

Bud Adams

25th Annual Meeting
of
ASSOCIATION OF MIDWEST
FISH AND GAME COMMISSIONERS

ADAMS A.W.

PROCEEDINGS
OF
25th Annual Meeting
Association of Midwest Fish and Game Commissioners
Held at Provident Life Insurance Building
Bismarck, North Dakota
July 10, 11, 12, 1958

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Association of Midwest Fish and Game Commissioners

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TWENTY-FIFTH ANNUAL MEETING

1958

CONTENTS

Thursday Morning--July 10

Registration	
Opening Remarks	1
Welcome by Governor John E. Davis	2
Announcements and Roll Call	4
President's Report	5
Appointment of Committees	6
The Federal Program--Progress on Wetlands and Refuge Acquisition Program, D. H. Janzen	7
Federal Aid Apportionment, Dr. Ray Johnson	13

Thursday Afternoon

Panel Discussion on the Progress and Future Aspects of the Soil Bank Program, H.R. Morgan, presiding	17
Hayden Olds, Ohio	20
Roman H. Koenings, Wisconsin	24
Ray Wells, Missouri	30
Frank Heidelbauer, Iowa	35
Robert Morgan, North Dakota	39
Thomas Schrader, Department of Agriculture	44
Summarization, H.R. Morgan	53

Friday Morning--July 11

Panel Discussion on Problems of Planning for the Future, William Barnes, presiding	58
Dr. Harlow B. Mills, Illinois	58
James W. Kimball, Minnesota	68
Raymond A. Haik, Minnesota	75
Dr. C. H. D. Clarke, Ontario	80

(over)

Friday Afternoon

Panel Discussion on the Place of Fundamental Research in Fish and Game Management, William Towell, presiding	83
Dr. Justin Leonard, Michigan	83
Albert Hochbaum, Manitoba	87
Tom Evans, Illinois	94
Business Meeting	100
Treasurer's Report	100
Federal Aid Committee Report	101
Legislative Committee Report	101
Soil Bank Committee Report	102
Resolution Committee Report	102
Nominating Committee Report and Election of Officers	114

REGISTRATION

G. E. Sprecher	Wisconsin Conservation Department	Madison
R. H. Koenings	Wisconsin Conservation Department	Madison
Wilbur Boldt	North Dakota Game & Fish Department	Bismarck
I. G. Bue	North Dakota Game & Fish Department	Bismarck
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Fred Warders	Kansas Fish & Game Department	Pratt
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Frank Heidelbauer	Iowa Conservation Commission	Des Moines
Lester F. Faber	Iowa Conservation Commission	Des Moines
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C. S. Williams	Bureau of Sport Fisheries & Wildlife	Denver
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Wm. B. Barnes	Indiana Department of Conservation	Indianapolis
M. O. Steen	Nebr. Game, Forestation & Parks Com.	Lincoln
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Tyler C. Hendrickson	North Dakota Game & Fish Department	Bismarck
Morris D. Johnson	North Dakota Game & Fish Department	Bismarck

Registration-2

Glen D. Palmer	Illinois Department of Conservation	Springfield
C. H. D. Clarke	Ontario Dept. of Lands & Forests	Toronto
Thomas A. Schrader	Department of Agriculture	Washington, DC
John Bauman	Bureau of Sport Fisheries & Wildlife	Fort Totten, ND
Tom Evans	Illinois Department of Conservation	Springfield
Russell Bagwell	Bureau of Sport Fisheries & Wildlife	Bismarck
George Karpen	North Dakota Game & Fish Department	Carrington
Charles N. Lloyd	Wisconsin Conservation Department	Madison
Robert W. Burwell	Bureau of Sport Fisheries & Wildlife	Minneapolis
Ellison Madden	Bureau of Sport Fisheries & Wildlife	Devils Lake
H. B. Mills	Illinois Natural History Survey	Urbana
William E. Towell	Missouri Conservation Commission	Jefferson City
Ben Cash	Missouri Conservation Commission	Kennett
Frank P. Briggs	Missouri Conservation Commission	Macon
Ted Butler	Missouri Conservation Commission	Springfield
Ray M. Wells	Missouri Conservation Commission	Jefferson City
Ted Shanks	Missouri Conservation Commission	Jefferson City
Al Hoefelman	Missouri Conservation Commission	Jefferson City
Paul S. Jefferies	Missouri Conservation Commission	Moberly
Helen Cooper	Missouri Conservation Commission	Jefferson City
R. E. Johnson	U. S. Fish and Wildlife Service	Washington, DC
T. E. Jacobsen	North Dakota Game & Fish Department	Bismarck
H. F. Duebbert	North Dakota Game & Fish Department	Oakes
D. L. Mitchell	North Dakota Game & Fish Department	Oakes

Registration-3.

C. R. Grondahl	North Dakota Game & Fish Department	Hettinger
LeRoy Shearer	Soil Conservation Service	Huron, SD
H. D. Ruhl	Michigan Dept. of Conservation	Lansing
Justin W. Leonard	Michigan Dept. of Conservation	Lansing
Bud Morgan	National Wildlife Federation	Bismarck
Harry Woodward	Dept. of Game, Fish and Parks, S.D.	Pierre
Chuck Schroeder	North Dakota Game & Fish Department	Bismarck
Bud Adams	North Dakota Game & Fish Department	Rugby
Robert L. Morgan	North Dakota Game & Fish Department	Bismarck
Alfred C. Fox	North Dakota Game & Fish Department	Bismarck
John L. Sypulski	Bureau of Sport Fisheries & Wildlife	Billings, Mont.
Delbert Tibke	North Dakota Game & Fish Department	Bismarck
Jerry Wilson	Bureau of Sport Fisheries & Wildlife	Riverdale, ND
Robert Randall	Bureau of Sport Fisheries & Wildlife	Bismarck
Les Berner	S.D. Department of Game, Fish & Parks	Pierre
V.R. Johnson	S.D. Department of Game, Fish & Parks	Pierre
Dan Janzen	U. S. Fish and Wildlife Service	Washington, DC
L. G. Lloyd	Soil Conservation Service	Bismarck
Tom Klett	North Dakota Game & Fish Department	Mandan
Dale Henegar	North Dakota Game & Fish Department	Bismarck
Burton Rounds	Bureau of Sport Fisheries & Wildlife	Minneapolis
James W. Kimball	Minnesota Department of Conservation	St. Paul
Raymond A. Haik	Minnesota Department of Conservation	Minneapolis
Homer L. Bradley	Bureau of Sport Fisheries & Wildlife	Moffit

Registration-4

William C. Hickling	Bureau of Sport Fisheries and Wildlife	Bismarck
John G. Hewston	North Dakota Department of Game & Fish	Bismarck
Harry Jensen	Bureau of Sport Fisheries & Wildlife	Jamestown, ND
W. A. Leach, Sr.	North Dakota Game & Fish Department	Bismarck
Jack Samuelson	North Dakota Game & Fish Department	Mott
H. H. Spitzer	North Dakota Game & Fish Department	Ashley
Robert G. Rollings	North Dakota Game & Fish Department	Devils Lake
Louis H. Carufel	North Dakota Game & Fish Department	Riverdale
Dr. J. H. Shaeffer	National Wildlife Federation	Parker, SD

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25th Annual Meeting
Association of Midwest Fish and Game Commissioners
Bismarck, North Dakota

Thursday Morning - July 10

The 25th Annual Meeting of the Association of Midwest Fish and Game Commissioners was called to order by President I. G. Bue.

DR. BUE: It gives me great pleasure to welcome you to North Dakota-- Member states, member provinces of Canada, interested visitors and conservationists.

Last year our meeting was held in the Land of 10,000 Lakes. This year it is in the land of several hundred thousand potholes, which we are quite proud of and which do contribute a great deal to our duck supply throughout the Nation. This is the last frontier of waterfowl production in the United States. This region raises from 2 to 4-1/2 million ducks a year. These ducks are shot in about every state in the Union.

You will find the people in this state friendly and full of western hospitality-- we go in strong for western hospitality. People in North Dakota know what it is to go through severe winter storms and through drouth periods. Also, we are pretty tough people, too. For example (story on cremation).

I certainly want to thank all of the members of this Association for helping in formulating and preparing for this two-day meeting. They have been most cooperative. We have many mutual problems which we can talk over and look at here. Many of these problems can be overcome by cooperation.

No Association meeting would be complete without having a few words from the Governor of the Host State.

Inasmuch as Governor Davis is an ardent small game and big game hunter, he has a tremendous interest in the Game and Fish Department and the work it is doing.

I know that on at least one occasion last hunting season, he bagged his limit of pheasants, and that during the winter season he shot a nice mule deer buck.

We all know that the work of any Conservation Department is at its best when there is a good working relationship between the Governor's Office and that Department. We have been most fortunate that way. Governor Davis has gone along 100 % with us on any measures we have requested.

Incidentally, I understand that I am in the Governor's doghouse to some degree in that I bagged two geese last fall, and he didn't get any. I'll see that

that doesn't happen again.

Ladies and Gentlemen, at this time I would like to introduce North Dakota's Governor--John E. Davis.

GOVERNOR DAVIS: Greetings.

As you came in yesterday, I know you looked at our state--green this year, as probably your states are, because of the bountiful rain. This is an agricultural area, as I imagine most of you come from, and it means that we are going to have feed, pastures and apparently prospects for a good crop. It is also conducive to the best interests of game and wildlife which you are greatly concerned with. I think that over-all, throughout this mid-central area that you represent, our state is in a very favorable and probably enviable position.

For some of you, this may be your first trip to our state. I want you to enjoy your visit. I know that Dr. Bue and his staff will make available to you any services that you may require. Some of you came with your families, and they will be provided for.

Hunting and fishing is becoming a bigger interest to more people. I think too that wherever you go you will find people with a mutual interest in hunting. You gentlemen are in a very responsible job and have a big responsibility. More people than ever before are showing a bigger interest in hunting and fishing. I think that is just natural. We see it here in North Dakota. More people are taking the time to utilize the diversions and recreations that are available. They are interested in fishing, in upland game and in big game. I know that all of you can vouch for this increased interest. You have, therefore, a great field in which to work.

The thing that amazes me in the time I have known and watched the work of our own Department is the fact that there are so many dedicated people. They do their work enthusiastically. Oftentimes I know, and probably they feel, that there aren't the rewards there ought to be, financially, but there certainly are many more things that help to compensate, possibly, for the work in which these people--the biologists, the game enthusiasts, and the enforcement people work.

One thing that we can say, that you recognize, is the increased interest of young people. If a boy can hunt, if he starts out that way (probably with his father) he learns to be a little more self-reliant. He learns from just being outdoors--living for a short time close to Nature; and if you build good boys, you make good men.

In this whole scope of living today, it seems to me, this era of wildlife; its propagation, preservation and conservation is gaining in interest and gaining importance. You folks are in a field which has been neglected, actually.

There is so much to do. For people going out and hunting in the fall, land is sometimes posted. Sometimes, I think oftentimes, access is denied,

so I think greater interest has to be pointed toward the use of public lands and the making of public hunting areas. You have done a great deal in terms of reserves and conservation areas to build up wildlife habitat. This has been one of the primary areas of operation for our Department. Bud Morgan was a great advocate of this thinking. Dr. Bue continues to share it and working in that direction.

Oftentime when working with public opinion, it is necessary to point things out to them. Public Relations--I know you are finding it most important. So that people begin to know what you, in your advanced thinking, are trying to do. Those things are helpful and speed up the program that you are trying to carry out. So more and more, it seems to me, we are pointing toward the need for more public shooting ground and probably the use of governmental land areas to be set aside for this purpose and use. It is discouraging for hunters to start out and find that every place they go is either taken up by some private party who had resources to invest and buy; to be denied the chance to the best places, or to find this "No Hunting", "No Hunting", wherever you go. Most of it has come about because of absolute disregard of the farmer's property rights by the hunters. Some hunters are careless. But more and more, your public relations program is working both ways. The hunter and landowner, the farmer and rancher, are important.

I would just like to say a few things about North Dakota where you are holding this meeting. Under the Department and Dale Henegar--where we never had fish before, within a few years they are catching 15 and 20 pound northerns; and every hardware store (I live in a small community myself and you never could find any fish hook or plug or a rod in the stores) you go into any of them now and they are available. You see that change taking place all over. Dam sites and smaller lakes have been planted with fish and we are really making progress everywhere in that direction. Our upland game; pheasants, partridge and grouse, and in areas where we never had big game before, are presenting greater opportunities for general all-around hunting in a wider area over our state.

Much interest was manifested in our Native Duck Bill, passed by the last Legislature. It created a little humor. There were some reasons for it that were rather concrete. Sometimes you can't get all of the cooperation you want out of a Bureau which operates oftentimes without the proper recognition of all local problems. We have long known that our Canadian friends enjoy some early season hunting. Many of our people go up there. Our conditions here are not too dissimilar to theirs. Our conditions seem much the same and there should be a little consideration due to the fact that the length of the duck hunting season oftentimes on the latter end of it, doesn't mean anything at all in North Dakota.

Normally by November 15th there aren't any ducks. The small potholes are frozen and the ducks have headed south. A season a few days earlier could probably save some ravaging damage done to grainfields.

It used to be that only the wealthy could take off and go hunting. We now have a shorter work week, and we have a greater interest in hunting because it

has been good, and because if they go hunting, they get something. If you have a season open up in the middle of the week there are just a few, actually, who can go out and hunt; and as a result people who work in shops and on jobs can't get away. As a result, to them it wasn't exactly fair. We were trying to make that more uniform so that everybody could start out together.

We are hoping that we can work with federal authorities and get a compromise some way, but at least North Dakota's wishes were known.

While you are here, I would just like to say this: The country looks good. It is green. If any of you have never been out in our Badlands, take a day--it is only 135 miles out there--and you will enjoy taking a look at it. We have an attraction this year which started the last part of June, and which I know is going to be outstanding throughout the year. It is a drama or a pageant type thing which has been written professionally and has professional players right out in the Heart of the Badlands in a beautiful spot. I looked at it July 3rd. It is called "Old Four Eyes"--a take off on the life of Theodore Roosevelt, who lived out here in the Badlands. If you go, I know that you will feel well rewarded. I recommend it to you, and I know that you will enjoy it.

If there is anything we can do for you, feel free to call on me if you don't get it from Dr. Bue and his staff; who I know will provide it. I know that your stay here will be productive in terms of what you are learning and meeting each other and exchanging ideas; and we hope that your interest has been excited enough so that you will return and visit North Dakota again.

DR. BUE: I certainly want to thank Governor Davis for his kind words in regard to the Department, and I think from his talk you can understand that he does see many of our problems and has been very close to them.

At this time the ladies are having a breakfast at the Coffee Cup Cafe, and this afternoon there will be a guided tour of the Capitol Building at 4:00 P. M. Transportation will be furnished from the Grand Pacific Hotel at 3:45 P. M.

On Friday afternoon at 2:30 there will be a Tea for the ladies at the Bismarck Junior College Lounge and transportation will again be furnished.

We have a good museum, located on the Capitol Grounds, and tours have been arranged to Fort McKean and Fort Lincoln.

We will have aerial trips over North Dakota's famous pothole country and you will see Garrison Dam and the Reservoir from the air. Our thanks to Bill Towell of Missouri for bringing a plane up. We will have two Cessnas and a National Guard Plane, and will be able to take care of everyone.

We are going to have a Barbecue tomorrow night (Friday at 7:45) preceded by a Social Hour at 6:45. Anyone needing a ride, please let us know.

We want you to enjoy your stay with us, and if you or your wives want to go somewhere, let us know and we'll guide and transport you.

Two girls and typewriters are available for typing committee reports and resolutions, etc. They will be here both days of our meeting.

At this time I would like to say a word of thanks to Harold Schafer of the Gold Seal Company for being so generous in extending us the courtesy of using his cabin and area for the Barbecue and also for furnishing us with what I am sure will be a very nice social hour Friday night.

Roll Call of States

As we call the roll of States and Provinces, I would appreciate it a great deal if the Director or Commissioner from that state or province would introduce fellow delegates from his state or province who are also in attendance.

Delegates were in attendance from Ontario, Minnesota, South Dakota, Wisconsin, Michigan, Nebraska, Kansas, Iowa, Missouri, Illinois, Indiana and Ohio.

Dr. Bue read a letter from Tom Kimball, Colorado, expressing his regret that he would not be able to attend the conference. Manitoba was not represented, and there was no one present from Kentucky.

North Dakota Game and Fish Department personnel were then introduced, as well as personnel of the local Missouri River Basin Studies Group and other Fish and Wildlife Service personnel in attendance.

DR. BUE: Report of Association President

We in the field of Fish and Wildlife Conservation work find ourselves more and more intangled with the ever-changing ways of American living.

More high dams, more pollution of our streams, more super-highways, more demand for military facilities, more industrial sites, changes in agricultural practices, are but a few of the problems that exact a toll on our wildlife resources.

It is, however, interesting to note that more people and more organizations are organizing to defend the rights and perpetuation of our wildlife resources.

I cannot say just how much our association has done this past year towards helping the situation. I do know that I have sent several letters out to members trying to drum up support for or against congressional legislation that would have good or bad effects on wildlife.

Maybe I should have sent more letters, but the International Association and National Wildlife Federation have certainly kept all states aware of existing

conditions--and probably additional letters would have been repetition.

I think that the Midwest Pheasant Council organized last year at Itasca Park, Minnesota, will have good fruit in the future.

The important point is that we keep a united front in fighting for what we think is right and it seems that most of this is accomplished by keeping in close contact with our Congressional delegates.

Before going into our morning program, I would like to go over the Committee assignments as set up some months ago. Later in the program, we will have committee reports.

COMMITTEE APPOINTMENTS

Federal Aid Committee

James Kimball, Minnesota, Chairman
Harry Ruhl, Michigan
Hayden Olds, Ohio
Tom Kimball, Colorado (absent)

Program Committee

Thomas Schrader, Chairman
James Kimball, Minnesota
W. J. K. Harkness, Ontario (absent)
Wayland Osgood, Michigan (absent)
I. G. Bue, North Dakota

Resolutions Committee

William Towell, Missouri, Chairman
William Barnes, Indiana
Lester Faber, Iowa

Legislation Committee

Harry Ruhl, Michigan, Chairman
George A. Selke, Minnesota (absent)
Mel Steen, Nebraska
Tom Evans, Illinois

Soil Bank Committee

L. P. Voigt, Wisconsin, Chairman (absent)
Larry Gale, Kentucky (absent)
Hayden Olds, Ohio
Tom Evans, Illinois

Nominations Committee

Dave Leahy, Kansas, Chairman (absent)
Fred Warders, Kansas
Les Faber, Iowa
Bruce Stiles, Iowa (absent)
Frank Phipps, Kentucky (absent)

Auditing Committee

G. W. Malaher, Manitoba, Chairman
(absent)
Glen D. Palmer, Illinois

I think that we are very fortunate in having Dan Janzen here today to go over "The Federal Program--Progress on Wetlands and Refuge Acquisition Program" with us.

Dan informed me that he would speak "off the cuff" inasmuch as conditions change so fast that he will have to keep us informed through word of mouth and will not give a paper. At this time I would like to have Dan Janzen come up here.

I am pretty sure that Dan will be happy to answer any questions when he gets through.

DAN JANZEN: Thanks, Doc. It is very nice to get back to the middle west and this "outdoor air-conditioning" that you have here. During the last nine days in Washington, D. C. it has been 90° or better, with a humidity of 99 %.

I suppose I should be able to speak off the cuff on this subject by now. Just about all I have been doing in the last 29 years, while working with the Fish and Wildlife Service, is working on this problem. Probably I started out in such a way that no one could dream that I would end up in this particular business. I spent four years in forestry school and I then joined the Fish and Wildlife Service on the National Migratory Waterfowl Program in 1929. I have been in this business of trying to find wetlands for ducks ever since. So I suppose that by now I should be able to get by without a paper.

As you know, in 1929 there was passed a Migratory Bird Conservation Act that appropriated eight million dollars for a ten year program. It was designed to place into national wildlife refuges enough land to insure a breeding stock of waterfowl in perpetuity. Like most of those programs, it went by the board. That was 29 years ago.

It wasn't very long after that in the early thirties that we had the WPA Program. It gave our wetlands program a big boost on some of the national wildlife refuges and it provided ways and means of developing more wetlands. But on the other hand (and I was in the middle of this, in Michigan especially) it provided for a big drainage program, and there were a large amount of wetlands drained during that period of time.

Then again, following the World War, we continued the big drainage program for agricultural purposes and otherwise, so that we have been losing wetlands--we have been losing ground ever since the day I started with the Fish and Wildlife Service. Eventually one begins to wonder where this will end up. Two years ago, I was appointed on a task force in Washington to work up a ten year program for the Fish and Wildlife Service. The task force more or less reached an agreement that our primary problem was how to preserve enough wetlands to maintain our migratory waterfowl in perpetuity.

It so happened that I was only on the task force about 60 days when I got tapped for this job. The very first thing that hit me was, what are we going to do about our wetland preservation program? I found that the proceeds of the

Duck Stamp Bill of the thirties had been used, about 85 percent, for other than land acquisition. Perfectly legal, and if you can realize what happened, you can see why, but it was obvious immediately, after I was on the job a while, that the amount of money for acquisition from the duck stamp monies would be less and less instead of more and more.

It also became quite apparent to me that it was going to be very difficult to get large amounts of money appropriated for land acquisition. A program such as that--out and out appropriation--would require a terrific amount of pushing because there is always a lot of opposition.

So we looked toward another source of money. About that time we were under serious criticism from many conservationists of the states for diverting so much of this duck stamp money for enforcement, waterfowl research, operation, and development of refuges. They said this was not what the duck stamp was intended for. Now that is subject to argument--whether it was or not. There was considerable confusion.

As you know, a few months ago we suddenly upset the apple cart, maybe, with a favorable report from the Administration, cleared by the Bureau of the Budget, supporting a hundred percent earmarking of the \$3.00 duck stamp; permitting 40 percent of the land to be open to hunting and placing small wetlands such as these potholes you have here in North Dakota in a special non-refuge category.

We got support from all over the Nation. There was practically no opposition to it, and at the present time that bill has passed the Senate. The only fear we have is that because we have elections coming up this fall, Congress may want to adjourn early and there will be a last minute rush of bills. That is probably where the bill might be lost. But as far as I can see now, that is about our only source of supply for funds for carrying out a wetlands acquisition program. I don't know where else it will come from.

Now I want to talk about the provisions of that bill because there is still some confusion, I find in talking to some of the people here, as to what that bill actually provides. I have studied it backwards and forwards, having had to appear before the Committee. The earmarking of the \$3.00 items are obvious.

I want to talk a little bit about this 40 % opening provision. What some of you state administrators may not know, in fact I didn't know for sure, and I don't think any of us were sure of it, is that some of the land that we have opened on refuges are subject to question; as to whether we have the legal power to open them. The acquisition history of a particular tract in mind determines whether or not we can open it, and we have purchased land for some refuges from five or six different funds; all having different degrees of permitting to open or not to open. So you can see how impossible it is to manage wildlife on an area when you are in that shape. This bill is designed to permit us to open any 40 % of an area under certain conditions.

Now on the small water area provisions, which created an awful lot of

misunderstanding--In fact I don't know how many times we have had to go back up to explain this to some of the Congressmen. It certainly is complicated--why or how we could define the small wetlands or production areas (they come in different categories) and not require that they be closed to hunting. As you know, there is a segment of the population of the United States that looks upon these national wildlife refuges as a sanctuary program, and they demand that the areas be closed to all kinds of hunting; not for management of the birds, but for protection, and they had difficulty in understanding this, but this is what the provision says: The Secretary of the Interior is authorized to utilize funds I will skip that. defray the expense incident to the acquisition by gift, lease, purchase or exchange of the small wetlands pothole areas; Such small areas designed as waterfowl production areas may be acquired without regard to the limitation and requirements of the Migratory Bird Conservation Act. All of the provisions of such Act which govern the Administration in regard to lands acquired thereunder except the "Inviolate Sanctuary" provision of such Act shall be applicable to areas acquired pursuant to this section. And that simply means that at least as we see it now subject to further legal interpretation that we can proceed with the wetlands preservation program in this pothole section without worrying about the Migratory Bird Conservation Act Provisions which would make the area inviolate.

Now if this bill is passed, what are we planning to do with the money?

The Migratory Bird Conservation Commission has finally adopted a new procedure. If we didn't have the Commission, we would have something else. You may be interested to know that when I testified before the Merchant Marine and Fisheries Committee, the Congressmen questioned me very closely as to how would Congress know that we were expending this money in a prudent manner. Shouldn't we bring these purchases before Congress for approval, like they approve Corps of Engineers projects, etc.? There was considerable discussion along that line. Fortunately we had a couple members of the Migratory Bird Conservation Commission present who were quite proud of their new procedure, and they got up and explained in detail that there was all the checking on the Fish and Wildlife Service that was necessary through the Migratory Bird Conservation Commission, and that annually they would report to Congress. And that was diamond clear. But there were two Congressmen who very definitely wanted to tie us up with a new procedure, and that is just exactly what we couldn't afford. As you who have been in extensive land acquisition programs know, you have to have some flexibility.

The biggest hurdle immediately before us is the preparation of the plan of areas: the listing of the areas which the states and Fish and Wildlife Service can agree should be acquired, as a guide for the future.

We are asking each of the four Flyway Councils to prepare such a plan. The Atlantic Flyway Council has actually reached the stage where they have delineated such duck areas and given them priority. It has taken them about a year and a half to do this, and we are using that list as a guide in shaping our new acquisition program. The three western flyways, in which this Association is located in two of them, are not that far along, but we are badly in need of this

plan.

The Bureau of the Budget wants to see such a plan. They want to know how we propose to proceed. We think it is important. It is the one sure way we have of working out something cooperative with the states. You people are in this just as deep as we are. While we have to answer, in the final analysis, to Congress for everything that we do, we couldn't do the job at all, or even begin to do it, without the full cooperation of the states. We will never be able to excuse a bad area on the basis that it was recommended by a Council. We will have to assume the full responsibility. We will also at times ask you for a complete explanation as to why we proceeded with a certain area.

Every State Administrator knows that he is not in a position to say the final word on what he will or will not do. We have a commission, we have departments, we have an administration, we have Congress; and most of you have some controls on you also. Many of you are more independent, however, than we are. But to the best of our ability we are going to try to follow our plan.

I can't tell you the plan, because if maybe I did, there wouldn't be any call for cooperative work. We need help on this thing, and ask that you people go through the same thing that the Atlantic Flyway Council went through. Some tempers ran pretty high and some sections of the Flyway Council thought that there shouldn't be any acquisition in other sections because it would change the pattern of flight. There had to be compromises and more compromises. For example, some of the southern states felt that there shouldn't be any more areas in New England, because it would hold the birds too long up in that section. It was very difficult for some of the states to get together and we did have to do a lot of compromising. You will have to do the same here. However, we do need that kind of a plan, and I hope every state is paying some attention to this so that we will have one in the near future.

This money will not be available until July 1, 1960. We are hopeful, however, that through a procedure we are working on now, we will have more money than we now see in the near future.

So the big program, of course, is sometime hence, but a year and a half is a very short time. The Atlantic Flyway Council thought sure they would have their plan a year ago. After their acquisition committee had reached an agreement all the way through, they took it up with the Council as a whole, and immediately the roof fell in. Some of the Directors didn't agree with some of the members of the acquisition committee. You will probably have the same thing here, but I think when you get through, everybody will have a much better understanding of the problem and what may happen as a result of this preservation and acquisition program. There is no question in my mind that if we don't go into a program like this, there is only one place for aquatic wildlife and waterfowl to go, and that is down, because civilization is moving in everywhere. Not only agriculture and grazing, but pollution and navigation, urban development--I could name a dozen of items which everyday are moving in on our wetlands, and if we can get and preserve them for wildlife, think of what it means if they can be converted to public ownership or control.

I haven't anything to propose to you as to exactly how we are going to proceed. I think you can now understand why we aren't any further along than we are on a sure program. You have learned more about it now, and you realize how many difficulties there are.

In the final analysis, the biggest problem is going to be the actual land acquisition. Land prices are going up. Land is something that a lot of people look at now as something that they live on, and they don't want to give it up. Many of them are buying land for investment. Every piece of wetland in the east is looked upon as a speculative venture. In the middle west much of it is the same. We are going to find in many cases a difficult time of purchasing. We are going to find local sub-divisions that won't want to give up, or they think they are going to have to give up, the right to tax. We have at the present time a proviso for compensating them--they accept 25 percent of the gross receipts. This is not too satisfactory because in some instances it means that the local taxing unit will get back a lot more money than they got in taxes, and in other cases it means they get very little back. So the acquisition problem--the opportunity for purchase--in the final analysis may determine to some degree which areas to purchase. That is why we need an acquisition program laid out big enough so that we can choose those areas we can acquire. It is a big difficult project, and one I am not looking forward to with any enthusiasm. I worked with land acquisition the first five years I was with the Fish and Wildlife Service a long time ago. At that time land was easy to purchase. Much of it was tax delinquent and they almost wanted to give it to us. Those days are gone. And even in those days, it wasn't so easy sometimes.

Along with this program must be coupled a program of research designed to determine how we can raise more birds on smaller acreage. Because no matter what kind of a program we have, I am sure that we are not going to have enough wetlands to continue to maintain our bird populations unless we do that because it is going to take more money than we have, or can foresee. We must try to go along with civilization--and find some way that we can raise more birds--and still maintain the type of recreation which we are now getting out of wildlife. That is going to be kind of rough.

Sure, you can shoot ducks from a tower; you can turn a pheasant loose in a cornfield; and you can concentrate your hunting on that basis; and there isn't anything wrong with it. To me that just isn't recreation, but a lot of people think it is, and who is to say what is recreation for somebody else?

I see that I have just about taken up my time, and there probably are some questions...

One other point that I would like to make at this time is the Coordination Act which you states are just as much interested in as we. The Coordination Act Amendment was reported out of the Senate Committee, and it has been reported out of the House Sub-committee, but what will happen, we don't know. It might be more difficult to pass than the Duck Stamp Act. But all the difficulties were ironed out with the various departmental agencies. So far as we know now, there are no specific objections to the bill. It is just a question of getting action

on it. This Act will do quite a bit towards preserving wetlands for wildlife. We think it will go hand in hand with the Duck Stamp Act in preserving and making available new wetlands.

I think that I have taken up enough of your time, and if there are any questions, I would be glad to try to answer them.

HAYDEN OLDS: You made a statement, I think I have it verbatim, "we need an acquisition program laid out big enough so we can choose the area we want to acquire", do you mean that if you had 70, shall we say, purchase units established, that you would buy land in all of them as the land becomes available or do you mean that from this list you would select 30, and actually put emphasis on these 30, and eliminate the other 40?

