

# FAWN



## FISH AND WILDLIFE NEWS

A NEWSLETTER OF  
THE NATIONAL MILITARY FISH AND WILDLIFE ASSOCIATION

VOLUME VII NUMBER 1

JANUARY 1990

### NMFWA BOARD OF DIRECTORS

President: Larry Adams, Department of Army, Fort Belvoir, VA (703/355-7968-71, A-345-7968-71)\*

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Kim Mello, Fort McCoy, WI (608/388-2252, A-280-2252)

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Program Chairman: Lt Col J. Douglas Ripley, HQ USAF, Washington, DC  
(202/767-3668; A-297-6242)

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Newsletter Editor: Chester Martin; USAE Waterways Experiment Station, Vicksburg, MS  
(601/634-3958)

### THE WILD SIDE

(Larry D. Adams, President NMFWA)

Welcome to the '90s! The National Military Fish and Wildlife Association (NMFWA) has moved forward on a number of fronts over the past years, and today we are the pioneers of the future as we enter uncharted waters toward the year 2000. To be as successful as we have been in the past, we must perhaps have an even greater commitment to our profession and our organization. In the next 10 years DOD fish and wildlife personnel will be faced with managing their installations with the added burdens of greater demands on natural resources, increased military training, reductions in programs and manpower,

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\* Note position change announcements on pages 6 and 12.

and additional constraints on funding and budgeting. Will we be prepared for the task and responsive to the challenge?

We are all well aware of the organizational diversity that exists throughout the Department of Defense. The leaders of our Association are to be appropriately remembered and commended for their success and willingness to serve, sometimes in the face of adversity. Rather than dwell on the past, we should reflect on our steady and continued progress, occasionally highlighted by spectacular achievements, as we launch into the next decade. We must never be complacent with yesterday's accomplishments; to the contrary, we should employ lessons learned from both the successes and failures of the past to develop an even greater vision to accept the challenges of the future. We should use these lessons to accept even greater responsibility and to achieve the long-term goals of the Association. As all of us should be aware, the basic mission of the NMFWA is to work as a cohesive group to improve fish and wildlife management, develop better lines of communication, ensure professional training opportunities, and promote all aspects of sound natural resources management on DOD lands.

As Natural Resources professionals in the DOD, we have some difficult times upon us. I speak as one who had to postpone annual leave for the Christmas holiday to address budget cuts in the Navy's Natural Resources programs. The question becomes "Are we mission-essential?" In my opinion that question should never be asked. However, there are many individuals in key positions who think of us only as fishing and hunting clubs, tree huggers, and the like. Although this kind of narrow-mindedness should not exist in this age of awareness, it continues to pervade and impairs our ability to maintain viable and affective programs. However, we must refuse to be intimidated by negativity; rather, we must consider it a hurdle to overcome through perseverance, dedication, and professionalism.

In closing, let me again thank all of you for the opportunity to serve the NMFWA as President for the past two years. It has, indeed, been a privilege to work with such an extraordinary group of wildlife and fisheries professionals. I especially thank the Board and committee members who have been the backbone of the Association, and I implore all other members to increase their level of activity and add to the strength of the organization. I bid you not only to reflect on the past but also to plan for the future, to "dream new dreams." I am looking forward to seeing all of you at the 1990 Annual Meeting and encourage you to work together to make this the most dynamic and productive meeting ever.

#### FY90 NMFWA ANNUAL MEETING ANNOUNCEMENT

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 be meeting in conjunction with the 55th North American Wildlife and Natural Resources Conference, scheduled for 16-22 March. NMFWA members are encouraged to participate in the programs and activities of both the NMFWA and North American meetings.

