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[00:00:00] **Speaker 1** Okay, we're set. Well, I guess let's start with, can you kind of sum up what we were doing, what was the point, the goal, and then the methods for what we're doing.

[00:00:10] **Speaker 2** Yeah, so today you came out on the Lake Winnebago Bottom Trawl Survey. It's a survey that has been conducted with the same methodology since 1986. It really samples pretty much every species and I guess life stage of species that exists out there where we're able to trawl using that gear. But kind of the main objectives for us, some of the first questions you get when you go out where. Really looking at the year class strength for walleye as well as a lot of the other game and panfish species that people target on the system here. So that's essentially the number of the smaller individuals that you catch, you know, the more smaller ones, the ones that were born the previous spring. So I call them young a year, often abbreviated as Y-O-Y.

[00:01:05] **Speaker 1** The whole thing or just? Yeah, the whole

[00:01:07] **Speaker 2** Oh, that's fine. I could probably do it better.

[00:01:10] **Speaker 1** So it's called a bottom trawl survey.

[00:01:15] **Speaker 2** Yes, yep.

[00:01:16] **Speaker 1** So you were talking about how long ago did it start?

[00:01:18] **Speaker 2** So the bottom trawl survey in its original, or I guess in its current modern methodology started in 1986. The research vessel that you guys are out there on today was actually part of a much earlier rough fish removal program. And that kind of dates back, I think it ended around the 70s. But now that vessel is used primarily for, actually it's really only use that we have for it now is the Winnebago bottom trawl survey. And again, it samples. Pretty much all species that you find out in the lake, some species are gonna be more geared towards being observed in the trawl. It's really good at documenting walleye population numbers, the young of year catch, so the year-class strength, basically the more fish that you catch, the small ones that were born the previous spring. It tells you that they had a successful spawn if they're caught in high numbers. You can then even then look at recruitment. Of those young of year fish comparing the young of year catch from, say, 2022 to the yearling size catch of 2023. So you can look at recruitment that way. It really just gives us a good way to keep tabs on the, you know, multiple fisheries, all the different species, you now how they're doing, how the reproduction is going, what the adult population is like, what size structure is like. And gives a lot of insight to anglers as well. We put out that report, usually comes out around November and I typically get some phone calls and emails asking for it before it's actually out there.

[00:02:51] **Speaker 1** This what we got today is not the only survey like you do this multiple times and average them out it's not just the one day that you're out there and what you got that day

[00:03:00] **Speaker 2** Yeah, so Winnebago is a absolutely massive body of water. It's the largest inland lake in Wisconsin. It's about 137 some thousand acres. So it's kind of hard to wrap your head around if you're used to just like normal sized inland lakes. We also have the upper river lakes that are part of the system as well, but the survey does only cover Winnebego. Kind of scattered throughout the lake, we have 46 way points. Those are the same 46 waypoints we have. Been trawling on you know going back to 1986 to keep it standardized and comparable across all these years of data that we have and then we'll do it the first week in August the first week in September the first weak in October and then each one of those months we do the same 46 waypoints so they're essentially done in triplicate and we take the average of those three months to I guess write up the final report.

[00:03:47] **Speaker 1** I don't think a lot of people realize how much just counting goes into this.

[00:03:51] **Speaker 2** Yeah, yeah, there was, I mean, today you guys saw it, we had some extremely high catch rates for trout perch, which are these kind of small forage fish species. They're a highly utilized forage species for a lot of our sawed after game fish like walleye and sauger. And actually yesterday, the day before you guys came out, we had 16,500 in a single net pull. I think we were on the table counting for a good 20, 30 minutes there. Today we actually moved over to check weighing them as you guys probably observed and yeah if we kept on getting those really high numbers That's kind of what you have to do

[00:04:26] **Speaker 1** What is so significant about making sure that this count is comparable to the last 20, 30, 40 years of count?