JANZEN: I might answer that by explaining how the Atlantic Flyway Council has been working with our people. They set up a priority; one, two, three priority. Now, actually, we are not sure that we can even begin to follow that priority. We will not begin to know until we have made a thorough acquisition study. First of all, we are assuming that biologically, generally, the selection is okay. Now a detailed examination of that unit might reveal some weaknesses. For example, we might not be able to get water rights. So we might have to eliminate that. Or it might be that we will get into it and we might find out that the county passes a resolution saying that, "No, we don't want this purchased in here". And the state decides that it doesn't want to purchase that one, and we eliminate it because we want to have the approval of the state department behind us. So you don't know at this stage. We will make a thorough, complete examination of every one of these projects as fast as time and manpower will permit, then what we probably will do first will be to take up with the states our problems, and explain why we might have to drop this one or that one because of the impossible situation. We would like to see the possibility of completing a project before we actually put our signature on the dotted line on a contract for purchase. We would study each one of these projects that the Council had approved and make a complete analysis of it, with the idea of presenting it to the Migratory Bird Conservation Commission.

Now one other thing I might mention--if a member of the commission wanted to have some project presented to us, which we didn't even recommend, they could approve of it and we would have to proceed with it. I want it thoroughly understood that we may not be able to follow our plans one hundred percent, so nobody can say, "you promised us it would be done this way".

BILL BARNES: Do you plan to place any emphasis on a particular acquisition--for example, for production habitat or for resting habitat or for wintering habitat, or would there be a combination of these factors and that probably would vary in each Flyway?

JANZEN: There will be a combination. I can't see putting all of our money into any one of these categories. It depends. Different Flyways are different. The pattern of flight comes up all the time. Everybody is very carefully watching this.

BUD MORGAN: Dan, did I understand you to say that all of the pothole areas leased or acquired, up to 40 %, at the discretion of the Secretary might be opened for free public hunting?

JANZEN: That is correct.

Well, if there are no more questions, thanks for listening.

DR. BUE: Thanks a lot, Dan, for going over the wetlands problem.

I have a couple of notes here that I would like to mention. If any one needs transportation, let us know and we will have some of our Enforcement personnel guide you around. Room 301 at the Grand Pacific Hotel is available for your use and there is a typewriter there for anyone wanting to avail themselves of these facilities.

Now I would like to call upon Dr. Ray Johnson for his remarks on the Apportionment of Federal Aid Funds.

DR. JOHNSON: The Pittman-Robertson program has just begun its twentieth year, and the Dingell-Johnson program is now seven years old. They have enjoyed a long period of stability and usefulness. In those years the P-R Act has been amended 6 times and the D-J Act but twice. It is significant that all but one of these amendments deal with a change in the method of apportionment of funds to the states.

At first the states could receive no more than \$150,000 and no less than \$15,000 annually from the P-R fund. That was changed within four years so that no state could receive more than 5 % or less than 1/2 of 1 % of all funds apportioned to the states. Later amendments brought the territories into the program, increased their direct appropriations, and divided up the \$13.5 million dollar backlog among all states and territories in five equal payments.

There are signs that the P-R and D-J programs may be entering another period of change, in regard to methods of apportioning funds. Some legislative changes are already proposed.

In the U. S. Senate, Senator Purtell of Connecticut has introduced S. 3920 which would place the P-R apportionment on the same basis as the one for D-J; that is, the funds would be apportioned on the basis of 40 % for land area, 60 % for number of license holders, with a 1 % minimum. Senator Wiley of Wisconsin has introduced S. 4043 to change the wording of the P-R Act from its insistence upon "paid license holders" to "number of licenses sold". Representative Seeley-Brown of Connecticut has introduced H. R. 12898 which would greatly modify the Pittman-Robertson Act. Funds would become available for a three year period instead of a two year stretch, there would be two apportionments per year with 75 % of the total sum being made available before June 1 and the remainder before January 1, a state could accept less than its normal allotment, the funds would come as lump

sum payments to the states and not as reimbursements, and there would be no accounting of the funds except for an annual statement from each state. These bills are still in committees and no hearings have been held on them. Whether or not they will receive further attention this year is problematical.

Two other circumstances will change the sum of money apportioned to the states in the near future. The entrance of Alaska into the family of states may mean a lessened apportionment for all other states. The Territorial Legislature passed Senate Bill 30 last year to qualify the new state for Federal Aid participation. The new state will be a maximum state because of its large size. The only remaining problem is one of finding sufficient matching funds to put into the Federal Aid program.

The other circumstance is that the Pittman-Robertson backlog funds are now in their fourth year. They will be available for only one more year. A drop of about 15 % in total funds available will be noticed by every state.

The states themselves are proposing many changes in the apportionment procedures:

1. The Massachusetts Legislature has memorialized Congress to approve the appropriation of P.-R funds on the basis of total state population.
2. The funds should be made available on the basis of the monetary income from sale of licenses.
3. No credit should be given for land area.
4. Apportionments should be based on the value of retail sales of taxable equipment in each state.
5. The Association of Western Game, Fish and Conservation Commissioners passed Resolution Number 14 at their meeting in Sun Valley, Idaho on June 25 asking that no change be made in the current apportionment procedure.

The Association of Fishing Tackle Manufacturers meeting in Chicago late in May passed one resolution urging the abolition of the excise tax on fishing tackle, and within a few minutes passed another one urging its retention. The convention accepted both.

The P-R and D-J Acts contain the phrases "paid hunting license holders" and "persons holding paid licenses to fish". These phrases were selected years ago and agreed to by all of the states as one basis for the apportionment of funds. The first P-R manual and Rules of the Secretary issued July 12, 1938 said in Section 1314 "Special licenses issued only after a general license has been purchased should not be counted, as the law requires the number of license holders and not the number of individual licenses."

The biggest discussion of apportionment procedures has arisen from no

change in the Acts but from two bits of advice from the Solicitor of the Department of the Interior. In response to a request from the Attorney General of Idaho and to one from the Bureau of Sport Fisheries and Wildlife, the opinion was given, in effect, that "a certification of licenses by a state which purports to supply the Secretary with data as to the number of licenses sold does not meet with the requirements of the statute and may be refused by the Secretary." The view went on to say that the states could get a certified number of license holders by sampling their license sales to determine the extent of duplication by means of a statistically sound method of sampling.

The Bureau has inquired about a statistically sound method of sampling license sales to see how many people buy one or more kinds of licenses. It has distributed a possible method of computation around through the states for their examination and comments. An increasing number of states are finding that they can follow the proposed method, or are already getting the figures in their hunter and fishermen polls and surveys.

The studies now being made by the states to see how they can provide the required data on number of paid license-holders will be reported on at the International Association meeting in Philadelphia in September, 1958. The apportionment of funds for Fiscal Year 1959 will be made before that date using license data already given to us last year by the states, according to traditional methods. The states will not be asked for their latest license figures at the usual time (September) but the request will come later after it is decided at the International meeting on what kind of license data is to be furnished.

I want to make it clear that we are not trying to make things hard for the states. The opinions of our solicitors must be followed. It is just as hard for us as it is for you now, and it may be rougher in the future, before we arrive at an equitable distribution formula for the Federal Aid funds.

G. E. SPRECHER: Did I understand that you were going to withhold action on this until after the meeting of the International in September?

JOHNSON: The study of making the apportionment in 1960 will wait until the discussion in Philadelphia.

SPRECHER: Supposing the International votes to retain the status quo, would the Fish and Wildlife Service go along with that?

JOHNSON: That would be a very interesting question. I hope I am there.

BILL BARNES: Will you approve a variety of sampling procedures? It seems to me that there should be only one method.

JOHNSON: You are right, but the states themselves do not have the same operating mechanisms. We will see if we can arrive at 3-4 general principles that are acceptable.

HARRY RUHL: We are very much concerned about some angles.

We would hate to spend \$25,000 which we do not need to spend. We have assumed that we could use any method which is statistically sound. We know that there are other methods which might be acceptable. In our state we think we have an adequate record on file. We keep the license stubs, and they are available for checking. The unidentifiable names are a very small percentage--only three or four percent.

Another thing that I would object to--some of the states would not have to sample; other states would sample theirs. There are a whole lot of things which would be involved. Faith is very important in getting accurate results because if you are careless and inefficient you would have less duplication found than if you are efficient. All of these methods would have to be very carefully supervised by the Service and it would call for some special talent in the Regional Office to do it. I am convinced there are a lot of pitfalls in the sampling method.

JOHNSON: Your views parallel those of New York and California.

M. O. STEEN: I don't think it represents any problem in Nebraska.

I am reasonably familiar with federal aid and the opinion of the states around the country. I do not believe they will accept the sampling method and you are going to have to figure out some way to meet it. You have got yourselves a problem. There are about three ways in which you can settle this. You can settle the question by turning to the Courts to determine what the law actually is. You can change the law; or you can ignore the solicitor's opinion.

JOHNSON: Do you have any suggestions on how the Act could be changed?

STEEN: I would like to see the Service express its ideas on how the law could be changed.

JOHNSON: This controversy has not been a pleasant one. . . . do you question the authority of the Secretary to administer the provisions of the Act?

STEEN: You walked into this with your eyes open, and now you will have to settle it. If we are agreed that the present system is satisfactory, and it seems to be in most of the states, all you have to do is change the law.

DR. BUE: There doesn't seem to be any more discussion. Thank you, Ray.

Before we adjourn for Lunch, I would like to introduce Cal Olson. Cal is Sports Reporter for the FARGO FORUM, North Dakota's largest newspaper.

Adjourn for Lunch

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Thursday Afternoon - July 10

Dr. Bue called the meeting to order, and announced that the first pothole flights were scheduled right after the afternoon coffee-break.

The first Panel scheduled for the afternoon session was the Discussion on the Progress and Future Aspects of the Soil Bank Program, L. P. Voigt, Wisconsin, presiding.

In the absence of Mr. Voigt who was not at the meeting, H. R. Morgan, Special Field Representative for the National Wildlife Federation, volunteered to conduct the discussion.

BUD MORGAN: Mr. Chairman, honored guests, panel members:

All of you are aware of the importance of proper and sufficient habitat in maintaining harvestable surpluses of game. All of you realize the impracticability of a state game department's control of sufficient land to properly provide wild game with enough habitat to insure such surpluses.

An important and ever present problem of each game administrator is that of habitat.

Until recently, available land upon which to establish and maintain habitat was a bottleneck to each habitat program.

That problem has been solved by the Conservation Reserve Program of the Soil Bank Act. Farmers throughout the United States have placed over 10 million acres of land in this program during the past year and one-half. Midwest farmers, in particular, have been enthusiastic about this program. The plans presently being formulated by the Soil Bank Division of the Department of Agriculture, for this program in 1959, lead one to believe that many more millions of acres will be retired from crop production and diverted to conservation uses during the coming year. Land availability for habitat development is no longer a problem.

There remains a problem, however.

The Fish and Wildlife Service, aided by far-sighted state game administrators, provided that game should benefit from this Act. Practices designed to provide proper habitat for wildlife were provided for under the authority of the Act and later were developed in regulations governing the Conservation Reserve Program.

These practices appear to be adequate to supply ideal habitat for all of the game species in any state. The problem is to get farmers to select them as the practices which they develop upon Conservation Reserve lands.

Some of you still take the attitude that any Conservation Reserve practice provides game habitat. I will agree that such is the case. I do not agree,

however, that the habitat developed under practices other than those which have been developed as of primary benefit to wildlife will produce ideal game habitat. I believe, that as game administrators, we have a responsibility to strive for ideal habitat for each species and that this same responsibility dictates that we should bend every effort toward the establishment of this ideal habitat in abundance.

There are two benefits to be gained from taking advantage of habitat developed under the "G" Practices, other than the benefit of providing more habitat. One is the benefit which is sure to be gained from the establishment of a high type habitat which definitely meets the needs of the species for which it was designed. The other is the benefit derived from public opinion. If we, in years to come, can point to thousands of acres of habitat developed under this program, we have accomplished two things. We have demonstrated to the Congress, the sportsmen and the public generally, that habitat--proper habitat--is vital to game in the wild. That is a lesson which we have been trying to get across for a long time. This is our chance. We have also demonstrated to the sportsmen whom we serve, that proper land use will pay dividends in the bag and the creel. If we do not take advantage of the habitat potential of this program, we will appear in a poor light when in the future we try to encourage habitat development on land donated by private owners.

We, who are responsible for supplying game, dare not rely upon a practice designed to protect land from erosion or to produce forest trees, to provide the habitat so essential to each game species under our management.

How, then, are we to get ideal game habitat upon these Conservation Reserve Acres? What are the problems that confront us?

That such problems exist is evidenced by the program of the 1957 season where some 7,000 acres of land was placed in "G" practices. Seven thousand acres out of 6-1/2 million. One-tenth of one per cent.

What we have gained through our efforts to place more land in habitat in 1958 we don't know yet. From incomplete reports from North Dakota, it is indicated that we increased game habitat acreage tremendously. But in no state are we accomplishing what we should.

If we are agreed that habitat is valuable, and history would indicate that we do (many states have spent hundreds of thousands of dollars in an effort to establish habitat), then I can think of no project which would return so much from a dollar invested as one to which personnel were assigned full-time to encourage farmers to select properly designed "G" practices.

The problem to be met is two-fold. Overcome the nuisance values of "G" practices which often involve small areas of land. This can be done to some extent through providing specifications which allow more acreage to be devoted to a practice. It may be done by offering incentives of cash, services or materials. It may be done by salesmanship. However, if it is to be done, it will require time and effort upon the part of someone. An organized sales

effort which will include a trip to the County A.S.C. office with the farmer may be necessary. Wouldn't it be worth it, to get a few acres of good game habitat for the next ten years?

The second problem is that of getting proper cooperation from the County A.S.C. office personnel. This also requires selling.

Any way you look at it, you as administrators may just as well face the fact that if you want to benefit from this program you are going to have to spend money and man-hours and your returns will be in ratio to your efforts.

Several developments in our favor have taken place in the past year.

The regulations governing the Conservation Reserve Program have been relaxed to allow a farmer to change practice designation any time prior to actual practice establishment. Even if the sign-up date is advanced, as I am informed it will be, we will still have until June of 1959 to get "G" practices accepted by farmers.

The Congress restricted practice cost-sharing for Conservation Reserve Practice Establishment to cost-sharing offered for A.C.P. practices which are comparable and which generally are 50 % of establishment cost.

The National Wildlife Federation was able to influence Congressman Reuss of Wisconsin to make a last minute fight which resulted in retaining 80 % federal cost-sharing for "G" practices. This should give us some advantage.

You may now solicit the names of Conservation Reserve applicants from County A.S.C. offices. This provides you with a contact list comprised of farmers who have "bought" the program, and who need only to be sold "G" practices.

You are privileged to offer cash, service or material incentives to farmers who are placing land in Conservation Reserve, and such farmers can still collect the 80 % federal cost-share which practice establishment usually carries. P.R. funds may be employed to make "G" practices more desirable either through carrying on a sales effort or to pay the cost of materials or even to supply cash inducements.

All of these things are on the black side of the ledger so far as we are concerned. They are new and better tools than we formerly had, but we must still have manpower to use them.

Gadgets such as the practice display developed by Missouri or other ideas which will show County A.S.C. personnel that you want to cooperate by making their job easier, do a world of good.

Close contact between A.S.C. folks and game department people will increase the interest of the farmer in your habitat program.

The biggest landfall that has been ours is the employment of Tom Schrader as field wildlife specialist for the Soil Bank Division. Tom's constant tail-twisting of A. S. C. fieldmen should result in their tail-twisting of A. S. C. county committee personnel.

A. S. C. people must be with you, if you are to win. All of your selling in the field can be rendered worthless by someone in the County A. S. C. office who is opposed to your program.

There must also be Soil Conservation Service cooperation.

Let me once more emphasize the following: We have privately owned land which Uncle is paying rent upon for habitat development. We have a good set of tools to work with if we have exercised proper care in developing "G" practice specifications with State A. S. C. Committees.

We have farmer acceptance of the program. We don't have enough farmer selection of "G" practices. That can be increased in many ways, but each requires time, effort and money.

Where can you buy more habitat of a quality which you yourself write the "specs" for, than under this program?

Now, with the Convention's permission, I will not comment on any of the papers as they are presented, but will leave that until all of the papers have been given, at which time I will present a summarization of the discussion.

A fifteen minute movie on the Soil Bank program prepared by the Ohio Division of Wildlife was shown to the group.

HAYDEN OLDS: Wildlife Aspects of the 1958 Soil Bank Program in Ohio

Information received from the Ohio A. S. C. office within the last two weeks indicates the extent Ohio farmers availed themselves to the opportunities of the various phases of the 1958 Soil Bank Program. Our first look at the figures gives the impression that the combined 1958 investment of time and efforts by the A. S. C., S. C. S., Agricultural Extension Service, and the Ohio Division of Wildlife has paid small dividends. The table indicates a remarkable 1958 increase in the "G" practices by acreage and per cent, while sign ups in the "A" practices dropped.

PRACTICES	1956 and		CUMULATIVE
	1957	1958	TOTAL 1956-1958
Acceptable Vegetative cover at beginning of contract (acres)	23,275	4,032	27,307
Practices approved for cost sharing:			
A2 - Permanent cover (acres)	15,792	2,497	18,289
A7 & A8 - Forestry tree cover (acres)	513	548	1,061
B7 - Water Storage structures	15	5	20
D1 - Winter cover (acres)	none	418	418
D2 - Summer cover (acres)	none	5	5
G1 - Wildlife cover (acres)	141	1,798	1,939
G2 - Wildlife water & marsh structures (acres)	36	11	47
G3 - Fish pond structures	68	32	100
Total CR Acres	39,897*	9,081*	48,978*

*The above information was received from the State ASC Office on June 26, 1958. There are small errors in the totals which could not be reconciled at the time this paper was prepared.

Preliminary planning for the 1958 program by the Ohio A. S. C. and the Ohio Division of Wildlife Personnel left little to be desired. Cooperation and joint effort were excellent. A determined effort undoubtedly would have been made by the Division of Wildlife personnel to promote the "G" practices agreed upon, but planning for an action program was crystallized when Bud Morgan by invitation came to Ohio and worked with us during the period of December 18 and 19, 1957. During this two-day period the many ramifications of the Program were discussed with representatives of the three state-wide sportsmen's organizations who were invited to Columbus for this purpose by the Chief of the Division. Subsequent events indicated an oversight when the Ohio Outdoor Writers were overlooked. Staff personnel of the Division of Wildlife, together with representatives of A. S. C., S. C. S. and the Agricultural Extension Service spent the best part of a day with Morgan.

Return trips to Ohio were also made by Morgan on January 18 and March 22. On the latter date, Morgan discussed the Soil Bank Program with the Ohio Wildlife Management Association during its annual convention.

Out of these conferences a well planned program developed, admittedly late, but quite effective within the time limitations imposed. The Division of Wildlife appointed three men to work full time promoting Conservation Reserve practices for the period during which Soil Bank contracts would be written. These men were assigned to work within thirty-three counties of northwestern Ohio, representing the better pheasant range of the state. Other counties, however, were not neglected as Staff personnel assigned to administrative districts and counties were charged with the responsibility.

Necessary tools, copies of which are available for attending members,

were prepared as rapidly as possible. A printed circular for wide distribution was soon off the press. A pamphlet entitled, "Enjoy More Wildlife Through a Conservation Reserve Program" represents a joint effort of the Agricultural Extension Service, the Ohio State University, and the Division of Wildlife. Also prepared was a 15 minute movie which will be shown in connection with this meeting. The Ohio Conservation Bulletin, a monthly departmental magazine carried information on the subject as did periodic semi-weekly news releases. S. C. S. and A. S. C. personnel were advised and encouraged from their respective central offices.

Periodic progress reports indicated obstacles which definitely inhibited desired results, but continued effort was encouraged and maintained by the realization that experience gained in 1958 would produce results in 1959, particularly if certain modifications in the basic law and local administration could be achieved.

For our benefit, and I trust yours also, are now listed some of the difficulties and problems encountered in encouraging greater participation in the 1958 Conservation Reserve Program, reasons limiting this participation, and an overall brief look at the Wildlife picture as affected by both the Conservation and Acreage Reserve Programs:

1. Uncertainty in the agricultural picture and the fact that a Conservation Reserve contract irrevocably tied a landowner to crop allotments for the length of his contract imposed a serious handicap.
2. An opinion openly expressed by A. S. C. office personnel that the per acre payment for Conservation Reserve land was too low undoubtedly deterred many landowners from signing Conservation Reserve contracts.
3. The widespread rumor that 1958 was the last year for the Acreage Reserve Program apparently prompted a considerable number of landowners to plant cash crops this year on land which they may plan to put in the Conservation Reserve Program next year.
4. Most A. S. C. offices were apparently swamped with work in signing up a considerably larger acreage in the Acreage Reserve Program than in previous years with very little additional help.
5. Additional funds were allocated at a very late date to the Acreage Reserve Program with the result that sign-up of Acreage Reserve contracts from waiting lists of landowners was extended to April 15 from March 15. This additional work undoubtedly affected the ability of A. S. C. office personnel to concentrate on Conservation Reserve contracts.
6. The lack of complete knowledge of the various features of the Conservation Reserve Program by a significant proportion of A. S. C. office personnel undoubtedly affected the number of acres signed up and practices selected. This lack of knowledge most surely discouraged some landowners who were seeking information on the Conservation Reserve Program.

7. A.S.C. office personnel quite evidently were more familiar with the cash values to be derived by landowners from participation in the Acreage Reserve Program than they were with the Conservation values to be derived from the Conservation Reserve Program. This is primarily attributed to the fact that many office workers had little or no personal knowledge of farming.

8. In a few cases, and fortunately only a few, some A.S.C. office workers judged the Conservation Reserve contracts too involved and too time consuming to negotiate, and therefore, avoided them whenever possible. Our personnel combated this attitude by suggesting that both the Conservation Reserve and the Acreage Reserve Programs were their assigned responsibility and that the Conservation Reserve contract once signed was valid for a term of three to fifteen years and would not require their attention again during this period. Acreage Reserve contracts on the other hand are negotiated annually.

9. A.S.C. office personnel, while cognizant of the "G" practices, had little or no conception of how a wildlife plan should be developed on a farm. Contacts with A.S.C. office personnel were highly educational and valuable in building this concept of the wildlife aspects of the Conservation Reserve Program. In many instances, interested cooperators were referred to our personnel for additional information. Undoubtedly the word "wildlife" startled some landowners who evidently held the impression that a wildlife plan involved the planting of trees only or a complete abandonment of the land and permitting it to revert to brush.

10. Too often the landowners fail to realize that the cost of seed, lime, fertilizer, wear and tear on machinery, and labor, all of which were cost shared when establishing Conservation Reserve acreage, represented a pretty fair net return on marginal land that was presently cropped.

In spite of the evident shortcomings pointed out above, it is interesting to note that a considerable number of the A. S. C. offices have requested the Division of Wildlife to again interest itself in the Conservation Reserve Program providing it is carried out another year. Specifically we have been requested to have public information on the major features of the Conservation Reserve Program available to release as soon as possible after the provisions are known and start the release of same by not later than January 1. Our first meeting with central office personnel to plan for 1959 was held June 30 just past.

Supplies of guide sheets and pamphlets issued by the Division of Wildlife are also requested for distribution by A.S.C. office personnel. Our personnel point out that the key to selling the Conservation Reserve program is through constant contact with the A.S.C. offices and at any spare time to explain the different functions of the Wildlife program. The acceptance of our personnel as competent individuals by A.S.C. office personnel resulted in a greater interest in the "G" aspects of the Conservation Reserve Program. Our men were beginning to receive increased calls and letters from A.S.C. office personnel setting up interviews with interested cooperators when the program reached its deadline, indicating a recognition that Wildlife Division personnel were familiar with the Program and their assistance was welcomed.

It is felt that next year, because of this year's experience, the whole Conservation Reserve Program will be off to a running start. Several suggestions which would probably serve to encourage a greater sign-up in the Conservation Reserve next year, together with increased participation in the "G" practices, are worth mentioning:

A. The provision that requires a landowner or farmer who holds a Conservation Reserve contract to stay within his crop allotments should be removed.

B. Place the Wildlife "G" practices first in the list of Conservation Reserve contracts offered to landowners.

C. Begin activity in November or December to permit additional time to distribute information on the Conservation Reserve practices. When our men started last year on the Conservation Reserve Program, farmers were already standing in line to sign the Acreage Reserve contracts.

D. The continuation or abandonment of the Acreage Reserve Program will undoubtedly affect participation in the Conservation Reserve Program. In either case, increased payment per acre for Conservation Reserve lands would make this program more attractive and particularly so if the Acreage Reserve is continued.

While a considerable smaller acreage was signed up in the Ohio Conservation Reserve this year than in 1957, the picture for wildlife is brighter this year than last. It must be realized that the total acreages for both years is providing cover for wildlife this year and will continue to do so for a minimum of one more year. At the end of next year, three-year contracts (where grass was already established) will expire; however, minimum contracts signed up this year will still provide cover for wildlife for two more years. In addition, where cost share was involved, minimum contracts were for five years and will still provide cover for four and five years respectively.

It is felt that this represents a much larger acreage of wildlife cover than the Division of Wildlife could feasibly provide working alone and that any steps which we can take to assist in this Program should be undertaken.

BUD MORGAN: Thank you, Hayden. And now, Roman H. Koenings.

ROMAN KOENINGS: Soil Bank in Wisconsin at the Present, and Future Needs and Possibilities.

Mr. Chairman, honored guests and fellow panel members:

I would like to limit my remarks to the Conservation Reserve of the Soil Bank inasmuch as the Acreage Reserve will probably be discontinued next year and would be of little benefit to a long-term wildlife program if continued for another year or two.

Basically, the purpose of the Soil Bank program is to remove

agricultural lands from the production of so-called soil depleting crops. Secondly, the program was and is to result in definite land-use changes, away from agricultural production to other permanent uses. Naturally we are in favor of both of these purposes and are willing to expend every effort possible to accomplish them. However, the regulations accompanying the Act make it virtually impossible to do much for wildlife directly and thereby assist the United States Department of Agriculture in accomplishing these goals. We will have to admit that the people responsible for the administration of this program in Washington, D. C. are not without their problems either.

Another problem on the National level is the organization of federal agencies and the refusal of the U. S. Department of Agriculture to cross Departmental lines to assign wildlife responsibilities to the Fish and Wildlife Service. They in turn could delegate their responsibilities to the State agency responsible for the administration of the wildlife program.

Naturally there are many more problems, but the three I have mentioned have a direct bearing on the wildlife values produced: the Act itself or the regulations to put it into effect, the refusal to cross Departmental lines, and the basic purpose of the Act.

These have had a considerable effect on the program in Wisconsin. We take pride in our agency relationships and the manner in which we can work together. In fact, the State ASC Committee in Wisconsin gave us blanket approval to draw up any practice for wildlife production on Soil Bank lands as long as we stayed within the provisions and regulations of the Act. So we cannot place our difficulties on the administration of the various agencies at the state level. Therefore, there had to be some other reason for our failure to sell wildlife practices in the state. To get some of these answers, I went to people from various agencies who are working directly with the program; but first let me quote the situation in Wisconsin as it stands today. As of June 13, 1958, the cumulative totals since the program began are as follows:

4,344 contracts - of which 1,766 farms had all their eligible acres in the Conservation Reserve, or 41% of the farms had all their eligible acres in the Conservation Reserve. There is a total of 161,516 acres in the Conservation Reserve, of which 90,809 acres are in entire farm units. It is interesting to note that approximately 41% of the contracts were for all the eligible Conservation Reserve acreage, but that 56% of the acreage is in these same farms. Of the 161,516 acres under contract, 18,815 acres have been signed for tree cover; 331 acres for wildlife cover (G-1); 26 acres for wildlife water and marsh management (G-2); and 18 acres under dams or ponds for fish (G-3), for a total of 375 acres devoted to specific practices to develop wildlife habitat. Two-tenths of one percent devoted to wildlife.

This is at best, a miserable showing. When I saw this I felt it was time to ask some rather blunt questions. The first question I asked was enough to promote discussion, and that was "Why haven't the wildlife practices been more

readily accepted and used?" The answers - and these are not my opinions, but the comments as I jotted them down - are as follows:

"Wildlife managers refuse to change their wildlife management program to fit or dovetail into an agricultural program".

"Wildlife managers have been thinking of big game and migratory water-fowl programs and don't have a common sense farm game development program".

"Wildlife management not generally accepted as a good thing by the land-owners. Wildlife people have worked too hard on the sportsmen's clubs and not enough on the landowner".

"County Agricultural Agents, farm planners and foresters give 'lip service' to wildlife management, but still consider wildlife managers as over-grown bird watchers. They tolerate them, but that's about all".

"Most wildlife managers are too impractical. They should be technical personnel who are practical and understand agricultural programs and economics".

"Failure of wildlife people to develop a good variety of game-food shrubs and food-patch mixture that could be used on Conservation Reserve lands without affecting allotments".

"Wildlife shrubs are good for odds and ends, but are not applicable to the type of lands going under the program".

"Constant changes in allotments make it impossible for farmers to make long-range plans if only part of the farm is under the program".

"The University of Wisconsin convinced the farmers in the northern part of the state to switch to grassland farming which almost eliminated their possibility of establishing a Soil Bank base".

"Farmers don't want to replant their food patches each year at their own cost".

"Those who did not put their whole eligible acreage in, intend to put the land under contract back into production at the end of the contract period, and therefore are not interested in either trees or wildlife".

"There is no direct financial return to the landowner for producing wildlife as there is some day for trees".

"A man who plants trees can sell that land to a paper mill some day. Who is going to buy 40 acres of wildlife shrubs?"

"The whole program is too complicated for the average farmer. It changes from week to week. With the educational level of the average farmer, who controls the farm, being at the Junior High level, you cannot let these

programs get too complicated".

"The type of lands being entered in Wisconsin do not lend themselves to ditching and ponds."

This will give you some idea as to how some of the agricultural people explain the lack of interest in wildlife. Those comments pertaining to the attitudes and the abilities of wildlife managers could be construed to mean that the agricultural people do not understand the basic aims of the wildlife programs. I will have more to say about this later on.

To get a more complete picture, I asked State ASC personnel -- "What type of individual is putting his whole farm under the program?" I don't have their answers in sequence as far as importance is concerned, but here are some of the answers:

"Age is a great factor. Those near retirement and eligible for Social Security can retire, live in their house, raise their garden and have the Soil Bank payments for taxes and additional income."

"Ill health - some farmers put their land under the program for three or five years to regain their health and still have an income. Most intend to return to farming at the end of the contract period. These people are not interested in trees or wildlife because they want to go back to farming".

"Farmers who have a son taken into the military service - they will go back to farming as soon as the contract expires and the son returns".

"Older farmers near larger cities who put their lands in the Soil Bank and are waiting for the expansion of the city to increase the value of the farm".

