Tenth Annual Meeting

MIDWEST GAME AND FISH COMMISSIONERS

September 21, 1943
7:30 o'clock p.m.

Mr. Robert A. Gray (Wisconsin), presided.
CHAIRMAN GRAY: This is the result of considerable discussion at the conservation commission meeting at Madison recently as to the advisability of continuing the lake trout propagation program in both Lake Michigan and Lake Superior.

After considerable discussion it was the wish of the Commission that some propagation work be continued this year but that a little further research into this matter be conducted, if possible, by the States of Indiana, Michigan, Illinois, Wisconsin, and the Federal Government in conjunction with Mr. Van Oosten.

Mr. Vanderwall has probably written all of the different states, and this is his letter written to Indiana:

"Dear Mr. Barnhart:

"At the regular meeting of the conservation commission yesterday a great deal of discussion was given to the matter of propagation of lake trout in the Great Lakes in which Wisconsin has jurisdiction, namely, Lakes Michigan and Superior. During the discussion there was considerable doubt cast upon the efficiency of artificial propagation as an aid to the maintenance of the population and it was felt that considerable more research be conducted to determine the status of the efficiency of artificial propagation.

"In effect, the Commission approved the issuance of permits to fishermen to take spawn as Wisconsin has done in the past with the accompanying instructions that as many fish as possible be reared to a larger size and that a study would be made to measure the value of planted fish. It is planned to rear approximately 300,000 fry to a larger size of which possibly 20 or 30 thousand will be reared to a size sufficiently large to permit fin clipping as a method of marking the fish.

"We realize that Lake Michigan is a tremendously large body of water and that what little efforts might be carried on by Wisconsin alone would be not sufficient to adequately handle this problem and consequently the Commission authorized the department to proceed with working out some sort of a joint
research plan with our neighboring states whereby the study
would be carried on on a larger scale and the results or
effects more adequately determined.

"Therefore, it is the purpose of this letter to ask
if you of our sister states are willing to proceed with the
development of a plan of joint investigation which will also
include the U. S. Fish and Wildlife Service.

"On the basis of the report recently issued by the
international committee of the Great Lakes inquiry of which
Dr. John Van Oosten, in charge of the Great Lakes investi-
gations, is a member, we assume that the fish and wildlife
service is ready and willing to participate in such a
program since the committee has recommended a study of this
nature.

"It is suggested that if a plan of cooperative
research meets your approval that we hold a conference as soon
as possible to proceed with the development of the plan,
determine how the study should be executed, what each state
can do, the amount of finances necessary, and all other such
details. An early reply will, of course, be appreciated and
suggestions on the matter are desired.

"Very truly yours,

(Signed) E. J. Vanderwall

"E. J. Vanderwall
Conservation Director"

DR. SCHNEBERGER (Wisconsin): That letter was sent to each
of the states, and also to Von Oosten, and perhaps to get
started we might call on each state to find out now what they
plan to do this fall in the way of propagation, and what the
possibilities might be to rear and fin-clip some of these fish,
following that with the mechanics of identifying or recovering
those that have been fin-clipped.

I know from actual experience of tagging fish in
Green Bay myself, and also the work that the Smith brothers
carried on, that you cannot depend upon the commercial fisherman
entirely to submit your records as to recaptured fish that
have been marked, because I have known fishermen who have
carried these tags in their pockets and never did send them in.
Consequently we have got to have men who will follow up and
make inspections of the catches to find these marked fish.

I think we might start with Michigan and see what
they are going to do this fall, and what they think of the
project.
MR. WESTERMAN (Michigan): Well, our program as planned for this coming season does not differ materially from what we have been doing for several years past. We are definitely on record as opposed to issuing permits to take lake trout or whitefish during the closed season.

We have a situation in our state where on lake trout particularly the closed season dates are different on each of the three lakes on which Michigan fronts, that is, Huron, Michigan and Superior.

So far as Lake Michigan goes the closed season does not entirely cover the spawning season; in other words, it is not just the season that we should have. Of course, those matters are set in Michigan by the Legislature, and as far as the Department goes we have no authority to change them.

We take the position then that it is our duty and responsibility to save and impregnate all the eggs possible that are taken by fishermen after the season reopens, which is November 11th on Lake Michigan, and which is right in the center of the spawning season.

