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ASSOCIATION OF MIDWEST FISH AND GAME COMMISSIONERS

[redacted] FOURTEENTH ANNUAL CONFERENCES

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ASSOCIATION OF MIDDLE WEST, STATE GAME CONSERVATIONISTS

Fourteenth Annual Meeting
July 14, 15 and 16, 1947
Conservation Training School, Roscommon, Michigan

Monday, July 14, 1947

9:00 - 10:30 a.m. Pheasant population trends and what to do about them.

William J. Lowe, Commissioner, State Game and Fish Department, Bismarck, North Dakota

E. A. Elder, Commissioner, Division of Conservation and Natural Resources, Department of Agriculture, Columbus, Ohio

General Discussion

10:40 - 11:40 a.m. How to apply research findings to fish and game management.

Round table discussion: Leader - E. J. Vanderwall, Director, Department of Conservation, Madison, Wisconsin

Each state will be expected to contribute suggestions

1:30 - 2:30 p.m. Ultimate policies of the states in regard to non-residents.

Donald H. Hughes, Director, Division of Fish and Game, Department of Conservation, Indianapolis, Indiana

General Discussion

2:40 - 3:40 p.m. Waterfowl management.

W. H. Crouch, Chief, Division of Game Management, U. S. Fish and Wildlife Service, Chicago, Illinois

General Discussion

3:50 - 4:50 p.m. Radio for conservation work.

S. C. Fontanna, Deputy Director, Department of Conservation, Lansing, Michigan

General Discussion

Tuesday, July 15, 1947

9:00 - 9:20 a.m. What should the states and the Midwest Association do regarding the planning, engineering, and manipulation of dams and their accompanying structures on the Mississippi River and similar rivers?

M. C. Steen, Chief, Fish and Game Division, Department of Conservation, Jefferson City, Missouri

General Discussion

Tuesday, July 15, 1947 (cont)

9:30 - 10:30 a.m. Attitude, policies and administrative decisions of the states in regard to fish and game management on such reservoirs under existing conditions.

Chester J. Wilson, Commissioner, Department of Conservation, St. Paul, Minnesota

General Discussion

10:40 - 11:40 a.m. River basin studies - how do they affect the states and what should the states and the Midwest Association do in regard to new projects.

Rudolph Pfeffenbach, River Basin Studies, U. S. Fish and Wildlife Service, Chicago, Illinois

General Discussion

1:30 - 3:00 p.m. In-service Training Schools.

The plant - John Gunderson, Assistant Superintendent, Conservation Training School, Department of Conservation, Roscommon, Michigan

The program - Charles Welch, Training Officer, Department of Conservation, Lansing, Michigan

How Illinois looks at such a program - Livingston E. Osborne, Director, Department of Conservation, Springfield, Illinois

General Discussion

3:10 - - Business Meeting -- Reports of committees, election of officers, etc.

Wednesday, July 16, 1947

Reserved for special conferences and field trips to be arranged at the Training School.

Michigan Department of Conservation personnel will be available to accompany parties who wish to visit Conservation projects.

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ASSOCIATION OF MIDWEST FISH, GAME AND CONSERVATION COMMISSIONERS

Fourteenth Annual Meeting
July 14, 15 and 16, 1947
Conservation Training School, Roscommon, Michigan

MONDAY, JULY 14, 1947

The meeting opened at 9:00 a.m., with H. D. Ruhl, Game Division, Michigan Department of Conservation, and President of the Association, presiding. Mr. Ruhl introduced Commissioner Harold Titus, Director P. J. Hoffmaster, and Secretary Wayland Osgood to the group.

Titus: The Department of Conservation is very glad to welcome to the State of which we are very proud and to the Higgins Lake Training School, of which we are also very proud, the members of this meeting. Anything that you may suggest to help us with our problems will be appreciated.

Hoffmaster: I am very thankful that we have a place like the Training School where a group like this can get together and talk things over.

Osgood: It seems good to be able to sit in on meetings and not have to take notes.

F. F. Tubbs, Regional Game Supervisor, Region II, was placed in charge of the field trips for visiting members and guests: He suggested the following trips:

1. Hunt Creek Research Station - Lewiston (a half-day trip to see what the state is doing on trout research. Also to observe a study of population by the shocking method.

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2. Grayling Fish Hatchery.

3. Dead Stream Impoundment (Waterfowl, fur-bearers, fish)

4. Controlled burning area (intended primarily to maintain an opening for prairie chickens and sharptails, and to provide better grazing for stock owned by local farmers.)

5. Deer (comparison between their states and ours - visit some of our worst deer country in Michigan).

6. Grouse trial area at Gladwin Area.

7. Higgins Lake Forest - planting here, nursery here, commercial cuttings of benefit to game.

8. Fire fighting - Roscommon Experiment Station. (observe radio setup)

9. Parks (how they function) - can visit the following: Hartwick Pine State Park and Higgins Lake State Park. (Will review park administration and problems).

10. Fishing (will provide guides for fishing, feeding of fish, canoe trips).

Contact me (Tubbs) and I will get in touch with other men to make arrangements necessary for your requests.

Mr. Ruhl announced the names of Committee members, viz:

Resolutions Committee:	Chester Wilson, Minnesota - Chairman H. A. Rider, Ohio Livingston Osborne, Illinois M. O. Steen, Missouri
Finance Committee:	Robert C. Sparks, Illinois, - Chairman Clark Wilson, Nebraska Ernest Swift, Wisconsin
Nominating Committee:	Donald R. Hughes, Indiana Frank D. Blair, Minnesota E. L. Wickliff, Ohio Stanley Saugstad, North Dakota

PHEASANT POPULATION TRENDS AND WHAT TO DO ABOUT THEM

by Stanley Saugstad, North Dakota

I don't know how others may feel about this problem of pheasant population trends, but, personally, I feel that our understanding of this problem is somewhat similar to the knowledge of preventative medicine at about the time of the Civil War. I have been greatly interested in the remedies used by people prior to the time when the causes of disease were known. People tried various things which in the light of our present day knowledge were absurd: shooting fire-crackers, building huge bonfires, use of charms, tub-thumping, etc., simply because they didn't know what was happening. I feel that our understanding of these population trends is still somewhat in the tub-thumping stage. We are getting a toe-hold and a hand-hold on more figures and more facts, and are slowly gaining ground, but the answer is not at hand. I could sum up this situation very briefly: Our North Dakota pheasant population trend has been downward during the past two or three years and what to do about it is the big question. I doubt that there is anything within our means at the present time which would materially influence the pheasant population in North Dakota.

Previous history shows that the pheasant came into North Dakota comparatively recently, about the time of the First World War. There were some game farm birds released over the state. Also there was a natural influx from South Dakota. The pheasant population built up steadily in the mid 30's and early 40's until 1944, when the peak was reached. There were some local drops in 1943 and 1944. The following table shows roadside count figures and results of hunter bag surveys and estimated nesting success for the entire state.

Year	Old : Young Roadside Count Late July	Birds Per Mile Roadside Count Late July	Hunters' Bag Old : Young	Estimated Nesting Success
1944	1 : 2.7	1.94	1 : 2.50	21%
1945	1 : 1.5	1.56	1 : 2.00	16%
1946	1 : 1.5	.97	1 : 1.88*	12%

The above data was supplied by the Federal Aid Division of the North Dakota State Game and Fish Department.

In 1940, a few nesting studies were begun and continued for about 3 years. They showed a success ratio of 20 to 30 percent. Crows and skunks were partly responsible for losses, but normal agricultural practices were a bigger factor. Studies were dropped during the war, so there are no figures for the critical period when the state population began to drop. Thus, we do not have a true picture of what the situation was for this important period.

Although final figures for this year were not available at this time, it appears that nesting success is about 20 per cent for one area and in some sections 10-12 per cent. In places, it may be less. It is fortunate that pheasants renest, for it they did not, our pheasant population would be much lower than it now is.

The annual natural mortality of pheasants is estimated to be about 70 per cent, thus, the yearly reproduction must be considerable to make up for this loss. There is reason to believe that a 20 per cent nesting success will just about maintain a constant population under North Dakota conditions.

(Example: Suppose that there were about 100 hens and 100 cocks in a unit area):

Of 100 hens 80 birds left. If they renest, 20 per cent	20 have success
i.e., 64 birds left. If they renest again, 20 per cent, i.e.,	12 came through
	12.8 came through
	48.8 successful nests

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* This figure is a little misleading since a preponderance of the birds examined were probably taken in the areas where production had been the most favorable. Such areas would naturally tend to have a larger ratio of young birds and hunters will go where the shooting is the best. There were large areas within the state where the ratio was three old to two young birds.

Thus, 48 of 100 hens could successfully produce with a 20% nesting success. I think we can assure that 10 young are in each brood--that would be 480 birds successfully hatched, which would probably maintain a given population. IF the mortality rate of young birds and old birds is approximately the same until they reach the hunter's bag, then these figures are somewhat near correct, and IF the hunters make no selection between old and young birds.

To be sure, a few hunters will pick out the old birds (with matured plumage), but the average or inexperienced hunter will tend to get more young birds. Thus, the hunters' bag is perhaps a fairly representative sample of birds in the field. Based on the assumption that a hen pheasant will make three attempts at renesting, the probable average nesting success in North Dakota the past few years has been as follows:

1944	About 21% nesting success
1945	About 16% nesting success
1946	About 12% nesting success

(However, in a large section of North Dakota, hunters bagged 3 old birds for every 2 young in the fall of 1946. In this adult-heavy area, nesting success was possibly as low as 5 to 6%.)

Although the evidence is rather strong that our present decline in pheasants is attributable to reproductive failure, it is not so easy to indicate the causes behind our curtailed production. Weather and land utilization are probably the two most important factors.

All grains have gone up in price and beef prices have gone up. As a result, farmers are utilizing their lands as they have never done before. This intensified use of land is one of the most important factors in reducing available nesting sites for pheasants. Thus, pheasants are driven to use less desirable areas for nesting. Nests showing greatest percentage of success are in uniform cover--fields or areas of several acres or more. Brush patches, stone piles, ditches, and other small patches of cover are generally showing low nesting success.

I have farmed myself and have tried to save every nest I saw while plowing. I've virtually never known a plowed-around nest to succeed. I think that it would be better to plow a nest under in the hope that the hen would renest. In the event that the hen is incubating when the nest is moved, she will usually return to it. The shorter the remaining incubation period, the greater are the possibilities of success. There appears to be little correlation between density of cover and nesting success.

Other factors which have influenced our pheasant population include: Severe winters, especially blizzards; a rather dry spring and summer in 1946 which made a change in the type of cover; floods, excessive June rains which caused birds to abandon nests. Fox predation is in evidence, but I do not believe that they had much effect on our pheasant population. Pheasant populations rose and dropped independently of fox populations. Crows are fairly heavy

over much of the state and are probably of some importance. The skunk is a big factor, more important than the crow. There is a bounty on crows in North Dakota, but skunks are taken for pelts and protected the rest of the year.

Grouse are still up fairly well, although roadside counts tended to show a little drop. The sharptail is our principal species of grouse, but we also have the pinnated and ruffed grouse. Ruffed grouse first dropped in 1942 and 1943 (very low) and are still low. Huns went down in 1943 and dropped way down but seem to be coming back slightly at least in some areas.

Discussion

E. L. Wickliff, Ohio: What about changes in the reproductive capacity of pheasants from year to year?

Saugstad: Clutch size is about the same.

P. J. Hofmaster, Michigan: Is increased land use the principal cause for the drop in pheasant population?

Saugstad: Pheasants have dropped about the same on refuges where there has been no change in land use.

D. R. Hughes, Indiana: Do you think inoculated seeds are responsible?

Saugstad: I doubt it.

Ernest Swift, Wisconsin: Can you give a definite figure on density?

Saugstad: That's a difficult question to answer. I cannot give an honest answer to the question as it varies so much. There must be 50-100 birds per square mile for good pheasant hunting. But concentrations may be much greater. For instance, one rancher reported 3,000 pheasants feeding in his cornfield (during a good year) and wanted to be rid of the birds because they were causing damage. I thought maybe the rancher was exaggerating, as many others do, but we found it to be true when we investigated. I had never seen so many birds at one time. It was a highly abnormal situation, however.

L. E. Osborne, Illinois: Is disease another factor?

Saugstad: We have no evidence that it is.

Osborne: Wouldn't cycles have a lot to do with populations?

Saugstad: I cannot answer that right now, might be able to in 15 or 20 years.

Osborne: Do your figures show a drop in pheasants in 1935-36?

Saugstad: I think Mr. Steen can answer that better than I.

M. O. Steen, Missouri: Yes, there was a drop. I think the change in type of cover is a principal factor. I watched the trends on Federal refuges (Valentine Refuge in Nebraska and Sand Lake Refuge in South Dakota). At the peak at Sand Lake I saw 10 birds to the acre, the highest I've ever seen. There are two factors involved--the quantity of cover and the type of cover.

Abandonment starts succession toward climax. Succession growth is especially favorable to pheasants. The refuges went through the succession. As the area approached climax, the pheasants declined. An intensification of land use has been very pronounced, most marked in Dakotas where climatic effects are extreme. A decline not only in quantity but also in quality has been evident. Habitat changes hold pheasant populations down.

H. A. Rider, Ohio: I agree with most of the statements that have been made here. Ohio is one of the smaller states in area, with 26,318,000 acres, and over 7,000,000 people living in that area. Our state is second in industry, fourth in population, and 3-5th in agricultural production. There were about 709,000 licenses sold last year, but around 1,000,000 hunted. Farmers and the immediate family of the farmer and tenants on the land are permitted to hunt without a license. Of the 26,000,000 acres of land and water, 1½ million acres is water, 1½ million acres is in municipalities (more large cities than other states), and 2 million acres of highways, railroads, plant sites, etc., which leaves 18 million acres upon which 1,000,000 people hunt. Practically all our pheasants are scattered in the rich agricultural land in the northwest part of the state. This area covers approximately 6,000,000 acres, which in poor times sells for $100 to $125 per acre and in good times from $300 to $350 per acre. The average Ohio farm consists of 90 acres of land. Intensification of land use was a factor in downward trend of birds. The depression helped to increase pheasant populations - government paid farmers not to grow crops, and pheasants became a nuisance during war years when crops were again needed.

Lack of habitat, winter cover and nesting cover is now the most important factor in downward trend of pheasants. There is 24% less hay crop - corn has taken the place of most hayfields. Production of alfalfa for livestock has also been a factor. Torrential rains during the nesting season did not help either. Our pheasant population reached its peak in 1941, and since then has been declining steadily.

What can we do about it? We can do nothing about the wet springs, but we can do something about land utilization. Vermin (crow and fox) are not the important factor, neither is disease. Generally, there is no need for worry about food and water in Ohio.

The state of Ohio is attempting to set up a project of leasing crop fields and woodlots on a cash rental basis, particularly hay fields and in some instances alfalfa fields. We expect first to establish winter cover in woodlots. We know from experience where pheasants concentrate. Around the woodlot we are attempting to lease sufficient nesting cover to take care of birds that concentrate there in the winter. We want to get sufficient undisturbed nesting cover surrounding these areas (100 to 1,000 acres, probably an average of 500). We feel that by doing this pheasant populations will come back. It will be necessary to spend somewhere in the neighborhood of $500,000 in this project during the next year. We are finding that we have to pay about $10.00 an acre for this nesting cover. Farmers will not disturb this nesting or winter cover by grazing, cropping or harvesting.

PHEASANT POPULATION TRENDS IN OHIO

by H. A. Rider

According to authentic information, pheasants had become established in a few Ohio counties prior to 1903, but it was not until after the closing of the bob-white quail season in 1913 by an act of legislature that pheasants were liberated in large numbers throughout the state. Over 120,000 pheasants and 130,000 pheasant eggs were distributed to individuals and organizations prior to 1930.

In 1930 Dr. L. E. Hicks compiled a map of pheasant distribution and abundance. The map showed that pheasants had failed to establish themselves in the unglaciated portions of eastern and southeastern Ohio, but they had become established in the prairie sections of Marion and Union counties and a narrow strip bordering Lake Erie from Lorain to Toledo. The same map showed that pheasants were common in a large section of west central Ohio, and extending northward to include parts of Hardin, Hancock and Seneca counties. In most of Wood County where pheasant populations reached their peak almost a decade later they were reported on the map as only fairly common.

