

Rutgers Focus

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Cook professor Nathan Reiss (center) discusses the new pollution-tracking equipment with Ray Fernandez (left) of PSE&G and Robert Kramer of the U.S. Environmental Protection Agency.

BULLETIN BOARD

Ph.D. in public administration

At a special inaugural ceremony Oct. 25, Rutgers-Newark Provost Norman Samuels welcomed the 13 students who make up the first class for the new doctoral program in public administration. The program offers the only Ph.D. in public administration in New Jersey.

A time to give

Pledge cards and a listing of charitable organizations have been circulated to Rutgers employees under the 1994-95 New Jersey State Employees Combined Charities Campaign that benefits more than 1,000 charitable organizations. Employees must donate at least \$26 in order to designate the gift to a specific agency. Otherwise, the contribution will go directly to United Way for distribution. The materials issued to each employee contain instructions on how to make a contribution. Pledge cards must be returned to departmental solicitors by mid-November.

Planning for the future

The Rutgers University Foundation will sponsor an estate and gift planning seminar in the Remigio U. Pane Room on the first floor of the Alexander Library on College Avenue, Friday morning, Nov. 18. Guest speaker Jonathan G. Tidd, one of the leading authorities in the field of charitable gift planning, will discuss the advantages and disadvantages of trusts, living wills, powers of attorney, the marital deduction and various strategies that might allow you to remember Rutgers in your estate plan. Spouses and guests are welcome. For more information or to register by phone, call ext. 2-8808.

Rutgers ready to combat air pollution

Monitoring station to help improve state's air quality

By Steve Manas

Smog is a serious problem in New Jersey. But the nation's first comprehensive photochemical assessment monitoring station (PAMS), now operational at Rutgers, should help researchers gain a better understanding of just when and where air pollution becomes a threat to human health.

The station will collect information to help New Jersey meet its enhanced air monitoring requirements under the 1990 Clean Air Act Amendments, Daryl Lund, executive dean of agriculture and natural resources at Cook College, announced. The PAMS is located at the New Jersey Agricultural Experiment Station/Cook College Vegetable Research Farm No. 3 in East Brunswick.

The station is specially equipped to monitor ground-level ozone, a major pollutant which has no relationship to the ozone layer that protects us from ultraviolet radiation. "This station will play a key role in air pollution research and will ultimately lead to improved environmental quality and better health for state residents," Lund said.

The monitoring equipment at the site, which includes a 66-foot tower, continuously collects data on ground-level and upper-atmosphere winds and temperatures and relays the information to computers housed in a N.J. Department of Environmental Protection air monitoring trailer. The facility is equipped to collect additional data on the concentration of ground-level ozone and other pollutants. Public Service Electric and Gas Co. and Jersey Central Power and Light Co. jointly donated equipment and construction costs for the station.

"This monitoring station, created through a cooperative effort among private industry, government and an

academic institution, will provide New Jersey with critical information necessary for tracking the movement of pollutants," said Commissioner Robert C. Shinn Jr. of NJDEP, which provided support for the project. "Understanding and controlling the transport of pollutants into New Jersey is vital to our ability to comply with the Clean Air Act."

Nathan Reiss, chairman of NJAES/Cook College's department of meteorology, explained: "The upper air measurements are absolutely essential in understanding the complex factors involved in ground-level ozone development. Unlike pollutants that have a stable chemical makeup and can be easily traced to their source, ground-level ozone forms in the atmosphere in complex interactions.

"Factors including other chemical emissions, sunlight, wind speed, wind direction and temperature come into play," he said. "Ground-level ozone cannot necessarily be reduced by decreasing a single factor. Scientists need to better understand how it is formed to find ways to eliminate it."

Although there are several other sites in the New York-New Jersey metropolitan area that monitor upper atmosphere winds and temperatures, they do not do so continuously and are not located in high-ozone areas, Reiss observed.

"This station will give us the most definitive readings available," he noted. "We'll be able to use the data to clearly document the factors involved in the formation of ozone and develop mathematical models to work on a solution.

"The station also will greatly enhance our research and teaching capacities," Reiss added. "The data can be used for other land-atmosphere research projects that have numerous meteorological, climatological and agricultural applications, and our students now will be able to see the three-dimensionality of weather and to watch it evolving continuously over time."

The MTBE controversy

An interview with Paul Lioy

One strategy for reducing air pollution is to add the chemical MTBE (methyl tertiary butyl ether) to gasoline. But with talk radio humming with complaints about MTBE, Focus turned to Paul Lioy of the Environmental and Occupational Health Sciences Institute to get the facts. The institute is a joint enterprise of Rutgers and the University of Medicine and Dentistry of New Jersey.

Q. What do we know about the health effects of MTBE?

A. The good news is that studies in which the institute has participated show that most people are not affected by MTBE. However, there seems to be a sensitive subgroup of the population who suffer nausea, headaches and sleepiness at the wheel. They are not well-characterized, and the prevalence of symptoms is not known.

Q. What can consumers do to reduce their exposure to MTBE?

A. If you are affected by MTBE, first of all, try to find a gasoline station that is using ethanol as an additive.

Second, whether you are affected by MTBE or not, make sure that your vehicle is tuned up. I cannot stress this enough. Having a properly tuned car cuts down on air pollution in many ways, not just in terms of the MTBE to which you may be exposed.

Third, and this, again, applies to all motorists, if you have an older vehicle, make sure that your mechanic reduces the amount of evaporative emissions. This will cut down on the amount of MTBE and other pollutants that get into the interior of the car.

Q. Are there other things consumers can do?

A. Yes. If you are affected by MTBE, don't pump the gasoline yourself; go to an operator-assisted aisle. And, if you're crawling in traffic or caught in a traffic jam, keep your windows rolled up and adjust your ventilation system to recycle the air that's already in your car.

Q. Is the public debate now raging about MTBE an "informed" debate?

A. I would say yes. The purpose of using MTBE is to cut down on carbon monoxide levels, and achieving the mandated standard is logical and reasonable. However, we must keep in mind that, in 1994, New Jersey is not out of compliance with federal clean air standards for carbon monoxide by any large measure.

Q. If you could re-frame the debate, how would you do it?

A. We're not focusing on the issue properly. We should be looking at reducing the levels of carbon monoxide at the specific locations where violations are taking place. The simplest way to control the problem is to re-route congested traffic flow in those areas, rather than change over an entire fuel system for the region. At the moment, we seem to be trying to drive a nail into a wall with a sledgehammer.