



FAWN



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THE WILD SIDE

(Larry D. Adams, President NMFWA)

Hot!! This has been a sizzling summer for the Association, full of hot news and heated issues - very much in keeping with the temperatures. As announced in the June 1989 FAWN, the Association adopted four resolutions, which were formally drafted and sent to all Service Branches and the Office of the Assistant Secretary of Defense. The response on these resolutions was to forward them for consideration to the Defense Natural Resources Council (DNRC), which met in August 1989. The results of this meeting will be reported in the next issue of FAWN.

Robert Struckmeier reported that the Fifth DoD Wildlife Law Enforcement Training Session, held 19-23 June 1989 at Fort Leonard Wood, MO, was highly successful. Excellent course instruction was provided by representatives of the Missouri Department of Conservation, USDA Forest Service, U.S. Fish and Wildlife Service, and the Army Military Police Investigation (MPI) units. Bruce Siddle, a well-known

defensive tactics instructor, was a featured speaker for the course. This training continues to be an annual highlight of the Association.

The hottest current item is the program for the 1990 annual meeting. Doug Ripley, Program Committee Chairman, is busy putting together a tentative agenda and making meeting arrangements. This is a tough assignment, and Doug will need maximum support from all members to make the Denver meeting one of our best ever. Other NMFWA committees have also been making steady progress in preparation for the meeting. Tom Warren's Resolutions Committee is drafting procedures for submitting and adopting NMFWA resolutions and/or position statements. These procedures will be addressed in the next issue of FAWN and at our 1990 annual business meeting. Slader Buck and the By-Laws Committee are in the process of revising the Association's By-Laws; they are shooting for a 15 November due date, which would allow the proposed changes to be published in the next newsletter.

Announcements from the Awards, Poster Session, and Program Committees are contained in this issue. All members are urged to identify potential awards candidates and submit nominations as soon as possible to Ron Dow; we expect that the Awards Committee members will have their work cut out for them this year. The Poster Session Committee will need assistance manning the booth during the annual meeting. This is a vital display for public awareness of our organization and the Department of Defense, so please contact Rich LeClerc if you can help out. Rich is also in need of slides for the poster display (see Call for Papers, page 3).

Board members have also been busy this summer with other items of NMFWA business. Two issues of FAWN have been published since the 1989 annual meeting, and the next issue is scheduled for January 1990. FAWN continues to be one of our most effective means of communicating information and ideas among ourselves and to other agencies and organizations. Rick Griffiths has developed a set of guidelines and duties for the position of Secretary/Treasurer for the Association. I have asked other board members and committee chairmen to prepare similar reports for their offices. This information will greatly facilitate passing along duties to newly elected/appointed officers and will assist in maintaining high standards for each position.

As I have continually stressed, effective communication is essential between the Association and the DNRC. Therefore, it was agreed upon at the 25 August DNRC meeting that the Council would appoint a liaison to the NMFWA to facilitate increased coordination and communication regarding DoD natural resource issues. Tom Coda, HQ U.S. Marine Corps, was selected as the current DNRC liaison.

In closing, I wish to remind all NMFWA members that the next annual meeting is less than six months away. This newsletter officially announces the meeting, thus you are urged to take immediate action and initiate the paperwork needed to obtain permission to attend the meeting and training sessions. Only through your attendance and participation can the meeting be a success. Let us make every effort to break the attendance record of 125 set at the last meeting.

SECRETARY/TREASURERS REPORT

The June 1989 issue of the FAWN cost \$431.38 to print and mail to NMFWA members. Our current bank balance is \$2,677.71, with no unpaid bills and \$275.00 still due in registration fees from the March meeting. The cost estimate for this issue of FAWN is \$431.38. The current Association membership is 404.

Membership applications have been sent to several persons who asked to be placed on the FAWN mailing list; receiving the FAWN is one of the benefits of having a current application on file with the Secretary/Treasurer. Members who relocate are reminded that we need a current address and phone number for each of you. Your At-Large Directors need this information for contacting you.

