Creating a Long-term Plan for an Environmental Education Program
Developed by the Iowa Association of Naturalists, 1993

Scope

This document is designed to serve as a model, with examples, for creating a long-term environmental education plan. The examples used in this model are not meant to be appropriate for all environmental education programs. When designing a plan for a specific program, the plan writer needs to take into account their particular situation and resources.

Benefits of an Environmental Education Long-term Plan
Listed below are some of the possible benefits to creating a long-term plan for an EE program:

- Defines types of programs that are "appropriate"
- Provides a method for designing programming
- Gives direction to the program
- Defines target audiences
- Demonstrates a purpose or value for the program
- Justifies programming decisions for supervisors
- Communicates elements of the program to staff and public
- Creates a method for measuring program components
- Evaluates programming
- Creates program stability during staff changes

There is a logical process for writing a long-term plan.

Step 1: Research and Discussion
Agency mandates, journals, text books, environmental writings, available surrounding resources, and experience are the basis for arriving at a philosophy that expresses an agency's definition of a quality environmental education program. This philosophy should be communicated among those who administer the program.

Step 2: Writing a Statement of Philosophy and Justification for the Philosophy

Using the information gathered in Step 1, the naturalist writes a concise statement of philosophy that demonstrates the agency's purpose for creating an EE program. A justification statement can be written to demonstrate the arguments for pursuing this philosophy. This process should include input from administrators, and the statement should be a consensus of the agency.

Step 3: Writing the Program Goals
Goals are written to demonstrate the effects that the agency hopes to accomplish within

its audiences. These goals should relate directly to the written philosophy. Goals that are contrary to the agency's philosophy are not appropriate. Remember, an agency should not expect to accomplish all goals that seem necessary; we can't do everything. Program goals should be communicated to all administrators and supervisors of the program. The agency may choose to officially adopt the program goals.

Step 4: Writing the Program Objectives
Objectives include the actual programming components that will be performed in order to accomplish the goals for a given audience. Objectives that do not relate directly to the program goals are not appropriate. There needs to be a general understanding of the agency's audiences and their characteristics and needs. Objectives need to be measurable so that the naturalist can determine if they are being met. This is a brainstorming process that generates many ideas for successful programming. The naturalist should develop the program objectives and communicate them to supervisors. Periodic evaluation is necessary to determine if the objectives are affecting the agency's goals.

Step 5: Creating a System for Program Evaluation
Measured objectives can be assigned standards that simplify the evaluation process. The naturalist needs to determine what should be accomplished within a given timeframe. The evaluation process looks at whether these accomplishments were met and considers reasons for accomplishments or short-falls. Adaptation and evolution follow the evaluation process. Programming, staff time, material purchases, and the actual objectives may change as a result of the evaluation process.

The EE Program Model (See Figure 1 below)

The model demonstrates a logical flow for the development of a long-term plan. A written philosophy demonstrates the agency's definition of a quality EE program. This philosophy is justified using written documentation and experience. The philosophy is translated into a series of program goals that demonstrates how the program attempts to affect its audiences. Program goals are translated into objectives which include the actual programming components of the EE program. Methods for evaluation are incorporated into the objectives and the evaluation process is put in place to allow the program to adapt and evolve.

This is a two-directional model. Evaluation helps to mold the objectives; objectives relate back to the goals; goals relate back to the philosophy. Programming is justified by the plan.

Component Examples of the Long-term Plan

1. Statement of Philosophy and Mission Statement

This statement expresses the fundamental beliefs of the agency.
Why is an EE program important? What should an EE program accomplish?

Example: An environmental education program needs to interpret local natural resources including plants, animals, and physical elements; promote the conservation and preservation of these resources; promote practices which help insure a cleaner and healthier environment; and develop an environmentally-responsible citizenry in the community. Providing citizens with "good" experiences and active participation in "natural" settings is seen as essential to accomplish this goal. Also viewed as essential in meeting these goals is a citizenry which is sensitive to the environment, has knowledge in environmental and natural topics and issues, and possesses adequate problem solving capabilities. Environmental education is viewed as a life-long process which needs to target a variety of populations.

A mission statement can be written to communicate the philosophy as a mission of the agency. For example, "The EE Program of Tree Huggers of Iowa acts to interpret local natural resources, including plants, animals, and physical..."

2. Justification of Philosophy

Why is the written philosophy appropriate for the agency? What justifies translating the philosophy into an EE program? Possible sources of justification for an agency's philosophy include the following:

Written law or agency mandates
For example, Chapter II 1A of the Code of Iowa states that a conservation board shall "promote and preserve the health and general welfare of the people, encourage the orderly development and conservation of natural resources, and cultivate good citizenship by providing adequate programs..."

Environmental writings of such authors as Aldo Leopold, Rachel Carson, and Sigurd Olson are supportive of EE philosophy. For example, Leopold stressed the importance of 'developing an ecological conscience."