"Those who plant trees are near to markets for forestry products and hope to sell the planted land to industry and retain the buildings and a few acres at the end of the contract period".

"Some speculators who plant trees. There cannot be too many because the acreage of trees is not too great a percentage of the total".

"Former part-time farmers who put their eligible lands under the program and use the rental to pay the taxes, plus some additional return".

"Landowners who have a tenant problem. They could not hold their tenants, so they put the farm under the program when they had no tenant to share the payments with as specified in the regulations".

"Farmers who were going to sell, but took advantage of the program with intention of selling the farm as an agricultural enterprise at the end of the contract period".

I have pointed out the above to indicate what we can expect in the way of

habitat development in the future.

Next year the goal is 439,000 acres for Wisconsin. If the type of landowner who has put his land under the program so far is indicative of the future, I can see little reason for optimism for increased use of the wildlife practices during the next two years. The goal by the end of 1960 for Wisconsin is 920,000 acres. At the present rate, that means that 1,840 acres will be devoted specifically to wildlife practices.

I asked a third question - "What must be done to improve the wildlife possibilities?"

Some of the answers:

"Put through a regulation that all allotments are stabilized during the contract period and would be changed only if allotments were increased. This would give a farmer who did not put all his eligible acreage in an opportunity to plan for food patches."

"Train game managers in agricultural programs and economics so they understand the whole picture".

"Have the game management people develop better game shrubs for winter food and develop a grain that will stand above the snow".

"Train the County Agents, farmplanners and foresters so they understand game management and don't just give it 'lip service'."

"Carry on an educational program beamed at the type of individual who is likely to put his lands under the program and at the right educational level".

"Develop practices that are more appealing to landowners".

"Get game and sportsmen's clubs to assist in the establishment of wildlife practices".

In conclusion, I would like to point out, if you haven't noticed, that something is very definitely wrong. The main factor, as I see it, is that we are not getting to the landowner. Whether he is discouraged by people of other agricultural agencies, the county ASC offices, or whether the financial return is more important than we realized, I don't know. I would like to propose that a detailed study be made of the type of individual who is entering his land under the program, his age, his educational background, his reason for entering his lands, his method of selecting the practices, and several other factors.

I would also like to suggest that an intensive educational program be carried out, both for wildlife people and agricultural people, as well as foresters. I personally feel that conservation agencies, in general, have neglected to train their personnel in agricultural relationships. Whether we like it or not, we are being drawn into the agricultural picture through the

Public Law 566 Watershed, the Rural Development Program, the Soil and Water Needs Survey, the Agricultural Conservation Program, and Soil Bank Program, and many others. We must carry on an intensive educational program aimed at the people in the agricultural agencies to demonstrate the value of wildlife to farm landowners. We must develop a sound farm game management program with them which they will support in an active way rather than merely give it "lip service". This will overcome the attitude that the wildlife programs are impractical and that wildlife managers are "over-grown boy bird watchers".

And last, I would like to suggest that we recommend a change in the application of the practices on the land for whole farm units. That as applications come in for whole farm units, the intention of the landowner be obtained in some manner, and that the agency people would draft a complete Soil Bank plan for his approval, trees, grass, or wildlife cover in their proper place; and if the landowner accepts, the cost sharing for the farm be approved by the county committee as a single practice. It may not increase the acreage devoted to wildlife a great deal, but it would put each total farm to maximum wildlife production correlated with the intent of the landowner. I feel that wildlife practices should be concentrated on total farm planning in most areas of the state, except the extreme southern part where it is not likely that there will be any large number of total farm sign-up.

There still is a tremendous opportunity for wildlife under the Conservation Reserve of the Soil Bank. Not too long ago I heard an extension supervisor make the statement that wildlife managers are where extension agents were 30 or more years ago. This statement caused considerable comment by wildlife managers who considered this a blow to their integrity. Actually I think the statement, as far as farm game is concerned, is basically true. If we go back to the end of World War I, we will find that the extension agents were "accepted" generally during the problem period from 1920 to 1930. We would also find that foresters made their biggest gains as the result of the CCC program. I feel we should make every effort to utilize the Conservation Reserve of the Soil Bank - the program that will cut 30 years of slow educational work down to two years in having game management an integral part of farm management. By using our experience of the past and applying it to the future, we can develop one of the finest educational media that has come along in many years.

What all the answers might be, I don't know. But unless we are able to increase participation under the program, we are missing a wonderful opportunity.

BUD MORGAN: Thank you, Roman. I was afraid, until you made those last remarks, that some of the people in the audience would get the idea that you felt that the program was willy-nilly, that they might just as well get along without it, as have it.

Coffee-break

Dr. Bue called the meeting to order, and announced that the Resolutions Committee would meet at 8:00 in Room 301 at the Grand Pacific Hotel.

Chairman Bill Towell requested that all suggested resolutions be given to any member of the committee, prior to that time, or be brought to the meeting at 8:00.

Dr. Bue turned the meeting over to Bud Morgan and the Soil Bank Panel.

BUD MORGAN: We happen to be very fortunate this afternoon--a very agreeable surprise that I hadn't anticipated--we have with us two gentlemen from the State A. S. C. Office. I know that we will be very happy to have them here, and to have them enter into the discussion when we get to the General Discussion. It gives me a great deal of pleasure at this time to present a fellow that has done a bang-up job working hand in hand and giving the North Dakota State Game and Fish Department all of the cooperation in the World on their wildlife habitat program, which has been very successful in the last year, Leslie Sachow, Office Manager for the State A. S. C. Office, located in Fargo. And one of his State Committee Members, a newly elected member I will grant you, who is looking forward to becoming chairman of the board one of these days, Melford Skramstad.

Getting on with the program, we now have Ray M. Wells, Missouri.

RAY WELLS: Wildlife and the Soil Bank in Missouri

Make no mistake about it, the Soil Bank can be made to work for wildlife! But the Lord helps only those who help themselves--the possibilities of this program can become reality only if the conservation reserve is given the emphasis of a major habitat improvement program by each state's wildlife department. Any program geared to take advantage of the fish and game practices of the conservation reserve should give full cognizance to five activities absolutely vital to successful conclusion of the program:

1. Coordination of activities with the state ASC, SCS and Extension Service.
2. Favorable working relationships with the above agencies on the county level.
3. An intensive publicity program.
4. An assignment of responsibility by the wildlife department.
5. An active participation in all facets of the program.

Let's take a detailed look at the above prerequisites for a successful wildlife Soil Bank program.

1. Coordination of activities with state ASC, SCS and Extension Administrators. Most of you will agree that this phase of the operation is imperative, with ASC administering the over-all program, SCS having responsibility for technical phases of the G-2 and G-3 practices, and Extension Service assigned

the educational and informational activity of the Soil Bank program. Most of you will also agree that successful coordination won't just grow Topsy-like, but must be planned and nurtured.

Missouri's planned cooperative program with farm agencies began clear back in the early 40's. The serious drouth of the mid-thirties had revealed an urgent need for permanent water throughout most of the state, so our Conservation Commission biologists were assigned to work cooperatively with agricultural agency personnel on this common problem. In addition, our wildlife department offered, free, the necessary pipe to assure watering tanks for the then unheard-of fenced pond. This pond program found favor with landowners and our efforts won the respect of related-agency personnel working cooperatively on the project. In 1944 these efforts culminated in the AAA (now ACP) approval of the "specification" farm pond as a practice for cost-share payments. This program has resulted to date in 118,000 specification farm ponds averaging one-third acre in size and covering an area two-thirds the size of our Lake of the Ozarks, according to the current Missouri Extension Service report. These ponds are all fenced to exclude livestock, thus offering optimum opportunities for fish and upland game production. Pond construction is a continuing popular activity on Missouri farms with nearly 10,000 excellent structures constructed annually. In 1951, cooperative efforts expended by the Commission and related state agencies secured the addition of multiflora rose to the national docket of ACP practices, making it possible to secure cost sharing for planting this wildlife shrub in Missouri (and other states, for that matter).

My illustration of coordinated efforts with agricultural agencies of my state may appear irrelevant to a discussion of Soil Bank functions for wildlife. But these early activities were the basis for united effort when the Soil Bank became a reality. It should be emphasized that throughout most of this period of coordination, the Commission designated one individual to be responsible for all liaison between Land-use agencies and our department. Thus the early Soil Bank meetings in 1956 found the Conservation Commission taking part in all deliberations at the zone and state conferences, with our presence automatically requested. Our recommendations for conservation reserve wildlife practices were adopted just as presented to the state committee.

The Soil Conservation Service, in spite of a limited number of Soil Districts in Missouri, has offered valuable assistance with the technical phases of G-2 and G-3 practices. To further implement our coordinated efforts, a Memorandum of Understanding was drawn, outlining our cooperative technical responsibilities under the conservation reserve.

2. Favorable working relationships on the county level.

Through the twenty-year history of Missouri's Conservation Commission, all field personnel have been advised of their responsibility to maintain close working relationships with agricultural agencies. Seven field service agents of the department have been given specific assignments to work in liaison with these agencies at the county level. Cooperative activities have

resulted in wildlife production work with 4-H, FFA, the Soil Districts and the ASC through the wildlife and forestry practices of the ACP program. These activities set the stage for the advent of the Soil Bank and its greater wildlife application. Our field service men had proven their cooperation with the county agencies so, as work comrades, they were invited to the earliest county Soil Bank committee meetings. With working relationships already established, all that was necessary under this new program was a change of direction, of effort.

3. An intensive publicity program.

Wildlife habitat practices have always required intensive selling to achieve any measure of successful application on privately-owned land, so it appeared from the beginning that landowner reluctance to accept the "G" practices of this new program would be a bottleneck.

In an effort to gain more universal acceptance of the conservation reserve wildlife practices the Commission inaugurated a "crash publicity" program in January, 1957, with a Soil Bank issue of the Conservationist (circulation then at 100,000). Several thousand extra copies were made available for distribution to all agricultural agencies. ASC fieldmen ordered additional magazines after their personal copies became dog-eared from constant use in the field. This special issue of the magazine was a daring venture; we had to guess at a lot of things and stick our necks out on what we could do. But it started the ball rolling for greater utilization of the wildlife practices. Other informational devices were employed to assure a constant flow of publicity to any potential conservation reserve participant. Two folders, titled "Tree Crop Dividends From the Soil Bank" and "Wildlife Dividends From the Soil Bank" were prepared and intensive distribution made by the field service agents through all ASC county offices and related agency personnel. The current state-approved conservation Reserve wildlife practices were multilithed in our office, with an attractive game cover added, and distributed by all our field personnel. Regular progress reports on the conservation reserve were carried by The Conservationist magazine, and by our sportsmen's clubs' publications.

But according to state and county ASC personnel, the most effective sales weapon was a wall display "Wildlife Dividends from the Conservation Reserve" which we placed in each county ASC office early last March. This display (36" x 48") listed the state approved wildlife practices and illustrated each with an 8" x 10" glossy photo. These displays became mute salesmen for wildlife and we found that ASC office managers who had previously indicated little interest in the wildlife practices were doing an about-face--partly or largely because of increased cooperator interest.

An intensive publicity program was kept in operation right on down to the grass roots of the program. The ASC office managers furnished each field service agent with lists of CR applicants for each county in his district. These applicants were sent a letter and other informational material on the wildlife potentials of the program and invited to request, through their ASC office, our technical assistance with wildlife planning. Personal contact was then made with the landowner to survey his Soil Bank acres and plan wildlife habitat

improvements. If time permitted, all applicants were contacted at the farmstead even though a response to the original letter had not been received. We found this personal contact with the landowner more than paid for itself in additional wildlife practices established on CR acres.

4. An assignment of responsibility.

Everybody's program is nobody's program, and we decided to keep that in mind. Of course, all field personnel were briefed on the operations of the Soil Bank program early in its beginning and were urged to assist with the greatest possible application of the wildlife and forestry practices.

But to assure clear-cut lines of authority our field service section was given the responsibility for sparking the program state-wide. With the success clearly up to one named unit, there was a specific challenge, an incentive; further the agricultural agencies soon recognized these key men as the representatives of wildlife interests on any CR deliberations. The field service section head met many times with ASC field men to present the case for wildlife; other men of the section met even more with the county office managers in district meetings to discuss Soil Bank problems. So the Conservation Commission in general and Field Service in particular were accepted by ASC as part of the team working for an application of conservation reserve practices.

5. An active participation in all facets of the program.

From past experience in working with related conservation agencies, we could assume that the ratio of their cooperation on wildlife activities would vary directly with the amount of effort we expended in selling their program. Consequently our field personnel were instructed to carry out an intensive Soil Bank publicity program in their assigned districts. These activities were geared with local ASC officials to assure the dissemination of correct publicity and, above all, to keep them posted on the degree of our participation in their program. These efforts helped remove any remaining resistance to the wildlife practices of the CR.

What was the end result for wildlife? Let's take a look at the figures from state ASC reports for 1957-58. Thus far we have discussed only the CR portion of the Soil Bank because we felt it has the greater implications for wildlife interests. However, some thought should be given to the AR because of its widespread appeal to the landowner and its accidental wildlife benefits. During 1957, 682,356 acres were placed in the AR in Missouri. Much of this land offered only fleeting benefits to wildlife because it was back into crop production by late fall. However, agreement land held out of production until the following crop year added greatly to the wildlife range of the state. Our field men encouraged farmers to retire land under this program for more than one year, seeding the acreage to sweet clover or other adapted legume.

In 1958, a 10 percent additional annual rental incentive was added by the USDA for AR land retired up to three years, and our personnel redoubled their efforts to secure wildlife cover on the acres covered by this short-term program.

Thus in 1958, 1,131,787 acres were taken out of production by Acreage Reserve agreements and, according to program specialists of the state ASC, 330,000 of these acres were out of production for more than one year. These were added credits to the wildlife ledger.

It is, of course, difficult to evaluate the wildlife benefits of the short term AR program, with its lack of specific practices for game or habitat improvement. No doubt the landowner participating in the program can observe more critically, if not technically, the end result to wildlife on the retired acres. Every day our personnel, through field contacts with these individuals hear glowing reports of the amazing response by wildlife to habitat improvement through the AR. There is no doubt that with only casual observation the owners of more than a million and one-half acres in our state have learned that wildlife will respond to proper habitat manipulation. This lesson could be an invaluable, if intangible, contribution of the Acreage Reserve to future game management programs in the state.

But our real love is the Conservation Reserve, with its clear-cut contributions to improved wildlife habitat. A total of 134,531 acres have been contracted under this program since its beginning--a total of 3445 farms with CR acres. In addition, 112,740 acres have been seeded to legumes and grasses under at least a five-year contract. This in itself is an important "accidental" contribution to our shrinking wildlife habitat in the state. Some 1291 acres have been set aside for forestry plantings which, at least during the first five years or so of development, will afford additional upland game habitat.

With our field service men stressing pond and lake units, with surrounding acreage devoted to food and cover plantings, it is not surprising to note that 1734 of these larger deep-water structures have been built with CR cost-share to date. Wildlife habitat of the state benefited to the tune of 92 miles of multiflora rose established through this program. Some 920,000 rose seedlings were purchased from the Commission nursery for the completion of this practice. Game food and nesting cover was not overlooked in the over-all program. Landowners were encouraged to establish 388 one-quarter acre patches of sericea lespedeza and recommended annual food plot mixtures. Missourians liked the waterfowl opportunities offered by CR practice G-2; this program to date has offered cost-share on 235 waterfowl and furbearer structures totaling 1609 acres and has permitted establishment of companion food plots with CR assistance on the floodable portions of these newly created marshes.

This is the program to date. It is rather simply said on paper, but a lot of sweat, perseverance and long hours of work made the program possible. If we have appeared boastful in our presentation of Missouri's Soil Bank program, it was not only because we are proud, we're trying to build up the necessary momentum to hurdle the challenge of the CR program for 1959-60 that is facing our department personnel. We have just been advised that the USDA has set Missouri's Conservation Reserve acreage that can be under contract by the end of 1961 at 957,000 acres, an increase of nearly 830,000 acres over our present total of 127,090 acres after two years of the program.

This is encouraging and disheartening at the same time. Our limited

trained personnel in the field of wildlife production make the task of securing adequate wildlife plantings on these acres most difficult.

May I add that there is a definite side-value of this program that might easily be overlooked. Due to the all-out close cooperation by all agencies in this program and the need for each representative fully understanding the practices offered by the Conservation Reserve, we feel we have an additional 325 related-agency people who now have a working knowledge of basic wildlife production practices. In addition, wildlife has graduated to station of equal consideration among the related agencies in deliberations pertaining to conservation matters. These side benefits are of far-reaching importance. If the Soil Bank had utterly failed in its promised salvation for wildlife, game managers could still be proud of their well-deserved acceptance by soil and water conservation groups, and of the basic habitat improvement training our related agency groups have received as a result of the Soil Bank.

BUD MORGAN: Thank you a lot, Ray. Ray warned me that Missouri is always modest about any of their programs or any of their developments. In the paper that was just given, I certainly don't feel that any comment of that sort or any warning of that sort was necessary because I think that they have very definitely something to be proud of and something that they don't have to be modest about in telling of it.

The next paper is going to be given by Frank Heidelbergbauer who is going to offer you another approach to the over-all habitat problem as comprised in the Soil Conservation Reserve Program. I am sure that you will pay particular attention as to the way that Iowa; through its alertness, through its rapid action, and through its very close working relationships with the State A. S. C. Committee, was able to glean a real worthwhile piece of cover and habitat out of the program of the past year. Frank.....

FRANK HEIDELBAUER: Soil Bank Promotion

Mr. Chairman, honored guests, panel members:

The productive capabilities of Iowa lands rank among the highest in the nation. One hundred bushel per acre yields of corn are "the rule" during normal seasons. The "bidding" on land sales frequently starts at four hundred (400) dollars per acre.

Needless to say, the provisions of the Conservation Reserve phase of the Soil Bank have not been attractive to the owners of our high value lands in Iowa.

Our cumulative achievement of only seventy three thousand (73,000) acres under Conservation Reserve contract for three years of effort reflects the difficulty our Agricultural Stabilization Committee people have faced in selling this program in Iowa.

The Conservation Reserve promotion activities of our own departmental

field people met with some success in our marginal land areas, but were most discouraging over the State as a whole.

The Acreage Reserve phase of the Soil Bank presented an entirely different picture. Here our high productivity and land values were an asset to the program's promotion. Acreage Reserve rental rates were established on a basis of land value and productivity. Our highest county-average commanded a payment of sixty three dollars (\$63.00) per acre with the state average at forty nine dollars and seventy five cents (\$49.75) per acre.

Our County ASC offices started accepting Acreage Reserve contracts for 1958 on the 13th day of January.

By January 27th with five hundred and twenty thousand (520,000) acres under contract, their allocated funds for the program were exhausted. Contracts covering another five hundred thousand (500,000) acres were accepted on the condition that they would become valid in the event more funds were provided by the federal government.

On March 27th, our State ASC office received the additional monies provided by congress for this purpose and a million acres under the Acreage Reserve phase of the Soil Bank became an actuality in the State of Iowa.

A check with farm management people indicated that a major proportion of these Acreage Reserve lands would be seeded down to red or sweet clover and the seeding protected with a nurse crop of oats.

It immediately became apparent that with proper management the potential of a million acres under Acreage Reserve contract could have a very salutary effect on our harvestable surplus of game birds for the 1958 hunting season.

Like many other midwestern states, we are faced with the problem of overharvesting our hen pheasants with the mowing machine and underharvesting our cock birds with the gun.

Results of our technical field studies indicate that up to 45% of our nesting pheasants are annually destroyed by the mowing operations.

It was quite apparent that a vigorous promotion to cut this loss on the extensive Acreage Reserve contracts would pay the greatest dividends in game birds for the 1958 hunting season.

Under federal regulation oat nurse crops on Acreage Reserve lands must be clipped three weeks before maturity. The date of June 15th had been in effect in Iowa since the program's inauguration.

In a joint meeting of the state level ASC people and our departmental field management and technical personnel we were successful in getting this "last date of clipping" set back to June 25th. Thus providing ten additional days

of sanctuary for nesting game birds on Acreage Reserve lands.

A check with the ASC people indicated that a farmer under Acreage Reserve contract may clip his nurse crop as high as he wishes as long as the immature grain heads are removed in the process. We were successful in obtaining departmental approval and an allocation of funds to develop a larger poster promoting the clipping of only the heads of the oat nurse crop thus providing a safe margin between the mower-sickle-bar and nesting game birds. This poster carries our Soil Bank promotional slogan which refers to wildlife, so produced, as "compound interest from the Soil Bank". These posters were distributed throughout the State well in advance of the nurse crop cutting period.

Federal regulations provide for a "Wildlife Food Patch" practice on Acreage Reserve contracts at the discretion of the State ASC Committees.

Food for wildlife is usually abundant in Iowa, but the combination of food and cover is hard to come by on our cultivated lands.

There was some reluctance on the part of our State ASC Committee to permit this practice in Iowa, however, we received their approval after assuring them that all such food-patches established would be under the supervision of our departmental field personnel.

A workable food-patch plan was quickly formulated by our management people and their state level Soil Conservation Service advisors. The plan as approved allowed considerable leeway in planning the size and locations of plots within the Acreage Reserve fields. For example, strips of any width could be planted with Sudan Grass either alone or in combination with one of the other eligibles listed. These strip seedlings could be terminated some distance from the fields and, thus providing not only food and cover, but a type of planting that lends itself well to the harvest of game during time of open season.

Inasmuch as oats was listed as one of the food-patch plan eligibles we asked and received approval for farmers to leave parts of their oat nurse crops uncut under the provisions of the "food patch plan".

Our technical people suggested that such strips of standing "nurse crops" be left immediately adjacent fencelines showing the greatest predominance of permanent cover whenever possible. It was felt that this practice could greatly increase the nesting success factor of our game birds.

Promotion wise, the "food patch plan", the "head high" nurse-crop clipping and the leaving of strips of uncut oat nurse crop on acreage reserve lands constituted ideal participation projects for organized sportsman's groups.

Our Conservation Officers were already keeping close liaison with County ASC offices in their Conservation Reserve promotional work. They were thus readily able to provide their sportsman's clubs with current rosters of farmers in the county who were under Acreage Reserve contract.

Some clubs divided their working membership into committees with

each committee receiving a block of farmers to be personally contacted for the purpose of promoting these practices.

As an additional incentive for organized sportsman participation we provided them with a draft of a form letter that could be readily printed under their club letterhead and mailed to farmers in their county under Acreage Reserve contract. In this letter we stated the need for these practices and explained them in detail. The lower one-fourth of the one page letter was in the form of a tear-sheet, application blank an interested farmer could fill out and mail back to his county ASC office.

Our Conservation Officers furthered this promotion on the county level by speaking appearances at farm meetings and participating in local radio programs.

Every conceivable medium was utilized for promotion on a state-wide basis.

Our departmental public relations section dispatched news releases to all papers in the State and arranged for a number of radio and television programs with stations having statewide coverage. Special releases and programs were timed to coincide with the nurse crop cutting period.

The state officers and directors of our two statewide sportsman's organizations, The Izaak Walton League and the All Iowa Conservation Council were contacted and periodically fed current material which they in turn printed in the monthly publications channeled to their statewide membership.

We also contacted the head of the Information Department of the Iowa Farm Bureau Federation, our largest statewide farmer's organization.

In discussing our Soil Bank Promotion with the Farm Bureau people we stressed the fact that our Iowa farmers, as an occupation class, constitute one of our largest participating groups of sportsmen. We placed considerable emphasis on the pleasure derived by farmers who do not hunt, but do like to play host to relatives and friends during time of open season.

Following this line of reasoning won us the full support of the Farm Bureau people and we were then able to utilize their elaborate, statewide public relations and information system. Radio program tapes we made in their sound laboratory were fed to forty local stations over the state and our news release material was fully utilized in their publications.

In exploiting the wildlife potential of the Soil Bank program we solicited our field people for suggestions and promotional ideas and received some excellent material from this source.

Both the State ASC officials and our technical advisors on Soil Bank wildlife practices, the State Soil Conservation Service people have been extremely cooperative in helping us exploit every potential of the Soil Bank for

wildlife purposes.

Current information strongly indicates the Acreage Reserve program will be terminated this year and that the Conservation Reserve phase will become the "heart" of the 1959 Soil Bank Program.

We were recently invited to take part in a meeting called by our State ASC Committee for the purpose of preparing annual payment rates for the 1959 Conservation Reserve Program in Iowa. We were delighted to learn that there will be a substantial increase in rates along with a percentage bonus for farmers placing their entire units under contract. It is quite possible that the inducements may well be sufficiently attractive to entice participation from even our highest land value areas.

Our Fish and Game Division management personnel, working with our State Soil Conservation Service technical advisors are currently in the process of developing a new "G" (Game) practice which we will propose be added to our 1959 Conservation Reserve program.

We intend to vigorously promote this program and its practices. We are confident that we can exploit additional contacts and methods for this purpose as well as utilizing those we have already developed.

No Soil Bank promotional program could be complete without the sportsmen being informed of the salutary effect of this program on our State's game populations. While our plans to this end are still in a formative stage, it is our thinking to release a summary report through our departmental public relations media with the aim of securing the universal support of our state's sportsmen for this and future national Soil Bank programs.

Now if we can just find someone to tell us how to make our cock pheasants run and fly instead of running and hiding, we'll feel we have the situation pretty well in hand.

BUD MORGAN: Thank you, Frank, for a very fine report that I think demonstrates the value of being on your toes when one of these programs comes along. When there is some phase of it that you don't feel that you can capitalize on, maybe another look at the program will give you an inspiration which will pay off in dividends like it did in Iowa.

At this time I would like to introduce Bob Morgan, from North Dakota.

BOB MORGAN: Progress and Future Aspects of the Soil Bank Program in North Dakota

The Conservation Reserve Program in North Dakota lists eight separate conservation practices that farmers and ranchers can utilize to put their lands under Conservation Reserve Contracts. A brief break down of these eight practices is as follows:

CR-1: Grass Seeding for Permanent Vegetative Cover.

- CR-2: Tree Plantings to Prevent Wind or Water Erosion
(usually one to seven row plantings)
- CR-3:- Dams, Pits, and Ponds for Grass Land Management or
- CR-4:) Irrigation Purposes.
- CR-5: Establishment of Temporary Vegetative Cover for
Erosion Protection.
- CR-6: Establishment and Management of Cover and Food
Specifically Beneficial to Wildlife.
 - A. Wildlife Tree and Shrub Plantings for Winter Cover.
 - B. Sweetclover Plantings for Cover.
 - C. Food Patch Plantings.
- CR-7: Water and Marsh Management to Benefit Wildlife.
- CR-8: Establishment of Forest Woodlot.

In order to properly evaluate the progress made by the Conservation Reserve Practices specifically designed to benefit wildlife, (Practices CR-6 and CR-7), we must first note what took place to these practices in relationship to the Conservation Reserve Program as a whole in 1957.

According to the State A.S.C. Office, 431,492 acres were placed in the North Dakota Conservation Reserve Program in 1957. Of this amount, 429,461 acres was planted to the grass under CR-1, 841 acres was planted to trees under CR-2, 3 acres went into a pond under CR-3, no acres went into ponds under CR-4, 518 acres in one county was seeded to Temporary Vegetative Cover under CR-5, 246 acres went into Wildlife Cover and Food Practices under CR-6, 423 acres went into Marsh Management under Practice CR-7, and no acres were recorded for forest plantings under CR-8.

Percentage-wise, practices designed specifically for wildlife rode the "caboose" in the 1957 Conservation Reserve Program "train". Approximately 99.5% of all land going into the Reserve Program in 1957 was seeded to grass under Practice CR-1. The 246 acres that did go into the wildlife cover practices under CR-6 amounted to less than .06% of the total. It is interesting to note, that of the 246 acres placed under wildlife cover practices in 1957, 150 acres were located on Game and Fish Department game management areas and another 50 acres were located on H. R. "Bud" Morgan's farm in Richland County. To keep the records straight then, approximately 46 acres out of a total of 431,492 acres were put into wildlife practices under the Conservation Reserve Program by farmers and ranchers of the State in 1957, and practically all of these 46 acres were put in as wildlife tree plantings furnished by the Game and Fish Department and probably would have been planted anyway. Also, most of the 423 acres put under the Marsh Management Practice CR-7 in 1957 went into the Game Department's game management areas. Thus we see, that farmer and rancher participation in the wildlife practices was virtually nil under the State's 1957 Conservation Reserve Program.

There were several reasons for this lack of participation in the wildlife phase of the Conservation Reserve Program by the farmers and ranchers of

North Dakota in 1957.

First, there was the confusion that was so prevalent in the administration of the 1957 Soil Bank Program. The 1957 Soil Bank Program was enough to discourage a Philadelphia lawyer, much less a local A.S.C. County Committeeman. Local county A.S.C. personnel found it easier to explain and write contracts for practices that they were used to dealing with in their own A.C.P. Program, such as grass seeding and field windbreak tree plantings. Wildlife practice specifications were new and technical for the most part. Also, many of the A.S.C. office personnel are women or men who care nothing for hunting and have little or no understanding of complicated game management practices. It is also true, that many of the A.S.C. personnel did not even know that specific wildlife practices existed in their 1957 county dockets.

Most of us in the game management field felt that the Conservation Reserve Program would benefit wildlife to some degree, but we were not too positive just how to push or pull the "critter" to benefit wildlife the most. Consequently, our promotional program lacked the effectiveness that was needed to sell a new "product".

Federal limitations on the assistance a state agency could give the landowners also held back promotional work of the wildlife practices in 1957. Another factor that did not benefit the wildlife practices, was the fact that Federal cost-share was \$6.00 per acre for seeding eight pounds of grass and only \$1.60 per acre for seeding ten pounds of sweetclover in 1957.

There was one bright spot in the 1957 program that I would like to mention before going on to this year's results. Through the cooperative effort of the Game Department and the Barnes County Wildlife Club, some 6,000 acres in Barnes County were seeded at the regular grass seeding rate, plus two pounds of sweetclover per acre. The Game Department furnished the 12,000 pounds of sweetclover seed and the wildlife club did most of the contact and field work on the project. We will attempt to evaluate this project and use the information obtained as a guide in future work with the Conservation Reserve Program.

Several changes which benefited the wildlife practices were made in the Conservation Reserve Program before the 1958 program season. One amendment made it possible for State Agencies to assist the landowner in establishing reserve practices. With the new amendments in mind, we began formulating our program schedule for 1958.

We decided to place the main emphasis of our work on Part B of the G-1 Practice - Establishment of Stands of Sweetclover for Cover. Why did we choose this practice over the other practices, such as; wildlife tree plantings, food patches, and marsh management? There were several reasons. Our wildlife tree planting program was already at the point where demand either equaled or surpassed the supply, and no further emphasis on this program was necessary. The food patch practice requires annual work on the farmer's part and his acceptance of this practice was rather poor. It was also felt that

herbaceous winter cover was more important to North Dakota wildlife than winter food. The Marsh Management Practice has failed to receive acceptance, either from the farmer or the county committeemen. Nine counties refused to even have this practice placed in the county docket in 1957. We will attempt to place some emphasis on the Marsh Management Practice in the future, if a way can be found to increase the participation.

