Oral Interview With
Nels Thoresen
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Nels is a retired fisheries biologist from the Department of Fish, Wildlife and Parks.
Let's start out with a little discussion of where you were born, where you grew up and where you sent to school.

NT: I was born in Great Falls in 1920. We didn't live in Great Falls very long and mostly I went to school out in the country school here and I went to high school in Belt and graduated from high school there in 1938.

AW: Did you decide on a career in fisheries at the time you were in high school or is that something... tell us how you got into it later on.

NT: Well, I was in school in Utah State, the university in Logan, Utah, and they had a newly formed fisheries section there and the wildlife school and the school of forestry. I worked for a short time during the summer and so on for the Utah Department of Fish and Game. I just sort of went into the work there.

AW: You were in forestry to start with and then decided on fisheries when it was available?

NT: Yeah, that's right.

AW: So you got into the fisheries field while you were in school. How did you happen to go to work for Montana rather than some other state?

NT: Well, there was an opening. They felt the need for knowing more about farm ponds in the state; they were getting a lot of inquiries about problems developing in farm ponds -- fish

kills and things like that. There was an opening for a two-year study of farm pond conditions. It was working with Dr. C. J. D. Brown at the Montana State University in Bozeman. I started doing field work on a statewide basis, trying to run down farm pond conditions, physical, chemical and biological so we could know a little bit more about that resource.

AW: But you were an employee of the Fish and Game at that time?

NT: Yes, I was hired by the Montana state department of Fish and Game.

AW: How many other fish biologists were working there when you went to work?

NT: Just two. Chuck Phenicie headed up the fisheries and Clint Bishop was working with him in Helena. That's all.

AW: Was Opheim anywhere in the state at that time?

NT: No, he was still at Utah State when I left there.

AW: I know when I went to work there was you, Clint, Chuck, Opie and Frank Stefanich. You were the third one, then, the third biologist.

NT: Right. There was a crew of men working on Prickly Pear Creek, mostly on studies that was directed out of Montana State University and I think Frank Stefanich worked on Prickly Pear for a while before he became a biologist for the state.

AW: Well, I believe when I came to Miles City in '51 you had just finished this survey of the physical, chemical characteristics of farm ponds and were at that time going to be headquartered at Belt as a district biologist. Is that right?

NT: That's right. We were spread out so thin around we didn't have people enough to concentrate very much as far as the overall conditions for fisheries in the state so it didn't really matter where I headquartered I mostly worked out of Bozeman on the farm pond study I'd be gone from Bozeman for maybe a month checking up on a series of ponds I was working on statewide.

AW: Then about the time I came to Miles City you must have been off of that farm pond study and working on more things specifically in this district.

NT: That's right I was district biologist.

AW: What year did you start with Montana? Do you remember? I started in '51, July of '51 in Miles City.

NT: '48.

AW: After Chuck did.

NT: Yeah.

AW: Well, we were spread so thin, as I remember we did a lot of working together. I can remember coming from Miles City to work with you on things that require more than one or two people, as most fisheries things do.

NT: That's right.

AW: In fact, one of my first memories was coming up here, I think we were going to get some northern pike for my district and there was a crew shocking up on the Sun River that you and I were to assist on. The crew from Helena was running the shocking. I think we shocked a tunnel, didn't we?

NT: That was a fish supply canal. There was a Sun River Irrigation Project and there was a big supply canal that takes off out of the Sun River and flows down into Pishkun Reservoir. There was a lake along that supply canal that was formed just by leakage from the supply canal and it had been planted with northern pike. There was no record of that plant, but it was a source of eggs and when you come up, Art, from Miles City, why we were up there working on that project trying to procure some eggs from those northern pike.

AW: As I remember it was a cloudy fall day a lot like this one today and you took me up there; I'd never been up to the east Front, the east slope before, and because their first shocking operation was in that tunnel at the base of Gibson Dam I can truthfully say I saw the inside of the east Front before I ever saw the outside.

NT: Right. When they shut the supply canal off the fall of the year, there was a lot of fish stranded in the low places where the water couldn't drain out of. We shocked that to make a determination of the extent of fish that were left in the supply canal when it was drained.

