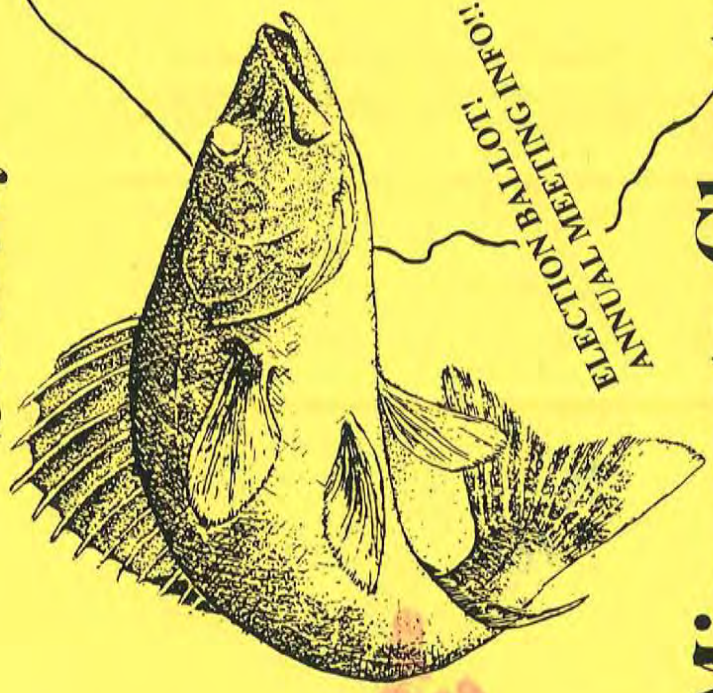
Shetland - file

American Fisheries Society



Minnesota Chapter

ANNUAL MEETING INFO!!
ELECTION BALLOT!!

JANUARY 1995

AFS

Minnesota Chapter AFS
1201 E. Highway 2
Grand Rapids, MN 55744

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Paul Brouha
American Fisheries Society
5410 Grosvenor Lane, Suite 110
Bethesda MD
20014

RECEIVED
FEB 27 1995
AMERICAN FISHERIES SOCIETY

1995 JOINT MINNESOTA-IOWA CHAPTER AMERICAN FISHERIES SOCIETY MEETING

February 21-23, 1995

Village East Resort
Okoboji, Iowa
Reservations: 1-800-727-4561

The 28th annual chapter meeting is just around the corner and we're hoping to make this one of the most productive and enjoyable meetings ever. We've lined up a great facility with all the amenities; pool, whirlpool, indoor track, tennis course, exercise equipment etc. We'll be having a social the first evening to renew old friendships and make some new ones. Contributed papers on a variety of subjects from Iowa and Minnesota biologists will be featured at joint meetings of the two societies. The first day will be topped off with a banquet and white elephant auction fund raiser. To facilitate the white elephant sale we'd like to ask all attending members to bring along an item of no use to you but of great use to someone else.

Where it is.
The Village East Resort is located South of Spirit Lake and east of West Lake Okoboji on Highway 71. Reservations are on a space available basis. Rates are $50/night single and $60/night double. The hotel has a 3 day cancellation policy. Food is available at the resort and several other locations. Meeting Registration will be set up Tuesday afternoon, Feb. 21, in the Pebble Beach room.

What's going on:
Tuesday:

2:00 pm MNAFS Rivers and Streams Committee, Bayhill Room
4:00 pm Minnesota EXCOM, Augusta Room
4:00 pm Iowa EXCOM, Brooks Room
5:00 pm Social, Pebble Beach Room

Wednesday:

7:00 am Registration begins, Pine Valley Room
8:00 am Joint meeting, Bayhill Room
3:00 pm Chapter meetings for both Chapters, Pine Valley and Bayhill Rooms
6:00 pm Banquet, St. Andrews Room

Thursday:

8:00 am Joint meeting, Bayhill Room
12:00 noon Adjourn

Berkley Outlet News

The Berkley Company has agreed to open their outlet store for those attending the meeting from 3:00 to 6:00 pm on Tuesday Feb. 21. So be sure to bring a few extra dollars and take advantage of this opportunity.

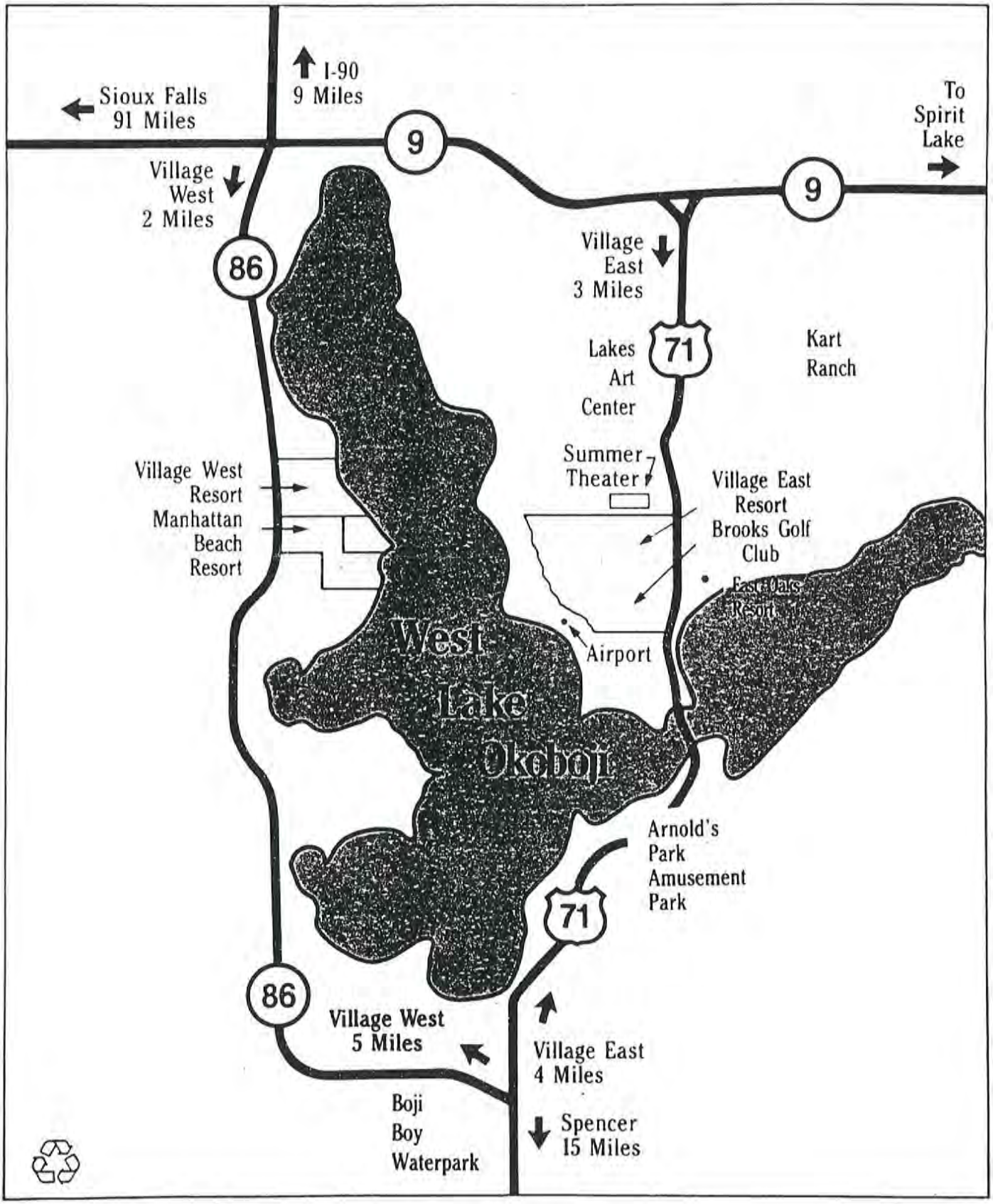
Attention Fisheries Students:

The Minnesota Chapter is dedicated to promoting student attendance at its annual meeting. If you need financial assistance for lodging, registration, banquet or other expenses you can submit an application for assistance to Henry Van Offelen, DNR-Fisheries, PO Box 823, Detroit Lakes, MN, 56502. . Applications may be obtained from Henry at (218) 847-1579. Please take advantage of this. We want you to attend!

White Elephant Auction

We ask that all attending members bring along an item that's of no use to you but of great use to someone else for the White Elephant Auction.

VILLAGE RESORTS
& CONFERENCE CENTERS
LAKE OKOBOJI



1995 CANDIDATES FOR PRESIDENT-ELECT

We are pleased to be able to present two outstanding candidates for the office of President-Elect of the Minnesota Chapter of the American Fisheries Society. The following are biographical sketches for our 1995 candidates:

Larry Kallemeyn

Since finishing his M.S. at South Dakota State University in 1968 (yes, he qualifies for membership in AARP), Larry Kallemeyn has worked for several fishery agencies. From 1968 to 1973, he was employed as a fishery research biologist with the Saskatchewan Fisheries Laboratory. After six months with an environmental consulting firm in New Jersey, he joined the South Dakota Department of Game, Fish, and Parks as a research biologist working on paddlefish. From 1975 to 1980 he was employed by the U.S. Fish and Wildlife Service, first as a research biologist with North Central Reservoir Investigations in Yankton, SD, and then by the Environment Division in the Pierre, SD Area Office. Since 1980, he's been in International Falls, "the icebox of the nation", where until the fall of 1993 he worked for the National Park Service as the aquatic research biologist for Voyageurs National Park. He now is the sole employee of the National Biological Survey International Falls Biological Station, which is attached to the NBS's Great Lakes Science Center in Ann Arbor, Michigan. His work experience has primarily involved fish communities in boreal forest lakes and reservoirs (Sask., MN) and the Missouri River (SD). His work at Voyageurs, however, has allowed him to get involved in studies dealing with many aspects of the aquatic environment, including contaminants, furbearers, aquatic birds, and bald eagles. As the saying goes ... diversity is the spice of life.

Larry's been a member of the AFS since 1965 and a MN Chapter member since 1980. In 1993, he was the federal representative to the Chapter's Executive Committee. Larry would like to see the Chapter continue to build on its involvement in public environmental education, particularly as it relates to sustainability of our aquatic resources. He also feels the Chapter should continue to provide professional development opportunities, particularly to AFS members. Maybe those opportunities could be used as a carrot to get more fishery workers into and involved in the Chapter. Last but not least, the Chapter needs to continue to be an effective spokesman for the professional fisheries community in Minnesota.

Bruce Vondracek

Bruce Vondracek is the Assistant Unit Leader-Fisheries at the Minnesota Cooperative Fish and Wildlife Research Unit located at the University of Minnesota. He received a B.S. and M.S. in Zoology from the University of Wisconsin-Madison and a Ph.D. in Ecology from the University of California-Davis. Following several years as a postdoctoral researcher at the University of California-Davis, he became the Assistant Unit Leader at the Ohio Cooperative Fish and Wildlife Research Unit in 1988. In 1991, he assumed his current position. Bruce became a member of the Minnesota Chapter in 1991. Bruce has served on several AFS committees at the local and national level. He was the chair of the Resolution Committe for the Ohio Chapter, served as an Associate Editor for Transactions, was a member of the Skinner Memorial Award Committee, and is currently chair of the J. Frances Allen Scholarship Commitee and the Awards Committee for the Minnesota Chapter.

Bruce's research is focused on the interaction of fisheries biology and ecology. The primary focus is on fish community structure and how interactions at the community level can be integrated with management activities. He is currently using a variety of techniques to examine the effects of vegetation control in lakes on fish structure, the interactions and bioenergetic responses of trout in streams, and the affects of alternative agricultural practices on stream quality.

Bruce feels that the Minnesota Chapter should continue the strong leadership role providing unbiased scientific information to resource managers and decision makers through workshops, the legislative breakfast, and the annual meeting. Furthermore, he wants to continue the strong focus on public education programs, but also seek new directions to strengthen the Chapter efforts.

NORTH CENTRAL DIVISION AWARDS NOMINATIONS REQUESTED

The North Central Division of the American Fisheries Society is soliciting nominees for the three awards given annually. These awards are the Most Active Chapter Award, the Meritorious Service Award, and the Fisheries Excellence Award. All three are fully described below. Forms to be completed for each award are available, but the nominations can also be made in a letter including information outlined in the description of each award.

Description of Awards:

Most Active Chapter:

This award will be given to the North Central Division Chapter that has carried out the most active program of enhancing professionalism and fisheries science, relative to its size and the geographic distribution of its membership. Most often, members will nominate their own chapter. Nomination materials should include the number of members, names of officers, number and type of meetings, special activities, recruitment activities, and a brief (1 page) description of what makes this chapter an active and important contributor to the NCD, AFS, and fisheries profession. Additional materials of support may also be included.