Well, our facilities will not permit handling all that will be taken. Our instructions are to handle to the limit of facilities and impregnate and plant back on the spawning grounds the surplus. In disposing of those that are handled at the hatcheries, the majority will have to be planted back as fry. About a million are turned over as advanced fry to the U. S. Fish and Wildlife Service station at Charlevoix on Lake Michigan for rearing to the fingerling stage. That is a cooperative program that has been carried on for several years past with the Fish and Wildlife Service under which the fish are fed there.

The first planting has to be made usually about the middle of July, that is the thinning-out program when the fish are probably 2 inches long; and then about the middle of August the balance are planted.

Now, those August planted fish which may reach a number of four or five hundred thousand would be fish of the size that might be fin-clipped, I guess. They are large enough, probably 2-1/2 or 3 inches long at that time.

In discussing fin-clipping with Dr. VanOosten of the Fish and Wildlife Service in charge of Great Lakes Fisheries Investigation, who has also been a member of the International Commission that has been appointed to study Great Lakes problems, and Dr. Hazzard, both have expressed to me about the same feeling that Dr. Schneberger did; that is,
that the cooperation that we get from fishermen is not too good, so that the question really resolves itself to one of how we are going to get really an adequate measure with either fin-clipping or tagging that might be done.

The fish are probably too small to tag, and fin-clipping would be the only proper method of identifying those fish so that they might be identified later in the catch.

Now, we are as much interested as any state can be in any program that will try to get much needed facts as to the survival rate of these artificially reared lake trout. Whether this is the appropriate time to do it, or not, it is certainly the time perhaps to begin. We can't begin too soon, but there are going to be some personnel problems, as I see it, in trying to do very much until after the war-time emergency has passed.

Dr. Hazzard's staff has been riddled because of men who have entered the service, and we really can't at this time take on any new problems. But we are distinctly interested in trying to work the matter out when and if we can.

CHAIRMAN GRAY: May I ask this question?

How many fingerling trout do you raise with your present program?

MR. WESTERMAN: Well, on Lake Michigan the only ones that we are raising are the ones that we handle cooperatively with the Fish and Wildlife Service at the station at Charlevoix.

On Lake Superior we are doing some work at the Marquette Station. I haven't the figures too well in mind, but offhand I would say it was 100,000 or less per year up there.

CHAIRMAN GRAY: May I ask Illinois: Do you raise any fingerlings or are you planting fry?

MR. HUNT (Illinois): Well, I would like to hear what the other states are doing about it. We are still continuing with our hatching, and planting fry.

CHAIRMAN GRAY: You are not raising any lake trout to fingerling size?

MR. HUNT: No, we are not, but we plant about twenty-five, or I guess thirty a year.

CHAIRMAN GRAY: I see.
MR. HUNT: Now, I would like to know if anybody has had any experience in rearing the larger size. I would like information.

MR. WESTERMAN: We have just been discussing that before we came in.

If we had the authority in Michigan I believe we would practically close fishing for lake trout during the spawning season. Of course, we do not have that authority in the Commission. We have to depend on legislative enactment.

MR. CULLER (U. S. Wildlife Service): The Charlevoix Hatchery has a capacity of 60 million eggs, lake trout eggs, and now we are handling approximately and planting approximately 925 thousand fingerling fish from 2 to 5 inches in length.

MR. DICKINSON (Wisconsin): What is the maximum fingerling capacity the hatchery could take care of?

MR. CULLER: The capacity is 900 thousand to 950 thousand fingerling fish.

MR. DICKINSON: Do you think we are getting full value for the money we are spending?

MR. CULLER: Well, I can answer that in this way: About eighteen years ago, when I took over the field as a district man, I made recommendations that they close the season; that the season for lake trout be closed during the spawning season and that the states expend their money they had been utilizing in the past for the production of fry in rearing and raising the fish to a large fingerling size before they were planted. That was eighteen years ago, and Mr. Westerman and I have for years discussed this matter and we have practically come to the same conclusion that the logical thing to do was to take a limited number of eggs before and after the season from the commercial fishermen and rear those fish to a large fingerling size before they were planted.

I also suggested that an investigation be made by clipping the fins of the fish. I do not think that I will agree with Dr. Schneberger and Dr. Hazzard here that you can take fish of that size and by clipping fins find out just what we are doing. We all recognize this fact, that the larger the fish are planted the better chance there is for survival.

