USNA 249- Lake Erie Public Health & Angler Consumption:

Identifying and Providing At-Risk Communities with Safe Consumption Practices

Problem Statement

-Some Northeast Ohio Anglers rely on the fish they catch in Lake Erie and its tributaries as a major source of protein. These fish contain possibly dangerous levels of toxicants, contributing to serious public health issues in the future. The Cuyahoga County Board of Health is seeking the most effective ways to communicate such risks to these anglers.

-Understanding angling and consumption views and practices across the many cultural and economic backgrounds within this niche is imperative to development and implementation of appropriate communication strategies.

Lack of Knowledge and Apathy

-Many anglers lacked knowledge on toxicant and pollutant information within Lake Erie's tributaries. Several with such knowledge were apathetic to potential health risks.

Comment from Surveyed Angler:
"The fish swim here, so it's safe."

Language and Cultural Barrier

-Our findings indicate immigrant, most from Slavic origins, and refugee community anglers in the area may be at higher risk for overconsumption of contaminated fish due to cultural practices and lack of effective communications.

Spring Frequently Caught Fish Species:

Steelhead Trout

25 – 30 inches long;
5 – 6 pounds

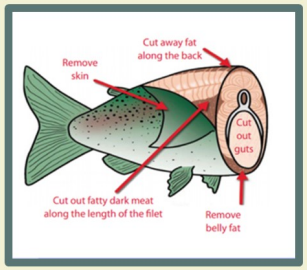
Spotted Catfish

15 – 25 inches long;
2 – 10 pounds

White Bass

10 – 14 inches long;
1 – 3 pounds

Healthier Consumption Preparation:

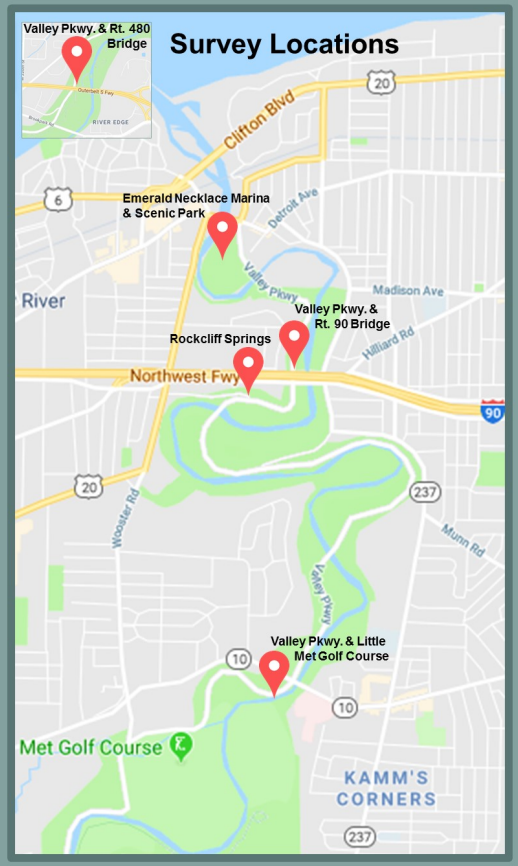


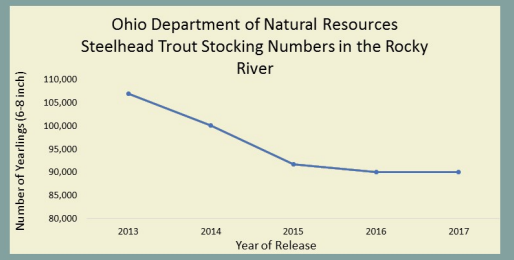
Toxicants Included in Ohio EPA Fish Consumption Advisory:

-PCBs – carcinogenic; damage to nervous, endocrine, reproductive, immune systems; high incidence of birth defects
-Mercury – nervous system and brain damage, birth defects, carcinogenic

Other important toxicants not included in Advisory:

-DDT – neurotoxin attacking central nervous system, carcinogenic
-Dioxins – affects early development, disease-causing, carcinogenic





-Steelhead Yearlings migrate to Lake Erie for reproduction in Summer, migrating an average of 3 to 5 times before catch and consumption, allowing for toxicant buildup to occur.