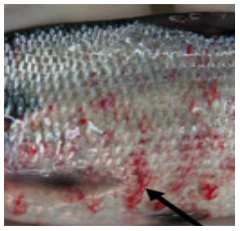
Viruses/Poisons (Ottawa County)

	Common Name	Scientific Name	Overview	Threat
	Oak Wilt	*Ceratocystis fagacearum*	Oak wilt was first identified in 1944. The fungal pathogen that causes the disease, *Ceratocystis fagacearum,* is thought by most to be native to the eastern United States. The oak wilt fungus moves from tree to tree in two ways: transported underground through the roots or overland, by insect vectors.	Oak wilt is an aggressive disease that affects many species of oak. It is one of the most serious tree diseases in the eastern United States, killing thousands of oaks each year in forests, woodlots, and home landscapes.
	E. coli	*Escherichia coli*	*E. coli* is a type of fecal coli form bacteria commonly found in the intestines of animals and humans. The presence of *E. coli* in water is a strong indication of recent sewage or animal waste contamination. Sewage may contain many types of disease-causing organisms.	Infection often causes severe bloody diarrhea and abdominal cramps; sometimes the infection causes non-bloody diarrhea. Frequently, no fever is present. the infection can also cause a complication called hemolytic uremic syndrome, in which the red blood cells are destroyed and the kidneys fail.
	West Nile Virus	*Flavivirus*	The West Nile virus made its first documented appearance in the western hemisphere with the 1999 outbreak in New York City. Previously, the disease was recognized in Africa, Southeast Asia, the Middle East, and Europe. The virus cycle is maintained in nature between mosquitoes and birds, the latter serving as reservoir hosts.	West Nile Virus is a mosquito-borne virus that can cause a mild fever to encephalitis (swelling of the brain) or meningitis (swelling of the membranes surrounding the brain and spinal cord) in humans and other mammals.
	Viral Hemorrhagic Septicemia	*Novirhabdovirus sp.*	VHS virus has been present in the Great Lakes since at least 2003. VHS is transmitted to juvenile and adult fish most often via urine and sex products that enter a fish through secondary gill lamellae, or possibly through fin bases or via wounds. VHS was initially introduced via transport in ballast water or infected migratory fishes to the Great Lakes - St. Lawrence River system.	Some fish become hyperactive, sometimes displaying nervous symptoms such as twisting of the body and behavior that involves swimming erratically in circles or in a corkscrew pattern. Nearly 50 species of fish are known to be susceptible to VHS. The mortality rate for infected fish varies between 20% and 80%, depending on environmental conditions.
	PBDE	*Polybrominated diphenylethers*	These chemicals are major components of commercial formulations often used as flame retardants in furniture foam (pentaBDE), plastics for TV cabinets, consumer electronics, wire insulation, back coatings for draperies and upholstery (decaBDE), and plastics for personal computers and small appliances (octaBDE).	There is growing evidence that PBDEs persist in the environment and accumulate in living organisms, as well as toxicological testing that indicates these chemicals may cause liver toxicity, thyroid toxicity, and neurodevelopmental toxicity.

Source: National Center for Research on Aquatic Invasive Species, Michigan State University, Dr. Mohamed Faisal, Department of Natural Resources, Environmental Protection Agency, United States Department of Agriculture