A \$100 registration fee is being charged collectively for both meetings and will cover the following: Registration for the North American Conference, North American lapel pin and final program, registration for the NMFWA meetings, and the NMFWA banquet. The fee also helps pay for the use of meeting rooms and audio-visual equipment. This year the Association will collect a single registration fee and provide the Wildlife Management Institute (WMI) their share for each of our members who attend. Therefore, do not send any money directly to the WMI unless you plan to attend their banquet (\$30). However, you must submit their application, found on page 36 of the North American Conference

brochure (provided to all members in the NMFWA mailing dated 26 December 1989), directly to the WMI to ensure that they will have a final program and lapel pin for you upon arrival. Note that the North American application is stamped with the NMFWA symbol to show that the fee is due directly from our Association.

We request that you return the NMFWA registration form (also enclosed in the 26 December mailing) so that we may keep track of how many of our members will attend. This form should be addressed to Mr. Rich Griffiths, U.S. Army Environmental Hygiene Agency, ATTN: HSHB-MR-EMO, Aberdeen Proving Ground, MD 21010-5422. Although we would prefer that you send your \$100 conference fee with the application, you may pay on the first day of the NMFWA meeting. Regardless of how you pay, please send in both applications (one to the WMI and one to us) as soon as possible and not later than 24 February 1990. You should also book your hotel room by that date. If you have any questions about the forms, you may contact Mr. Griffiths at A-584-3792 or 301/671-3015.

The theme for the NMFWA meeting is "Interagency Cooperation--An Essential Tool for Successful Military Natural Resources Management." The program and agenda are provided below. Time periods for major sessions are firm, but the time slots and exact titles of individual presentations are still tentative. The Association will also display a poster at the annual meeting, and all members should plan to help man the booth at some time during the sessions. Please call Rich LeClerc at 301/743-4834 (A-364-4834) if you have any questions regarding the NMFWA poster.

Tuesday, March 20

- 0900-1000 Registration in hotel lobby
- 1000-1200 Planning sessions:
  - Air Force (Plaza Room 3)
  - Army (Plaza Room 5)
  - Marine Corps (Plaza Room 1)
  - Navy (Plaza Room 2)
- 1300-1500 Board of Directors Meeting - Larry Adams, NMFWA President (Plaza Room 4)
- 1515-1900 Field Trip to the Rocky Mountain Arsenal (free bus transportation and refreshments provided)

Wednesday, March 21

- 0800-0900 Registration in hotel lobby (continued)
- NMFWA Technical Sessions (Empire Ballroom 3)
  - 0900-0910 Announcements - Lt Col Doug Ripley, NMFWA Program Chairman
  - 0910-0920 Welcome - Dr. Laurence Jahn, President, Wildlife Management Institute
  - 0920-0930 President's Remarks - Larry Adams, NMFWA President
- Session A: North American Waterfowl Management Plan - Moderator: Chester Martin, USAE Waterways Experiment Station, Vicksburg, MS
  - 0930-0950 Status of the North American Waterfowl Management Plan - Harvey K. Nelson, Executive Director, U.S. Office for the North American Waterfowl Management Plan, U.S. Fish and Wildlife Service, Twin Cities, MN
  - 0950-1005 Update on the DOD/FWS Memorandum of Agreement - John Bardwell, Sikes Act Coordinator, U.S. Fish and Wildlife Service, Washington, DC

