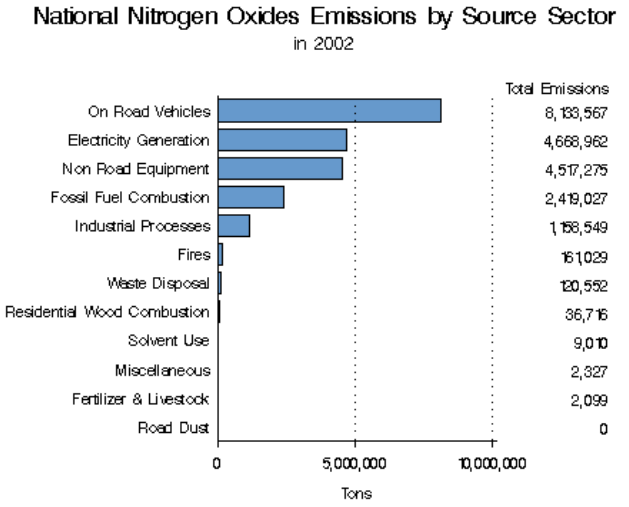
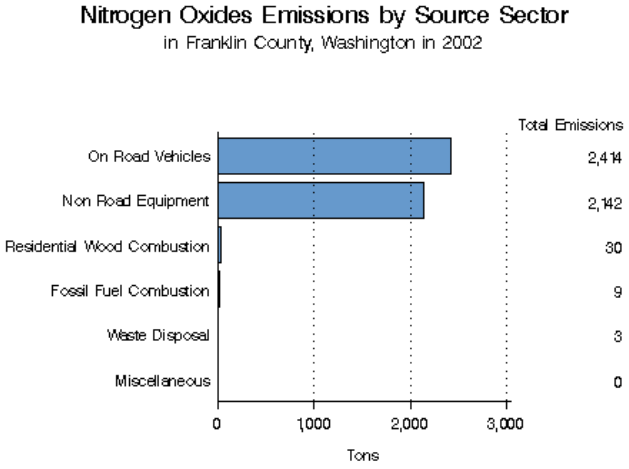
Air Pollution in the Pacific Northwest Worksheet Name _____

List a few general facts about Nitrogen Dioxide air pollution below:

Emissions Inventory for *nitrogen oxides* in the lower **atmosphere**:

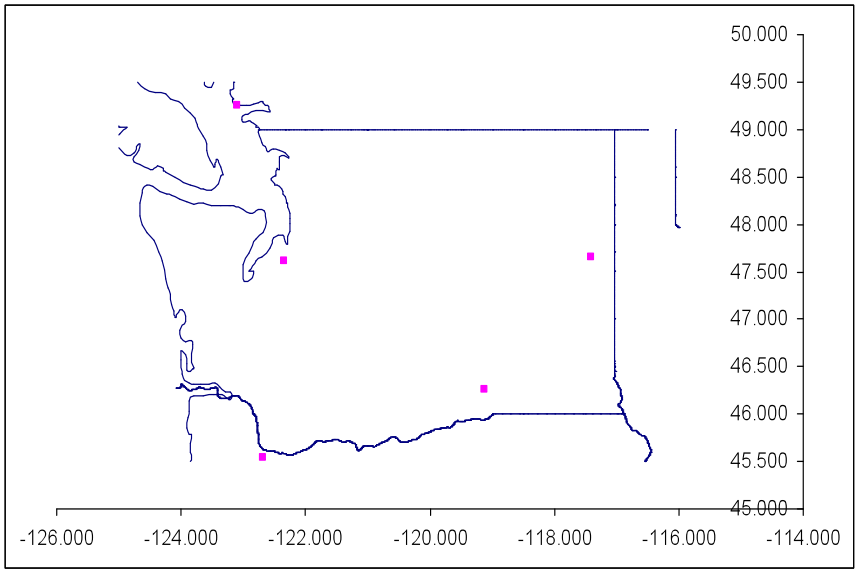
Provided by the **Environmental Protection Agency**





In the box below, answer the two questions: What are the top two sources of nitrogen oxides in the USA? How much is emitted per year? (Include Units)	**In the box below, answer the two questions: What are the top two sources of nitrogen oxides in *Franklin County* (Pasco)? How much is emitted per year? (Include Units)**

Label the Cities, Axes, and Title in the plot below:



What are the coordinates of each city?

