

Fish Consumption Guidance for Southeast Asians

**A HISTORICAL SUMMARY OF FISH CONSUMPTION OUTREACH
TO SOUTHEAST ASIANS IN MINNESOTA**

October 2020

Fish Consumption Guidance for Southeast Asians: A Historical Summary of Fish Consumption Outreach to Southeast Asians in Minnesota

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FISH CONSUMPTION OUTREACH TO SOUTHEAST ASIANS IN MN

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Summary

The Minnesota Department of Health (MDH) began providing fish consumption advice to the public in the 1970s after polychlorinated biphenyls (PCBs) and mercury were detected in fish. Exposure to these contaminants through eating fish could pose a human health risk, particularly for subsistent fishers, the fetus, and young children. Initially, fish consumption guidelines were communicated to the public only through news releases. Print distribution began in 1983 for waterbody specific advice. A summary of the advice first appeared in the MDNR fishing regulations in 1987.

Fish consumption guidelines continue to present day. Annually, an interagency team of the Minnesota Department of Natural Resources (MDNR), the Minnesota Pollution Control Agency (MPCA), and MDH jointly select lakes and rivers for fish collection and contaminant analysis. Data from this monitoring is the basis for fish consumption guidelines (advice). MDH reviews and analyzes new and historical fish contaminant data to update the guidelines. When appropriate, guidelines change to reflect the most current data available. MDH looks at both benefits and risks of eating fish when establishing the basis for guidelines so fish eaters get the most health benefit from eating fish while minimizing exposure to environmental contaminants found in fish. Guidelines are publically available and accessible so the people of Minnesota can make informed decisions about which fish to eat and how often to eat them.

For more information:

- [Minnesota's Fish Contaminant Monitoring Program \(PDF\)](https://www.pca.state.mn.us/sites/default/files/p-p2s4-05.pdf)
(<https://www.pca.state.mn.us/sites/default/files/p-p2s4-05.pdf>)
- [Resources, Reports and Technical Information](https://www.health.state.mn.us/communities/environment/fish/techinfo/index.html)
(<https://www.health.state.mn.us/communities/environment/fish/techinfo/index.html>)

Early strategies to share the guidelines with the public included MDH News releases, printed guidelines, and MDNR fishing regulations. These written materials, available only in English, targeted anglers and, thus, distribution methods may not have reached anglers' families and those with limited English. With growing diversity in the Minnesota population, fish consumption advice was needed in another format to reach those with limited English proficiency and cultural lifestyles focused around fish, namely immigrants and refugees from Southeast Asia (such as Hmong, Vietnamese, Laotians, and Cambodians). Fishing and fish-preparation customs of their homeland emphasized using all fish caught (regardless of species and size) and discarding very little waste. These practices resulted in a potentially high exposure to PCBs and mercury.

In the early 1990s, MDH began focused fish consumption advice outreach work for Southeast Asian communities (mainly Hmong), which continues to present day. Efforts have included focus groups, community events, radio shows, newspaper articles, translated factsheets, videos, and more. Over the years, key organizations and advocates have provided valuable input and wisdom for working with these communities, including findings from non-MDH agencies and organizations (see [External Resources](#) at end of main report). Lessons learned by the MDH Fish Program have been incorporated into best practices to serve this population, evolving with time. These best practices may benefit others interested in working with Southeast Asian communities for future projects related to fish and other topics.

Outreach Period: 1990 – 1996

Overview

In the early to mid-1990s, it became clear that educational outreach efforts to inform Southeast Asians, especially Hmong, of potential health concerns from consuming fish were hindered by language and cultural barriers. While most Hmong anglers welcomed information about contaminants in fish, the typical press releases and mailings that conveyed fish consumption information to the public reportedly did not reach this community. As a result, MDH and MDNR collaborated to determine the health messages and communication methods that would best meet the needs of these communities. Using the results of interviews and a behavioral survey, MDH tailored fish consumption advisories to meet the unique needs of the Southeast Asian anglers. From 1992-1996, educational programs involving specialized advisories, translations, signs, a Hmong language video, and workshops were used to inform Hmong anglers and other Southeast Asians about fish contaminants. This time period laid the foundation for the work that continues today.

Full details were published in the journal of Toxicology and Industrial Health: [Fish Consumption Advisories and Outreach Programs for Southeast Asian Immigrants](https://journals.sagepub.com/doi/abs/10.1177/074823379601200314) (<https://journals.sagepub.com/doi/abs/10.1177/074823379601200314>).

What Happened

Collaborative Projects

Informant Group Interviews

MDH conducted interviews with informant groups (known as “stakeholders” in today’s terminology) to gather information on the fishing and fish-eating habits of Southeast Asian communities in Minnesota. Information was used in planning educational and intervention programs and conducting a Hmong Angler survey.

Summary of Informant Group Interviews

Informant Groups	Key Points
Social service organizations and advocacy groups serving immigrants in Minnesota	<ul style="list-style-type: none"> Requested advisory translations. Reported fishing for food increased clients’ self-esteem and gave them useful work.
City and county public health departments with many Southeast Asian clients	<ul style="list-style-type: none"> Had contact with the largest cross section of the Southeast Asian population (Hmong, Vietnamese, Laotian, and Cambodian clients) through education classes. Stated recent immigrants had no idea surface water was unsafe to drink. Reported SE Asian communities distrusted Western medical practices, such as drawing blood.

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Informant Groups	Key Points
Natural resource professionals, including conservation officers, who regularly observed or encountered Southeast Asian anglers	<ul style="list-style-type: none"> • Found people regularly violating fish and game laws. • Observed Southeast Asians fished only in summer. • Reported anglers felt obligated to keep and eat every fish they caught.
Environmental educators, including Hmong and Vietnamese educators, who provided programming for Southeast Asian youth and adults	<ul style="list-style-type: none"> • Described Southeast Asian practices of exploiting natural resources rather than stewardship practices. • Reported the idea of pollution (e.g. waters and fish may contain harmful chemicals) was new to the Hmong community. • Nature centers requested translated materials.
City park officials and staff in an area heavily used by Southeast Asian anglers	<ul style="list-style-type: none"> • Observed many Southeast Asians fishing contaminated lakes and taking more fish than the fish advisories recommended. • Asked for assistance in providing specialized educational outreach.
State agencies concerned about Southeast Asian settlement, education, and resource use	<ul style="list-style-type: none"> • Recommended community-based personal interactions. • Suggested the use of written translations, audiovisual materials, and the development of a curriculum for English as a Second Language classes. • Provided opportunities to observe physical and social settings for angling.
Primary care providers specializing in care for Southeast Asians	<ul style="list-style-type: none"> • Offered insight into the Southeast Asian communities' lack of familiarity with and distrust of Western medical care. • Reported preventive health care was not used widely by Southeast Asian communities.

Hmong Angler Survey

Hmong anglers in the Twin Cities were interviewed by staff trained by MDNR. Questions focused on fishing and fish-eating habits. Each survey took about 2 hours and was administered verbally in Hmong at either the participant's home or a community center. The survey was developed by MDH and MDNR to systematically collect data on potential exposures to fish from the Mississippi River and to gather information on strategies to use in educational programs.