In 1940 Hicks prepared another map showing the pheasant population trends as determined by the same type of census methods as was used for his first map. The 1940 map showed population levels of more than 300 pheasants per square mile in parts of Wood and Hancock county in northwestern Ohio and less than 100 pheasants per square mile in Marion and Union counties, which were the high concentration areas in 1930.

Recent Population Trends

Due to war conditions the pheasant studies were dropped from 1942 to 1945. On November 1, 1945, and on the same date of 1946, a one-day roadside pheasant survey was conducted in northwestern Ohio by the Wildlife Research Unit. The roadside surveys were made in Hancock, Hardin, Henry, Marion, Sandusky and Wood counties, in which similar surveys had been conducted during 1938, 1939, 1940 and 1941. The count of pheasants per 100 miles were as follows: 1938 - 103, 1939 - 112, 1940 - 104, 1941 - 131, 1945 - 79, and 1946 - 83. (Leedy).

Extensive pheasant nesting studies during the summer of 1946 were conducted by interviewing farmers in four counties to compare nesting densities with those reported in previous year. A farmer reports indicated only 2/3 as many nests per 100 acres of hay in 1946 as for the same counties in 1939.

Dustman and two assistants, working full-time on the four-mile square study area in Wood County found 276 nests, compared to 563 in 1939, 539 in 1940, and 558 in 1941.

Only 89 of the 276 nests found in 1946 hatched, compared with an average of 563 nests for the years 1939 to 1941. Flooding which occurred on June 12 and 17 was very destructive to nests. In one 35-acre field of sweet clover, 43 of 47 nests were destroyed by high water. The fate of 276 nests found on the study area was as follows: Successful nests - 89; nests destroyed by flooding - 78; nests preyed upon - 29; nests deserted - 17; nests destroyed by mowers - 43; by man - 3; and by unknown causes - 17.

In a sample of 784.4 acres of first cutting alfalfa, June 1, 1946, for dehydration mills, 128 adult females were known to have been killed, 5 adult females crippled and 85 juveniles killed.

In a 23-acre field of alfalfa near the Liberty Township refuge in Wood County, which was cut June 1, 35 nests had been established and 29 adult hens were found dead. The second cutting made July 18 - 4 nests, 4 dead hens and 12 dead juveniles were found. At the third cutting September 5, no nests and no dead hens were found, but 10 dead juveniles were found in the field. (January-March, 1947, Wildlife Research Unit report).

The kill figures of pheasants for 1946 was approximately 868,000 as compared to 685,000 for 1933.

Based on all the surveys and areas studied there is a low population of adult females as compared with the years 1938 to 1941 and a relatively small percentage of successful nestings and a small average brood size. Leedy and Dustman, 1947, pointed out that land-use trends have been unfavorable, in general, to pheasant production. More food has been made available through increased acreages of wheat, soybeans, oats and corn and the increased percentage of corn currently harvested by mechanical pickers. However, the increased amount of food has not compensated for the loss of nesting areas due to a decrease of 24.4 per cent in hay crops and to a reduction in the number of idle fields formerly used for nesting.

Discussion

E. D. Martin, Ohio: Asked a question regarding aggregate acreage of leased land.

Rider: We hope to lease an area of 250 to 500 acres in each township. That will cover probably 45 counties in the state, with an average of about 10 townships to the county. They will be five-year leases, subject to renewal, at a rental of $10.00 per year. There will be no hunting on those areas. Our idea is to trap off our surplus birds in the heavy pheasant areas and transplant them.

Rider: We will distribute from our game farm about 35,000 birds and put out probably 70,000 to 75,000 birds to the sportsmen's clubs, although the latter will probably not help much. The game farm birds, which are free-flying birds, we expect to put primarily on the refuges. Survival of game farm birds is very good. We will put them out in the middle of September. We formerly put them out soon after the heavy snows ended. We discontinued holding the game farm birds over through the winter. We carried on a tremendous banding program before the war, but have not been banding many birds in the last few years.

The nesting areas will change from year to year. Those areas are not being taken out of agriculture, but there will always be some area with plenty of cover for pheasants. We will give the farmer seed to sow, following the best soil conservation practices. The areas under grass will change from year to year.

We will spend about $500,000 per year on the leasing program, which will eventually cover 50,000 to 75,000 acres. We are putting practically all out Pittman-Robertson eggs in that one basket. No grazing will be allowed on those areas. We are trying to encourage the planting of sweet clover. We are getting the nesting cover around those woodlots where we know have been heavy concentration.

Rider: Mr. Ruhl, what is the history of pheasants in Michigan?

Ruhl: In 1918 we had 5,000 or 6,000 birds on an average; and 25,000 eggs. We opened the season in 1926, but do not have very good records of kill, etc. Populations gained gradually until 1941, and has gone down same as in Ohio since then. We raised more birds last year than we have ever raised before.

Rider: We have about 38,000 birds when they are doing good. The Government subsidies to farmers for reducing their crop plantings greatly benefited the pheasants. Since the subsidy was removed, the pheasant population has dropped. Our high was in 1941 also.

Mail was coming by bag loads complaining about too many pheasants. The Heinz Tomato Products Plant has written asking to be rid of pheasants that are getting in tomato crops.

Ruhl: The Michigan peak kill was in 1944, but 1941 probably was the high in population.

Saugstad: Our first state-wide drop in North Dakota occurred in 1945 - 1944 was our peak year for pheasants - but in 1946 the decline was more pronounced.

Frank D. Blair, Minnesota: Different states do vary in pheasant populations from one year to another. The year of 1937 was when the bad drop in pheasant populations occurred in our state.

Frank D. Blair, Minnesota: Minnesota had a severe drop in 1937. The peak was in 1941. The drop in 1937 was after a drought, followed by a very wet season. Last year we showed a slight increase, but a bad winter destroyed some of our brood stock.

HOW TO APPLY RESEARCH FINDINGS TO FISH AND GAME MANAGEMENT

by Ernest Swift, Wisconsin

I am glad to see this Association meet again, and am quite positive this organization has great possibilities.

There are three types of interest in applying research findings to fish and game management. They are administration, management, and research. I represent the administration side of it in our Department. Application of research is part of administration. I have noticed that research men think I favor management, and the management men think I favor research. That is because I usually take the part of research men when I'm with management men, and vice versa.

Public Relations -

(1) Experience with deer research:

Wisconsin's deer research was more of a survey than research. What research we have done has been good, but our strategy is not always right. In 1940 we hired a man to take charge of this kind of work. We wanted a man from the field who had good experience and who was respected by all, to be teamed with a research man, but we were unable to carry this out. As a result, many of the field men and research men do not agree, and a good program cannot be carried on with a situation like this. To have a successful program you must have a common front in your own department. Employees should have the opportunity to analyze the problem, educate themselves, and thereby understand all phases (research, management, and administration) thoroughly. Even with all the above mentioned precautions, there will still be a triangle. Research men and management men do not like to deal with the public. There has to be a definite internal understanding, with no IF, ANDS, or BUTS, before the outside public can be sold on anything.

Since 1940 about $500,000 was spent on the deer survey and artificial feeding. The Legislature threatened to pass a bill reverting $250,000 from Conservation money. Some legislators differed with the Department on its deer policy, and as a result was the basis of much controversy. After a department has set up budgets and then suddenly has $250,000 taken away from it, there must be a lot of revamping to reorganize the department.

(2) Pheasant:

The pheasant has been discussed already. Each state has its own setup and problems. The type of area, cover, and human population are factors in the movement of a crop of game. Some years ago there was a good deal of artificial propagation. In 1942 the peak (800,000 cocks) in kill and the peak in distribution took place. During the war both went down.

(3) Red Fox:

This species has gone up in the last few years. The Wisconsin hunter has his own ideas regarding the pheasant situation. He seems to feel that the Department has proved that artificial propagation is the answer, and that when you stop distribution, together with the fox coming up, it is responsible for low cycle. They accuse the Department of being inconsistent.

I am not in accord with the management end of our department that artificial propagation of pheasants is the last word for high pheasant populations, nor do I agree with the researchers who say it hasn't done any good. Game farm work is not as important as management thinks it is, and yet more important than research thinks it is, but I believe the two are gradually getting together on a good common program.

(4) Fisheries:

Two years ago there was an idea within the Department that too many streams were being stocked with trout. There were 76 streams in one county that had been stocked. Some Fisheries men thought stocking was not the answer anyway. They were going to eliminate stocking in 70 of the 76 streams, but some Legislators stepped in, and now the Fisheries boys have modified their ideas somewhat. They tried to go ahead too fast, and you must sell a program before going ahead with it.

We have a little project in Vilas County that has five lakes, and which is outside of the general fishing area. These lakes were overstocked with small fish. The Department requested that all size limits be removed. Then research and management men called on people interested in conservation in the county. Permits were issued solely to see what was being caught, and it was found that the fish were practically all under-size. Thus, it was difficult to get people to fish there. Resort owners had to urge people to fish heavily. This is a case where management and our fisheries research men were coordinating efforts. Quite often research men get starry-eyed and management men get bull-headed. It is administration's place to pull them together, which takes a lot of time and experience. Too often research men say they have an objective and program that has nothing to do with management, and vice versa. Again, administration must try for a common objective.

Discussion

Chester Wilson: Ernie hit the nail on the head time after time. The fruits of their research were appreciated by Minnesota, especially Swift's book. Wisconsin's films of actual conditions, and the photographs in these deer yards were used in successfully convincing the Minnesota Legislature and public. Now our troubles are in other fields, upland game for example.

We are still up against the kind of problem of getting public support that Ernie has brought out. As an administrator, I have tried to get research and management boys together, and also to get both of them

closer to the public and to sell their programs. I have suggested, and progress has been made, in getting sportsmen's groups and other interested agencies to cooperate in the whole wildlife and conservation observation program. We carried on the practice of sending out questionnaires for a long time, asking for reports on conditions of various wildlife populations. This information was to be used, along with information from Game Wardens and other Department personnel, in making regulations on various subjects. In most cases, though, these reports only represented the writer's opinion and not true facts. We are hoping to have a system whereby scientific-minded men who are also sportsmen will work with a committee of others. This hasn't gone far yet, but we are trying to increase it from time to time.

P. J. Hoffmaster: I spent a day with Mr. Strehlaer of Columbia talking about the possibility of convincing the public of new ideas. He said it took 30 to 50 years trying to effect a change in public ideas in established practices. It is not wise to wait until the public gets around to agreeing with this idea, but have research men and management men get together and have discussions, and then you will come to a common denominator. Certainly, there is no one formula. The need for cooperation among the three phases - research, management, and administration, is obvious.

I am not sure just what strategy should be applied, but do believe that the shock strategy is sometimes necessary.

Swift: We stood by our recommendations, but the Conservation Commission toned them down. After a while we got them by the Legislature. We recommended an antlerless deer season in Wisconsin with suitably closed areas where there might be over-shooting. The Conservation Commission decided on a regular 9-day buck season.

The public seems to be toning down a little, so there may be a little advancement in our education of the public.

D. H. Janzen, Minnesota (Fish and Wildlife Service): The Fish and Wildlife Service's waterfowl management program has been going on for many years, and while the Service has had much contact direct with the public, a major portion of public opinion has probably been made known to the Service through the respective State Departments. This year the Service held public hearings (eleven throughout the States), but I have not made up my mind as to what they accomplished. Certainly, some of the parties on both sides failed to change their minds, but they did have a chance to make their opinions known. I would like to have the hearings continued but with some modifications. Guess we will have to wait until their results are a little better known. I do know that improvement in game management techniques can be effected only as rapidly as public opinion will permit.

Mr. Ruhl called the meeting to order at 1:30 P.M.

Mr. Chester S. Wilson of Minnesota requested time to speak on resolutions. He read a list of suggested resolutions to be adopted by the Association. (Final approved resolutions listed with Tuesday P.M. discussion.)

ULTIMATE POLICIES OF THE STATES IN REGARD TO NON-RESIDENTS

by Donald R. Hughes, Indiana

Gentlemen, right off the bat I am going to make a confession to you. I don't have to confess feeling signally honored in being asked to lead a discussion on the subject of what we're going to do about the non-resident licensee, because it's an interesting subject at this time. I am not plagued with the human vanity that makes people sing in the bath tub, make speeches before imaginary audiences, and, if they are lucky enough to be chosen, orate before real-for-sure audiences.

But, I have still another confession. I am going to confess that you've handed me a most embarrassing subject. In the first place, I represent the smallest state west of the Alleghenies, even though we Hoosiers do feel that we do everything in a big way. We have our non-resident problems, and our resident ones, too. On our south we are bounded by the great Ohio River, and Indiana dosen't own one single drop of that water. Yes, that's a fact--a disturbing one at times. Under the terms of the Virginia Grant, the Ohio remains the property of the state of Kentucky. The Indiana boundary, under the terms of the Virginia Grant, is the low water mark of the North bank of the Ohio River. That peculiar provision has produced many a legal headache, boat loads of lawsuits, and plenty of grief for the Indiana Conservation Department.

It works out this way: A resident of the State of Kentucky can fish in the Ohio River with a license from his own state, whereas an Indiana fisherman to fish the same water must have a Kentucky license. I have heard of instances, though, where a Kentuckian has rowed across the Ohio River, seated himself on the Indiana bank, and wound up afoul the Hoosier fishing code. I have also heard of instances where an Indiana angler made the mistake of fishing the Ohio River from a boat, forgetting to get himself a Kentucky license. You can see without my going into great detail that the Hoosier desiring to fish the Ohio River from his own shores is inviting trouble. However, when worst comes to worst, it isn't entirely up to snuff legally for a Kentucky game warden to be pursuing a Hoosier law violator on the latter's home soil. I find myself constantly defending State's rights, yet when I stop to think, I wonder just what State's rights really are.

We are now hearing a lot of talk about reciprocal license wherein one state can strike back and punish the residents of another state that discriminates against them. Reciprocity, of retaliation, or whatever you want to call it, are terms that sound might good at first. But they do bear close inspection. I never got very far up the mathematical ladder, but I can see a lot of combinations possible among forty-eight units of government, each one waving the club of

retaliation against her forty-seven sisters. While I am proceeding with this effort, would someone better versed in mathematics figure out the total number of possible combinations? Just try and imagine the off-hours left to a Fish and Game Commissioner obliged to work out reciprocal schedules with Maine, Pennsylvania, Massachusetts, North Carolina, Colorado, Oregon, and so forth. Consider, of course, the fact that each of these other states in turn is working out schedules for her forty-seven sister states. Any man with a mind capable of comprehending such an overall picture ought to be on the faculty of some school of technology and not trying to run a Fish and Game Department.

I hope I've made it plain, therefore, that I believe that a reciprocal setup among the states, each operating against the forty-seven others, is utterly silly and impossible. The aggregate cost of bookkeeping would be staggering. It just won't work. Despite this, I remain a contender for state's rights.

The keystone of the license situation is the cost, both to the resident and the non-resident. No state can long continue in the license business charging either its residents or its visitors more than the price of the license affords. The non-resident who comes to Indiana and pays $15.50 for a non-resident fishing-hunting-trapping license has every reasonable right to expect somewhere near that amount of fun from his outlay. If he catches no fish, bags no game and finds his traps empty, he simply isn't coming back the following year. When he later reads ballyhoo and publicity about the wonderful fishing and hunting in Indiana, he's going to be as mad as a wet hen. He's going somewhere else on his next vacation. Not only does the Fish and Game Fund suffer from desertions of this sort, but also the vacation resorts, the service stations, the general stores, the tackle dealers -- everyone.

The damage to a state or a locality from license discrimination is tremendous. Fishing and hunting are so closely linked with the economy of a state or a lesser unit of government that everyone suffers when the administration of the Fish and Game agencies go haywire.

Previously, I mentioned the fact that Indiana is the smallest state in the area west of the Alleghenies. Lacking the area of our sister states means, of course, that we have less game in the aggregate for the resident hunters, not to mention the visitors. As a result, we have, perhaps, less to offer than do such states as Michigan, Pennsylvania, Wisconsin, Minnesota and South Dakota.

