



## 4-H Youth Development

### 2000 Programs of Excellence

Life Skills

#### Environmental Education and Earth Sciences

##### **4-H Youth Conservation Council**

*Michigan*

###### Situation

The area of environmental stewardship has long focused on learning about the natural resources and ecology. This project took knowledge to another level...action. These teens applied to be a part of this council, from their concern for various environmental issues. Topics included wetland conservation, golf course development, land use issues, and exotic aquatic species. Participants gained a clearer understanding of the process for creating natural resources policy and decision making related to these issues. Other skill development included communication skills, research skills, understanding of government policy and leadership.

###### Program Description

This first year program, through an application process, gathered nineteen youth ages 13-18 from across the state to be a part of the Michigan 4-H Youth Conservation Council (M4-HYCC). Five regional teams were created and the youth researched a natural resources issue, developed a research-based presentation and presented their findings to the House of Representatives committee on Outdoor Recreation and Conservation.

Benefits for those involved in the program start with the various skills developed or enhanced as a result of this project. Youth reported in pre- and post-evaluation an increase in knowledge on how to present to officials, confidence in ability to present to officials and their ability to influence how environmental issues and problems are resolved. These skills are the foundation for future leaders in natural resources conservation and political involvement. It is crucial that the future leaders in natural resources have the skills to make decisions based on research not emotions and opinions.

Total FTE time by volunteers and 4-H staff amounts to two full FTEs. Grants to support this program came from the Michigan Department of Environmental Quality budget \$5,000. Other granting sources were the Michigan 4-H Foundation, National 4-H Council, and Pharmacia Upjohn.

Youth met three times as an entire group and also met locally once a month or more through the year to research, develop, and practice their presentations.

#### Accomplishments and Impacts

Post program evaluation results:

- This M4-H YCC experience helped me to be more interested in a career related to the environment or to the government in the future 90.9% Agree or Strongly Agree.
- I plan to get other youth involved in environmental issues 77.3% Agree or Strongly Agree.
- I was satisfied with my experience in M4-HYCC 100% Agree or Strongly Agree.

#### Collaborators

Michigan Department of Environmental Quality, Michigan State Senate Policy Office, Michigan State Department of Fisheries & Wildlife, Michigan 4-H Foundation, Pharmacia Upjohn, and several state conservation organizations.

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### **4-H Watershed Project Watershed Models**

#### *California*

#### Situation

Two major problems face a prominent estuary in San Luis Obispo (SLO) County: soil erosion and the subsequent rapid in-filling of the estuary, and pollution associated with urban runoff. Changes in citizens' behavior come about only after a thorough understanding of the direct consequences of one's actions. The 4-H Watershed Project models were designed to demonstrate those consequences graphically in a way that both youth and adults can understand.

#### Program Description

The Watershed Project in SLO County, California, developed



and built three 12 ft. by 12 ft. concrete watershed models for communities along the coast of the county. Each model is a permanent colorful sculpture that people can jump around on, that shows local geography, and that can be used to teach community members how to keep its creeks and other bodies of water clean!

Each relief map cost about \$1,500 and was built by a combination of elementary, middle school, and high school youth and adult community volunteers. Using these models, youth groups, high school students, and teachers offer demonstrations of watershed concepts, urban runoff pollution, erosion and sedimentation, and solutions to water pollution. Starting with a 7.5 minute USGS topographic map of the community, several bags of cement, and a stack of rigid foam boards, the volunteers created beautiful, large, scale-model, accurate relief maps of their watersheds. One model is housed at the County Schools' Environmental Education Camp and was built by 4-H youth and adults. The model is integrated into the Camp's programs on geology and water.

A second model of the same watershed, built largely by students and 4-H SLO Scientists, is housed at an elementary school where it is used by teachers to teach watershed concepts and sources of water pollution; to teach local history and map reading skills; and, to help children understand the water cycle. It is also available for community group use; youth trained in the use of the model present the demonstrations to the groups.

High school students of a Community School built the third model, of a different watershed. Students demonstrate the effects of runoff pollution to middle school students and community groups to help them understand how to prevent pollution of the rivers and streams. A small portable Watershed Model made of plaster and fiberglass is available for use at schools, fairs, and community events. Community groups, such as AmeriCorps and recreation programs borrow the model to teach youth about watersheds and runoff pollution.