AW: Well, one of the largest projects the division ever did in the early days was the Marias, which was in your district, and I believe your brainchild. Would you like to talk about how you got the idea and the plan to start that big project?

NT: It was really Walt Allen's brainchild. We knew that Tiber Dam was going to close off and impound the Marias and that summer and because there was so many carp and other rough fish up in that drainage, we were trying to get ahead of the carp and we were trying to finish that problem. We were in a meeting in Cut Bank when Walt Allen said we'll kill that carp off. It wasn't really my brainchild; it came from Walt in a preparatory move to keep Tiber

from getting a good start with carp as soon as it was closed. And we kind of drained all the resources we had in the state to do that job. We covered a lot of miles and everybody said if we had any inkling there was any carp, why we'd go after them and kill them out. We found carp as far as up Cut Bank Creek as far as north and west of Browning. Cut Bank, Two Medicine and Bauger Creek.

AW: Well, as one of the people in charge of it you probably had a lot more headaches with it than a lot of us that just worked on it as kind of labor. I can remember sometimes we all thought we were using powdered cube root or derris root that was not harmful to anything but animals who breathe with gills but then we found out after we got into this thing that this stuff had toxaphene in it and we'd already started down the drainage. Did you worry a bit when we were headed for the water supply intake of Cut Bank, which was the Governor's hometown at that time?

NT: I surely did. We made arrangements to go through there at a time when they weren't pumping, but being that the water upstream from Intake and the Cut Bank water supply we knew that the material we were putting in the stream was going to enter that water supply. The thing we didn't know was that there was toxaphene in that product at that time.

AW: That's right. That's something we didn't learn until later that fall, I believe. Or else we wouldn't have had our hands in it as deeply as we did.

NT: That's right. We got rather intimately associated with it, that toxicant.

AW: It was in all our trucks I think. In fact, I can remember even having it piled up in the truck I was sleeping in a time or two. You had crewmembers there? Can you describe some of the places where they had to spend the night?

NT: Well, they had the Cut Bank airport and there was a hangar there that they didn't have any airplanes in so most of us slept in that warehouse, that hanger, and worked out from there. It was sort of a focal point of where the project got started and later on we were working further south and part of the crew was just camping out and working days and going back to where the camp was at night.

AW: I described the project once in a short article in Bear Facts and Fishtail that it was a summer where most of the fisheries division spent most of their time walking between the eastern boundary of Glacier Park and the Tiber Dam site not once, but several times. Do you think that covers the area pretty much?

NT: Yes, that's pretty accurate. The carp were resistant; the other species of fish were easier to kill than carp, we had to hit them pretty hard to make sure we killed them all. Of course, we couldn't really hope to do. But surely we reduced the population by a whole lot by the time Tiber Dam was closed.

AW: Figured the project bought several years of good fishing in Tiber, better than it would have been without it, as far as carp are concerned. How about goldeye? Were you successful with goldeye?

NT: Goldeye were one of the easiest to hit. When we put some more toxicant in that stream, as soon as it started downstream, goldeye started turning up and by the time we worked the stretch of river or stream, goldeye were all gone. There was a little sucker that seemed to be a good indicator of how effective we were and we'd watch for them and as soon as we found them, we'd reslug the stream and work on down from that.

AW: Well, most of the crew were fisheries and I remember we had some folks from some other divisions too. We spent a lot of time up there and I remember some of the married ones weren't too happy about the length of time they got stuck up there. As a supervisor of this project you must have had some personnel problems I wasn't aware of as one of the workers on the crew.

NT: Yeah, that's true. Vehicles, too, was a problem. We were dealing with some pretty long distances and if the worker was going to be effective he had to have a vehicle and that took more vehicles than we had on hand. We had vehicles from the hatchery, spare vehicles from Helena.

AW: You had a problem in scheduling those vehicles, too, because you had crews going down the river that had to leave vehicles to the starting point and then somebody had to move vehicles to pick them up when they come out.