Summary of Hmong Angler Survey

Survey Participants (n=30)	Key Points
<ul style="list-style-type: none"> • Age 17-88 • 97% fished the St. Croix and/or Mississippi Rivers • Ate an average of 3.3 fish meals per month (summer average when Hmong fish) • Traveled an average of 22 miles to fish • Averaged 19 fishing trips from May to September 	<ul style="list-style-type: none"> • Species most frequently caught (in descending order of frequency): crappie, white bass and walleye, other bass (largemouth and smallmouth), northern pike, trout, bluegill, and catfish. • Names of species and lake locations not always known; freshwater drum may be misidentified as white bass. • Requested fishing and fish contaminant information be shared in person, by radio, or at community meetings. There was relatively little interest in written materials.

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Survey Participants (n=30)	Key Points
<ul style="list-style-type: none">Meal preparation varied greatly. Few anglers reported preparing fish soup.	

Hmong Video

MDNR, MDH, and the Public Broadcasting Service's television station KTCL, Channel 17 in St. Paul, received private funding from the McKnight Foundation to develop a culturally sensitive education package on fish contaminants for the Hmong community. Content for the video product came from knowledge gained from the angler survey. The Hmong language video, called "Are These Fish Edible?", was filmed by Mr. Fong Heu, a Hmong television producer. The film aired on Kev Koom Siab ("Path to Unity") in March 1995. A copy of the film was provided to MDH on videotape to use as an educational resource. A promotional sheet and word of mouth advertised the video to interested parties. Video details included:

- 27-minute video in Hmong with English subtitles
- Content crafted to appeal to Hmong community that loves fishing and relies on fish as a staple
- Created as a result of the Hmong angler survey, which showed Hmong residents are at risk for exposure to environmental contaminants in fish because they consume more highly contaminated fish species and fish from more contaminated locations (such as the Mississippi and St. Croix Rivers)
- Explained fetuses and children are more susceptible to mercury and PCBs
- Described ways to reduce risk (select lower Hg fish, select less contaminated locations to fish, fish preparation)



New Outreach Products Developed

Written materials (Appendix 1)

- Early 1990s Brochure: Which fish are safe to eat?
 - Purpose: written for persons fishing in metropolitan areas and rivers; illustrated and written at a third grade reading level; included drawings of fish species in safe and unsafe to eat categories and instructions on how to clean and cook fish to reduce the ingestion of PCBs
 - Available in English, Hmong
- September 1993 Fact Sheet: Do you like to fish?
 - Purpose: fact sheet developed and distributed to increase fish consumption awareness in Southeast Asian communities consuming fish from the Twin Cities metropolitan chain of lakes; described fish that are safe and unsafe to eat and how to clean fish to remove contaminants
 - Available in English, Hmong
- June 1996 Fact Sheet: Fish and Your Health – Safe and Unsafe Fish to Eat
 - Purpose: written for clinic patients and consumers; overview of health risks from contaminants in fish, illustrations of fish, and how to trim fish to reduce exposure to PCBs; funding for translation and color printing from the Agency for Toxic Substances and Disease Registry (ATSDR)
 - Available in English, Hmong, Cambodian, Vietnamese, and Laotian

Video resource (promotional sheet in Appendix 1)

- September 1995 Hmong video: “Cov Ntseg Nuav Noj Puas Tau?” or “Are These Fish Edible?”
 - Purpose: educational tool for clinic visits, home visits, and training public health and/or clinic staff; describes how fish get contaminated, health concerns, safer types of fish, and safer fishing locations; aired on Kev Koom Siab and later loaned to interested parties by request
 - Audio in Hmong with English subtitles

Key People/Organizations

- MDNR
- Public Broadcasting Service's television station KTCI, Channel 17 in St. Paul
- Ms. Josée N. Cung, Office of Planning, Minnesota Department of Natural Resources
- Mr. Fong Heu, Producer, Kev Koom Siab, television station KTCI, channel 17
- Local organizations/individuals who work with Southeast Asian communities

Lessons Learned

- Informants stressed the need to use positive messages with target communities.
- Informal links (e.g local organizations) to Southeast Asian communities are essential.

- More direct contacts with the community (e.g., workshops and demonstrations) were a time-consuming but significant education strategy.
- A respected Hmong interviewer was essential for the success of the Hmong angler interviews.
- Successful strategies included visual materials (drawings or photographs of fish to aid in identification), materials written in very simple English, audiovisual materials, and interpersonal communication.
- The most useful educational materials were audiovisuals. Written materials may be inappropriate for populations that, for the most part, communicate orally. While translated materials were produced, MDH found that many in the Hmong community did not read Hmong. Translation errors were made because of variations in this relatively young written language.
- One poster depicted a family whose members had Asian features that were purposely left abstract to avoid identification with only one nationality. The MDH heard of at least one criticism that facial and hand features were missing.
- Materials can be distributed by trusted community educators, such as community organizers or those teaching English as a Second Language.
- Community educators preferred MDH staff present information with the assistance of translators at meeting sites in neighborhoods where Southeast Asian communities are located. These meetings were time intensive and reached a limited number of the target audience.
- Radio, television, and newspapers targeting Southeast Asian communities were very effective at reaching large numbers of the community.

Best Practices for Future Work

- Building trusting and authentic relationships with organizations and individuals in the Southeast Asian community are essential for communicating health messages to this population.
- Information shared by a respected member/organization of the community will be better received than from someone outside the community.
- Audiovisual and visual (drawings) are the most useful educational materials for Southeast Asian communities.

Outreach Period: 1997 – 2007

Overview

For the next decade, outreach work revolved around the lessons learned and best practices developed in the early to mid-1990s. MDH continued working with organizations and individuals with ties to the Southeast Asian communities to maintain and build stronger relationships. Efforts during these years were mainly through collaborative work with the MDNR outreach programs for community events, radio announcements, and translated newspaper articles. Written materials were no longer translated into Southeast Asian languages. This was due to: 1) feedback that people who speak Hmong don't necessarily read Hmong, 2) difficulty in translating due to multiple dialects, and 3) the younger generation preferred reading English.

What Happened

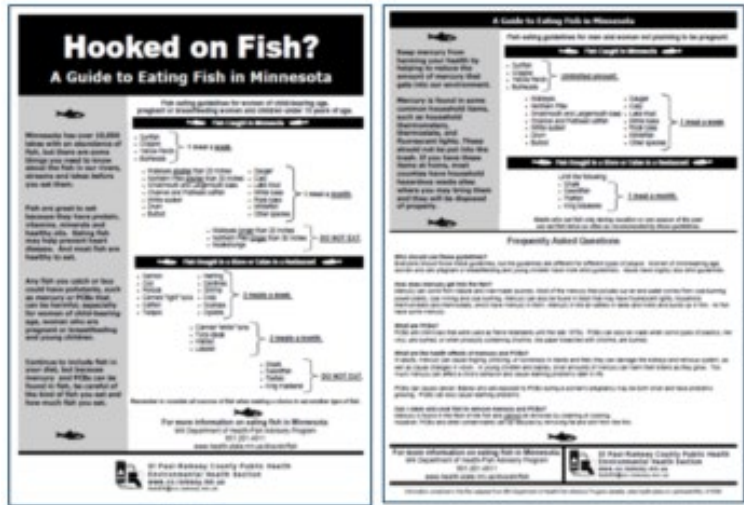
Collaborative Projects

Partnering with News Media

MDH contracted with writers from two Twin Cities newspapers, The Hmong Times and Ngay Nay (Vietnamese paper), to write a series of articles giving fish consumption advisory information in a cultural context. The articles, published in Hmong and Vietnamese respectively, were widely available in the community. See articles in Appendix 2.