NMFWA 1990 ANNUAL MEETING ANNOUNCEMENT AND CALL FOR PAPERS

The 1990 Annual Meeting and Training Session of the National Military Fish and Wildlife Association will be held on 20-22 March 1990 at the Sheraton Denver Tech Center in Denver, CO. The Association will again be meeting in conjunction with the North American Wildlife and Natural Resources Conference. The combined registration fee for the NMFWA and North American meetings will be approximately \$100, which will be paid in one sum to NMFWA upon registration; a predetermined percentage of this amount will then be paid by the Association to The Wildlife Management Institute. The \$100 fee includes the NMFWA Banquet and all other Association activities, but it does not cover the cost of other banquets and social events. Conference rates for rooms at the Sheraton are \$54 (single room) and \$58 (double room).

The theme for the NMFWA meeting is "Interagency Cooperation--An Essential Tool for Successful Military Natural Resources Management." Please contact Lt Col Douglas Ripley if you would like to present a paper at the meeting. This is an important opportunity for you to share your experiences and knowledge with other natural resources professionals. Although abstracts will not be needed until the end of the year, those wishing to speak should provide Doug with proposed titles no later than 1 November 1989 so that a schedule of presentations can be developed. He may be reached at HQ USAF/LEEV, Bolling AFB, Washington, D.C. 20332; phone (202)767-6242 or Autovon 297-6242. Final details for the meeting will be included in the January 1990 newsletter.

An NMFWA poster will again be displayed at the 1990 meeting. Our Poster Chairman, Rich LeClerc, will be putting together a slide presentation as part of the display and is in need of slides that represent DoD natural resources management programs. Thus, installations are requested to provide two slides each of (1) scenic views (with a wildlife habitat perspective) and (2) personnel conducting wildlife/fisheries field work. Duplicates are preferred so that a permanent slide library can be developed. Slides should be submitted no later than 15 November 1989 to Rich LeClerc, Naval Ordnance Station, Code 097D, Indian Head, MD 20640-5000.

The At-Large Directors report that they are looking for Association members interested in serving on the Board for the 1990-91 term of office. Although official nominations are not being solicited at this time, please contact your respective Director if you wish to be considered for a Board position.

YOU HAVE WON!!!!

You have just won the opportunity to submit a nomination for the National Military Fish and Wildlife Association awards program. Yes, these are your awards! The awards program was established to recognize those persons, organizations, and activities that have made exceptional contributions to natural resource management within DoD, to the NMFWA, or towards achieving the objectives of the NMFWA. There are no firm categories for nominations. Public relations, outstanding publications, in-house training programs, and natural resources or endangered species management are a few of the areas that will be considered.

This is your chance to gain recognition for individuals or organizations that you feel have made a difference in your program. It is a sad legacy that nearly all the past nominations have been submitted only by members of the NMFWA Board or committees. Take a little time to submit a nomination today. Forms can be obtained by calling or writing the Awards Committee Chairman, Ron Dow, Code 6220, Naval Air Station, Point Mugu, CA 96042-5000, Autovon 351-7412, Commercial (805) 989-7412.

THE FORT MCCOY LYME DISEASE PROGRAM

(Kim Mello, Fort McCoy, WI)

A basic description of Lyme Disease (LD), its biological characteristics, diagnosis, and treatment were presented in the January 1989 issue of FAWN. This follow-up article provides a synopsis of the history of LD on Fort McCoy and development of an effective program to deal with the disease on a military installation.

Deer ticks were first discovered on Fort McCoy in 1979. Until then, deer ticks were known to occur only in a few areas in northern Wisconsin, and few people in the area had heard of deer ticks or LD. Also, most medical professionals in the surrounding communities were not familiar with the disease or its diagnosis. In 1982, two students working with the Fort McCoy Fish and Wildlife Program were diagnosed as having LD. One of the students developed a large red rash, which is often characteristic of the early symptoms of the disease, and the other displayed neurologic manifestations (e.g., facial paralysis - Bell's palsy). Both students were treated and have recovered. From that time on, installation personnel have become increasingly aware of deer ticks and LD and have been very careful about taking certain precautions when working in the field.