EE journals and reports such as Hungerford, Peyton, and Wilke's *Goals For Curriculum Development in Environmental Education*, the *Tbilisi Conference Report*, the *Journal of Visitor Behavior*, and the *Journal of Environmental Education*. For example, The Tbilisi Conference Report states that EE should be "a comprehensive, life-long process."

Previous experiences in EE programming
example, previous experience has shown that hands-on, outdoor experience is generally the best method for affecting a "realization" within program participants.

3. Program Goals

What does the agency hope to accomplish within its audiences that will relate to the agency's EE philosophy? The following example is based on the "Goals for Curriculum Development in Environmental Education" by Hungerford, Peyton, and Wilke. A state

plan for curriculum framework and learner outcomes will soon be available. This plan will also concentrate on areas of appreciation, knowledge, and action.

I. Environmental sensitivity
   A. Develop curiosity and respect for the natural environment
   B. Sharpen perception through the use of senses
   C. Develop a "good" attitude about the outdoors based upon outdoor experiences.
II. Knowledge
   A. Develop an understanding of basic ecological concepts
      1. Individuals and populations
      2. Environmental influences and limiting factors
      3. Energy flow
      4. Interrelationships in nature
      5. Cycles
      6. Community and ecosystem
      7. Diversity
      8. Change
   B. Knowledge or familiarity with local natural resources (plants, animals, and physical environment)
   C. Awareness of the effects of human interaction with the environment and associated issues
      1. Cultural (historical, social, arts, and literature)
      2. Political and economic (related to natural resource use)
      3. Land management techniques (how we should use our resources)
III. Problem-solving skills
   A. Develop skills necessary for working toward the resolution of complex environmental issues
      1. Recognize and define environmental problems
      2. Observe and collect data
      3. Organize and classify information
      4. Think critically (analyzing and generating alternatives)
      5. Evaluate and clarify value (ethical) positions
      6. Develop a plan of action using strategies such as persuasion, consumerism, and political action to help resolve environmental issues
   B. Humans as an ecosystem component (effects and affects)

4. Program Objectives

What will the agency do to affect its goals? Objectives address target audiences, program components, programming, and use of staff. Creating measurable objectives will be beneficial to the evaluation process.

Target Audiences: What groups and individuals will be the main audience for the EE program?

- Students (public, parochial, preschool, K-2, 3-4, 5-6, 7-12, behavioral, gifted, interns, college)
- Civic groups (garden clubs, Lions, Rotary, Masons, sororities and fraternities, church, etc.)
- Youth groups (scouts, 4-H, church groups, camps, etc.)
- Handicapped
- Senior citizens
- Families
- Tourists
- Teachers and youth leaders
- Media
- Other naturalists and conservation personnel
- Outdoor recreationists

<u>Program Components:</u> What media will the agency use to affect its objectives?

- Program presentation (indoor, outdoor, target audiences)
- Exhibits (permanent, mobile, indoor, outdoor)
- Interpretive trails (self-guided)
- Publicity (feature articles, news releases, public service announcements, radio spots, posters, signs, etc.)
- Publications (newsletters, park brochures, rules brochures, pamphlets, trail guides, etc.)
- Research and continuing education (plant and animal inventories, EE research, workshops, issues research)
- Networking (Department of Natural Resources, Soil Conservation Service, Iowa Conservation Education Council, etc.)

<u>Programming:</u> Specifically, what will the agency do to accomplish its goals? Measurable objectives are easier to evaluate. Maintenance (status quo), improvement, and innovative programming need to be
addressed along with their staff time requirements. Objectives need to be realistic.

- Program attendance (i.e., 4,000 students; 1,000 youth; 1,000 civic; 1,000 public, 500 seniors, etc.)
- Average group size (indoor, outdoor, school, civic, etc.)
- Number of groups (indoor, outdoor, school, general public, etc.)
- Programs geared to specific goals (i.e., 25 percent of programming will deal with ecological principles)
- Program and activity development (number and types of new activities to be created)
- Number and types of displays to be created and maintained
- Number of articles to be written by staff
- Number and types of publications to be created
- Number and types of audio-visual materials to be collected
- Types of teacher training to be offered

- Amount and types of professional development
- Number and types of wildlife surveys to be conducted
- Special projects to be completed
- Test scores (i.e., students will achieve a score of 75 percent or better on post-activity tests)

Implementation of Programming: Establish a timeframe for beginning and completing the program objectives (see Figure 2 below).

5. Program Evaluation

Did the measured objectives meet the standards of the agency? What are appropriate changes or future needs for the program?

Methods of Evaluation: Records are kept that allow the naturalist to periodically determine if the objectives are being met (see Figure 3 above).

- Was the objective met in the desired timeframe?
- Were objective numbers met (total and averages)?
- Naturalist's notes and observations
- Teacher evaluation forms
- Verbal and written comments
- Pre and post-activity tests measuring percent improvement
- Post-activity tests measuring percent achievement

Adaptation and Evolution: How should the program change?

- Priorities of programming
- Programming methods
- Staff time requirements
- Materials needed
- Unrealistic objectives
- Inappropriate goals