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DEC making good use of $1.3 million fish marking/tagging trailer at Altmar fish hatchery (video included)

Published: Sunday, May 09, 2010, 6:10 AM

By **David Figura/The Post-Standard**

Dennis Nett/The Post-StandardMike Connerton explains the workings of the $1.3 million marking/tagging trailer located behind the DEC's Altmar fish hatchery.

Imagine clipping the back fin and tagging each and every one of the 2.3 million chinook salmon stocked in Lake Ontario this year.

Let's add one more degree of difficulty. You can't touch the fish with your hands.

It's no problem, thanks to a $1.3 million computer-run setup inside a trailer behind the state Department of Environmental Conservation's fish hatchery in Altmar that's being shared by New York and Canadian officials.

Chinook fingerlings measuring a couple of inches long are brought into the trailer via a piping system, sorted by size and sent to one of six, computer-run marking/tagging machines.

Each fish is then taken one at a time into a watery shoot, where it is held by clamps for a couple of seconds

while its small upper back fin (adipose fin) is clipped off. Then, a sliver-sized piece of metal with a microscopic-sized serial number on it is inserted into the fish's nose. The fish is then returned to the hatchery and will be stocked in the lake later this summer.

"We can mark about 5,500 fish an hour," said Mike Connerton, senior aquatic biologist with the DEC.

NYSDEC Salmon Tagging Trailor

NYSDEC Salmon Tagging Trailer

The DEC has bought and is currently using a $1.5 million trailer outfitted with all sorts of equipment to clip the fins of, and tag young salmon raised at the hatchery for research purposes.

And the reason?

"There's various things we want to know about chinook salmon. Things that can help us improve or stocking and management strategies. Our goal is provide better recreational opportunities in the lake — specifically, more and bigger fish," he said.

The sport fishing industry and all it entails is big business in Lake Ontario. A 2007 Cornell study estimated it generates $113 million annually for the state's economy. The responsibility for keeping the lake's fishery going and vibrant is handled by the DEC and Canadian officials alike, both who stock the lake's fish.

The trailer and all its equipment were bought in 2008 with money from a fund set up following a lawsuit settlement with Occidental Chemical as restitution for the Love Canal environmental disaster that came to light in the late 1970s. It resulted in extensive environmental damages and lost fishing opportunities in the lake.

"It's one of the largest sport-fishing based claims in the land — $12 million. It was reached in June 2006," said Chris Balk, natural resource damages coordinator for Lake Ontario.

Balk said the settlement outlined annual payments.

"We're just about completely paid up on the claim," he said, noting that in addition to the fish-marking trailer, money has been set aside for providing assess for sportsmen to the lake, along with various research and educational projects.

As for the fish marking trailer, the DEC provides staff to mark New York's share of chinook fingerlings stocked by the DEC (1.8 million). The Ontario Ministry of Natural Resources uses its staff, along with some volunteers, to mark and tag its 550,000 fingerlings stocked each year.

Both sides have been clipping fins for the past two years. This is the first year the tags are being put on each of the fish.

Connerton, talked this week about the operation and what it hopes to achieve.

Why are you marking and tagging chinook (king) salmon rather any other fish in the lake?
It's our number one fish out there, the fish we stock the most. It's the fish that generates the most interest with anglers. As a result of that, it's the fish we have the most pressing research questions about.

Why are you clipping each fish's fin?
Right now, we don't know what the proportion of wild fish relative to stocked fish is in the lake. By next year, the chances are if you catch a fish and its fin is clipped, it's a stocked fish. If not, it's a wild one.

Dennis Nett/The Post-StandardMike Connerton holds a chinook salmon fingerling that's had it's adipose fin clipped and a small metal tag inserted into it's mouth.

What's with the tagging technique?
The marking machine has a needle that puts the piece of metal with a microscopic number on it into each fingerlings nose. It'll be recovered 2 to 3 years later when the fish is an adult. We can sense the wire by waving a wand, a sort of metal detector, over the fish. We'll cut part of the snout (where the wire is located) and take it back to the lab, where we'll dissolve the tissue and cartilage with hydroxide (a strong, corrosive base). We'll extract the wire from that with a magnet, and then examine it under a microscope. From that, we'll be able to tell where the fish came from and what year it was stocked. This will help us learn the relative survival rates of fish stocked with particular methods and at particular locations.

How are you obtain data on the fish that have their back fins clipped off?
The same way we always have – relying on anglers. They can sample chinook salmon a lot more effectively than we can. We'll go to fishing derbies, cleaning stations. Survey anglers on streams and ports and see what they're catching. The U.S. Fish and Wildlife Service is also contributing money toward having two guys out there on the lake, collecting data.

Are you planning to do this with any other fish in the lake?
Yes, we're planning to do the same with coho salmon, rainbow trout and brown trout. We'll be marking the chinook salmon until 2012 and wrapping up that study around 2015. We'll get to the rest of the fish afterward.

What's the bottom line here?
What we're trying to do is save the state money by putting our resources into doing things as effectively and efficiently as possible. If we see that some of our methods are real stinkers compared to others, we'll change those practices.