- 1005-1020 SCS Support for Cooperative Waterfowl Management Efforts -  
Randall Gray, Soil Conservation Service, Washington, DC
- 1020-1045 State Procedures for Providing Waterfowl Management Assistance -  
Gary Myers, Tennessee Wildlife Resources Agency, Nashville, TN
- 1045-1100 Break
- 1100-1115 The Role of DU in Joint-Venture Waterfowl Programs - Mike Berger,  
Director of Government Relations, Ducks Unlimited, Long Grove, IL
- 1115-1130 University Assistance for Waterfowl Management Actions -  
Richard Kaminski, Mississippi State University, Starkville, MS
- 1130-1145 Implementing Waterfowl Management Programs at the DOD Installation  
Level - Tom Poole, Fort Devins, MA
- 1145-1300 Lunch
- Session B: Military Law Enforcement - Moderator: Bill Rogers, Cherry Point, NC**
- 1300-1400 The Crises of Law Enforcement on Public Lands - Terry Gross, Special  
Agent in Charge, U.S. Fish and Wildlife Service, Denver, CO
- 1400-1415 Break
- 1415-1430 Law Enforcement at Fort Belvoir - Clint Horton, Fort Belvoir, VA
- 1430-1445 Law Enforcement at Fort Bragg - Mike Hunnicutt, Fort Bragg, SC
- Session C: Endangered Species - Moderator: Mark Littlefield, Fort Ord, CA**
- 1445-1500 Black-footed Ferret and the U.S. Army--A Model for Endangered Species  
Cooperation - Kelly Drake, Staff Recovery Biologist, Region 6, Endangered  
Species Office, U.S. Fish and Wildlife Service, Denver, CO
- 1500-1515 Florida Grasshopper Sparrow at Avon Park Air Force Range -  
Bob Progulsky, Avon Park AFR, FL
- 1515-1530 Endangered Plants on Military Lands - Robert Shaw, Colorado State  
University, Fort Collins, CO
- 1530-1545 Break
- Session D: Past, Present, and Future Opportunities for Cooperation -  
Moderator: Scott Klinger, Fort Gillem, GA**
- 1545-1600 Potential for Raptor Management Programs on DOD Installations -  
Richard Olendorff, BLM Snake River Birds of Prey Area, U.S. Bureau  
of Land Management, Boise, ID
- 1600-1615 Military Use of Forest Service Lands - John McGee, Headquarters,  
U.S. Forest Service, Washington, DC
- 1615-1630 Wildlife Aspects of LCTA - David Tazik, Land Condition Trend Analysis  
(LCTA) Group Leader, U.S. Army CERL, Champaign, IL
- 1630-1645 Clean Water Act and Corps of Engineers - Jeff Bossart, NAVFACENCOM,  
Norfolk, VA
- Session E: Summing Up - Moderator: Doug Ripley, Bolling AFB, Washington, DC**
- 1645-1700 The Importance of Fish and Wildlife Programs to the Military  
Mission - Kim Mello, Fort McCoy, WI
- 1700-1715 Fish and Wildlife Management on Military Lands -- A Status Report -  
Tom Wray, NAVSURWARCEN, Dahlgren, VA
- 1830-1930 Social/Cash Bar (Empire Ballrooms 1 and 2)
- 1930-2030 Banquet
- 2030-2050 Banquet Speaker - Mr. Gary D. Vest, Deputy Assistant Secretary of  
the Air Force (Environment, Safety, and Occupational Health)
- 2050-2130 Presentation of Awards

Thursday, March 22

- 0830-1200 NMFWA Business Meeting and Elections - Larry Adams, NMFWA President  
(Empire Ballroom 3)
- 1230-1330 NMFWA Board Meeting - Organizational (Empire Ballroom 3)
- 1330-1430 Joint Services Training Session - Mr. Jim Marsh, Office of the  
Assistant Secretary of Defense (Environment), Washington, DC;  
Mr. William Metz, F. E. Warren Air Force Base, WY; and Mr. Ben Brown,  
Rocky Mountain Heritage Task Force, The Nature Conservancy, Lakewood,  
CO (Empire Ballroom 4)
- 1445-1645 Individual Services Training Sessions  
Air Force (Plaza Room 3)  
Army (Plaza Room 5)  
Marine Corps (Plaza Room 1)  
Navy (Plaza Room 2)

SECRETARY/TREASURER'S REPORT - JANUARY 1990

The current active association membership is 417. However, we still have problems keeping track of our members. The Post Office has been returning 6 to 8 copies of the FAWN after every mailing due to the expiration of forwarding orders. When I can track down the new address, I re-mail the FAWN with a new 45 cent stamp on it. When I cannot find the new address, that person is dropped from the mailing list. Therefore, I greatly appreciate the help I have received from many of the members in keeping track of address changes. Our Treasury balance after paying for the current issue of the FAWN is \$1831.30. Accounts receivable total \$110.00 and anticipated expenses prior to the meeting in March are about \$250.00.

