

Michigan Trout Unlimited

“Position on Chumming”



Background:

Chumming has been practiced in Michigan to varying degrees by some anglers through the years, and at times, has been both lawful and prohibited. In recent years, the practice of chumming has been reported to be increasing, both in the number of people and in the volume of chum that is being used by each of them. It is a fishing practice that some anglers say works very well, while other anglers vigorously oppose the practice. Chumming involves luring or attracting fish by depositing chum -- fish eggs, corn, rice, noodles, maggots or oatmeal-- into the water to get fish into a actively feed. It's often used to target rainbow (steelhead) trout with fish eggs. The prevalence of the chumming practice is causing conflicts due to its increasing in severity among some guides and recreational anglers and distribution on Michigan rivers. Left unaddressed, the problem will escalate and be significantly more difficult to manage later.

MITU supports the Natural Resources Commission to ban chumming in Michigan.

Current Issue:

Michigan Trout Unlimited (MITU) is currently faced with deciding on a position on the practice of chumming. Very little “hard” data exists on the biological or sociological impacts of this practice, to help inform the Natural Resource Commission (NRC) with the decision-making process. This results in the impression that this is purely a “social” issue, where the NRC should simply evaluate the number in favor or opposed to chumming. This could not be further from the truth. Michigan Trout Unlimited “Position on Chumming” will therefore address the plausible risks and impacts that this practice could be assumed to pose, purpose the NRC use the “Precautionary Principle” to guide action, and confirm that approach bu presenting what other states have chosen to do on this issue.

There are two significant questions that need to be asked in the debate that must be considered.

1. Where the practice of chumming is allowed, what are the effects on the fishery?
2. Where the practice of chumming is allowed, what outcomes do other anglers experience?

To date, there has been very little scientific research conducted on the effects of chumming on a fishery when chumming is practiced. The Michigan Department of Natural

Resources has not undertaken research on chumming which would justify an exception to regulations limiting how fish may be taken. However, the Oregon Department of Fish & Wildlife Restoration and Enhancement Board commissioned the Institute of Marine Research to study “Effects of Commercially Available Egg Cures on the Survival of Juvenile Salmonids” (<http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0021406>). This research concluded sodium sulfite found in egg cures (preservatives), when ingested, increases mortality for juvenile salmon. Because the research was conducted in an Oregon laboratory, the Michigan DNR stated “may not represent what is practiced in Michigan” in Fisheries Order 200.16A submitted on April 18, 2016, resubmitted May 16, 2016 to the Natural Resources Commission (http://www.michigan.gov/documents/dnr/FO200.16A_524679_7.pdf?source=govdelivery&utm_medium=email&utm_source=govdelivery).

The Michigan fishing guidebook says it is unlawful to “Deposit litter, fish, offal or any foreign matter in any waters of the state or any lands, private or public.” *Michigan TU believes this current prohibition is inclusive of chumming with fish eggs, corn, rice, noodles, oatmeal or maggots into the water of the State of Michigan, thus is unlawful under this rule.*

Risks & Impacts from Chumming

Disease and Invasives Introduction/Spread

The use of fish eggs as chum is a vector for the introduction and spread of new aquatic pathogens, fish diseases, and aquatic invasive species. Currently, there are no regulations or reporting of the use of chum, so we do not know the origin of fish eggs, what fish species the chum comes from, and what pathogens or invasive species may be coming on chum, in chum, or along with chum. MITU has learned that anglers get their fish eggs from local Michigan salmon and steelhead, out of state salmon eggs, and are buying large volumes of shad eggs from out of state. It is just as easy to assume Asian Carp processors in neighboring states might capitalize on markets for large volumes of fish eggs. Consequently, when the DNR conducts eDNA surveys, in the areas where chumming is practiced, to identify the presence of Asian Carp, the DNR could be acquiring false positive results. None of the fish flesh tissue is being processed, regulated, or certified to ensure spread of pathogens or invasive species does not occur. Could there be a new fish disease carried on chum, or an invasive species like a larval New Zealand Mudsnail? Yes it is plausible. For a DNR fish stocking permit, a certain level of disease certification assurance is needed – but chumming requires none. There is currently no assessment data on the volumes being used, the rivers fish eggs are used in, what fish species the fish eggs come from, and what states fish eggs were taken from. Chumming thus poses a real and feasible risk of being a vector of aquatic pathogen and invasive species movement.