There has always been a question in my mind about planting fry in the Great Lakes.
I might say this: That in the work at the Put-in-bay Station in Ohio we found that in the event that the season was kept open during the spawning season that whatever we planted indicated that there was a chance that we added to the fish population in that water area, whether it was on Erie, Michigan, or Ontario, or wherever it was. Otherwise those eggs would go to the market. If they were fertilized and hatched and planted as fry there was an opportunity for some of them surviving and reaching legal size for catching.

MR. DICKINSEN: Do you think there is any harm done to the spawning beds by having the season open?

MR. WESTERMAN: Why, I think there is a great deal of harm done.

MR. CULLER: I agree with Mr. Westerman fully.

MR. WESTERMAN: There is harm done in this way:

Regardless of the regulations you have when you permit fishing as our law provides, and I guess some other states also, during the closed season tests made show a certain percentage of fish found to be ready to spawn, and on the basis of those tests if you issue permits, as we used to do, the result is a considerable number of un-ripe fish come in and they are an absolute loss.

Also there is a tremendous wastage of ripe fish when taken in nets. The fish that are fully ripe and probably deliver some of the best eggs lose many of their eggs after they are caught in the mesh and before they can be brought aboard the boat and the eggs taken.

I haven't these figures in mind, but the so-called potential take that really reaches the hatchery is a figure of approximately 15%, in my judgment. The time when ripe fish leave the grounds is different, so, in a sense, there are times when un-ripe grounds are open to fishing.

Storms are another factor that cause a great deal of wastage at that time. November is a season of gales, and while the nets are presumed to be lifted daily during the spawning season in our state, sometimes it is several days before they can be reached because of weather conditions.

Because of all those various factors there is a great wastage of eggs before they reach the hatchery. Most of the figures that have been compiled to support or to defend artificial propagation are based only on the eggs that reach the hatchery and fail to record or credit the eggs that are wasted entirely, which, in my judgment, as I said before,
is perhaps 85% of the total potential take.

There is one thing more I would like to say with regard to our regulation on Lake Michigan. The season opens on November 11th under the present law. There is a provision in our statute which extends that closed season five days when the other states fronting on Lake Michigan adopt and enforce a similar closed season. If that could be accomplished I think it would result in a saving of a very large number of eggs that are now being wasted, because those five days are important five days as they come right in the midst of the spawning season.

MR. DICKINSEN: Do you feel that the temperature or the weather in certain areas of the lake has anything to do with it?

MR. WESTERMAN: Oh, very definitely. That is one reason why the problem of Lake Michigan, as I view it, is a bit more difficult than it is in either Superior or Huron.

Michigan has a long north and south axis, so to set days to cover the spawning season in Lake Michigan requires a longer closed season than either Superior or Huron.

MR. DICKINSEN: I think you are entitled to know my position.

I am the Commissioner that asked for this meeting. I am opposed to taking the spawn. I think it is the duty of our Department to aid nature in her work.

I think in this particular work of taking the fish off the spawning beds we are working against nature's process of increasing its own and reproducing its own species.

On Lake Michigan we find that on the southern half the fishermen take about five times as many pounds of fish for a quart of eggs as in the northern half.

If I was operating as an individual I would take all the eggs in the northern part of Michigan, but I would be taking less fish for the amount of eggs. It looks to me that it is nothing more than a selfish movement of the commercial fishermen to get those extra trout for resale.

MR. WESTERMAN: That agrees pretty well with our feeling.

MR. DICKINSEN: I am just trying to figure it out for myself, personally, and applying it to a commonsense matter.
MR. WESTERMAN: Well, you are right, and I believe, as you say, it is a common sense matter. It is a matter of business with fishermen. They are taking out a larger number during the spawning season than any other time of the year.

We felt, when we were operating under the permit system, the situation frequently developed that it was really unprofitable to take those fish out of the water at that time, speaking of it now from the returns to the fishermen. In other words, marked gluts developed and prices were low, and it meant a profit to no one.

It has been our feeling that if those fish could spawn naturally and not be molested by fishermen at that time, that they are not going to leave the lake, they are going to be available to the fishermen at other seasons of the year at times when they would actually return more money to the fishermen.

Of course, it is unfair to the fishermen of one state, or three states out of four, to tie up their industry and have another state continue to take fish during that period.

I check with you, too, Mr. Chairman, in what you said about the southern end of Lake Michigan. In our state we have not got the time to organize any port collection of lake trout spawned south of Frankfort. Our eggs come from the north end of the lake.