But, I will contend that we have a reasonable, fair setup for the non-resident visitor wishing to fish our streams and lakes or hunt afield. The fact is, we are just a little better than reasonable with the visiting fishermen. Take the resident Hoosier who gets a two-week vacation in the summer and prefers fishing to any other recreation. For his two-week vacation out fishing he pays $1.50 for a license, which also entitles him to hunt and trap. But he has no vacation in hunting and trapping season, so his fishing alone costs him $1.50. From some other state comes another angler with a two-week vacation. Like the other chap, he cares nothing for hunting and trapping. Indiana sells him a fourteen-day fishing license for one dollar. From a practical sense, it would be

wise for the Indiana fisherman, when he procures his license, to tell a little white lie -- to say he's from Georgia or Alabama. It would save him fifty cents. Now wouldn't you call that a pretty fair shake for the non-resident angler.

Without meaning one single word of criticism about the South Dakota situation, I'll say that the basic trouble out there was due to over-publicity about their pheasants. Back around August and September, you couldn't pick up a national magazine without reading reams and seeing pictures galore about pheasants. It brought to that state thousands of hunters, some of the irresponsible type, and all the troubles that go with migration of an army. The hotels, the tourist camps, the restaurants and the stores profited no end. The guy that got the hot poker was the farmer, who has come through experience to regard the pheasant as the next thing to a pest. So the farmer bucked in his traces and lost no time in posting "NO HUNTING" signs when some enterprising individuals came around with stacks of them.

I was out there and stumbled across something most interesting. I found that signs in many cases were being distributed by taxi-cab drivers, who drove something besides taxi-cabs. They also drive bargains with the farmers, as follows: The cab driver would first bemoan the fact that the farmer, who fed the pheasants, was the only person not cashing in on the big strike. Then the cab driver would coax the farmer into posting his land with the posters provided by the taxi operators, to keep the hordes of non-residents off the private lands. Then the taxi-cab driver would work in a proviso that he'd bring hunters out, cruise the prairies, pop off the birds from the fenders, take the hunters back to the hotel happy and minus anywhere from $5.00 each up to what amount the hunters were willing to pay. Then the taxi-cab driver would split his take with the farmer. Gentlemen, IT WORKED. The situation produced a lot of difficulties, as you can easily imagine.

But, it isn't the business of Indiana in any sense, or any other state, to be telling South Dakota how to run her business. Suppose we decided to retaliate against South Dakota, charging a resident of that state $20.00 for a state permit and $3.00 for a county ticket to hunt pheasants in our state. Anyone knows that Indiana wouldn't sell a single non-resident hunting license to a South Dakotan on any such basis. It would be plain silly to think otherwise.

It boils down simply to a matter of reason and good sense. The price of any commodity must be based on the value of the goods, subject in a way to the demand.

Running a fish and game department under discretionary powers is exactly the same as running a bank. The capital of a bank is its cash and its good investments. In our business the capital structure is the amount of fish and game we have to offer. With a bank it's the interest rate, and with fish and game, it's the cost of the license. When the cost of the service is out of line with what is offered in exchange, of course the patrons shift their business to a competing institution. Isn't that basic? Isn't that proof that fish and game as a business, has to follow sound business practices. So why let ourselves be carried afield with the idea that we can discriminate and hold the business.

You may think you have troubles. I'll remind you that my legislature has provided free, lifetime permits to all persons of all wars who are back from the service. Today, around three out of every four persons who fish, hunt and trap in Indiana, do it through the free permit. The remainder foot the fish and game bill, and we of the department do the sweating for the entire state. And it appears that the system will remain with us. But even in the face of that situation, I would not become a party to any deal to discriminate against the non-resident who chooses to vacation in Indiana and spend his money with our established businesses.

In closing, to open up the general discussion, I'll say that nothing would please me more than for you to pick my remarks to pieces. I'm up here to learn all I can, to see if there isn't some way for my Fish and Game Department to find its way out of the woods. I would like to hear an expression from each and every person in this room, but let's keep one thing in mind -- men best succeed who best agree.

Discussion

Chester Wilson: Is raising license fees a good way to control take of game?

Livingston Osborne, Illinois: Each state has their own money and should do what they think best in their respective case.

Chester Wilson: It is necessary to keep license fees high, or you will have too many non-residents. Hunting pressure is a minor factor, but I have always wondered if other states think it desirable to raise license fees to ward off non-residents.

Rider: There is no room for non-residents in Ohio. Already there are too many people and not enough land.

Swift: I do not believe the policy of raising license fees is fundamentally sound in game management, as you would be changing the amount of the fees too frequently in trying to keep up with the fluctuating population.

Osborne: License fees are for the purpose of collecting revenue which is needed for keeping up the game populations.

Rider: If you cut the pheasant season in half, in which case you would have to cut the hunting time for other game, wouldn't you be losing money? Conservation Commission members said we weren't interested in that, but in game populations. If we fall down to 400,000 hunters this season, we will raise our license fee to about $3.00.

Osborne: Still, states need money in order to carry out those things.

Rider: I agree with you, but do not agree with Chester Wilson's view.

Robert C. Sparks, Illinois: Raising license fees would not help. The price of non-resident licenses has nothing to do with it. It is the other expenses of the trip.

Ruhl: A considerable number of persons from out-of-state were fishing through the ice for bluegills. Many persons feared over-fishing, and the feelings got out of hand. The Legislature put a stop to non-resident fishing through the ice because of local objection.

Rider: A person from Ohio can buy an Ohio River fishing license for the same price as a Kentuckian can buy one. The complaint in Ohio is that all the Michigan people are flocking down to hunt 'coons, but we sold only 23 non-resident licenses in the year which the complaint was made.

Ruhl: What should this Association do about this common business of discriminating against out-of-state hunters?

Blair: This should be done in the discretion of the Commissioners. Minnesota laws do not permit non-resident trapping. Fishing license fees are $3.00 for individuals and $4.50 for husband and wife. These fees attract 300,000 non-residents. But hunting license fees are $25.00 for small game, and $50-$25 for deer, which fees I believe keep non-residents out.

Hughes: Resident license appropriation was turned down. Indiana is about the only state that gives free permits to so many people.

Blair: A legislator wanted to give free permits to all residents of our state who were on pension, but the Conservation Committee killed this bill.

Hughes: In 1927 the Republicans were in power and put the bill through. They are in power again in Indiana. We tried to get the legislative committees of the House and Senate to put a bill through to abolish the Veteran's Free Permit policy, but it was too hot a potato. Out of the appropriation for the whole department we got $300,000. This year we got an appropriation of $500,000 for the whole department. For the first time in the history of the Department, Fish and Game gets $40,000 out of the whole appropriation, which we think is quite an improvement.

Osborne: Some legislators make big speeches just to get elected. What Indiana needs is a good sportsman's club to get a man in office that will do things right when he is in power. Conservation is something the whole country is talking about, and so politicians always put it in their campaigns because it gets them somewhere.

Saugstad: Do other states discriminate between aliens and non-aliens in issuing non-resident licenses?

Rider: A British Ambassador came to Ohio wanting to hunt, but could not get a complimentary license because England does not allow us to hunt in their country. Our state will not sell to <u>any</u> foreigner whose own country refuses to sell hunting licenses to Americans.

Osgood: There are eleven states that discriminate against aliens hunting in their states.

Chester Wilson: In Minnesota we now sell licenses to aliens.

Mr. Ruhl called the meeting to order and introduced Mr. W. E. Crouch, Chief, Division of Game Management, U. S. Fish and Wildlife Service, Chicago, Illinois.

WATERFOWL MANAGEMENT

by W. E. Crouch, Fish and Wildlife Service

Managing waterfowl is much more difficult than other game. One reason why it is difficult to get basic data on waterfowl is because waterfowl starts out from Alaska and Northern Canada and many species won't stop migrating until they get in South America. The Fish and Wildlife Service has made many efforts to survey the population. Hunting regulations were passed - an inventory of the United States waterfowl was made in January, with the help of 1,200 State personnel - Canadian officials were very helpful also. An estimate of 54,000,000 waterfowl was made in this survey. This summer twelve men, cooperating with some men in Canada, investigated what the breeding conditions are and what to expect in the way of a fall flight.

Funds for the Fish and Wildlife Service to purchase or develop new areas comes from the sale of Duck Stamps, and is not sufficient. It is for that reason that we must ask help from states in purchasing of areas suitable for breeding and other purposes. There will be over $9,500,000 available to the states for wildlife purposes, and there is nothing saying you can't use it for waterfowl management. The states are in a position to do something about money, but we are not. There is not much to do in Alaska, as there is sufficient habitat there. Canada has drought and many other things to limit our activities there.

There are 184 so-called duck factories projects. There are over 5,500 dams, and there have been developed and maintained 20,000 water improvement projects. Wintering grounds are important, and, at the present time, are most lacking. There is no reason why states can't purchase and maintain wintering grounds under the Federal Aid Act. They should establish public shooting grounds also. In the future, if it is done, we'll be able to satisfy the average hunter. They should not be established in one spot, but should be scattered over a wide area. Contrary to what it may seem, a public shooting ground is a conservative measure and has been proved so. If a man is satisfied with his first day of hunting he will hunt no longer. You reduce the illegal kill. These grounds could be planted with various aquatics which would serve as feed and are very good for this purpose.

Waterfowl are subject to many ways of dying. Some of the factors that cause loss of ducks are: (1) disease, (2) pollution, (3) lead poisoning, (4) predation, and (5) kill both legal and illegal. The only factor that can be really controlled is that of kill. Regulations are simply a means of controlling the take of game, but they are of no consequence unless they are enforced. True, the Fish and Wildlife Service has a small staff, but it makes every effort to see that hunting regulations are observed. State game departments have helped a great deal, and can be increasingly helpful.

Present Waterfowl Situation

Reports which we are getting daily from breeding grounds, while not too pessimistic, are not entirely optimistic. In parts of the breeding grounds conditions have been favorable, in other parts they have not, due to drought, low water levels, etc. The main difficulty is the scarcity of breeding stock, and also there has been an enormous increase in hunters. Since 1942 there has been approximately a 50% increase in hunters, and there is nothing that can be done and still fulfill our obligations other than to cut down in waterfowl to be taken this year. You can look forward to a shorter season next year, a smaller bag limit, and a shorter number of hours to hunt per day in the case of ducks.

Geese

The goose situation is not as bad as the duck situation. However, in certain areas it is not too good. The Mississippi Flyway may be open to geese this year. We had approximately 16% increase in Canada Geese in the Mississippi Flyway this year over the year before. They really are not in good enough shape to hunt, but there will be a small bag limit and a short season.

GENERAL DISCUSSION

Osborne: We have been fighting the practice of shooting a half hour before sunrise for many years. We are for a split season, but cannot see the reason why, if you allow 35 days, you should cut it to 28 days on a split season. Where we have a long season we need a split season, but if you cut it to 28 days we do not care about it.

Crouch: The experts, and myself, feel that two 14 day seasons are equivalent to one 35-day period. In effect, you will have two opening days, with their great concentration of hunters. It also makes it possible for a state where we are permitting only a few days to get a greater concentration of hunting.

Blair: What is a split season?

Crouch: A split season is where you open a season for say five days, close it, and then open it again for a few days. I do not think this practice tends to be good conservation.

Blair: What is your reasoning?

Crouch: A split season means two opening days, which is bad on any game. Hunting would be more suitable on split season, and therefore would have more kill.

Osborne: I should think that the bag limit and the season limit would take care of this.

Crouch: The average man did not get his bag limit last year.

Blair: I agree with Crouch; a split season is not good conservation.

Rider: For those states that do not allow hunting on Sunday, I believe they should be given extra days to make up for it.

Ruhl: We have certain counties that do not permit hunting on Sunday.

Steen: Many people have the idea that bag limits control the kill, but there are many other factors controlling kill. In past seasons we have had a bag limit of ten birds a day. On this basis, since there are 2,000,000 hunters (from Canada, United States, and Mexico), we could take 20,000,000 birds per day legally. How long would waterfowl last if the bag limit were the controlling factor?

We agree with Minnesota in our ideas about the split season. It is during the first few days that the heavy kill occurs, and while the migration is on. I do not think that 28 days in a split season can be compared to a straight 35-day season. I think the boys in Missouri want the Fish and Wildlife Service to keep on setting waterfowl regulations, but most of them think the seasons should be set with regard to what the waterfowl need and not what the hunters ask for.

Blair: We actually have a season of about three and a half months during the course of the migration.

Rider: What about Canada?

Crouch: Canada is taking very similar action as that we are taking. They are taking drastic action in season and bag limits. They are going along very wholeheartedly.

Osborne: What about predators in Canada?

Crouch: They do not have many complaints.

Osborne: It is very important up there so it would help us if they did.

Crouch: It is not as important as some think. People think Indians and Eskimos take a lot of eggs, but they do not take more than they want to eat. A duck will renest when the eggs are taken.

Clark Wilson, Nebraska: What about the crow situation?

Crouch: If you were going to absolutely control the crow situation the cost would be prohibitive. It would be up in the millions that would have to be killed to do much good. I don't think it would do very much good as far as waterfowl are concerned. With the exception of a few areas, the work would have to be done right on the breeding grounds, which is probably out of the question as far as the Service is concerned. A comparatively small number migrate to the nesting ground. So what you kill here would not have much effect as far as breeding grounds in Alaska and Canada are concerned.

Blair: Our duck populations are about the same as last year. However, we have killed more crows in Minnesota than in any previous year that I know about. In traveling through the state you will see fewer crows than ever before.

Chester Wilson: Would you care to make any comments on the regional council meetings with state sportsmen's organizations?

Crouch: I think it was a good thing. It was handled at the time of the year when Dr. Cottam and I were busy and couldn't devote much time to it. I think it would have been more successful if it had been held after winter inventory. Next year we could have a small meeting and then a large meeting in order to combine ideas. But, on the whole, I do think the meeting on waterfowl produced some real good.

On the matter of split season again, I will say that one state may think they need it and another state does not. Each of you want all the things you can get for your own state, which is why we have this chance to talk things over. Something is being prepared to send out to fight for this.

Rider: For the past eight years in Ohio we have had only two hearings. In April every county in Ohio will have an open hearing on game. Each county will select a sportsman and a land owner (usually a farmer) to attend the district meeting in May, composed of 12 or 14 counties. Written recommendations will be typed up in this meeting. Again a land owner and a sportsman will be selected to attend the Columbus meeting in July as an advisory committee, at which time reports from each district will be given. Each district will read off their recommendations in order on each subject. A knock-down-drag-out discussion among delegates will then ensue, and after four or five hours an agreement will be reached. The next day, or that afternoon, the Conservation Commission will set season limits and hours, and then submit it to the President.

The public would be better satisfied with things if all districts had a say in what was to be done. So all the way around this would be a good thing to promote.

Crouch: I suggest to you game administrators that you all get together and determine your seasons on a basis somewhere near comparable, so that when you tell us what you want, at least a group of states will have somewhat comparable seasons.

Mr. Ruhl called the meeting to order and introduced Mr. S. G. Fontanna, Deputy Director, Michigan Department of Conservation.

RADIO FOR CONSERVATION ACTIVITIES

by S. G. Fontanna, Michigan

I asked Mr. Ruhl for a spot on this program because I felt that you gentlemen should be acquainted with what has been taking place in radio-conservation affairs during the past three years.

Use of radio in conservation work has, with minor exception, been devoted to forest fire prevention, detection, and suppression. Used first for this purpose by the U. S. Forest Service in 1927, its use increased greatly during the decade 1930-40, both by the Forest Service and by many of the states. In 1939 the Federal Communications Commission recognized its importance by making eleven radio frequencies in the 30-40 m.c. band available for forest fire control. Michigan was one of the pioneers in the use of radio, and early found that it could be put to effective use for law enforcement purposes as well as for forest fire control. This was brought about undoubtedly by the fact that in Michigan forest fire control and enforcement of game and fish laws and regulations are combined in one division called the Field Administration Division, and the field representatives of this division, namely, the conservation officer, is both a forest fire and a law enforcement officer. However, because the channels allocated by the Federal Communications Commission could only be utilized for forest fire control, an arrangement was made with the State Police to use their radio frequencies for law enforcement work. As a consequence, conservation officers' cars were equipped with radio to handle calls on both forest fire and State Police frequencies. At the present time Michigan has 191 cars, 119 fire towers, and 33 fixed stations equipped with radio.

I cite the above merely to show you that Michigan has had considerable experience in radio and is thoroughly sold on its use for law enforcement work as well as for forest fire control.