Fisheries Excellence:

This award will be given to a North Central Division member who has made an outstanding contribution to the fisheries profession. This contribution may be a single activity or a collection of achievements over the individual's career. Former Division members may be nominated if most of their work occurred while they were NCD members. Nominations should include the names and signatures of at least 2 nominators, a brief (1 page) biographical sketch of the nominee, a brief (1 page) narrative of significant contributions made by the nominee, and copies of any additional materials to support the application.

Meritorious Service Award:

This award will recognize extraordinary service to the AFS by a NCD member. Nominations may be based on a single outstanding achievement or a variety of service activities, and may include the Chapter, Division, Section or Parent Society level. In the nomination, evidence must be presented that this service has gone beyond the routine and that it has made a genuine and lasting contribution to the betterment of the Society. Nominations should include the names and signatures of at least 2 nominators, a brief (1 page) biographical sketch, a brief (1 page) narrative of significant contributions made by the nominee, and copies of any additional materials to support the application.

All of these awards will be presented at the North Central Division Annual Meeting at Detroit in December. Nominations must be received by **July 15.** Please print this announcement in your chapter's newsletter and announce this call at your annual business meeting. You may submit nomination materials to, and receive additional information from:

Donald L. Pereira
Minnesota Department of Natural Resources
1200 Warner Road Phone: 612/772-7962
St. Paul, MN 55106 FAX: 612/772-7977
email: dlp@finsandfur.fw.umn.edu

CALL FOR NOMINATIONS

Excellence in Fisheries Education Award Committee
Education Section, American Fisheries Society

The American Fisheries Society (AFS) Excellence in Fisheries Education Award was Established in 1988. The award is administered by the AFS Education Section and is presented annually to an individual to recognize excellence in organized teaching and advising in some aspect of fisheries education. Nominees must be an AFS member, have been actively engaged in fisheries education within the past five years, and have had at least ten years of professional employment experience in fisheries education. Two or more people may act as nominators, but at least one nominator must be an AFS member.

Nomination deadline is March 31, 1995. Additional information can be obtained from:

Bobby Whiteside
Chairman, Excellence in Fisheries Education Committee
Aquatic Station
Southwest Texas State University
San Marcos, TX 78666

PRESIDENT'S MESSAGE

by Bill Thorn

I represented the Chapter at the business meeting of the North Central Division of the AFS at the Midwest Fish and Wildlife Conference in Indianapolis, Indiana. Several other Chapter members were also present. Congratulations to Don Pereira, now President-Elect of the NCD AFS. President Jim Diana masterfully completed the business meeting in under two hours. Minutes will be published in Mainstream. Many students were present and presented papers. The Division needs a new newsletter editor - if interested see the last Mainstream.

Activities of technical committees are increasing and provide most of the "action" in the Division. The Fish Management Section is considering meeting at the Midwest; it presently meets at the annual AFS meeting. The Division is financially sound which means it could support joint Chapter projects. Six resolutions were passed: 1) reauthorization of the Great Lakes Fish and Wildlife Restoration Act, 2) reauthorization of the Nonindigenous Aquatic Nuisance Prevention and Control Act, 3) increasing funding for the Great Lakes Fishery Commission Program Requirements, 4) continuing the CRP program, 5) better environmental review on drainage projects to protect habitat, and 6) better Missouri River water control to benefit aquatic habitat.

Our chapter finished second in a very close voting for the Best Chapter Award. We have a second-to-none Continuing Education program and newsletter, pass relevant and timely resolutions, have an up-to-date Procedural Manual, and make ourselves available to legislators. We have individual members active in section, technical committee, division, and parent-society matters. Many are officers, and one is a parent society officer. Yet when listening to other chapter accomplishments, I sense that something is missing - the Chapter, as a group of members, is rather inactive. For example, the Alaska chapter sponsored two symposia last year. In addition to the Chapter priority of public education/advocacy, I hope future leaders will consider sponsoring workshops and symposia to provide science-based information on timely and relevant topics. We now have the finances to do so.

In the future, you will be hearing much more about the Fisheries Action Network (FAN). The parent society initiated this program to disseminate information to subunits. Through this program we can contribute to projects of other subunits or get their help for our Chapter initiatives. For example, FAN has the ability to provide the science-based information for successful watershed management and ecosystem management. With such information, AFS members can set reasonable and achievable objectives, and move these projects to successful implementation.

Thanks to officers and committee chairs for your work in the past year, and good luck to Carl Richards in the coming year.

ECOSYSTEM MANAGEMENT AND OTHER BUZZWORDS

This piece is not to admonish you to get with the ecosystem management program nor is it an attempt to communicate pearls of wisdom about why or how to manage ecosystems. Ecosystem management is, or is rapidly becoming, an important (and sensitive) issue and fishery managers should focus on it. One good reason is the obvious answer to the question "who manages fishery resources?" It is my opinion that fishery managers have been involved -- many have been leaders -- in ecosystem management for a long time.

Ecosystem management has become a political platform and a guiding principle for land and water management at the federal level. The portended changes implied by the preferred (by the U.S. Department of Interior) alternative in the Federal Aid Environmental Impact Statement will also make ecosystem management a guiding principle for land and water management at the state level.

I must admit some confusion. Sticking with my opinion that fishery managers have been involved in management at the ecosystem level, should I be delighted that a major, national political initiative is coming into position to support what fishery managers have been doing all along, or should I be insulted because federal administrators are inferring that I don't give a damn about ecosystems and should make a change for the better. I will try not to be defensive or paranoid and assume the federal administration is supportive of the good work that has been done by fishery managers.

I agree fully with the concept of ecosystem

integrity and I understand that problems can occur from single-species management or unreasonable exploitation of natural resources for recreational use. Speaking from the perspective of recreational fishery management, there certainly are examples of detrimental effects on habitat and other aquatic species that result from recreational fishing and single species management. The recent symposium Uses and Effects of Cultured Fishes in Aquatic Ecosystems, in which the Fisheries Management Section was actively involved, acknowledged that errors, although not always recognized as such at the time, have been made in the past. It is also testimony to the fishery manager's recognition of the importance of intact, functional ecosystems. There also are numerous examples of sport fish management benefitting suites of species, the entire aquatic community, or the aquatic habitat. Given a fishery system with a declining sport fishery for one or more species which is wholly or in part due to a detrimental change in habitat, is there a fishery manager among us who would not have "fix the habitat" as the first objective of the fishery management plan?