MR. SPRECHER (Wisconsin): I would like to ask this question of Mr. Westerman and Mr. Culler:

Does the Michigan Conservation Department believe that sufficient investigation has been made as to the value of artificial propagation of lake trout to determine its abandonment?

MR. WESTERMAN: We would like to have more information. We are in sympathy with getting more information, but I feel that on the basis of what we have we are not justified in liberalizing the regulations.

MR. SPRECHER: Well, isn't it true that lake trout have maintained production better than any other species except carp and perch and a few such species as that, during the last sixty years? Isn't it true that that is the only species of fish that has maintained a propagation program?

MR. WESTERMAN: You say "better". I do not know that I can agree with you on that entirely.

Lake trout and whitefish are the only two species
on Lake Michigan that have been propagated at all, intensively at least, and we have had experience with whitefish, since you mention that.

Whitefish went down to a point under intensive fishing, and we feel in our state that trap and net fishing was to quite a degree responsible for it — to a point where there were practically no whitefish available during the spawning season. The closed season we have on whitefish protects them, so there are no whitefish eggs available in Michigan during the closed season.

However, we have witnessed in recent years that whitefish are increasing in production without any artificial propagation.

MR. SPRECHER: Didn't artificial propagation on whitefish cease about 1930.

MR. WESTERMAN: Yes.

MR. SPRECHER: And since 1930 hasn't the production of whitefish gone down to an all-time low?

MR. WESTERMAN: Yes.

MR. SPRECHER: How can you say then that whitefish has increased?

MR. WESTERMAN: I say we have gone down to the low and now we are commencing to climb the hill again. We are coming up.

MR. SPRECHER: You are commencing, but you do not know how high that hill is going to be.

MR. WESTERMAN: No, of course not.

MR. SPRECHER: Isn't lake trout on the increase also?

MR. WESTERMAN: Well, lake trout maintains itself fairly well.

MR. SPRECHER: Well, now, if artificial propagation is detrimental why shouldn't lake trout have gone to an all-time low instead of maintaining itself better than most other species of these commercial fish.

MR. WESTERMAN: I don't think it has maintained itself any better than some of the other species.

MR. SPRECHER: What other species?
MR. WESTERMAN: Well, from the standpoint of production perhaps but not so from the economical standpoint because lake trout are worth more. But from the poundage standpoint take, for instance, smelt. They have not been propagated, and see where they went through natural reproduction.

MR. SPRECHER: Where are they now?

MR. WESTERMAN: Well, they are down, because of a very serious mortality last year, but you can't charge that off either for or against propagation.

MR. SPRECHER: I do not believe we can consider smelt.

MR. WESTERMAN: Why not?

MR. SPRECHER: Because smelt are an exotic species. They were not native to Lake Michigan.

I do not believe we can consider perch because their spawning habits make it unnecessary to artificially propagate perch. I do not think we can consider carp because they are, too, an exotic species. On the contrary, we can consider trout, whitefish, and herring, and chubs as native species of Lake Michigan. I do not know how you can consider smelt or perch as they are an entirely different type of fish. Their spawning habits are entirely different.

Lake trout do not run up the stream to spawn like smelt. Perch spawns on the surface.

MR. WESTERMAN: How about chubs?

MR. SPRECHER: Well, as I understand it, there are about 100 different species of chubs in Lake Michigan spawning all the year around. I do not know anything about chubs. But I do know from the report of the committee on Great Lakes Investigation, the International Committee, that lake trout have maintained production, and it is now 90% of the average for the forty-two years reported. Lake trout have maintained themselves. The production of lake trout has maintained itself better than any other commercial species on Lake Michigan.

If artificial propagation was detrimental why doesn't the production of lake trout go down to nothing?

MR. WESTERMAN: I do not think I said it was detrimental.

DR. HAZZARD: Maybe it is in spite of artificial propagation that that is happening.
MR. SPRECHER: Do you believe that sufficient investigation has been carried on?

DR. HAZZARD: I will tell you what I would like to suggest. Of course, it won't be considered. But a very much simpler way to get at the answer to the problem would be to discontinue all propagation, say, for a five-year period, and then by that time we will have some results, and we can take it up again.

MR. SPRECHER: Will you agree with this suggestion: That we continue artificial propagation until sufficient evidence is obtained to prove that it is wrong?