Please send in your advance registration for the Annual Meeting as soon as possible. This will simplify record keeping at the meeting. If you plan to pay at the meeting, we accept personal and traveler's checks but not credit cards. Cash is also acceptable, but not preferred. We are not thrilled about accepting payment via Form 1556, as we have experienced difficulty in collecting from some Navy installations using this procedure.

Help will be needed at the registration desk on Tuesday and Wednesday in Denver. Please let me know if you can help - Richard Griffiths, NMFWA Secretary/Treasurer.

BYLAWS COMMITTEE UPDATE

The NMFWA Bylaws Committee is busy updating the Association bylaws. This will constitute a major revision because the NMFWA is growing (both in numbers and complexity), and the bylaws need to better reflect our objectives and provide for an Association that will better serve the membership. Committee members have provided initial input and are working on a revised draft, and the Board will be mailing a proposed revision to all members in early February. The draft will be sent in plenty of time for you to look it over before the NMFWA session in Denver, so bring your ideas and be prepared to discuss them at our annual business meeting. This is critical because we need to know if the revised bylaws reflects what the members want from the Association.

## NMFWA ELECTIONS

Your Association needs your help. The NMFWA is looking for individuals to participate in the democratic process (i.e., run for office). I know some of you have been contacted by your At-Large Directors who have been encouraging you to throw your hat into the ring. If you have declined - please think again; if you have not been asked - volunteer; if you have ever sat back and said "I would have done it another way" - here is your chance! The Association is seeking some new blood and fresh ideas, so get involved - it only hurts when you don't. Please respond immediately by contacting Slader Buck or your At-Large Director.

## AT-LARGE DIRECTORS STATUS REPORT

East and West At-Large Directors worked cooperatively during the summer and fall to prepare and distribute a questionnaire on military fish and wildlife management, which was forwarded to NMFWA members and other installation natural resources personnel. Response to the questionnaire was outstanding, and the At-Large Directors wish to thank all the members who took the time to answer the survey. A presentation entitled "Fish and Wildlife Management on DOD Lands: A Status Report" will be given at the March 1990 meeting to provide results of the questionnaire.

At-Large Directors mailed letters to Association members to (a) offer assistance and request submission of articles for FAWN, (b) solicit nominations for Board of Directors offices and the NMFWA awards program, and (c) request 35-mm slides for the 1990 annual meeting poster display. The letters also strongly encouraged increased involvement in the Association to provide mutual benefits to all members. Other information was disseminated to Association members as necessary. Eastern Director Thomas Wray II represented the NMFWA at several DNRC meetings, at the request of President Adams.

At-Large Western Director Kim Mello is interested in feedback from NMFWA members on the following topic: DOD Fish and Wildlife Programs - Are they and how are they mission-essential? Please contact Kim as soon as possible if you have any ideas or recommendations on this subject.

Congratulations are in order for At-Large Western Director Scott Klinger, who was recently selected for a Natural Resource Specialist position at command level in the Army. He is in the process of closing out business at Fort Riley and preparing for the move to HQ, Forces Command, Fort Gillem, Georgia. Because of his very busy schedule, please direct all correspondence on NMFWA issues (Western Region) to Kim Mello until further notice.

## PROPOSED RESOLUTIONS

The resolutions below have been proposed by members of the NMFWA and will be presented, discussed, and voted on at the 1990 Annual Business Meeting in Denver. In keeping with decisions made during the March 1989 NMFWA Annual Meeting, only resolutions appearing in this edition of the FAWN will be considered at our forthcoming meeting. However, resolutions deemed to be of an emergency nature may be presented to the membership for their review during the general business meeting. Additional consideration will require a 2/3 majority vote of those present.

