

Karen Linck

Subject: FW: NorthMet aquatics: sturgeon
Attachments: largeStLouismap.jpg; sampling map.jpg; sturgeon 2013 final report2.pdf; Lake Sturgeon Habitat Report _final_Kerr_2011.pdf

From: Varian, Anna (DNR) [<mailto:Anna.Varian@state.mn.us>]
Sent: Friday, November 07, 2014 4:27 PM
To: Fay, Lisa (DNR)
Cc: Comardicea, Irina (DNR); Melinda Todorov
Subject: RE: NorthMet aquatics: sturgeon

Lisa and others,

I'm going to try to give you some information on sturgeon in the St. Louis River estuary without overwhelming you, let me know what additional information would be helpful. I've attached two maps of the St. Louis, our 2013 spring sampling report, and a paper that may have some useful references for sturgeon and pollution related issues (page 10 and 11).

Quick background: Sturgeon were extirpated from the St. Louis River in the early 1900's because of the combined effects of exploitation, pollution, and habitat alteration. A cooperative effort between MNDNR and WIDNR to reintroduce sturgeon started in 1983. Lake Sturgeon stocking occurred for 13 years and ended in 2000 (there were some off years). We have been sampling the spawning run since 2006 and tagging fish in hopes that someday we can estimate the spawning population size (difficult to estimate because sturgeon do not spawn every year like most fish). In 2011 Fond du Lac biologists caught the first naturally reproduced lake sturgeon (they may have been reproducing prior to 2011 but this is the first proof). Additionally during our standard St. Louis River summer index gillnetting we captured a juvenile sturgeon this year that would have had to been naturally reproduced given its small size and our last stocking date. In 2009 a habitat project was completed below the Fond du Lac dam to provide spawning habitat for sturgeon and other species.

Sampling: We sampling mature adult lake sturgeon during the spawning run in the spring, they come up the St. Louis as far as they can go which is the Fond du Lac dam (see maps and the 2013 report). This year we captured 69 sturgeon during our spring sampling ranging in size from 757mm to 1485mm. Two of the fish we caught in 2014 were tagged in 2013, so they migrated upstream to the spawning area 2 years in a row, this is unusual for sturgeon as I said before the males generally spawn every few years and females every 5-7 years. And we have been capturing tagged fish from different agencies operating in Lake Superior, so these St. Louis River 'spawners' are going out into the lake and potentially moving long distances throughout Lake Superior.

We also conduct gillnet sampling downstream in the estuary during the summer, this sampling does not target sturgeon but we catch them. The rate at which we catch sturgeon in these nets is linked to the St. Louis River Area of Concern. One of the requirements to meet the AOC delisting goals is to "document an increasing trend of 2 to 5 year old fish, with at least 2 index values greater than 3.0 per gillnet lift." I'm not sure what are numbers are now but it's nowhere near 3 sturgeon per gillnet.

Other: It is generally thought that juvenile sturgeon (age 0 to 5ish) use the estuary habitat and then move out to Lake Superior at an older age. We catch smaller/younger sturgeon in our index netting in the estuary then during the spawning run and the USFWS has some data that shows the sturgeon caught in Lake Superior at the mouth of the St. Louis are older than sturgeon caught at the mouths of other Lake Superior tributaries, suggesting that the juveniles are using the estuary for a couple of years before moving out to the lake.

Fond du Lac tribe work: Lisa I completely forgot about this when I talked on the phone with you, but the Fond du Lac tribe has been stocking sturgeon upstream of the dams in the Cloquet River just upstream of its confluence with the St. Louis River. They've done some telemetry tracking work with sturgeon in this area. The fish are stocked in the Cloquet but they migrate out into the St. Louis.

You should call Brian Borkholder he's the Fond du Lac biologist tell him I sent you. Office # 218-878-7104 email: BrianBorkholder@FDLREZ.COM

FYI Stream miles: The Fond du Lac dam/ upstream extant of migratory sturgeon is about 20 miles upstream from Lake Superior, the Cloquet River is about 50 miles upstream from the lake. And the Embarrass River is about 138 miles upstream from the lake, the Partridge is about 162 miles upstream from the lake (If I recall I think those are the two streams you referenced on our phone call.).

Hope I didn't overload you let me know what else you need, I'm happy to help!

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