Ingestion & Chemical Toxicity

The material, fish eggs or otherwise, that is used as chum, can be ingested by the target fish species, as well as non-target species, of all sizes, ages and species. Chumming introduces the material into the waters for digestion by all fish present. One large concern with chumming is the wide variety of curing chemicals that can and are used for fish eggs used as chum. Typical chemicals used in the curing of eggs for fishing, include salt, sugar, borax, sodium sulfite, formaldehyde, and other cures and scent additives. Anglers using cured fish eggs for bait have long used a plethora of precise and varying recipes for curing eggs. Michigan DNR lacks any regulation or knowledge as to what cures are currently being used, and would not have means readily available to enforce certain chemical prohibition. Some research from the western states where egg curing is widespread has indicated that sodium sulfite and even borax may have acute toxicity, yet no one has really explored subacute toxicity effects. Borax, a common laundry detergent booster, indicates on the box, "may be harmful if swallowed", "contact a physician immediately if ingested". Formaldehyde is a known and listed carcinogen. Michigan DNR currently lacks any control over, or knowledge of what chemicals are used in fish egg chum, and lack thorough research on their acute and subacute toxicity impacts to either the fish ingesting them, or citizens who consume fish that have been feeding on these chemically cured egg. From a fisheries perspective, this is of great concern as it could affect the health of our fish population; including juvenile Chinook salmon and even threatened juvenile lake sturgeon which bottom feed and are found in two of the rivers where chumming is most highly practiced. For human fish consumption health and safety, the DNR Fisheries Division or any other group have not conducted any testing for these chemicals, or studies to ensure consumption of fish post- chum ingestion is safe. In the absence of "hard data" on this risk/impact mechanism, the precautionary approach is warranted until hard data proves it to be safe.

Angler Satisfaction, Expectations, and Unequitable Spread of Catch

Perhaps the clearest mechanism of impact from chumming comes from the reallocation of target fish catch success among all of our anglers. The cost and effort of high volume chumming is only worth it to those practicing it because it produces significantly higher catch rates. This practice is currently occurring most intensively, for steelhead fishing, of which steelhead runs are of finite supply (particularly in recent years). It has also arisen in places where the prime fishing spots are of finite supply (e.g., below dams or prime spawning areas). This is being employed as a tactic for some anglers and guides to out compete others for finite steelhead and finite prime fishing spots. The enhanced success of those practicing chumming, can lead to lower success for other anglers via several mechanisms. First, those practicing chumming catch a larger percent of the fish present in prime spots, leaving less available for anglers that follow thereafter. Second, remaining fish have been able to feed sufficiently on chum eggs, thereby lowering their need to feed thereafter. Third, the abundance of egg chum in the prime spots can make fish

selective only to eggs, thereby lowering their susceptibility to other fishing techniques. Fourth, many anglers are avoiding the areas where the race to prime lies and excessive chumming occur, to avoid the competitive anxious setting that effects their objective of a quality experience, thereby being relegated to less productive fishing areas.

MITU has learned from recent coldwater fish species angler surveys, that high quality aesthetic experiences rank as the number one most common and universal aspect of a fishing experience a majority of Michigan anglers seek (this is verified by a recent DNR survey as well as an MSU study). The competitive race for fish catch rates and prime spots that can be fostered by chumming, along with the imbalance of equitable spread of catch rate success among anglers, poses a threat to the sustainable satisfaction of our anglers. If these factors occur, it is unclear today, whether dissatisfied anglers will: 1.) Go somewhere else where chumming isn't as prevalent; resulting in a loss of economic benefit to certain communities; 2.) Make less frequent angling trips for species like steelhead (resulting in less economic benefit to Michigan from our fisheries; 3.) Eventually let discouragement over their lack of success lead them to less participation in angling and more attrition from license purchasing.