The Fort McCoy Natural Resources Management Division (NRMD) was subsequently assigned the lead role for LD research and information development for the installation. Initial surveys were coordinated with researchers from the Wisconsin Division of Health, Wisconsin Department of Natural Resources, and the University of Wisconsin at Madison. Tick drags were made, and small rodents were trapped to determine if tick larvae and nymphs were present. At that time, ticks were not as widespread on the fort and were found only in a few "hot spots" that were also excellent habitat for deer and ruffed grouse.

In 1984, preventive medical (PM) detachments under the 30th Hospital Center at Fort Sheridan, IL, began to work with NRMD personnel during the muzzle-loader and gun-deer seasons. Upon arrival at check stations, hunters were given preliminary instructions and were provided an information sheet and plastic tubes. When hunters brought their deer in for registration, PM personnel took blood samples and collected ticks from the deer. The blood samples were later tested to determine if LD antibodies were present. Besides tick and blood samples, tissue samples from the heart, liver, and other organs were collected in 1986, 1987, and 1988. The cooperation from hunters has been outstanding and has contributed greatly to the success of the surveys. During one muzzle-loader hunt, 88 deer were registered and 83 blood samples were taken.

Fort McCoy's Zoonotic Disease Program was elevated in status in 1985, and an LD Coordinator was appointed to oversee the work. This resulted in the development of a fact sheet entitled "Ticks and Tick Bites," which was distributed to military units that train on the installation. The publication contains information on ticks, LD, and the use of repellents. In 1986, a Serological Assessment Study was conducted at the Troop Medical Clinic for military personnel that were bitten by

ticks. Subsequent data have also been collected on patients that were bitten and on the ticks that were removed from them.

LD projects have been coordinated with personnel from Fort Meade, Fort Leonard Wood, the U.S. Army Environmental Hygiene Agency, the Army Surgeon General's Office, and Yale University. Also, PM detachments from Fort Sheridan have been conducting a tick surveillance project from April through October, which has involved tick drags and small mammal trapping. The information obtained from these surveys and from other data collected by NRMD personnel were used to make a map that showed the distribution and relative abundance of deer ticks on the fort. In 1988, Permanone, a highly effective tick repellent that is used on clothing, was approved for sale and distribution in Wisconsin by the State and the Environmental Protection Agency. This product is now available for Fort McCoy personnel and troops that train on the fort.

INSTALLATION REPORT - FORT CARSON

(Steven R. Emmons, Fish and Wildlife Specialist, Fort Carson, CO)

Fort Carson Military Reservation is located along the eastern foothills of the Rocky Mountains in central Colorado and comprises 137,000 acres, of which 100,000 acres are actively managed for fish and wildlife. The Fort Carson Fish and Wildlife Section also manages the resources of the 244,000-acre Pinon Canyon Maneuver Site located approximately 150 miles to the southeast. The primary mission of both Fort Carson and Pinon Canyon is training the 4th Infantry Division (Mechanized), which is one of the largest divisions of its type stationed in the United States.

Both installations are located in semi-arid terrain dominated by shortgrass prairie, with pinyon pine and one-seed juniper on rocky hills and escarpments. Other habitat types include isolated stands of ponderosa pine and cottonwood/willow riparian communities along permanent and intermittent waterways. Pinon Canyon also has an extensive system of steep canyons with 200- to 300-ft sandstone cliffs.

Wildlife resources include waterfowl, scaled quail, wild turkey, mourning dove, cottontail rabbits, prairie dogs, coyote, bobcat, mule- and white-tailed deer, and pronghorn. Fort Carson has an expanding population of elk, and Pinon Canyon hosts an introduced population of bighorn sheep and one of the largest concentrations of nesting ferruginous hawks and other raptors in Colorado. Although restricted by military training activities, Fort Carson and Pinon Canyon annually support over 3,000 days of recreational hunting. The Colorado Division of Wildlife has established Pinon Canyon as a separate game management unit within the state's system, enabling greater control over hunting pressure and harvest of deer and pronghorn.