NT: Yes, the logistics of the project were such that it was really hard to be effective all the time. To have supplies in vehicles at the place where the fellows were working. We went into every possible place where we could find carp, even some of the smaller streams. Any backwater or anything, there'd be carp in there. We'd come by the head of Lake Frances. Lake Frances, somehow, was devoid of carp, although there were carp practically right at the intake canal that fed Lake Frances. And I don't know that we were so lucky that we didn't have carp in Lake Frances because that's a good sized body of water and it would have been a lot more difficult to see that they were killed in Lake Frances. But by the fact that they were near the inlet there wasn't carp in Lake Frances and there hasn't been.

AW: And there's still carp-free today, is it?

NT: Yes, Lake Frances has got to be a pike fishery now but back in the days before this project, why we had kokanee in there and rainbow trout and it didn't have the carp problem. Lake Frances had a lot of shallow areas that carp would have really muddied up and been a detriment to that fishery. Lake Frances has been a very good fishery throughout the years.

AW: I remember one of the preparatory jobs for that Marias project. I think one I worked on a little bit the year before was Kipp Lake. Do you want to go into that a little bit?

NT: Yes. We had found that Kipp Lake was saturated with carp and a few other bodies of water along the Great Northern Railway. They built these reservoirs, the water intakes for the steam locomotives they were running; there were oriental people working on crews along the railroad and they saw to it those reservoirs were planted with carp. So we started out with Kipp Lake it was a fair sized body of water and it was completely filled with carp; Cut Bank Browning sportsmen went to Pike Lake and got some northern pike to put into Kipp Lake to try and control the carp population in there. Kipp Lake didn't fair too well although some did live; they weren't contributing to any kind of a real decent sort of a fishery but they were present and when we killed Kipp Lake as the first step in this Tiber project. And we didn't know exactly how to go about it. We had such a short interval of time every morning to put the toxicant into the lake because the wind would come up and blow us off the lake by 10 o'clock so in order to do the job in a relatively short time, we decided to do it with airplanes. There weren't many dusters in the area, lots of spray planes, but none that were dusters, so we made arrangements with a flying service in Choteau to modify one of their planes, one of their Ford trimotors so we could put the kind of toxicant we had into the lake and get that job done in a relatively short time. We had a kind of crude modification, a hole in the bottom of the plane and we mounted a 55-gallon barrel over the top of the hole and different crews would kind of take turns on flying and running the toxicant through this barrel.

AW: We made a venturi -- as I remember, it was supposed to suck it out.

NT: Yeah, and that worked reasonably well, the venturi was where we had the hole lined up with the hole in the bottom of the barrel and each pass over the lake we could put enough through that venturi to cover a good swath.

AW: I remember there was a piece of stovepipe that fit the hole in the bottom so you could shut it off and then somebody would pour the barrel full except for that stovepipe. And then the guy over the barrel--. When the airplane was completed its turn and it was over the water the pilot would signal and the guy over the barrel would pull that up and hope that the toxaphene went out.

NT: It was fairly successful, a maybe rather crude arrangement, but it worked and we got a complete kill on Kipp Lake which was sort of a challenge because there was so much carp in that lake it was necessary to cover the shallow water areas and all of it and by doing it with a plane, why we were able to the skunks came along following our kill and packed--. There's caves and stuff around by the dam with dead fish.

AW: It must have been rather unpleasant for the locals around there then.

NT: Well, fortunately, there wasn't anyone who lived real close to Kipp Lake.

AW: So that was a complete kill. I think we were lucky that there wasn't any damage to the crew cause I remember once in a while that toxaphene was moist enough it would bridge over and then when the venturi got to working right it would blow the stuff back into the airplane. I can remember having a pretty good mouthful and face full of that dust a time or two.

NT: Well, I think we were pretty lucky a lot of times when we were putting that material out. Cause as you mentioned before, it wasn't just rotenone in that product and handling toxaphene--. When we were handling toxaphene in liquid form we took great precaution not to expose the people who were doing it.

AW: Rubber gloves, face masks, all that stuff with liquid toxaphene, as I remember.