#### Stakeholder Satisfaction

The interactive, hands-on, nature of the models and the use of local geography have made these relief maps ideal for allowing children and adults to acquire a firm concept of what is meant by the term "watershed." The fact that volunteers built the maps has them given "ownership" of the model and its concepts; they actively look for opportunities to show them off and to discuss and use what they have learned. Young people, ages 8 to 11, asked to be trained in the use of the model. They have now made many presentations of the watershed models, explaining the concepts of storage and release of water,

drainage of sub-watersheds to larger watersheds, and demonstrating sources of runoff pollution as well as strategies to minimize water pollution.

The models have been incorporated into the curriculum of the schools at which they are housed; thus, hundreds of children a year will be taught the watershed and water pollution concepts. The fifth grade teachers at the elementary school have developed a six week science unit around the concept of watersheds and use the model as an integral part of their teaching.

#### Accomplishments and Impacts

Ten elementary aged youth that helped in the construction of the models were taught to demonstrate watershed and runoff pollution concepts using the large Watershed Models. They have presented their demonstrations to over 300 adults at numerous demonstrations.

Ten continuation high school students both built and demonstrated watershed and runoff pollution concepts to their community.

Local scout troops have changed from the use of detergents to biodegradable soaps for their car washes. They pass out information at their car wash detailing the reasons for the change.

An informal survey of pet owners who attended the many watershed model demonstrations indicates that they are now picking up their animal waste.

Six states have requested copies of the Watershed Model Construction Manual as a result of their exposure to the model presentations by youth.

A county in northern California has already replicated the process and has constructed an even larger model. Another county is in the process of planning a model.

#### Resource Commitment

Funding for the project was partially provided through a grant from the U.S. Department of Agriculture (USDA) to the Morro Bay, California, Hydrologic Unit Area.

#### Collaborators

Local partners in the development of the large, scale-model relief maps included the Morro Bay National Estuary Program, the Environmental Protection Agency (EPA), the Morro Bay Foundation, the San Luis Obispo County Office of Education, Pacific Gas and Electric, Monarch Grove Elementary School,

Ranch El Chorro Outdoor Environmental Education Camp, the Arroyo Grande Community School, AmeriCorps, the 4-H SLO Scientist Program, and Davidson Films, Inc.

#### Contact Person(s)

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Other Base Program Areas This Program Applies To  
Natural Resources Environmental Management Agriculture

### **4-H Master Tree Steward Program**

*New Jersey*

#### Situation

A need for educating people about the benefits of trees was first recognized by the City of Elizabeth, the County Seat of Union County, in 1991. They saw the decline of the area's shade trees and wanted to protect the beauty of this treasure. They approached the Rutgers Cooperative Extension 4-H Program for help. Together, they worked to create the 4-H Master Tree Steward Program.

#### Program Description

The 4-H Master Tree Steward Program trains adults to teach children about trees. Upon completing this free training, the volunteers share their knowledge with school children. The training sessions run from two to four hours long. Through the 10 training sessions, volunteers learn about the life cycles of conifers and broadleaf trees, parts of a tree and leaf, how trees make food, and how trees change through the seasons. They also learn to identify common local trees and how to show their appreciation of trees by sketching and writing poems about them. The final training session is a visit to a fourth grade classroom, where they observe the trainer teaching the children about trees. It is the same 50-minute lesson that they will teach when they finish their training.

#### Stakeholder Satisfaction

Program has generated much interest on the part of adult volunteers who participate with in-depth training, then teach children importance of trees. In addition, many schools continually request this program.

#### Accomplishments and Impacts

Since 1992, 4-H has trained over 40 adults to be Master Tree Stewards. In turn, these volunteers have taught 17,000 Union

County youth about the importance of trees to Union County. The children have increased their knowledge of the science of trees, as well as their understanding of the importance of trees.

#### Resource Commitment

Since 1992, the program has received over \$15,000 in grant funds from a variety of sources to carry out its work.

#### Collaborators

The City of Elizabeth, the County of Union, The New Jersey Forestry Department, and the Rutgers University Forestry Department, various businesses providing grant support.

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#### Other Base Program Areas This Program Applies To

Natural Resources Environmental Management  
Leadership & Volunteer Development

### **4-H Field and Stream**

#### *Mississippi*

#### Situation

Demographic characteristics of target audiences— two-thirds of U. S. homes contain firearms. Safety training can prevent accidents at home. Shooting is the second most popular international sport behind track and field. One of five Americans hunts, and nearly half fish. These are lifetime sports. Rural and urban youth may become involved. Older male involvement is retained. Description of problems, issues, and concerns facing target audiences-handgun crime by young people is prominent. Through shooting sports involvement, families are safer and more aware of proper gun use. Families teach children and prevent violent lifestyles due to disrespect for others.