Habitat management projects on Fort Carson include renovating reservoirs to improve angler access and waterfowl nesting habitat, constructing gallinaceous guzzlers, planting tree/shrub shelterbelts for cover and small plots of grain and alfalfa for food, and installing goose nesting structures. Currently, four new reservoirs are under construction to enhance a 300-acre wildlife demonstration area that is being developed. This site will showcase techniques being used to enhance wildlife habitat on the post and will feature a 1.8-mile interpretive trail.

Pinon Canyon is managed as native shortgrass prairie habitat with an emphasis on planting native species. Man-made habitat structures are kept to a minimum and concentrated near existing structures such as windmills and homesteads. This area is being considered as a possible transplant site for an experimental population of

black-footed ferrets. Pinon Canyon has been the location of numerous wildlife research investigations conducted before and after the initiation of military training activities. These investigations have increased our knowledge of the effects of mechanized maneuvers on the natural resources and wildlife species of the area. These efforts also serve as the basis for many new management initiatives within DoD, such as the Condition Trend Analysis program.

A progressive fisheries program has been developed for Fort Carson and Pinon Canyon. Fort Carson supports 20 managed impoundments, which range in size from 1/4-acre ponds to the 92-acre Teller Reservoir. Six reservoirs totaling 41 acres are stocked biweekly with rainbow and cutthroat trout to support over 52,000 angler days of put-and-take recreational fishing. Approximately 15,000 fingerling channel catfish are also stocked annually as part of an interservice support agreement with the U.S. Fish and Wildlife Service. Teller Reservoir, the only warm-water fishery on post, supports populations of northern pike, largemouth bass, black crappie, channel catfish, and black bullhead. Unfortunately, recent investigations detected naturally-occurring mercury contamination in the reservoir's pike and bass, which resulted in catch-and-release restrictions being imposed. However, this has only slightly reduced anglers' enthusiasm for one of the best warm-water fisheries in Colorado.

Nine small reservoirs are managed as brood ponds for Federal and/or State threatened fish: Greenback cutthroat trout, Arkansas darters, and southern redbellied dace. Fort Carson's success with breeding greenback cutthroat trout has resulted in a limited catch-and-release fishing program, reintroduction to native waters, possible removal from the endangered species list by the turn of the century, and numerous awards for the program from state and national conservation organizations. An aquatic inventory of Pinon Canyon and surrounding sites determined that this is one of the few areas within the state that possesses a totally native fishery. An aggressive program to minimize impacts from military training and perpetuate this unique aquatic ecosystem is being undertaken by Fort Carson.

The Fort Carson Fish and Wildlife Section is part of the Environment, Energy and Natural Resources Division, which is within the Directorate of Engineering and Housing. The Section employs 1 permanent biologist, 1 permanent biological technician, and 2 temporary biological technicians. In addition, the U.S. Fish and Wildlife Assistance Office in Golden, CO, also provides 2 permanent biologists and 2 temporary equipment operators as part of an interservice support agreement. Our address and phone are: HQ, Fort Carson and HQ, 4th Inf. Div. (Mech), ATTN: AFZC-FE-ENR (Fish and Wildlife Section), Fort Carson, CO 80913-5023; (719) 579-2752 or 4828; Autovon 691-2752 or 4828.

THE WATER COLUMN -- SOURCES OF INFORMATION

(Tom Bryce, Fishery Specialist, Fort Stewart, GA)

One of the most valuable elements in managing fisheries resources (whether ponds, lakes, reservoirs, streams, or salt water systems) is the knowledge of where to obtain information needed to address a subject or solve a problem. This, of course, is an essential first step in the management of any resource. In light of the need to acquire and reference necessary sources of information as we manage our aquatic resources, I am providing a different twist to this newsletter's "Water Column." Instead of discussing a specific aspect of management, I have compiled a list of some of the more frequently and widely used references within the fisheries profession. Although not a comprehensive treatment of materials and sources (e.g.,

books on marine fisheries are not included), I hope this list of publications and organizations will help you, the manager, in developing your fisheries programs.