NT: And here we were using this fishtox, which was rotenone, but it did have toxaphene in it; it made it an effective long-lasting toxicant for killing fish but fortunately we didn't harm any of our people. If there'd been an EPA they wouldn't have spent five minutes on that method of application and they'd just shut us down.

AW: I'm sure, Nels, if there'd been an EPA, an OSHA, or an employee's union at that time, that job would never have been done.

NT: That's true.

AW: Well, part of the Marias job was poisoning, but part of the job was planting. That planting crew used airplanes, too, didn't you?

NT: Yeah. They--. We planted rainbow trout pretty heavily in the drainage in the following year. One thing working with flowing water the toxicant didn't persist over the winter; it cleaned itself out relatively fast. So many other projects we had in the area the toxaphene that was in that product persisted throughout the winter and into the spring.

AW: Didn't you replant some of the Marias that same summer we were poisoning as soon as the slug was out of the area?

NT: That's right.

AW: In fact I remember, it seems to me, the planting crew got so much ahead of their own schedule, they overran the toxicant crew and we killed off a bunch of the fish we'd just planted.

NT: That's right. Yeah.

AW: I think I remember a statement you made to the sportsmen that time. Someone asked you

what all these people were doing up there and you said, "Well, some of them are planting them and some of them are unplanting them, but they're all keeping busy."

NT: That's right.

AW: Well, that's a project that will never happen again but for those of us who were there it's like having been in a war; it's something you're glad you did but you just as soon not do it again. Well, let's back up to when you first went to work for Montana. You mentioned getting on a farm pond study. How did you apply for the job; were your interviewed; how did they make your selection?

NT: Well, the job opened up. It was a cooperative kind of a job born of need. Montana State college in Bozeman we were getting a lot of inquiry about conditions in farm ponds and if there was trouble, if a farm pond killed out, they'd inquiry as to why it happened, why did it kill out. Information was needed as to what the condition was out there in these ponds throughout the state and so between Chuck Phenicie who was the state fisheries biologist, the first one they hired, he was faced with the same kind of questions so they decided they needed a project to determine what the condition was in these ponds throughout the state. There was a job opening and I was looking for a job. I'd just completed the requirements for graduating with a Master's Degree and there were a few job openings around the United States; there were some in Wyoming and West Virginia. This job in Montana I guess we learned by the grapevine I guess that this project was being set up. At the time there wasn't a fish and wildlife section of the college, there were only really two in the west at that time. One was in Oregon and the other was in Utah State and I was just finishing my work at Utah State when I applied for the job and got it.

AW: Did you have to come up to Montana for an interview; did you have to take any examination or test?

NT: No, I didn't; I didn't have to take any test. I did come up for an interview with Chuck Phenicie and I was hired.

AW: Well, when you first went to work what kind of equipment did you have? People today have a lot of new and fancy stuff. I know when I started I had a few hand-me-downs. I imagine you had a few things that didn't fit quite right, too, when you started out.

NT: Well, the most important thing I had was a chemical kit that I could determine oxygen and alkaline and things like that. I didn't have much of a boat. I had a war surplus rubber life raft; I was assigned a vehicle. Archie O'Claire was the director and the state game warden at that time. When I reported for work he gave me the keys to this vehicle and we went out and looked at it and he said, "The girls have checked it in the front office." Nobody even looked at it before. It was a Ford panel truck with a three-speed transmission in it. It would go down the road like a scalded cat but it wouldn't pull up the smallest hill. That was my vehicle that I covered most all the counties in Montana.

AW: And you weren't just driving it down the highway, you were going on back roads, gumbo roads, uphill, downhill. Did you have to have it pulled out by a rancher once in a while?

NT: I can't remember getting in so deep that I had to be pulled out but I did put on chains a lot of the time. The vehicle was--.

AW: It was kind of nice; the reason I know about that vehicle is that's the one I was assigned when I started in 1951 and I often wondered why you were smiling so much when you gave me that vehicle -- you knew all about it. I did have it pulled a couple times. Just like Nels said, it had lots of power for going down the flat road, you could put it in second gear at 55 miles per hour with no trouble at all, but sometimes you had to get up the hill.