Partnering with SPRCDPH

The St. Paul-Ramsey County Department of Public Health (SPRCDPH) partnered with Emergency Community Health Outreach (ECHO) and MDH to develop fish consumption outreach resources. ECHO is a collaborative in St. Paul that helps ensure that people with limited English proficiency receive life-saving health and safety information. SPRCDPH contracted with ECHO to develop a modified “safe eating for fish” two-page information sheet called “Hooked on Fish?” (Appendix 1), which was based on an MDH brochure.



In addition, they created as a 20-minute TV program on mercury in fish entitled “What’s Fishy About Mercury?” (Appendix 2). Both the information sheet and TV show translations were available in seven languages and included these key messages:

- Mercury is a pollutant found in our air and water and ends up in the fish we eat.
- Eating fish is healthy, but because mercury is found in some fish, we need to limit what fish we eat and how much we eat.
- Keep mercury out of the environment by taking used florescent bulbs and old mercury thermometers to household hazardous waste sites instead of throwing them in the trash.

Partnering with MDNR

MDH collaborated with MDNR-SEA (Southeast Asian), MinnAqua (Minnesota Aquatic and Fishing Education), and FIN (Fishing in the Neighborhood) programs at a number of community events. Activities included presentations, fillet demonstrations, and informal conversations about the fish advisory. Staff also acted as a resource for Q&A with attendees. A translator frequently attended to assist with conversations.

In addition, MDH and MinnAqua co-authored a chapter in the MinnAqua Leaders’ Guide. The chapter, called *Eating Fish*, focused on the risks and benefits of eating fish.

MDH and FIN also worked together to include fish consumption messages to existing fishing pier signs in the metro area. Example to the right is the sign for Gervais Mill Pond (Appendix 2).

Partnering with UMN Extension

University of Minnesota (UMN) Extension provide nutrition education programs for low income youth, families, and individuals. MDH presentations were provided to UMN Extension on the risks and benefits of eating fish. This information was developed into a curriculum and DVD by UMN Extension. The DVD was distributed at future UMN training events.



New Outreach Products Developed

Written materials (Appendix 1)

- March 2006 Fact Sheet: Hooked on Fish? A Guide to Eating Fish in Minnesota
 - Purpose: joint effort by SPRCDPH, ECHO, and MDH to develop a fish consumption outreach resource for people with limited English proficiency
 - Co-developed by SPRCDPH and MDH
 - English available for this report; translated into six other languages by SPRCDPH

Key People/Organizations

- Lillian McDonald - Public Information Officer, Saint Paul - Ramsey County Department of Public Health (SPRCDPH)
- Cathi Lyman-Onkka, SPRCDPH
- ECHO Minnesota
- Hmong Times and Ngay Nay newspapers
- MDNR-SEA
- MINN AQUA
- FIN
- UMN Extension
- Local organizations/individuals who work with Southeast Asian communities

Lessons Learned

- Informal links (e.g. local organizations/individuals) to Southeast Asian communities are essential.
- Implementing best practices developed from previous work is more successful through partnerships with organizations/local groups who have established relationships with Southeast Asian communities.

Best Practices for Future Work

- Building trusting, authentic, and on-going relationships with organizations and individuals in the Southeast Asian community are essential for communicating health messages to this population.
- Information shared by a respected member/organization of the community will be better received than from someone outside the community.
- Audiovisual and visual (drawings) are the most useful educational materials for Southeast Asian communities.

Outreach Period: 2007 – 2010

Overview

The unexpected discovery of perfluorochemicals in metro area lakes in 2006 and 2007 raised citizen concern that many Hmong are subsistence fishers and would be a vulnerable population that is not reached by normal outreach efforts. This concern prompted MDH and SPRCDPH to revisit fish consumption advisory outreach and education for limited English proficiency populations, particularly the Hmong. Work during this time period was partially funded by EPA through a grant to Wisconsin for the Great Lakes Consortium for Fish Advisories.

A detailed report of Hmong outreach during this time period can be found at Great Lakes Consortium Fish Guidelines Outreach Project: [Building on Existing Knowledge: Updating Minnesota's Fish Consumption Educational Outreach for the Hmong Community \(PDF\)](https://www.health.state.mn.us/communities/environment/fish/docs/2009fgoreport.pdf) (<https://www.health.state.mn.us/communities/environment/fish/docs/2009fgoreport.pdf>).

A one-page summary is available at [Updating Minnesota's Fish Consumption Educational Outreach for the Hmong Community \(PDF\)](https://www.health.state.mn.us/communities/environment/fish/docs/2009fgosummary.pdf) (<https://www.health.state.mn.us/communities/environment/fish/docs/2009fgosummary.pdf>).

What Happened

Collaborative Activities

Meetings with Local Organizations/Individuals

A number of meetings with stakeholders took place to discuss possible areas of collaboration and decide where to focus outreach efforts. Attendees included staff from SPRCDPH Hmong Resource group, MDH, St. Paul Parks and Recreation, Ramsey County Parks and Recreation, and MDNR-SEA. Several other individuals with relevant experience and knowledge were also consulted. All stakeholders agreed it was time to revisit fish consumption outreach to the Hmong community.

Key concepts from these meetings included:

- Health care providers are a key gatekeeper for health information in the Hmong community as they are trusted and respected.
- Currently, there is a transition in the Hmong community as the first generation ages and a growing proportion of the population has grown up and had their primary education in the U.S.

- The effectiveness of written materials in Hmong is unclear. There are several Hmong dialects and using only one may exclude a portion of the population. Literacy in the Hmong language is limited, although there does seem to be growing interest in some subsets of the population.
- Face-to-face communication is clearly preferred.
- There is a strong sense that full participation of the Hmong community is essential to the success of any efforts to develop new resources.

These concepts shaped many outreach efforts during this time period, including a novel survey method using mind mapping (details in above referenced report).

Outreach Efforts

Health Care Providers. Outreach to health care providers was attempted but later set aside because a clinic “champion” (a key Hmong health professional who would act as a point person for fish consumption advice) could not be obtained.

Personal Interactions. Discussions with Hmong fishers, youth, parents, and elders took place in several structured settings to learn about fish and health in Hmong culture, the kinds and amounts of fish consumed, and preferred ways of receiving information about fish.