Professional Organizations

American Fisheries Society, 5410 Grosvenor Ave., Suite 110, Bethesda, MD 20814-2199 (301/897-8616). All states have individual AFS Chapters.
American Water Resources Association, 5410 Grosvenor Ave., Suite 220, Bethesda, MD 20814 (301/493-8600). Two to three meetings are held per year.
North American Lake Management Society, 1000 Connecticut Ave. N.W., Suite 202, Washington, D.C. 20036 (202/406-8550). The annual meeting is usually in November.
The Aquatic Plant Management Society, Inc., c/o William Rushing, P.O. Box 2695, Washington, D.C. 20013 (202/272-1841). There are numerous State and Regional Chapters; the annual meeting is usually held in July.

Periodicals*

Aquaculture Magazine - Buyer's Guide and Industrial Directory, P.O. Box 2329, Asheville, NC 28802 (\$8/yr). This is an excellent source of information for the purchase of fisheries equipment, materials, fish, etc.
Lake and Reservoir Management, North American Lake Management Society (\$20/yr).
North American Journal of Fisheries Management, American Fisheries Society (\$20/yr).
The Progressive Fish Culturist, American Fisheries Society (\$21/yr).
Transactions of the American Fisheries Society, American Fisheries Society (\$26/yr).

Books and Major Reports**

Aquatic Plant Identification and Herbicide Use Guide. Vols 1 and 2. 1988. H. E. Westerdahl and K. D. Getsinger. Tech. Rep. A-88-9, U.S. Army Engineer Waterways Experiment Station, Vicksburg, MS. 222 pp. (no cost).
Atlas of North American Freshwater Fishes. 1980. D. S. Lee, C. R. Gilbert, C. H. Hocutt, R. E. Jenkins, D. E. McAllister, and J. R. Stauffer, Jr. (eds.). North Carolina State Museum of Natural History. 867 pp.
Fish Habitat Improvement Handbook (Streams). 1985. M. E. Seehorn. Tech. Publ. #R8-TP7, USDA Forest Service, Southern Region, 1720 Peachtree Rd. N.W., Atlanta, GA 30367. 21 pp. (no cost).
Fisheries Techniques. 1983. L. A. Nielson and D. L. Johnson (eds.). American Fisheries Society. 468 pp. (\$33).
Freshwater Fishery Biology. 1966. R. F. Lagler. Wm. E. Brown Co., Dubuque, IA. 421 pp. (\$16.50).
Handbook of Freshwater Fishery Biology. Vol 1 (1969); Vol 2 (1977). K. Carlander (ed.). Iowa State University Press, Ames, IA. 1,200 pp. (\$38.50).
Management of Lakes and Ponds. 1970. G. W. Bennett. Van Nostrand Reinhold Co., New York, NY. 375 pp. (\$26).
Principals of Fishery Sciences. 1980. W. H. Everhart and W. D. Young. Cornell University Press, Ithica, NY. 349 pp. (\$22).
Reservoir Fisheries and Limnology. 1971. G. E. Hall (ed.). American Fisheries Society. 511 pp. (\$10).
Reservoir Fisheries Management. 1986. G. E. Hall and M. J. Van Den Avyle (eds.). American Fisheries Society. 327 pp. (\$16).

* Costs reflect standard membership fees; may vary.

** Prices are approximations and may vary regionally or according to type of reproduction (e.g., hard vs. soft cover).

The Warmwater Streams Symposium. 1981. L. A. Krumholtz (ed.). American Fisheries Society, Southern Division, P.O. Box 368, Lawrence, KS 66044. 422 pp. (\$12).
Warmwater Streams Techniques Manual. 1984. C. F. Bryan (ed.). American Fisheries Society, Southern Division, c/o William H. Tarplee, Carolina Power and Light Co., Rt. 1, Box 327, New Hill, NC 27562. 124 pp. (\$10).
Water Quality in Warmwater Fish Ponds. 1979. C. E. Boyd. Auburn University, Agricultural Experiment Station, Auburn, AL 36849. 359 pp. (\$9).