DR. HAZZARD: Well, that is one way you could do it, or you could discontinue the planting, say for a two-year period; plant heavily the next two years; maybe on an alternate program. You could see the result of your catch records.

MR. SPRECHER: In my experience, the smaller the body of water the more rapidly you can obtain information on planting of fish.

You take a little lake of two or three acres, or take a small trout stream and you can immediately see the results of planting. The larger the body of water the slower those results become evident. I think you will find that true all the way.

MR. DICKINSON: Isn't it true that that is due to the fact that you have not planted the same amount of fish per acre?

MR. SPRECHER: I think so.

MR. WESTERMAN: Mr. Sprecher, on Lake Superior, as far as Michigan goes, we have done very little planting of lake trout in the last ten years, and yet the production maintains itself just as well there.

MR. SPRECHER: Well, I maintain that there has not enough investigation been carried on in Lake Superior. We have only a very small section of Lake Superior. There is Canada, Minnesota and Michigan.

MR. SCHNEEBERGER: We might just reverse the question and ask: What investigations have the fish culturists made to show that it has been necessary to even consider artificial propagation?

MR. SPRECHER: I will answer that question by saying that the fish culturist is not a fact-finding individual. He takes the facts and goes ahead and plants according to those facts. The investigator is the man who is supposed to find this information, and it is my opinion we need more investigation and we need more information before we discontinue a program that is apparently successful.
CHAIRMAN GRAY: What is Illinois' program?

MR. HUNT: I heartily agree with you. Until we are shown we are doing the wrong thing I do not think we should endanger ourselves and stop the artificial propagation of trout because we do not know today where we are.

I believe everybody is agreed that if we stopped for five years that we would have to spend fifty years bringing it back. Until we know more about it I think we should continue.

CHAIRMAN GRAY: What is Illinois' program for this year?

MR. HUNT: We take trout spawning.

CHAIRMAN GRAY: How do you take it?

MR. HUNT: By the fisherman.

CHAIRMAN GRAY: I mean by boats?

MR. HUNT: By those that desire to.

CHAIRMAN GRAY: You issue permits?

MR. HUNT: That is right.

CHAIRMAN GRAY: How many permits will you issue this year?

MR. HUNT: We follow the same program that you fellows do up there.

CHAIRMAN GRAY: When do you start; just as soon as the eggs are ripe?

MR. HUNT: That is right.

CHAIRMAN GRAY: And you propose to hatch this year how many eggs?

MR. HUNT: From 225 to 250 million.

CHAIRMAN GRAY: And you plant them in the fry stage?

MR. HUNT: I would like to ask this question: Do you think it is possible to take those young trout out of the spawning bed when the eggs are collected? Do you think it is a practical thing to do? I would like to know a little bit more about it.
MR. CULLER: It depends a great deal on how the fish are planted. If you hatch your fish in water possibly 12 to 14 inches in depth and then you take them out and put them overboard and they go down to water that is 60 to 150 feet deep, as to what happens to the yolk sac of the fry, whether or not it is ruptured by the sudden descent into that depth of water, is undetermined.

MR. HUNT: We hold all our fishes until they are beyond that state.

MR. CULLER: Until they are advanced fry?

MR. HUNT: Yes.

MR. CULLER: I still contend that the larger you can rear your fish the better success you are going to have.

MR. HUNT: Well, that is true of all fish.

MR. CULLER: Except in fish cultural practice.

Am I right on that, Mr. Westerman?

MR. WESTERMAN: Yes, I think so.

MR. SPRECHER: In reply to your question as to what happens to those fry when they are dropped down to 120 feet of water after they have been in the hatchery and they have arrived at the stage of stream fry, that is, with the yolk sac absorbed, we ran several experiments this spring on that and we found that twenty-one out of twenty-four of those fry survived two or three weeks in a screened box in the bottom of the lake at that depth.

MR. HUNT: That trout goes to those spawning beds to spawn.

Don't you think that the natural thing to do is to release those young trout on those spawning beds? That is where they would be if they were hatched in the wild state.

MR. SPRECHER: Yes.

CHAIRMAN GRAY: What is Indiana's program? Do you have any spawning beds?

MR. MOSBAUGH (Indiana): Indiana has one fisherman that operates extensively in lake trout and only one, Bob Ludwig of Michigan City, and he fishes largely in Michigan waters.

We are not hatching eggs at all. We have no program of any type.