### Basic Training for Natural Resources Enforcement Personnel

WHEREAS, natural resources law enforcement is a specialized civilian responsibility on many military installations; and

WHEREAS, the commissioning of enforcement personnel carries a liability risk which is directly related to training; and

WHEREAS, the Department of Defense has no formal training for natural resources law enforcement personnel beyond that given to military enforcement personnel; and

WHEREAS, there are a wide variety of professional opinions and laws regarding minimum standards for law enforcement personnel with regard to basic training; and

WHEREAS, the National Military Fish and Wildlife Association has a strong interest in improving the quality of natural resources law enforcement on military installations; and

WHEREAS, the National Military Fish and Wildlife Association will no longer sponsor a basic law enforcement class for new enforcement personnel.

THEREFORE, BE IT RESOLVED, that the National Military Fish and Wildlife Association at its Annual Meeting in Denver, Colorado on March 22, 1990 supports basic training of natural resources law enforcement personnel which at least meets the requirements of a recognized police agency in their area; and

BE IT FURTHER RESOLVED, that the NMFWA supports having such basic training done by certified schools and/or certified or recognized experts in their fields, understanding specialized phases of this training (first aid, legal aspects, game warden techniques, etc.) may require the services of persons who may not be law enforcement professionals; and

BE IT FURTHER RESOLVED, that NMFWA supports having the training backgrounds of present natural resources law enforcement personnel reviewed by persons authorized to confer commissions to ensure that they have basically met the intent of this resolution considering both formal training and experience; and

BE IT FURTHER RESOLVED, that NMFWA requests that the Department of Defense incorporate the intent of this resolution in appropriate natural resources regulations.

#### Riparian Zone Protection and Management on DOD Lands

WHEREAS, riparian zones are extremely important ecosystems nationwide, provide fish and wildlife benefits far out of proportion to their extent on the landscape, and play a critical role in maintaining biological diversity in many regions; and

WHEREAS, riparian ecosystems provide year-round habitats for many wildlife species and serve as breeding sites, wintering areas, and stop-over habitats for a remarkable array of migratory birds; and

WHEREAS, stable riparian vegetation reduces streambank erosion, provides shade and essential microclimates, contributes organic matter to streams, and functions as a buffer zone to protect watercourses from the potential adverse impacts of adjacent land uses, thus improving water quality and fish habitat; and

WHEREAS, riparian ecosystems have been historically degraded and drastically reduced in quantity because of mismanagement and the adverse impacts of various land uses; and

WHEREAS, the restoration and protection of riparian zones is considered a resource priority of national concern, which has resulted in a growing body of technology and expertise on the proper management of these ecosystems; and

WHEREAS, DOD installations throughout the United States, especially in the West, include extensive areas of riparian habitat, some of which have been seriously damaged by military training activities;

THEREFORE, BE IT RESOLVED, that the National Military Fish and Wildlife Association at its Annual Meeting in Denver, Colorado on March 22, 1990, urges the Department of Defense to recognize the importance and sensitivity of riparian zones and promote the proper management of these ecosystems on all DOD lands; and

BE IT FURTHER RESOLVED, that the Department of Defense seek out the latest technical advancements on riparian zone management and promote the application of this technology on DOD installations nationwide; and

BE IT FURTHER RESOLVED, that NMFWA requests that the Department of Defense incorporate the intent of this resolution in appropriate natural resources regulations.

#### NAVY PROVIDES AIRLIFT FOR ENDANGERED WHOOPING CRANES

(Whitney Tilt, Program Manager, National Fish and Wildlife Foundation)

The first of three shipments of captive whooping cranes from the Patuxent Wildlife Research Center in Laurel, Maryland, arrived at the International Crane Foundation in Baraboo, Wisconsin, on November 8, 1989. These birds are members of the world's only captive flock of whooping cranes, currently housed at the Patuxent facility. Shipment of the cranes is part of a project coordinated by the U.S. Fish and Wildlife Service to establish a second captive flock of the species to reduce the risk of extinction by disease or other catastrophes. "This transfer is a good example of how we can maximize endangered species recovery activities through cooperation and teamwork with other conservation organizations," said John Turner, Director of the U.S. Fish and Wildlife Service.

