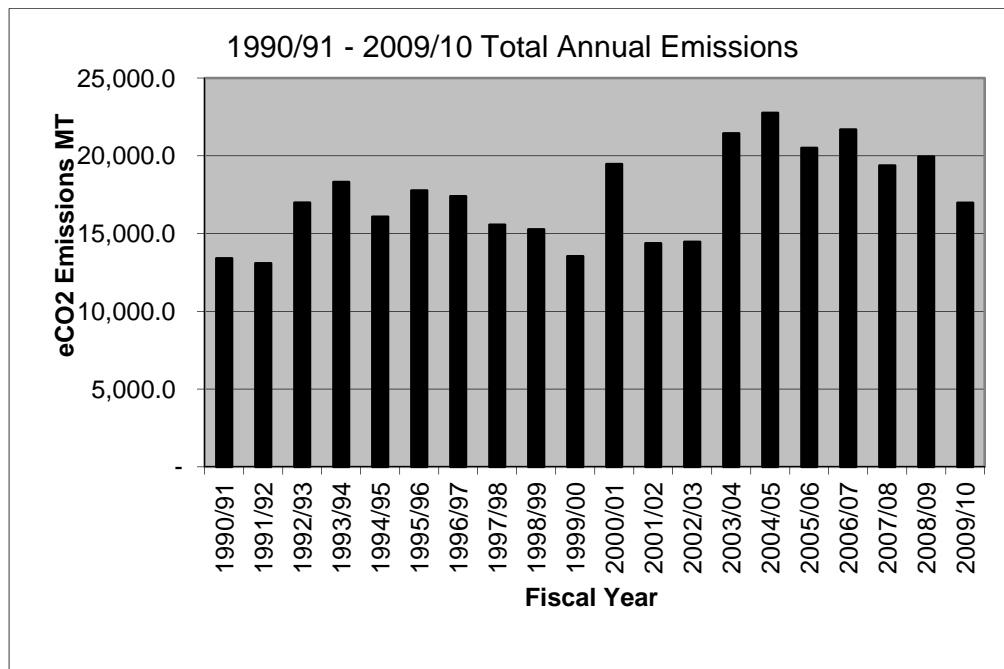


## 2009-2010 Summary of Greenhouse Gas Emissions

This is a summary of Macalester College's greenhouse gas emissions inventory during the 2009-2010 fiscal year. This fiscal starts on June 1 and ends May 31, which is true of every fiscal year. This summary will focus on the total annual emissions of this fiscal year compared to previous fiscal years, as well as the data from specific sectors of the total annual emissions.

