Leech Lake Band of Ojibwe

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Testimony of The Honorable George Goggleye Jr., Chairman
Leech Lake Tribal Council
115 Sixth Street NW
Cass Lake, MN 56633

To

Chairwoman Johnson and Distinguished Members of the House
Committee on Transportation and Infrastructure
Subcommittee on Water Resources and Environment

Regarding

Non-Point Source Pollution: Atmospheric Deposition and Water Quality

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Good afternoon Madam Chairwoman and members of the Committee. I am Lenny Fineday, Director of Leech Lake's Administration and Governmental Affairs Department. I come before you today representing the Chairman of our Tribal Government, The Honorable George Goggleye Jr. The Chairman extends his greetings to the Committee and regrets that he cannot be here today.

Thank you for taking testimony today on this critical issue of non-point source pollution impacts to water quality. There are several toxic pollutants or contaminants that are known to be capable of adversely impacting our watersheds and waters via atmospheric deposition. Mercury, Dioxins and PCBs (polychlorinated biphenyls) quickly come to mind. Of these, mercury is the most ubiquitous because it comes

from any fossil fuel combustion source and is deposited through atmospheric deposition both into the watersheds and directly into lakes.

The fish in all of our Tribal lakes, and in all Minnesota lakes, contain mercury from atmospheric deposition. Because of the widespread adverse impacts of mercury I will direct my remarks today to this atmospherically deposited non-point source pollutant.

Briefly, what do we know about mercury and its adverse impacts? Mercury is a potent neurotoxin and human developmental impacts are well described.[1] Mercury falling out of the air into a lake or watershed becomes methylated, usually through natural bacteriologic processes. Once methylated the mercury enters a terrestrial or aquatic food chain.[2] All forms of mercury may be transformed biologically to methylmercury. Once methylmercury is incorporated into a food chain it may be bio-accumulated (build up in an organism or body) and biomagnified as one organism eats another. Human exposure to mercury occurs primarily (95%) through consumption of fish and seafood. Because mercury is a potent neuro-toxin, exposure to small amounts in the womb and during childhood can cause permanent neurological damage. In addition to IQ reduction, mercury toxicity has been associated with childhood diseases and disorders including mental retardation, cerebral palsy-like symptoms and hyperactivity[1], as well as heart disease in men. An additional sobering fact regarding the toxic impacts of mercury is that the slope of the dose-response curve appears to be steeper at lower doses, a term known as supralinear.[3] This means that even at very low doses mercury can cause significant adverse impacts to children and, impacts to fetuses may occur with minimal or no apparent symptoms in the mother. The following quote by the physician Dr. Ian Donald must be in the foreground of our thoughts as we deliberate mercury issues: "The first 38 weeks of life spent in the allegedly protected environment of the amniotic sac are medically more eventful and more fraught with danger than the next 38 years in the lifespan of most human individuals."[4]

Tribes using their fishery resources are disproportionately impacted by mercury contamination because of their generally higher fish consumption as compared to the overall U.S. population. Based on human blood mercury research by Schober[5], the U.S. Centers for Disease Control and Prevention estimates that 8% of American women

of childbearing age have blood mercury levels above EPA safe levels. This percentage increases by four times to 31.5% for Native American women with blood mercury levels above the safe limit established by EPA.[6]

The primary reason that Indian women may have elevated blood mercury levels is because Tribal members, particularly members of Tribes in and around the Mississippi and Great Lakes watersheds, harvest fishery resources for our nutritional needs in accordance with our Federally protected Treaty Rights. Good, clean fish are widely recognized as an excellent source of protein and healthful omega oils. The United States Environmental Protection Agency (EPA) reports that the average American consumes approximately 17.5 grams of fish per day. This translates to about 14 pounds of fish per person per year. Our Tribal sustenance fish consumption rate is over 200 grams per day or about 180 pounds of fish per year. I must note here that some Tribes report per person fish consumption rates of more than 365 pound per year. Consequently, Tribal exposure to mercury via fish ingestion may be 10 times greater, or more, than the average American.

Chairman Goggleye asked his technical staff to provide some specific mercury impact information for his testimony to your Committee here today. The ability of mercury to cause IQ deficits in children is perhaps the most widely recognized quantifiable mercury impact. The following calculations are derived from the findings of the three major studies that have been done regarding mercury impacts to children, the EPA, and our ongoing Tribal research of mercury in fish. The three major studies are named for their geographic locations: Faroe Islands, New Zealand and Seychelles. The range of potential IQ deficit for children in

the above studies is quite large, spanning from -0.53 to -0.024 IQ point for each part per million of maternal hair mercury.

Our assessment of potential IQ impacts to Leech Lake children incorporates the above referenced study data, Tribal specific fish mercury data and Tribal seasonal fish consumption data (bolus dosing). All of this data translates to potential IQ losses of up to 14 IQ points per Leech Lake child. Then, as distasteful as this may be, using EPA's

economic valuation per IQ point of $11,871, a child losing 14 IQ points to mercury would also be at an economic disadvantage of $166,194.

These potential impacts are clearly unacceptable.

Perhaps mercury can be a rallying point for all nations, states, cities and counties to say enough is enough with pollution. We need to constructively engage as humans and as governments to expeditiously move our policies and regulations in a direction that puts health and welfare at the top of our priority list. After all, if we are healthy we can be economically productive and most able to pursue our chosen cultural traditions be they lacrosse or baseball or soccer, sauna or sweatlodge, beadwork or watercolor painting. But first and foremost, to pursue happiness as we describe it for ourselves, we need our health.

We, as Indian people, cannot afford to relinquish the fish that have sustained us for centuries. Fish are an integral part of our culture, who we are. Thank you again for allowing me time to speak here today.

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Testimony of Chairman Goggleye
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