Stakeholder. This is a new word (buzzword) that means "constituent." Fishery managers have a bunch of stakeholders. One stakeholder is anglers -- a small group of over 40 million people in the U.S. alone. They represent males and females of all ages, ethnic origins, and abilities. In 1991, they contributed well over $25 billion in direct expenditures to the U.S. economy. Annually, they contribute $500 million in fishing license fees and, along with boaters, provide $200 million in excise taxes collected by the U.S. Department of Treasury and administered through the Sport Fish Restoration Program. The funds from license sales and Sport Fish Restoration Program are used by state fishery management agencies to maintain and enhance fishery resources. The benefactors of these efforts include many more people than just anglers and boaters.

It seems to me ecosystem management will be tremendously expensive. As one of many people who do fishery or aquatic research, I find my research focuses on single species or concise issues. I have proposed, and will continue to propose, ecosystem-level research, but the cost is high, far beyond what resource management agencies (who already have limited, even insufficient, budgets) can afford. Who are the stakeholders for ecosystem management? Everyone, whether they know it or not. Who writes the check for ecosystem management?

Partnerships. Not a new work, just one borrowed from industry to replace "cooperators." A buzzword, nevertheless. I have seen the benefits of agencies and organizations working together, and I strongly support the partnership approach. Since everyone is a stakeholder for ecosystem management, partnership opportunities for ecosystem management should abound and, in time, I expect they will. I see several partnership opportunities for ecosystem management.

First, fishery managers will make good partners because they already are managing ecosystems and they have first-hand knowledge of ecosystem management needs. Fishery managers may have to do a better job of communicating their past, present, and future ecosystem management efforts and their willingness to work with other agencies and organizations on ecosystem issues. Ecosystem management leaders may be wiser to focus on the ways fishery managers benefit healthy ecosystems than to try to direct their activities.

Second, anglers and boaters can be good ecosystem management partners. They enjoy quality natural resources and are quick to recognize when quality deteriorates. As discussed above, they are already stakeholders in fishery resource management. Although educational programs may be necessary to adjust their attitudes and behaviors, anglers and boaters can be strong ecosystem management supporters and cooperators. With anglers and boaters come the opportunities for partnerships with the sport fishing and boating industries. I am frightened, however, when I hear the work "compatibility" associated with recreational use instead of the word "opportunity," especially when compatibility has the connotation of "guilty until proven innocent." Broad reductions in opportunities to use and enjoy fishery systems could prevent partnerships with anglers, boaters, and associated industries. Some losses of recreational opportunity will occur as sensitive ecosystems are conserved. Keep these losses to a minimum. Has anyone ever considered mitigation for loss of recreational fishing use?

I expect a ride down a rather rough path as biologists and non-biologists, managers, and administrators try to implement ecosystem management. The last I heard, high level administrators were looking for a definition for ecosystem management.

Hal Schramm

CONTINUING EDUCATION UPDATE

In the last survey for future workshop topics, there was a lot of interest in holding a workshop on GIS. Upon further investigation, it was evident that there are many very good workshops being offered on this topic already. For those of you who have expressed an interest in receiving training in this area, I have listed below the organizations that I have found which offer workshops in GIS and related topics.

St. Cloud State University - Center for GIS (612) 255-2170
GIS Research and Development Center - University of Wisconsin, River Falls (715) 425-0635
State of MN Land Management Information Center (612) 296-1211
GIS World, Inc. Fort Collins, CO (303) 223-4848

Deserae Bushong- Cont. Ed. Co-chair

A BURBOT OR A TROUT?

If you can tell the difference between a burbot and a trout, the Salmonid Technical Subcommittee is for you. Tom Jones will be soliciting volunteers at this year's business meeting in Spirit Lake. If you cannot make it to the business meeting, but you can successfully separate burbot and trout anyway, you can join us by notifying Tom at Lake Superior Area Fisheries, 5351 North Shore Drive, Duluth, MN 55804.

PUBLIC AWARENESS COMMITTEE

The Public Awareness Committee has contacted 25 TV stations with viewership in Minnesota and surveyed their willingness to air the Minnesota Chapter's Public Service Announcement (PSA), and their needs for tape format. Twenty stations agreed to air the PSA and copies in 3/4", 1", and beta have been made and distributed to them, at a cost of approximately $450. Hopefully several million viewers will be learning more about this organization and our activities in the next few months.

1995 ANNUAL MEETING RAFFLE

We expect to have another good selection of raffle prizes at this years annual meeting, so don't forget to bring a few extra dollars for those raffle tickets. Big ticket items this year include several **framed prints**, a **Zercom Marine LCD Depth Finder Ice System**, a **pair of custom made ultra-light fishing rods**, and a **Trophy 5 x 7 portable fish house**. As always, ideas for other prizes are always of interest. Please forward any ideas to Henry VanOffelen.

Don't forget, bluegill t-shirts will be available at the meeting.

WANTED
WHITE ELEPHANTS

A white elephant auction will be held at this years annual meeting as part of the fund-raising efforts. All members are asked to donate at least one item for this auction. Any priceless item that you have stored away would make a great contribution. Fishing/hunting equipment and other memorabilia would make great contributions. Does anyone have a mounted bullhead?

THE AMERICAN FISHERIES SOCIETY, MINNESOTA CHAPTER

Continuing Education Committee is proud to sponsor the following workshop

Genetic Principles and Techniques for Fisheries Resources

instructed by

Eric M. Hallerman, Virginia Polytechnic Institute and State University,
Anne R. Kapuscinski, Mark L. Gross and Loren M. Miller,
University of Minnesota (UMN)

April 5, 9:00 a.m. - April 7, 1:00 p.m. 1995
Earle Brown Center, University of Minnesota, St. Paul

Workshop Topics

Introduction to Basic Genetic Principles

(Review of genetic concepts from the DNA level to the meta-population level, followed by discussion of how evolutionary principles affect genetic diversity of aquatic communities)

Population Structure (Stock Identification)
(Lecture and laboratory demonstration of primary molecular genetic techniques used to discriminate among genetically distinct populations of aquatic organisms)

Genetic Guidelines for Hatchery and Transplantation Programs
(Guidelines for maintaining natural levels and patterns of genetic diversity)

Molecular Genetic Tools and Applications
(Short laboratory demonstrations showing current tools used in genetics studies including: computer simulation, polymerase chain reaction (PCR), DNA fingerprinting, gene transfer, detection of quantitative trait loci (QTL's), and chromosome manipulation)

Effects of Genetically Modified Organisms on Aquatic Ecosystems and Fisheries Management
(Lecture on assessment of environmental risks of introducing genetically modified organisms into natural aquatic ecosystems. In a case-study exercise, participants will apply and evaluate recently developed performance standards for risk assessment and management of genetically modified fish and shellfish.)

cost:

$200/person - instruction and materials

Any profits derived from the workshop will be used to support projects sponsored by MN Chpt. AFS. For more information contact Mark Hove, MN AFS Continuing Education Co-Chair at (612) 624-3019, via e-mail at mh@finsandfur.fw.umn.edu, or at Dept. Fisheries & Wildlife-UMN, 200 Hodson Hall, St. Paul, MN 55108.

