Environmental Sciences & Technology

Committee Members: Denise Frebertshauser (Co-chair), Tom Hutson (Co-chair), Conrad Arnold, Elizabeth Hill, Dwayne Murphy, Ruby Schwinn, Ann Sherrard

NRCS Impact Team Core Members – Denise Frebertshauser & Tom Hutson

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Natural Environment

Five lesson plans related to the environment were written for the Maryland AGsploration program – one lesson plan related to IPM practices and four related to the Chesapeake Bay.

Three 4-H faculty members represented the Maryland 4-H Youth Development Program at the Maryland Environmental Literacy Summit. The purpose of this summit was to provide a forum to discuss recommendations for the effective systemic implementation of the newly approved environmental literacy regulations with the State Board of Education.

Three adult volunteers and ten youth represented the Maryland 4-H Youth Development Program at the America's Great Outdoors Listening Session. They joined senior representatives from the U.S. Department of the Interior (DOI), U.S. Department of Agriculture (USDA), the Environmental Protection Agency (EPA), and the White House Council on Environmental Quality (CEQ) for a public listening session and discussion regarding the Chesapeake region and land conservation, recreation, and reconnecting people to the outdoors.

On the Horizon – Pursuing Grant Funding for Development of a Youth Version of "Woods in Your Backyard" Curriculum
Conduct joint Wildlife Adventure Day/WHEP & Forestry Contest – Fall 2011

Environmental Stewardship

Over four hundred youth participated in the Power of Wind program sponsored through a grant with the Department of Energy. They built wind turbines, discussed wind as a renewable energy source, and investigated how turbines produce energy.

On the Horizon – Development of an Eco Stewards Program.

Engineering & Technology

An engineering program sub-committee was established to help determine the future direction of engineering programs in the Maryland 4-H Youth Development Program. One of their highlights from 2010 includes the development, implementation, and evaluation of an Engineering Camp for youth ages 11-19. The 2010 camp had 15 youth participants and 25 youth representing 9 counties attended in 2011. Program sessions highlighted include: Farm and Tractor Safety, Small Engines, Lawn Tractor, Tractor Operator, GPS, Soldering, Welding, Robotics, and Engineering Design. This program was also highlighted during a program seminar at NAE4HA.

Through grant support from National 4-H Council and Lockheed Martin, the Maryland 4-H Youth Development Program has been working on the development of a model for expanding 4-H Robotics programming across the state. The components to the overall project design are promotion, training and technical support, cost sharing, and evaluation. Implementation of the model is being conducted through the development of a National "Train the Trainer" Toolkit, which will guide participants through the steps to familiarize themselves with robotics and to start and sustain a year round robotics program in their state.

Seventeen new 4-H clubs dedicated to robotics have been established across the state.

The Maryland 4-H Robotics Program was one of nine exhibits selected to represent the University of Maryland at the US Science & Engineering Festival.

To encourage further involvement of youth in 4-H robotics, a state-wide Robotics Competition has been developed and will have its' inaugural event at the Maryland State Fair this year.

Best practices regarding Maryland's State-wide 4-H Robotics Expansion Model have been shared with colleagues across the nation at NAE4HA and the DoD/USDA Family Resilience Conference.

On the Horizon – Development of a Maryland 4-H Aerospace Challenge
Phase Two of the Maryland 4-H Robotics 4-H Club Program

Outdoor Adventure

A Camp Director's In-Service was held for extension faculty members and camp administrators. Topics included American Camp Association Standards, Department of Health and Mental Hygiene Regulations, Operating Policies and Procedures, Bullying, Youth Decision Making, and Evaluation.

A Creative Camping Conference consisting of four one hour sessions was conducted at the Maryland 4-H Volunteer Forum. Five state--wide camp staff training sessions are being conducted this spring for adult and youth camp staff.

Maryland 4-H was one of nineteen US Camps to receive a grant to incorporate the Camp 2 Grow Program into the Camping Program. Camp 2 Grow is a leadership and environmental stewardship program developed by the American Camp Association® through funding from the Lilly Endowment Inc. Camp 2 Grow teaches middle and high-school aged youth fundamental leadership knowledge and skills and provides youth with a framework for implementing environmental stewardship applications in their camps, homes, or communities. Three Maryland 4-H camps piloted the Camp 2 Grow (C2G) program last year.

To assist with the continuous assessment of Maryland 4-H Camping Programs a Camp Peer Visitation Program was piloted. Faculty and volunteers from across the state utilized a check list to conduct visits at each of the Maryland 4-H Camping Programs. These reviews were utilized to determine the existence of the eight essential elements within the Maryland 4-H Camping Program as well as to assist with encouragement, training, and compliance issues in regards to policies and procedures related to Maryland 4-H Camping.

An adult volunteer training and certification in the curriculum of the National 4-H Shooting Sports program was held for 32 volunteers in 2010 and 28 in 2011. One hundred and nineteen (119) of our 154 currently active MD 4-H volunteer instructors teaching shooting sports in 2010 reported that 8,037 Maryland youth had a 4-H shooting sports experience through clubs (2661), summer camps (2065), fairs (1449), special interest programs (876), events, activities and other educational programs (986).

Three State Shooting Sports Competitive Events were conducted within the past year: Archery Match – 61 participants, Shotgun Match - 79 participants, and Rifle Match – 82 participants.

A Sporting Clays Fundraiser was conducted raising $7,000 for the benefit of the Maryland 4-H Shooting Sports Educational Program.

On the Horizon – Integration of Online Camp Staff Training Opportunities
Development of Family Camp
Completion of Maryland 4-H Camping Manual
Development of Outdoor Adventure Programs, i.e. Sport Fishing