- **Lake Phalen Shoreline Survey**

The St. Paul Parks and Recreation Youth Corps Program volunteered their youth to conduct interviews of people fishing at park lakes during the second half of August 2008. Of 44 respondents, 7 were Hmong. While the limited number of Hmong participants was a disappointment, the survey did accomplish outreach to Hmong teenagers in the Youth Corps program through the training process and enabled a connection with other youth corps programs that involve Hmong youth elsewhere in St. Paul.

- **Listening Sessions**

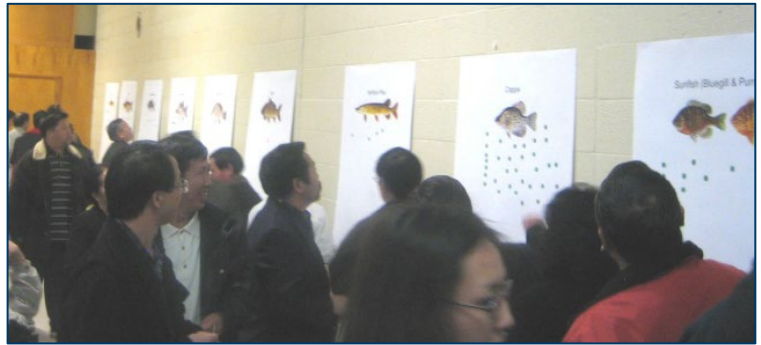
MDH and SPRCDPH staff conducted listening sessions with Hmong in existing community programs who met together regularly. Four listening sessions provided a rich collection of information about eating habits, fish stories, recipes, reflections on contamination in fish, and suggestions for communicating with the Hmong community. Two sessions were conducted with the Roosevelt Housing Community Center Hmong Women Gardeners and two with the Community Design Center Youth Corps. Xe Susane Moua, the St. Paul neighborhood District 2 coordinator, led and interpreted the listening sessions. These informal meetings provided an opportunity to ask follow up questions and gather a broader range of information than what could have been obtained in structured surveys.

- **CSC Hmong Community Event for Frequent Hmong Anglers and Consumers**

Tong Vang (MDNR) along with John Ny Vang and John X Vang of the Capitol Sportmen’s Chapter of the Minnesota Deerhunters’ Association (CSC), the local chapter of Hmong sportsmen, organized and hosted a community event with MDH and SPRCDPH.

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The event included: 1) a MDNR update on fishing regulations, plans for improving white bass fishing (a current concern/hot topic for Hmong at the time), and dedicated time for audience feedback; 2) an interactive survey with 120 Hmong attendees about preferred fish species to catch and eat where participants placed colored dot stickers and fish stickers on large poster boards as a way to indicate their survey responses; and 3) testing of a draft video about mercury in fish (created after the community listening sessions with Xe Susane Moua) using a pre- and post-evaluation.



John Ny Vang emceed the event, translated the English presentations, and facilitated the survey and video evaluation questions. He also summarized the results on Hmong Radio KPNP 1600 am on June 22, 2009. They were rebroadcast several times over the summer months of 2009 as public service announcements (PSAs).

Hmong Fish Video. A draft video (in English) was developed to address questions and misunderstandings discovered through the listening sessions with the intent of using it to gauge the utility of a movie and to solicit cost estimates for a Hmong version. Video content included how mercury gets into fish, which fish have the lowest and highest amounts of mercury, and how fish from city lakes are safe to eat. This video was evaluated at the CSC community event.



Following the CSC community event, John Ny Vang expressed interest in continuing to share fish consumption information to the Hmong community. He agreed to translate and narrate the draft video into Hmong. Fong Heu, a local Hmong film producer who had produced the first video for MDH in 1996, agreed to produce the new video entitled: "Talk about Fish and Way of Eating Fish" (Tham txog ntses thiab kev noj ntses). Together, Vang and Heu modified the script to adjust for cultural context and Hmong speech patterns. For example, they spent time thinking through ways to

say "mercury" in Hmong, as there is no existing name. The new video was distributed as a DVD through CSC, MDH, MDNR-SEA, Hmong public TV, the Mississippi Watershed Management Organization, and SPRCDPH. It was also posted on the MDH website with the English script: [Talk about Fish and Way of Eating Fish \(PDF\)](#)

(<https://www.health.state.mn.us/communities/environment/fish/docs/2009fgoscript.pdf>).

Agency Collaborations. MDH also collaborated with MDNR for outreach efforts during this time period.

- **MDNR-SEA Program**

In addition to the CSC event, staff from MDNR-SEA worked with community leaders to design culturally appropriate models for education and coordinated with MDH to deliver fish consumption messages at:

- Classroom training workshops held at a community center
- In anglers' homes, as a version of the storytelling tradition and often involved elders
- Day field trips that included bus travel to fishing sites with an education component followed by a hands-on session of fishing, fish cutting/filleting, and preparation
- Radio announcements and video
- Translated materials for purpose of reinforcing the messages and reference, **not** to replace the above models

- **MDNR Fishing Regulations**

A MDNR fishing regulations booklet is available to anglers when they purchase a fishing license. Until 2010, the booklet was only available in English. In 2010, MDNR published the fishing regulations for the first time in other languages - adding translations in Hmong, Vietnamese, and Spanish. These translations have continued annually since then. Fishing regulations information is also available on the MDNR website: [Fishing regulations \(https://www.dnr.state.mn.us/regulations/fishing/index.html\)](https://www.dnr.state.mn.us/regulations/fishing/index.html).

New Outreach Products Developed

Written materials

- 2010 MDNR Fishing Regulations
 - Purpose: fishing regulations translated into Hmong, Vietnamese, and Spanish
 - MDH provided text for fish consumption advice and worked with MDNR on translations
 - Audience: Hmong, Vietnamese, and Spanish anglers/consumers

Video resource

- 2009 Video produced in Hmong: "Talk about Fish and Way of Eating Fish" (Tham txog ntse thiab kev noj ntse)
 - Purpose: educational tool in Hmong about mercury in fish
 - Video available as a DVD in Hmong (with Hmong subtitles), written video script (text only) available in English, and full video posted on YouTube: [Talk about Fish and Way of Eating Fish \(https://www.youtube.com/watch?v=GY0gt4tpljg&feature=youtu.be\)](https://www.youtube.com/watch?v=GY0gt4tpljg&feature=youtu.be).

Key People/Organizations

- SPRCDPH Hmong Resource group, St. Paul Parks and Recreation, Ramsey County Parks and Recreation, and MDNR-SEA.