(See other side for speaker biographies and registration form.)

BIOGRAPHIES

Anne R. Kapuscinski

Anne is a professor in the Dept. of Fish. & Wild. at the UMN. Her research in fish genetics has included population genetics models, quantitative genetics, genetic conservation guidelines for hatcheries, gene transfer in fish, and development of national guidelines for work involving genetically modified organisms.

Eric M. Hallerman

Eric is an assistant professor in the Dept. of Fish. & Wild. Sciences at V.P.I. & S.U. His work has included population genetic analysis, identifying markers for selective breeding, gene transfer in fish and development of national guidelines for work involving genetically modified organisms.

Mark L. Gross

Mark recently finished his Ph. D. in the Dept. of Fish. & Wild. at the UMN where he was using DNA fingerprinting techniques to genetically mark smallmouth bass for the assessment of reproductive success. Previously, he worked on performance evaluation of fish genetically engineered for enhanced growth.

Loren M. Miller

Loren is presently working on his Ph. D. in the Dept. of Fish. & Wild. at the UMN where he is estimating changes in genetic diversity within fish populations using molecular genetic tools. His M.S. thesis presented a methodology for assessing genetic response to size-selective exploitation in fish populations.

LODGING RECOMMENDATIONS

Participants are responsible for their own lodging. The cheapest, closest lodging is at Motel Six where we have 30 rooms reserved for the workshop (April 5 & 6, 1995). Rates are $31.94/night for one person, or $38.35/night for two people. When making reservations at Motel Six [(612) 639-3988], identify yourself as an attendee of the Genetics Workshop at the UMN. Other nearby lodging options include the Days Inn [(800) 325-2525] and Super Eight Motel [(800) 800-8000]. All three motels are a few miles north of campus in Roseville, MN.

Registration Form

Please register me for the Genetic Principles and Techniques for Fisheries Resources Workshop.

Name/Organization _____

Address _____

_____

Phone (work)_____ (home)_____

Genetics Workshop $200

Total amount enclosed = _____

REGISTRATION MATERIALS MUST BE RECEIVED BEFORE MARCH 1, 1995

Send registration form and payment (checks payable to MN-AFS) to:

Deserae Bushong, MN AFS Continuing Education Co-Chair
MN DNR Area Fisheries Headquarters
1801 South Oak Street
Lake City, MN 55401

If you can't make it to Spirit Lake in February please don't forget to mail in your dues renewal for 1995. In order to make the Chapter Membership Directory a reality and to make the membership database more useful please take some time and complete the entire application, it only takes a minute.

MINNESOTA CHAPTER
1995 MEMBERSHIP APPLICATION

Name _____

____ Work Address

_____

_____

_____

Phone _____
FAX _____
EMAIL _____

____ Home Address

_____

_____

_____

(Please place a check next to the address in which you would like your newsletter sent)

___ Yes, you may use my name and address in the Chapter's Membership Directory*

Are you a member of A.F.S.?___ yes ___ no. Membership number _____
(Membership number is located on your Fisheries mailing label).

Please complete the following (it will make our membership database much more useful!)
Affiliation: _____ (D.N.R., Federal Government, Academic, Private, or Tribal)
Job Title: _____
Year joined A.F.S. _____ Year joined Minnesota Chapter_____
Students please place a check here ___

If you are a new member, list recruiting member here _____

(*Your permission is required. The information collected here is strictly confidential and for use only by the Chapter)

Send to: Jeff Reed
Membership Chair
Glenwood Area Fish
1110 North Lakeshore Drive
Gleenwood, MN 56334

RIVERS AND STREAMS TECHNICAL COMMITTEE

Henry G. Drewes

At last years annual business meeting the Rivers and Streams Technical Committee (RSTC) offered a resolution supporting the use of a habitat guild approach to establishing protected flows on Minnesota streams. After some general discussion regarding the resolution it was decided that the membership should be provided some additional background information (in the form of an issue paper) before bringing the resolution before the membership for a vote. Please take the time to review the issue paper included in this newsletter before the annual meeting. A copy of the draft resolution to be presented to the EXCOM and the membership at the 1995 annual meeting is also included for your review. Questions regarding this information can be directed to Henry Drewes at (612) 297-3287 or Ian Chisholm at (612) 296-0781.

I have scheduled a winter RSTC meeting to be held in conjunction with the annual meeting. The meeting will be held on February 21 from 2:00 - 4:00 pm at the Village East Resort and Conference Center at Lake Okoboji, the site of the annual meeting. I believe the room assigned to us is the "Southwest Bay Hill Wing". The meeting is open to anyone who wishes to attend. We will be discussing the stream flow protection issue, advancements in the clearing and snagging issue, and a variety of other stream-related topics. Give me a call if you would like time on the agenda. I will also be inviting stream management folks from Iowa to participate in this meeting.

ISSUE PAPER

SUPPORT OF PROTECTED FLOWS FOR RIVERS USING A HABITAT GUILD APPROACH TO THE INSTREAM FLOW INCREMENTAL METHODOLOGY

Conflict between resource protection and development is inevitable given the limited supply and increasing demand for water in Minnesota and the United States. Water is a commodity regulated at the federal level; an established instream flow program is a primary step to protect our water and stream uses from excessive exploitation. Reported surface water use increased 21% from 1985 to 1989, with a record total (groundwater and surface water) use occurring in 1988. This reality was forecasted over ten years ago by Stalnaker (1981) who stated, as a result of increasing demand, "midwestern and eastern states no longer are considered to have an 'unlimited' water supply. " Wise allocation of water must include consideration of impacts to the stream biota. The best technique available today for addressing biological values in a forum that allows for negotiation between affected users is the Instream Flow Incremental Methodology (IFIM) and the best approach for applying the IFIM to warmwater streams is the habitat guild approach.

We propose that the Minnesota Chapter of the AFS supports a higher level of protection for instream flows, protection of diverse aquatic habitats and their communities, and the use of a habitat guild approach in identifying protected flows for rivers in Minnesota. What follows is a brief introduction to the rationale for this proposal.

