

EDUCATION NEEDS IN WATERSHED CONSERVATION

George W. Worley*

I believe this is the first of these conferences at which the educational aspects of water resources and water problems have been given special recognition. I know it will not be the last. A broad educational program is important, perhaps essential, to the solution of our water problems.

Under a truly democratic system of government public opinion is, eventually, the force which determines the direction of action in major issues. When water problems are of major interest, as they are in the southwest, it is important that the public be given timely, adequate, accurate information concerning these matters. Only when such information is available can the public be expected to give significant and continuing support to water conservation programs. Providing useful, accurate information is a form of education.

What are some desirable characteristics of an educational program to stimulate interest, thought, and action on water resource problems? I suggest the following:

1. A conservation education program should enjoy the approval and active support of the State Department of Education and the institutions related to it.
2. There should be state-wide coordination of planning and activities. All organizations, agencies, groups, and individuals involved in the program should have opportunity to participate in the coordinating process. There should be a harmonious working relationship between researchers and technicians who provide pertinent information, and those persons who are primarily concerned with interpreting this information and presenting it to the public.
3. The conservation education program should involve information for all age levels from pre-school to adult.
4. The program should be regular, continuing, rather than sporadic. We should be concerned with teaching a basic philosophy rather than only advocating emergency measures.
5. A conservation education program should utilize modern educational methods, materials, and equipment.
6. There must be provision for evaluating progress.
7. The personnel who plan, organize, and execute the program should have clearly in mind what concepts and principles are to be taught

*Director, Watershed Conservation Education Project, University of New Mexico, Albuquerque, New Mexico.

and how to teach them. This involves a program of leadership training.

What is the status of the conservation education program in New Mexico? How many of the desirable characteristics suggested does our state conservation education program exhibit?

This is the situation as it appears to me, on the basis of observation admittedly limited both as to time and opportunity. Current status, recent progress, and remaining problems will be suggested in relation to each of the desirable characteristics of a good conservation program mentioned earlier.

1. The State Department of Education

It appears that personnel of the State Department of Education are aware of the importance of conservation education, particularly those aspects relating to water, and are aware of their responsibility concerning it. They are justifiably concerned with the problem of increasing emphasis on the conservation education program in the face of a jam-packed curriculum and insistent demands for added time and effort in many fields.

No one person in the State Department of Education is charged with attention to a statewide conservation education program. Certain individuals, because of personal interest or the nature of their assigned work, tend to be more active in conservation education or are thought of as representing the department in conservation education matters. More and more active leadership in conservation education from the state department is always desirable. It is to be hoped that additional personnel may become available to the department, either to give direct attention to the conservation education program, or to reduce the individual work load so that present personnel can give more time to this important activity.

2. State-Wide Coordination of conservation education

There are examples of planned coordination of education activities by a number of agencies and organizations. Conservation education workshops, the activities of Soil Conservation Districts, forest fire prevention programs, and the Rural Development Program, to mention a few, involved working together to inform the public of resource problems and conservation measures. However, there is no permanent state-wide organization to coordinate efforts in conservation education, prevent duplication of effort, and plan for increasing the scope and effectiveness of conservation education. Such organization may come soon.

On October 5th and 6th a Watershed Conservation Education Conference was held at the University of New Mexico under the sponsorship of the Pack Foundation project. One of the major outcomes of the conference was the recommendation that a state-wide conservation education council or committee be organized. A working committee was appointed, and will meet very soon to initiate the organization recommended.

3. Conservation education at all age levels

The extent of uniformity of the conservation education program with respect to age levels is not known to me. Certainly conservation concepts are taught at most school grade levels, but I suspect that there is much variation in the degree of emphasis. Quite often we find that interest and activity is high in the upper elementary and junior high levels.

I am inclined to believe that conservation information for adults is directly proportioned to the personal initiative and leadership of local representatives of the state and federal agencies concerned with water, soil and other resources.

4. Is the conservation education program regular or sporadic?

Certain elements of a watershed or general conservation education program are regularly included in the programming of schools and local, state, or federal agencies. However, emphasis on conservation matters all too often waits upon a flood, sedimentation problem, or other emergency. This should not be so. Stimulus for conservation planning and practices should come from an appreciation and understanding of the fundamental relationship of man to water and land, rather than from transitory emergency conditions. Deliberate planning for regularity should be a part of conservation education program development.