Erosion of angler satisfaction in a particular fishery can result from both failure to successfully catch as many fish; but it also can result from shifting expectations of what "success" means. If anglers hear about the catch rates of those doing high-volume chumming, they may shift their expectations of what a successful catch rate should be, and hence be less satisfied with what would normally be a reasonable catch rate. Remember that the Charter Boat Association warned the NRC of this when chinook salmon bag limits were increased from 3 to 5. They warned that clients often define success in that fishing, by the guides' ability to deliver a boat limit, shifting the boat limit shifts the expectation and definition of the clients' satisfaction (leading charter boat guides to fish longer, spend more in fuel, and raise the trip costs to clients – which could lead to less frequently satisfied clients and less participation due to increased costs).

DNR Management Constructs

The DNR are managers of 1.) Public trust resources managed for maximum benefit to all citizens (meaning they must concern themselves with both anglers and those benefiting indirectly from them via economic expenditures by anglers), 2.) Fish and aquatic species populations, 3.) Anglers' experiences. From this perspective, chumming's impacts to the behaviors of all anglers is of high significance, and its unknown risks to fish and aquatic species populations should be of concern.

DNR – Fisheries Division 2013-2017 Strategic Plan "Charting the Course" the following information is referenced:

"Michigan's world-class fisheries and aquatic resources are fragile and subject to threats from invasive species as well as increasing development pressures. Intensive

protection and management efforts go well beyond fishing regulations and habitat protection.” Page 5.

“Without these efforts, the state’s fisheries would quickly decline, just as many valuable fisheries resources have declined elsewhere worldwide.”...” With the vision expressed in this strategic plan, Fisheries Division has the privilege of continuing to meet its long-standing responsibilities to protect, manage and enhance the state’s aquatic public trust resources for the benefit of all Michigan citizens, current and future.”

Fisheries Division Mission: *protect and enhance Michigan’s aquatic life and habitats for the benefit of current and future generations.*

Fisheries Division Vision: *To provide world-class freshwater fishing opportunities, supported by healthy aquatic environments, which enhance the quality of life in Michigan.*

Perspective from Other States

Of 14 states offering steelhead fishing, 12 of 14 currently have prohibitions on the practice of chumming. Michigan and Ohio are the 2 states that currently do not prohibit the practice (note: Ohio’s steelhead fishery is completely hatchery dependent).

<u>State</u>	<u>Chumming is legal</u>	<u>State</u>	<u>Chumming is legal</u>
Alaska	NO	Washington	NO
Oregon	NO	California	NO
Idaho	NO	Montana	NO
Minnesota	NO	Wisconsin	NO
Illinois	NO	Indiana	NO
Pennsylvania	NO	New York	NO
Michigan	YES	Ohio	YES

The Precautionary Approach

The precautionary principle states that where uncertainty is present, natural resources management decisions should favor the side of caution for the resource. It’s a well-developed principle in natural resources management, with firmly established justification. While uncertainties exist in the decision on prohibiting chumming, there are also numerous plausible mechanisms for how it is having or is likely to have significant risks and negative impacts. As a result of the information provided in the Michigan Trout Unlimited “Position on Chumming”, MITU believes that given the weight of mechanisms for negative impacts and risks posed by chumming on the fishery, along with current uncertainty levels and lack of scientific data, the “Precautionary Principle” dictates a prohibition on the practice of chumming. Michigan Trout Unlimited supports the ban of chumming in Michigan by the Natural Resources Commission.

Organizational Philosophy Relevance

In considering appropriate action on chumming, Trout Unlimited relies on the “Philosophy of Trout Unlimited”, created by TU Founder Art Neumann.

The Philosophy of
Trouth
Unlimited. . .

believes that trout fishing isn't just fishing for trout.

It's fishing for sport rather than for food where the true enjoyment of the sport lies in the challenge, the love and the battle of wits, not necessarily the full creel.

It's the feeling of satisfaction that comes from limiting your kill instead of killing your limit.

It's communing with nature where the chief reward is a refreshed body and a contented soul, where a license is a permit to use - not abuse, to enjoy - not destroy our trout waters.

It's subscribing to the proposition that what's good for trout is good for trout fishermen and that managing trout for the trout rather than for the trout fishermen is fundamental to the solution of our trout problems.

It's appreciating our trout, respecting fellow anglers and giving serious thought to tomorrow.

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Art Neumann