The wildlife practice specifications for the 1958 program were written and accepted by the State Committee. The State Committee also revised the Federal cost-share payments on all practices. Consequently, wildlife practices were much more attractive this year than in 1957. Federal cost share in 1958 was \$4.25 per acre for seeding grass and \$3.75 per acre for seeding sweetclover, as compared to the 1957 rate of \$6.00 per acre for seeding grass and \$1.00 per acre for seeding sweetclover.

Thus, the outlook for participation in the wildlife practices for 1958 was much better from the start of the program year than it was in the past year.

To further emphasize and promote the sweetclover cover practice (CR-6B), 12 counties were picked to serve as a pilot project area. These 12 counties were selected because they represented marginal pheasant areas in which pheasant populations were formerly present and have been increasing again during the past few years, but where food and winter cover are still limited. Besides the \$3.75 per acre Federal cost-share that the farmer could receive from the Federal Government, the North Dakota Game and Fish Department offered to pay landowners in this 12 county area an additional \$1.00 per acre to help establish sweetclover plantings. This project was set up as a PR project and 5 of the 6 habitat biologists were assigned to spend two weeks doing promotional and field checking duties. These biologists talked the project over with A.S.C. County Committeemen and office personnel and gave them brochures regarding the project. In several counties habitat biologists attended local soil bank meetings held by the various Federal Agencies involved. This proved to be very effective in selling the project. A saturation type publicity campaign was set up and all news media was used to inform the public about the program. Agreements were signed with the 12 County A.S.C. Offices regarding cooperation on the project.

An agreement was signed this spring with the State Soil Conservation Service Office, whereby, technical determinations for the G-1 Practices in North Dakota were turned over to the Game and Fish Department.

Figures released to us by the State A.S.C. Office reveal that the 12 counties in the Pilot Project Area put a total of 88,215 acres into the Conservation Reserve Program in 1957. Only twenty-two acres in the 12 county area was placed in wildlife practices under CR-6 in 1957. Application cards have been received this year by the Department for 4,000 acres of sweetclover plantings in this 12 county area in 1958. Thus a substantial increase has been noted in farmer participation in the wildlife practices in the 12 county project area.

In addition to the 4,000 acres of sweetclover attained in the 12 county project area, we know that about 100 acres of the Game Department's wildlife tree plantings were put into the Reserve Program. The Department also placed about 50 acres of food patches into the Reserve from plantings made on the game management areas. Early reports from the State A.S.C. Office indicate that participation in the wildlife practices in the remaining 41 counties of the state was about the same as that of 1957. Exact figures are not available at this time. We do know, however, that at least 4,150 acres have been put into the G-1 wildlife practices of the Conservation Reserve for 1958. The comparison then is 246 acres of G-1 practices in 1957 to 4,150 acres plus, of G-1 practices in 1958.

Figures released by the State A.S.C. Office indicate that total participation in the Conservation Reserve Program in North Dakota for 1958 was about 350,000 acres. If this preliminary figure holds true, it would mean a drop of some 19% in participation from last year's total of 431,000 acres.

If we apply this 19% State drop to our 12 county project area, it would mean that total participation in the Conservation Reserve for 1958 was about 71,500 acres. Our 4,000 acres of sweetclover would then be 5-1/2 % of the total acres in 1958 as compared to .03% of the total acres for this same area in 1957. It would appear that at least some progress has been made in the right direction in the 12 county project area. It would also appear, from the poor showing made in the other 41 counties of the State, that results will occur only where an effort to obtain them has been applied.

Wildlife habitat has undoubtedly been improved by the 781,000 acres placed in the soil bank thus far in our state. The undisturbed nesting cover created by the 3/4 of a million acres seeded to grass should greatly benefit all wildlife, especially our prairie grouse species. It should be noted, however, that along with the return of this submarginal land to cover ~~that~~ other submarginal land has been plowed up. It might be interesting, if we could compare the lands placed in the soil bank with the lands broken up and placed in crop since the program began.

North Dakota has now placed about 3% of its total cropland into the Conservation Reserve Program. We are reported to have a total cropland acreage of about 27-1/2 million acres. The Department of Agriculture has set its 1959 Conservation Reserve goal at retiring 656,000 more acres in North Dakota. The 4 year (1957-1960) achievement goal set by the Department of Agriculture calls for 1,936,000 acres of North Dakota's cropland to be retired under the Conservation Reserve Program. This would be about 7 % of the total cropland in North Dakota.

The goal set by the North Dakota Game and Fish Department is to get as much of this acreage as possible into the G-1 and G-2 wildlife practices.

We shall again set our goals to reach for the moon. Perhaps next year, we will clear the back yard fence.

BUD MORGAN: And now, last but not least, we have Tom Schrader of the U.S. Department of Agriculture, Soil Bank Division, who has recently taken over his duties as the Wildlife Specialist for that particular division of Agriculture. Tom, may we hear from you now?

TOM SCHRADER: Mr. Chairman, Ladies and Gentlemen:

I don't know whether it is a fortunate or an unfortunate position to be last on the program like this, because I know that you always have a good part of your thunder stolen by the time you get on the stage. Everybody has said everything that can be said about the Soil Bank Program. I also know that you have the temptation to try to answer the things that have been said where they have been critical or to laud the things that have been said where they have been favorable; and you have so many of those things to take up that you forget all that you had in your mind when you proceeded up to the platform.

I could probably end this by just chiming in with the other two representatives from Washington who were on this morning--complaining bitterly about the heat--because I grieve quite a little bit about how tough they have it there in their airconditioned office building. In Agriculture, 90° is a lot worse. They don't really know how tough it can be in Washington.

But I have a couple of things that I think I can contribute to this discussion today along a little more serious vein. I didn't try to write any paper because I have to admit that I'm so new in this and have so much to learn about it that I didn't feel that I could pose as an expert on soil bank affairs when I came out here. I want to, first of all though, do something that I think should be done, and that is to commend the states. Most of the states that should be commended have preceeded me on the panel today. I think that if you have listened to Missouri, Ohio, Iowa, Wisconsin and North and South Dakota, and Oklahoma (one state that isn't represented here) you will include the states who have tried and really given an effort to make the soil bank work. And I think they are to be commended for the efforts that they have made in that respect. I even want to commend Wisconsin, although I got a little shaky like Bud, at some of the first things that were said here, and I began to fear that the thing had fallen on its face in Wisconsin. But I believe there may be a value even in what Wisconsin has done. If nothing else, they have been smart enough to take a good cold look at what's wrong, and perhaps they have learned some of the answers here that they can use to improve their program for next year; and if the rest of us can get together with them, we can find out the answers to some of the problems that we will have in these prairie states.

Now I wanted to make comment on one criticism that was made in the talk from Wisconsin, but otherwise I am going to pretty well lay off of everything that was said previously. The criticism was made about the complications of the program; and believe me, I want to agree that the thing has gotten complex and complicated beyond understanding and only those who spend hours and hours studying all these regulations have even a slight understanding of the program. I have found since being in Washington that one of the principle duties of the rather small staff which we actually have to administer this program, is

answering correspondence from the people who are heading up the program in the field; trying to explain to them what can be done. I think that it is a regrettable situation that this thing is so complex. But there is an explanation of it. The farmers of America seem to be spending their non-working, but waking hours, in figuring out ways to circumvent the regulations on this thing; and I don't know how--with the Congress serving as a watchdog as they are, on what is being done with this money--how you can avoid the necessity of attempting at least to provide at this time that the program will be carried out in a manner to achieve the objectives as stated in the Act, and so I am afraid that we are going to have to live with these complicated regulations.

Now I think that there has been enough said today about the 1958 program, and that it would be worthwhile for me to give you what information I can about what has been, or at least, what is almost settled about the 1959 program. For instance, I got the impression that a good many of you don't know that this is a fact that there will be no acreage reserve program in 1959. The Appropriation Act was signed by the President at least a month ago and there are no funds provided for an acreage reserve program. Now I gather from the experience Iowa has had with it, that they weren't particularly unhappy, and that they had found a way to make the acreage reserve program be of benefit to wildlife. My own experience in South Dakota leads me to believe that in South Dakota the acreage reserve was of benefit to wildlife.

Therefore, while the program next year will not have the Acreage Reserve, and we will lose something thereby, because I believe there were benefits from it; I think the removal of the competition that the Acreage Reserve provided for the Conservation Reserve will result in enough additional participation in the Conservation Reserve to offset those losses. In fact, surpass them because of the additional benefits that are possible from the long term nature of the Conservation Reserve program. Now I have heard some discussion here of the increased rates that are being proposed for next year, and that too is fact. Although it has not definitely been decided what the rates will be in any state, the Department is considering an increase in the national average rate from the ten dollars of the past two years, to \$13.50 for the next year's program. Now the increase which is being offered also provides that the state committee and the county committee can modify the rental rates for the state or for the county upward as well as downward from the average rates that are planned, so there can be an increase considerably above the \$13.50 national average. Now these rates are being increased to provide inducements to attract more productive land into the Conservation Reserve, and along with the increase in rate next year's program will have a definite attempt made to tie the increase to the productivity of the land. Land which is low in productivity will not normally receive higher rates than land of similar productivity received in last year's program. Therefore, the only land which can anticipate receiving higher rates in the 1959 program will be land that is substantially more productive than land which was being placed into the Reserve up to-date.

One other item in the rental rates that I think may be of interest that I would like to give you a little information on is the additional inducement that is being built into the program in 1959 in order to attract whole farms into the

Conservation Reserve. The 1959 program will provide a ten percent increase on the base rate per farm for the entire farm to be contracted. In addition to that, all the eligible land will be placed in the Reserve at the full diversion rate rather than as under the program to-date, where only the soil bank base went into the diversion rate, and the non-diversion rate applies to the additional land put into the Conservation Reserve. Under the program that is being contemplated for this year it will be possible for farmers putting whole farms into the Reserve to receive substantially higher rentals than has heretofore been the case.

Now what interest is that to we in the wildlife business? Well, to start with, I think it is most important to us that we will get an opportunity to work in areas where we haven't gotten land before and under one of the better policies than we have had to work with before. And I think it is true that the better the quality of the land not only will it raise more corn, but also it will raise more pheasants.

Now several of the state men who talked to me this morning have mentioned the fact that they have been given this information on the number of acres that is contemplated or set up for the goal for their state for this year. On the off chance that some of you may not as yet have received that information, I have made a list of the states that are involved in this Conference, and I will just quickly read through the goals for these states. Now bear in mind that these goals are not final. They are subject to change. But in a general way, the rates are being set and the goals are being set with the idea of attempting to reach this as near as possible. The State Committee is having the opportunity to adjust these goals and these rates downward at this time; and subject to action by the state committee, these figures are not final. . . . In Illinois, the figures for 1959 (I am going to read the state and the goal) 409,000 acres. Indiana - 324,000 acres. Iowa - 520,000 acres. Kansas - 1,006,000 acres. Michigan - 349,000 acres. Minnesota - 494,000 acres. Missouri - 481,000 acres. Nebraska - 625,000 acres. North Dakota - 656,000 acres. Ohio - 219,000 acres. South Dakota - 533,000 acres. Wisconsin - 439,000 acres. Those are substantial acreages of land that are going to be put into the reserve and which form a basis for what I consider to be the opportunity for the Soil Bank Program.

I would like to comment on one other advantage that is being built into this year's program--the wildlife phase of it. That is the cost-sharing rate for the practices which can be installed on this land. As you all know, an effort was made by the Congress to reduce the cost-sharing rates to the A.C.P. rates for comparable practices throughout the United States. Now that is going to be done. During this year's program the A-2 Practice will be reduced to the fifty percent cost level--the same as the comparable practice under the A.C.P. program.

I don't know if that is a matter of particular concern or interest until you stop and think about it, but one of our big forms of competition in this program is the fact that the A-2 rate was attractive and the G-1 rate was no more attractive. Now under this year's program, the G-1 rate will be maintained at the

80 percent cost-sharing rate so that we are going to have one other advantage in selling G practices this year that we did not have in the past; that generally the rates for G-1, G-2, and G-3 will be higher than the comparable A-2, A-7, and pond practices.

Now, one other thing that I would like to mention about cost-sharing is in connection with a complaint or criticism, and it is one that I very frequently voiced myself before I got into this present job. That is the failure of the Department of Agriculture to make the money available to the states for the technical services, or the participation or the help which the state game and fish departments could give to this program. I screamed at great length about that situation over the past few years and I thought that one of the things that I would attempt to do when I got into this job was see if I could not rectify this horrible situation. I would see to it that my old buddies in the states could get some money to help out. I figured that it would be a very valuable assist if the Department of Agriculture would make some money available for the wildlife phase, but I find that there is very little likelihood that we are going to be able to get such help for the states for two reasons. I guess perhaps the most important one of these reasons is the fact that this program, like any other program, has matured to the point where it is operating on a budget, and there is no money in the budget for transferring to the states. It is entirely unlikely that there is any money available that could be given to the states for that purpose. Another reason why I don't know if there is any chance of getting money available for the states, is that there is a body of opinion in the Department of Agriculture that there is already a much more substantial contribution to wildlife management than most of the states and private conservation agencies realize in the cost-sharing assistance part of the program which sets up money for cost-sharing for wildlife practices. Now during the first two years of the program, cost-sharing assistance has roughly approximated the rental rate. They have spent a hundred million dollars for rental rate, and they have spent one hundred million dollars for the cost-sharing assistance for the A practices. The over-all national average has approximated \$10.00 per acre. As it stands now--with the rather small amount of G practices that have been instituted--the wildlife agencies have gotten a very small percentage of this money spent for G practice installation, but there is nothing that prevents them from getting it all if they can do a salesmanship job of a big enough magnitude to have all of the land put into the Conservation Reserve put into G practices.

Now, I do not anticipate that that is likely to happen. But if the hundred million dollars that is budgeted for practice payments for this year--if we could raise the participation or the placing of this acreage from this 12 million acre goal for this year to ten percent--so that if we put a million, two hundred thousand acres in G practices, we would be getting twelve million dollars spent on wildlife habitat improvement in the United States this year. And there are those in the Department of Agriculture who feel that this is quite a substantial contribution to wildlife management by an agricultural agency. I don't believe in the light of that feeling, that they are going to be inclined to make available, even though it would be a nominal amount, any money for the states for the selling job that the states must do to make this program work.

Now I would like to wind up my remarks with just a few comments on the Soil Bank program as I have seen it. Personally, I think we have overlooked one thing, and I am somewhat in disagreement with Bud on this. I hope that we can disagree slightly from time to time and still remain friends.

He believes that our primary importance should be attached to the G practices. I think that we are missing a good bet if we don't take as much advantage as possible in getting wildlife into the A practices. And I would like to give a "for instance" on this to show what I mean. I was out to one of the western states the other day, and I found that there had been very little participation in the G practices in that state, but there had been a rather substantial acreage put into A-2. In discussing this with the group there--some from the ASC Office and some from the Game and Fish office--it came to light that all of this A-2 acreage that went into the reserve in the past two years in this state had been planted primarily with crested wheatgrass and a legume. That was just dandy, but in that state the crested wheat falls over and furnishes very little winter protection for wildlife. And they wondered whether or not it would be agreeable to A.S.C. if this was changed to provide that they use tall wheat or bluestem. Insofar as the Department of Agriculture was concerned, it made not the slightest difference. In next year's program in that state those two species will be the ones that will be advocated. And that A-2 land will be much better wildlife habitat than it was if it was strictly A-2 as an agricultural land.

It is entirely conceivable to me that in almost every state in which we have a substantial acreage going into the Soil Bank that we can give a little thought, do a little thinking, let our imagination work in technicolor, and sit down and see what we can do with the A-2 measures, which is the biggest practice going, to be sold by the agricultural people. They aren't wildlife people. They don't know anything about it, and a lot of them don't care about it. But they do know agriculture, and if there is anything that we as wildlifers can do that will make A-2 the best possible wildlife practice that it can be made, then I think that the benefits that we can receive from this program can far exceed anything that we can get by way of selling the G-1.

Now by that, and here is where I get back in agreement with Bud, I don't believe that we should discard G-1, G-2 and G-3, they have a lot of value and they have a lot of opportunities. I think we should work on them as things which we can do, as things which will augment what we can accomplish under A-2 and A-7; and we should do the best possible job of selling that we can do. I think we should do things like Ohio did in making the movie. South Dakota made a TV movie, and I would like to pass on that comment because I think it was worthwhile. South Dakota did about the same thing as Ohio did. We went to the Extension people at the State College and for \$75.00 we got a short TV movie made that was shown on all four of the TV stations in South Dakota. It generated a tremendous amount of interest in the Soil Bank Program in that state. I think we should make every effort we can during this next year to do as good or better job as we have done this year, and I want to go back again and say that I think that these midwestern states did a tremendous job of publicity and extension type work which will induce more and more farmers to participate in this program.

I can't wind up without saying one other thing about this program, and that

is, as has been brought out by two or three other speakers before me, the necessity of getting together with the people in agriculture to get this program to going.

Now I can see that there are a number of things that I can do in this job which I have with the Department of Agriculture. I can't help but feel a certain amount of humility and pride over the magnitude of the job which one man has trying to do; all the things that I can think of trying to do, all over the United States to get this program going. And I am not going to be able to do it, but one of the things that I will try to do is to work with the State A. S. C. Committees to point out to them; to develop in them, the necessity for the goals and aims of the wildlife people. I am not going to be very successful unless you folks do the same thing. You have got to get better acquainted with those people. You will have to go to them with the realization that this is an agricultural program and that the only way that you are going to get anything is to mesh it in with the primary purposes of the program. You are not going to get it by going to them and saying, "Just quit what you are doing and do what we want to do". The only way that you can accomplish your objective is, if you will go to them and say, "What can we do with your program to make it a little better for what we want?"

I have, as some of you know, had my troubles with some of the agencies in Agriculture in the past few years, and I can remember back to the early days of River Basin Studies when I thought that anybody that worked with the Corps of Engineers was automatically equipped with horns and cloven hoofs and a forked tail. But I am finding the same thing in Agriculture that I found in the Corps of Engineers. After you get to know these fellows, they are pretty good guys and trying to do a job, too. I don't believe that any of you need to worry if you can't find cooperation from Agriculture in getting this program on the road.

Now, I want to wind up with just one comment, and go back just a little bit to this getting some money for this program--you are going to get from this program just what you put into it!

I think the statistics and figures of the North Dakota boys certainly pointed that out. Where they put some effort into it, they got a tremendous increase. All of the states, and there were about 9 or 10 of them, that put some effort into this, this year, showed a remarkable increase in the acreage in G-1 practices this year. I believe the same effort next year will pay off even more handsomely.

If there is an opportunity to answer some specific questions about next year's program that comes out of Bud's taking the discussion over, I will be glad to try and answer them. Thanks for your time.

BUD MORGAN: Thank you a lot, Tom. I have just one comment--to begin with, I am not mad at you because you disagree with me. Ordinarily I am mad at people that disagree with me, but in your case, I am not. Because of the fact, primarily, that I think you misconstrued a remark that I made here in my opening remarks--(actually I think that we are in perfect agreement)that being that we

should take advantage (and this was very definitely pointed up by Iowa's report this afternoon) of any or all of the facets or approaches to this program that may offer from time to time. The only point that I have in disagreement with you is that I think we should use the A practices and the other practices, other than the G practices, to augment the G practices rather than the G practices to augment the A practices.

Now then, there are several states who have not had an opportunity to report on this and may wish to, and I am going to call their names, and if they care to comment on this program, I think this would be a fine opportunity and a fine time to tell us. We have Jim Kimball here. Would you care to comment on the program so far as Minnesota is concerned, Jim?

JIM KIMBALL: Well, I haven't got much to say on it, except that Tom Schrader came in one day and we went up to the ASC office and were amazed at how simple it was to get them to postpone the date of clipping from early in June until sometime in July. In just a day or so, they had an order out to that effect. It was so easy that we couldn't quite understand how it worked so easy. That sort of fired me, and I went to the State Highway Department and got them to postpone the mowing of highways until sometime later on in July. We are having our fieldmen try to do the same thing with the counties. In other words, with a very little bit of effort--and with Tom Schrader's help--I think we may have saved a great deal.

BUD MORGAN: Thank you a lot, Jim Kimball, from Minnesota. I have learned that these people from Agriculture didn't have tails and horns sometime ago. In fact when I first started on this program, and I think that as we work more and more with them, we get a better appreciation of their wish to try and cooperate in all of these programs wherever they can within the framework of their authority.

Is Woodward from South Dakota here, or any of the other boys?

HARRY WOODWARD: Bud, I will call on Les Berner to answer your question briefly with what information we have.

LES BERNER: In South Dakota we definitely made an effort to get into the Act this year for the first time, and as Tom said, we made a real effort. The Commission authorized us to go ahead on a cost-sharing basis, and we took the rough part of the state as a trial. We took the southeast corner which has much the same problems as Iowa (the high corn producing area) and we can truthfully say we didn't have a lot of participation on an area-wide basis, but in one area where we were able to get the local sportsmen's club to go out and do a lot of pushing in addition to our own pushing, we had as many contracts in the one county as we had in the eight other counties down in that corner. This bears up the point that several of you made here, that it is a matter of work. If we get more fieldmen out there, I think that we will get the job done. One of the things we are going to do next year is to give one man the full-time job and the responsibility of tying in every and all of the agencies concerned, not only our state agency but everyone else. We don't expect to spend as much money on chasing

around next year as we did this year, but we certainly expect to get more in the way of results.

BUD MORGAN: Thank you, Les. Now we don't use Harry Ruhl, as a rule, but apparently he is going to have to answer for the Great State of Michigan. I know that you haven't really gotten into the program, but you may have comments that you would like to make today.

HARRY RUHL: One of our problems is that the county committeemen and the state committee sometimes don't understand what you are driving at. In our state we are rapidly becoming a non-agricultural state, and there are less and less of our people on the farms.

BUD MORGAN: Harry, it occurs to me that this program might pattern right in with your problem on the north where agriculture seems to be on the wane. Possibly a little education program directed at having those whole farm units taken out and making that a better recreational area, as a consequence, might be a partial answer to your problem.

HARRY RUHL: It seems to me that part of this is to plan far enough ahead so that agricultural leaders have learned what you are trying to do in small doses, and do not find themselves antagonistic to your program.

BUD MORGAN: Thank you for your constructive comment. Mel Steen, Nebraska.

M. O. STEEN: We have had very heavy participation in the Acreage Reserve and very low participation in the Conservation Reserve. To make matters worse, the Department of Agriculture came along last year with a proposal that they were going to let the farmers submit bids for participation in the Conservation Reserve. They went out and beat the drums for that. They really beat the drums and they got just a deluge of bids. Now admittedly some of them were very unrealistic. They were exorbitant, but a very large number of those bids were very realistic. They were perfectly proper and within range and should have been accepted. So what did the Department of Agriculture do, but wait until the last minute and toss the whole business out the window; and come back and give our farmers just fifteen days in which to come back to the old rules and the old rental rate and submit their applications for Conservation Reserve. As a net result, we had forty-five thousand acres go into Conservation Reserve in Nebraska last year, while South Dakota had two hundred and fifty thousand acres and North Dakota had four hundred and fifty thousand acres. We are quite unhappy with the manner in which the Conservation Reserve has been handled.

I also want to talk about a couple of things that I thought were all right. About trying to sell practices to Agriculture that would be planned along wildlife lines, and I think the point was very well made. My experience has been that you are not selling anything to Agriculture. After all, we are working through an agricultural agency; a group of citizens looking at the thing through their eyes, and we are asking them to do something for us.

BUD MORGAN: Thank you, Mel. I think that without a doubt Tom Schrader will

take care of all our problems in the coming year.

I think that we should hear from Fred Warders from Kansas. Fred, are you ready to report?

FRED WARDERS: Bud, I have a little to report on. Since your visit to Kansas sometime ago and the instruction given to our field staff, we have found a considerable amount of interest in the Conservation Reserve, especially in the G practices.

BUD MORGAN: Thanks, Fred. How about Tom Evans from Illinois?

TOM EVANS: I don't know if I ought to get up here and try to say anything or not, Bud. After all the efforts we made on having all these favorable changes brought about in bookwork, and then having the program fall flat on its face in the state of Illinois, I'm not very proud of it, at all.

We had the same experience that Mel Steen related as far as the Bid Program was concerned. Everybody had high hopes on this bid program for the whole farm and everything was going along beautifully when, Bingo, the whole thing was in the wastebasket.

At the state meeting which we sat in on the other day, we were left with the impression; well not the impression, a stated fact, that the State Committee itself did not know where it was going. They don't know whether they are aiming at budget controls or whether they are aiming at conservation.

Farmers have come into the county offices and asked for conservation reserve practices or contracts. They have asked for G practice contracts, and they have been turned away or rejected, often because the county people didn't answer the questions. They would tell the applicants that there wasn't such a possibility, and all that sort of thing. Our district biologists, going to a meeting to talk about the Conservation Reserve Program, found that they had to explain the program; that the Agricultural people present could not explain it. We feel that we have been pretty much behind the eight-ball. At the state level we have had wonderful cooperation. We can't complain at all. They have done just about everything that we have asked for.

I agree with Tom here on A-2 versus G-1. If A-2 is more popular, there is no reason why A-2 shouldn't be acceptable as a substitute for G-1.

BUD MORGAN : Thanks, Tom. Bill Barnes, Indiana.

BILL BARNES: I would like to say, like Tom, that our state officers have given us complete cooperation. In fact, they have contacted our agency for information and advice on what should be done as far as G practices are concerned.

BUD MORGAN: Thanks, Bill. And now, Les Sachow, office manager, North Dakota A. S. C. Office.

LES SACHOW: Well, I don't have much to say, Bud. I appreciate being here,

and I know that Mr. Skramstad does too. We do appreciate your efforts, Bud, and what Dr. Bue and his staff in North Dakota have done not only in promoting the wildlife practices, but in selling the whole conservation program to the farmers. I know that it has helped us in the past few years. I know that there is going to be more progress in the wildlife program in the future. You have a well laid groundwork, and I am sure you will reap the benefits in the next few years.

BUD MORGAN: Thank you, Mr. Sachow. And now, very briefly (Summarization):

The Ohio Department's program to establish game habitat under the Conservation Reserve Program differed from other programs in that Ohio elected to assign full-time personnel to 33 northwestern counties along with coverage of the balance of the state by part time staff assignments. Along with the usual all out publicity campaign, Ohio prepared a special fifteen minute movie on the program.

Less than 25 % of land placed under C.R. contract in 1957 was contracted in 1958, yet over 7.5 times as much game habitat was established. On an equal acre basis, therefore, game habitat would have increased to 980 acres on basis of 1957 sign up, and percentage-wise, six tenths of .01 percent of C.R. lands were placed in game habitat in 1957 while in the 1958 program with full-time personnel and a publicity campaign, over 20 percent of the C.R. acreage was placed in game habitat.

Regarding Wisconsin, I question that basic purpose of the Conservation Reserve is that of depleting crops. If total future goals are attained, only 7 % of the more marginal cropland will be retired under this program. The goals should be conservation of soil first and crop depletion second.

I heartily agree that funds should be transferred to game agencies willing to assume responsibility for G practice establishment.

The statement that "there is little reason for optimism under the present program for increased wildlife habitat" will be disproved by other panel papers.

Contracts do not influence allotments.

Total farm planning can, and is being done in some states, as a cooperative effort between the Soil Conservation Service and game department technicians.

Roman brought out some very good reasons for lack of G practice participation in Wisconsin. These will be noted with an attempt at getting proper changes.

Missouri, with experience and proof, makes a positive statement. The program will work in the interests of wildlife. They list five "Musts" if the program is to be successful.

Through a cooperative effort, in which game personnel played a leading role by offering to sell, not only the G practices, but the entire program, Missouri has added 325 related-agency personnel to its game habitat sales force.

Through its all-out efforts, the Missouri Department has made both farmers and sportsmen recognize the relationship of habitat manipulation and game populations.

Through being alert to all benefits which might accrue to game, this department capitalized upon the A.R. program and by so doing took advantage of 330,000 acres of habitat established upon A.R. lands which were held out of crop production for more than a single year.

Missouri did not confine its efforts to one phase of the C.R. program. It sold herbaceous cover, emergency food, woody cover and water successfully.

These accomplishments were not made without effort, however. They were the result of a carefully planned campaign which included coordinating the game department's activities with those of other agencies having a part in this program in such a manner that each benefitted from the efforts of the other; Of a crash publicity program which kept interest high and the public constantly appraised of progress and of what could be gained by participation in the program; Of pinpointing responsibility through specific assignment of personnel and through being alert to the many and varied benefits to wildlife offered by the program. Missouri has proven what can be done.

How much acreage has been placed in game practices under this program in 1958? 1104--includes rose under A-8. In 1957--824.

Iowa, with its high value land, took advantage of the popular A.R. program. It did not sit back with a defeatist attitude because only 73,000 acres had been placed in C.R. during the past 3 years. Working cooperatively with state A.S.C. personnel, it provided that regulations be modified to provide for late and high clipping of nurse crops and for establishment of food patches on A.R. contracted lands, and to leave some of the nurse crops unclipped as food for game.

Sportsmens groups were made partners in this enterprising promotional project. They were supplied with current lists of local farmers placing land under A.R. contract and committees of sportsmen contacted their farmer neighbors in an effort to promote these habitat practices. These clubs were provided with printed materials which would further the program.

The big farmers' organization (Farm Bureau) of the state was encouraged to get into the play. Its state-wide information system was put to work to get participation. How can you beat a deal where the farmers' own organization is cooperating in a program to get farmers to plant habitat?

Iowa would not be licked because her farmers could not afford to place high productive land under C.R. contract. This should be a lesson to any state game department. If habitat is important to game production, there is a way for each state to take advantage of the C.R. program.

New regulations, constantly being developed by the Soil Bank Division of the Department of Agriculture, offer new avenues of approach to establishment

of game habitat on high-priced land. Revenues from game production resulting from increased carrying capacity of C.R. lands may increase interest in the 1959 program.

North Dakota's is by way of being, primarily, a progress report.

Whereas the state's farmers placed only 46 acres in practices especially designed to produce game habitat in the 1957 C.R. program, they established at least 4,100 acres in "G" practices in the 1958 program. The increase in 1958 game habitat over the 1957 program, was, therefore, nearly 100 times that of 1957, or one percent of the land placed in C.R. contract in 1958 on a state-wide basis.

Now, let's take a look at the gain, percentage-wise, on the twelve county area where the department made an effort to establish game habitat.