Prior to and during the war the number of uses for radio and the demand for frequencies increased so rapidly that the Federal Communications Commission, realizing that it did not have the necessary personnel and facilities to do an adequate job of allocating the available frequencies, in 1943 requested private industry to set up an organization to make a study and present recommendations for frequency allocations and engineering standards for radio services. The result was the formation of the Radio Technical Planning Board, which was divided into a number of panels representing various services. Forest fire and conservation were set up under Committee 3 of Panel 13 of the RTPB, which panel embraces the so-called emergency services. This Department was fortunate, through the State Police, to get in on the ground floor of the organization of Committee 3 of Panel 13, and R. K. Thompson, our communications supervisor at the time, was chosen co-chairman of the committee. The rest of the committee was composed of representatives of those states which at the time were using radio most extensively, including New York, Pennsylvania, California, Florida, and Oregon.

From the very beginning of the organization of Committee 3, Mr. Thompson insisted that the committee consider other conservation activities besides forest fire in framing a suggested radio plan to submit to the Federal Communications Commission, although the other members of the committee were not at all enthusiastic about going beyond forest fire. The upshot of the whole matter was that when the plan was presented to the Federal Communications Commission at its hearing in October of 1944, the Commission approved broadening the scope of activities to include besides forest fire such conservation activities as game and fish management (including law enforcement), park management, water control, etc. Perhaps the strongest argument for including all types of conservation activities was the fact that forest fire makes use of radio channels largely only during the spring, summer, and fall months, leaving the channels relatively unoccupied during the winter months. Other conservation activities, particularly law enforcement, make use of radio the year round. Inasmuch as there was considerable competition from other

services for channels in the 30-40 m.c. band, the ability of the forestry-conservation services to keep their channels busy during the entire year proved advantageous in securing channels.

Since the original Federal Communications Commission hearing in 1944, considerable work has been done by Committee 3, and subsequent hearings have been held by the Federal Communications Commission which made final frequency allocations in March of 1947. These allocations give forestry-conservation 21 clear channels and 8 shared channels in the 30-40 m.c. band, and 14 shared channels in the 152-162 m.c. band. Most of the states now using radio for forest fire are operating in the 30-40 m.c. band.

To facilitate gathering material for presentation to the Federal Communications Commission, a temporary organization of radio technicians and administrators attached to state forestry departments was organized in 1944. This organization, known as the Forestry-Conservation Communications Association, is set up on a regional basis of four regions, each of which is headed up by the Regional Chairman. R. O. Klemetti, Radio Engineer of the Michigan Department of Conservation, has been president of this organization since its inception. After the Federal Communications Commission made final allocation of frequencies for forestry-conservation services, there still remained the job of distributing these frequencies among the states and deciding whether to allocate definite frequencies for forest fire purposes only.

The FCCA worked up such an allocation plan for the states designated (1) where possible, to give each state the frequencies on which it was already operating, and (2) to eliminate interference between states. Under the plan, each state was assigned two radio frequencies which it shared with four or more other states. Through the FCCA, each state received a copy of the plan prior to the meeting of the Association of State Foresters held in June of this year. The plan also recommended that no frequencies be assigned specifically for forest fire, but that they be available for all conservation activities, subject, however, to this condition: That where a coordinated radio network required joint use of frequencies for forest fire and for conservation activities, such joint use could be secured only upon the approval of the state agency legally responsible for forest fire control. This proviso applies to all radio frequencies in the 30-40 m.c. band, except five frequencies which remain open to any use. This plan was approved by the Association of State Foresters and has been submitted to the Federal Communications Commission. Although not yet approved by the Federal Communications Commission, we feel quite sure that it will be.

I appreciate that what I have said has been a little hard to take in one short space of time, so I will try to emphasize a few of the most important points: (1) there has been a tremendous competition for radio frequencies and any agency desiring to obtain the use of them had to present an extremely strong case to the Federal Communications Commission; (2) that with the exception of one or two states, radio had been used in conservation work only for forest fire control; consequently, to get approval of the allocation of radio frequencies for any conservation activities other than forest fire, it was necessary to combine such use with forest fire; (3) that we should consider ourselves extremely fortunate in accomplishing this and in now having radio frequencies available for such conservation uses as enforcement of fish and game laws.

You will possibly want to know what to do to get going with radio in your state. If your agency is a division of a State Conservation Department of which the State Forestry agency is also a division, and that forestry agency is already equipped with radio, then your problem should be very simple. Where the forestry, game, and fish agencies are separate entities, and the forestry agency is equipped with radio, then it will be necessary for the game and fish agencies to make arrangements with the forestry agency to utilize its facilities and to help augment them, if necessary. Where the state forestry agency is not equipped with radio, then the game and fish agencies will have to start from scratch with both field stations and mobile equipment. The FCCA will be glad to render aid in such a case.

Mr. Reynold Klemetti, President of the Forestry-Conservation Communications Association (and Radio Engineer of the Michigan Department of Conservation) exhibited a chart and explained how the communication channels were distributed. He said: ----

The map represents locations in the 30-40 m.c. band. We have 21 clear channels and 8 shared channels, which are shared with the transit companies. One of the main things is the interference between the various states and their systems. There are two types of interference. Direct interference between systems within a radius of 200 miles and skip interference up to 2,000 or 3,000 miles. The skip interference extends over several cycles. You must also consider the states now occupying several channels. Channels were broken up into 13 groups of two channels each, except Group 1, set up 120 kilocycles apart, so a single transmitter can operate on two channels by changing crystals. Under this plan you have the first five channels open to any state for conservation use only. The other channels are for forest fire suppression and other state agencies, or where a coordinated network is required. You will note some states are subject to skip interference, but that is because they would rather remain on the channel and permit some interference. In the Lake States area, with Michigan as the center, we share the same channels with several other states. This too calls for skip, but they are spread far enough apart so they will have little direct interference. On the 72 and 76 megacycle we have 8 clear and 6 shared channels. The shared channels are both open to forestry and conservation use. In the 152-162 you have the 14 clear channels. We made an agreement at Yosemite that the channels will be available on a regional basis, Eastern, Central, Southern, and Western. We have all those channels now available for conservation. I think we fared comparatively well.

GENERAL DISCUSSION

Fontanna: I think the game and fish people are very lucky to get anything at all out of this. The only representation the game and fish people had were the foresters that were there.

Osborne: What is the cost?

Klemetti: An average of $575 per moving unit, and a fixed station runs about $3,000. According to the new F. C. C. proposal, the clear channels are to be used for conservation purposes only. If you want to work with the State Police, I think you can do it.

Walter A. Gresh, Federal Aid Inspector, Fish & Wildlife Service, Minnesota: What companies are putting out pack sets?

Klemetti: One of the newest out is the one designed by Motorola, which weighs about 7½ lbs. and measures 7" x 12" x 2", at a cost of approximately $250. R.C.A. is also putting out a new model.

Crouch: What is the range of this $250 set?

Klemetti: The range for the pack set is only 3 or 4 miles on the ground. However, in fire towers or some other high station it would be 15 or 20 miles.

It is not very practical to have a set that you can tune, as most of the time the person operating it will be off tune. Arrangements have been made for F.M. between fire towers. We propose to install pack sets at some later date in towers. We have two independent systems. F.M. on the State Police frequency. About 200 cars and 19 fixed stations.

Speaking of a coordinated radio system, I will draw you a rough sketch of how it is proposed. Take a fixed station, which will have two channels, #1 and #2. Each send and receive. Call Channel #1 Law and Channel #2 Fire. Then take a car and give it a receiver on Channel #1, so he can receive the station when he is sending on #1. Transmit on #1 and #2, so car can send on two frequencies and back on one. Over here, fire tower system. It will receive on #2 and send on #2. Fire tower can also send on #1. Fire towers send and receive on #2 and district station on #2. We have an independent law system. Everybody can talk to everybody else, but normally law and fire are separated. That is the system we contemplate when the money is available.

Swift: More recently we have hooked in with the State Police, although in a small way, but it is satisfactory. It seems to me that this type of communication is vital in the use of manpower and keeping up with the times. I don't see how any law enforcement agency can very well get along without it in the future. Michigan has pioneered more than any other state. They have fought the battle for the states in general. At Rapid City some one brought up the question of attempting to get radio for fish and game. The foresters have put forth more effort than the game and fish divisions. I suggested that the Midwest Association should lend support to the foresters so that they could get what was coming to conservation by virtue of the great forests in back of them. We figured that at least in the Great Lakes States, Michigan, Wisconsin, and Minnesota, where all those efforts are under one head, there should be two distinct set-ups and neither one should be eliminated. I think the State of Michigan and the state foresters should be complimented on the efforts they have made to obtain frequencies. They have taxed themselves out there to quite a substantial sum per state. I believe the Midwest Association should contribute to some extent toward the effort the state foresters are making, as it will create a better feeling between them and the game and fish divisions. I think it should all be one coordinated effort.

(The meeting adjourned at 4:30 P.M. until Tuesday morning, July 15th)

TUESDAY, JULY 15, 1947

The meeting was called to order at 8:35 A.M., Mr. Ruhl presiding. Mr. F. F. Tubbs announced trips scheduled for this evening and tomorrow.

Mr. Ruhl: The next subject involves the question of impoundments along the Mississippi River. Many of us are not directly affected and it is difficult for us to keep a sound perspective on them, so I think it would be a good thing for some of us not directly affected to hear them. Some of you were at the International meeting when Mr. Pick and Mr. Sloan discussed them, but some of you were not.

WHAT SHOULD THE STATES AND MIDWEST ASSOCIATION DO REGARDING THE PLANNING, ENGINEERING AND MANIPULATION OF DAMS AND THEIR ACCOMPANYING STRUCTURES ON THE MISSISSIPPI RIVER AND SIMILAR RIVERS

by Melvin O. Steen
Missouri Conservation Commission

The subject assigned to this discussion is "What Should the States and the Midwest Association do Regarding the Planning, Engineering and Manipulation of Dams and Their Accompanying Structures on the Mississippi River and Similar Rivers." That is quite a comprehensive subject and one that can be covered only in a general way. Moreover, local circumstances and conditions modify the larger picture. We shall, therefore, discuss the subject with the understanding that our statements are general statements only.

Perhaps it would be best to consider what the States should do by discussing first what they can do. The things that can be done are limited, first by the characteristics of this type of project, and, secondly, by a conflict of interests and a consequent resistance to changes or modifications in projects and plans.

Specifically, the avenues of possible approach to this problem are:

(1) We can ignore the problem altogether. Certainly this is not desirable, nor is it actually possible. One does not ignore a bear in his camp even though one may be disposed to do so.

(2) We can attempt to completely eliminate construction of the projects. When a project is proposed that is undesirable basically, this can often be accomplished, and certainly it should be accomplished under such circumstances. I believe we must concede, however, that the wildlife interests in themselves are not powerful enough to do this unless they have the backing of other interests which also find the project undesirable. Moreover, I doubt the wisdom of opposing a project because it may be undesirable from our point of view when it is desirable from the over-all point of view.

(3) We can attempt to secure modification in design and plans of operation at the time such plans are being drawn and prior to the actual construction of the project. This is the orderly and logical procedure to follow, yet it has not been followed as it should be up to the present time. There is, however, evidence of increased willingness on the part of the agencies in charge of the projects to consider modifications of this nature. Unfortunately, this does not insure adoption of the proposed modifications. In our experience, such recommendations, even when approved by the district office, often fail of approval higher up for one reason or another.

(4) We can attempt to secure modifications in the operations of going projects such as the one now in existence on the Upper Mississippi River. Here again we find ourselves faced with a conflict of interests and a resistance to change, although some progress has at times been made. Such progress has been made only after the states have overcome resistance that the circumstances did not justify.

These, then, seem to be the possibilities. Now let us consider the alternatives in detail.

As indicated above, alternative one is clearly unworthy of consideration. We must find some way of living with the bear, and that association must be based on logical and practical considerations rather than idealistic ones.

Under alternative two we would suggest the creation of a state water policy board, representing all public interests. Such a board should make a study of each project proposed, and take a definite stand on behalf of the State and the over-all interest of its people. This is undoubtedly the most effective device for modifying or eliminating the projects. That projects can be stopped in this fashion has already been demonstrated in our own state in the case of Osceola Project on the Osage River Drainage Basin.

Under alternative three we have legal backing for attempts to secure modification of designs and plans of operation. This backing is to be found in Public Law 732, recently enacted by the Congress of the United States. This law establishes the right of the states to enter into planning of dams and reservoirs before private studies have been completed and sent to Congress for authorization. However, our observation is that the provisions of this law have not yet been utilized by most of the states, and that federal agencies are disposed to ignore the law or to make only token compliance with its provisions. This law should be made effective, and it should be fully exploited by the States. To this end, a water policy board, such as the one referred to above, could add prestige and weight to recommendations of the recreational and conservation interests of the State involved.

Under alternative four we can and have made recommendations to operating agencies, but, generally speaking, these recommendations do not get far. In theory, federal agencies apply the provision of Public Law 732 to existing as well as pending projects, but in practice such is usually not the case. Moreover, policy with respect to existing projects is not uniform. For example, in our own state, we have undertaken the wildlife management of one project under an agreement which is satisfactory to us and which had the approval of the district officers in charge and of their superiors. In the case of another project on which we propose to manage wildlife, we have been unable to come to terms with the same agency because another district office or a higher authority flatly refuse to approve provisions in an agreement which are identical with those approved in the case of the first project. In other words, the left hand refuses to do that which the right hand has already done.

Summarizing then, there appears to be considerable that the states and this association could do, but the effectiveness of such actions depends in a large degree upon the backing and official status which the proposals may have and upon the aggressiveness of its sponsors. In general, too, such action must be initiated and prosecuted by the state involved, although in the case of an inter-state project, such as that on the Upper Mississippi River, it is desirable and necessary that the several states involved agree upon as uniform proposals as possible.

We confess here to a bit of confusion as to the exact scope of the subject assigned to us for discussion. It refers to dams on the Mississippi River and similar rivers. Actually, the dams on the Mississippi River are low-head dams, constructed for navigational purposes only; whereas most, if not all, the projects currently under consideration throughout this area are flood control rather than navigation projects. There is a difference.

If, however, the purpose of this discussion is to review all water manipulation projects of major consequence whatever the primary purpose may be, the general statement can be made that each state and this association must be on guard and must enter actively and aggressively into the study and the development of such projects. Unquestionably, some of the proposals advanced are ill-advised and even unsound, while others are sound, or can be made so if the many interests involved insist on a comprehensive and well-rounded plan of development. It appears to us that if this is to be accomplished, it must be accomplished at the insistence and, in fact, the adamant demands of the state. The tendency of federal agencies has largely been to go their own way and to render only lip service or to make only token gestures towards effective coordination in project planning, development and operation. One agency of the government is concerned with navigation; another is concerned with irrigation; a third is concerned with soil conservation; a fourth is concerned with wildlife resources; a fifth with forest resources, but all of them are concerned with water and other resources either directly or indirectly. In their operations, however, there has been a regrettable lack of consideration for over-all problems and interests. The defense is raised that activities of the respective branches are limited by law, but this is a very lame defense. Moreover, the law can and should be changed if the public interest so dictates.

In my opinion, one of the major weaknesses of past and present operations has been this tendency of the individual units of the federal government to prosecute their own peculiar objectives and to take little cognizance of other interests unless and until they were forced to do so by reason of the demands of the public. The ultimate and natural consequence of this has been (and probably will be) the creation of valley authorities. In other words, the creation of still another branch of the federal government, (or an organization operating under sponsorship of the federal government) which is able and willing to deal with all the interests of the watershed.

In conclusion, I would say that <u>whatever</u> the ultimate developments may be, whatever projects may be or may not be constructed, three basic premises seem pertinent to this discussion:

(1) The individual states must so organize their affairs that a well-rounded study can be made of all proposals, and a well-founded and official position taken on each project in the over-all interests of the individual state and its people.

(2) In cases where several states are involved the greatest possible degree of unity must be achieved, and organizations such as the Midwest Association of Fish, Game and Conservation Commissioners offer one avenue for such coordination and unity.

(3) All projects should be studied and approved or disapproved on the basis of their over-all values and defects. The present wave of flood-control hysteria, the hue and cry of special interests have often led to ill-conceived and unsound projects; projects which have no place on the American scene. They are not sound projects, but here they are and here they will stay unless the states and the people will other wise, and back their will with aggressive and unified action!

