BTNEP
BARATARIA-TERREBONNE
NATIONAL ESTUARY PROGRAM

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Dear Chef Parola,

I am writing to share my thoughts about the dangers of the Asian carp invasion in the Barataria-Terrebonne National Estuary. I hope that my comments will be useful and persuasive on your trip to Washington DC. Please feel free to share this letter with anyone whom you feel is an appropriate contact.

As you know, there are several species of Asian carp currently invading freshwater systems throughout the Mississippi River drainage. Two of these species in particular, silver carp and bighead carp, are already having ecological and economic impacts in several states to our north. The federal government, guided by the actions of the Great Lakes and Mississippi River Interbasin Study (GLMRIS) and the Asian Carp Working Group of the Aquatic Nuisance Species Task Force, has spent millions of dollars in carp control already, including the installation of a multimillion-dollar electric barrier at the foot of the Chicago Sanitary and Ship Canal.

The expensive effort to keep Asian carp from entering the Great Lakes and potentially destroying the economically vital fisheries there is certainly warranted. Fisheries biologists and resource managers are in widespread agreement that if these species are allowed to enter the lakes, the result would be the likely collapse of a multibillion-dollar fishing industry. Asian carp are voracious plankton feeders that grow very large, up to 50 pounds, and can consume incredible amounts of plankton that includes larval fish and the food they eat. Ominously, nine positive samples of environmental DNA have been found above the barrier and one actual fish, a 19-pound bighead carp, was found in Lake Calumet which links directly with Lake Michigan. State and federal agencies must do everything in their power to prevent carp from destroying the fisheries economy and the ecology of the Great Lakes.

But an identical story is unfolding a thousand miles to the south with much less attention and many fewer resources being devoted to it. Unlike the Great Lakes where carp invasion may yet be prevented, the introduction of Asian carp into Louisiana's coastal zone is now unavoidable. But the impacts will be just as severe. At risk is a commercial and recreational fisheries industry worth an estimated total impact of $3.5 billion per year to the state. The industry supports roughly 40,000 jobs, and the coastal zone provides an estimated 21% of all fisheries landings by weight in the lower 48 states according to Louisiana's Coastal Protection and Restoration Authority.

Nearly all of these economically and ecologically important fisheries species, including shrimp, oysters, blue crab, menhaden, and other finfish, are dependent on the coastal estuaries for all or part of their life cycles. Estuaries provide the critically important nursery grounds for many of these species. Unfortunately, the filter-feeding behavior of silver and bighead carp means that they are not only competing with the larval stages of our native fish for the plankton that they eat, but they are also directly consuming them when they are in their own larval stages. Therefore impacts may be seen not only on species with similar feeding habits, but on all species.

Policy makers and resource managers may try to take solace in the fact that Asian carp are considered to be freshwater fish, and that perhaps their impacts may be limited in the higher salinities of estuaries, but this would be a false hope. Bighead carp have already been found in East Bay, a brackish area near the mouth of the Mississippi River, and silver carp have been found in Vermilion Bay, Lake Pontchartrain, and the coastal marshes around Port Sulphur, LA, all locations with some salinity.

To be sure, carp are currently much more numerous in freshwater areas. The highest densities of silver carp are found in outfall channels of the river, where large volumes are discharged for flood control (the Bonnet Carre Spillway) or salinity control (the Caernarvon and Davis Pond Diversions). The state's Master Plan for coastal restoration calls for several similar but very large freshwater diversions from the river into the Barataria and Breton Estuaries. If and when these diversions are built and operated, they will provide the ideal pathway for further introduction of Asian carp into the coastal lakes and bays. Freshening of the basins that will occur with these large diversions will also render the habitats even more suitable for carp. State and federal resources must be allocated to address this issue.

Salinity tolerance studies with these two species have shown that juveniles and adults will be able to survive and move through brackish waters. Actual reports of carp back this up. Asian carp are established in the Caspian Sea, which is brackish. But they will probably need to return to freshwater to spawn. So what will be the ultimate impact of Asian carp in the estuaries? It is very likely that natural flooding and man-made introductions of freshwater will spread Asian carp throughout the estuaries. Over time, individuals with higher tolerance to salinity will be selected for, and the genes for surviving high salinity will be passed on. This is a common phenomenon with invasive species as they adapt to their new surroundings.

Many questions remain regarding the threat Asian carp pose to Louisiana's fisheries, but some things are certain: we are only at the start of this invasion, and all signs point to increasing numbers of carp and worsening impacts. Also, there are no proven control methods for this species other than direct removal of fish from the water. Therefore, some incentive must be provided to encourage human consumption and a commercial fishery for these species. If we don't find a way to limit their numbers, they are likely to literally eat our lunch.

Sincerely,

Michael Massimi

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