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- Hmong Healthcare Coalition: a group of health insurance company employees, University of Minnesota researchers, and public health professional staff who met together monthly to work on Hmong health issues.
- Ms. Chao Vue, a community educator for the American Red Cross, provided valuable information during stakeholder meetings about creating a traditional storycloth to teach new information to elders in the Hmong community.
- Jennifer Winkelman gave a presentation that highlighted the work of the Mississippi Watershed Management Organization with the Hmong community and provided insight into best practices for outreach to the Hmong community.
- Michele Schermann, a research fellow with Bioproducts and Biosystems Engineering at the University of Minnesota, provided practical advice based on her years of experience with several research projects focused on Hmong Americans.
- St. Paul Parks and Recreation Youth Corps Program
- Roosevelt Housing Community Center Hmong Women Gardeners
- Community Design Center Youth Corps
- Xe Susane Moua, St. Paul neighborhood District 2 coordinator, who led and interpreted listening sessions
- John Ny Vang and John X Vang, leaders of the Capitol Sportmen's Chapter of the Minnesota Deerhunters' Association (CSC) (local chapter of Hmong sportsmen)
- Fong Heu, local Hmong film producer

Lessons Learned

- Signage was not an appropriate response to the discovery of PFOS in metro fish.
- Creating a traditional storycloth to teach new information to elders in the Hmong community may be a potential outreach strategy if deemed feasible and useful. Hmong use story telling as a way to communicate and share history and important events.
- Health care providers are key gatekeepers for health information in the Hmong community as they are trusted and respected.
- There is a transition in the Hmong community as the first generation ages and a growing proportion of the population has grown up and had their primary education in the U.S.
- The effectiveness of written materials in Hmong is unclear. There are several Hmong dialects and using only one may exclude a portion of the population. Literacy in the Hmong language is limited, although there does seem to be growing interest in some subsets of the population.
- Face-to-face communication is clearly preferred.
- There is a strong sense that full participation of the Hmong community is essential to the success of any efforts to develop new resources.
- The extent of sport-caught and market fish consumption in the Hmong community is largely based on anecdotal observation. Fish consumption likely varies by age, income, and season, especially for sport-caught fish. Due to the large number of Hmong in the Twin Cities, casual observers are likely to assume that any Asian observed fishing is Hmong.
- Informal meetings provided an opportunity to ask follow up questions and gather a broader range of information that cannot be obtained in structured surveys.

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- There is a general awareness of contamination, but specific details are fuzzy. Knowledge of the MN Fish Consumption Guidelines is not accurate.
- There is a perception that clean looking water will have fish that are safe to eat and dirty looking water will have fish with higher contamination – and that fish from city lakes are contaminated.
- Eating fish is part of Hmong culture. Information on how to prepare fish is traditionally passed down from parents to children. This process may be modified in the U.S. For example, Hmong may learn from an older brother who is a teacher, from a physician, from the Food Network on TV, from young Hmong professionals, and sometimes from parents.
- Fish may be used in a traditional meat salad (“laab” in the Hmong language) or prepared with one of the following methods: fry, grill, stew, steam, or smoke.
- Hmong see the government as an authoritative source of information.
- While anecdotal reports suggested drum (or Sheepshead) is popular in the Hmong community, this was not true for participants of the CSC community event survey. Crappie and white bass were the most popular fish caught and consumed. The consumption frequency seemed to be at most 1 time per week, with some exceptions such as eating fish more frequently for health reasons.
- Listening session participants stated they eat a variety of locally caught fish. While crappie seems to be most popular, they also mentioned sunfish, bass, catfish, and buffalo fish. This is in contrast to verbal feedback from the Capitol Sportsman’s Chapter that indicated a strong preference for white bass. They also reported not eating a lot of store bought fish, except tilapia. The women gardener groups primarily relied on fish given to them by relatives or purchased fish. Participants perceived they are experiencing a new group of diseases here in the U.S. as compared with what they saw in their elders in Laos.
- The value of fish was related to diet and health (one specialty medicine fish mentioned is associated with intelligence, but the exact species could not be determined).
- The value of fishing as an activity is more than obtaining food. Family activity, fresh air, and exercise were all mentioned as benefits of fishing.
- Needs assessments of limited English proficiency populations benefit from active participation of the target population. Using pictures and oral communication, participants can provide quantitative and qualitative responses that provide helpful information for the community as well as staff.

Best Practices for Future Work

- Building trusting, authentic, and on-going relationships with organizations and individuals in the Southeast Asian community are essential for communicating health messages to this population.
- Information shared by a respected member/organization of the community will be better received than from someone outside the community.
- Audiovisual and visual (drawings) are the most useful educational materials for Southeast Asian communities.
- There is a strong sense that full participation of the Hmong community is essential to the success of any efforts to develop new resources. Future work should tailor messages to anglers and non-anglers of both genders and all ages.

- Focus future Hmong fish consumption messages on these concepts:
 - A rural/clean-looking lake/river does not mean the fish are healthy to eat.
 - Choose fish that are healthy to eat by choosing the right kind and size of fish and waiting the right time in-between meals of fish.
 - Fish consumption advice is different for mothers/children than it is for men.
 - Eating fish plays an important role in preventing diseases here in America and is good for babies and young children.
 - Eat a variety of locally caught fish (not just white bass).

Outreach Period: 2011 – 2012

Overview

Staff focused efforts on revisiting previously attended venues, joining new community events, and distributing the new Hmong video “Talk about Eating Fish and Way of Eating Fish” (Tham txog ntse thiab kev noj ntse). Evaluation of this video promoted valuable and interactive participation in addition to generating fruitful suggestions from organizations and Hmong citizens. Full details of the video evaluation are available online, Great Lakes Consortium Fish Consumption Guidelines Outreach Project: [Talk about Fish and Way of Eating Fish: Evaluation of a Community Health Education Video \(PDF\)](https://www.health.state.mn.us/communities/environment/fish/docs/hmongevaluation.pdf) (<https://www.health.state.mn.us/communities/environment/fish/docs/hmongevaluation.pdf>).

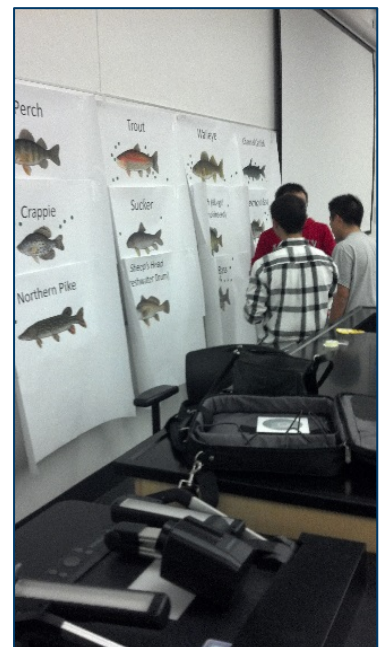
What Happened

Collaborative Projects

Hmong Fish Video Evaluation

Local agencies/organizations who work with Hmong communities as well as Hmong citizens tested and evaluated the Hmong video for fish consumption comprehension, video clarity and usability, and distribution suggestions. Feedback was provided by:

- SPRCDPH
- Community Design Center (Hmong youth)
- Hmong Health Care Professionals Coalition (HHPC)
- Association for the Advancement of Hmong Women (AAHW)
- Lao Family Services
- Legislative-Citizen Commission on Minnesota Resources (LCCMR) – Environment and Natural Resources Trust Fund (ENRF) Project
- U of M Hmong Student Association (young adults)
- Association for the Advancement of Hmong Women (Hmong elders farming program)
- Neighborhood House Hmong Food Shelf and Support Services (Hmong elders and families)
- Community Design Center (Hmong youth)