#### Program Description

Mississippi 4-H Field and Stream is a natural resources education program designed to teach youth and adults essential life skills using shooting sports, wildlife and fisheries management, hunting, and fishing. Field and Stream has been active statewide for over a decade. It is operated by extension agents and volunteers through county-based 4-H clubs. Mature youth may choose from shooting sports (i.e., rifle, shotgun, pistol, muzzleloader, archery), hunting, wildlife habitat evaluation program, and sportfishing (i.e., tackle crafting,



angling skills, aquatic ecology, and people and fish). These activities allow youth to develop and hone life skills impacting lifelong vocational/avocational interests.

Young people will make future wildlife and fisheries management decisions and need firm grounding in natural resource management principles. The Quail/Small Game Grants program allows young people to develop management plans that result in habitat enhancement. The Wildlife and Fisheries 4-H School Enrichment Series includes mobile educational modules designed for use by 3rd and 4th grade teachers/students. Relationships grow between school systems and the county Extension network, and enable young students and teachers to connect with high-quality, readily useable wildlife and fisheries educational curricula. Through 4-H, young people learn experientially using multi-media and other proven teaching methodology.

Grassroots participation - Grass roots 4-H'er and adult participants and County 4-H clubs drive the program direction. Trained adult volunteers work with young people at the local level.

Individual and public benefits - youth develop essential life skills including: 1) understanding natural resource management, 2) development of self-concept, character, and personal growth, 3) safe and responsible use of firearms, archery, and fishing gear leading to sound decision making, self-discipline, and concentration, 4) development of high standards of safety, sportsmanship, and ethical behavior, 5) orientation to the broad array of vocational/avocational activities related to shooting and natural resources conservation, 6) and strengthening of families through life-long recreational activities.

Field and Stream requires an estimated 20 FTE equivalents including agents across 70 counties and state staff. Over 350 trained volunteers are active. Grants totaling over \$500,000 have been provided by businesses, state agencies, and conservation organizations.

Frequency, intensity, and types of participation of target audiences - county clubs meet a minimum of 10 times per year for 2-8 hours per meeting. These include practices, training, shooting events, fun activities, and planning meetings. State events are offered annually and attract thousands of young people and adults (trainers, parents, families). Young people develop and participate in related, non-4-H events such as Junior Olympics and NWTJ Jake's events.

Program qualities of importance to participants and



stakeholders - development of youth in areas of character, self-concept, decision-making abilities, concentration, avocational and vocational opportunities, life-long involvement, conservation improvement, family involvement. Others include fun activities, recruitment into hunting, fishing, shooting sports, and opportunity to build Field and Stream expertise and use as a springboard to higher level or more competitive programs. Field and Stream offers opportunities to compete in events at state and national levels.

Appropriateness of educational activities for target audiences— Most homes (two-thirds) have firearms, hunting and fishing involvement, although a strong tradition is declining even in Mississippi. Young people should know how to safely handle firearms, and recruitment into traditional outdoors-recreational activities is paramount to maintaining conservation support.

Participant and stakeholder satisfaction with the program is actively growing with number of young people and adult leaders, counties participating, and financial and personnel bases all increasing. Anthony Blair, new volunteer leader, is quoted as saying "Dean, I really enjoyed the Field and Stream Workshop and I appreciate you and Jared inviting me to attend. The presentations were informative and professionally done. I look forward to working with Mike and the Oktibbeha County 4-H youth shotgun sports." Nic Barclay, 4-H'er and President of the Hinds county Field and Stream club, said "This is my final year to be in the 4-H competitions because of my age. Over the last seven years I have participated in shooting sports. The 4-H program has taught me a lot and I appreciate all those who made it possible. I hope this part of the 4-H program will continue to grow and Mississippi will always be represented at this annual event."

#### Accomplishments and Impacts

Young people and adults are developing leadership and service potential both within the Field and Stream organization and communities. Over 450 trained adult volunteer leaders work with young people. Currently, over 70 counties have trained leaders and clubs. Six leaders have won National Wildlife and Fisheries 4-H awards for program involvement and several serve on national committees that host national, related events. Field and Stream leaders are frequently recognized with awards from the Mississippi Wildlife Federation. The White-tailed Deer School Enrichment Program received an Award for Excellence from the Mississippi Public Education Forum. Annually, over 750 young people participate in state-level events, over 20,000 are involved in some related aspect of Field and Stream, and leader and youth participation is increasing at 25 percent.