[00:04:35] **Speaker 2** Well, I mean, for the standardization of it, you know, if you were to switch up your waypoints or do something different, this has been done the same way since 1986. If you change something and then get a different result, you really can't use it to compare. That's a really big thing in fisheries management in general, the standardization of methodology. And it's all relative. You know, it's trend data and it's relative to what has happened before.

[00:04:58] **Speaker 1** And so that's important for people to understand, because fishermen will think, well, they're hitting over here, or last year they were hitting over there, but you can't just go where you think they're hitting or where the word of mouth at either the bar or the bait shop is.

[00:05:11] **Speaker 2** Yeah, and that kind of gets into, I guess, like the the law of averages and why we have forty six different waypoints scattered all over the lake. And then not only are we hitting that, like, again, we're doing them in triplicate and taking the average of those. So, you know, maybe there's an off day and fish aren't in whatever location for whatever reason. That's why we do it in triplicated to get that average. And then if you do it the same way, again, law of average is everything comes together and it's comparable over the the long term.

[00:05:37] **Speaker 1** So what did you see today in terms of the number of walleye per net pull? Was that average, high, low? Yeah.

[00:05:43] **Speaker 2** Yeah, so currently right now in Lake Winnebago and the Winnebego system in general, we do have a above average adult walleye population. We had a very large year class in twenty twenty two. You guys probably saw today the biggest net pull of young of year walleye. Again, the young of your indicating the year class strength or how successful the spawn was. I think we had like thirty five in a net pull in twenty twenty two, we are having net pulls well over a hundred, you know, basically indicating that they had a various, very successful spring. The adult numbers are up, the average is right around five and most net poles we were getting between five and 10. So we do have a lot of the survey to go. We are also right on the west side here, right in the main lake. That is where we typically see a good amount of walleye. We can kind of get lower numbers on the north end and maybe the east side occasionally, but they can, you know, they move around and numbers fluctuate and vary. You could look at like the standard deviation of the data set between waypoints and it can be somewhat surprising actually. The young of year catch overall, you know, again, like people will be calling and asking like, hey, how'd the first week of the trawl survey look like? How's the year class? And it's like, as of now, we're probably sitting at above average hatch for Winnebago system walleye. That being said, you now those numbers could drop off as we move into the later months, so I don't really want to make any claims on it now. But yeah, the adult walleye population was definitely looking good above average for sure.

[00:07:09] **Speaker 1** So why didn't we see any larger walleye in any of the net poles? It seemed like there were a few leavened of maybe 14.

[00:07:15] **Speaker 2** Yeah, I mean, so the average size of fish on Winnebago, you know, you're really going to see fish between like 15 and 18 inches. You do see bigger fish. Like in our spring electrofishing survey, when we're up there during the spawn, we see fish as big as 28, 29 inches. They are relatively rare. It's definitely more of a, I guess you could say, like consumption or harvest oriented fishery around here. Really what the system is relying on is a lot of natural reproduction, and then the anglers most definitely utilize that resource. And people will, I guess, ask a lot about if adult numbers go down, that's actually not the most concerning thing that could happen on the Winnebago system. The most concerning would be the lack of production for a prolonged period of time. The system is absolutely massive. We have a... A really unbelievable amount of spawning habitat for these fish to utilize, and as long as environmental conditions line up the reproductive history of fish, not just walleye, but fish in general, it's to, you know, spew out a whole lot of eggs and then how many of them survive. So as long that can still occur and those fish can be replenished, the young of your catch, I guess, is what I'm getting at could be more concerning.

[00:08:29] **Speaker 1** You were talking about the size of this lake versus other lakes that most people will probably be on if you don't actively go fish Winnebago. And it is stunning to see, just the drone that we pulled out, just like the number of fish, period.

[00:08:42] **Speaker 2** Yeah, just the biomass of the freshwater drum that we get in the trawl is very, very impressive. I think if you look at the end results from the survey, it's well over 50,000 individuals each year. They're not small fish either. The trout perch, obviously, they're those little kind of forage fish type, but yeah, the drum, they range from nine inches to we get them up to 25, 26 on some exceptionally large individuals.