An additional important source of information is the Fish and Wildlife Reference Service (under contract with the U.S. Fish and Wildlife Service), 5430 Grosvenor Lane, Bethesda, MD 20814; the reference service may be contacted at (301) 492-6403 or 1-800/582-3421. Managers should also utilize their State Fish and Game Department, U.S. Fish and Wildlife Service Regional Office, and State Extension Service Office for additional information. If you have questions regarding the sources provided, please feel free to call or write: Tom Bryce, Fishery Specialist, Fish and Wildlife Branch, DEH, ATTN: AFZP-DEN-W, Ft. Stewart, GA 31314-5000; (912) 767-2584, Autovon 870-4952.

WETLAND AND HABITAT RESTORATION TECHNOLOGY AVAILABLE AT WES

(Mary C. Landin, USAE Waterways Experiment Station)

The current Administration's stated goal of "no net loss of wetlands" is being studied by the Department of Defense to determine how it will affect military training and other work activities. For the U.S. Army Corps of Engineers (CE), wetland habitat mitigation has been a fact of life for nearly two decades. Both from a regulatory standpoint and through its dredging and other Civil Works activities, information has been collected and compiled into a number of source materials that are available to the CE, military installations, and other agencies and organizations. Studies conducted by the U.S. Army Engineer Waterways Experiment Station (WES) are usually published as WES technical reports or miscellaneous papers. Several WES newsletters (e.g., Wildlife Resource Notes, Recnotes, Environmental Effects of Dredging) are also available.

At the 1989 NMFWA annual meeting in Washington, D.C., I became aware that many DoD biologists were not familiar with WES programs and studies that deal with wetlands and habitat restoration/mitigation. I found, for example, that while most military personnel knew that the CE Wildlife Resources Management Manual was prepared by WES, almost no one was aware that the Wetlands Delineation Manual was developed at WES and published as a technical report in 1986. It has since been reviewed by an interagency working group at the Washington level and has official signatures of the U.S. Fish and Wildlife Service, USDA Soil Conservation Service, U.S. Environmental Protection Agency, and the CE. The document is being re-issued as an interagency manual that will allow all four agencies to use the same criteria for wetland delineation. Copies are available from the Government Printing Office (GPO Document No. 024-010-00-638-8) at a cost of \$7.50.

While most military installations do not have to deal with dredged material placement and management, dredging is a major issue with the CE and at many U.S. Navy and Coast Guard facilities. WES has been conducting research on dredged material since the early 1970's and has published numerous reports on various aspects of dredging. Engineer Manual 1110-2-5026, Beneficial Uses of Dredged Material, was published in 1987 and contains chapters on 14 broad topics dealing with potential uses of dredged material (e.g., wetlands creation, aquatic habitats,

endangered species habitat, natural resource recreation, and other environmental considerations). A report documenting long-term environmental monitoring of 11 CE projects is also available; the projects encompass thousands of acres of wetlands and other habitats built with dredged material.

WES has been teaching a series of training courses in dredged material management and in wetlands delineation, evaluation, and development/restoration for a number of years. While these classes are generally filled with CE personnel, we have been able to conduct a limited number of special courses tailored to a specific audience. Topics covered in these courses include habitat development and management; engineering and contaminant aspects of dredging; use of vegetation for erosion control; wetland development/restoration; use of the Wetland Evaluation Technique (WET), which includes a printed document and associated software developed to assist in wetland evaluations; and wetland laws and regulations.

Please feel free to call me at (601) 634-2942 if you have any questions on the above materials. Other points of contact are Ellis J. Clairain (x3774) for wetland delineation and evaluation and Hollis H. Allen (x3845) for riparian habitat management and erosion control techniques.

DEPARTMENT OF NAVY WETLANDS INITIATIVE

(Thomas Wray II, NAVSURWARCEN, VA)

The election of George Bush has resulted in a new high level emphasis on wetlands protection. His recent endorsement of a "no net loss" policy was acknowledged in a 12 April 1989 memorandum from the Assistant Secretary of the Navy to the Chief of Naval Operations and Marine Corps Headquarters.