CHAIRMAN GRAY: When do you let him fish?
MR. MOSBAUGH: I will refer that question to Maurice Lung of our Department.

MR. LUNG (Indiana): Our season is the same as Michigan's.

CHAIRMAN GRAY: Then you allow fishing as soon as Michigan's season opens?

MR. LUNG: Yes.

CHAIRMAN GRAY: And no disposition is made of the eggs that are taken? They are thrown away?

MR. LUNG: We make no disposition.

DR. T. H. FRISON (Illinois Natural History Survey): May I ask a question? I am just curious about this from a biological standpoint.

What is the theory of this propagation? Is it the theory that these females that you catch wouldn't do a good job of spawning in their native waters? What is the fundamental theory that necessitates taking those fish out of their environment to get these eggs, and then put them back? I am just trying to get the fundamental biological theory that must be underneath that program.

MR. SPRECHER: My answer to that is that we have not sufficient information on lake trout to answer that.

DR. FRISON: Well, in most other species you do not do that.

MR. SPRECHER: In the case of walleyed pike I can tell you what happens to them. I have seen it with my own eyes. Most of them are washed up on shore and disposed of in that way. I would say in nine years out of ten that I have checked I have found that the rest of them are eaten up by minnows, and perch, bull-heads, and other species of fish that eat spawn.

DR. FRISON: Then you think there is a probability that lake fish may perhaps run contrary to most other organisms as regards this process of reproduction?

MR. SPRECHER: I firmly believe that since 1931 we have had only one year where the wind velocity was not enough in the inland lakes to wash the eggs up on shore in such quantities that at least 95% of them were lost in the case of walleyed pike.

MR. WESTERMAN: We had a rather peculiar experience with walleyed pike.

Ten or eleven years ago we built a hatchery on one of our northern lakes, Lake Gogebic, in the upper peninsula, with the cooperation of some county farms. In other words,
the community was sufficiently interested to share in the financial cost. We have been operating that hatchery for the last two or three years. We never took the eggs out of the lake. We did transport eggs up there from Saginaw Bay. But we haven't been able to satisfy the people interested in Lake Gogebic that natural reproduction is ample in that lake so that additional planting there is not needed. That lake has been studied quite carefully by Dr. Hazzard's staff. In fact, that was the basis for establishing that wall-eyes were naturally reproducing themselves in Lake Gogebic.

MR. DICKINSON: I think there has been enough said here tonight to indicate that we have not got enough information, and I do not believe at any time we are going to have enough information on all the species. As we go along we are going to have more and more technical information, and there should not be a let-down in that.

The purpose of my recommendation to our Department was to find out if we can get more technical information and to find out whether it warrants the expenditure of money which we are putting in for the propagation of lake trout.

In our state we are taking our funds from sportsmen's licenses, the hunter and the fisher, and the fellows who are getting the benefits are the commercial fishermen and they are not paying the bill.

I feel that each division should be maintained out of its own resources. If they want to propagate lake trout the commercial fisherman who gets the benefit of the propagation should pay part of the bill.

CHAIRMAN GRAY: I have been watching this thing for twenty years. I am not a technical man, but my practical observation is this so far as hatching is concerned:

I believe that it is necessary to hatch brook trout, rainbow trout, and brown trout, because I do not believe the condition of the waters in certain parts of our state are such that they can naturally reproduce those in any great quantities. I think it is necessary to conduct hatcheries to maintain your species.

Insofar as the Great Lakes are concerned, I am thoroughly convinced that the pressure that we get in Wisconsin from commercial fishermen is for the sole purpose of their making a little extra during that period. It is a money-making proposition with them. I do not believe in putting pressure on them. I probably would do the same thing if I was one of them.
MR. CULLER: Well, our station in Charlevoix made the recommendation that I was talking about a few minutes ago.

The great trouble is that the percentage of eggs that we would get from the commercial fishermen is so small, and that there was a large poundage being taken out of Lake Michigan in proportion to the number of fry that were being returned, that it was always a question in my mind whether it was not lower than would happen under natural reproduction.

MR. DICKINSEN: What poundage would you think would be proper for a quart of eggs?

MR. CULLER: Well, I wouldn't say.

MR. DICKINSEN: Have you any idea?

MR. CULLER: No, I do not. I wouldn't say right now.

MR. DICKINSEN: Do you think you have made any progress?