5. Use of modern educational methods, materials, and equipment

Use of the most effective teaching techniques and materials often hinges on the interest, initiative, and training of the leaders involved. Information about natural resources and their conservation can be presented in a highly interesting and satisfying manner. Water, land, plants, and animal are tangibles in which people are naturally interested. Possibilities for presenting information on resources by means of experiences, meaningful activities, visual and tactile materials are practically endless. Unfortunately, the information is often made to conform to the traditional "bookish" approach and loses its natural appeal. One hour in the field is often worth ten in the classroom, one good motion picture can teach as much as several books, and one project where the learner "does something" with resources is worth several lecture sessions where the learner is "told about resources".

There is a distinct need for the development and distribution of useful reference materials in conservation education to teachers, youth leaders, civic clubs, church groups, and other potential sources of leadership. Examples of such material are: bibliographies, lists of available visual materials, sources of assistance from local and agency personnel, suggested field trip routes, meaningful activities and projects, etc.

6. Progress should be regularly evaluated

Any program benefits from occasional "stock-taking" to determine

strong and weak points, progress, and relative failures. We need answers to questions such as these: What is the general level of understanding with regard to natural resources and their conservation? How was the conservation knowledge acquired? What effect does location within the state, economic status, occupation, and rural or urban life have upon acquisition of conservation attitudes? At what grade level does the most rapid acquisition of knowledge of conservation concepts occur?

Missouri, Iowa, California, Virginia, and recently Utah, have benefited from surveys of the effectiveness of conservation education programs.

In New Mexico, provision should be made for some type of periodic evaluation of the extent of conservation knowledge and the means which are used or may be used to achieve this knowledge.

7. A leadership training program

We are accustomed to finding great variation in the interest and achievement in communities. We find a certain community which has a reputation for its parks, public buildings, utilities, streets and roads. Another community has an outstanding interest and accomplishment in art. Still another is noted for its fine school system. Behind each outstanding program there is almost certain to be outstanding leadership.

Conservation-conscious communities are almost invariably the result of conservation-minded teachers, resource agency personnel, or conservation-minded civic leaders. It has been said that school administrators and teachers are the key to a successful conservation program. When teamed with other interested and informed persons in the community they exert an almost irresistible force for the improvement of conservation attitudes.

It follows that if leadership is of such obvious importance, a program to stimulate and train leaders will pay excellent dividends.

Probably the most outstanding examples of conservation leadership training in New Mexico were the conservation workshops for teachers held from about 1947 to 1953. Mrs. Ruth Bush Jones, Information Specialist, U. S. Forest Service, was instrumental in establishing these workshops at New Mexico Highlands University; Eastern New Mexico University; New Mexico Western College; and the College of St. Joseph. Other conservation workshops in the southwest were held at the University of New Mexico, Albuquerque; University of Arizona, Tucson; and Arizona State College, Tempe. Teachers attending the credit workshops received basic information in conservation principles, spent much time in the field under the leadership of resource persons from local, state, and federal conservation agencies, and developed conservation teaching activities, projects, and materials.

Every effort should be made to re-establish regular conservation

workshops or conservation field courses for teachers. Such a workshop is planned for the summer of 1960 at the University of New Mexico. It may be desirable to stimulate increased attendance at such leadership training sessions by offering tuition scholarships or similar inducements. In a number of states Soil Conservation Districts, women's clubs, garden clubs, sportsmen's organizations, and service clubs encourage attendance of teachers and youth leaders at conservation training courses by paying all or part of the expenses of those attending.

Too often, teachers are the only potential leaders to whom conservation training courses are offered. The establishment of short but intensive workshops in conservation education principles and techniques for soil conservation district supervisors, Boy Scout and similar youth group leaders, 4-H leaders, representatives of sportsmen's organizations, playground directors, camp counselors, and others in positions of leadership would have a tremendous impact on the conservation attitudes of the public.

The comments, references, and suggestions in the foregoing paragraphs are presented humbly. They are intended, not as a complete analysis of conservation education in New Mexico, not as a master plan for a new and better conservation education program, but simply to suggest some of the needs related to a public information program on our natural resources and their management. There is no implication that we lack a conservation education program. Much has already been done and is being done, but the matter is so important that we cannot afford to rest here. William Vogt, author of "Road to Survival" says, "A conservation program, my experience shows, inescapably rests like a tripod on three legs: research, education, and action on the land. These must function simultaneously if the structure is not to collapse."

We are, and we must continue to be, concerned with keeping the education leg of the tripod straight, sturdy, and on firm ground if we are to have a broad, effective conservation program on the land.