FISH CONSUMPTION OUTREACH TO SOUTHEAST ASIANS IN MN

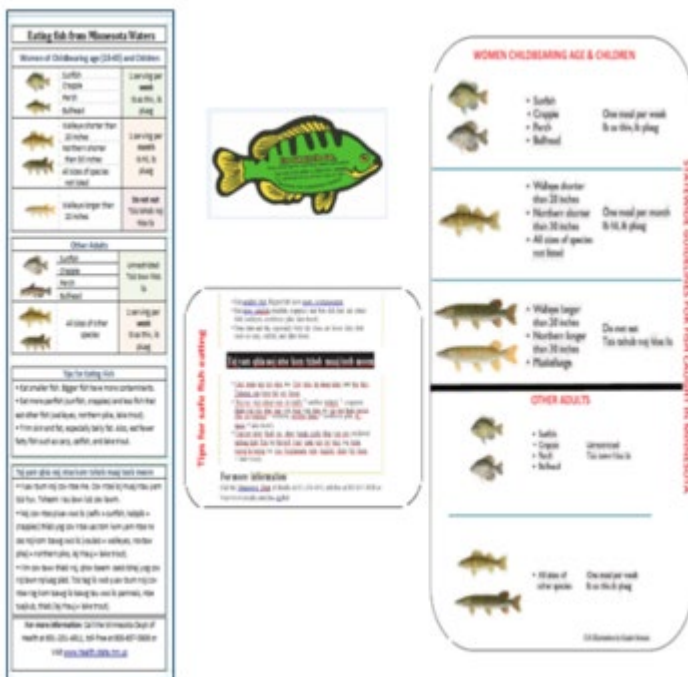
Reviewers liked the video as is and offered a number of recommendations for distribution, such as adding an informational booklet (in English) inside the DVD cover and advertising through *Hmong Today*, *Hmong Times*, and *Asian American Press*. Reviewers also advised a “go to the people” strategy to distribute the video where Hmong gather (e.g. July 4th celebration, Dragon Festival, Hmong Village, Hmong Resource Fair, Farmers’ Market, Hmong Bakery, Golden Harvest).

A video distribution plan was formed based on evaluation results and reviewer suggestions.

Hmong Fish Video DVD Distribution

MDH staff mass-produced 7,000 copies of the video in DVD format. More than 6,000 DVDs were distributed to a variety of agencies and organizations and at community events. See examples of community event fliers (Appendix 2).

New community event handouts in Hmong were also developed (images below and Appendix 2). Best practices were incorporated into message content. Thousands of fish consumption handouts and magnets were distributed to Southeast Asian organizations and at community events.



The largest community event was the Hmong Freedom Festival, which had an estimated attendance of 40,000 people. Staff distributed the DVD, magnet, and 3-fold handout together as a small packet to people as they passed the booth. In all, approximately 7,130 materials were distributed. Attendees recognized the fish images and liked the size of the Hmong handouts; kids especially liked the green fish magnets. Individuals were less likely to take the information if approached; they were more interested and receptive if the information was handed to them in a calm and easy manner with women being generally more receptive than men. Many people took the DVD but were initially confused on whether it was free or for purchase. Many smiled when they heard it

was free or “no cost”, which was a more effective phrase with older individuals. Many also asked if the DVD was in Hmong or English, and if it had subtitles. As people took the DVD, either a Hmong speaking volunteer or MDH staff briefly described the DVD. Women responded well when told that the DVD described what types of fish are healthy to cook and eat. Men took interest when told what types of fish are healthy to catch and eat.














Key People/Organizations

- SPRCDPH
- Community Design Center (Hmong youth)
- Hmong Health Care Professionals Coalition (HHPC)
- Association for the Advancement of Hmong Women (AAHW)
- Lao Family Services
- Legislative-Citizen Commission on Minnesota Resources (LCCMR) – Environment and Natural Resources Trust Fund (ENRF) Project
- U of M Hmong Student Association (young adults)
- Association for the Advancement of Hmong Women (Hmong elders farming program)
- Neighborhood House Hmong Food Shelf and Support Services (Hmong elders and families)
- Community Design Center (Hmong youth)

New Outreach Products Developed

Written materials (Appendix 2)

- Handouts for Hmong Community Events
 - Purpose: developed for distribution at Hmong community events
 - Audience: Hmong

Eating fish from Minnesota Waters		
Women of Childbearing age (18-40) and Children		
	Sunfish	1 serving per week
	Crappe	1b as thiv, 1b pluag
	Perch	
	Bullhead	
	Walleye shorter than 20 inches	1 serving per month
	Northern shorter than 30 inches	1b hi, 1b pluag
	All sizes of species not listed	
	Walleye longer than 20 inches	Do not eat Tsis bhob noj Hlos is
Other Adults		
	Sunfish	Unrestricted
	Crappe	Tsis tovov hlos is
	Perch	
	Bullhead	
	All sizes of other species	1 serving per week 1b as thiv, 1b pluag
Tips for Eating Fish		
<ul style="list-style-type: none"> • Eat smaller fish. Bigger fish have more contaminants. • Eat more panfish (sunfish, crappies) and less fish that eat other fish (walleyes, northern pike, lake trout). • Trim skin and fat, especially belly fat. Also, eat fewer fatty fish such as carp, catfish, and lake trout. 		
Tej yam qhia noj ntse kom txhob muaj teeb meem		
<ul style="list-style-type: none"> • Yuav tsum noj cov ntse me. Cov ntse loj muaj ntau yam tsis huv. Txheem rau lawv lub cev lawm. • Noj cov ntse p luav xws lis (xafiv = sunfish, kabpib = crappies) thiab yog cov ntse uas tom lwm yam ntse no ces noj kom tsawg xws lis (vaualis = walleyes, novtav phajj = northern pike, lej rhauj = lake trout). • Vim cov tawv thiab roj, shov tseem ceeb thaj yag cov roj tawv npluag piab. Tsis tag lis sub yuav tsum noj cov ntse roj kom tsawg lis tsawg tau xws lis pannaiss, nte tuajjub, thiab (lej rhauj = lake trout). 		
For more information, call the Minnesota Dept of Health at 651-201-4911, toll-free at 800-657-3908 or visit www.health.state.mn.us		

Wallet card front (left) and back (right)



Lessons Learned

- Trusting relationships and support from Hmong organizations/individuals are key to successful and effective community involvement and outreach.
- Informal conversations with Hmong of different ages/genders provided a robust pool of information.
- Learning and understanding cultural ways and perceptions are important for connecting with the community and can promote outreach efforts.
- Hmong DVD and smaller Hmong handouts were most appealing to community event attendees.

Best Practices for Future Work

- Building trusting, authentic, and on-going relationships with organizations and individuals in the Southeast Asian community are essential for communicating health messages to this population.
- Having a Hmong-speaking volunteer, contractor, or staff for translation and interpreting is an effective and valuable resource.
- Audiovisual and visual (drawings) are the most useful educational materials for Southeast Asian communities.
- There is a strong sense that full participation of the Hmong community is essential to the success of any efforts to develop new resources. Target messages to anglers and non-anglers of both genders and all ages.
- Focus Hmong fish consumption messages on these concepts:
 - A rural/clean-looking lake/river does not mean the fish are healthy to eat.
 - Choose fish that are healthy to eat by choosing the right kind and size of fish and waiting the right time in-between meals of fish.
 - Fish consumption advice is different for mothers/children than it is for men.
 - Eating fish plays an important role in preventing diseases here in America and is good for babies and young children.
 - Eat a variety of locally caught fish (not just white bass).

