

# Study Fumes Over City Park Grass

January 28 2010, By Devin Powell, ISNS

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Plants are usually our allies when it comes to reducing the atmosphere's greenhouse gases, converting carbon dioxide into food and storing the gas' carbon in the soil below.

But according to new research, green parks located in dry climates -- which bring thick carbon-capturing grass to regions normally populated by sparse native vegetation -- may actually increase the amount of CO<sub>2</sub> released into the atmosphere.

"The greenhouse gases produced by maintaining the [park](#) are the problem," reports Amy Townsend-Small, an earth scientist at the University of California, Irvine. Her research suggests that parks in arid cities, as they are currently managed and landscaped, are not as "green" as they look.

Her measurements of soil carbon and the air above the park's turf in Irvine showed that grass itself captures a fair amount of CO<sub>2</sub> and emits only a tiny amount of nitrous oxide, a [greenhouse gas](#) that soil bacteria create while digesting [fertilizer](#).

But when Townsend-Small included estimates about how much energy and fuel was required to manage the land -- and the pollution produced by equipment such as lawn mowers and leaf blowers -- she calculated the resulting carbon footprint created from landscaping maintenance to be 10 times the amount of carbon that the park's green area could absorb. Just watering the grass alone produced enough carbon to override any potential reduction in carbon that the lawn might produce.

The numbers were even worse for the park's athletic fields, where turf is continually torn up and replanted before it can store significant amounts of carbon.

Published in the Jan. 22 issue of the journal [Geophysical Research Letters](#), the research suggests that parks in arid cities, as currently managed, should not count as carbon credits.

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Citation: Study Fumes Over City Park Grass (2010, January 28) retrieved 26 April 2024 from <https://phys.org/news/2010-01-fumes-city-grass.html>

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