Current Navy policy permits no overall net loss of wetlands. Moreover, by the year 2000, Navy lands will register an increase in the quantity and quality of their wetlands resource base. This bold initiative will be accomplished by implementing the following:

- a. Address wetland impacts thoroughly within the NEPA process.
- b. Avoid or minimize wetland impacts to the maximum extent possible; mitigate unavoidable impacts accordingly; and identify areas suitable for wetland creation/restoration in installation natural resources management plans and master plans.
- c. Identify and map legally defined wetland boundaries on all Navy lands by FY95.
- d. Ensure proper protection/management of wetlands at the installation level through employment of natural resources management expertise.
- e. Track wetland impacts/creation/restoration at the installation level.

The above implementing procedures clearly demonstrate the Navy's desire to meet the challenge of preserving our Nation's vitally important wetland resources.

DEPARTMENT OF DEFENSE NATURAL RESOURCES CONSERVATION AWARDS

The Department of Defense announces that Francis E. Warren Air Force Base, WY, is the winner of the 1988 Secretary of Defense Natural Resources Conservation Award for installations. The winner of the individual award is Kyle Rambo, natural

resources manager at Naval Air Station, Patuxent River, MD. These awards have been presented annually since 1962 to recognize excellent natural resources management by military installations and Defense employees. The awards were presented at a Pentagon ceremony on 25 September 1989.

Warren AFB developed innovative programs to preserve its fragile beauty and extensive historical sites. The base hosted many State and Federal experimental programs to improve its natural resources, including an aquatic vegetation reduction program using grass carp and a liquid oxygen aeration system to prevent winter fish kills. Warren has undertaken extensive efforts to study and preserve the rare Colorado butterfly plant, including the designation of a portion of its habitat on the base as a Research Natural Area. Working with the surrounding community, the base is creating a new lake that will also be used for flood control.

Kyle Rambo has been the natural resources manager at Patuxent River since 1986. He coordinated a joint effort with the State of Maryland to construct and place artificial reefs in the Chesapeake Bay and reduced the Air Station's potential for bird aircraft strikes by modifying the use of 120 acres adjacent to the airfield. He initiated a hawk banding program to define peak migration periods and routes and established an extensive volunteer program. He also developed a plan to use digested sludge from the county treatment plant to restore environmentally damaged sites and improve other areas.

DEPARTMENT OF DEFENSE ENVIRONMENTAL QUALITY AWARDS

The Department of Defense announces that Tooele Army Depot, UT, has won the 1988 Secretary of Defense Environmental Quality Award for Installations. The winner of the individual award is Karl-Willi Ningelgen of the Kaiserslautern Military Community, Germany. These annual awards recognize outstanding leadership and progress in the conduct of pollution abatement programs to clean up and safeguard the environment at military installations. The Environmental Quality Awards were presented at a Pentagon ceremony on 25 September 1989.

Tooele Army Depot demonstrated consistent application of sound environmental planning principles while managing a complex industrial facility. The Depot is the Army's maintenance center for tactical wheeled vehicles and troop support equipment. It also operates significant storage facilities for conventional ordnance and chemical munitions. Tooele implemented many new projects to decrease the generation of hazardous wastes, including development of a solvent recovery system, testing of new dry media stripping techniques, and the design of a consolidated maintenance facility that will not discharge liquids to the environment. Two special permits allow research to continue on improving disposal methods for ammunition and explosives.

Ningelgen has been the environmental coordinator for the Kaiserslautern Military Community since 1979. He established and chairs the German-American-French Environmental Working Group to coordinate environmental issues in the Community, shortening environmental review procedures required by local authorities. His careful citing of a new family housing area preserved approximately 30,000 trees. He started the first large-scale biological treatment of oil-contaminated soil in the region and established procedures that reduced fuel spills by 70 percent.

NEWS BRIEFS AND ANNOUNCEMENTS

Short Course on Riparian Ecosystems

A short course in "Management of Riparian Ecosystems in the Southwest" will be held at New Mexico State University, Las Cruces, NM, on 8-12 January 1990. The course is the tenth in a series designed to give natural resource professionals training in habitat management in specific ecosystems. Tuition is \$185.00. Arrangements can be made to receive university credit for the course. Enrollment will be limited, and application forms must be submitted by 1 November 1989. Those interested in the course may obtain application forms by writing J. E. Knight, Box 4901, Department of Fishery and Wildlife Sciences, New Mexico State University, Las Cruces, NM 88003.