NT: I just mentioned a lot of the work getting to these ponds was off the beaten path; just maybe a single track road off across the prairie. I concentrated quite a bit on ponds up in Phillips Valley area because the resettlement administration during the early '30s had built a lot of ponds, a lot of reservoirs to water cattle in that south part of those counties. They moved people off the farms, or off the places that were out there scattered all over the southern parts of those counties and they moved in along the places along the Milk River and threw that into an open range condition out there where they'd summer their cattle out there and bring them into the Milk River bottoms during the wintertime, but it made a good place to plant fish. Fish were planted in a lot of these resettlement reservoirs and the records of planting weren't all that great. There was a couple of fellows that lived in Malta that were kind of in the fish planting business. They'd seine some fish out of an area, put them in cans and stuff and take and plant these ponds; some of them took off wonderfully well but others didn't. Then there was fish coming out of Miles City, mainly bass and bluegill. So when I come along, I got a hold of some records from Miles City and then from department people in Malta I'd find out what reservoirs had been planted and I'd go there and check the reservoirs. I'd check the alkalinity in the water and the oxygen and so forth. And I'd put out some gill nets and get some idea of how well the fish had done, whether or not they were still in the reservoir or had died out.

AW: You had to use this rubber boat you mentioned, this war surplus riverboat to do these things-- gill net setting. Most of the folks today are used to rubber boats that are used on rivers with wooden bottoms or inflatable bottoms. Do you care to describe the rubber boat you had and the problems you had? How did your chemicals set on the floor of that boat?

NT: Very precariously. I would get out and take a sample and sit there in that boat and try and run those tests. Scatter out some of the chemicals that I had sitting there bobbing around in that boat and trying to run these tests.

AW: One of those chemicals as I remember was concentrated sulfuric acid and the bottom of that boat was not much more than a couple 1/16 of an inch of plastic. I had the same problem

you did, that's why I bring it up. Did you ever think what would happen if that bottle of concentrated CO2 fell over in the bottom of your boat?

NT: Well, there was one of the chemicals that was pretty strong and you were going to pysette it. I remember once I was sitting there and a gust of wind come up and I got it into my mouth and it took the skin off the top of my tongue and I took a piece of cheesecloth that I had there and tried to wipe it off my tongue and it did away with the cheesecloth.

AW: You have a picture of the summer boat and the gill net. Long time ago I saw one. It's rather priceless. For the folks who are listening to this: one of the things you want to do with a gill net to make it work right is set it in a straight line. Straight and fairly tight. And one thing a rubber boat will not do, particularly in the wind, is go in a straight line. Do you still have that picture of the riverboat and the S-shape of the gill net?

NT: I think I probably do. Like you say, I set a lot of gill nets that weren't stretched out as taut as they should be. But I wasn't trying to do a quality thing, I was mainly trying to see if there was any fish in there, their size and so on to determine if the plant that had been made was successful and that the pond wasn't devoid of fish.

AW: Right. You were worried about presence or absence, not numbers per net set or any quantitative number.

NT: That's right.

AW: Well, can you think of any other reminiscences from the early days you'd like to leave for the record?

NT: When we conducted this farm pond survey over a couple year period and gathered enough information so we generally knew a little bit more about what the conditions were in these farm ponds, we come up with some figures of what the physical features of a pond was going to have to have in order to sustain fish. A bulletin was put out; we put together the information and Dr. C. J. D. Brown and myself put out this bulletin and a lot of what was in there was general but it did pertain to the information we gathered throughout that period. When that was over I was assigned a fisheries biologist job that pretty much mostly contained the central Montana area. It was nearly half the state; we had a biologist at Flathead, or at Kalispell, who worked the western part of the state and I was working most of the eastern part of the state.

Additional Information - September 28, 1993

AW: At this point, Nels became too tired to continue so we stopped for the day. The following day he said he had covered all the ground he wanted to, so this ends this interview.

Transcribed by Margie Peterson
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