(Discussion postponed until after next subject)

ATTITUDE, POLICIES AND ADMINISTRATIVE DECISIONS OF THE STATES IN REGARD TO FISH AND GAME MANAGEMENT ON SUCH RESERVOIRS UNDER EXISTING CONDITIONS

by Chester S. Wilson, Minnesota

What concerns us on the Mississippi River is illustrative of the problems that all of us in conservation work are concerned with. The natural resources of the country are a common stock. When the natural resources in one part of the country are depleted it affects, directly or indirectly, the people in every part of the country. Suppose the 10,000 lakes in Minnesota should dry up. It would intensify the demand on the lakes of Wisconsin and Michigan. The manner of handling the problems has its application to other lines as well. The relationship of the State agencies among themselves and the relationships between the Federal agencies and the State agencies are important considerations. The effectiveness with which we solve these problems is going to depend largely on the attitude with which we approach and treat them. It depends on the attitude of everybody concerned.

My experience with those agencies goes back a long time. I have had to deal with the Army Engineers and other Federal agencies. The early attitude of the Army Engineers is one with which I think most of us are familiar. The friction that developed from the rather hard-headed attitude of the Army Engineers and other Federal agencies was an obstruction to progress for a long time. It persists today, and I think one of the most important things this organization can do to promote greater success in the solution of common problems with which State agencies are concerned is to eliminate the last vestige of hostilities on each side.

The basic principle was incorporated in a resolution adopted by this Association at the convention in 1943. We were there concerned with this Mississippi River problem. We had been witnessing the damaging effects of the water in 26 pools. We were particularly concerned with the effects of a practice of winter drawdowns that had just recently been adopted during the war which aggravated the damaging effects of those pools. That practice was submitted to as a necessary wartime measure. But the disastrous effects of it were evident and in that resolution we incoporated this proposition: that the Federal agencies in planning and operation of all Government projects affecting waters should apply this principle: That the interests of wildlife and conservation and recreation should have consideration along with all other public interests, giving to each type of interest due recognition in proportion to the related public benefits. That carries the same principle to which Mel referred.

We, as public agencies, cannot be one-sided about this proposition. You may be the directors of game and fish, and maybe you are not tied in as some of us are under a single outfit. But you are a state agency, and at some point up the line there must be coordination of public interest, and if you do not have it, it gets into the lap of the legislature. So start in setting up your attitude on that principle, that all public interests should be recognized in proportion to their related benefits. I think as servants of the public that must be our attitude, to try to arrive at a coordinated plan of operation, taking that principle to the other people with whom we have to deal, Army Engineers, War Department, Bureau of Reclamation, Fish and Wildlife Service, and U. S. Soil Conservation Service, or other Federal agencies. When we approach them with this problem you must first get your own minds in order and settle the difference in your own departments or with other state departments.

Then you must do a certain amount of coordinating between these other agencies. For years we have been trying in Minnesota to establish a Fish Hatchery at an important site. We have been unable to do it because three Federal agencies had a string on the land. They all approved the problem, but were unable to get together and unroll the red tape which prevented them from doing anything about it. Finally they threw up their hands and said you do what you can about it. So we now have a bill up in Congress.

It is vitally important to get rid of the attitude of hostility and admit that the Army Engineers, or whatever agency it is, have a job to do. It is a case of reconciling on the Upper Mississippi the interests of navigation and conservation or other uses of the river. It has been the continual effort of our Department to overcome that feeling and try to get the Engineers together with the local groups on common ground, and I am able to say that we have been very successful. The entire matter is the application of Public Act 732. No law is any better than its administration. The personal problem on both sides is one of the most important ingredients of attempting to secure cooperation of effort. We have been very fortunate in Minnesota in having broad-minded men as engineers. They finally came to appreciate the importance of getting along with the people with whom they were living, and our effort to use a little oil with them instead of hostility bore fruit. It was the Minnesota District Engineers who went to St. Louis and sold to their superiors the idea that the War Department must get closer to the people and the idea went all the way up the line, with the result that after our initial battle regarding the drawdowns of the upper reservoirs, they withdrew from their position.

Regarding policies and administrative decisions, we should have some regard to the machinery of operation. There are starry-eyed people who think there can be no solution to this problem until there is set up all over the country regional authorities to control all these vast problems. I think the extent of the authority should be measured by and limited to the need of coordination. There is no need of authorities to coordinate projects a thousand miles apart unless there is a relationship between them. There are many operations, and this includes the vast majority of them, which can be reconciled by getting together in the manner I have described.

I think we should make every effort possible to obtain the necessary coordination and get going on the job with the existing agencies. Some of these problems are so urgent that we do not have time to wait until some super-authority can be set up and get on the job. We have to deal with the men who are in the field now, and get them to bury their hatchets. At the time we passed the resolution in

1943 we did not have any effective machinery for coordination, but simply got together with the Army Engineers as to the regulation of the water levels. We got quite a lot of results in that way. But that was not sufficient, so the whole country got behind this coordination Bill 732. That has been a great step forward. I think it has done more than any other one thing to change the reluctant attitude of the Government agencies in taking conservation and wildlife and other public interests into consideration and that we should push the operation of that law to the limit before we attempt anything more autocratic.

We have also set up some other machinery in the Mississippi and Missouri River valleys. I think the first step that was taken was the establishment in the Missouri Valley by the ten states of the Missouri Valley States Committee. The Missouri Valley has a greater variety of problems than the Mississippi. The Governors of the ten states formed themselves into a committee, plus three representatives of each State Conservation Department, or other State agencies. That Committee has done a remarkable job of reconciling violently conflicting interests. The Upper Valley wants irrigation and the Lower wants flood control. Through the medium of this Committee they succeeded in reconciling their differences by uniting behind the acts of Congress.

At the same time, the Bureau of Reclamation and the War Department had their heads bumped together by the threat that the Missouri Valley Authority would be set up, which caused them to get together, and now almost every major difference has been resolved. Now a permanent standing coordination committee has been set up consisting of representatives of the Bureau of Reclamation and the War Department, and four members appointed from the inter-state committee. So there you have this committee, at first created unofficially, but now recognized as representing both the Government agencies and the states, passing on every conflict that may arise. And they have done a splendid job.

In the Mississippi Valley the problem has been simpler. Before we created the machinery for reconciliation, we created the machinery for investigation. This was directly the outgrowth of the resolution that this association adopted in 1943. We decided that the first thing to do was to get our technical forces together to study the conditions along the Mississippi and decide what was to be done. So we created the Upper Mississippi River Conservation Committee. We had no legislative authority. Each state agreed to contribute material and manpower. It was divided into Upper and Lower Sections, and they have been very effective in trying to get the answers as to what needs to be done in operating the water levels. We have obtained the complete cooperation of the Fish and Wildlife Service, and the Government engineers have been very receptive towards the work of this committee.

Then we started working on the problem of machinery for coordination. Meantime, as a result of this movement, which has been going on all over the country, Congress has incorporated in the Flood Control Acts of 1944 and 1945 this specific provision: that they should first consult the states. This is done through the governors. But, obviously, no governor can know the answers. He must call in his people concerned with wildlife, navigation, flood control, or whatever the problem is. So we organized the Upper Mississippi Valley Water Use Council. That was done with the full cooperation of the Army Engineers. They have done very effective work by cooperation of the various interests.

That agency is necessarily an informal one. It has no legal status. Mel pointed to the importance of our agreeing among ourselves and putting our own house in order before we go to the Federal Government with any problem. It has been suggested that groups from each state that form the delegation from each council be given some legal authority. I would like to throw the idea out here for further thought, and I think this organization should keep closely in touch with the operation of this council. I do not know whether this idea of making those three members some sort of a board to unify the state program on water control is within the scope of this organization. I think that would have to be decided by each state. In Minnesota we probably do not need that kind of an agency, but some of the states do.

GENERAL DISCUSSION

Rider: I approve the ideas expressed by the two speakers. In Ohio we had the problem of a multiple-purpose lake and had good cooperation from the Army Engineers. We have only one or two natural lakes of consequential size in Ohio, but we stepped into the picture when the Army had the attitude of flood control. We put into the minds of the people the idea of multiple-purpose projects, not simply flood control. We presented nine or ten different aspects. First, navigation; second, power; third, sanitation; fourth, industrial (steel mills) and municipal and domestic water supply. Finally, conservation, fish and game interests. We had the Army Engineers, steel and coal companies, and finally agreed. All the interests involved sat down together. We in the Conservation Department demanded that all these reservoirs have a constant level. In a period of a few years we worked it out so that everybody is satisfied. The navigation and power have not come into operation yet, but I have no doubt that they will. It can be worked out.

We have another instance in our town of Delaware. There was involved industrial, and municipal water supply, flood control and finally fish and game, and recreation. We finally worked that out so there will be a constant water level. So everybody got exactly what they wanted, and in the end we got real conservation.

I believe the whole trouble with the Army Engineers is our attitude. The Izaak Walton League has taken the wrong attitude that the Army Engineers are always wrong. If we all get together and submit our ideas to them I think they will receive them sympathetically.

Osborne: I come from Illinois, where they have been catching hell from the Army Engineers. Chester Wilson has done a great job in his work on the drawdown pools in the Mississippi, and I give him great credit. However, I believe in the theory that the Izaak Walton League has. At one time we had some good fishing waters, until people drained the natural lakes, took away our water supply, and now they are trying to harness our rivers, tearing the banks away, destroying hundreds of thousand of acres of crops every year. We say, let the rivers go down their natural valleys as they always have. The land there is not worth much anyway.

But the Government Engineers believe only in flood control, and think only of harnessing the water. So with great scoop shovels they are going to create big valleys and lakes, and when the water goes out we have

tremendous, unproductive holes. They want to use hundreds of millions of dollars for this purpose, instead of letting the water take its natural course. At a meeting we had, 95% of the people were opposed to this program; and the 5% in favor were large land owners. Yet the Government Engineers had the temerity to go to their superiors and say the people wanted these Government flood control projects. We have been to public meetings and argued this case with the Government Engineers. We pleaded with them, but they ridiculed hunting and fishing, and said it had no value. We demanded that every public interest be taken into consideration. We finally brought sufficient public pressure to bear, and they now admit that we are right and asked us to work with them. We are against them only when they try to destroy conservation in Illinois.

Rider: (In answer to a question by Clark Wilson)

I do not want any more Federal Government in Ohio than I now have. What I want them to do is to build these reservoirs and then turn them over to the Ohio agencies. I want them to spend the money, but to turn it over once the project has been completed.

Carl Eklund, Fish and Wildlife Service, Chicago: (cited two cases)

We recommended some fencing along an irrigation canal and in setting up their budget appropriation they set aside $60,000 for this. In connection with another project of a mountain home in Idaho, we recommended that they develop certain recreation areas involving some fencing. So they again asked for about $100,000 for this development. We recommended that they do the work and then turn it over to the state, and that it be maintained possibly as a Pittman-Robertson project. Idaho is all for it. If Congress appropriates the money, they will do this. So this indicates that the Federal Government can construct projects and then turn them over to the state.

Rider: They did buy extra land -- seven tracts, and brought them where we wanted them, for park sites, then we got them. However, we do not want the Government to operate them.

Carl Noren, Conservation Commission, Jefferson City, Missouri: In Kansas the engineers in their district office set up plans for a stable-level sub-impoundment for recreation, but it had to go through the regular channels, as the whole project does, for authorization. The District Office set it up as a model plan. The Board of Engineers knocked it out. We are getting along fine with the offices on the lower level. Once it goes above the district office you lose control over the planning.

Chester Wilson: A very important thing for every conservation agency to keep in mind is that the Army Engineers do not start these projects, they are started by some local group. They get to the Congressman of a certain district and ask him to put through a resolution. There is the place to start in getting consideration for conservation interests. If you wait until the authorization is set up and incorporated in the authorization bill, it may be too late. The place to start is with the initial hearing and keep everlastingly at it.

Janzen: One thing to keep in mind is that each District Engineer may have a different viewpoint of his problems. District Engineers must be educated as to the fish and wildlife aspects of the projects. The biggest problem results from the two to four year turn-over of District Engineers. As soon as an engineer becomes acquainted with his problems, he gets transferred. Even in the same Division we have found districts approaching a problem in different ways. One must keep in constant touch with them. In our region we plan to contact each district office about every six months to see what projects they are pushing. It takes attention on our part to keep up with their program. A project may be considered dead and some public pressure comes along and the subject is reopened for further study.

Steen: Is unlimited flood control justified at all? In the last analysis flood control is the wolf cry of a bunch of darn fools who take up residence on a flood-plain where they have no business to be in the first place. Why should the rest of the people always have to pull their chestnuts out of the fire?

Regarding the board I mentioned, I thought some of the states might be interested. We got together representatives of every state agency concerned in any way, even the Highway Department, because some roads were to be flooded. After a lot of discussion, we all decided what the State's attitude should be, and the Governor presented it. That solves the problem of cooperation within the State.

The meeting was called to order, and Mr. Ruhl introduced Mr. Carl Eklund, U. S. Fish and Wildlife Service, Chicago, Illinois, who read the following paper.

RIVER BASIN STUDIES.
HOW DO THESE STUDIES AFFECT THE STATES AND WHAT SHOULD THE STATES AND THE ASSOCIATION DO IN REGARD TO NEW PROJECTS

by Rudolph Dieffenbach, Coordinator
River Basin Studies, Fish & Wildlife Service

What the Corps of Engineers and the Bureau of Reclamation are going to do to our fish and wildlife resources by building dams and straightening river channels has been hotly discussed for a long time. Extreme points of view are held on both sides of the issue. If one can afford to generalize, he might say that those crying against river developments of any kind are carried away by unreasonable zeal in the interest of fish and wildlife conservation. On the other hand, the advocates of all-out river development can generally be put down as being unaware of the monetary and recreational value of our fish and wildlife resources.

After something more than a year of study and analysis of practically all types of proposed river developments -- whether they be flood control, channel improvement, hydroelectric power development, drainage, navigation, or an irrigation project - it can be emphatically stated that it is dangerous and unreasonable to generalize. Projects that will prove beneficial to either fish or to wildlife, or

to both, can be pointed to as justification for such developments; other examples can be found where diametrically opposite effects will result. In between, there are projects which will have little or no appreciable effect, either good or bad, on the resources that we are interested in conserving.

The Fish and Wildlife Service was designated by Congress as the Federal agency to find out what will happen to the fish and wildlife resources on river development projects by the enactment of Public Law 732. That act requires the Fish and Wildlife Service to make reports on all such projects. These reports have equal standing in the records with those made by the sponsors of the projects. The House and Senate committee reports on this bill are worth the time by reading of anybody who is interested in the purpose of Public Law 732. There are abstracted here a few of the salient expressions of those committees: "Restoration of the proper balance between uses of the lands and waters made by man and those made by wildlife may involve difficult problems and require considerable thought, but the solving of such problems is not impossible if intelligently handled." When I contemplate the variety and novelty of our experiences in river basin studies during the time that has elapsed since that report was made, I am impressed with the wisdom contained in that statement.

The committee has also said, in its report, that "..... the proposed bill also would make available for administration for wildlife conservation purposes by State, public, or private agencies or organizations, area of land and water acquired by the Federal Government primarily for flood control, irrigation, and other uses, but, Ohio, etc., at the same time, adaptable for the secondary use of wildlife conservation." In light of the language in the Act and the committee's statement on the intent of Public Law 732, there are compelling reasons why we cannot expect fish and wildlife interests, in every case, to be the paramount consideration. There is, however, the right under the Act to present every sound argument against an authorized development or for the modification of design and operation to improve fish and wildlife environment. The office of River Basin Studies of the Fish and Wildlife Service, with such ends in view, makes studies of the project areas and examines the sponsor's development plans.

It is probably surplusage to tell sportsmen that there are important wildlife species which require bottom-land types of habitat. Certain of them cannot adapt themselves to other environment. Since reservoirs are in the river valleys, it is generally the case that valuable habitat is destroyed by such developments. In the process, it is not an uncommon coincidence that important and sometimes valuable fishing streams are submerged.