[00:09:08] **Speaker 1** And you also pulled a few sturgeon, and you scanned those. Looks like one came across as having been tested. Yeah.

[00:09:13] **Speaker 2** Yeah one of them did have a pit tag so Lake Winnebago is home to one of if not the largest lake sturgeon population in the world and if you you know want to take it into account like fish per acre or however like yeah maybe obviously great lakes are so much bigger so the population might have more individuals but for density Lake Winabago is probably if not the biggest, one of the biggest in the world for Lake Sturgeon populations.

[00:09:37] **Speaker 1** And so what's the significance of having volunteers come out and do it?

[00:09:41] **Speaker 2** Yeah, so volunteers are great. You know, one, it really helps us get our work done. You guys saw how many fish we are counting today and how many, like how much time it takes to do that. If we had to have that much more staff on the boat. And then two, you guys are out on the boat today with a lot of walleyes for tomorrow members. And those guys not only do a lot of their own work all around the system. I know I think you guys were covering some of their portable hatchery work, but they fund projects for us. They come to, you know. Winnebago Fisheries Advisory Committee meeting, have their input, and it's just a really good way to gage the wants and concerns of the public versus what we're doing as a state agency. So not only the Walleyes for Tomorrow guys, but then all the other volunteers that come out, they are typically with a sportsman's club, or they're just an average angler who read the trawl report and saw at the bottom that they could sign up to volunteer. So it's a really good. Way to kind of bridge that disconnect that often happens between anglers and the state agencies managing these resources.

[00:10:40] **Speaker 1** They probably get a different perspective of what it's like out there versus just being in their own boat.

[00:10:45] **Speaker 2** Yeah, I know. And it's like all anglers are going to have their own anecdotal fishing experience. Like, oh, I caught more fish this year and I caught more fish here and it's, like, well, if you come on our boat, will you really get a better understanding just because of the sheer amount of fish that we're handling and the gear that we are allowed to use to sample the population.

[00:11:03] **Speaker 1** And a couple more detail-oriented. So the net and the drag cover one acre in each of the waypoints.

[00:11:11] **Speaker 2** Yep, so the net is 27 feet wide. When the boards have it expanded open, we tow that behind the boat at four miles per hour for five minutes. If you do that calculation there, someone can fact check me if you want. It comes out to roughly one acre. So each trawl will cover one acre, each trawling event, you know, the 46 way points in triplicate will add up to 138. If you think that Winnebago is 137,000 acres, like the entire, if you think about the acreage coverage versus the whole system, it's like .01% of the system that we're actually covering with that bottom trawl, or I guess of the lake, not the system, but.

[00:11:48] **Speaker 1** But that's enough to have accuracy and faith in the numbers you're putting out. Yeah.

[00:11:51] **Speaker 2** Yeah and it's all again going back to the standardization and the relativeness so it's relative to what we have been doing and it is a very extensive survey. I guess it's a very big lake but we have 46 different sites scattered all throughout. We're dragging that net down there for five minutes four miles an hour. It's uh we catch a lot of fish get a good idea what's going on out there.

[00:12:11] **Speaker 1** Can I get you to say and spell your name and give your title and then just give us the names of the other?

[00:12:18] **Speaker 2** Yeah, Angelo Kozola, that's A-N-G-E-L-O-C-O Z-Z-O L-A. I am a senior fisheries biologist for the Wisconsin DNR based out of Oshkosh covering game fish management on the Winnebago system. The other DNR staff on the boat, Jason Coles was the guy with the orange bib on. Jason is J-A-S-O N-K-O H-L S. The The gentleman with longer hair was Nate Chemanski, that's N-A-T-E-S-C-H-M-A N-S K-I, if I want to spell check that one. And then the boat captain was Ryan Zernzak, that is R-Y-A Z-E R-N-Z-A C-H.

[00:13:05] **Speaker 1** Thank you so much. We're good with that end.