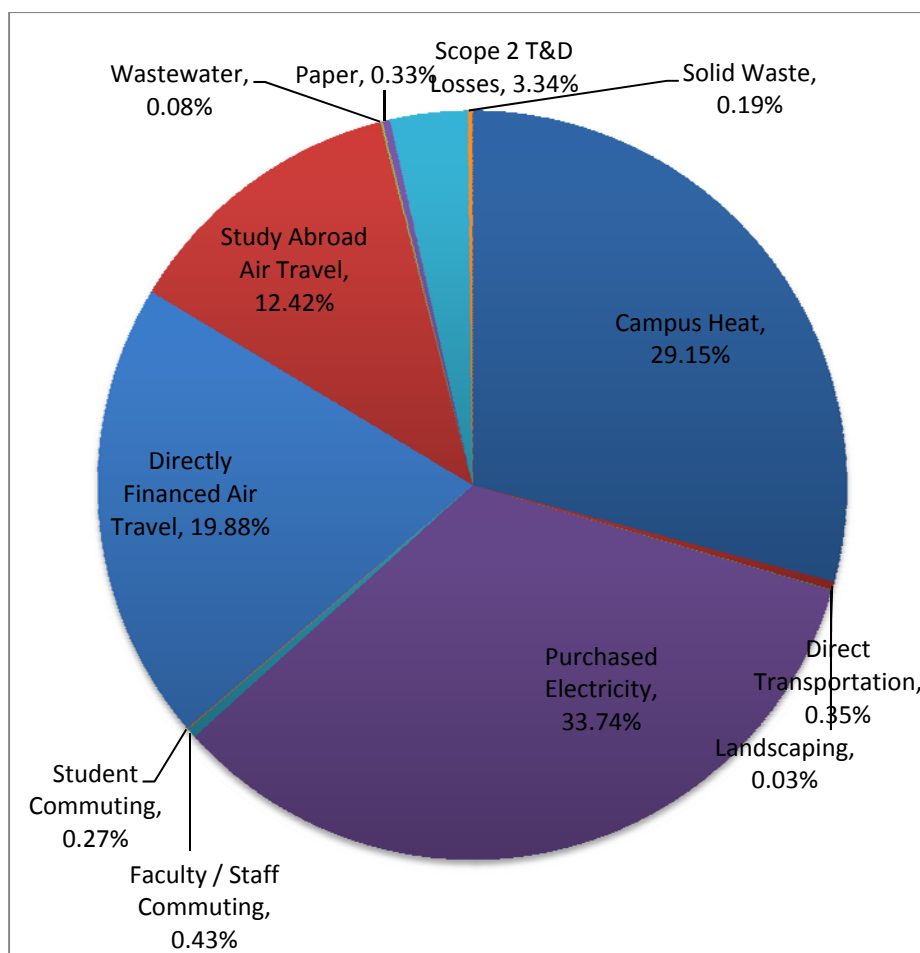
The total annual emissions during the 2009-2010 fiscal year was 16,978.3 metric tons of carbon dioxide equivalents (MT eCO<sub>2</sub>). This fiscal year's total annual emissions are lower than the total annual emissions from previous year. If you look at Graph 1 you can see that in the past five years, there's a general decline in the total annual emissions. This data is not normalized for differing weather conditions, so certain years might have had a worse winter than others which would affect how much emissions that one year would have.



Graph 1. This graph displays Macalester's total annual emissions for the past 20 years. Starting in 2005 the total annual emissions has steadily declined.

The 2009-2010 fiscal year's emissions are separated by sector in Graph 2. The majority of Macalester's emissions come from electricity and heating. Together, these two sectors make up 62.89% of the total annual emissions. The other sectors that contribute a significant amount to the total annual emissions all fall under the heading of travel. These sectors include study abroad air travel, directly financed air travel, student commuting, faculty/staff commuting, and direct transportation. In total, all of these sectors make up 33.35% of the total annual emissions. Therefore, the vast majority of Macalester's total annual emissions comes from electricity usage, heat usage, and traveling.





Graph 2. This graph demonstrates the percentage of each sector's contribution to the total annual emissions. The largest contributing factors are campus heat, purchased electricity, and the combined travel sectors.

Some interesting facts and figures for this fiscal year are the percent decrease in total annual emissions from the 2004-2005 fiscal year and 2008-2009 fiscal year. The percent decrease from the 2004-2005 fiscal year to this fiscal year is about 25.4%. The percent decrease from the 2008-2009 fiscal year to this fiscal year is about 14.9%. Both of these decreases are most affected by the decrease in MT eCO<sub>2</sub> from scope 1. Scope 1 is largely composed of Macalester's heating supply. The decrease in scope 1 from the 2008-2009 fiscal year to this fiscal year is about 22.5%. This significant decrease in this scope demonstrates that there is significant improvement in the efficiency of Macalester's heating program. In general, the heating sector comprises the majority of the total annual emissions, but in this fiscal year, the heating sector contributes less to the total annual emissions than electricity usage. Therefore, one can infer that the next sector Macalester should reduce usage in or increase efficiency in is electricity.

Macalester set the 2007-2008 fiscal year as a baseline from which they would like to have decreased their total annual emissions by 15% by 2015. Currently, in this fiscal year, Macalester has decreased their total annual emissions by 12.3% from their baseline. In terms of just heating, there was a 21.5% decrease in heating MT eCO<sub>2</sub> from the baseline year. Another figure to consider is the drastic decrease in heating MT eCO<sub>2</sub> from the 2004-2005 fiscal year that had the highest total annual emissions. The decrease from that fiscal year to this fiscal year is about 50.1%. Given this data, it looks like Macalester will be able to reach our goal for 2015. Between now and then, Macalester will have to decrease their total annual emissions by 2.7%. If Macalester continues its reduction of scope 1 aspects, namely heating, then reaching the goal will be easily reached.