Currently, protected flows are established in Minnesota using a low flow hydrologic statistic - the Q_{90} or 90% exceedence flow. Although over 40 streams in Minnesota have protected flows established using hydrologic statistics, water managers within the DNR now agree that this method inadequately protects instream values. Recently, researchers have called for a more holistic approach to river management on a national level, one that recognizes watersheds as the primary scale of interest and maintaining a diversity of habitats and interconnections as the goal (Doppelt et al. 1993). A

key component of stream systems is the flow regime (Hynes 1970, Karr and Dudley 1978). Protection of flows for in-stream uses of water, such as fish and wildlife habitat, recreation, and aesthetics, has been identified as a significant environmental issue in the US (Loar and Sale 1981, Reiser et al. 1989). To be successful, instream flow methods need to be based on values, a defined level of a resource, or a use (Beecher 1990). Hydrologic statistics will yield inconsistent results relative to a value, resource level, or use because habitat is a function of flow and channel shape, not a frequency of flow (Beecher 1990).

Habitat, particularly velocity, depth, and substrate, has been found to be the primary determinant of community characteristics, and human alterations of habitat alter the nature of fish communities (Gorman and Karr 1978). Velocity, depth, and substrate conditions are interrelated and a function of flow (Morisawa 1968, Richards 1982). In his extensive work on warmwater streams in Illinois, Schlosser (1982a, 1982b, 1985, 1987a, 1987b) showed that channel morphology and flow regime appeared to be the primary factors affecting a broad range of fish community characteristics. Other studies, Probst et al. (1984) and McClendon and Rabeni (1987), have reported that habitat variables such as cover, woody debris, water depth, and velocity are important habitat determinants for smallmouth bass and rock bass. In streams with complex fish communities, habitat conditions and habitat variability appear to be the primary factors shaping community structure (Bain and Boltz 1989). In the AFS position statement on the cumulative effects of small modifications of habitat, Burns (1991) discouraged actions that cause small losses in habitat and called for research focused on offsetting potential habitat loss and ecosystem restoration. A key issue then is, how we should quantify habitat and evaluate water development projects in river systems?

The Instream Flow Incremental Methodology quantifies habitat changes in relation to flow changes (Bovee 1982). It is the most commonly used instream flow method in North America and provides the most detailed and graphic approach for assessing effects of water development projects on fish habitat (Reiser et al. 1989). The IFIM was developed in the northwest and widely applied to assessing impacts on salmonid habitat. However, a broad, community-level perspective is needed to protect stream resource values; particularly in warmwater streams where there are diverse fish communities (Orth 1987, Miller et al. 1988.)

Use (as suggested by the National Ecology Research Center) of the IFIM does not suggest ignorance of the importance of other variables in the structuring of fish communities. What must be kept in focus are the effects of stream flow regulation on habitat in rivers. The primary purpose of the IFIM is to predict changes in available habitat with flow changes rather than simulate ecological interactions (Gore and Nestler 1988). We have no control over rainfall, untimely blizzards, competition, or predation. As resource managers, we do have a responsibility to limit the extent that public water will be removed from Minnesota streams. We do not advocate changing natural flow regimes based on the IFIM output but rather to limit human-induced changes to these flow regimes when harm to the aquatic communities will occur. Depth, velocity, substrate, and cover are certainly not the only variables important to fish; they do, however, change dramatically with changes in flow and since we have some ability to limit changes in flow we also have some control over these variables.

As noted above, we are interested in using a water management tool that ties controllable factors to fish populations. Certainly, the IFIM is not perfect; it is a process and as such allows consideration of other ecological factors (Orth 1987). It does not give the answer, it provides more information, with which to make a sound decision. It represents the best method for determining instream flows and for assessing the effect of management alternatives. Until there is evidence to the contrary, we agree with Orth and Maughan (1986) that, while further study is needed, we support the current practice of making the assumption that weighted useable area (habitat) is an index of potential fish biomass or numbers.

The physical habitat simulation system (PHABSIM) within the IFIM is primarily used to address changes in depth, velocity, substrate, and cover. The model is, however, capable of addressing other variables such as temperature and dissolved oxygen, if this is a matter of concern. Quoting from Milhous et al. (1984), "the basic components and interactions needed to simulate fish populations **as a function of management alternatives** are illustrated" in Figure 1.

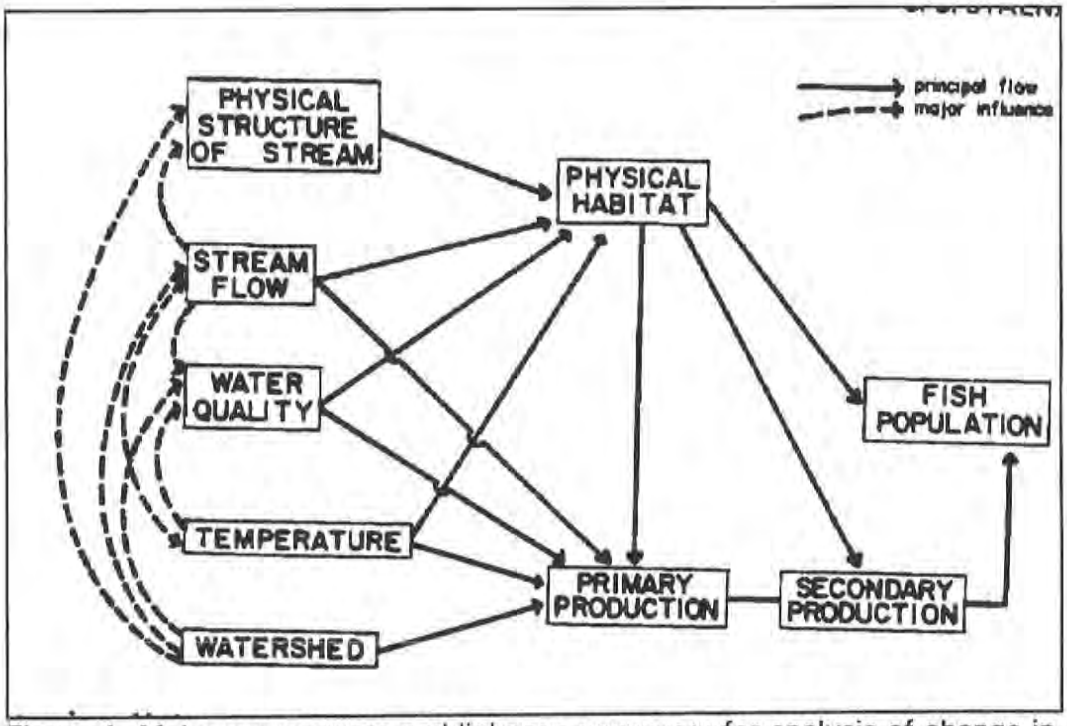


Figure 1. Major components and linkages necessary for analysis of change in stream systems. (from Stalnaker 1979)

The IFIM is not an ecological model. It is a water management tool, designed to have environmental and ecological applications (Bovee 1982). As we refine the inputs to this modelling process, we refine our abilities to predict outcomes and avoid ecological and management blunders. This is largely the impetus for Leonard and Orth's (1988) refinement of target species selection for warmwater streams and communities. Bovee (1986) identified two classification systems for use in selecting target species, based on 1) fisheries management objectives, or, 2) adaptations of species to riverine environments. We have chosen the latter, as outlined by Leonard and Orth (1988).