In 1957, this area had 22 acres in G practices, and these were department woody plantings that happened to be established on C.R. contract land. To all intents and purposes, there was no participation in G practices in this area in 1957, but we will give them the benefit of the doubt and say that there were 22 acres of G practices in the 1957 Conservation Reserve program.

In 1958, with cash inducements and publicity, G practice participation was increased to 41 acres. This amounts to over 188 times the acreage of 1957 in G practices, or five and one-half percent of the acreage total placed in C.R. contract on the project area.

The foregoing should be definite proof of the fact that effort pays off.

Now, what did each acre of this additional habitat cost the North Dakota Department? I am told that over-all costs amounted to less than \$7,000.00. Using that figure, we find that for less than \$1.75 per acre, we have bought prime habitat for a period averaging from 5 to 10 years.

To those who have allowed their interest in this program to lag--

Each of you administrators must determine to what degree and upon the approach you will use to secure added game habitat under this program.

It should be evident from reports heard today that the potential not only exists, but is a potential which can be developed at a minimum of cost. In any program, man-hours and money must be expended.

Even though we may find ourselves where forestry and extension were 20 years ago, it is never too late to start and the sooner we do, the sooner we will attain our goal.

Tom Schrader said U.S.D.A. has not made much of a contribution for federal cost-share on G practice establishment. I agree that this is something we should strive, as an organization, to work for.

Schnader believes that G practices should be incorporated into other practices; that the wildlife practices should augment wildlife values which are built into A, B and D practices. I cannot agree to this. I believe that other conservation reserve practices should be developed, specification-wise, to include as many wildlife values as are practical, that we should use our influence to see that this is done, but I also strongly believe that if we allow G practices to take a second place, to be absorbed in other practices, to lose their identity, we have lost a potent tool of game management. The development and use of these G practices establish a lesson we have all endeavored to establish in the minds of farmers and sportsmen alike--"Proper game habitat and game production are closely related".

Bud Morgan turned the meeting back to Chairman, Dr. Bue, and the meeting was adjourned until Friday morning.

Friday Morning - July 11

Dr. Bue called the meeting to order and after announcements regarding the plane flights over the pothole country, he turned the conference over to Bill Barnes, Indiana, who presided on the Panel Discussion on the Problems of Planning for the Future.

BILL BARNES: Thank you, I. G. I think our subject for this morning, Problems of Planning for the Future, is quite important. When one considers atomic energy, production, and all the other problems that confront us, we realize that there is quite an influence and effect upon our wildlife resources. I think that probably we should be interested in our human resources as well as in the management of the fish and wildlife resources.

It is quite appropriate to have the first paper deal with our human populations in the year 2000 A.D. We are specialists in dealing with problems of fish and wildlife populations and in manipulation of limiting factors such as food and cover. With that kind of a situation, what will we do with human populations? It is, therefore, a pleasure to introduce the first speaker on our panel, Dr. Harlow B. Mills, Chief of the Illinois Natural History Survey, and his subject, "Standing Room Only--2000 A.D."

DR. MILLS: When one jumps into a pool of cool water, he is usually in for a shock. If, however, he enters it slowly and by degrees, it may cause him no difficulty at all. So it is with many things about us. If they happen suddenly we are shocked; if by degrees we may take them as a matter of course.

Today I should like to discuss some things that are sneaking up on us insidiously, and which we take for granted whether they are for good or bad. The first has to do with numbers of people and their wants and needs; the second has to do with the fulfilment of these necessities, and finally I should like to talk about an interest which is caught in the middle--our interest in fish and wildlife.

But before we get into these considerations, let us generalize for the moment.

A long while ago an English preacher by the name of T.R. Malthus stated that human populations tend to be controlled by the food supply. There are those who believe that the old theorist was wrong, but in our western civilization we have not as yet tried out his idea.

We are constantly thrilled and chilled by the great advances made in the physical sciences in the past few decades. The theoretical energy contained in the atom has been brought out of the ivory halls, and the ivory crania of a few philosophers. This theory turned out to be intensely practical, and it was unveiled to the world most dramatically. It was analogous to jumping into an icy lake.

But quietly, without fan fare, and forming scarcely a ripple in the stream of consciousness of the most of us, another scientific miracle has occurred. We

have temporarily kicked Malthus down into the cellar. We have developed food-producing methods which are the real phenomenons of the age, for we can live without our own brand of atom fission but we cannot live without food. We have done a stupendous, a gigantic thing which is without precedent. We have, in the United States and elsewhere, increased our populations and at the same time increased our standard of living. And this, I repeat, has caused scarcely a murmur among the populace; we have taken it as naturally as we take breaths of air.

Possibly because this achievement sneaked in the back door unobserved, we find that there are those who feel that it was a natural thing, that it can go on indefinitely, and that there will be no problems in the future; that we can support an almost unlimited number of people on the earth. And this has given rise to two groups with opposite points of view, the Dangerous Optimists and the Fearful Pessimists: those who cry Hallelujah, and those who cry doom.

It is interesting to note that a generalization can be made concerning these two groups. The optimists seem to be generally the production scientists, the applied scientists, and the trusting laymen. The pessimists seem to be generally the more basic scientists, often basic biologists.

In this connection we must not pass without a comment on the place of science in human affairs. The general public, seeing only end results of scientific activity, tends to feel that science has no limits, that there are no problems which it cannot solve. We must remember that too much faith can be put into our powers. We must remember that there is somewhere a limit to our abilities and our production. We must have the humility to remember that we cannot solve all human ills.

People. First let us talk about people. As a race we have been on the earth for from a half-million to two million years. For hundreds of thousands of these years people skulked around in odd places, grabbing when the opportunity afforded itself and being grabbed when at a disadvantage. The important thing is that they did arrive, and that they held their own and moved about here and there, not diminishing in numbers and not increasing rapidly.

Through all of the history of the human race but the immediate past, growth in numbers must have been slow. In an issue of Science of about two years ago, Woodbury says, "The world population is estimated to have doubled from 100 million to 200 million in the first 1000 years A. D., more than doubled from 500 million to 1200 million in the 200 years from 1650 to 1850, and again doubled from 1200 million to 2400 million in the century from 1650 to 1850, and again doubled from 1200 million to 2400 million in the century from 1850 to 1950". If we come to relatively modern times we have some fair census figures.

World Populations					
Year	Millions	Annual Increase	Year	Millions	Annual Increase
1650	470		1950	2,400	16.0
1800	870	2.7	2000	3,600	24.0
1900	1,600	7.3			

Ralph W. Phillips, in a recent issue of The Scientific Monthly dramatizes this increase by visualizing a dining table at which two linear feet are given to each person. To seat all people at once would require a table extending around the earth 20 times, with a small auxiliary table only 4,232 miles long. In addition it would be necessary to employ a crew of workmen who would be making tables at the rate of 17.8 miles a day. By 1960, says Mr. Phillips, we would need 21 tables extending around the earth, plus a long auxiliary one 18,500 miles in length.

Now let's see how Paul Sears looks at this question. In his article titled, The Inexorable Problem of Space, in a recent issue of Science, he says that at the present rate of increase in about 22 generations, if we allow a spot 2x3 feet per person, there will be standing room only. This would, in 22 generations, put 4,646,400 people on a section of land, about as many people as were living in Massachusetts in 1950. Sears admits that he has allowed plenty of space per person, but believes that each should have enough so that he could reach into his pocket for the rent money.

Now to get closer home. The soil scientist, Firman Bear, says that under pristine conditions there were about 2,400 acres for each American Indian. At the time of Benjamin Franklin's birth there were still about 1,900 acres for each person in the United States. By 1800 this had reduced to a per capita allotment of 400 acres, and by 1900 to 25 acres. In 1955 there were 12 acres per person, and, if there are 300 million people in the year 2000, this will be cut to 6. Now, if you consider that only about 1 acre in 5 is tillable, this leaves as of today about 2.5 acres for each of us.

Let us see what has happened in the United States since 1800:

United States Population					
Year	Millions	Annual Increase	Year	Millions	Annual Increase
1800	5.3		1950	150.7	1.5
1850	23.2	0.36	1957	173.0	2.8
1900	76.0	1.06			

When we consider these figures we see all of the symptoms of a species of animal which is in irruption, which has got out of control, and which shows no signs of slowing down. In natural populations we consider this to be a danger sign, a forerunner of a depression in numbers, a break from a peak. If these figures are plotted we get a curve which is not a normal growth curve, but a startling upsurge in numbers. Certainly it cannot be considered to be evidence of a normal, healthy, ongoing population.

Food. Earlier we made some strong statements about our growing food production. This growth is entirely due to scientific advancement. The numbers of Americans employed in agriculture have constantly decreased as food production has skyrocketed. In 1850 a farmer fed 5 people, in 1925 he fed 9, in 1950 he fed 15, and in 1955 he fed 20. At the same time the acreage under control of each farmer has increased. Greater efficiency, modern methods, have brought this about. We are no longer an agrarian culture. Farming might be said to be the

field manufacturing of foodstuffs nowadays.

How did this come about?

Many scientific advancements contributed to the phenomenon. Hybrid crops produce much more on an acre than did the old open pollinated varieties. One hundred bushels of corn to the acre is now commonplace in the corn belt. New crops and new varieties of old crops have been put to use. More commercial fertilizer is now being used than ever before. Pest control has become a major science. Weed killers eliminate costly farming operations and cut down competition. New fungicides increase yields. Plant breeders have produced many varieties which are resistant to diseases and insects; sugar beets which do not get curly top, wheat resistant to hessian flies and wheat stem sawflies, wheat varieties which can withstand the deadly stem rust, apples resistant to scab disease, all of these things are in use or are being perfected. New insecticides so numerous and effective that they startle us are in use today. And well they might. Without them there would be no potatoes harvested. Our own studies of abandoned peach and apple orchards show that without the use of insecticides and fungicides we would harvest only about .2% of the crop. By modern standards untreated fruit crops will yield only one in 500 marketable fruits. Dr. G. C. Decker, on the basis of data from the United States Department of Agriculture, estimates that since the advent of DDT and its congeners, the yield of potatoes has risen 160%, onions 140%, sweet corn 160%, tobacco 125%, beet seed 180%, and alfalfa seed 160% (in the State of Washington alfalfa seed increased 420%).

Marketing has made tremendous advances. Take refrigeration and its contribution to keeping foods available throughout the season even though they may be produced seasonally. Grading has forced the production of quality products. Distribution systems have been developed to a high degree. Stored products can be protected from pests which cause deterioration.

All of these things have added to our use of food products made available through modern agriculture.

Furthermore, we are not generally using all of the tools which Science has made available to us. The fertilizer industry calculates that if we used proven methods of fertilizing crops, methods tried but not in use, we could keep the present production of corn, cotton, wheat, and hay, and retire 42 millions of acres. Osborn has said, "...official estimates indicate that the application of... (new)... techniques have, during the last 13 years, resulted in a gain the equivalent of production from 64,000,000 acres of land." In Illinois the corn yields for the past ten years have averaged 60% greater than before modern technology took hold.

Nor have we reached the end of this agricultural advance. Many advances are yet to be put into general use and many more are yet to be discovered.

This combination of scientific advance has put us in the anomolous and illogical position of producing foods in such quantities that we can neither eat

nor sell them.

The Dilemma. What, then, are we faced with in the future? We are in the midst of a tremendous race, a race between people and their food supply. Populations are growing apace. The rate of increase in the United States is greater than the rate in India. Food production, where modern science has had time and the opportunity to work on it, has grown almost beyond belief.

But man must never overtake his ability to feed himself. And here scientists, and especially biologists, and among them especially biologists interested in population dynamics, have feelings of uneasiness. To carry the belief of the optimists to an ultimate and absurd conclusion, there is no limit to what people can do in feeding themselves! There is a limit. And that is where the biologist gets concerned. Theoretically the ability of any successful organism to reproduce itself is infinite. The ability to produce food does have limits, though. It is the finite factor. On purely theoretical bases people will overcome their ability to think themselves into a square meal.

The June, 1958, number of the Kiwanis Magazine carries a thought-provoking article by Rear Admiral H. G. Rickover. Among many sobering comments we find the following:

"Ominous, too, is the fact that while world food production increased nine percent in the six years from 1945-51, world population increased by 12 percent. Not only is world population increasing faster than world food production, but increases in food production tend to occur in the already well-fed, high energy countries rather than in the undernourished low-energy countries where food is most lacking."

Let us look at some of the finite factors in food production.

The production of food is dependent on the surface of the earth. Directly or indirectly, we get our nourishment from that surface upon which the sun shines. But we must be more specific. There are approximately 196,836,000 square miles of surface, according to Phillips. Of this, only 55,786,000 square miles are land, the remaining are water. Only 28.3% of the earth's surface is land. Twenty percent of this area is in permafrost. More than 20% is too rough or too high for permanent human habitation. Another 20% is too arid for cultivation. That leaves us with less than 40% to play around with in producing food.

Of the land available, we are losing area from production. Despite the greatest widespread interest in soil conservation ever known, we are still losing topsoil through careless handling. Further, we submit to what I call land usurpation. This is a rather new thing as an effective agent in reducing the food production potential, for until the last half-century we have been adding more acres than we have been subtracting. According to Ordway, farm, forest, and grazing land in the United States was reduced by 16,000,000 acres from 1935 to 1945. This went into the building of cities, industrial development, roads, highways and the like. Kennard points to the Miami Valley in Ohio. Twenty-five years ago it was a rich, productive farming area. Now particularly from

Springfield to Cincinnati this is an industrial area. There are those that believe that a strip from Milwaukee to Peoria will, before long, be completely usurped for residence and industry. When this happens St. Louis will grow north up the Illinois and join the push south.

From 1942 to 1956 on a nation-wide basis, 20,000,000 acres have been withdrawn from food production. This is 5% of the total cultivated acres in the United States.

The Department of Agriculture estimates, according to Representative Arends, that each year we are losing 1,250,000 acres of good farmland. From 1942 to 1957 Ohio, Indiana, Georgia, Florida, and Texas each lost about a million acres. Connecticut has lost one-third of its cultivatable land, and it is estimated that another ten years at the present rate of usurpation will see the last of that state's good, commercial, producing farmland.

Champaign and Danville, Illinois, are about 35 miles apart. A new super-highway is being built between the two cities, which will usurp about 3000 acres, or approximately $4 \frac{2}{3}$ sections!

The optimists say that we can irrigate new lands. Testimony given by the United States Department of Agriculture before Congress in 1952, according to Osborn, indicates that the food and export needs of the country by 1975 will require 113,000,000 more acres than are now being farmed, and this is 70,000,000 more acres than are planned on by the government in all of its land development and reclamation projects.

The tropics have always held an attraction to the optimists. All we have to do is to clear the Amazon basin and start to produce food and transplant people there. So far this has not worked. In a stimulating new book on the tropics by three Frenchmen, de la Rue, Bourliere, and Harroy, there are some sobering comments: "The legend of the inexhaustible fertility of the soil in the hot countries has taken a long time to kill," they say. "Too many fantastic accounts have given rise to a strongly held opinion that the surfaces cleared of the great tropical forests are of an unheard-of richness. . . . It has now been convincingly shown that, generally speaking, the soils of the tropics have nothing like the fertility of those of temperate regions, that their yield under cultivation is in general less, and that they are also very easily destroyed."

And so it goes through the most of the proposals of the optimists.

Let us quote some pertinent comment from a couple of the thinkers of the day.

In a speech given by Dr. Milton Eisenhower, we find the following, "If we had at this moment a feasible 25-year plan to bring the diet of people everywhere up to about 2600 calories per person per day (a meager diet by your standards and mine)--if we had such a plan, I say, it would involve increasing world food production by 110 percent, taking into account the estimated increase in population. And I say in all earnestness that it is an open question whether food production

for all our science, can be increased by that much. . ."

The University of Chicago's physiologist, A. J. Carlson, discusses the effect of modern medicine on the human race, and states that we are increasing the race faster than we are increasing food production. He concludes as follows: "What is the answer to this serious situation? Shall it be less of modern biology and medicine? more starvation? more violence and war? or more intelligence? there is fairly good evidence that we must practically double the present world food production even to feed adequately the present world population. So far as can be judged, this cannot be done."

Well that is that.

The dilemma in which the conservationist finds himself now is apparent. What can he do with people, and what can he do with food? He is not only watching, he is participating in the greatest race in history--the race between the farmer and the obstetrician!

And what will be the effect of this race on wildlife?

The first point I should make is that there is an inverse relationship between numbers of people and individual freedom. As the population increases we will find that our individual spheres of freedom will become more restricted. Now we aren't going to like this, but it is coming. We see it now. Today KEEP OUT and NO TRESPASSING signs appear where there were none yesterday. The inalienable right of the individual to fish and hunt will become less inalienable as time goes on. More and more we are going to be controlled by human organization, which is another way of saying Government. This is inevitable, and essential if there is to be a well-ordered society in a more dense population. I think that this can be predicted with complete assurance that it will happen. Further, game animals will be more and more regimented as far as our use of them in sport is concerned.

The second point I would make is that, while the discussion of food and people may have seemed somewhat academic to you, it certainly is not in one part. If we assume that food will balance with appetites for a long time in the future, the matter of space in relation to wildlife will not. If more space is needed for living it will be taken. If more space is needed and can be used for food production it, too, will be taken. When the chips are down, our defenses will have to be up, or we will lose wildlife habitat right and left.

These are sobering contemplations. As populations grow, and land surface is more and more usurped, and possibly long before human hunger is here, wildlife will have to be protected much more assiduously than is now the case.

To look at the most discouraging aspects of the situation, dams unheard of now will be built. Natural waters will be diverted and manipulated with regard for nothing but immediate human use. Public lands, now held inviolate, and for the use of all, will be opened for private or semi-private use. The collapse of

the west coast sardine fishery may well be the first dramatic instance where exploitation of an appreciable marine food item destroyed it. Wildlife will be destroyed by direct exploitation or indirectly by usurpation of habitat.

I have purposely painted a depressing potential future. I am not sure that it will happen, but I know that it can happen. It will not do much good to run into the woods, fields and waters, shouting, "Run for your lives; the dam is broken." Where is wildlife to run?

And that brings me to my third point. There is no one of us here who has not been concerned by the growing uses made of pesticides. About most of their uses I find myself not particularly concerned, however. If we wish to hasten the crossing of the supply and demand curves for food we will stop the usage of pesticides. If we wish to decay the quality of food we will outlaw pesticidal use.

As in almost every human endeavor, the use of these chemicals is the use of a two-edged sword. It can cut both ways; it can do good or evil. I do not go along with the general alarmists. What many of them do not know is that, as far as human health goes, we are now living under the most rigid protective laws which have ever been passed. Human health now is pretty well protected.

Further, safeguards have been built into labels which will cause the minimum of adverse effect to other forms of life than humans. Agricultural cropland has been treated for many years with little apparent change in the vertebrate populations. Insecticides are poisons; were they not they would be useless as insecticides, and we must expect some losses at some times. But as yet there are no data which show a cause and effect relationship in the diminution of any species through its range or permanently.

We must beware of the people who cry "wolf". Last year I received a copy of a letter written by a lady who stated that after the spraying of one Illinois town THERE WAS NOT A BIRD LEFT. Immediately I sent our ornithologist up to investigate. He found that sixteen common town species were present, and in numbers very little different from those in close-by unsprayed communities. There are too many wolfcriers.

In spite of what I have said, I am not at all sure that it is desirable to spread a non-selective insecticide over large acreages for the control of a pest, that is, in our present state of knowledge, and if this insecticide will decimate or eliminate valuable animals. It may well be that in the long run this will not be injurious, but our present knowledge of population structures and dynamics is enough to give us some concern.

I believe that we should be critical of the use of pesticides, but I believe just as firmly that we should be selectively critical. Where obvious errors have occurred we should not be quiet. But an over-all, blanketing, damnation of the use of pesticides can do us all much harm. Many of the entomologists involved in the problem are not only good but broad general biologists, and have a real awareness of the dangers involved in pesticidal use.

We must be intelligent in our criticism and not let our speculations run

away with us. And we must fortify ourselves with good, factual data before we get into a fight.

When we think of the future of wildlife in all of this competition, we cannot get away from zoning for land use. We must think of areas where people will live, areas where they will grow food, and areas which will be devoted to the production or protection of wildlife. We may not like this. It is an expression of the loss of freedom brought on by population density. Perhaps we who have interests in fish and wildlife are a little ahead of the game in this area, for what but zoning has been the setting aside of refuges, parks, and similar areas? More of these will have to be established. How many of you recall the time when you could go north into the lake country and have access almost anywhere? What is it like now? Cabins and private holdings are rapidly eating up the remaining shorelines. Time is slipping away from us. We should now be in the midst of a great land acquisition program; now while surpluses are still a part of the food picture, now while there is still an abundance of questionable and submarginal land, and now before human populations and "needs" have usurped everything. Now is the time to invest in recreational and protective lands for those added millions of the future to use.

In this discussion of zoning properly belong some remarks concerning commercial paid shooting or fishing areas. It appears to me that these activities have a real place in the development of outdoor sports for a growing population. But we should not consider that they are the ultimate goal or the final solution to a problem. At best they should be additions to a hunting and fishing program. There are esthetic factors to be considered. If the demand is stimulated for this type of sport to the exclusion of wild hunting or fishing, it is just one step for some ingenious person to develop some glorified pinball machine where we shoot at silhouettes or shadows, and bring back game from the operator's deep freeze as a prize for good marksmanship.

Further, while game is produced in the wild and is huntable, each item bagged is a savings to the state of the cost of producing that item, and this can mount up to fairly sizeable figures.

I do not imply that shooting or angling for game stocked before the sportsman is wrong; I do hold that it must not be considered as a complete substitute for the wild hunt.

Finally, in this matter of land use, we must ask ourselves if we know how to handle game in areas of heavy human habitation or use. Do we know all of the answers? It is obvious that we don't. It is obvious that we are ill equipped with facts to face what is ahead. It is equally obvious that we are not doing much right now to obtain these facts. Are we going to muddle along until we are in the midst of unique problems in need of immediate solution?

This business of finding facts which will help us must be more intensively pursued. The old style of research is not enough. The new research man must be a man with vision and imagination far beyond that usually demonstrated now. Such basic fields as genetics, physiology, and even psychology and sociology of

wild things must be investigated. And to do this will require good brains, and good brains must be bought. We can't get good research done at the pay of a maintenance foreman, and that is what some of us are doing!

Charles E. Wilson, when he was head of General Electric, summarized future research very well when he said, "It may seem to be a paradox that, at a time when science has so far progressed that its findings and its further directions are almost incomprehensible to ordinary men, it finds itself actually tied more tightly to ordinary men than ever before--first, because it has succeeded in almost scaring them to death with nuclear fission, and second, because the cost of research has gone right through the roof and must be paid for in large part out of the ordinary man's pants pockets.

"Modern research has become enormously expensive. It must be supported by tremendous sums of money supplied by laymen, through direct or indirect taxation, even though those same laymen can in the very nature of things have little to say as to how that money is spent.

"As taxpayers and ordinary men, I don't think that any of us are quarreling with this state of affairs. I merely submit it to you--to those of you who are practicing scientists--as a sort of climatic condition which, like artificial rainfall, is new in this half of our century and therefore worthy of your consideration."

The responsibility on all of us here today is a grave one. We have a chance to meet a most unique problem if we have the fortitude to do it. And if we have the imagination.

We should think about this: If there is a meeting similar to the present one in the year 2000 A.D., how will those future officials evaluate us who are here today? Will they say that we are a bunch of muddlers, seeding the easy way for the moment, following rather than leading public opinion in this important field? Or will they point to us as far-seeing men of action, who really helped them in facing the most unusual situation which ever faced our North American culture?

A newspaper reporter once listened to an erudite discourse on a fossil animal which had such a well developed ganglion at the base of the spine that it resembled a second brain. The reporter's production of the evening consisted of a single 12-line poem which I quote:

'Tis plain to see from these remains	No problem bothered him a bit,
This creature had two sets of brains;	He made both head and tail of it,
One in his head, the usual place,	If aught escaped the forward mind
The other at the spinal base.	'Twas captured by the one behind.
Thus he could reason <u>a priori</u> ,	And when in error he was caught
As well as a <u>posteriori</u> .	He had a saving afterthought.

We may not have a chance for a saving afterthought, and the only satisfaction that I receive out of this whole discourse is that the majority of us here may be dead before the going gets really rough. So much more we owe to those who follow us.

BILL BARNES: At any meeting of the Midwest Fish and Game Commissioners, sooner or later there is going to be some discussion of waterfowl. Currently, we are very much interested in an increase for the duck stamp. I think we have a person here from Minnesota who is very vitally interested in wetlands who has probably gone into this subject more thoroughly than anyone else-- Jim Kimball, the director of the Minnesota Game and Fish Commission, who will now give us his paper on the duck stamp.

JIM KIMBALL: "To Buy or Not to Buy - With the \$3 Duck Stamp"

This paper is based on the assumption that the \$3 duck stamp shortly will become a reality, and I wish to make it clear at the beginning that the author has supported and will continue to support this legislation. It seems appropriate that anyone presumptuous enough to present his views on the herculean task of spending the large sums of money which will accrue to the Fish and Wildlife Service for the purpose of maintaining waterfowl habitat should at least make an effort to qualify himself.

As most of you know, I spent six years with the South Dakota Department of Game, Fish and Parks. During this time the campaign was begun to save the prairie potholes which were fast disappearing down the drainage ditch. My next five years were spent with the U. S. Fish and Wildlife Service in the Branch of River Basin Studies where one of my major responsibilities was the supervision of the Waterfowl Habitat Preservation program and, of course, the past three years have been spent with the Minnesota Department of Conservation where the "Save the Wetlands" program really got underway. In spite of this background, I hasten to confess that I do not in the least feel qualified to tell anyone how best to spend the six and one-half million dollars a year anticipated from the \$3 duck stamp. However, it is a timely subject, and I hope to make a few observations and bring out a few points which may lead to an interesting discussion.

A great deal has been said and written by many people about the need for acquisition, by the States or the Federal government, of a large part of the prairie pothole waterfowl production habitat in the Dakotas and Minnesota in order to help insure the future of duck hunting. This idea has received much publicity and indeed the \$3 Duck Stamp bill contains special reference to the acquisition of small water areas for waterfowl production. Let us examine this idea in the clear light of day and see where it leads us.

In the best waterfowl production habitat of the Dakotas and Minnesota, there may be twenty to forty or more separate potholes on a single section of land, each playing a part in the production of ducks. Obviously, the possibility of buying 20 to 40 small wetland areas in a single square mile becomes almost ridiculous. We then turn to the possibility of buying entire ownership. Application of a bit of simple arithmetic to land costs and maximum anticipated waterfowl production per acre indicates that following this purchase procedure could well result in putting ducks in the hunter's bag at a cost of anywhere from \$20 to \$50 each. Of course, this economic analysis might not apply to large, extensive marshes or intensively managed areas, but again, we must remember the bulk of the duck production comes from relatively small, well-scattered

prairie potholes.

These arguments against outright acquisition might appear inappropriate when propounded by the Game and Fish Director of the State which is currently carrying on the biggest State wetland acquisition program in the country. As you know, a law was passed in 1956 in Minnesota, adding \$1 to the hunting license and earmarking this money exclusively for acquisition and development of wildlife lands. To this is added over \$200,000 a year in Pittman-Robertson funds, which means we are spending well in excess of a half-million dollars a year for the purchase of wetlands in Minnesota. However, I hasten to add that no attempt is being made to justify this program solely on the basis of producing more ducks. In addition to producing some ducks the relatively large tracts which Minnesota is buying provide much needed public hunting areas, both for waterfowl and upland game. This program also appears to be the most efficient way in which we can produce winter habitat for pheasants. Furthermore, we are concerned with water conservation.

To sum it up, wetlands are purchased in Minnesota to provide public hunting, to produce waterfowl, to provide pheasant habitat and to conserve water.

On the other hand, the Federal program of spending the \$4 duck stamp money, is concerned solely with the preservation of waterfowl habitat, an extremely large portion of which is expected to be for production. With this latter objective in mind it appears next to impossible to develop an economically justifiable purchase program.

In the event you are not convinced that outright purchase is unsound from an economic standpoint, let us consider some of the other problems associated with a purchase program.

1. During the past year, our Minnesota wetlands program obtained 169 options and examined 180 titles. Of course, land surveys are also necessary for each of these tracts. In fact, 105 tracts had to be surveyed by metes and bounds. This is time-consuming and expensive. Multiply this by about twelve, and you have a rough idea of the magnitude of the physical problem of carrying on an acquisition program with six million dollars a year. To this, of course, must be added a substantial sum for maintenance and administration of these areas once they are acquired.

2. The greatest problem of all may arise from the social, political and economic factors in operation today at county and township levels which severely limit the possibility of any large-scale state or federal land acquisition program. Removing any lands from the tax rolls strikes a severe blow to the already met real resistance from these political sub-divisions and, in fact, one county has issued a ban against further purchase of land by the Department of Conservation. The most discouraging part of this feature is that opposition is strongest in the areas where the best and most plentiful waterfowl habitat exists. This is because these counties normally have the lowest tax base to begin with. It may be argued that in the long run the county will benefit from development of wildlife lands because

of increased revenue from sportsmen. Whether this be true or false, such revenues do not directly replace the funds needed to maintain roads and schools.

3. Considering the problem just stated, and the political influence of rural people and county boards, we must recognize the possibility that state legislatures may repeal enabling legislation which presently empowers the Fish and Wildlife Service to acquire lands.

4. Another interesting point to consider is this: Under existing policies would not the U. S. Fish and Wildlife Service, using the duck hunter's money to purchase lands for ducks, be competing directly with the U. S. Department of Agriculture which uses tax funds for the subsidized drainage of the same types of lands? It appears to me that the programs of these two agencies would then be in direct competition with each other. Should we not rather be thinking of a plan whereby the \$3 duck stamp and the Department of Agriculture's Conservation Reserve program would complement each other? Isn't it possible that the \$3 duck stamp program could be so correlated with the Conservation Reserve program of the Department of Agriculture that we could conceive a Conservation Reserve program for wetland habitat which would be truly significant in maintaining this valuable resource?

Of course, there are those who will argue that anything short of outright purchase is merely a delaying action and that wetlands which are not brought into public ownership will eventually succumb to the drainage ditch and the plow. I do not believe that this is true and we should certainly hope that it is not because, as has already been pointed out, it is virtually impossible to save a significant portion of the wetlands through outright purchase. Waterfowl hunting will depend in the future, as it has in the past, largely on the duck production from privately-owned lands. Furthermore, if this nation ever reaches the point of food shortage because of insufficient farm land, the wetlands will be drained regardless of ownership.

Actually, a delaying action may be exactly what we need and all we need. This belief is based on current trends in agricultural research and development. Everything we know of modern agriculture and the direction it must take, strongly indicates that we will be producing more and more food and fiber on less and less of the best agricultural lands, and that the marginal agricultural lands which were last to come into agricultural production, may be the first to be retired from intensive cultivation.

