

Scientists Given SOS Grant

The National Science Foundation has awarded \$15,000 to Canisius College students, in a Student-Originated Studies (SOS) grant for environmental study. The grant proposal was initiated and written by Ms. Diane Cookfair, a senior majoring in biochemistry, through the American Chemical Society (ACS). Ms. Cookfair will be director and Dr. Frank Dinan will serve as faculty moderator for the summer project.

A STEERING committee was organized last fall to find a research problem and to organize a line of investigation. The group, consisting of Kathy Burke '78, Mary Magee '77, Robert G. Perez '77, and Ms. Cookfair, consulted the Erie County Department of Environmental Quality for suggestions. Dr. Donald Rowe of the DEQ offered assistance to the prospective researchers in directing them to specific environmental issues that needed study and in choosing exact target sites within the county on which to base the study. A decision was reached to study the effect of sewage overflows on the water quality of a stream. Shortly after the grant was submitted, the county disbanded the DEQ. This was unfortunate since, besides the obvious disadvantages to the ecology of the county, the agency had been anxious to learn the results of the research, which might demonstrate the need for stricter laws or more comprehensive efforts to keep the area's water clean.

SEWAGE OVERFLOW arises because of hydraulic overloading of sewage lines, blockages inside the system, and excessive water influx into the sewage lines. For

twelve weeks this summer the students will work on one specific stream system, the Slate Bottom Creek-Cayuga Creekcourse. Samples will be taken from the waterway when no overflow is apparent and when overflow occurs, usually during or just after a heavy rainfall. Written into the budget are items for mud-stomping boots and waterproof note pads for damp water.

WATER SAMPLES will be transported back to the Horan-O'Donnell Science Building, designated as the hub of the research activities. Chemical tests will include estimations of suspended solids and contaminants, dissolved oxygen content, and five-day oxygen demand. The first test will indicate how much industrial effluent reaches the stream. Results from the second and third tests will show the depletion of vital oxygen supplies in the water, that endangers plant and animal populations in the stream. In a biological slant, bacteria and macroinvertebrates in the stream habitat will be examined. The presence of pathogenic bacteria and the diversity of macroinvertebrate forms reflects the quality of the stream and its fitness for consumption. As the data is collected, statistical analysis will be performed with the Super Nova II computers the College owns.

MS. COOKFAIR admits that the idea of an environmental study of some sort germinated first at an ACS meeting. With impetus from Dr. Phil Heffley and Dr. Dinan of the Chemistry Department, the idea grew to its present proportions. Dr. Dinan emphasized the broad nature of this undertaking, stating that in-

deed "it must be interdisciplinary" in order to work. The research team is drawn from many majors, and encompasses those with such diverse talents as photography, computer science and spectrophotometry and spectroscopy. Besides the steering committee, Canisius students involved in the project are Alice Welch '77, Suzanne Rehak '77, Robert Morcelle '77, Joseph Mehlretter '77, Raymond Jarmack '77, and Laura Heimback '77. Ms. Ellen Rose, a senior in geology/geography at SUNYAB, completes the crew.

ONE IMPORTANT reason that the College landed this grant is a precedent during the summer of 1972. With similar funding Tom Gasiewicz and coworkers conducted research on mercury and cadmium levels in human hair. Mr. Gasiewicz is now finishing work towards a Ph.D. in toxicology at the University of Rochester. "Alumnae (of such projects) tend to do well," observed Ms. Cookfair. The investigations, which may furnish results of significance to the community, may also provide an extremely interesting employment for the summer. A latent interest could be piqued by such research and set a lifelong direction for the individual.

TO DR. Dinan's knowledge, Canisius College is the only local institution to ever receive an SOS grant. He personally is optimistic that supplies and people will be "primed and ready to go once summer is here." In the next few weeks the research team will be scouring the scientific literature on stream analysis and ordering supplies for the first phase of operations. Other preparations include an assessment of available space for offices and additional laboratories. The momentum is building that will carry the young investigators throughout the summer.