The Department of Navy flew the eight rare whooping cranes from Andrews Air Force Base outside Washington, D.C., to Baraboo, Wisconsin. The mission was flown by Marine C-130 Squadron VMG-R 452 aircraft based at Stewart Air Force Base near Newburgh, New York, as part of a regularly scheduled training and proficiency flight. This event represented an exciting combination of partners coming together to help recover the whooping crane, and the National Fish and Wildlife Foundation is delighted to have been the catalyst for this cooperative effort involving the U.S. Fish and Wildlife Service, National Wildlife Federation, International Crane Foundation, and Department of the Navy. The Canadian Wildlife Service has also made significant contributions to whooping crane recovery efforts over the years.

Establishment of the second captive flock of whooping cranes increases the chances that this rare species will recover from the brink of extinction. In 1941, only 16 whooping cranes existed in the wild, but there is now a wild flock of 133 birds due to cooperative efforts by the United States and Canada. Prior to the November 1989 transfer, the captive population of cranes at Patuxent numbered 54. The International Crane Foundation in Wisconsin was selected as a second breeding site because of the Foundation's extensive experience and success in breeding various crane species.

The Foundation provided a \$200,000 grant to support the construction of new pens at the second breeding site, and the National Wildlife Federation contributed \$25,000 as a co-sponsor of the project. The Foundation will concentrate its efforts on breeding the whooping cranes while the Patuxent Center will continue to conduct reproduction research. A proposal currently under consideration as part of the recovery effort calls for using surplus cranes from both captive flocks to establish a second self-sustaining wild population, which would enhance the chances of the species' full recovery. The long-term goal for all cooperating agencies is that some day the cranes propagated at Baraboo and Patuxent will fly free in the wild.



## THE WATER COLUMN -- STREAM HABITAT IMPROVEMENT

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

A variety of habitat improvement techniques can be used to help manage fisheries in small streams, especially in cool and cold water systems. These include methods that are available for streambank stabilization, improvement of redd sites (trout/salmon egg-laying/incubation sites), reducing acidity by establishing lime dosers (small mechanical/electronic devices that discharge lime at timed intervals) along a stream course, and a diversity of other options limited only by one's imagination and creativity. The emphasis of this article is on instream structures that can be used to improve the quality and diversity of fishery habitat in a variety of stream ecosystems.

Before initiating any habitat improvement action, the existing stream must first be surveyed from the standpoint of assessing habitat conditions and identifying any limiting factors. For example, is the stream lacking spawning habitat, protective cover, low water refuges and "hold-over" habitat, resting or feeding areas, or good water quality? Secondly, consideration must be given to what type of fishery is supported or desired for the stream (i.e., native or sustained trout fishery, put-and-take fishery, anadromous fishery, etc.). Thirdly, management objectives should be determined and a long-term plan established to include construction and placement of structures and maintenance of the desired habitat.

The quality, quantity, durability, and stability of instream structures will be affected by available funding and must be assessed for project viability. Aesthetics and habitat diversity are also key elements in any habitat improvement program. Some of the more common structures used for stream habitat improvement are given below.

Channel blocks - Structures used to consolidate braided channels during low-flow periods to increase current velocities and channel depth and to reduce temperatures; often used in low-gradient streams where flows are spread out over the floodplain and would benefit from consolidation.

Channel constrictors - Structures placed along either or both banks to funnel stream flow and create overhead cover; usually constructed from fallen trees or large-diameter logs.