Dr. Herrell DeGraff, food economist at Cornell University, says, "We have the same amount of cropland as 35 years ago and 62 million more people. Yet our people eat better today because food output per acre is up 70 percent."

The possibilities for further increasing per acre yields is even more startling. Our average corn yield nationally is about 44 bushels per acre and it has been proven possible to produce over 300 bushels per acre. The average U. S. Dairy cow gives 6,000 pounds of milk a year but the champion has proven it possible for one cow to produce almost 43,000 pounds which amounts to 60 quarts each day of the year. And the breeding up of dairy herds and other livestock

may move much more rapidly in the future. Artificial insemination was only the beginning. It now appears possible that by transplanting fertilized eggs to "incubator" cows the superior cow may soon produce 100 to 500 calves during her life instead of the usual ten.

It is significant that each year 100,000 families are quitting the farm.

Another point to be considered is the relatively small percentage of the total land area in the prairie pothole states which is needed for the production of our waterfowl resource. For example, in the prairie pothole region of South Dakota; that is, the portion of the state lying east of the Missouri River, only three percent of the total area was classified as wetlands according to the figures contained in the national wetlands inventory. In light of the agricultural research developments listed above and the constantly growing mountain of surplus farm crops, does it not seem incongruous that we should continue to finance a drainage subsidy program which increases these surpluses and is destroying the production habitat of our great waterfowl resource. We must also recognize the opinion held by leading agronomists in this portion of the country that this prairie pothole area will ultimately be best utilized under a program of grassland farming. Dr. W. M. Myers, head of the University of Minnesota Department of Agronomy and Plant Genetics, states: "Grassland farming will save and restore soil, reduce farm production costs, and in most cases, result in higher food yields per acre". "This" he states, "is true in the level deep soils of southern Minnesota and the need for more grassland farming greatly increases as we get into the rolling shallow-soiled country. The advantages of grass over corn increases by leaps and bounds as we move north".

In summary, it is believed that the acquisition of entire farms for the purpose of saving the wetlands is not economically feasible and the purchase of numerous small potholes on individual farms is impractical, if not impossible. This would appear to leave but one approach: A program which will leave the wetlands in private ownership but, through some form of lease or rental agreement, simply prevent them from being drained and maintain them in their present state. It is hard to see how such a plan could possibly work as long as it operates in direct competition to a Department of Agriculture program of subsidized wetland drainage. It would, therefore, seem that to get the most from your duck stamp dollar you must first eliminate subsidized drainage and then substitute for it an incentive for the farmer to retain his wetlands in their natural state. One possible solution could be to make wetlands eligible for inclusion in the Conservation Reserve, and to feed duck stamp money through the administrative machinery of the Conservation Reserve Program to finance rental contracts for the wetlands. This proposal may have serious shortcomings and is only suggested as one possible consideration. However, it does seem imperative that some plan be developed which will avoid competition between the agriculture funds and duck stamp money - a plan which will rather make them complement each other.

If we are smart enough to develop a practical, economically sound means of preserving wetlands in the states, it could lead to a similar Canadian program. Such a program must be acceptable to state, county and local governments and to the man on the land.

BILL BARNES: I think that we have a lot of questions of interest, some of which will pertain to this discussion of the purchase of wetlands. I think, of course, in other parts of the flyways the emphasis may be placed on types of acquisition other than breeding and potholes. I also would like to ask you, do you think that if you did buy several sections of land with a series of small potholes, that it might be possible to go in with some additional production of foods and thereby relieve some of the acute crop depredation problems, and also start a better harvestable population of migrating waterfowl?

JIM KIMBALL: The crop depredation problem is a tremendously serious one, as many of you know, but I think that is a little different problem than we have here. The thing I am trying to point out is that about 70 % of the waterfowl production of the entire continent takes place in this prairie pothole region (that includes the three Provinces and Minnesota, South Dakota and North Dakota). Of that 70 %, 20 % is produced from the three states. So you see, 20 % of 70 % is only about 15 %. Now if you were to go into a land acquisition program and if you have been out and flown this area, as I did yesterday, you would have an idea of the magnitude of the program and your wildest dreams, I don't believe, could get you imagining that you might put into state or federal ownership more than one-half of that waterfowl producing area. So you have 15 % to start with, and if you get control of half of that you are down to about 7 %, so you are fooling around with roughly, 5 to 7 %. As Bill Barnes pointed out, and as I very well knew that he would point out, all of this money isn't going to go into production habitat. He has some ideas down there as I am sure some of the rest of you have. So you see, in buying these lands, it is very fine to say, "once we have bought them, we've got them", and all that. I am just afraid the people in this country are just going to go to sleep and say, "Now we have passed the \$3 Duck Stamp Bill, it's one hundred percent for acquisition, and that takes care of things, period". That doesn't take care of things! There is opposition to a purchase program. If there is some relatively inexpensive way to get farmers to just leave these things alone and maybe we only have to sew them up for the next 25 years, or longer, if possible; quite possibly the situation will have changed by that time until we don't have to worry about them. But once they are drained, they don't come back and it is almost impossible to put them back.

Did you mean increasing the food or something, so that you could increase the production of these areas that we will manage?

BILL BARNES: So that you might better scatter migrating populations from Canada, and hold them in a number of different habitats and thereby spread out your birds.

JIM KIMBALL: That, of course, is a little different program, too, and it is quite natural that you should think of that, and that I should think primarily of production habitat because that is where I spend most of my time. In this paper admittedly I talked about just one phase of this thing, and that is the production part of it.

I am just afraid that people may go to sleep now that they have passed the \$3 Duck Stamp bill, and say, "That's the answer", but I believe a big job is still ahead and I don't envy Dan Janzen, Bob Burwell and the rest of you fellows one

bit on how to get your money's worth out of this.

BILL BARNES: I am sure we might have other comments from the Floor. Tom Schrader--

TOM SCHRADER: I don't know about the suggestion to use duck stamp money for augmenting the Conservation Reserve Program. Because of the rates that are being put into effect this year, people will be encouraged to place their whole farm into Conservation Reserve, and if they do, they will be under no pressure to drain any of the potholes on that farm. This is one of the reasons that I hope you States and possibly the Fish and Wildlife Service will put some effort into supporting and encouraging the Conservation Reserve program in the pothole areas.

Now there is one thing that hasn't been brought out in the Conservation Reserve discussion and that is the \$5,000 limitation that has been put in. The Department of Agriculture has been beat over the head so much in the past year over cooperations getting those large ACP payments and price supports, that to avoid any more of that kind of business, the Conservation Reserve has a \$5,000 maximum limitation which seriously hinders the possibility of getting more whole farms above 300 to 400 acres in. The only way this can be changed is by pressure--by people who like to see these farms go into the Conservation Reserve--being placed on the Department to raise that \$5,000 limitation. The only thing conceivable in my mind that can prevent the potential number of whole farms in the pothole country going into the Conservation Reserve program is the \$5,000 limitation. I think it has some real possibilities, Jim, and perhaps you can even talk Dan into pumping a little money into it.

DAN JANZEN: Tom, I would like to ask you a question. If they put the farm into Conservation Reserve, can they drain the potholes?

TOM SCHRADER: No. If they put their entire farm in, they cannot drain the potholes.

JIM KIMBALL: I would like to assure Dan Janzen that "Old U.S.D.A. Tom Schrader" here didn't have anything to do with this part of the paper. I don't think I was entirely clear. I don't have any thoughts that you are just going to ask the Department of Agriculture for the money and say, "Let's put these potholes in the Conservation Reserve". I just thought one possible way might be to use the existing machinery of the Soil Bank Program to facilitate that thing, because as you know it is going to be a tremendous job. It is going to take quite a force to even get rentals on that land.

HARRY RUHL: I would like to make a couple of observations. It seems to me that the problem actually isn't abnormal. It is the sort of thing that can be expected under the circumstances so far as the opposition, the growing pains, and the misunderstanding is concerned. With the amount of money in sight, it seems to me that the most optimistic estimates you can make are woefully and way short. No carpenter can build a house with one tool. No man should build a house for waterfowl with one tool. You should get just as personal, have just as many tools as possible to get, and know where to use them. I don't think, however, that any

of us could dig up many things that we do, unless it is some individual research, where we can invest the money and get it back with as much value as buying a piece of land. In other words, suppose we do buy all of the section to get some potholes. The chances are we could dispose of part either by exchange or outright sale; and re-invest it; and one thing we have done is to buy the agricultural land and the potholes and then trade the agricultural land for another pothole. It seems to me that you are going to need to buy some.

JIM KIMBALL: What do you mean when you say we should use many tools?

HARRY RUHL: In some places we should buy, in some places we should lease, and in some places we should use the Soil Bank.

JIM KIMBALL: Now you are saying that we should also learn how to produce more ducks on the same land. Of course, I am certainly all in favor of it if we can do it, but we must remember that on some of our best managed refuges we have maybe 20 pairs for square mile, while this farming country here that isn't being managed at all has a 100 to 150 pairs per square mile. Up until now, we just don't know how to make it any better than it is.

Certainly on migration and wintering habitat there is a great deal you can do. Let's make a comparison with pheasants. I have always figured that if I could have complete control of one-half of one percent of the land, why we could supply the necessary wintering habitat for pheasants. But that is where you are handling birds in concentrations. And when you come to the time of the year that they are reproducing you just have got to have most of the land under control. No one yet has devised a good method of handling production habitat and saving pheasant nests.

It is the same way with waterfowl. If these birds weren't territorialistic, if you could crowd them into a little area as they crowd during migration or during wintering, then you could handle the thing; but here we are dealing with breeding birds which are spread out homogeneously over the land, and there is a tremendous amount of land and water needed to take care of the problem. That is what makes it such a big problem.

BILL BARNES: Are there any more questions or comments? If not, we will have our coffee break.

Coffee-break

Dr. Bue introduced some of the guests present who had not been presented earlier. They were Sam Merritt, President of the local Izaak Walton League; Lyness Lloyd, State Conservationist, Soil Conservation Service; and Otto Maercklein, Director of the North Dakota Wildlife Federation.

The meeting was then turned back to Bill Barnes.

BILL BARNES: Among these problems of planning for the future--we know that one of these days, with an increased population, we will have more and more

legislation. So with that in mind, our next speaker will cover the subject, "The Lawyer is Needed". Mr. Haik is with the Minnesota Department of Conservation (with the Attorney General's office, connected with the Conservation Department).

RAYMOND HAIK: "The Lawyer's Role in Conservation Planning"

Of the many issues facing present day wildlife administrators one of the most urgent is that arising from the destruction of natural wildlife habitat. This problem is causing wildlife administrators to turn to lawyers for investigation of possible legal solutions and a new field of conservation law is developing.

The role of law and the lawyer has long been a part of conservation but all too often the mention of law and wildlife brings to mind a vision of a game warden arresting a hunter with too many ducks or a person taking fish with illegal equipment. It is not such a picture that I would describe.

The regulation of social conduct and individual or group action by law has always been a part of our American heritage. The needs and problems of society are continually changing, and generally, the law has changed to reflect the new conditions. It is one of the duties of the lawyer working with lawmaking branches of government to evaluate present problems. He also must visualize future demands so as to be able to formulate and draft legislation which will reflect the needs of growing populations. This is true in the field of municipal affairs, industry, agriculture, business and all other areas upon which our people rely for existence.

When our nation was first being settled there were no laws regulating the use of wildlife. Wild game was usually abundant and could be had for the taking. It supplied the settlers with many essential items of food and clothing. Increasing human populations naturally resulted in changes in environment and wildlife populations declined sharply. Some species were entirely eliminated or brought to the verge of extinction. When much of the damage had been done conservationists became alarmed and demanded enactment of restrictive legislation regulating game seasons, bag limits, and the manner of taking. These laws exemplified the philosophy that our wild game could be perpetuated by such restrictions. It was soon apparent that such regulations were not sufficient and that the problems of wildlife and conservation did not end at state lines or our country's border.

Lawyers played a part in efforts to control migratory wildlife by Federal legislation under the Commerce clause of the Federal Constitution (Article I Section 8 Clause 3), but such legislation conflicted with the traditional theory of state ownership of wild game, and litigation between the states and the Federal Government resulted. It was soon apparent that more was needed and protection of our migratory waterfowl necessitated treaties with our neighboring countries. The validity of the treaty with England and Canada was upheld by the United States Supreme Court in the famous case of Missouri v. Holland (1920) 252 U.S. 416 where the court rejected the argument that the right of the states to protect wild game was destroyed by Federal legislation passed to implement the treaty. The court stressed the national importance of the problem and the inability of the individual states to meet it, hence the necessity of the treaty and the

implementing Federal legislation. The doctrine of Missouri v. Holland regarding the treaty power of the executive branch under the Constitution has been widely discussed in recent years, and is one of the main arguments used by those who would limit the treaty power and provide for ratification by the states.

The story of the fight to protect migratory wildlife in the early 1900's is an example of what law can do in protecting wildlife resources. Other legal tools such as injunctive relief were and continue to be an effective means in the hands of conservation minded public agencies, or private groups, to prevent and abate nuisances, pollution, and other actions detrimental to wildlife as well as the public health and safety.

We need more than the protection of our wildlife resources by law enforcement designed to punish individuals or enjoin them from acts considered detrimental to wildlife. The danger today is the advance of civilization as our population grows.

The problems have been stated by Jack H. Berryman of the U. S. Fish and Wildlife Service in his papers entitled "Our Growing Need, A Place to Produce and Harvest Wildlife" and "Problems of Land Closure to Hunters and Fishermen".

Mr. Berryman develops the problem very clearly by showing

- (1) our present population of over 165 million which will increase to over 225 million by 1975;
- (2) the increased time available for recreation and the resulting demands upon wildlife;
- (3) the private land ownership problem which prevents the harvest of a wildlife crop.

The problem which must be met is one of land use and the competition which is developing among economic groups for the use of the unchanging number of acres in the United States. Some of the competition is from agricultural drainage, increased cottage and lakeshore development, reclamation projects, industrial expansion, urban growth, flood control, and super highway systems. This land use competition is slowly taking the remaining natural wildlife habitat. It is becoming impossible for wildlife to survive. Its ability to perpetuate itself is being destroyed.

In light of the demand for the use of our lands by competing economic groups it is clear that there should be a basic shift in thinking about wildlife conservation. It must be made clear that the future of hunting and fishing as we know it and protection of our wildlife resource requires that some land remain available for wildlife even though it is also useable for agricultural, industrial, residential or other purposes.

Unless the public as a whole realizes that wildlife requires the use of land

it is apparent that it will only be a matter of time before the demands of other uses will eliminate our wildlife populations.

The danger of not recognizing the present symptoms of future problems is the same today as in the late 1890's when it was thought that wildlife would last forever. Such thinking tends to gear conservation programs to routine matters and doing that which is presently expedient. Estimates of game abundance and anticipated harvests are part of any overall game management plan, but should not other non-wildlife factors such as the expanding population, increase in leisure time available to hunt and fish, decrease in wildlife habitat and reduction of areas available to the public to harvest the wildlife crop be considered?

- (1) What are the aims and purposes of existing conservation programs?
- (2) What factors are hindering the present programs? Are the factors of population and land use competition considered?
- (3) What is needed to provide for the future?

The answers to these questions should result in State and Federal legislation designed to consolidate and secure the best objectives of a future wildlife program.

It is in this area that a service can be performed by lawyers. The same legal tools which protect and encourage development of other economic interests certainly can be made adaptable to conservation problems. Conservation administrators should request the lawyer to explore the possible legal approaches to the protection of wildlife. At the present time we have tax relief, land purchase or leasing and soil bank programs. These programs can be criticized generally as not being steps toward a permanent solution, saving some land area for wildlife. One approach which I feel has possibilities as a permanent protection of our wildlife resource is land use zoning and regulation which is presently one of the most effective legal tools in regulating land use in our urban areas and, to some extent in our rural areas.

When you purchase property for a home you consider many problems, but one seldom considered but which is very important, is the zoning law or regulation. You would hesitate to spend \$30,000.00 on a home if you knew a goat farm might be established next door, or a glue factory across the street. Usually the homeowner is protected because of zoning laws designed to restrict the manner in which residential property may be developed or used.

There is no question but that land use in the rural areas is going to change markedly in the face of the growing population and urban and industrial expansion. The competition for the remaining land will be very keen especially among the economic groups dependent upon agriculture. We no longer have a clear line between city and country. Our small towns are seeking new industry. Demands upon wildlife, lakes, streams and land areas for recreation increase yearly.

It is my opinion that land use zoning in the rural areas is only a matter of time, the only question is whether wildlife will have a place in the plan.

Our wildlife resource investment should be secured by revising our conception of law's role in conservation from one of regulating seasons and limits to one of protecting wildlife land areas from destruction by application of zoning law principles to wildlife resources.

Now is the time to decide whether we are going to have a haphazard program of development and land use or whether we will lay a foundation for sound land use through zoning laws and regulations which will permit an orderly expansion and at the same time preserve and protect our wildlife resource investment.

We can have land use zoning for wildlife but it will not take place until the importance of preserving our wildlife resource is known and accepted by the public. What is required is knowledge and information concerning present land use by all economic groups and their anticipated demands; a complete inventory of our land, soil, forest, and water resources; an examination of existing zoning ordinances in urban and rural areas to ascertain present zoning law problems and where improvement is needed; study of areas where zoning laws have been used to protect wildlife and recreational interests; determination of what legal subdivision, township, county, state or federal, can best assume the responsibility for zoning.

I feel that wildlife administrators should

(1) urge formation of local committees on at least a township or county level to inventory land, soil, forest and water resources to ascertain present use being made of the land and present economic influences in the area;

(2) urge that local groups represent a cross section of the community, lawyer, doctor, farmer, businessman, banker, manufacturer, wildlife representative, and public officials;

(3) within your departments you should establish a wildlife planning board composed of employees charged with the responsibility of developing a plan which will provide for and include wildlife;

(4) Follow the example of the Soil Conservation Service and make wildlife planning assistance available to local groups;

(5) See that the economic value of wildlife is stressed by facts and figures readily understood by the landowner.

This I feel is just a start but there should be no delay in establishing wildlife planning programs in the rural areas.

The need for land use zoning was recently stressed when Congress was considering legislation to set aside and preserve wilderness areas. The

statement of Edwin Way Teale in support of the bill (S 1176) crystalizes the problem. (Congressional Record, Thursday, March 20, 1958).

"whole program of wilderness preservation, although never formulated as such by Congress, has grown steadily in importance and popular interest. Its greatest danger at present is the fact that the status of any area can be altered merely by administrative decree. A more solid foundation in law is required if the areas that have already been set aside are to continue as land forever wild." (Emphasis added)

This danger that the status of any wildlife area can be altered is one of the prime reasons for encouraging development of a zoning law which will protect existing wildlife habitat and encourage future development. The wildlife and water conservation areas which are being purchased under a joint federal and state program in Minnesota are excellent examples of the need for zoning to protect wildlife investments and encourage their development.

Presently wildlife and water conservation areas in Minnesota can be drained under state laws designed to aid and further agricultural, industrial or residential expansion. Often times you have competing federal or state agencies working at cross purposes for use of a certain land or water area. Is not the better approach one which will protect the investment rather than destroy it within a few years? The present program of wetland acquisition is a step in the right direction but not all the wildlife land needed can be purchased. Based upon present day values a marsh is worth more to the owner raising a corn crop than a duck crop and unless there is a legal change to protect the area it eventually will be drained. The individual farmer can and does profit if the area is drained but does he benefit by leaving the land for wildlife use?

More publicity should be given to the economic worth of our wildlife resource by stressing items such as the following:

"According to figures released by the U. S. Fish and Wildlife Service, American sportsmen bought 34,195,183 hunting and fishing licenses during 1957. This represents an increase of more than one million over the previous high of 33,163,831 licenses sold during the 1956 fiscal year. Total cost to hunters and fishermen for all licenses, permits, tags and stamps (not including the Federal Duck Stamps) was \$90,617,039."

How much more does this mean in dollars and economic worth to a gas station operator, bait dealer, grocer, motel owner, boat dealer, camp equipment manufacturer and all other industries which depend upon our wildlife resource. Wildlife is big business.

Public education and seeing that there is an adequate return to the farmer landowner of his share of the wildlife dollar are some of the immediate problems. Wildlife administrators must do more than just criticize drainage and other damaging wildlife practices, they should foster and develop a program which will protect the wildlife resource and still give consideration to competing economic interests such as agriculture. The farmer should not bear the load of preserving wildlife. There must be a balancing of interests and it is not the farmer's duty to develop a plan. It is the duty of the wildlife administrator.

Wildlife societies and wildlife administrators have a real stake in the future of our wildlife resource. They must be ever watchful lest they fall into the rut of carrying out a program based upon day to day expediency. The need for planning for future needs cannot be over emphasized. A program proceeding on a day to day basis constantly is bogged down in trivial details. Let us forget about the problems of one or two line fishing and change our concept of law enforcement to one of preserving those land areas upon which wild game depend for survival. These are the basic problem areas of conservation on which much can be done from a legal standpoint. The failure to provide for the future through planning based upon research and factual data rather than conjecture and criticism of conflicting practices may well be the end of our wildlife populations as we know them today. The problems of harvesting on private land and compensation of the landowner can be part of the program but those problems are secondary to the main one which is that of seeing that wildlife has a share of the land to the extent needed for survival.

In the final analysis we must have laws to protect the wildlife resources we have and preserve what we acquire and develop. The passage of any law requires factual data as to the need and reasons for legislation. The legal tools are available to help with the problem. Our natural wildlife heritage is and should continue to be enjoyed by all individuals, but it may be lost unless we reach an understanding concerning its relative importance and the necessity of preserving it.

BILL BARNES: Thank you, Mr. Haik. If there are no comments, we will go ahead with our next subject. I think several of the speakers have emphasized the need for reorganizing some of our own thoughts within our own organizations. So with that in mind, the next subject is "Internal Organization Needed for Planning", to be given by one of our neighbors from across the border, Dr. C. H. D. Clarke, the Supervisor of Wildlife Management for the Ontario Department of Lands and Waters.

DR. CLARKE: "Internal Organization Necessary for Planning"

This Association had the unhappy faculty of searching out of obscurity those subjects least known to me and assigning them to me as topics. This time I am fearful of the result.

Planning implies first that you want something. It may be that it is to possess something, to see something happen, or to prevent something happening. The last two are complementary. Very rarely indeed can any man bring

anything about entirely on his own. Other people and other agencies constantly impinge on our programs and plan impinges on plan. Perfect planning involves a perfect knowledge. We all see through a glass darkly. If we attempt to provide too far ahead our plans may be invalidated by evolutionary processes which affect our own attitudes and ideas as much as they do anything else.

The most important plans, those whose validity is attested by survival were often those whose clearest vision was of what the planners were determined to prevent. Of this nature, I suggest, are such things as the Magna Charta, and the constitutions of your country and of ours too. Those who framed them surely never conceived of such a world as we live in, but they had a clear idea of certain essentials that have not been changed by the evolution of society. There are some possibilities in the development of our society that we, too, reject, such as the ideal, or idea, of a test tube culture in which the world of nature, as we know it, has no place.

We perceive that the judgment necessary to planning must above all be based on knowledge. Those who do not possess that knowledge cannot plan. The entire organization of planning has to be internal in the sense that he alone can make our plans who is privy to our purpose in understanding as well as in sympathy. We may draw upon outsiders for information about the other interests impinging on our plans, but if they know our own purposes and our fields of interest they can hardly then be called outsiders. The most important form of knowledge is that comprehended by the three thousand year old admonition of the Delphi oracle - "Know thyself!" There is a school today that seems to assume that this is impossible. I have twice in my time been prominently associated with large international organizations, which here can only mean predominantly American organizations, and both, during my tenure of office, had a mind to do something that our Lord implies is not easy, namely, by taking thought to add a cubit to their stature. In both cases it was proposed that the thought should be taken, not by themselves, but by one of these extraordinary modern agencies, business consultants, public relations counsels, or what have you, who are supposed to know your needs better than you ever could, without the faintest idea of who you are or what you are supposed to be doing. The resulting inflation does not come within my definitions of planning nor is the result stature.

I must contend, then, that planning is essentially internal. Its materials are facts, whether in the possession of the planner by reason of training or experience or gathered specifically. We can never have too much information when we come to plan. Hence the internal organization must be one for the finding, organization, and interpretation of facts. There must be provision for the inward look prescribed by the oracle, and it is better if the planners are given the opportunity to view their facts in perspective. Lack of perspective is the single greatest fault of plans and planners. The planner himself can have it only if he has both knowledge and experience, and is free to step out of the main streams of activity far enough and long enough to be able to view the whole business objectively.

I do not feel competent to go into the details of the work of making a plan. If you had called on a professional planner you would have been given, I am sure,

a comparison of the effectiveness of various types of survey, and various means of recording, classifying, and presenting data. The St. Lawrence seaway is now in the process of fulfilling plans which for thoroughness can surely seldom have been surpassed. The new Barnhart Lake, whose flooding you saw recently on your television screens, has been familiar to the builders for years in scale models whose photographs will be hard to distinguish from photographs of the real thing once it is realized. I am not so sure that it is this sort of planning your chairman asked to hear about.

You can see, then, that I do not consider going outside one's own agency for such things as soil surveys or aerial photographs, as significant deviations from the principle that planning is an internal affair. Once a plan is made, though, is it from within or without our own fences that we move out to obtain acceptance and support? In all planned activities it seems that the only thing that can stop a good plan is failure to gain public acceptance. Here we may have failed to heed the oracular admonition, if we think of "Know thyself" as meaning "Know humanity" and especially the foibles and prejudices of our own community. The whirlwind economic planners are said to be able to sell plans to grow corn on the Matterhorn and edelweiss in the valleys. It is their activities that make people suspicious of all plans. Our selling points should be the facts, and they must come from within. Planners should never be inarticulate, and the non-planning members of our own organization should be parties to our plans as early as possible. If they are left out, and become indifferent or hostile our plans have a great handicap to overcome.

What then is the internal organization? It must have

1. Someone in charge who is both capable of seeing plans and problems in perspective, and is given an opportunity to do so.
2. An organization capable of mustering all the facts required, equipped to do so.
3. Some person or persons understanding both problem and plan who at the same time understand the persons and groups on whom it depends and can guide its impact on them from the beginning.

Where the scope is small, one man often combines all functions, but it is no use skimping on plans, especially fact finding.

BILL BARNES: Thank you, Dr. Clarke. Now, are there any other points to discuss regarding this paper, or any of the past papers? If not, then I would like to thank all the participants in this morning's panel, and with that, I will turn the meeting over to I. G.

DR. BUE: Thank you, Bill. I am sure that everyone enjoyed the very interesting panel meeting this morning.

The meeting will now adjourn until 1:30 this afternoon.

* * *

Friday Afternoon - July 11

DR. BUE: This afternoon we will have a highly interesting panel; and as Dr. Selke was unable to make this meeting, we called on Tom Evans, and he said that he would fill in--even though he had only about five days to get his material together. I understand that he has been working pretty closely with the other panel members and everything is well under way. This should be a very interesting panel, I believe, inasmuch as we certainly are all of us interested in research and its implications within our various departments. With that, I will turn the meeting over to Bill Towell who is to preside over the panel discussion on the Place of Fundamental Research in Fish and Game Management.

BILL TOWELL: Thank you, Dr. Bue. It might be a little difficult for me to get my mind off the resolutions here for a few moments and think about research. I don't believe they could have selected a presiding officer here this afternoon that has had less experience or less contact with research than myself, so perhaps that is good. Perhaps I can arbitrate the battles between the researchers.

I do find on the program, however, that we might be a little bit overbalanced on the administrative end. We have "The Conservation Department Looks at Research" and "The Researcher Looks at Research" as well as the Administrator. It looks like two administrators to one researcher, but I think that our first speaker has had considerable experience in research work himself, so without taking further time, I will introduce the first member of the panel, who is the Assistant Deputy Director of the Michigan Department of Conservation. He has held that position for about seven years, prior to which he was, for about seventeen years, in the Department of Fisheries of the Michigan Department-- Dr. Justin Leonard.

DR. LEONARD: The Conservation Department Looks at Research

Our concern with research is based on two simple questions: (1) Is what we are doing the right thing to do; and (2) How can we do our job better?

Speaking of research generally, we must view it within a realistic frame of reference. It is a fundamental trait of human nature to resist change. Research almost always points up the need for change. Ipsso, facto, research meets with resistance and hostility.

People are people, whether they work for a conservation department or are among the customers. Since, as people, they are resistant to change, they seek to justify this resistance.

This they do, primarily, by assuming they know all the answers, already. You all have attended sportsmen's meetings so this point needs no elaboration.

Within the agency itself, resistance to change is justified by a monolithic structure of habit, custom, and tradition. "We have always done it this way, therefore, we should always do it this way."

Attitudes toward research are changing, of course. Events starting with



World War II and culminating with the Sputniks have made the public, if not research-minded, at least keenly aware of the technological products of research.

Advertising, especially on television, has helped to develop this awareness. Whether it has really helped or hindered may be questioned. The fear is often expressed that the public is being led to confuse scientific advance with mere gadgetry.

A paradoxical situation exists, however, in which the public insists on the stamp of research approval on overalls and automobiles and toothbrushes and nostrums for "tired blood" while at the same time resisting the intrusion of research into matters of fish and game. As I have noted elsewhere, the sportsman demands the latest scientific developments in tackle, gear and transportation, but once afield, he leaps into the embrace of folklore, superstition and hunch; and he seems to believe that responsible authorities should find their management plans in the same basket.

Attitudes of conservation administrators toward research have changed much more sharply, in the last 14 or 20 years, than have those of the general public. Today's administrators are aware of the value of research, since it has often got them off of hot spots. But non-technical personnel at all levels often lack a clear understanding of just what constitutes a research program, even though, if asked, they would announce in favor of it.

A lot hangs on semantics. As applied to research, "basic" and "fundamental" often are viewed as dirty words. They tend to be equated with the willfully impractical. I recall a state sportsmen's convention some years back at which a delegate proclaimed, "What we need is less research and more investigation."

Most attempts to differentiate between fundamental research and applied research break down. One simplified attempt is to say that fundamental research is done in a white lab coat and applied research in a pair of leaky waders. And it is true, the white coat is often transmitted into a red flag in the eyes of the sportsman; yet the white coat is a practical garb for a high school graduate running purely routine chemical tests, while the leaky boots may be worn by the Ph.D. prying into the private lives of dicky-birds or sowbugs.

Conservation agencies generally consider themselves as being concerned only with applied research, the implication being that only applied research is practical. We must recognize, I believe, that applied research is important in leading to direct action, but that it feeds on the fundamental.

Applied research gives quick answers, to specific questions, sometimes right, or right enough.

Basic research may take longer, and, ideally, reveals general laws and principles which may be applied to a wide range of specific problems. Applied research is concerned with what and when, fundamental with how and why.

