



## Persell Wind Turbine



For over twenty years now John Persell has been a leading scientist of the White Earth Water Quality Research Laboratories in Cass Lake MN. John and his team study water quality, mercury in fish, wetlands restoration and teach about sustainable practices for keeping beautiful northern MN lakes, rivers and streams healthy.

In all 800 lakes, all of the fish tested by the Water Quality Research lab contained mercury in excess of safe limits for consumption. In other words, virtually everyone who eats fish from lakes in northern Minnesota is at risk of mercury poisoning and its neurological side effects to some degree. One coal-fired power plant near Cohasset, Minnesota releases 800 pounds of mercury into the atmosphere every year. This gaseous form of mercury called methomercury is formed from the burning of coal, which contains the mercury that literally rains down on the land and waterways and ends up in the fish. Especially the larger fish that are at the end of the food chain in the water like walleye, trout, northern pike and other game fish that traditionally have been a prized source of nutritious food.

Now unfortunately, mercury is also a part of our dinner.

With this background, John (In red jacket with David Winkleman) has desired to personally live closer to the land and be more sustainable. His picturesque home is in fairly deep woods nestled between a number of waterways northwest of Cass Lake. John and Patty are proud owners of a new Jacobs 31-20 turbine on a 120-foot tower, which is now generating more electricity than they can use. Even though the Persell's are not living in a great wind site location and will only generate about 12,000 kwh per year, it is still more electricity than they consume in their home so they now have virtually net zero electrical power consumption and sometimes even receive a small check or credit from the local power company, Beltrami Power.



John explains. "Even though the up front cost of the Jacobs turbine is over \$50,000, we are doing this for the long haul, the big picture. And the biggest payback for us is the satisfaction and knowledge of knowing that we are no longer a part of the problem that we are part of the solution to move into a more sustainable world."



John began working for the Minnesota Chippewa Tribe in 1978 as a Water Quality Planner, shortly after graduating from Bemidji State University (Bemidji, MN) with a B.S. in Biology and Chemistry. The [Tribe's Water Quality Program](#) grew to become the Tribal Water Research Lab in 1979, achieving Federal drinking water certification in 1987. John has remained Director of the Tribal Government's Lab, which today employs four staff performing drinking water, surface water, and fish tissue analyses for a wide variety of parameters. John has directed the Tribe's research focus to contaminants in subsistence resources during the last ten years. At the center of this research focus is the St Regis/Wheeler Superfund Site, which is located on the Leech Lake

Reservation. The toxic cocktail at this former wood preservation company site includes Dioxins and Furans, PCBs, DDT, PAHs, Phenols, Arsenic, Chromium, and Mercury.

As part of the Tribes' assessment and communication of the risks associated with food contaminants, he has devoted considerable time to understanding the known health impacts of these contaminants. John is a six-year veteran of the United States Air Force and Army; a father and grandpa, and particularly enjoys family and outdoor activities.