If we were to list the harmful effects of river developments, they would read about as follows: They inundate streams and bottom lands; destroy sport fishing, waterfowl, and fur-animal habitat as well as that of a wide variety of other game; dams are barriers to migratory fish; if channels below the dams are dewatered permanently or intermittently, fish, fur-animals and waterfowl habitat is destroyed; rapid changes in water releases are harmful to fish, fur-animals, and waterfowl, and destroy food and cover; excessive water releases scour bottoms, - make turbulent water and destroy fish; improperly controlled diversions make for fish losses in fields and canals; hydroelectric turbins result in fish losses in machinery; canalization projects generally show no benefits to fish and wildlife - on the other hand, they usually drain bottom lands, destroying fish spawning grounds, and fur-animal and waterfowl habitat. We have as yet examined no project which promised all of these harmful effects.

There is also another side of this picture. Let us visualize the ideal reservoir. Here we find increased fish production; temporary refuge for fish from tributary streams; they will make waterfowl resting, feeding, and nesting places and public shooting areas; muskrats and other aquatic fur-animals will be benefited; in the vicinity of such reservoirs environment will be made for a variety of wildlife species; more uniform flow below dams will benefit fish, shellfish, fur-animals, and waterfowl; existing pollution will be diluted; there will be benefits to wildlife through flood abatement particularly during the nesting season; irrigated crop lands and canal banks are usually beneficial to upland game; properly regulated diversion canals increase fish, fur, and game animals. As was said with regard to the bad reservoirs, here it can also be said that we have not yet found one that contains all the favorable features recited.

One of the problems that is greatly concerning the Service is the matter of the destruction of bottom-land habitat in the arid and semi-arid regions of the country. At best, such cover, which has already been encroached upon by agriculture, is not sufficient as winter habitat or range for surrounding game populations. Isolated instances of the destruction of such cover might not be grounds for very great concern, but when we look at the river development programs in its entirety, and over the years, this problem becomes one of grave importance. Every known device is being used to meet this situation. We are also searching for new ones. We know that the shelter-belt planting program through the Dakotas, Nebraska, and other states, succeeded beyond the expectations of most well-informed people at the time it was started. The Fish and Wildlife Service hopes that it will be possible to adopt certain aspects of the shelter-belt planting program along the margins of the reservoirs in the adjacent valleys to compensate for the destroyed food and cover. It is conceivable that, acre for acre, more ideal food and cover can be developed thereby than presently exists on the lands that will be submerged. This is not intended to say that we can improve upon nature. It does mean that in many places man has already done considerable damage to the natural food and cover, and that at least man-made plantations can be so selective as to provide the most desirable food and cover plants tolerant of the zones within which such plantations will be made. The Corps of Engineers and the Bureau of Reclamation lately evidence appreciation of this problem. We expect cooperation from them in efforts to solve it.

Perhaps the most frequent question asked is the kind of recommendations made to mitigate fish and wildlife losses and to increase those resources. The most common are concerned with water level management and maintenance of fish and wildlife pools, construction of subimpoundments, the maintenance of minimum flow below reservoirs, fish protective devices, food and cover planting, refuges and wildlife management areas. Most of these descriptions are self-explanatory, but perhaps a few require amplification as, for example, a subimpoundment. A subimpoundment is a partition of the main reservoir by a low dam so constructed as to maintain a controlled water level. It is believed that where such subimpoundments can be established, we can anticipate high waterfowl, fur-animals and fish values to accrue to the project.

A fish and wildlife pool is one below which the reservoir should not be drawn so as to insure permanent water for fish and wildlife uses. This, in our terminology, is different from a conservation pool. The latter is a term frequently used by the construction agencies, and, in some quarters, has been visualized as providing the facilities which are described for the fish and wildlife pool. On the contrary, a conservation pool may be merely one for silt storage, for the storage of irrigation water, or for navigation use, and with such great fluctuation that it is valueless for fish and wildlife purposes.

Fish protective devices would be fish ladders, screens, and stilling basins below dams.

Another question that is presently asked is: Are your investigations paying dividends on the costs of making them? The answer is definitely yes. Evidence of this is the adoption of plans for the benefit of salmon in the Columbia River and rivers of California. We likewise hope for the creation of better environment for fish and wildlife on other projects, but as yet there has not been enough time for the integration of our plans with those of the sponsor. In numerous cases, fish and wildlife losses and benefits determine the overall cost-benefit ratio and hence the feasibility of construction. We know that in the matter of suggestions for redesign of projects, our recommendations are being taken seriously by the Corps of Engineers and by the Bureau of Reclamation. A conspicuous example is in the case of the Harlan County reservoir on the Republican River in south-central Nebraska. Here is an area comprising approximately 15,000 acres of land and water. A recommendation has been made for the establishment here of a Federal migratory bird refuge and also a wildlife management area to be administered by the Game, Forestation, and Parks Commission of that state. Several public recreational areas for the convenience of campers are also included in the plans.

The development of intracoastal canals and coastal rivers will have far-reaching effects on marine fisheries as well as wildlife. Notable among these are the Pacific Coast salmon and, on the East and Gulf coasts, the blue crab, oysters, shad, and shrimp. The effects of such developments on the coastal marshes are, of course, of very great concern to us.

The drainage of marshes, in many places, constitutes an integral part of river development programs. We are generally opposed to such drainage because it means the destruction, at Government expense, of an alarmingly diminishing habitat for wildlife. It can also be accepted as generally true that such projects increase the flood flow from natural retention areas. Furthermore, there have been too many examples of drainage projects which are failures from an agricultural standpoint. The Fish and Wildlife Service has already spent millions of dollars to restore marshes for waterfowl use, many of which were ones unwisely drained.

One of the most baffling questions is that having to do with the longtime fishing potentialities of artificial bodies of water. It is almost universally true that reservoirs have an initial period of high fish production followed by decline. However, it is known that in certain artificial reservoirs whose fishery is wisely managed, and whose water management produces conditions suitable for fish, good fishing is maintained. This is a subject about which far too little is known, but about which we are trying hard to find the answer.

Depending upon the section of the country, we are finding both good and bad effects resulting from irrigation. In the northwestern United States, it can generally be put down as true that irrigation is conducive to an increase of pheasant and waterfowl habitat, notably the former. The type of agriculture practiced will produce both food and cover enjoyed by these birds. (Pacific, northwest). On the other hand, in the southwest, the lands taken over for irrigation are now generally more valuable for game than they will be after crops are introduced. The type of farming practiced on such lands is the limiting factor in the game production.

The effect of siltation of reservoirs is an ever-recurring subject of speculation. It is one about which far too little is know, not only as to the life expectancy of water storage capacity, but also as to the effects of silting on fish and wildlife resources. The subject is a large one, and we can only touch upon the fringe of it here. Suffice it to say that sooner or later perhaps averaging fifty years from time of filling, all reservoirs will be filled with silt. What will happen then? Already a number of reservoirs have been or are nearly filled. They should be studied to see what value they may now have for wildlife. We have the theory that they will have very considerable utility for waterfowl and other wildlife species through their reversion to marshes. But this is only a theory and remains to be verified. The thought that I wish to express here is that, while we are today in the process of destroying habitat essential to certain valuable natural resources, there is the possibility of recreating similar or superior evironment for them. I do not offer this idea as justification for the destruction of our present resources, but, in the face of the inevitable construction of certain of these presently proposed reservoirs, we must look and plan ahead to make the most of any opportunity that the future may offer.

If we had had the existing means of studying river basin developments before reservoir construction on the Upper Mississippi, it is more than likely that the present protracted controversy would not have occurred. By the same token, we would have been better prepared to cope with some of the perplexing problems that now confront us. However, it is a fact that we have made long strides in perfecting our study methods and in developing ideas, not alone for mitigating losses, but to create added benefits to fish and wildlife resources on reservoir projects. We also believe that we have been instrumental in stopping a few of the harmful projects for the time being at least.

Public Law 732 not only puts a definite responsibility on the Fish and Wildlife Service, but it likewise spells out equally heavy responsibilities for the states. In performing our work, full recognition is given to these facts. Our men are expected to seek cooperation and advice from the state conservation officers on all aspects of the investigations. We realize that we are reporting on resources most of which it is your primary responsibility to protect and preserve. We not only seek your help in getting the facts in the field, but we ask your review of the reports before they are sent off to higher authority. Up to now, there has been a surprising degree of agreement on the conclusions reached. I would not expect you to be so naive as to believe that there is always perfect agreement. Biological investigations varying as they do, such could not be expected. If you differ with us in any case, you have full freedom to make your own reports expressing your honest opinions. We do hope, and we do believe, that you join with us in wishing that such cases will be the exception rather than the rule.

The research work that you state people have done has been of great value to us. It is not intended as flattery when I say that I do not know what we would have done without the information we have obtained from you. In spite of this, there is still so much that we should know and that we think you should also know. With the best of intentions, and in our best diplomatic manner, we have, in our frustration, suggested Pittman-Robertson projects to some of the state boys to fill in some of the gaps. Frankly, I am plugging for favorable consideration by you of research projects that will help in making adequate reservoir studies, and resultant recommendations that will mean the most for your fish and wildlife resources.

Interpolation by Mr. Eklund:

I think the irrigation projects in the Pacific Northwest should produce some of the finest pheasant habitat in the United States. The Mountain Home project involves 200,000 acres of land whose crops will be based on a livestock economy. Fifty or sixty percent will be forage and grain crops. We recommended a system of upland game bird refuges there. The wildlife benefits which will result from the project can be used to help write off the cost of development. We maintain that if the farmers' costs were reduced by the development, the hunter should get some benefit also through the farmer permitting hunting under controlled conditions.

I was much in accord with Mr. Wilson's suggestion that it is advisable to use a little oil instead of hostility in our relationship with a project sponsor.

I would like to say something about the need of research data. When I got into this program I did not fully realize how little we knew about game. We have to evaluate the fish and wildlife in monetary terms, and it is difficult to put these values in dollars and cents. We must apply research findings whenever we can, but if it has never been conducted we have to base our values on data which is often not better than a good guess. I cannot emphasize too greatly the importance of getting this wildlife information from the various states. I hope every one of you game commissioners will encourage research programs which will be applicable to our work. A little work here and there will get us the information we need. I was glad to see in Missouri they have started river basin studies. In our work we are trying to present a fair valuation of the game, both pre-project and post-project. We are supposed to present the facts.

GENERAL DISCUSSION

A. S. Hazzard, Director Institute for Fisheries Research, Ann Arbor, Michigan:

What type of fish ladder would be used?

Eklund: I would imagine it would be something like at Bonneville Dam on the Columbia, which is a series of steps going up on each side of the stream. The installation of ladders is dependent upon the species of fish in a stream.

Janzen: It seems to us that some consideration must be given the type of fish that will use the ladders. In our area we turn thumbs down on ladders unless we know there are desirable fish that will use them.

Hazzard: The Fish and Wildlife Service wrote us that they had the answer to the fish ladder. I was wondering if you were making a recommendation on the fish ladders, and if so, what type.

Eklund: No, we are not making general recommendations. (Mid-west stream)

Rider: I spent a day in the Department at Oregon and asked whether the ladder was working on bass. He said yes, but we do not pay much attention to bass. They have daily, weekly and monthly reports, but the reports showed practically no bass. There were 906 for the last year.

Steen: It depends upon what you want to move upstream. If you want to move your carp and rough fish, you should have it.

(Copies of Constitution and By-Laws of the Forestry Conservation Communications Association were distributed among those interested.)

(Meeting recessed at 11:15 A.M.)

Mr. Ruhl called the meeting to order at 1:30 P.M., and introduced Mr. Livingston E. Osborne, Director, Department of Conservation, Springfield, Illinois.

ILLINOIS' EXPERIENCE IN TRAINING PROGRAMS
by L. E. Osborne, Illinois

My first conception of conservation practiced by sportsmen and other people of this country at the time I became Director was not very flattering. It struck me that those people cutting timber, those who were draining streams for farming purposes, those who had ill-advised flood control programs, those who were polluting streams, and those who were taking our fish and wildlife without attempting to replace them were thinking of only taking and not replacing.

Hunting and fishing, in the minds of most people, was on an entirely different plane than golfing, baseball, football, horse racing, and other sports. Those who were engaged in them were almost ridiculed. Law enforcement officers were called "rabbit shepherds". A great part of the funds received in many Conservation Departments was expended for political purposes, keeping on the payroll men who never worked. During the last eight or ten years, there has been a remarkable improvement. The sale of hunting and fishing licenses has increased tremendously. Conservation employees are treated with considerably more respect in the State Legislature. Our U. S. Senators and our Congressmen are now anxious to add their names to conservation bills. Much of this improvement has been caused through publicity and education.

Our theory in Illinois is that nothing is too good for the man who likes to hunt and fish for usually he is a good American, so when we decided to have an educational program we made this as comprehensive and as impressive as possible, buying beautiful buildings and surrounding near Chicago where people need to know about conservation. Our program at the School is free. It is paid for through the sale of hunting and fishing licenses. Our instructors are the best in the country and make no charges for their services. They come from the U. S. Fish and Wildlife Service, our State Natural History Survey, from our Cook County Forest Preserve, and from well-known sportsmen.

Once a year we have two classes of high school juniors, one from each county in the State, totaling 102, chosen by the Superintendents and Principals on a non-political basis. We pick them up at their homes and take them to the School and take them back home, after giving them the best of meals, best in beds, and a fine entertainment, as well as an educational program.

We encourage them to form junior conservation groups in their county the following year, which we supplement with speakers, literature, and motion pictures for any program they might have. We expect to have a thousand or more such groups before the end of the year. We have several hundred now. We have a similar program for high school teachers. We give our Conservation Officers a refresher course every year.

Many organizations hold their annual meetings at our School at no cost to themselves, such as the Izaak Walton League of America, Illinois Federation of Women's Clubs, the officers and directors of the Illinois Federation of Sportsmen's Clubs, Outdoor Writers Association, Sea Scouts, Boy Scouts, and many other organizations interested in conservation work.

We are helping prepare a Conservation program for the public schools, which should reach a million students.

We must sell the next generation on the wise use of our natural resources.

When I took over the Department, my first impression was this. We had 45 men who had other jobs (school teachers, railroad clerks, etc.), and who had never left their jobs. Whenever an important arrest was made it was always fixed, and the Conservation Officer responsible was bawled out and so became discouraged. Most of the personnel had been appointed through politics, and I fired all those who did not have certification. However, on injunction proceedings I was forced to take back some of them. Hardly any of them knew a thing about wildlife (fish or game); most of them did not know how to start a motor in a boat, and some of them could not swim. Some of them were too old to work elsewhere, and it seemed that when men became too old for anything else they became Game Wardens.

Those of you who studied in college or high school or have done a little work on the outside can cram on it in a few nights. A man can take a Civil Service examination, if he is intelligent enough, after reading our fish and game guide. But there may be a case where someone may be excellent in conservation work, but is afraid of tests. A good conservation officer must be interested in people, his work, conservation, and must be a man who loves the out-of-doors.

It is appalling when you realize how little money we are getting for wildlife restoration purposes. Probably one out of every five people in this country are interested in hunting or fishing or outdoor life. Yet, we get nothing back unless we pay for it in the form of hunting and fishing licenses. We are the biggest army in the world and want good things for our country, but people are afraid to get up and say something about it. We should go the Senators, Representatives and Legislators and see what can be done. Do not vote for anyone who is not interested in the standard you are. If we will organize properly and use certain pressure groups against our law makers, we can get sufficient money to do our jobs. Man is working less and less hours, so we must find places for them to go and have fun in order to keep them in our country instead of going somewhere else during their idle hours. The fault is ours, we haven't organized properly and demanded what we are entitled to. I have organized a group who will organize the entire country of sportsmen for right, decency and honesty, who will go the Senators, Representatives and Legislators. We shouldn't have to beg for money, it should come willingly from higher-ups.

Mr. Ruhl introduced Mr. John Gunderson, Asst. Superintendent, Higgins Lake Training School, Roscommon, Michigan.

IN-SERVICE TRAINING SCHOOLS
by John Gunderson, Michigan

The Plant

There is a gong in back of the kitchen, which you may or may not have noticed. We ring it one-half hour before breakfast and five minutes before luncheon and dinner. Personnel is hard to get, so we expect everyone to be prompt at meal times.