While some here may disagree, I feel that in the ideal research program,

the search for and testing of new facts and principles should flow so smoothly and logically that it would hardly be possible to spot the boundary between basic research, applied research, pilot-plant development, and full-scale management programs. Such a program is, and can be called, practical research.

Research in our field is concerned with such matters as physiology, life cycles, and ecology of plants and animals, and with how to manipulate animal populations and their environment.

It is useful to the fish manager to know when pike spawn in a given lake. It is much more useful to know what factors trigger the onset of spawning since that knowledge may apply to many lakes. It is useful to the manager to know the fish population of a given lake but this information has little practical meaning, except as interpreted in the light of fundamental knowledge of population dynamics.

I would like to advance the claim that we have sold the desirability of research to the majority of our co-workers and customers. What we need to do now is get away from discussion of the merits of fundamental vs. applied research. Instead let us confine ourselves to asking, "What do we need to know?" and then start out after the answers. Whether this search leads us into field or laboratory, whether we wind up counting chromosomes or crappies, whether we measure the production of plankton or the creel return from a trout planting, the conservation agency will have to carry the ball.

Ideally, it might be argued, the general public should support fish and game research through appropriations to qualified colleges and universities. Our wildlife heritage certainly provides interest and enjoyment to many who are not hunters and anglers. Songbirds, rare plants, the whole spectrum of nature, find some of their best habitat on hunting lands purchased with license revenues, and it would seem that the general public might lend some support to research by the schools.

If we are realistic, however, we must recognize that, so long as ear-marked license funds are available, as they are in many states, the conservation department is elected. And further, if it wishes to insure itself of a continuing supply of properly trained employables, it may have to make some contribution to the schools itself.

This state of affairs is not without advantages. In Michigan, for example, our department has, for nearly thirty years, provided what amount to graduate fellowships for students at the state universities. It helps the student to get his degree, and it helps the teaching departments by giving them students they might not otherwise have. But from a purely selfish standpoint it helps our department:

1. We are able to get research done at less cost than by a full scale staff member.
2. The student uses school laboratory and library facilities which we often lack and are reluctant to acquire.

3. We have a chance to size up a possible permanent employee for several years without any binding commitment.

4. We have an opportunity to "pick" faculty brains.

It has been suggested to me more than once, by college professors and deans, that we contract all our research to them. On the basis of experience, this plan would not work. When we first started getting into research, most of our "practical" employees displayed a high degree of allergy to "campus fellers" and to the scientific approach. Once we had our own research staff on the same payroll and responsible to the same boss as the rest of the outfit, we found that the toxic symptoms abated rapidly.

This is hardly the place to recite a long list of needed research. A good review was made in 1956 by a Wildlife Society Committee headed by Dr. S. C. Whitlock, based on contributions from leaders in our field, continent-wide. In such broad and vital areas as physiology, nutrition, pesticides, trophic chains, population dynamics and census methods, the surface has hardly been scratched.

Even where broken up into chunks of manageable size, these problems involve long-term approaches. That should not deter us. We need the facts, and it is unlikely that they will be revealed to us in an instantaneous flash of glory by Divine Providence.

Administrators are sometimes unduly gun-shy. Much recent experience convinces me that the public is now ready to accept a more audacious approach to research than we in the front office realize.

Often it is simply a matter of presentation. The same hypothetical research report might be titled either "A monographic study of the life history and bionomics of earthworms," or "Earthworms as an important food of woodcock". The average sportsman would snort at the first and buy the second as good use of his money.

One point that needs attention by both administrators and research workers - we need more cross-fertilization between disciplines. The scientific and technical literature has grown voluminous almost beyond comprehension. But I am sure we could save ourselves years of arduous toil by keeping our eyes and ears more alert to developments in other fields of biology and in the physical sciences.

To summarize my statement for this panel let me say:

1. Conservation departments are in the research business to stay. Only research will enable us to keep up with skyrocketing demands, and no one else is going to do it for us.

2. We might be well advised to drop the words "basic", "fundamental", and "applied" from our vocabulary. What we must have are answers. We get them only through research, and it is up to us to appraise the problems and follow whatever approach gives the best promise of results,

whether it looks like a long haul or a short one.

3. In our present state of knowledge it would be hard to turn up any fact dealing with animal populations or their environment which would not be of practical value to management.

4. We can help both ourselves and the teaching institutions by providing them with cooperation and financial assistance, but the bulk of the responsibility is ours.

BILL TOWELL: Thank you, Dr. Leonard. I certainly agree with everything you had to say. I fully agree with your thinking that we are going to have to de-separate the basic and fundamental research from the applied research because, as you say, one feeds the other, and they are so interdependent and so interlaced that they cannot be separated. I think that every Conservation Administrator feels the same way about it.

I was quite impressed by your statement that people resist change. I think that is accepted by all of us, and we all have many, many examples.

Now we will turn to the active researcher himself to get a little bit of balance into this panel. We have Mr. Albert Hochbaum who is with the Delta Waterfowl Research Station at Delta, Manitoba and he is going to speak to us on "The Researcher Looks at Research".

H. A. HOCHBAUM: "The Researcher Looks at Research"

Research by definition, is the quest for new information through examination of source material, the search after truth. It marks, perhaps, a certain step toward maturity in the young profession of wildlife management that this term is in order for discussion today. Only a few years ago research was not a word in general good standing. One might refer to "investigations" or "studies" but, especially when seeking funds, it was unwise to speak boldly of the need for research.

Whatever the reasons for its unpopularity ten or twelve years ago, it is clear that research is now acceptable, by budget committees and all, because there has been a public appreciation of its product; the new information made useful to the management of wildlife resources. It is worth noting, too, that in a few circles, useful results from research are now anticipated without a demand at the beginning that the researcher predict his exact goal and prescribe a straight-forward path thereto. As in medicine and in industry, where the scientist works with a good measure of freedom, many recent discoveries for wildlife management have developed because the biologist was free to follow down some lead or side trail not in sight when his study began.

The expansion of wildlife research is almost unbelievable. For example, up until the late 1940's, most states and provinces considered that waterfowl problems were to be solved only by the federal government. Now the total manpower employed by regional agencies is far greater than that of the federal services.

There has been a similar expansion in upland game, big game and fisheries research, but in this limited discussion I will confine my comments to waterfowl.

To account for the accomplishments of the enlarged research program would take many pages. And important as the discoveries have been, I will pass them by here because the most exciting part of research is the understanding it gives to new problems, the awareness of mysteries just beyond the threshold of the future. The accomplishments of research may be hard won; and yet once the truth is in hand, it usually seems so simple, clear and obvious that the researcher looks ever to the puzzles ahead that irritate and nag until they are solved. We see this in our present state of understanding of waterfowl populations. Twenty years ago, we had the idea that if we could set aside enough refuges and "duck factories", most of the problems of the waterfowl breeding ground would be solved. Surveys of the nesting range of ducks were then made in mid-summer, mostly after the drakes and young of the year had gathered on the big marshes. We believed all those vast numbers of an August Marsh were produced on that one large gathering place. It required years of study by many men from many agencies to discover how far and wide the waterfowl were dispersed in spring, to realize that some pothole country in farmland actually held more nesting pairs, produced more young per square mile than some of the finest breeding-ground refuges. We have come to understand through information gained by study of ducks at their source that our waterfowl population truly depends on marshlands within the realm of private ownership. This knowledge sets the stage for a new waterfowl management policy; and it opens up many vistas for continued study, viewpoints that could not have been attained ten years ago. Why do ducks space themselves; how does this spacing vary species by species; how may the environment be manipulated to accommodate more pairs per square mile over existing marshland, etc., etc.?

The wildlife research program, starting slowly with little money, moved quickly into high gear with grand financial support from both public and private sponsors. It has moved along so rapidly indeed, that some of the mistakes of research personnel have become nearly as obvious as the accomplishments. I am sure that the most serious shortcoming of our research program is its failure to document itself in publication. If we can speak with pride of the recent expansion of wildlife research, we wonder in dismay at the small amount of the new information which has reached publication. In a variation of a proverb that has been repeated many times, Geiger (1958) says "the work of the scientist is not truly completed until its significant results are communicated not merely to other scientists, but to the public at large." Our biggest single group of research workers, the Fish and Wildlife Service, is perhaps the most backward in publishing results. In the waterfowl field, the few scattered papers from the breeding ground investigations which started 12 years ago seem, indeed, a pitifully poor showing for the hundreds of thousands of dollars and the tremendous expense of manpower that have been devoted to these investigations. Nowadays, to be sure, much of the Service's work is simply routine survey, the annual repetition of a pattern of techniques. But in the beginning, in the first years of its work on the breeding grounds, the Fish and Wildlife Service made more discoveries, added more new information to our knowledge of the breeding grounds than had ever been gathered in all previous history. Almost none of this is

available in print.

So, too, with the states. Year after year the Pittman-Robertson Quarterly reports bear gems of new knowledge amongst the many pounds of paper padding. One might expect that, after a year or so for the maturation of ideas, these findings would be available to the world at large. And yet too often some exceedingly important discovery has its birth and burial in a mimeographed report of limited distribution.

One result of this failure to publish is an uncoordinated repetition of effort. Although biologists in one place may have discovered the solution to a vexing problem several years ago, students elsewhere, completely out of contact, are still searching to find the answers. We even find different departments of the same service completely out of touch with each other. There is nothing wrong about two groups working on the same problem - indeed it is a healthy situation. But each should know of the other's work, and the main line of communication between scientists is through publication.

Let us be clear about this matter of publication. Obviously it is important to get the results of research in press where they can be examined critically and then put to good use far and wide. But the urgency for publication is more than this. The discipline of scientific research is not complete until the scientist has settled down to think through his results, reviewing the literature, placing his findings in proper relation with the knowledge already accumulated in that field. He does not do this unless driven by the requirement to express himself on paper, to display his work openly and plainly for the scrutiny of his colleagues. Unless he does this, no researcher's work is complete nor the understanding of his results mature.

The lack of formal publication in some of the government services is so impressive that I have taken pains to try to find out why it is this way. First of all, the failure to publish is not explained by a lack of funds. None of the scientific journals require a fee for papers, and for larger texts and books, there is an ample source of subsidization amongst the University presses and other publication services. Lack of time is given by many workers as the main reason for not publishing. Government employees claim to be under such pressure, even with the five day week, that they, apart from other biologists, are too busy to organize their work for publication.

When one considers the matter of time, however, it is clear that those men, in or out of the federal services, successfully publishing their work are no more nor less busy than their unpublished colleagues. There must be some deeper reasons, and one of these, I believe, has been the lack of leadership. There is no moral incentive to complete the final stage of a research project. Every scientist who does place his work in press is stimulated in some measure by his co-workers and his leaders. Where there is a grand departmental spirit of camaraderie, where men are organized as a hierarchy of scientists, when associates at all levels work together for a common cause in which they all believe - then the act of publication cannot be stifled. In such an organization, the publication (however painful the act of preparation for press) is the inevitable

step by which each man records the progress of his ideas and his discoveries.

Another reason for the lack of publication, I take it, is the depressing effect of the master editorial policy. This may repress facts. For example, in several recent scientific reports of the Fish and Wildlife Service one can read in tables of figures evidence that the flyway concept originated by this Service, may not be "holding water". And yet, as far as I know, no author has come forth to freely discuss this matter. There are many new facts about waterfowl migration to be displayed and discussed, new ideas about refuges to be put in words and sentences so that they may be studied and considered by ornithologists at large. But for some reason of high authority, these new ideas and observations remain undeveloped and unpublished. Master policy may also dictate style so greatly that a man would rather not write at all than to see his work come out as a mill product. No author, however great, can attain publication without the help of an editor; let us remember this. But editing, in and out of government service, must be a free and workmanlike exchange of ideas between author and editor with both attaining agreement on the final product.

The story of publication is not entirely dark. The Illinois Natural History Survey, California and New York have a fine record of state publications, well prepared and in close pace with the research program afield.

In reply to these comments on publication, the services may point to their special series of self-printed reports, as the Special Scientific Reports of the Fish and Wildlife Service and the Wildlife Management Bulletin of the Canadian Wildlife Service. It is good to have these, of course; but by and large they are hastily prepared and often poorly edited, quite a number of them made up largely of undigested raw material. In some instances, authors explain that these reports are too tentative to be quoted; and in any event, the distribution is so restricted that they miss the wide examination the studies deserve. Surely from the fine team of biologists in the Canadian Wildlife Service we must expect something approaching the mark set by J. A. Munro in his classic series of waterfowl papers published in The Canadian Journal of Research. And if the Governments must document their own wares, let us see more carefully prepared bulletins such as Martin and Uhler's "Food of Game Ducks in the United States and Canada" or Soper's "The Blue Goose".

I find evidence of too wide a breach between those doing research and those responsible for putting new information to action in terms of new wildlife management techniques. In reviewing one of the new flyway plans, it seemed to me that authors are gravely out of touch with the literature of our times; they are so busy planning future policy for waterfowl that there is not time to build their foundation on the solid discoveries that are now in the literature. I think we should all be disturbed by the wide break between so-called game managers and the group they like to call the "dicky birders". Much fundamental research in birds has been accomplished in non-game species; some of the continent's most able biologists are working and publishing on passerines and other non-edible species. The field of game management suffers from the isolation it is building for itself. Wildlife biologists seem generally out of touch with European scientists and the European literature. In this respect, however, the Canadian

Wildlife Service has made important contributions through its program of translation by which papers in German, Czech and Russian biologists are being made available in English text to Canadian researchers.

Within some bureaus and services, the job of each individual seems to large that he does not coordinate his work with that of his colleagues; and without central coordination, there is a scattering of new information that is not being brought together to useful ends. For example, those attending the last North American Wildlife Conference in St. Louis learned, from the waterfowl status reports, that the total continental supply of Canvasback, as shown by the winter inventory, was something less than 500,000 birds. Since the male-female ratio in Canvasback to the best of our knowledge is 70:30, this means that for every 100,000 birds on the inventory books, we must think in terms of only 30,000 pairs. Low (1957) in another Fish and Wildlife Service report, shows that 24.8 percent of young Canvasback banded on their natal marshes were killed the same year as their birth, most of them before they had made their first journey to the ancestral wintering waters. With the knowledge Bellrose (1955) and Crissey (1955) have given us about the percentage of bands not returned by hunters, this 24.8 per cent represents an actual kill of around 65 percent of the young stock - and this does not take in the crippling which would mean another 15 to 30 percent loss. In short, Low's figures indicate a kill that must account for at least 75 per cent of this sample of young Canvasback their first year.

At another level of figures, in Special Scientific Report No. 37, the Fish and Wildlife Service tells us that in the gunning season of 1956-57, 467,306 Canvasback were estimated to have been killed in the United States. This kill figure holds more, birds, I believe, than were discovered in the 1957 winter inventory,

Either the techniques of appraisal need to be greatly refined, or else the record shows the Canvasback to be in poor shape with a heavier annual drain from gunning than we can expect it to stand. It is time that the Service brought all these conflicting figures together, time there was coordination of collective thought on the matter, time hunters and naturalists alike were told exactly where we stood in respect to the Canvasback. These scattered statements made so far by the Service are alarming; and yet, after four years of reported decline, there are no plans afoot to even test some of the techniques for control of this species, no attempts to plan the harvest in a manner more in line with the apparent size of its population and in respect for the Canvasback's extreme vulnerability to gunfire at certain times and in certain situations.

Finally, I see in our current wildlife research a tendency toward the narrow viewpoint. In government services, this apparently stems from the worship of "basic concepts". These may have seemed fundamental when they were first described, and certainly many such ideas may have served important functions. But our understanding of animal behavior is still so elementary that few if any of these are truly laws of nature. Our understanding changes as we learn more about each species we study - and yet too often the very act of learning is inhibited by the fear of throwing new light on a basic concept and thus offending some graybeard at the top of the office hierarchy. The waterfowl flyways

as now plotted on the official maps, constitute one such idea on which we have the right to expect more free study and open discussion. The present flyway system may be a wise division of the continent for administrative purposes; but as Austin (1958) points out "why not have the flyway boundaries on what the banding data show? Geographical analysis of the mass of waterfowl banding data without reference to the current artificial "flyway" boundaries would not only remove the main handicap hampering their analysts and statisticians, but would lay a firm and sound foundation for practical and efficient management of our waterfowl resources."

In any critical review of wildlife research in government bureaus I am sure we must acknowledge the exceptionally fine situation for broad, unrestricted research that now prevails in the Canadian Wildlife Service. Great work is being accomplished by a fine team of scientists working with exceptional freedom from administrative restrictions. We can only hope that the published results of these studies will do justice to the fine working conditions the Canadian Government has provided for its biologists.

At the university level, the narrow path is taken in all too many graduate schools where the pattern of the student's wildlife research is dictated by his committee. This sort of restriction follows two schemes. In one, the student is permitted to travel only within certain limits which, as far as one may observe, seem also to mark the limits of his committee's experience. He may explore more or less freely within the bailiwick familiar to his advisors, but is allowed no break-through into areas beyond. The second type of restriction is found in those schools with continuing projects. A student may select one of several established studies, but follow a more or less routine course in an investigation that had its beginning before the student entered school and which will have its ending long after he has completed his stint and passed the torch on to one of his followers.

We must surely understand that a very great part of our wildlife research is now being accomplished at graduate school level. If the graduates are to do great work in afterlife, surely they must be given more freedom and responsibility than many schools now allow. The history of mankind tells us that great minds have accomplished their finest thinking, made the greatest discoveries before middle age. Surely the graduate school must be a place where outstanding young men are free to develop broadly and unhampered in a liberal academic atmosphere.

This narrow approach to research, I believe, is evident in the papers presented for publication in the Journal of Wildlife Management and in the Transactions of the North American Wildlife Conference. Therein, as one reviews volume after volume, is the record of studies of measurement and technique. No doubt it is this way because parts and measurements can be easily added up into columns or displayed in tables or graphs. The student or professional may thus convince himself and his superiors that he is making an accomplishment. Wildlife biologists have thus studied tens of thousands of nests without leaving a good record of the behavior of the nesting hen. In countless nesting studies, the degree of predation is plotted, species by species, right down to the decimal point. But we know almost nothing about the nest-hunting activities of

the predators. Biologists crisscross the country making drumming counts, singing counts, crowing counts of one game bird or another; but there still is very little understanding of the sexual behavior of our game birds. There is a tendency to steer clear of studies of behavior, of investigations that seek to find the truth about the wildlife and its environment by direct and patient day to day study of the subject itself. I believe this is so because few students and fewer professionals can afford to launch into an investigation that would not yield a column of figures or a span of tables.

In this brief discussion the focus has been critical; but the tone is not sour. There is a great and growing wildlife research program operating widely over North America. I say, merely, that it will be better yet when more scientists, especially those in government services, bring more of their work to flower in publication, when wildlife biologists pay more attention to the literature already available, and when all of us learn how much there is yet to learn above and beyond those basic concepts laid down by the beginners.

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BILL TOWELL: Thank you, Al. After hearing you, I don't think that the Conservation Administrator need have any fears or worries about the researcher because I believe that you have the practical aspect which the administrators are seeking.

I have a great admiration for the next speaker in more ways than one; but right now principally because he has agreed at the very last minute to present a paper in place of Dr. Selke, who could not be here. This is the second one in the team of administrators ganging up on one researcher, and we will now hear from Tom Evans of Illinois, who is game management supervisor with our neighboring state, formerly with the Wildlife Management Institute. Tom will talk on the Administrator, as he looks at Research.

TOM EVANS: "The Administrator Looks at Research"

This is a most difficult assignment; first because, as explained by the Chairman, it came extremely late. I should have my head examined for saying I'd try it. In the second place one member of the panel disturbs me. His subject title is quite similar to mine, and he gave a paper along these lines just ten years ago. He may have dug out that paper for reworking, just like I did. A third reason why the assignment is difficult is that conservation administrators are as varied as the countless fields of endeavor in the U.S.A. They come from all walks of life with all degrees of training. Each will look at research on the basis of his own personal feelings and experiences. About all I can do is touch on some of the basic considerations and express some of my own thinking. How typical this may be is questionable, since my own background is of a technical nature, I have only recently moved into the purely administrative phase of game and fish management, and I do not represent the top echelon where the final decisions are made.

I suppose we may as well start with that badly abused consideration of basic vs. practical research. This always provides the basis for profound discussions, especially among the researchers, and it does represent a consideration by the administrator. Frankly, I don't know what is basic or fundamental and what is practical. No one has yet clearly defined the difference or catalogued various research activities.

However, I believe the administrator likes to think primarily of that research which will give him, in a short time, some useful working tools which can be used in the game and fish management program. By "short time" I mean in one to three years, with the latter being considered a fairly long time. This is a natural tendency. The administrator has been handed the responsibility for providing better hunting and fishing and all too frequently he is like the baseball manager who has to produce results in too short a time or be "ousted" even though he may not have the tools with which to do the job.

Frankly, I can't get too excited over basic or practical research, unless, of course, the basic research is to determine how many red corpuscles there are in a cc of hummingbird blood, or how many insects a bob-white quail will eat on a cloudy day in October with the wind from the southeast at ten miles an hour

and a daily temperature range from 45° - 70°.

The point we have to bear in mind here is that what may "seem" academic today may prove to be practical and highly useful tomorrow. I like to use, as an example, the prairie pothole situation of today. If, twenty years ago, someone had suggested it would be a good idea to use game and fish money to count the potholes and the ducks using them, he would have been considered nuts. Might not that basic information be valuable today in determining what real changes have taken place in the breeding population of waterfowl on the prairies, and how much of a reduction in water areas this population can tolerate? Academic years ago - practical, and almost imperative today. We are making that count today and have nothing to compare it with.

Personally, I am not too concerned over the fact that any given research project may get off on apparently basic lines at times. If it still is concerned with the problem it was set up to study, who knows what answers may be found? Some wandering can be valuable and almost necessary. The fact that a given project provides some sound information far removed from the specific problem doesn't mean the project failed. As Dr. Harlow Mills once pointed out, Columbus failed to find the East Indies by sailing west, but you could hardly call his trip a failure. He didn't reach his predetermined goal, but he did discover some mighty important geographical facts.

The administrator must, of course, keep a reasonably close tab on his research work. After all there are research workers who would go "hog wild" if they weren't controlled, and the administrator does have to account for the use of the funds appropriated to his department, and he does have to produce results. He is on the spot with those who make the appropriations and with the sportsmen who cough up the dough in the first place. In spite of this, or because of it, the good administrator should be willing and able to defend the need for some research which is not aimed solely toward getting quickie results.

Perhaps a second primary consideration should be, "How much shall I devote to research"? I don't know the answer to that one. We talk about 5 %, 10 % or some other figure, but there can hardly be even a rough rule of thumb. The answer depends primarily on what management problems are facing the administrator, how many of the answers he already has available, and how much money he has to work with. If the problems are extremely important, existing data meager, and funds available limited, it may be necessary to put an unusually large percentage of monies into research. Certainly this would be preferable to embarking on a makeshift management program that may backfire or at least prove to be exceedingly inadequate and wasteful of funds.

Percentages can be grossly misleading. I recently had computed the portion of the Illinois Game Management funds that go into research. The figure was 13 % of our total operations budget exclusive of land acquisition and capital improvement funds. It was 7.5 % of the total Division budget. In Illinois all research is conducted in cooperation with the Illinois Natural History Survey. When the research people there presented figures, they showed where Illinois spent a lesser portion of its monies on research than most other states. It was

based, however, on how the states used their P-R allotment, only, and did not consider the state's funds.

Percentages may vary considerably, depending on appropriations. When lean times arrive, it may be difficult or impossible to drastically cut well-established operations programs which are producing results. It may be more practical to reduce research outlays under such conditions. In making such reductions, however, the administrator has to consider the consequences of interrupting and setting back long-range studies and losing highly capable research men.

As an example, we in Illinois face a small-scale case. We have had in operation for three years a research project on the value of wide-row corn planting to wildlife. The basic work has been completed. We could proceed to institute a larger-scale project aimed at application of the results of the basic study in land management research. This would require tripling the funds to be devoted to this work. We don't have it available, and we have already trimmed other management operations. It becomes more practical, in my estimation, to take a year for preliminary work to set up a soundly conceived and organized project for the next biennium. The researcher who conducted the basic study and will carry on the expanded work can be retained to develop the myriad details of the new project. This, to me, is a good example of how the administrator is forced to proceed at times. Needless to say the researcher may be most unhappy in such instances.

There is an overlap between the foregoing and another important point the administrator must consider. That is that the research be well planned. By and large he will depend on his research leaders or supervisors to decide this, but he does have to give it some consideration himself. In the foregoing instance I believe a year's time can be very profitably spent in planning procedures, securing landowner cooperation, and seeing that all potential avenues of study are included. The project leader will have a much better picture of where he wants to go and how to get there. The state should get more for its research dollar than if it rushed into a hastily conceived project.

What can be done with the results of a project is often a prime consideration. Are they applicable to management? Is it possible for example, to sell the use of certain land-use practices to land operators? Again I go back to the wide-row corn project. We can show that the wide-row planting of corn with grass or legume interseedings is highly beneficial to wildlife, and we can show that crop yields and income remain essentially the same. Unfortunately we can't do much about getting farmers to use the practice. We would be remiss in our duties, however, in a state like Illinois if we did not investigate the wildlife implications of this potential cropping practice. If for economic or conservation reasons it should become popular, we shall have some of the answers available. These answers may be academic now and very practical in the future.

One factor has, I believe, been of great concern to administrators. That is duplication of effort. Will we merely be redoing something that Joe has already

done somewhere else? Some duplication is both necessary and desirable; first, to check results under similar conditions, and second, to see if the same results obtain under different conditions in different states. We do, however, have to be concerned with unnecessary duplication, due to the never ending plague of limited funds. The recent trend of forming inter-state councils of research and management workers is a step toward reducing duplication. Here in the midwest the Great Lakes Deer Committee, the Pheasant Council, and the Technical Section of the Mississippi Flyway Council are prime examples. Through these groups the researchers are better able to compare notes on what needs to be done, what is being done, and what results they are getting.

At one time we probably could talk about the research man vs. the administrator. I don't believe that is true anymore. The administrators have authorized the organization of these groups of researchers. In the Mississippi Flyway Waterfowl Council when the administrators want to know what to do about a perplexing problem, they direct the Technical Section to get the answer. In many cases this means research projects.

I believe we should begin to talk more about, "The Researcher and the Administrator".

BILL TOWELL: Thank you, Tom. I must certainly say that the presentation of the paper given was not in any way weakened by a lack of time and preparation. I find myself in almost complete agreement with everything said by all three of the panel members. But perhaps there are others among you that feel differently, and I hope that there will be some discussion. I know that everyone of these men are fully qualified to back up any statements they have made.

HARRY RUHL: It may be that we spend too much time worrying about whether there should be a sharp line between basic and applied research. It seems to me that the whole program depends upon melding both kinds of research and their application so that each is tending to stimulate the other to produce--because most of us need stimulation.

BILL TOWELL: That is a very good comment, Harry, and I think it is well for a researcher to be exposed frequently to the public reaction or the practical application to some of his studies.

HAYDEN OLDS: I would like to raise a question. How much direction does a research worker need? What type of an individual is qualified to give that direction?

BILL TOWELL: I am going to turn that question over to a man that can answer it. Dr. Leonard, Al--

DR. LEONARD: I think that is a very difficult question to which no pat answer can be given, because as Al Hochbaum brought out, we know from past experience that very often a project set up with such and such an objective got diverted off to some by-path which actually led to a much more valuable destination than the one which was invisioned at the start. I think that means, if you have directed

research, the one directing it must be in very close touch with the progress of the program; or, and I think this is much more ideal, there has got to be a certain amount of direction when it is done by an agency, but that can be set up more or less in certain areas for which we need facts, and then endeavor to fill the research positions with men who are competent to exercise quite a degree of self-determination within that broad area. It is true, as Al said, there are certain types of research workers who might rush madly off in all directions. They would find so many interesting by-paths to explore that they would never reach the end of any one of them. That is one of the things that concerns me as an administrator--the quality of new employees. I think we are up against stronger competition than we have had for many years because of the tremendous stress and glamour which attaches to the physical sciences these days. I think it is up to us as administrators to try to make our research positions attractive enough that we will get into them the kind of men that can carry on research with an approach of coordination rather than of specific direction. If we get to the point where we have to specifically direct step-by-step the progress of all our research workers, we might as well throw up our hands in horror. If we are able to obtain men of proper stature in that field, I don't think you are going to need to worry too much about it. That is a long answer to a short question, Bill.

HAYDEN OLDS: I would like to have a comment from Al.

A. HOCHBAUM: In a research project you need somebody to be there and stimulate, counsel, encourage and discuss.

BILL TOWELL: Any further comments?

BOB BURWELL: Believe me, we must keep our eyes on progress in the physical sciences. Al Hochbaum mentioned that at his Station they review research carried on by industrial concerns. I wonder just to what extent we are actually looking into research by industry and trying to make use of it in our business, and I am wondering whose obligation it is to look into that sort of research. Whether it is the administrator's or the man who is working on research. One of the young men in our office had a bright idea that maybe one of the local industrial concerns in Minneapolis had been doing something of interest to us. We explored it. We were amazed to find the amount of research going on that would appear to have direct application in our work, by teams of scientists that we could not begin to employ. I wonder if maybe we are not assuming that most of our research in the wildlife field is either being done by the government or by universities, and neglecting the opportunities that are all around us by people that don't happen to be titled "game managers" in private research.

-----: I believe if I had the funds and facilities to do it, I believe that I would put somebody on that would do nothing but review and abstract pertinent literature, not only in wildlife management, but in as many other fields as he could cover because I suspect that many other state agencies are in the same state as we are. We do not have large library facilities. We get a few technical journals; we get an exchange of reprints, but we don't have the run of the equivalent of a big university library. I think those of us who do have sizeable

research staffs would be well advised to try to handle some kind of an abstracting service.

TOM EVANS: So far as we are concerned in our Department, we rely upon the research supervisors in the Natural History Survey to dig out all of the material.

BILL TOWELL: Our time is up. Thank you, Panelists, for the three very fine papers.

Coffee-break

BUSINESS MEETING

COMMITTEE REPORTS

AUDITING:

Dr. Bue opened the meeting, following the coffee-break, and called for a report from the Auditing Committee.