National Symposium on Urban Wildlife

A national symposium on urban wildlife is scheduled for 11-14 November 1990, at the Stouffer Five Seasons Hotel, Cedar Rapids, IA. Organized by the National Institute for Urban Wildlife, the symposium will focus the attention of urban planners, landscape architects, developers, city administrators, natural resources biologists, elected officials, and others on the opportunity and need for wildlife and nature conservation in metropolitan America. For further information, contact Dr. Lowell Adams, Symposium Program Chairman, National Institute for Urban Wildlife, 10921 Trotting Ridge Way, Columbia, MD 21044.

Call for Papers-Western/Northwest Sections, TWS

The Western and Northwest Sections of the Wildlife Society will meet in joint session February 22-24, 1990 in Reno, NV. The theme for the meeting is "Wildlife Management throughout the Pacific Rim - Politics, Economics, and Biology." Proposed session topics include: Wildlife Diseases/Treatments, Environmental Contaminants, Forest Wildlife, Wetlands, Biodiversity, Natural Resource Economics, Foreign Trade-Wildlife, and Wildlife Law Enforcement.

Persons wishing to present a paper are invited to submit an abstract. Authors desiring to have their papers published in the "Transactions" should indicate this with the abstract. Papers prepared for publication will be given first consideration, in the event all time slots are filled. Submit abstracts by 30 October 1989 to: Scott E. Frazer, USDA-SCS, 117 South Mill St., Suite 1, Tehachapi, CA 93561; or Richard J. Pedersen, USDA Forest Service, P.O. Box 3623, Portland, OR 97208.

North American Conference Set for Denver

The 55th North American Wildlife and Natural Resources Conference is scheduled for 16-21 March 1990 at the Sheraton Denver Tech Center in Denver, CO. The meeting theme is "Resource Management for the '90s." Chairman of the Program Committee is Lonnie L. Williamson, Vice-president, Wildlife Management Institute, Suite 725, 1101 14th St. N.W., Washington, D.C. 20005 (202/371-1808). Gordon C. Robertson, West Virginia Department of Natural Resources, is serving as conference cochairman representing The Wildlife Society. Edward T. LaRoe, U.S. Fish and Wildlife Service, is assisting Robertson. Sessions for the conference are listed in the June 16, 1989 issue of the Outdoor News Bulletin and the July-August 1989 edition of The Wildlifer.

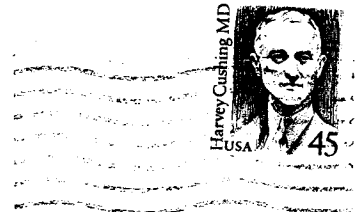
ODASD News

The Office of the Deputy Assistant Secretary of Defense (Environment) reports that the Cooperative Agreement between DoD and The Nature Conservancy continues to generate favorable publicity. CBS-TV's "Sunday Morning with Charles Kuralt" on July 30 included a spot on The Conservancy's cooperative efforts at Vandenberg AFB. In addition, the lead article in the July/August issue of The Nature Conservancy Magazine featured The Conservancy's work at Vandenberg and other DoD lands. The article, entitled "Protecting Military Secrets," was written by Leslie Friedman and Ken Wiley.

The 1987-88 Annual Report on Environmental Quality, prepared by the Council on Environmental Quality, featured a chapter on the management of natural resources and environmental quality programs on Defense lands and installations. Contact Rick Lemaire, Defense Environmental Policy, at Autovon 221-2215 for copies of the Annual Report or reprints of Chapter 4 (DoD section of the report).

A series of symposia and workshops are being offered as part of the "NEPA 20th Year Events" program. The first session, entitled NEPA: The Next Twenty Years, was held on September 21-26, 1989, in Washington, D.C. Others scheduled for 1989 are (1) The Scientific Challenge of NEPA, October 24-27, Knoxville, TN; (2) NEPA at Twenty, October 27-28, Portland, OR; and (3) NEPA Review Coastal Issues Workshop, November 1-3, Pensacola, FL. Several other events are being developed for 1990 and 1991. Contact Rick Lemaire for additional information on NEPA activities.

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