Outreach Period: 2013 – 2014

Following best practices to date, work with Hmong community groups continued but at a lower frequency in 2013-14 while MDH's focus shifted to fish consumption outreach through healthcare providers. Relationships with MDNR-SEA and St. Paul-Ramsey County Department of Public Health (SPRCDPH) were maintained. No new outreach products were developed.

Outreach Period: 2015 – present

Overview

Discussions with community leaders, results from the Minnesota Family Environmental Exposure Tracking study (MN FEET), and funding from the Great Lakes Restoration Initiative (GLRI) have stimulated additional Hmong outreach activities in recent years. Though the sample size in the study

was small, MN FEET results showed that Asian women (especially Hmong) had the highest levels of mercury in both mothers’ urine and babies’ cord blood among participants. Some Hmong women in MN may have high mercury exposures from using skin lightening products and eating fish higher in mercury. These findings suggested more focus was needed for Hmong women of childbearing age (WCBA), including outreach about fish consumption.

What Happened

Collaborative Projects

Hmong Focus Groups and MN FEET: Mercury in Skin Lightening Products

Hamline University students, under the direction of their professor and the Mercury in Skin Cream Workgroup, conducted focus group research and development of public health educational materials for the Hmong community on a new initiative about skin lightening products. Workgroup members included MDH, MPCA, local public health and environmental agencies, and community partners. Four focus groups took place with Hmong Student Associations at Hamline University, St. Kate’s University, and Concordia St. Paul to better understand how Hmong in MN use and think about skin lightening cream. Another purpose was to determine which outreach strategies would be effective for reaching the Hmong community about mercury-containing creams. Findings were published in the Hmong Studies Journal: [Hmong College Student Perceptions and Experiences with Mercury Containing Skin Lightening Products in St. Paul Minnesota \(PDF\)](http://www.hmongstudies.org/KeefeetalHSJ19.2.pdf) (<http://www.hmongstudies.org/KeefeetalHSJ19.2.pdf>).

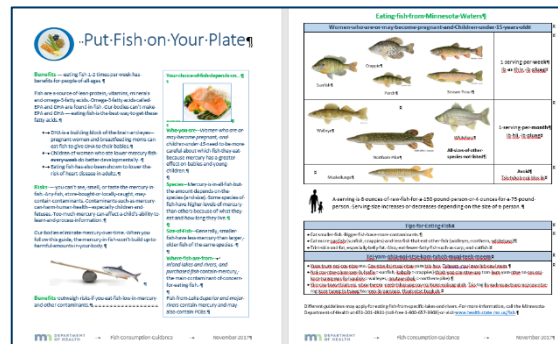
While not primarily a fish-focused project, generational findings from the focus groups were useful for working with the Hmong community for future fish consumption outreach. Of particular interest was the ways in which Hmong get information.

Hmong Information Resources by Generation

Younger Generations	Older Generations
<ul style="list-style-type: none"> • YouTube • Facebook 	<ul style="list-style-type: none"> • Hmong radio (KFAI Radio) • Hmong TV • Facebook

In addition, this project led to future work with Michael Xiong, a Hmong student at the time of the focus groups. He was later hired as a MDH consultant for additional Hmong outreach work.

Interest in mercury exposure from skin lightening creams led to the MN FEET study, which involved interviewing Latina, Asian, East African, and Caucasian pregnant women about skin lightening cream use and fish consumption (both sources of mercury exposure). Following birth, moms gave a urine sample and small amount of blood from their baby’s umbilical cord to be tested for mercury. Participants also received a 2-page handout about fish consumption (image on right, Appendix 2).



FISH CONSUMPTION OUTREACH TO SOUTHEAST ASIANS IN MN

The MN FEET Participant Handout was later revised after the MN FEET study for broader Hmong outreach as the new *Put Fish On Your Plate* handout (see Outreach Efforts below). The MN FEET study community report can be found at [MN FEET Study: Community Report \(PDF\)](https://www.health.state.mn.us/communities/environment/biomonitoring/docs/mnfeetcommreporten.pdf) (<https://www.health.state.mn.us/communities/environment/biomonitoring/docs/mnfeetcommreporten.pdf>).

Stakeholder Check-in

MDH consulted with Hmong community leaders to check in on past best practices, provide updates on current work, and learn about changes in the community. Several meetings took place with the following community stakeholders:

- MDH
- MDNR
- SPRCDPH
- HealthPartners Institute (HPI)
- Community members/groups

MDH hired Michael Xiong as a consultant to review and implement outreach and further strengthen current relationships. Meetings with three key stakeholders resulted in a number of outcomes.

MDNR-SEA. Meetings with Tong Vang of MDNR-SEA outreach provided new insight into current Hmong eating habits.

- Young people in the Hmong community eat out more and do not cook at home as often as older generations.
- Tilapia is a popular choice at group events.
- Pompano and Riverbarb (redtail) fish are popular commercial species but were not listed in the MDH consumption guidelines.

As a result, Michael Xiong and MDH purchased Pompano and Riverbarb (redtail) fish at local Asian markets and the Minnesota Interagency Fish Contaminant Monitoring Program tested samples for mercury. These species were low in mercury and advice was added to a new *Put Fish On Your Plate* handout for the Hmong community (Appendix 1).

SPRCDPH. HealthPartners Institute (HPI), through a grant from MDH's GLRI grant from EPA, coordinated a meeting with Mao Tao and Pa Shasky (both from SPRCDPH) and MDH to discuss outreach approaches. This generated a variety of social media suggestions and a list of Hmong-owned businesses (see Appendix 3) to use as possible outlets for educational material distribution.

Hmong Health Care Professionals Coalition (HHPC). MDH fish program and MN FEET staff met with HHPC to present current fish consumption advice and MN FEET study results and hear feedback.



Assessment of Existing MDH Materials

Xiong reviewed existing MDH fish consumption advisory (FCA) education materials to determine suitability, cultural sensitivity, and accuracy. After meeting with the FCA program manager to understand and define the main educational messages, he evaluated and made recommendations to the following:

- Non-English MDH fish web page resources and reports
- *Put Fish On Your Plate* handout
- Fish consumption guidelines information in the MDNR fishing regulations
- Choose Your Fish English brochure
- Shorter video segment cut-points for the “Talk about Eating Fish and Way of Eating Fish” Hmong video on the MDH website

Outreach Efforts

Outreach activities focused on distributing fish consumption guidelines through Hmong community events, Hmong radio, written materials, videos, and social media. An overall goal was to utilize existing channels and events where large numbers of Hmong gathered.

Educational materials included the Hmong video “Talk about Fish and Way of Eating Fish”, the new *Put Fish On Your Plate* handout tailored specifically to Hmong (shown in image above), and creating social media posts.