CITY	Latitude	Longitude

What is the largest value shown on the maps of nitrogen dioxide?

Which city is it in?

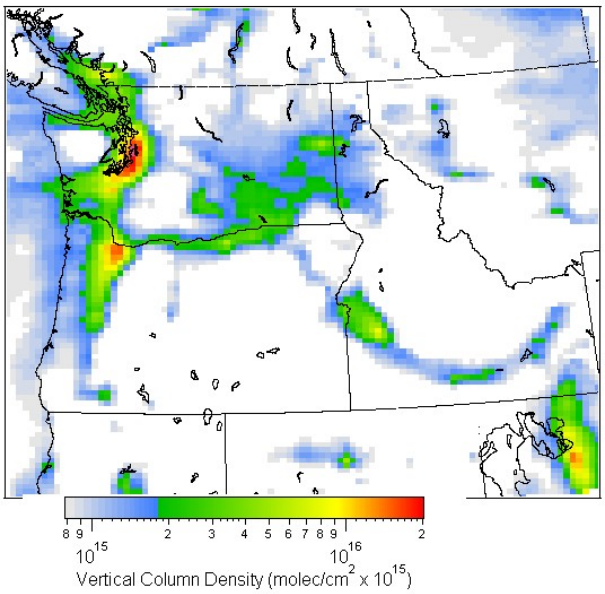
Is it from the model or the satellite?

November 2007 –*nitrogen dioxide*

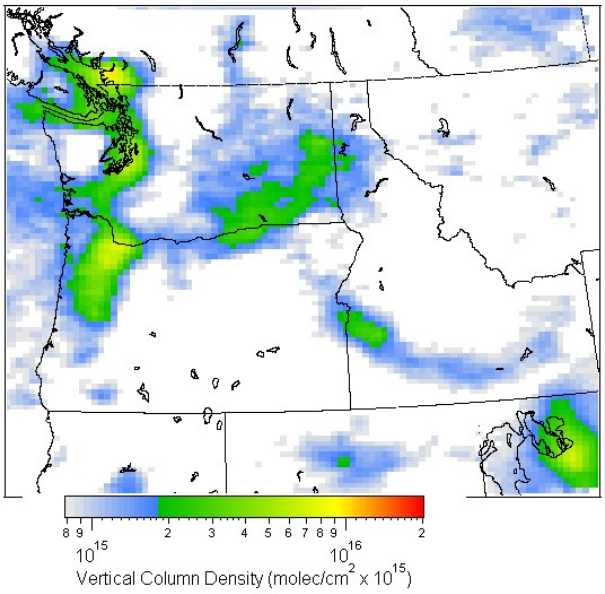
AIR QUALITY MODEL:

SATELLITE MEASUREMENT:

AIRPACT NO_2 Tropospheric Column - Monthly Average



OMI NO_2 Tropospheric Column - Monthly Average



Complete the table below:

	AIRPACT NO_2	OMI NO_2	AIRPACT/OMI Ratio	AIRPACT - OMI Difference
Seattle				
Portland				
Vancouver				
Pasco				
Spokane				

Which cities show the best agreement between the modeled (AIRPACT) and satellite (OMI) concentrations of nitrogen dioxide? (Be specific – use your calculation and graph results from Excel to explain why).

Which cities show the worst agreement between the modeled (AIRPACT) and satellite (OMI) concentrations of nitrogen dioxide? (Be specific – use your calculations and graph results from Excel to explain why).