The present Michigan Department of Conservation Training School is situated on beautiful Higgins Lake in the heart of the Higgins Lake State Forest, which was established in 1903 and is the oldest state forest in Michigan. It covers an area of approximately 247,000 acres, of which 143,000 is state-owned. This site was decided upon because it is centrally located in the state. Also, it is adjacent and near related conservation projects and points of interest such as the Higgins Lake Nursery, oil fields, Grayling fish hatchery, forest fire experimental station at Roscommon, Grayling sports park, Hartwick Pines, beaver dams, deer yards, sharptail and prairie chicken experimental plots, timber cutting, land use problems, and other features related to conservation.

This camp was established in 1941. Prior to this location, we had an officer's training school at the Pigeon River Headquarters. It was satisfactory for an officer's training school, but it was inadequate for the entire conservation program.

The Department has approximately $25,000 invested in this institution, as it was built by C.C.C. labor during the W.P.A. days. The plant consists of the main building which houses the recreation room, office and lobby, dining room, kitchen, and crew quarters, three dormitories, one of which is used as a classroom, a staff building, a temporary dormitory, a temporary classroom, a four-car garage, a central heating plant, and a workshop. All the furniture was constructed by the Indian Arts and Crafts project during the W.P.A. days. If you will examine it, you will find no hardware of any description, as it is all put together with wooden plugs.

The plans call for a classroom, museum, offices, and another staff building. We were unable to complete the construction due to material shortage and the high cost of labor and materials. We hope these plans can be carried out in the very near future.

We have approximately 40 acres of land adjacent to the School, part of which is used for parking lots, an athletic field, pistol and rifle range, and an archery range.

As you probably have noticed, our buildings are semi-rustic, and although the construction is pleasing to the eye, we have discovered quite a lot of disadvantages to this type of construction. At the present time these buildings are not insulated, and we have a rather wide overhang on the eves. We have a great deal of trouble with ice forming on this large overhang, because of the loss of heat which melts the snow on the roofs, and it is a difficult proposition to keep these eves free from the formation of ice. When this ice forms, the water backs up and enters the buildings near the side walls.

If we were to build another Training School rather than put up dormitories, we would probably build individual cottages which would house from 8 to 12 people. We feel that this would cut down on the cost of operation, as we would be able to close down certain portions of the School when we have small groups in. As it is now, with a small group all buildings have to be heated, and we cannot turn heat off from one dormitory without closing down the other.

The floors consist of hardwood flooring, and we find it is a difficult job to keep them clean as there is a lot of sand tracked in. We have covered the floors of the main lodge with a masonite covering, which has alleviated the cleaning situation a great deal. However, it is necessary that this masonite covering be painted at least three times a year, and the preparation we use here is called dura seal.

Personnel Problems

We maintain a staff of a chef, second cook, and two helpers in the kitchen, a maintenance man, two janitors, clerk, superintendent, and assistant superintendent. All personnel staying here at the Training School pay for their maintenance. This policy is the same with all departments of the State of Michigan. You can readily understand that with the kitchen set-up, we are unable to give dining room services. Our food is served family style, and anyone desiring seconds go the kitchen and get it.

We have a considerable turnover in personnel as the salaries for these positions are not as high as related positions in private industries.

In closing, if any of you gentlemen have any questions we will do our best to answer them for you. Thank you.

GENERAL DISCUSSION

Gresh: Do you have a central heating plant?

Gunderson: Yes. We were using coal, but now we are using oil. We operate twelve months a year. During heavy winter weather we have in-service training of conservation personnel. On the first of August we will begin our training of potential Conservation Officers.

Chester Wilson: What is your total average expenditures of funds?

Gunderson: We have a budget of $60,000 a year for running expenses. This money comes from the Game Protection Fund, and all monies taken in goes back to the same fund. As near as we can figure, the cost is approximately $3.90 a day per person. We charge adult groups $4.00 a day for meals and lodging. All linens and bedding are furnished. The School is not self-sustaining, because we subsidize teacher and youth groups. The teacher groups pay $3.00 a day, and the youth groups are charged a flat rate of $6.50 a week. Last year we had four groups of boys sent here by the Michigan United Conservation Clubs. There were 80 boys in each group, and they were given a week's training in conservation matters. Along with these youth groups we also had the 4-H Clubs and the Future Farmers of America. You can readily see that by charging $6.50 a week we are bound to go into the red a little, but we feel that it is worthwhile to subsidize these groups as

they are the people who are going to be handling conservation affairs in the future. The teacher groups are given credit for their work in conservation here at the School. Educators, not only from our own department, but also from the universities and other colleges of the State of Michigan conduct the classes.

Saugstad: What about storm sashes?

Gunderson: We do not use storm sashes, but do not have any difficulty with frost on the windows. The lowest temperature is from about 20° below to 0° during January and February. We had a lot of snow last year, but we were snowed in for only three days. We have a central heating plant. Everything is electrical, and so for times when the power goes off we have purchased an auxiliary plant so we will not get stuck again as we did in March of this year when our lights went out during a snowstorm.

Rider: You are not qualified teachers, so how do those who come for the purpose of credits get them?

Gunderson: We have educators from the University of Michigan, State Normal College, etc. The Superintendent of Public Instruction works hand in hand with us.

All of you have probably met Mr. William Ryder, who is sitting right over there. He works between the Sup't of Public Instruction Office and the Department of Conservation lining up the conservation program in the school systems of Michigan, as well as here at the Training School.

Mr. Ruhl called the meeting to order and introduced Mr. Charles Welch, Training Officer, Department of Conservation, Lansing, Michigan.

IN SERVICE TRAINING SCHOOLS
- THE PROGRAM -

by Charles Welch, Michigan

In-service training programs of one type or another have been conducted for Michigan's Conservation personnel for some thirty years. Much of it has been done on the trial and error basis, since the training of Conservation workers is a comparatively new field with few established precedents. We feel that progress has been made. Yet, we are far from perfection. During the allotted time, I shall endeavor to describe the development of our program and depict some of the problems that we have encountered. Undoubtedly, you have met some of the same difficulties in your respective states, and have the solutions.

Actually, our training program dates back to the middle twenties when field conferences were initiated to provide opportunities for field personnel to meet and discuss new techniques and equipment, mutual problems and cooperative measures. Field instruction was provided in the proper use and care of equipment. Annual conferences of a week or two duration were established at the Lansing office for field supervisors. Not unlike our present training sessions, one of the major

merits of these early programs was that the men were provided an opportunity to get acquainted. We still encourage monthly conferences on the district and regional basis, providing they do not conflict with the regular duties of the personnel involved.

Michigan's first Conservation training school was established in 1935 when groups of thirty-five officers were brought together for a ten-day training course. The major instruction offered dealt with law enforcement and forest fire, and was patterned after the Pennsylvania Game Protector and Michigan State Police Schools. In addition, specialists from the various divisions discussed geology, forestry, game management, fish management, education and related subject matter.

This first school was not received favorably by some of the old timbers. They objected to "going to school". It was considered a mere folly and waste of time. They knew their jobs and had worked for years without such training. Rumors persisted that the examinations which followed the instruction would be used as a basis for dismissing those who were sure that they would not qualify. Incidentally, no one was dismissed because of the examination results. Today we find that many of the same individuals who complained are now enjoying the annual trip to the little school in the woods. Undoubtedly, one of the most important factors in subduing the criticism is the improved facilities which the present training school provides. Prior to the construction of this unit, we resorted to tents, abandoned C.C.C. camps, and garages for quarters and classrooms, all of which were most unsatisfactory.

In addition to the annual refresher courses for Conservation Officers, the first recruit school was established in 1937. Fifteen recruits were provided six weeks' instruction covering all phases of their work before being assigned to field duty. In the same year, week long conferences were conducted for the personnel of the Game, Forestry, Parks and Recreation and Fish Divisions. Their curriculums consisted of topics related to their respective fields of work, inter-divisional cooperative programs and those of general interest to all employees of the department.

With the exception of the war years when most training was necessarily curtailed, the above programs were continued annually. Definite changes have been made. Our present schools are as different from the first as the V-8 is to the Model T.

The immediate results of training are difficult to measure. However, if we are to base our opinions upon the attitudes and accomplishments of those who have attended the various conferences, the results are favorable.

Like the changing concepts in wildlife management, we are continually modifying our thinking in relation to training. If training accomplished no more than to keep employees informed regarding the new developments and concepts in the field of conservation, it would be worthwhile. Only a quarter of a century ago, game management was considered only in terms of game propagation and law enforcement. Later refuges were established throughout the state, and were the last word in building up game supplies for the hunter. Today the refuges have outgrown their usefulness, and are open to hunting, and the emphasis is on habitat improvement. This is only one example of the many changing concepts in the field of conservation, which require that all employees of the organization be kept properly informed.

Today we have two primary objectives in our training program: First, to train each individual in relation to his particular assignment. Second, to provide each employee with information concerning the major programs and policies of the general organization and other agencies carrying on related programs.

On-the-job training of an individual for his particular assignment is a responsibility of supervision. If a supervisor is responsible for the work of his subordinates, he should also have the responsibility of training them to do their work most effectively. Each division is accountable for the development of training conferences for its employees. They have the responsibility of selecting the instructors and developing the program. The central training office has the responsibility of encouraging uniformity throughout the organization and providing any other worthwhile assistance.

During the past winter a three-day conference was conducted for the supervisory personnel of each division which included instruction in each of the following topics: Job Instruction, Conference Leadership, Employee Relations, and Job Analysis. Instructors from the University of Michigan, the Michigan Civil Service Commission, and the Michigan Department of Public Instruction were secured to assist department personnel in providing the instruction. The objective of the program was to provide supervisory personnel with instruction which would assist them in developing and conducting on-the-job training for their subordinates. Each three-day session was followed by a two or three day divisional conference.

Each supervisor attending these conferences was given a questionnaire requesting select topics which would be most helpful to him as a supervisor. The topics listed for his consideration were of a general nature common to all employees of the department. Of a total of fifteen topics, the following five were given top priority.

1. Information concerning the major programs and policies of each division.

2. Information concerning the organization and major policies and programs of agencies carrying on related programs in Michigan.

3. Public relations. How to organize and conduct field trips and provide other assistance to the public.

4. Detailed information on the Michigan State Employees Retirement system.

5. Civil Service procedures.

Each of the nine divisions of the department is responsible for certain phases of conservation activity. Yet, the public fails to recognize the divisional lines of authority, and expect each representative to be an expert in all fields. This necessitates that each employee, especially on the supervisory level, be informed regarding the general programs and policies of each of the other divisions -- not with the thought of each being an expert in all fields but rather of being qualified to assist the public to sources of assistance and information.

Prior to our entry into the war, informational programs were established in which personnel from all divisions participated. Before establishing the program, we contacted various industrial and public service agencies which were carrying on this type of training program. We found that the Extension Division of Michigan State College had been using true and false questions as a basis for discussion and were satisfied with the results. Since that organization functions much like the Department of Conservation, with similar problems, we felt that the procedure had possibilities. Sets of questions pertaining to all phases of the program were developed. At the beginning of each meeting, each trainee was provided with a set and given a limited time in which to jot down the answers. Then each question was discussed independently. Those who participated felt that the method was very worthwhile. Actually, this method is much more effective than lectures and demonstrations alone, since the questions tend to encourage discussion which provides the opportunity for all trainees to participate. However, it should only be used to supplement the lecture and demonstration method.

Two divisions use manuals effectively. We have considered the possibility of a general manual covering all divisions, but hesitate to develop one because its size would render it ineffective. Rather we feel that manuals should be developed on a divisional basis in those divisions where they are considered practical. During the war a policy manual was made available to all employees of the organization. This manual contained information concerning the major policies of each division. It was so set up as to allow the pasting of stickers to cover any revision. We are now considering an employee handbook which would be useful to all employees, especially new-comers to the organization. It would cover the rights and benefits under state employment involving such items as salary increases, vacations, sick-leave, workmen's compensation, and others.

There is no doubt that training other than that by supervisors on the job can be overdone. We have never been able to determine just how much time should be devoted to training, since it requires taking men away from their work. Do the results compensate for the time the employee is off the job, especially on the lower levels? We are inclined to believe that most of the training carried on in the lower levels should be done on the job by supervision. Much of it can be conducted in connection with regular supervisory procedures. Most of our field supervisors indicate that this method is most logical. They have also indicated that more would be gained if shorter and more frequent training sessions were held for supervisory personnel.

In our earlier training conferences, evening sessions were held regularly. However, we now feel assured that more is to be gained if we delete all evening classes, with the exception of special features such as movies, outside speakers, etc. More is to be gained if the trainees are allowed to mingle and discuss their problems with one another. Often these training sessions are the only times that many of the employees see each other during the year. However, in the recruit officer schools, we often have organized study or discussion periods in the class room in the evening.

We expect to establish a recruit school next month for fifty-six officers who are now being recruited by Civil Service. Rather than bring these men into the school for a continuous training course of six or eight weeks' duration, we plan to spread their training over a six month's period. Their training will be interspersed with field work. For example, after they have had classroom instruction in relation to the game laws, they will work during the hunting season with an experienced

Conservation Officer. Then following the game season, they will return to the school and discuss the various phases of the program on which they have had field experience before receiving instruction in other phases of the work.

Whenever possible, we feel that it is more desirable to use a few instructors who have teaching ability rather than a large number of instructors as we did at our earlier training schools. This procedure is not only more effective, but reduced the cost of the school, since less travel expense is involved, and fewer men are taken from their regular assignments.

In large groups covering a wide range of ages and experiences, we have found it desirable to divide them into sections according to age and experience. The interests of the younger employee are different from those of the veteran. As a result, the subject matter which the young worker considers worthwhile, is old to the latter, and he becomes bored from having to sit through the same instruction year after year. We have found that this segregation has a definite effect upon the morale of the school.

A number of supervisors who completed the questionnaire last winter indicated that more would be gained if shorter and more frequent conferences were held. In the future, we are planning on conducting conferences for the employees of all divisions on the regional and district levels. During the past year it has been impossible to hold many field meetings because the number of new employees made it necessary for each of the divisions to spend all available time in training the men for their individual assignments.

Another factor to which we have given considerable thought is the seasons of the year which are most desirable for training sessions. It is difficult to select periods which are best suited for removing personnel from their regular assignments for training. Usually, we conduct the greater number of conferences during the winter months. However, that period of the year is undesirable, since many of the men are accustomed to outdoor activity. After being confined to the class rooms for a few days, they become restless. This could be overcome by holding such conferences during warmer weather when they could spend more time in the out-of-doors during the periods when classes are not in session. But again, it means removing personnel from their jobs when the work load is the heaviest.

Seating facilities are another factor of importance. We recognize from experience that the class room facilities here are not adequate. However, this is merely a temporary arrangement and will be replaced with a well-planned class room in the near future.

During this limited time, it has been impossible to discuss our training program in detail. It is realized that only the highlights were touched upon. During the discussion period, it may be possible for us to discuss our mutual problems. As stated previously, we are far from perfection and can gain from suggestions.

GENERAL DISCUSSION

Rider: How would teachers be credited for Masters degree or some other such degree? How would points be fixed up?

Welch: We cooperate with the Teachers' College in a training program for teachers. They use some of their own instructors and some of our personnel.

Rider: Ohio does it through colleges; we turn everything over to the college. The National Education Association did not like the idea of non-professional "teachers" doing this sort of thing, so they turned it over to the State Education Board, but the Conservation Department paid for everything.

Welch: We have such a program here. Mr. William Ryder works for the Department of Public Instruction, but is paid by the Conservation Department.

Rider: If you want to get anywhere with this, you must get it in the hands of the educators generally.

Welch: Our Department of Public Instruction has encouraged Conservation education in schools and colleges.

Rider: How many supervisors were included in last winter's training programs.

Welch: We had 232 supervisors from our nine divisions in the supervisor's training school last year. The supervisor has the responsibility of training the men under him. That is the pattern followed by industries. We train our supervisors so they can train the men under them. Last winter we started for the first time to bring supervisors alone into the training school. We arranged with the Department of Public Instruction, the University of Michigan, and the Michigan Civil Service Commission, to provide the instruction. In any employee relations conference, leadership, job instruction, and job analysis are stressed.

We have a number of training conferences each year for conservation officers, game managers, etc. Usually the instructors are the supervisors of the division.

Gresh: Do you bring up whole divisions intermixed?

Welch: No, but we are going to soon.

Rider: Were supervisors ever taught how to do things?

Welch: Yes.

H. L. Aldrich, Regional Supervisor, Michigan Department of Conservation, Roscommon, Michigan:

We have 150 Conservation Officers, and are putting on 60 more.