MR. CULLER: Well, as I understand it, from the statistics that have been taken, they show that while the poundage of fish taken from the Great Lakes has maintained itself, whitefish and lake trout have not; they have decreased in poundage. I do not know whether I am correct in that, or not. Maybe Dr. Schneberger can tell you a little more about that. That is my understanding.

CHAIRMAN GRAY: Mr. Sprecher made some tabulations on that.

MR. SPRECHER: My statement was, in 1939-40 it showed 90% of the 42-year average. That was reported in the investigation.

MR. CULLER: In other words, it had declined 10%?

MR. SPRECHER: From the 42-year average.

MR. DICKINSEN: Even with a propagation program?

MR. SPRECHER: Even with a propagation program. That was much less than the decline of other commercial species taken over that same period.

MR. CULLER: Well, may I say this: I am still of the opinion that we should carry on the investigation in regard to lake trout, and that the fish should be marked so that we know where we are going. As it is now, we are just on our way but we do not know why. Let us carry on the program to see
just what the reasons and the results are and whether we are going any place in the planting of lake trout fingerlings. We do not know.

At Charlevoix, for instance, we are planting approximately 960,000 fingerlings a year. We do not know whether we are contributing to the fish population of Lake Michigan, or not. We know they are not doing any damage when we plant fish that size, and that when you plant fish that size they have a better chance of survival, I would say ten to one, or even a better percentage of that, than if they had been planted in the fry stage.

MR. DICKINSEN: But you have not done any damage taking those fry off the spawning beds?

MR. CULLER: It has always been my conclusion that there was too many pounds of fish taken off the spawning beds in proportion to the fish that are going back because of the fertilization of the eggs.

MR. WESTERMAN: You are saying, in other words, just about what I did.

There is little justification for taking those eggs, but if fishing is done during the spawning season they ought to try to take care of that.

MR. CULLER: Before and after the season we should take care of it.

MR. WESTERMAN: There is one other thing I should like to say to rather supplement what Mr. Gray said here.

I feel that the artificial propagation of brook, brown and rainbow trout eggs really supplements a natural reproduction. We are not going out on the streams to harvest a natural crop there. They are entirely in addition to natural reproduction. But on this lake trout work we are destroying, I said, 85%. We are only harvesting, you might say, 15% of the eggs. The others never reach the hatcheries. And trying to justify that kind of a program. I think that is an important distinction to be made.

CHAIRMAN GRAY: And you are also destroying the female trout at a time when she is easiest to catch, and the male, too.

MR. SPRECHER: Mr. Chairman, may I have an answer to my question? I directed my question to Mr. Westerman and Mr. Culler. As to whether or not he believes that sufficient investigations have been conducted on Lake Michigan to determine whether or not the artificial propagation of lake trout is of value.
MR. CULLER: No, I don’t believe that sufficient investigation has been accomplished. I will agree with you on that.

MR. SPRECHER: Well, do you believe sufficient investigation has been conducted to determine whether or not the planting of fingerlings is more economical than the planting of fry?

MR. CULLER: I will grant you that. Over years of experience I would say that the logical thing to do in planting fish is to plant them at a larger size in order to get the results that you wish.

CHAIRMAN GRAY: Can we agree on anything here that we can take back as a concrete result of this cooperative movement? Can we depend on you at Charlevoix to clip the fins?

MR. CULLER: No, you can’t, because we do not have the funds. We wish we had.

CHAIRMAN GRAY: Illinois can’t do it because they do not raise any fingerlings. Indiana is not in the picture. So that leaves Wisconsin, if you want to continue this experiment.

Well, if there is nothing further, we will adjourn.
Wisconsin Conservation Department

INTRA-OFFICE
MEMORANDUM

TO: Mr. Vanderwall
FROM: G. E. Sprecher
SUBJECT: Fish propagation discussion at Midwest conference

Date September 28, 1943

Pursuant to your instructions that I submit a report on any fish propagation discussions that took place at the Midwest conference which I attended, I am attaching herewith a verbatim report of the only discussion which took place on this subject.

Inasmuch as the reporter took this meeting in shorthand and as the discussion was relatively short, I requested a copy of that portion of the conference. Only one transcript of the meeting has been received.

G. E. Sprecher

GES:VT

APPROVED:

B. Worster
Mr. Webster

Mr. Gray

Mr. Vanderwall

[Handwritten note: suggest copy be sent to members of commission and to Mr. Gray, also Patterson]