In the absence of Glen Palmer, Chairman of this Committee, Wilbur Boldt, Treasurer of the Association, made the following report:

1956-1957 Receipts

Balance from Sam A. Parr, Secretary-Treasurer,		\$952.18
<u>Annual Dues</u>		
1956	Manitoba	35.00
1957	Kentucky	35.00
1957	Kansas	35.00
1957	Indiana	35.00
1957	Minnesota	35.00
1957	Illinois	35.00
1957	Missouri	35.00
1957	South Dakota	35.00
1957	Nebraska	35.00
1957	Ohio	35.00
1957	Wisconsin	35.00
1957	North Dakota	35.00
1957	Manitoba	35.00
1957	Ontario	35.00
1957	Colorado	35.00
1957	Michigan	35.00
1957	Iowa	35.00
		<u>1,547.18</u>
	Exchange on Canadian draft	.81
		<u>1,547.99</u>

1956-1957 Disbursements

Western Union Telegraph	39.67
Rita Winkel (Steno services, work on papers presented and duplimat work	75.00
Carolyn Heuer "	75.00
Bank Money Order - Wilbur Boldt, Secretary-Treas. -	<u>1,358.32</u>
	<u>\$ 1,547.99</u>

Harry Ruhl moved that the Treasurer's Report be accepted. The motion

was seconded by Bill Barnes, and approved with no dissenting votes.

FEDERAL AID:

JIM KIMBALL: We had a meeting after yesterday's session, and pulled in Dr. Ray Johnson and Dan Janzen, as well as some others, to discuss the general problem of how best to appropriate federal aid funds. There was a lot of sentiment in favor of at least looking into the possibility of making the allocation on the basis of fees collected by the states, which would include license revenue and also some fees which may not qualify; under Pittman-Robertson Funds, at the present time, but nevertheless are paid by apportionment into the state.

Mr. Johnson said that he had done some work on that in the past, but he has worked on that only on a basis of half; leaving one half still determined by the area of the state. It was suggested that it would be most desirable if he would work this out both for Pittman-Robertson and Dingell-Johnson one hundred percent on the basis of revenue to the state. Of course, there are disadvantages to this. It would, in some instances, be a case of the Government helping those who help themselves. It would be a good argument for the state to go to its people--"If we can increase our license fees, the amount of money we can get from the federal government goes up proportionately".

We didn't recommend, certainly, that this method be adopted, but we did recommend that it be reviewed and a tabulation made of what the results would be--how each state would come out--on such a method of apportionment.

We also recommended that if this technique did not provide the method of apportionment which was satisfactory, that we continue on the basis of apportionment which we now have. That is--using the number of licenses sold rather than the number of licensed hunters. To that we added a stipulation that a very definite study be made of the possibility of limiting this to a designated number of licenses. We recommend that--for example, one resident and one non-resident big game license and one resident and one non-resident small game license be allowed. That would probably be the limit under Pittman-Robertson. On Dingell-Johnson we recommended one resident sport fishing license and one non-resident sport fishing license. This was worked up in the form of a Resolution and submitted to the Resolution Committee.

DR. BUE: Thank you, Jim. All I can say is that it seems, unless the apportionment method stays the same, North Dakota is going to lose, no matter what kind of a method they have. I have seen the Resolution, and I think it is a very good one.

In regard to the Legislative Committee, Harry, do you have anything to report on?

LEGISLATIVE:

HARRY RUHL: There is only one thing, and I think it is merely a matter of

advice. I think there has been some question as to what this Legislative Committee should do during the time between meetings. Most of the decisions which come up in legislation seem federal, and because it usually touches most of the states in the region, it is usually of interest to the whole country and is also handled by the International. You have a situation where you are quite well informed on what is going on in national legislation, and I raise the question as to whether the Legislative Committee would be expected to pursue; to take action independently, although usually it would be the same action, I presume, in most cases as that taken by the International, or whether we take that action as states through the International Association. I presume that there will be some occasions when something will come up when this group will want to take action or express their viewpoints, which wasn't covered or handled by the International, but in most cases it already has been done.

I was a little bit puzzled, and perhaps lazy, to know when to act. For example, Callison certainly keeps you informed. He does a good job of prodding us, and I--for one--appreciate it. I think perhaps some thought should be given as to what action is expected of this Committee.

Pertaining to matters of legislation, we did go over it, talk about it, and made some suggestions to the Resolution Committee. We thought that was the best way to handle it. Personally, I think we need to gear a little better to get quick action, sometimes, coming from the grassroots; and I think sometimes we are apt to send a telegram or write a letter as an official agency while the opposite side is trying to pump a little further down and get some other people to write their Congressmen. I think that is true, whether it be International or Midwest, and I think some sort of discussion ought to be fruitful so that the next Chairman can do a better job than I did.

DR. BUE: Thank you, Harry. I think you are perfectly right on this pump-rising. We found that it paid off over on Garrison Dam in getting a fish hatchery. We had quite a few people writing in, and I think there is a lot of good legislation that could be pushed a lot more if we get some of the individual people throughout our states pushing along with us.

SOIL BANK:

DR. BUE: Les Voigt is Chairman of the Soil Bank Committee and he isn't here, but would Hayden Olds or Tom Evans have anything to report here? The subject was pretty well covered in the Panel yesterday so I don't imagine there is too much to report on it. Tom or Hayden, do you have anything to report?

EVANS AND OLDS: No report.

RESOLUTIONS:

DR. BUE: The next Committee is the Resolutions Committee, and Bill Towell is going to be pretty busy reading here. I don't think it is quite as bad as last year when I believe we had about thirty resolutions. We thought we would use the same procedure as we used last year, and that is that Bill will read off the

resolutions and we will give you a chance to discuss them. If there is no discussion, we will put it in one pile. If there is likely to be a little heated debate on another, we will put it in another pile. Then we will pass on all those on which there was no discussion at one time, and then take up these on which there might be some debate last, so that everyone can be heard from. Bill, I will let you take over.

BILL TOWELL: Thank you, Doc. We have eleven resolutions this year, so it is not as bad as it was up at Itasca.

RESOLUTION NO. 1 (Surplus Equipment)

WHEREAS, The U. S. Government from time to time advertises as surplus to its need certain types of construction and dirt moving equipment, trucks, tractors and many other useful items;

WHEREAS, State Game and Fish Departments have not been privileged to apply for such items to use in developing and maintaining wildlife conservation and restoration projects due to legal prohibitions;

WHEREAS, The Midwest Game and Fish Commissioners' Association assembled at Bismarck, North Dakota in annual convention July 11, 1958, held the opinion that State Game and Fish Departments would benefit greatly by receiving such equipment,

NOW THEREFORE, Be It Resolved that the Midwest Association of Game and Fish Commissioners support action to achieve this purpose and that the Chairman of the Midwest Association submit to the President of the International Association of Game and Fish Conservation Commissioners a copy of this Resolution together with a request that the International Association initiate legislation in the U. S. Congress or otherwise seek a solution whereby such equipment can be made available to State Game and Fish Departments to use in furthering their wildlife conservation and restoration objectives.

RESOLUTION NO. 2 (P. R. Apportionment)

WHEREAS, Public Law 415, better known as the Pittman-Robertson Act, was passed in 1937 and provides that the excise tax on sporting arms and ammunition be distributed to the various states by the Department of the Interior on the basis of a formula which includes equal weight to land area of each state and to the number of paid hunting license holders as certified to the Secretary of the Interior by the State Fish and Game Departments; and

WHEREAS, For the past 20 years "the number of paid license holders" has been interpreted to mean "the number of hunting licenses sold" and apportionment of Pittman-Robertson funds has been based on this assumption with the

full knowledge and approval of the Department of the Interior, and

WHEREAS, Many people purchase both "big game" and "small game", "resident" and "nonresident" hunting licenses, and it is a well-recognized fact that a certain number of people in every state possess more than one hunting license--such duplication can be determined only by a most comprehensive and costly statistical survey; and

WHEREAS, It is now determined by the Department of the Interior that the method of certification of hunters by the various state fish and game departments is no longer considered valid, and therefore, large sums of state fish and game management funds must be expended for statistical surveys to determine the actual number of hunters in each state, such surveys possibly costing up to \$35,000 annually per state, which money will be forever lost to game management;

NOW THEREFORE, Be It Resolved that the Association of Midwest Fish, Game and Conservation Commissioners meeting in Bismarck, North Dakota, on July 11, 1958 respectfully request the Bureau of Sports Fisheries and Wildlife to continue for the time being the method which has been in effect for 20 years for computing the Pittman-Robertson apportionment.

BE IT FURTHER RESOLVED, That the Bureau of Sports Fisheries and Wildlife be requested to study the feasibility of amending the Pittman-Robertson Act to use as a basis for the license computation for any state a maximum of one big game license and one small game license for any one individual. After such study the Bureau shall submit the results along with their recommendation to the respective states for their review and if approved by a majority of the States, the Bureau recommend suitable legislation to amend the act.

BE IT FURTHER RESOLVED, That copies of this resolution be forwarded to the Bureau of Sports Fisheries and Wildlife and to the members of Congress of the states of this Association.

RESOLUTION NO. 3 (Toxicants-Undesirable Fish)

WHEREAS, This association recognizes that one of the most serious problems in the management of the sport fishery is the control of various undesirable fish populations, and

WHEREAS, The use of selective toxicants in eliminating specific species appears to have unlimited possibilities, and

WHEREAS, The United States Fish and Wildlife Service has already initiated a program of testing and screening toxicity of chemical compounds in connection with the Great Lakes sea lamprey control program.

NOW THEREFORE, Be It Resolved that the Association of Midwest Fish and Game Commissioners at its annual meeting held at Bismarck, North Dakota

on July 11, 1958, in the interest of the sport fishery, nationwide, recommend to the Secretary of the Interior that that Department expand the program of testing selective toxicants to find additional chemicals that can be used to eliminate various species of undesirable fishes.

BE IT FURTHER RESOLVED, That we urge prompt enactment of necessary legislation by the Congress, including appropriation of funds, necessary to carry out this expanded program.

RESOLUTION NO. 4
(Tax Items-D. J.)

WHEREAS, Fish and recreation are recognized as one of the most important of the economic resources in our nation today, and

WHEREAS, The use of Dingell-Johnson funds by the several states has aided materially in acquisition, habitat development and research, for increased fishing opportunities, and

WHEREAS, Increased funds are needed by all states to properly develop the fishing resource in proportion to the demand, and

WHEREAS, The present Dingell-Johnson funds are accumulated from a tax on a very limited number of items utilized in fishing,

NOW THEREFORE, Be It Resolved, that the Association of Midwest Fish, Game and Conservation Commissioners, meeting on July 11, 1958, in the City of Bismarck, North Dakota, respectfully request the members of Congress of the member states of this association to introduce legislation amending the Federal Aid in Fish Restoration Act (64 Stat. 430) to increase the number of fishing items upon which a tax is imposed, to include additional items which can be readily distinguished as sports fishing equipment upon which the excise tax is not now levied.

BE IT FURTHER RESOLVED, That copies of this resolution be sent to the members of Congress of the member states of this Association and the Bureau of Sport Fisheries and Wildlife.

RESOLUTION NO. 5
(Pesticides)

WHEREAS, This Association recognizes the widespread use of insecticides and other chemicals to kill unwanted insects and plants and the direct and long term effects that these poisonous compounds can have on our fish and wildlife Resources; and

WHEREAS, recent reports show direct losses up to 70-80 percent in aerial application of pelleted heptachlor for control of fire ants alone; and

WHEREAS, Basic studies are needed to determine methods, periods of time, dosages and amounts of chemicals that may be applied for such control measures without harmful and lasting effects on fish and wildlife populations; and

WHEREAS, Senate Bill S. 2447 and H. R. 783 focus congressional attention to the acute need for a greatly expanded research program to gain further information on this problem,

NOW THEREFORE, Be It Resolved That the Association of Midwest Fish and Game Commissioners at its annual meeting held at Bismarck, North Dakota on July 11, 1958 urges Congress to enact the necessary legislation to permit the U. S. Bureau of Sport Fisheries and Wildlife to initiate a basic research program during the current fiscal year, with an appropriation of not less than \$300,000.

RESOLUTION NO. 6

(Study of Missouri River Fishery)

WHEREAS, Over the past 15 years the Missouri River has been changed from a muddy river of limited productivity to a series of large impoundments each capable of supporting a tremendous fresh-water fishery; and

WHEREAS, This newly-created environment for fish has given rise to new problems in fishery management, never before encountered in the inland fresh waters of the United States. These problems being inter-state in nature, extending throughout the main stem of the Missouri River from Montana through North and South Dakota to Nebraska, and

WHEREAS, Early in 1957, the four states involved, requested federal participation in an effort to secure even a minimum of the necessary fishery research. Todate, federal assistance has not been forthcoming and the states remain unable to carry the burden alone, and

WHEREAS, The greatest economy of funds and effort and the greatest common good will result from a unified, coordinated study of the fishery and its utilization,

NOW THEREFORE, Be It Resolved by the Association of Midwest Fish, Game and Conservation Commissioners that the U. S. Fish and Wildlife Service actively participate in planning, coordinating and prosecuting a comprehensive program of fisheries research leading to effective management and utilization of this sport and commercial fishery.

BE IT FURTHER RESOLVED that copies of this Resolution to sent to:

1. Secretary of the Interior
2. Director, Bureau of Sports Fisheries and Wildlife
3. Director, Bureau of Commercial Fisheries
4. Commissioner of Fish and Wildlife

RESOLUTION NO. 7

(Operation Outdoors)

WHEREAS, The U. S. Department of Agriculture, through the U. S. Forest Service, has developed a long-needed program identified as "Operation Outdoors", and

WHEREAS, Part I of this program concerning National Forests recreation aimed at solving the mounting problem of increased family outdoor activity, has been published and is ready for implementation by increased appropriations, and

WHEREAS, Part II will deal with improvement and management of wildlife habitat on the National Forests in cooperation with the fish and game departments, and

WHEREAS, Both phases of these activities have long been needed and have been programmed in a most thorough and systematic manner.

NOW THEREFORE, Be It Resolved that the Midwest Association of Game and Fish Commissioners commends most highly the U. S. Department of Agriculture for preparing the analyses and resulting plans dealing with the extremely important recreational and wildlife values of the National Forests, and urges Congress to implement the program through appropriate financing.

RESOLUTION NO. 8

(Public Land Disposal)

WHEREAS, In the past decade there has been a widespread program among western and the mid-western states to withdraw tracts of public land for wildlife use in order that the general public could be assured of continued hunting and fishing access to these lands, and

WHEREAS, The several state game and fish departments have spent considerable amounts of money and manpower in this program in the interests of the hunting and fishing public, and

WHEREAS, A member of the Solicitor's Staff of the Department of the Interior has recently submitted Opinion M-36442 questioning the legality of withdrawing these public lands for wildlife use and transferring the administration of said lands to the state game and fish departments, and

WHEREAS, It appears to the Association of Midwestern Fish, Game and Conservation Commissioners that this interpretation is incorrect and unreasonable,

NOW THEREFORE, Be It Resolved that the Association of Midwestern Fish, Game and Conservation Commissioners does hereby request that the Solicitor of the Interior Department review Opinion M-36442 in order that the

several states may be assured of their exact position with respect to past, present and future withdrawal requests, and

BE IT FURTHER RESOLVED, That in the event the Solicitor of the United States renders a decision unfavorable to the state game and fish departments in their proposed administration of such lands that the Association of Midwestern Fish, Game and Conservation Commissioners sponsor federal legislation which would assure the states of the right to administer these public lands for wildlife management purposes in the interest of the general public.

RESOLUTION NO. 9
(Amendment to Public Law 566)

WHEREAS, A bill, H. R. 5497, proposes to amend the Small Watershed Protection and Flood Prevention Act (Public Law 566) to provide for federal cost-sharing on practices installed for recreational purposes and to benefit fish and wildlife, and

WHEREAS, Under Public Law 566 projects some losses to fish and wildlife are sustained, and

WHEREAS, Land and water management in small watershed projects can and should provide for recreation as well as fish and wildlife management.

NOW THEREFORE, Be It Resolved That the Association of Midwest Game and Fish Commissioners in annual meeting at Bismarck, North Dakota on July 11, 1958, urges passage of H. R. 5497, as introduced.

RESOLUTION NO. 10
(Commendation)

WHEREAS, The twenty-fifth annual meeting of the Association of Midwest Fish and Game Commissioners, held at Bismarck, North Dakota, has been an outstanding success in furtherance of the Conservation Ideals of the Midwestern United States and Canada, and

WHEREAS, The North Dakota Game and Fish Department has extended every effort to make this conference a success,

BE IT RESOLVED, That the Association of Midwest Fish and Game Commissioners does hereby thank Governor John E. Davis, Dr. I. G. Bue, Harold Schafer of the Gold Seal Company, and all others from the fine state of North Dakota who helped to make this a most enjoyable and profitable conference.

RESOLUTION NO. 11
(C.R. -- Pothole States)

WHEREAS, Quotas of each state are being increased under the Conservation

Reserve Program for 1959, and

WHEREAS, The future of this program will depend largely upon its acceptance in 1959, and

WHEREAS, Those interested in all phases of conservation including the leaders in game management believe that this program should be perpetuated,

NOW THEREFORE, Be It Resolved by the Midwest Association of Fish and Game Commissioners, meeting in annual convention in the City of Bismarck, North Dakota, this 11th day of July, 1958, that the Secretary of Agriculture be requested to establish the highest rental rates possible for Conservation Reserve contracts in the prairie pothole regions of North Dakota, South Dakota, and Minnesota, increase the ceiling per farm from \$5,000 to \$10,000, and use the presently established method of accepting contract applications rather than the "bid" method suggested by some.

The foregoing recommendations will simplify administration of the program and increase the possibility of attaining state goals.

BE IT FURTHER RESOLVED that the Secretary of this organization be instructed to immediately wire copies of this resolution to Secretary of Agriculture Benson, Assistant Secretary Marvin McLean, Howard Doggett, Director of the Soil Bank Division, and the office manager of the State A.S.C. Committee in each state involved.

Following the reading of the Resolutions submitted by the Resolutions Committee, Chairman Towell moved the adoption of Resolutions 1 through 11, except Resolutions 2 and 9 which had been laid aside for further discussion. The Motion was seconded by George Sprecher, and carried with no dissenting votes.

BILL TOWELL: May I make one explanation on Resolution 2. The committee in meeting last night had already considered a suggested Resolution on P. R. Apportionment when the Federal Aid Committee joined our meeting and presented a substitute Resolution. It was the feeling of three members of the Committee, which is a very, very small minority, that the first resolution which we had already approved, be submitted here today; but I think in all fairness to the members of the Federal Aid Committee and the membership as a whole that the Resolutions Committee should submit for your consideration the suggested resolution offered by the Federal Aid Committee. So as a substitute, or as an addition to Resolution 2, I have this from the Federal Aid Committee:

SUBSTITUTE RESOLUTION FOR NO. 2

WHEREAS, The Federal Aid in Wildlife Restoration (P. R.) Act has since 1939 operated efficiently with a minimum of discrimination for or against any state and,

WHEREAS, The formula as used in the past for apportionment of these

Federal Aid funds to the states had the endorsement of states, and

WHEREAS, Every effort should be made to avoid expensive statistical surveys in each state to determine extent of license, duplications - an expenditure which would add nothing to wildlife conservation and management, and

WHEREAS, One method of apportionment would be to base P.R. Allotments on total hunting fees received and D. J. Allotments on total sport fishing revenue received,

NOW THEREFORE, Be It Resolved that the Association of the Midwest Fish and Game Commission :

1. Request the U. S. Fish and Wildlife Service to estimate how each state would be effected by having apportionment of P.R. and D. J. Funds, based solely on the qualifying fees received.
2. In event the above does not provide a satisfactory base for apportionment, continue as practices in the past with the following limitations.

- (a) In determining P.R. allotments, no state shall count more than the following classes of licenses.

One resident small game hunting,
One non-resident small game hunting,
One resident big game hunting,
One non-resident big game hunting.

- (b) In determining D. J. allotments, no state shall count more than the following classes of licenses.

One resident fishing,
One non-resident fishing

DR. BUE: The meeting is open for discussion here. I am a little at loss as to just how to proceed at this point with these two resolutions.

BILL TOWELL: I will move the adoption of Resolution 2.

TOM EVANS: I will second it.

DR. BUE: The Original Resolution 2 has been moved and seconded for adoption. Now, what about discussion?

TOM EVANS: I asked for discussion mostly for clarification. Being from Illinois, we don't stand to lose or gain much either way on this. I am interested in this proposal here because it represents a compromise. Some of the states, I know, feel that there shouldn't be a doubling up of licenses. So far as I am concerned, the state which has a big game management problem needs more money than a

money than a state which does not have one, but the thing I wanted to clarify was this: In the case of a state which has several big game licenses--we will say 20,000 deer licenses, 5,000 antelope licenses and 5,000 elk licenses--it is proposed that you would count whichever was largest and assume that the other big game licenses were duplications.

.....Mr. Steen asked which resolution was being talked on, and Dr. Bue re-read the Resolution No. 2 which had been presented by the Resolutions Committee and laid aside for discussion.

M. O. STEEN: The two Resolutions are quite similar, but I personally favor not this one, but the other one; therefore I am going to have to vote against this one.

JIM KIMBALL: Mr. Chairman, I don't think there is any conflict between these two Resolutions. Really the only difference is that this Resolution does not cover one item that was covered in the Resolution submitted by the Federal Aid Committee. Possibly the quickest way to clear this up is for me to present an amendment to this Resolution. I would recommend this amendment, or addition, to Resolution 2:

Be It Further Resolved that the Bureau of Sport Fisheries and Wildlife be requested to tabulate available data to determine the approximate allocation of both P. R. and D. J. funds to each state when based on the revenue to each state received from licenses and fees paid by the sportsmen of that state.

BILL TOWELL: Mr. Chairman, I will second the motion for the amendment.

M. O. STEEN: I would like to speak on that again. There is a feature in the second of these two that is left out in the first which limits in fisheries to consider anything other than one resident and one non-resident permit which does not appear in the one Resolution. I think it would be advisable to limit this to one general fishing license for residents and one general fishing license for non-residents.

DR. BUE: I think we should pass on the first amendment. It has been seconded. Then we will come back to Mel's question. Jim, will you re-read the amendment.

.....Mr. Kimball re-read the proposed amendment to Resolution No. 2.

.....Mr. Steen pointed out that the Resolution Committee could not submit two resolutions on the same subject and proposed the following:

M. O. STEEN: Therefore, I submit from the floor, as a voting delegate to this Convention, the other Resolution. I move the adoption of the other Resolution as a substitute for the original Resolution.

TOM EVANS: The motion has been seconded on the original Resolution.

DR. BUE: Actually with the amendment which has been proposed you have two

Resolutions that are practically the very same thing.

BILL TOWELL: The second Resolution was only read for information. It was not proposed by the Resolution Committee.

DR. BUE: That is right. There was no motion made, nor a second. It was read for information.

GEORGE SPRECHER: Just where do we stand on this thing? As I understand it, the Resolutions Committee recommended Resolution No. 2. Mr. Kimball suggested an amendment and that has been seconded. Now isn't the question before the House the adoption of Mr. Kimball's amendment to Resolution 2?

DR. BUE: We have asked Mr. Kimball's permission to put what Mr. Steen has requested on the fisheries part in with that amendment. I think possibly the thing to do, if you are going to bring this amendment up and include the fishery part, is to write it up so that it can be properly read so we know what we are amending into this Resolution.

M. O. STEEN: I think what you are doing here is amending this Resolution to arrive at the other one. I propose that the substitute motion from the floor ought to be written up.

GEORGE SPRECHER: I don't believe that the substitute Resolution does the same thing as Resolution No. 2. The primary objective of Resolution 2 is to request the Fish and Wildlife Service to discontinue their proposal to allot Pittman-Robertson funds on this new formula. I didn't hear that in the second Resolution. I think that is the basic part of the first Resolution. Mr. Kimball's amendment so far as I am concerned is entirely satisfactory, but I do not believe that the second Resolution goes far enough.

JIM KIMBALL: gave his amendment, amended to include Mr. Steen's suggestion, as follows:

Be it further resolved that the Bureau of Sport Fisheries and Wildlife be requested to tabulate available data to determine the approximate allocation of both P. R. and D. J. Funds to each state when based on the revenue to each state received from licenses and fees paid by the sportsmen of the state. Be it further resolved that if D. J. allocations be continued as in the past that these allocations be based on one resident and one non-resident sport fishing license.

HARRY WOODWARD: We sell a three day visitor's license to non-residents and we also sell a season license. It is pretty well split up. I don't believe I am going to be able to go along with the motion.

JIM KIMBALL: I have talked with Ray Johnson, and he has said that when he works it up, that all non-resident fishing licenses would be counted.

HAYDEN OLDS: If we put these two Resolutions together, in effect actually we

are requesting the Service to discontinue any further investigation of the movement which has been kicked around all over the country and which they have not actually arrived at any satisfactory decision on, as yet. We have also suggested some rather positive action in the way of counting these licenses. In putting these together, we just as much as ask the Service to discontinue their efforts to seek a solution in either of these two ways or other ways. I think we are blinding ourselves to other possibilities if these are not satisfactory, and I think the whole Resolution will tie the hands of the Service to further investigate.

RAY JOHNSON: It has been quite apparent for some time that a rather thorough study was expected of us. We have tended to confine our efforts to just the ideas that have been presented here. We will have to present figures on many other types of proposals which are coming from other parts of the country, too.

GEORGE SPRECHER: Mr. Chairman, it seems to me that we can clarify this thing if we would vote against this amendment and for Resolution No. 2, and then take up the other Resolution. I don't see any reason why we can't pass two Resolutions on the subject of Pittman-Robertson.

DR. BUE: Is it your idea then, George, to have the amendment deleted?

GEORGE SPRECHER: That's right.

DR. BUE: Any further discussion? The motion is before the House and it has been seconded on the amendment. Those in favor of this amendment will vote by saying Aye, against, by voting No. The "No's" have it, and we are back where we started.

Are you ready for the question? We are voting now on the Resolution which was recommended by the Resolution Committee.

All those in favor, signify by saying Aye. Opposed, No.....

Resolution No. 2 is approved with one dissenting vote.

Now, we have another Resolution which is controversial. Resolution No. 9. I had better read that again (Resolution was re-read by Dr. Bue).

Resolution No. 9 has been put in the form of a motion, is there a second?

TOM EVANS: I second it, and I would just like to say that this particular bill has already passed the House and has been reported out by the Senate Committee. It is altogether possible that it has already passed. If it already has passed, we will have to forget about it.

DR. BUE: Well, Tom, we will pass it, and I will try to find out where it is, and if the Resolution applies, we will send it in. Is there any further discussion? Are you ready for the question?

Those in favor of it, signify by saying Aye. Opposed.....

..... There were no dissenting votes on Resolution No. 9, and the Resolution was declared adopted.

Dr. Bue asked for any further Resolutions from the floor, and none were forthcoming.

NOMINATIONS:

DR. BUE: Do we have the Nominating Committee present? It is time for election of officers and we have a nominating committee consisting of Mr. Warders from Kansas and Les Faber from Iowa. I would like to have the report at this time.

FRED WARDERS: I think that most of you know it is customary that the Vice President be raised to the Presidency and that the President be elected in the State where the meeting is to be held next. With that in mind, the Nominating Committee wishes to submit for your consideration at this time the following officers for next year:

President--Bill Barnes, Indiana

Vice President--Harry Woodward, South Dakota

Secretary-Treasurer--Dr. Paul Stuart, Indiana

Gentlemen, I move the nomination of these men as officers for the coming year.

M. O. STEEN: I move that nominations be closed.

DR. BUE: All those in favor of the candidates nominated by the Committee will please signify by saying Aye. Opposed.....No.

There are no votes in opposition, and therefore the slate of officers presented by the Nominating Committee are unanimously elected for the following year.

Apparently that will take care of about all the business. Is there any other business that should be brought up at this time? Jim:

JIM KIMBALL: I move that in view of urgent need for retaining and restoring waterfowl habitat, the President is instructed to wire Representative Bonner respectfully urging that the three dollar duck stamp bill be favorably reported out of the Merchant Marine and Fisheries Committee as quickly as possible. It would be nice if this would be unanimous and the President would list the names of the states in our organization, etc., when he sends the wire.

M. O. STEEN: I will second that motion.

DR. BUE: You have heard the motion and it has been seconded by Mel Steen.

Is there any discussion? All those in favor of the motion, signify by saying Aye. Opposed?

There were no dissenting votes, and the Motion is unanimously adopted.

Is there any other business?

HARRY RUHL: This is a Resolution that the Western Association adopted; which I have revised:

Amendments to Coordination Act

WHEREAS, The Conservation and Perpetuation of fish and wildlife are becoming critical because of the increasing utilization of lands and waters to meet the needs of our expanding human population; and

WHEREAS, Large sums of public money are being spent by state, federal and private agencies for the development of water resources; and

WHEREAS, Construction agencies, both private and governmental, have been reluctant or legally unauthorized to consider ways and means to maintain or mitigate losses to fish and wildlife resources; and

WHEREAS, Many water development projects can be planned and coordinated to benefit all the users of the resources, and

WHEREAS, The amendments to the Coordination Act of 1946 (commonly called Public Law 732) as proposed by the Department of the Interior and endorsed by the forty-eight states and agreed to by all interested federal agencies, will provide planning and procedures for enhancement of fish and wildlife as well as mitigation of losses in all construction projects.

NOW THEREFORE, Be it resolved that the Midwest Association of State Game and Fish Commissioners urge Congress to expedite favorable action on R. R. 13138, or an identical bill.

I move the adoption of this Resolution.

HARRY WOODWARD: I second it.

DR. BUE: Is there any discussion? Ready for the question? Those in favor signify by saying Aye. Opposed?

There were no dissenting votes and the Resolution is unanimously adopted.

Is there any further business?

If not, I believe that about takes care of everything. I certainly appreciated the cooperation from all the members of the Association and from the people they have invited.

they have invited to participate in our program. I certainly have been very happy with the program.

It is unfortunate that usually the presiding officer of one of these meetings doesn't get to hear everything--too busy running around--but I certainly want to thank everyone. We know that there is going to be a lot of fun tonight, and we have transportation arranged for you at your various hotels,

At this time, I think we should have the new President of the Midwest come up here. Would Bill Barnes come up here please?

I would like to present this gavel to Bill Barnes, and I hope he can swing it better than I can, next year when anyone gets out of order. We certainly are looking forward to getting down to Indiana next year.

BILL BARNES: Thank you, Dr. Bue. I hope that I may have the same success, and conduct the next session in a like manner to what you have. It was very efficient.

I think you should be complimented, and I should like for everyone to give a standing vote of thanks to North Dakota

APPLAUSE

I have one other announcement. We are considering a meeting place in Indiana next year. We have not yet definitely decided on it. But a state park in the northeastern corner of Indiana is described in the brochure on the back table. We hope to have this meeting either at this state park or at Indianapolis during the same period that we have had this meeting.

Are there any further announcements or business? If not, may I have a motion for adjournment?

A motion for adjournment was made, seconded and so moved. The twenty-fifth Annual Meeting of the Association of Midwest Fish and Game Commissioners was adjourned.

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Convention Minutes Compiled by
Betty Stephens, Bismarck
N. D. Game and Fish Department