Bank crib with cover log - A cribwall is a rectangular framework of logs in which the wood members are essentially assembled in a log-cabin fashion. The rectangular cells formed by the structure are filled with soil and/or rocks, and vegetation can be established through the slats to aid in slope stabilization. The structure serves to protect eroding banks and provide overhead cover, and it can be used as a stabilization measure on steep banks with high-velocity flows.

Gabions - Wire baskets filled with stone or other material, which are wired together to form a continuous bank stabilization structure. Gabions also provide additional substrate for aquatic invertebrates.

Boulders/random rocks - Large boulders, gabions, or concrete objects placed in a channel well away from either bank to produce small downstream scour holes and zones of reduced velocity. Boulders also provide overhead cover and resting areas and may be placed in intermittent clusters in steep channels to create cascades and "stair-step" pools.

Log and brush shelters - Logs and brush cuttings placed or staked along eroding banks to provide streambank protection and overhead cover. A variety of brush matting and layering techniques are available.

Single- and double-wing deflectors - Deflectors are structures that protrude from one bank but do not extend all the way across the channel. They are used to divert stream flows for scouring and relocating sediment. A pair of deflectors placed on opposite banks at the same cross section is referred to as a double-wing deflector.

Wedge and "K" dams - Small dams, usually constructed with logs or cut planks, which can be used to create pools and provide deeper areas in shallow streams.

Some recommendations regarding instream structures are provided below. For additional information, I recommend the USDA Forest Service Technical Publication R8-TP7, Fish Habitat Improvement Handbook. Guidelines for bank stabilization and stream improvement are also available from the U.S. Fish and Wildlife Service, American Fisheries Society, U.S. Army Engineer Waterways Experiment Station, and various State agencies.

a. Logs from small, fast growing trees have little heartwood and deteriorate rapidly. Older trees with more heartwood are more durable.

b. Black locust and eastern hemlock are rot-resistant and more suitable if logs will be exposed to air. Yellow poplar, yellow pine, white pine, and oaks are also durable but are most effective if completely submerged.

c. Shallow streams less than 12 ft wide are best served by 10- to 12-in.-diameter logs.

d. Logs should be properly stabilized by locking them 3 to 4 ft into the bank, locking them behind boulders and root systems, and/or pinning them into the stream substrate with rebar, cable, or specialized cements. A soft, rolled steel cylinder 6 ft long by 2 in. in diameter with a 3/4- to 1-in.-diameter hole drilled 3 ft deep into its length serves as a good "driving head" for the pins.

e. For dam-type structures, the spillway height should be from 6 to 12 in.; the pool depth must be twice that of the dam height if fish passage is desired.

f. Structure locations are best selected during periods of lowest flow since the water level can vary seasonally and create obstacles to fish passage.

g. All disturbed sites should be reseeded and mulched to reduce erosion and enhance bank stabilization.

h. The riffle-run-pool ratio for the stream should be evaluated, and the manager should work toward developing a desired or optimum combination of habitat features.

i. Stream habitat improvement may be as simple as bank stabilization, revegetation, and revetment.

j. Structures should be designed so that the energy from the stream's velocity and flow is harnessed to accomplish natural scouring and undercutting.

k. The manager should develop a map of stream structures and other habitat modifications and maintain a good record of habitat work. A simple form can be created to record location, design, materials used, cost estimates, maintenance performed, and structure evaluation.

## NEWS BRIEFS AND ANNOUNCEMENTS

### Defensive Tactics Seminar - Fort Leonard Wood

A Defensive Tactics Instructor Seminar will be held by the Game Warden Section, PMO, Fort Leonard Wood, Missouri, on February 26 - March 2, 1990. The seminar will be taught by Bruce Siddle and Mike Dunn of PPCT Management Systems, Inc., Waterloo, Illinois. Course contents include analyzing use of force, control concepts, tactical handcuffing, pressure point control tactics, joint locks, defensive counterstrikes, the neck restraint system, the PPCT impact weapon system, and weapon retention. Upon successful completion of this instruction, participants will be able to develop and present programs in basic defensive tactics.