1) Selection of appropriate species and life stages on which to base analyses of instream flow needs is a critical step in determining flow regimes necessary to support fish populations (Orth (1987).
2) Species selection is extremely important because flow dependent habitat characteristics of a stream (e.g., depth velocity, substrate, cover) influence community structure and stability (Gorman and Karr 1978, Schlosser 1982b, Moyle and Vondracek 1985).
3) Changes in these habitat characteristics may cause shifts in species composition (Moyle and Baltz 1985, Bain et al. 1988).
4) Selected species should have, among them, a wide range of habitat needs (Leonard and Orth 1988).
5) Because warmwater streams are characterized by high species richness (Orth 1987), direct analysis of habitat requirements for all species is prohibitive. The guild approach was used to simplify the species selection process.
6) A guild is defined as "a group of species that exploit the same class of environmental resources in a similar way." (Root 1967).
7) Food and habitat are the most important resource axes identified in previous resource-partitioning studies of stream fishes (Ross 1986).
8) Species using similar resources should be affected similarly by the alteration of those resources (Roberts and O'Neil 1985).
9) Consequently, recommendations for instream flow must represent a compromise among the needs of all species (Leonard and Orth 1988).
10) The ultimate objective of instream flow recommendations should be to maintain the integrity of the aquatic biota (Moyle and Baltz 1985). Management objectives will continue to be an important component of selecting target species, but they should accommodate the needs of the entire aquatic fauna (Leonard and Orth (1988).

What we have tried to accomplish in this paper, is to show that a habitat guild approach to the IFIM, proposed by Leonard and Orth (1988) and recommended by Aadland et al. (1991) and Aadland (1993), fits within current ecological theory and data

for warmwater and coldwater streams, and is flexible enough to incorporate further advances in theory and data. This approach has been used successfully in Federal Energy Regulatory Commission (FERC) relicensings of hydropower facilities on the Otter Tail and St. Louis rivers in Minnesota. These principles need to be adopted for use in the development of a statewide protected flow program. We seek endorsement of this approach from the Minnesota Chapter of the AFS as a means to increase awareness and further ecological approaches to water management in the state.

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Resolution of the Minnesota Chapter of the American Fisheries Society

Requesting Support Of Improved Protected Flows For Rivers

Whereas, healthy river systems are a critical component of a healthy environment.

Whereas, the riverine systems should be protected for future generations of Minnesotans.

Whereas, rivers are diverse ecosystems containing many species of fish, invertebrates, amphibians, and reptiles.

Whereas, water withdrawals from rivers can seriously degrade aquatic habitat and the aquatic communities that rely on these habitats.

Whereas, protection of diverse aquatic habitats is a fundamental step in protection of riverine communities.

Whereas, a community oriented habitat guild approach to the Instream Flow Incremental Methodology (IFIM) is the most appropriate means of assessing effects of flow alternatives on diverse aquatic habitat.

Be it therefore resolved; that the American Fisheries Society supports a higher level of protection for instream flows, protection of diverse aquatic habitats and their communities, and the use of the habitat guild approach in identifying protected flows for rivers in Minnesota.

January 19, 1995

MN PRO CLUB 1995

Last year you recruited so many new members through the PRO Club that it's back again. For those of you who aren't familiar with MN PRO, its just like AFS PRO, recruit a new member to the Chapter and you are entered into a drawing for a prize. Last year Don Pereira won the coveted carved walleye pen set. Several members have already sent in new members for 1995. So get going, twist arms, recruit a new member, recruit a new old member (they count too!).

To make the hunt for new members even easier here are a few hints: Just over half of the DNR's Area Managers are Chapter members (is yours?). Very few PCA employees are Chapter members. Are any of the DNR's Regional Environmental Review Coordinators members? How about your supervisor?

MINUTES OF MINNESOTA AFS CHAPTER
28th ANNUAL BUSINESS MEETING
February 22, 1995
Spirit Lake, IA

Call to Order - B. Thorn - Meeting was called to order, a quorum was present, and everyone was welcomed.

Introduction of Guests - B. Thorn - Jack Wingate, AFS President-Elect and Don Pereira, NCD President-Elect, were introduced and welcomed to the meeting.

Approval of Minutes of 27th Annual Meeting - Minutes of the 27th annual business meeting were reviewed. Motion to approve, seconded, passed.

President's Report - B. Thorn - A handout was distributed outlining accomplishments and work in progress.

Treasurer's Report - C. Kavanaugh - Treasurer's Report was distributed and reviewed. Motion to approve, seconded, passed.

Auditor's Report - The Chapter books were reviewed by Tim Cross and Mark Ebbers and were found to be in order.

COMMITTEE REPORTS

Awards - B. Vondracek - Four 25-year awards will be presented at the banquet, recipients are; Dennis Anderson, Farrel Bandow, Bill Thorn, and Gary Siesennop. A Special Recognition Award will be presented to Henry Drewes for his work on the Rivers & Streams Committee.

Elections - R. Pierce - Ballots will be accepted for the next two weeks and the results will be published in the next newsletter. Candidates were introduced: President Elect; Larry Kallemeyn and Bruce Von Dracek, Secretary/treasurer; Cindy Tomcko and Henry VanOffelen, EXCOM Federal; Paul Pajak and Chantel Cook, EXCOM Open; Larry Schwarzkopf, EXCOM DNR; Dennis Anderson and Jim Stewart, EXCOM Academic; Mark Hove and Jay Hatch. Candidates were acknowledged for accepting nominations.

There has been some difficulty in getting people to run for office, particularly from the open, federal, and academic categories because of low number of members. Seeking suggestions to change format. The current format is specified in the procedural manual.

Issues - D. Pereira - Clearing and Snagging; Some progress has been made. The DNR Division of Waters (DOW) and Division of Fish and Wildlife (DFW) have each assigned a staff person to work on resolution of this issue.

