

CITIZENS' MONITORING

Introduction

There is a role for volunteer monitoring programs even in the minimalist monitoring plan. Volunteer groups have demonstrated their ability to provide technically valid, reliable data but it is critical that such efforts be professionally managed. Since effort must be professionally administered, a "citizen's monitoring" component will demand resources of the program (i.e. time and money). A successful volunteer monitoring program, in addition to professional management, must consider such critical factors as volunteer motivation and recruitment, group leadership, and coordination between the information collected and that which is needed for the LIS Study. Imparting a sense of contribution to a large-scale effort will be as important a motivation to potential volunteer organizations as money and training.

Minimalist Program

In the minimalist program, as defined at this stage, there seems to be four appropriate applications for volunteer efforts. These are:

Rainfall Monitoring

In the "pathogens" component, there was the need to document rainfall at a local level. This is a fairly simple measurement and the proper equipment is relatively inexpensive. The LIS Monitoring Program should equip, train and coordinate such a volunteer program.

Stream and Harbor Monitoring

Government monitoring programs do not have the resources to routinely monitor rivers and harbor areas comprehensively. Volunteer efforts can supplement water quality monitoring in these areas. For example, a number of volunteer groups currently monitor embayments for both water quality, such as oxygen, salinity, and temperature and living resources. Harbor sampling by volunteers can complement the open water sampling supported by government. As another example, the "nonpoint source" element of the minimalist monitoring program requires an increased frequency of sampling at USGS gauging stations. Volunteer groups may be able to help collect these additional samples although the analyses must still be done by the USGS.

Avian Community Census and Assessment

As identified in the Living Resource section, private nonprofit groups have a track record in conducting bird sightings and counts. A more complete integration of public and private efforts is needed.

Public Relations/Informational Products

The minimalist program includes efforts by the LIS Monitoring Program to distribute information and to keep the results of the program in the public conscience. The interest of citizen environmental groups should be harnessed to help accomplish this goal. Every EPA region has a staff member designated to volunteer monitoring activity and both states (CT and NY) already use volunteers to collect samples for the evaluation of fisheries (In NY, anglers routinely send in scale samples and catch measurements and striped bass fishermen provide samples for tissue

analysis). The LIS Monitoring Program should develop linkages with such existing volunteer efforts. A mobilization of recreational divers to report or observe conditions in potentially hypoxic areas has been done in other areas and may be beneficial here also. Citizen's groups can only be expected to promote activities in which they are directly involved. Thus, it is necessary for groups to contribute to the study before they can truly act as public liaisons.

Desirable Additions

Despite the problems inherent in maintaining a volunteer program and the real costs involved with professionally managing and equipping volunteers, there are some tasks in the "desirable" or "research" categories that should involve volunteer efforts in the data collection (but not in the sample analysis or data synthesis). These are:

- *Compiling Land Use Information.*

Monitoring of nonpoint sources involves detailed mapping of representative drainage basins with regard to land use and related information. Local volunteers may be able to assist in such efforts by reporting on development trends, recreational use, and installation of management controls within the drainage basins.

- *Synoptic Sampling.*

The LIS Monitoring Program could coordinate the efforts of many volunteer observers to provide occasional "snapshots" of condition around the Sound that would be impossible to compile synoptically in any other way. This might be an already existing program, like

the Christmas bird census. It may be a fairly simple set of observations like boat counts, or it may be more sophisticated such as temperature, salinity or even dissolved oxygen measurements.

- *Event Monitoring.*

Local volunteer groups could be enlisted to identify events and respond rapidly with the collection of samples needed to document the effects of these events.

Any of these activities would require not only management and technical guidance from the Monitoring Program but also a fairly comprehensive training program. A workshop will be conducted to refine the above points and further evaluate the practical aspects of establishing and maintaining a coordinated citizens' monitoring effort.

The Marine Sciences Research Center organized a workshop to develop a more detailed design for a Citizens' Monitoring Program for LIS. The workshop was held on 18 April 1994. The report will be available by 31 May 1994.