### Collaborators

Supporting organizations include local communities, boards of supervisors, other county agencies, local businesses, and individuals. State level support includes Mississippi Department of Wildlife, Fisheries and Parks, Friends of the National Rifle Association, Quail Unlimited, Quality Deer Management Association, National Wild Turkey Federation, Federal Cartridge Company, Chevron Companies, Weyerhaeuser Company, Safari Club International, Ducks Unlimited, and Haas Outdoor, Inc. (Mossy Oak).

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## **Wildlife Stewards**

### *Oregon*

#### Situation

As a state, Oregon is heavily impacted by debates about a variety of natural resource issues. Timber harvest rates; bans on logging to protect endangered species; and legislation to protect the salmon population all make the news on a regular basis. Science based information about natural resource management is not always available, and some of the information that is available is from organizations with a specific bias about management practices.

#### Program Description

The 4-H Wildlife Stewards program is a master volunteer program designed to provide partnerships between local schools, the 4-H Youth Development Program, and other organizations interested in promoting natural resource education. The master volunteers, called Wildlife Stewards, receive 40 hours of instruction in natural resources and educational methods. They also get an orientation to a variety of educational programs that are available from Extension or other appropriate sources. The Wildlife Stewards are matched to a partner school, to which they provide a minimum of 50 hours of technical support, work with teachers, and classroom programs. The primary audience is students in elementary schools, but the secondary audiences of the Wildlife Stewards, school teachers, and parents often find they learn as much or more than the students. The program was initiated in the urban setting of Portland, but in the past two years it has expanded to include five other counties, including one very rural community. Everyone that participates in the program gains a better understanding of natural resource issues. The Wildlife

Stewards also increase their technical knowledge and their teaching skills. The program has its own advisory committee to maintain strong grass-roots support.

#### Stakeholder Satisfaction

The project was initially developed by Maureen Hosty, Multnomah County Extension 4-H Youth Development Agent. During the most recent year, the program has expanded into Clackamas, Washington, Marion, Benton, and Coos Counties. Each county has an agent or program assistant that provides support for the program, but each has other duties as well. The number of schools participating in the program has increased every year, showing that the educational community has embraced this program as one with real value. Some of the strongest supporters have been school administrators. Approximately 2.0 FTE of faculty and program assistants supported the program in 1999. Of the new schools that joined the program in 1999, 100% said they would recommend the program to other schools. More details on satisfaction are included in the next section.

The habitat theme for each school is developed based on the needs and interests of the teams at each school. The themes include wetlands, garden ponds, butterfly gardens, bird gardens, bioswales, woodlands, streamside restoration, school nurseries, art projects, wheelchair accessibility, Native American gardens, worm composting, and nest boxes.

#### Accomplishments and Impacts

The theme for the program is "Caring For Our Wildlife Heritage, One School At A Time." This new program, started less than 5 years ago, is now reaching over 9,000 students with year long programs related to natural resource education. In 1999, the program was conducted in 35 schools. Over 200 teachers and many parents participated along with the 9000 school age youth in the program. All schools reported that "student awareness and understanding of wildlife needs and issues was greatly increased as a direct result of the Wildlife Stewards Program." Even though the Wildlife Stewards themselves are the means to deliver the program to the local schools, they are also viewed as students. The Wildlife Stewards reported increases in several important areas. On a 1 to 5 scale, with 5 being high, volunteers scores increased as follows: capability to make their community a better place to live increased from 3.6 to 4.3; their knowledge of the environment and their ability to make good decisions increased from 3.3 to 4.4; and their ability to work as a team to design and implement a wildlife habitat project increased from a 3.1 to a 4.5 as a result of the 40 hour course they received. Of the 85 master volunteers that have completed the 40 hour course since 1996, 71 are still active in the program today.

As a result of the success of the program, a new position has been created, which allows one area 4-H agent to devote full time to the further development of the program. All 4-H staff in Oregon have been invited to implement the program, and the program was included in the Oregon, Washington and Idaho professional development conference that was held in May 2000.

Resource Commitment

External support for the program has varied from year to year, but over the four years of the program, outside funds have come from the National Wildlife Federation, the US Fish and Wildlife Service, the Oregon Department of Fish and Wildlife, METRO Service District, and others. Each school is also required to fund some of the development of the natural habitat area, and many methods have been used to generate those funds. Over \$50,000 has been contributed to support the program in Oregon.

Collaborators

Many of the early funding partners also collaborated in the development of the program, including the National Wildlife Federation and the Department of Fish and Wildlife. Internal collaboration has also been strong with many Extension Master Gardeners being among the first few classes of Wildlife Stewards. Schools are the primary collaborators, because they have to agree to establish a natural habitat area and provide access for the volunteers to work with teachers and parents.

Contact Person(s)

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