Miller Creek: Carl Richards; some progress to report. Duluth and Hermantown have signed a joint powers agreement and formed a planning group. Richards is participating in this group. Next step is to seek DNR Watershed Project status.

Membership - J. Reed: A handout was distributed which identified chapter membership for 1994 at 288 members. Work is progressing slowly on the membership directory. Three action ideas were suggested for 1995: 1) complete and distribute membership directory, 2) identify and recruit non-chapter AFS members, and 3) continue MNPRO.

MNPRO resulted in 10 new members. Bob Davis won a carved trout pen holder for recruiting new member Marv Ingbritson.

Long Range Planning - T. Close: Will have a 10 minute input session during New Business.

Resolutions - D. Beck - A resolution "Requesting support of improved protected flows for rivers" was read to the membership. Will vote during Old Business.

Students - L. Maher - Information packets were sent to 10 colleges across Minnesota, no response. Eleven students are receiving financial assistance to attend the meeting. One high school student, Alexis Gray, is present and was introduced.

Rivers and Streams - H. Drewes - A handout was distributed briefly describing work accomplished on the clearing and snagging issue, Instream Flow, 1995 Farm Bill, and the NCD Rivers and Streams Technical committee.

Continuing Education - D. Bushong - The genetics workshop is very close to the break-even point with registrations. Have commitments from 21 people, need 25 to break even. Registrations will be accepted until March 1.

Public Awareness - S. Quinn - A handout was distributed which explained that 20 TV stations have agreed to air our PSA. Copies have been made and distributed at a cost of about $450. Everyone should watch for the video and provide comments to Quinn.

Procedural Manual - G. Busacker - The Public Education Committee proposal is ready for chapter membership approval. The proposed changes have been incorporated into the Procedural manual and a draft had been distributed. Comments can be made to Busacker until March 15, 1995. Then the AFS Constitutional Consultant will review again, then to AFS mid-year EXCOM, finally to full society membership at the annual meeting in Tampa.

Newsletter - report by Kavanaugh - Delay in the last two newsletters was caused by many factors; submission of items, post office delay, delay in shipping completed newsletters from St. Paul. Cost of local printing was explored and found to be very high. Recommend we continue to have the newsletter printed in St. Paul but budget to have them shipped to Grand Rapids via commercial carrier.

A comment was made about restoring the list of EXCOM and Committee Chairs on the inside front cover of the newsletter.

Exotic Species Task Force - A handout was distributed describing work of the committee. A conference call was held on February 14, 1995. Recommendations include 1) Letter to Federal Legislators asking support for reauthorization of the Aquatic Nuisance Prevention and Control Act. 2) Support the continuation of the $5 surcharge on MN boat licenses. 3) Resolution supporting state regulations prohibiting the transport of aquatic plants and regulating the introduction of new exotics. Comment to John Ringle by March 31, 1995.

Salmonid Technical Committee - T. Jones - The committee is just getting started, encourage anyone to participate. Developing a list of trout management reports.

EXCOM Reports

DNR - Hirsch - A written statement was distributed, items covered include; 1837 treaty, legislative notes, oversight committees, fishing roundtable. Additionally, fact sheets on three specific treaty issues were also distributed.

Federal - Pajak - A written statement covering; sustainable resource management, national forum on the farm bill, AFS promotional video, NEPA training, Workshop on low head fish weirs, and Aquatic Educators Coordinators Meeting, was distributed.

Academic - N. Mundahl - There is a threat to eliminate NBS and Coop units, encouraged letter writing. State funding is also a concern as the State university system merger progresses there is talk of eliminating small programs from some campuses. It was suggested that the Chapter write a letter, Thorn commented that it has already been done. Response from legislators has been low. Now is the time to use FAN to broaden message. It was suggested that the chapter write a letter to the State Department of Education supporting aquatic education as part of the 'graduation rule'.

Old Business

Action Agenda #1 - Sustainable Management Position Statement - Pajak - A draft has been developed following the joint session with the MN chapter of the Wildlife Society. Seeking more comments by March 15, 1995.

Action Agenda #2 - Instream Issues - Drewes - Covered earlier.

Action Agenda #6 - Chapter Financial Plan - Bathel - A letter was distributed from the Past Presidents Committee regarding chapter finances.

Action Agenda #7 - Constitutional Changes - Thorn - A motion was made to move forward with the by-laws change, incorporating the Public Education Committee as a standing

committee. Seconded and passed.

Resolutions - Beck - A resolution "Requesting support of improved protected flows for rivers" was read to the membership. Motion to approve, seconded, no discussion, passed.

ESOX, the official Chapter gavel, was passed from Bill Thorn to Carl Richards.

NEW BUSINESS

Immediate Past President Award - Richards presented Thorn with a certificate and thanked him for his service to the Chapter as President.

Committee Assignments - The following committee assignments were made:

Awards	Bruce VonDracek
Nominations	Rod Pierce
Issues	Bill Thorn
Membership	Jeff Reed
Resolutions	Dean Beck
Long Range Planning	Tracy Close
Students	Lynn Maher
Rivers and Streams	To be announced
Public Awareness	Steve Quinn
Newsletter	Chris Freiburger
Continuing Education	Deserae Bushong and Mark Hove
Procedural Manual	Greg Busacker

1995 Budget - A draft was distributed. A motion to accept the budget was made, seconded, and passed.

1996 Meeting Plans - Wide open at this time.

Other - A motion was made to underwrite up to $800 to cover potential shortfall in registration for the Genetics Workshop. Seconded, discussion about the possibility of offering scholarships with the chapter funded portion, past experience has been that registrations are received after the deadline and this workshop will probably fill with paying participants. No further discussion, call for vote, passed.

Research Abstracts - Richards - Encouraged the chapter to consider publishing a compendium of non-peer reviewed abstracts of work being done in the state. Used an example from the Idaho Chapter.

Riparian Awareness - C. Cook - The Minnesota Environmental Initiative will be sponsoring a conference on riparian awareness this summer in Duluth. Encouraged chapter members to attend.

Action Agenda Development - Input session - T. Close - The following are brief statements offered by the membership;
Look at Parent Society Strategic Plan.
Sponsor an educational event targeted at the general public and other resource professionals.
Suggest the Education Committee develop a means to get our message into high schools, Parent Society may have some materials.
Need input for FAN from membership.
Chapter news releases on issues.
Identify why the lack of participation from DNR management personnel.
Fund Office of Environmental Education and move to EQB.

Richards noted that a draft Chapter Action Agenda will be distributed.

Motion to adjourn, seconded, passed.

Respectfully submitted by Chris Kavanaugh, March 1, 1995