Welch: These men will be brought into the school for a six month's training program when they come on the job, but after they are put on the job the supervisor is responsible for training him to do his job better. They will be brought to the school for refresher courses.

Osborne: Are they being paid while in training?

Welch: Yes. They will be assigned to certain supervisors who will make periodic reports on them.

Rider: We felt in Ohio that if we turned this program over to the public educators it would become too academic. We hold the strings because we control the money.

Ruhl: In the credit courses quite a lot of the teaching is done by Department personnel, thereby giving a practical conservation slant.

Tubbs: The Michigan colleges accept the credits given here and 75% of the instructors last year were Department supervisors. All the people who teach have a certificate from the Department of Public Instruction which qualifies them as teachers.

Gresh: What are your requirements in a physical exam (height, weight, statute, size, etc.)?

Welch: The minimum weight acceptable for an enforcement officer is 140 lbs. Height 5'8" to 6'4".

Rider: I still don't see how Department employees can possibly be qualified as teachers.

D. W. Douglass, Head of Technical Staff, Game Division, Department of Conservation, Lansing, Michigan:

The students come to us as students of say Michigan State Normal College, but we make out the card and send in their credentials and they get the credits.

Swift: We have a mandatory law for teaching conservation. We took a man who we thought to be a high-class man (principal of a high school), started him out as a Game Warden, and worked him through a lot of jobs in three years. He carries on an education program, and in the summer he heads a program for teachers. He gets qualified professors from the universities to teach the schools.

Welch: Each group we have here must spend at least 25% of their time on conservation. We do not try to train all teachers, but only those who are interested and want the instruction. Mr. Ryder is available to schools and colleges and to assist them in integrating their programs.

Gresh: How much is education costing Ohio?

Rider: Our education program in Ohio costs nearly $100,000 from Game and Fish money.

Welch: Besides Bill Ryder we have two trained women teachers who have taught conservation and are available to schools and teachers at all times to assist them in their conservation programs, and the budget permits hiring another consultant to assist teachers in the Upper Peninsula.

About ten years ago there were rumors that the organized sportsmen would try to make teaching conservation mandatory in the schools, but we tried to discourage it and think we have made just as much progress without it.

Swift: Is the scheduling of programs your only job?

Welch: At the present time I am running a boys camp as well.

(Mr. Ruhl called a ten minute recess at 3:00 P.M.)

BUSINESS MEETING:

Mr. Ruhl called the meeting to order at 3:10 P.M., and introduced Mr. Robert C. Sparks, Secretary-Treasurer of the Association of Midwest Fish, Game and Conservation Commissioners.

The minutes of the last meeting were read and approved without correction.

REPORT OF THE SECRETARY-TREASURER
Robert C. Sparks, Illinois

In 1945 the records of the Association were either destroyed or lost. Since the last meeting I have written many letters trying to find out what became of the material of previous meetings as well as the funds, but have had no success. The minutes of last year's meeting in South Dakota have not been printed up yet. Shortly after the meeting in Indiana Director Mosbaugh was transferred or changed positions and did not get the minutes written. As he was the president, he would not have had the funds. Among a lot of letters I found this bankbook, issued by the First National Bank of Pierre, South Dakota. A balance of $45.00 is shown, with no withdrawals, but I cannot find the money.

(read the following report to those present) --

The past records of this Association have become lost. As far as I am able to find out, they were lost either during, or some time right after, the meeting that was held in Indiana in 1945, in with some copies of previous correspondence that was sent to the writer from Elmer Peterson of South Dakota.

I have a bankbook on the First National Bank of Pierre, South Dakota which shows a balance of $45.00 deposited in the name of the Association. However, I am unable to find what became of the $45.00, and no one seems to know.

In turn, I am presenting you with a list of the states who have paid their dues up in full, and also a list of other states who have not paid. However, many of the states who have not paid as yet do have vouchers and requisitions going through their State Departments for payment. Herewith, I am turning over to the new Secretary-Treasurer checks in the amount of $90.00.

I suggest that a copy of this report be given to the new Secretary of the Association.

R. C. Sparks
Secretary-Treasurer

Mr. Sparks continued --

I wrote all the members of the Association asking them to pay their back dues. So far we have received checks from the following states: Kansas, $10.00 - Michigan, $20.00 - Minnesota, $10.00 - Missouri, $10.00 - Wisconsin, $40.00 - and Illinois has a check coming through for $20.00. Most of the other states have indicated that they are sending checks.

At a meeting this noon the Finance Committee drew up a recommendation, which is now brought up for discussion. As records were lost, we do not know how much is really owed, or who owes at all. We recommend that all member states who are two years or more in arrears pay two years dues of $10.00 per year. Wisconsin will not be billed for two years, as they have paid $40.00. Also, the new Secretary should write to Elmer Peterson for the money in the bank. The Treasurer at the Indiana meeting was from Kansas, but we do not know his name. The Finance Committee has also decided that those member states who have not paid their dues or even attended a meeting since the Association was formed should be informed that unless they pay their dues by October 1st, they will be dropped from the Association. They also recommended that a full and complete report of the records be made and sent to each member state.

Dues are $10.00 per year.

I will say that being Secretary this year was not half as embarrassing as it was for Ernie Swift last year. He came to the meeting not knowing that he had been Secretary for a year, so he had no records and no $45.00.

Mr. Osborne made the motion to approve the Secretary-Treasurer's report, and it was seconded and carried.

Mr. Chester Wilson made the motion that all states check their own records, and pay in full if records are complete, otherwise pay for two years. Mr. H. A. Rider seconded the motion and it was carried.

Sparks: The balance on hand is $90.00, and there are no disbursements.

Swift: (Auditing Committee) -- There are no bills to date, and I believe the records are correct.

Mr. Chester Wilson made the motion that adoption of all the resolutions be approved. Mr. Livingston Osborne seconded the motion and it was carried.

Ruhl: Is it according to the by-laws that we should drop those states not paying by October 1st?

Chester Wilson: Yes, this is according to the by-laws.

Report of Resolutions Committee:

Mr. Chester Wilson read the following suggested resolutions and moved that adoption of all resolutions be approved. Seconded by Mr. Osborne and carried.

RESOLVED by the Association of Midwest Fish, Game and Conservation Commissioners in annual meeting assembled at the Conservation Training School, Roscommon, Michigan, July 15, 1947 as follows:

CONSERVATION MEASURES

We are mindful of the alarming depletion of natural resources by past consumption, waste, and inroads of war. We know that with growing population the demand for essential resources and the pressure upon game, fish and other natural attractions will continually increase. This is no time for retrenchment, but rather for redoubled efforts in conservation of soil, waters, forests, wildlife, and all other natural resources. We therefore urge upon the public and upon all conservation agencies, both State and Federal, the critical need for concerted action in furtherance of an all-out conservation program.

To that end, without minimizing the importance of other proposals, we urge the prompt adoption of the following measures now pending in Congress:

1. Adequate appropriations, at least the full amounts originally requested, for the U. S. Fish and Wildlife Service, the U. S. Soil Conservation Service, and the U. S. Forest Service, especially, as to the last named, funds for research, forest inventories, and wildlife management in the national forests;

2. H. R. 1693, providing for use of the proceeds of the excise tax on fishing tackle for fish conservation purposes;

3. H. R. 2617, increasing the duck stamp fee to $2.00 and providing for the use for public hunting grounds of part of the refuge areas acquired and maintained with duck stamp money;

4. H. R. 2472, providing for the use of money from reverted Pittman-Robertson funds for wildlife extension purposes by the U. S. Fish and Wildlife Service in cooperation with state agencies;

5. H. R. 2857, granting second class mailing privileges for publications of State conservation agencies;

6. S. 1155, providing for transfer of surplus land acquired for war purposes to the U. S. Fish and Wildlife Service or State conservation agencies;

7. An adequate Federal water pollution control act, with due recognition of the authority and responsibility of the States;

8. H. R. 2721, requiring management of upper Mississippi River navigation facilities and maintenance of pool levels with consideration for the needs of fish and other wildlife resources.

RECOGNITION OF WILDLIFE AND RECREATIONAL PURPOSES IN PUBLIC PROJECTS

We reaffirm the principle that in all public projects and operations, Federal and State, affecting lands, waters, forests, or wildlife, proper consideration should be given in connection with the planning and maintenance thereof, to the requirements of wildlife and public recreation as well as to other public interests, with due recognition to all interests affected in proportion to the related public benefits.

We acclaim the progress made in furtherance of these purposes under the Wildlife Coordination Act, Public Law 732, commend the Federal agencies and officials who have cooperated in the administration of that Act, and urge upon all concerned the fullest possible observance of its provisions in the future. We recommend that so far as any lands acquired for any such project may not be used or needed for the purpose thereof, and so far as such lands may be suitable for hunting, fishing, or other public recreational uses, the same be made available for such purposes by War Department or other agencies in charge thereof with the cooperation, so far as feasible, of the appropriate Federal or State wildlife or conservation agencies, and that such lands be not leased to private persons or corporations under conditions excluding or conflicting with such wildlife or recreational purposes.

SUPERIOR NATIONAL FOREST AND QUETICO-SUPERIOR WILDERNESS AREAS

We reaffirm our support of the program for consolidation of the roadless or wilderness areas in the Superior National Forest and for the establishment, in cooperation with the appropriate authorities in Canada, of an international wilderness memorial area on both sides of the boundary. To that end, we urge the prompt passage by Congress of the roadless area consolidation bill, H. R. 2642, S. 1090, providing for Federal acquisition of private land in the area and for adequate compensation for the local counties in lieu of taxes on government land.

We commend the Department of Land and Forests of the Province of Ontario for its far-sighted action in withholding permits for commercial developments in Quetico Provincial Park, pending further action on the roadless area bill by Congress. In consideration of this favorable action by the Province of Ontario, we urge that passage of the roadless area bill be expedited to the utmost, and that the Province of Ontario be requested meantime to grant such further postponement of commercial developments in Quetico Provincial Park as may be necessary.

REGIONAL MEETINGS ON MIGRATORY BIRD REGULATIONS HELD BY U. S. FISH AND WILDLIFE SERVICE

We believe that the regional meetings held by the U. S. Fish and Wildlife Service with State game and fish or conservation officials, representatives of sportsmen's organizations, and others interested, for consideration of proposed migratory bird regulations have been of great benefit in disseminating information of conditions affecting migratory game birds, promoting a better understanding of the problems of management and regulations, and enlisting the cooperation of state agencies, sportsmen and the public in a sound, long-range program for conservation of such birds.

We therefore strongly recommend that the practice of holding such meetings in each of the recognized waterfowl flyways of the country be continued.

RADIO COMMUNICATIONS FOR FORESTRY, GAME AND FISH, AND RELATED PURPOSES

Recognizing the value of unified representation before the FEDERAL COMMUNICATIONS COMMISSION on vitally important matters dealing with radio communication for forestry, game and fish, and related purposes, we endorse the program of the Forestry Conservation Communications Association, and recommend that they be authorized to represent this association and the respective State Departments and other agencies belonging thereto as occasion may arise in connection with any pertinent measures, proposals, or proceedings before said commission.

SUPPORT OF RESOLUTIONS BY MEMBERS

In behalf of the Resolutions Committee, and in order that the resolutions adopted by this Association may be most effective, I move that the Head of each participating State Department or agency transmit copies, to be supplied by the secretary, to the Senators and Representatives in Congress from his State, write them letters and make personal contacts, urging support for the recommended measures, and secure the cooperation of other organizations and individuals in writing similar letters, so far as deemed advisable.

Chester Wilson: (continued)

I have learned a lot in this meeting, and after such an interesting meeting, I feel this is an anti-climax --- "Education is the spearhead of Conservation."

Regarding the subject of radio communications, Mr. Klemetti has come here to give those who wish the opportunity to discuss any problems or questions with him. The officers of the Forestry-Conservation Communications Association are as follows:

Mr. Reynold Klemetti, Michigan - President
Mr. Earl Cornett, Michigan - Vice-President
Mr. W. F. Cochran, California - Secretary-Treasurer
Mr. H. J. McGinnis, Tomahawk, Wis. - Chairman for Region 3

Each state department would have to give these men authority to recommend this association, and to represent this organization. I move these policies be adopted.

Osborne: Seconded and carried.

Clark Wilson: Supplemented further motion on behalf of the Resolutions Committee that the head of each participating state department write letters to Congressmen and secure cooperation of other cooperating individuals. Insert the suggestion of Mr. Rider that we make personal contacts and write letters. It will be up to each state department to make these efforts.

Swift: Seconded and carried.

Osborne: WHEREAS the affairs of this Association during the year now expiring have been so ably conducted by its officers and directors, AND,

WHEREAS much of the success and the accomplishments of this meeting is attributable wholly, or in part, to the excellent food, the fine sleeping quarters and the good fellowship of the members of the Conservation Department of the State of Michigan;

THEREFORE BE IT RESOLVED: That the members of the Midwest Association of Fish, Game and Conservation Commissioners assembled in convention at Higgins Lake, Michigan, in July, 1947, testify to their appreciation of the efforts put forth in their behalf by H. D. Ruhl, President, and the other officers and directors of this association, AND,

BE IT FURTHER RESOLVED: That we express our deep appreciation for the hospitality extended to us by the Honorable Percy J. (alias "Pete") Hoffmaster, Director, and his Assistants in the Conservation Department of the State of Michigan, AND,

BE IT FURTHER RESOLVED: That these resolutions be inscribed as a part of the minutes of this meeting and be made a part of the permanent records of this association.

Rider: Seconded, and carried.

Ruhl: I want to say it is more pleasant to give than to receive, and we were only too happy to do what we could. We did not try to high-pressure you, but hope you enjoyed your visit. We would be glad to accommodate you again either individually or as a group, if it is possible. This is a conservation in-service training institution where we get to know each other better, and folks get to know something of other problems in other states.

Klemetti: We are very anxious to do what we can, partly because we are very much concerned about it and are interested selfishly. We hope you folks can help us get what we want and still enjoy yourselves.

Swift: I have one more suggestion regarding this radio subject. I think we should pledge $100 as a contribution to be used by the committee now functioning, as a gesture of our sincerity, for the purpose of helping with the expenses, and I so move.

Chester Wilson: Seconded.

Osborne: I am in favor of it, but think we should contribute more if they need it.

Ruhl: Maybe the states should do it individually.

Blair: Did Illinois have a representative at the Yosemite meeting?

Swift: No. There were about 30 or 35 states represented there, and they pledged $40.00 each.

Chester Wilson: How much money are we going to need, and can we afford it?

Blair: We have $130.00 in the treasury, and no bills pending.

Sparks: There has never been anything spent since we have been attending these meetings. According to our records, if the states that are behind in dues pay $20.00 each we will have $210.00, plus the possible $45.00 in South Dakota.

Motion carried.

RECOMMENDATIONS OF NOMINATING COMMITTEE

ASSOCIATION OF MIDWEST FISH, GAME, AND CONSERVATION COMMISSIONERS

July 15, 1947

President	-	H. A. Rider, Ohio
Vice-President	-	Clark Wilson, Nebraska
Secretary-Treasurer	-	E. L. Wickliff, Ohio

Board of Directors

Melvin O. Steen, Missouri
Ernest Swift, Wisconsin
D. R. Hughes, Indiana
Lester Bailey, Ohio
Robert C. Sparks, Illinois
H. D. Ruhl, Michigan
Dave Leahy, Kansas
A. L. Ziemer, Iowa
W. J. Lowe, North Dakota
Elmer Peterson, South Dakota
Frank D. Blair, Minnesota
Paul Gilbert, Nebraska

PLACE OF NEXT MEETING: Ohio

TIME: The committee recommends that the 1948 meeting place in 1948 be decided by the President and the Secretary.

The Nominating Committee's Recommendations were adopted, after being seconded and carried.

Rider: I suggest that by the time Congress meets again we get together and take these resolutions and all other matters of interest and take them to the Congressmen and REALLY sell them. Our getting $9,000,000 appropriated when the President asked for only $2,000,000 is proof that we can get almost anything if we try hard enough. I pledge my sincerest efforts in support of that program.

Osborne: I move that this meeting be adjourned.

Seconded and carried.

MEETING ADJOURNED.

May 5, 1948
Game Division
Mich. Dept. of Conservation
FLS & PAS