



ENSURING SEAFOOD SAFETY THROUGH HACCP

Federal seafood safety regulations became mandatory in December 1997. Enforced by the U.S. Food and Drug Administration, the regulations are based on Hazard Analysis and Critical Control Point (HACCP) procedures.

HACCP consists of identifying potential safety hazards, determining where they might occur in the process, monitoring these points and recording the results. The mandatory regulation is based on the belief that every commercial fish processor can understand potential food safety hazards of their products and take reasonable steps to avoid them. HACCP involves day-to-day monitoring of critical control points by production employees. The system emphasizes prevention to avoid product losses.

Sea Grant Initiatives

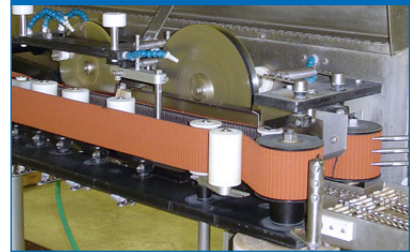
The mandatory federal seafood regulation requires all fish processors to receive formal training in HACCP principles and implement HACCP programs in their fish processing facilities. To meet the needs of the fish processing industry, Michigan Sea Grant took the lead in Seafood HACCP training in the Great Lakes region.

From 1997 to 2012, Michigan Sea Grant and partners conducted 21 Seafood HACCP courses that trained 538 commercial fishers, processors, and aquaculturists. Eighteen of these training sessions took place on reservations. Three tribes later signed Memorandums of Understanding with the FDA making tribal authorities responsible for educating and monitoring tribal fish processors within reservation boundaries.

These workshops attracted participants from Great Lakes states as well as attendees from as far away as California, Maryland, New Jersey, Massachusetts, Tennessee, Nebraska, Florida, and Texas. They included personnel from Van de Kamp Foods, distributors to Boston Market Restaurants, large U.S. importers/exporters of seafood and those involved with the aquaculture industry.

Following training, Michigan Sea Grant conducted over 200 follow-up visits to fish processing facilities to assist in developing HACCP plans and implementing record keeping systems. Since the HACCP regulation requires processors to keep extensive records of processing and sanitation at their facilities, Michigan Sea Grant staff developed both paper and electronic record keeping systems. These have been bound into manuals by the Great Lakes Indian Fish and Wildlife Commission and subsequently distributed to those who completed the HACCP training. Record-keeping forms include sections on receiving, brining, smoking, cool-down, temperature logs, labeling, verification, sanitation audit, and fishing vessel sanitation.

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Michigan Sea Grant College Program
Michigan Sea Grant is a cooperative program of the University of Michigan (UM) and Michigan State University (MSU). Funding: NOAA-National Sea Grant, UM and MSU. UM and MSU are equal opportunity/affirmative action employers.



MICHIGAN STATE UNIVERSITY

Additional Benefits of HACCP

A number of additional benefits have resulted from delivery of Seafood HACCP courses in the Great Lakes region:

- Michigan Sea Grant augmented national HACCP training materials by developing information and processing models specific to several species of Great Lakes fish.
- Through HACCP training courses, many tribal fish processors were introduced to specialized equipment used in fish processing, such as calibrated thermometers, salometers, graduated cylinders, and sanitizer test tapes. The Great Lakes Indian Fish and Wildlife Commission has since purchased this equipment for all tribal members who attended these workshops.
- Sea Grant provided technical consulting for the video, *A Guide to Making Safe Smoked Fish*, funded through the North Central Regional Aquaculture Center at Michigan State University. This popular video has since been incorporated in HACCP training workshops.

Based on field observations, all attendees of Seafood HACCP workshops in the Great Lakes region have implemented HACCP programs at their processing facilities. In addition, processors are utilizing the record keeping systems developed by Michigan Sea Grant.

Financial support for the Seafood HACCP Training Workshops was provided by the U.S. Food and Drug Administration, Great Lakes Indian Fish and Wildlife Commission, Chippewa Ottawa Resource Authority, Keweenaw Bay Indian Community, and the St. Croix Tribe. Tribal support for HACCP training is ongoing. These educational programs are open to both tribal members and others.