The PPCT Defensive Tactics System is recognized as the nation's leading nonlethal subject control system and is the only system that has been developed from a combination of tactical, legal, and medical research. For further information on the seminar, contact Robert P. Struckmeier, PMO, Game Warden Section, Fort Leonard Wood, MO 65473.

### Wildlife Law Enforcement Training Session

The 1990 Wildlife Law Enforcement Training Session will be held at Marine Corps Air Station, Cherry Point, North Carolina. The one-week course is tentatively scheduled for early June. Anyone interested in attending the session should call Bill Rogers at 919/466-3242 (A-582-3242). Recommendations for the course agenda are also welcomed.

### Request for Sightings of Southern Bald Eagles

The Sutton Avian Research Center in Bartlesville, Oklahoma, has been engaged in a southern bald eagle restoration project since 1985. The center has released 129 bald eagles in Oklahoma, Georgia, Alabama, Mississippi, and North Carolina and hopes to release at least 60 more birds this spring. The eagles are all banded with a standard U.S. Fish and Wildlife Service aluminum band. Those released in Mississippi have a 1-in.-high white plastic band with a black letter A followed by two digits (i.e., A-01 through A-95) placed on the right leg.

During the winter a high percentage of the released eagles are expected to be found on or near Corps of Engineers lands and reservoirs in the southeastern United States. Anyone sighting any of these color-banded eagles is encouraged to phone (collect, if necessary) the research center at 918/336-7778. Details of the sighting should include the location, date, time of day, age of the eagles, and any other circumstances of interest. Written correspondence should be directed to M. Alan Jenkins, Assistant Director, George Miksch Sutton Avian Research Center, Inc., P.O. Box 2007, Bartlesville, OK 74005-2007. We will be very grateful to obtain any information on the whereabouts of our released birds.

### Wildlife Reports Available

The U.S. Army Engineer Waterways Experiment Station has completed and distributed 65 reports as part of the "U.S. Army Corps of Engineers Wildlife Resources Management Manual," and 20 additional reports are in preparation. In 1988, the DOD military branches, via the Defense Natural Resources Council, became a cosponsor for the manual, and additional copies were printed to ensure widespread distribution to military installations. A newsletter entitled "Wildlife Resource Notes" is also published as a byproduct of the manual. If you have not received your copy of the manual and newsletter issues, please submit a request to the following address: Chester O. Martin (CEWES-ER-R), USAE Waterways Experiment Station, 3909 Halls Ferry Road, Vicksburg, MS 39180-6199. Please also let

us know if you are aware of other installation personnel that should be added to our mailing list.

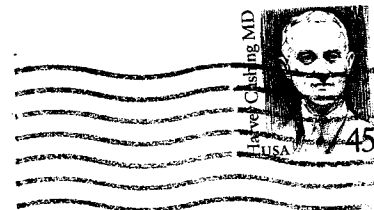
Congratulations, Larry

NMFWA President Larry Adams has been selected as the new Fish and Wildlife Administrator for the Department of Army. He will assume his duties with the Army on 29 January 1990. Larry's new address is U.S. Army Engineering and Housing Support Center, ATTN: CEHSC-FN, Fort Belvoir, VA 22060-5880 (703/355-7968-71; A-345-7968-71). The Association wishes President Adams the best of luck in accepting the challenges of his new position.

EDITORS' NOTE

As outgoing Editor for the FAWN, I wish to thank the NMFWA membership for their support and contributions over the past two years. Five issues have been published since the July 1988 Annual Meeting in Albuquerque, New Mexico, and these issues have consisted of a variety of interesting and informative articles submitted by Association members. Board of Committee members have done an excellent job of providing input to keep us up to date on national issues and activities of interest to the Association. Kim Mello, Tom Bryce, Rich Griffiths, Tom Wray, Slader Buck, and Larry Adams should be especially commended for their consistent and timely contributions.

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