Community Event: 2018 HmongTown Marketplace. HmongTown Marketplace is a year-round indoor/outdoor open market near downtown St. Paul where Hmong and visitors can experience Southeast Asian culture. From fresh food, groceries, and restaurants to clothing, traditional medicine, music, arts, and hair services, HmongTown provides goods, services, entertainment, and jobs for many Hmong. In addition to day-to-day marketplace activities, HmongTown also hosts special events throughout the year, including HmongTown Festival.



State Senator Fong Hawj visited the MDH booth.



Between May and September 2018, MDH staff and Hmong-speaking volunteers from Hamline University engaged with Hmong at HmongTown Marketplace on four typical Fridays and two days during the annual HmongTown Festival on the topic of mercury in fish and skin lightening cream. Handouts on fish consumption and skin creams were available for those who wanted more health information (handouts on pages 26-27). At the festival, interactive activities (photo booth and fishing game) and free items (sunscreen and goldfish crackers) drew people to the educational booth and allowed opportunities to engage in conversation about choosing to eat fish low in mercury and avoid skin lightening creams. A summary report of HmongTown

Marketplace and Festival can be found at [Community outreach and education about skin lightening products](https://www.health.state.mn.us/communities/environment/skin/community.html) (<https://www.health.state.mn.us/communities/environment/skin/community.html>).

FISH CONSUMPTION OUTREACH TO SOUTHEAST ASIANS IN MN

Community Event: 2018 Hmong New Year Celebration. Each year, the city of St. Paul is home to Minnesota’s Hmong New Year Celebration, an event meant to honor ancestors and give thanks for the harvest. Taking place in the fall (late November/early December), the three-day event highlights traditional Hmong dance, music, crafts, games, and vendors.

In November 2018, Michael Xiong (MDH consultant) worked a booth at the 40th annual Hmong New Year Celebration at the Saint Paul River Centre to engage with Hmong about fish consumption and skin lightening creams (MN FEET). Due to other on-going MDH work with HealthPartners Institute, MDH shared vendor space with Health Partners. Local Twin Cities Hmong Television HBCTV interviewed Xiong as one of the Hmong New Year vendors. The interview streamed live on November 23, 2018 and can be found at [HBCTV LIVE: Vendor Interviews - MN Hmong New Year 2019](https://www.youtube.com/watch?v=N3H6HtIFzpl&app=desktop) (<https://www.youtube.com/watch?v=N3H6HtIFzpl&app=desktop>).

In addition to visiting with event attendees, three handouts were distributed:

- Choose health, low mercury fish: [PUT FUSH ON YOUR PLATE \(PDF\)](#) (<https://www.health.state.mn.us/communities/environment/fish/docs/fishhandout.pdf>)



- Choose Tour Fish: Recommendations for Women & Children (PDF) (<https://www.health.state.mn.us/communities/environment/fish/docs/choosefishenglish.pdf>)



- Choose health, avoid skin lightening: [LOVE YOUR SKIN \(PDF\)](https://www.health.state.mn.us/communities/environment/skin/docs/gpfs.pdf)
(<https://www.health.state.mn.us/communities/environment/skin/docs/gpfs.pdf>)



To draw people into conversations, Xiong asked attendees about what types of fish they ate and how often they ate fish. He also solicited feedback to improve the *Put Fish On Your Plate* handout for community use. The key message was to promote eating fish by helping people to understand which fish to eat and how much to eat based on the Safe-Eating Guidelines.

With over 50,000 Hmong at the event, successes and feedback on the mercury in fish and skin lightening cream topics and *Put Fish On Your Plate* handout included:

- “Good information because the Hmong Community needs it.”
- “I love that they show Hmong dishes in [flier].”
- Fish Laab and Tilapia photo were most eye-catching because of the contrast in color.
- Good size handout and very high quality paper.
- Community wanted more information and all agreed that this topic isn’t discussed enough.
- Churches, a future politician, business owners, Hmong news station, and Hmong Radio expressed interest.

A variety of recommendations were also suggested:

- Have a game or activity to draw crowd over to booth
- More social media to reach younger audience because they are less likely to read brochure or flyer
- Use video ads no longer than 30 seconds
- Frequent postings of variety of fish information on social media for women of child-bearing age
- Include Hmong photos in handout (i.e.; Hmong patterns, Hmong hat, Hmong women with traditional clothes, etc.)
- Include fish names in Hmong, as many women don’t know the English name for the fish
- Less text in handout and more pictures, such as fish photos
- Use photos with a quick line on recommendation
- Serving size hard to understand
- Better location for booth as traffic flow went away from the booth
- Connect with the media outlets and churches to increase awareness
- Establish a social media outreach campaign

Hmong Radio. In 2019, Hmong radio host Kongsue Xiong interviewed Tong Vang and Michael Xiong live on Hmong radio KFXN AM 690 to talk about mercury and fish consumption. Interview topics included: reasons people should eat fish, choosing to eat fish low in mercury, cooking and cleaning methods to reduce PCB exposure but not mercury, and addressing myths. Two myths people often believe are: 1) city lakes are more contaminated than non-urban water bodies, and 2) someone can tell if a fish is safe to eat by how it looks or by looking at the water it comes from or how it smells. Fish consumption advice for Devil's Lake, ND, (common waterbody for Hmong fishers) and additional resources, including websites and phone numbers, were also highlighted.

Partnering with HealthPartners Institute. MN FEET results and input from community leaders demonstrated a renewed opportunity to engage with the Hmong population in Minnesota about the topic of safe fish consumption. From fall 2018 through August 2020, HealthPartners Institute (HPI) was funded from an MDH grant through the Great Lakes Restoration Initiative (GLRI) to:

- Conduct qualitative research (focus groups) among this population to understand consumption of health education messaging and identify potential gaps in current messaging
- Expand work in the digital media space, which could include:
 - Exploration of digital habits of this population for more focused targeting
 - Social media testing for messages and photos that most resonate with this population
 - Disseminating digital messages to towns identified as having high proportions of this population

Results from the focus groups demonstrated that an online presence is important to reach Hmong women of childbearing age (WCBA), and credible sources were online healthcare websites, healthcare providers, and close family and friends, especially those working in healthcare settings. Simple social media messages targeting Hmong (not just Asian) women were preferred. A summary of HPI's focus groups and social media work with the Hmong community is available at [Promoting Healthy Fish Consumption Messaging among Hmong Women: Focus Group Summary & Key Takeaways \(PDF\)](https://www.health.state.mn.us/communities/environment/fish/docs/consortium/promofishconsump.pdf) (<https://www.health.state.mn.us/communities/environment/fish/docs/consortium/promofishconsump.pdf>).

HPI rolled out a strategic social media campaign about fish consumption in spring 2020 targeting Asian WCBA (Facebook cannot target only Hmong). Ad content included both gain-and risk-framed fish messages with topics including guidelines, benefits, and recipes. MDH plans to rerun the most effective ads and posts through MDH's Facebook page and ask SPRCDPH and MDNR-SEA to share the posts to their respective organization's Facebook pages.

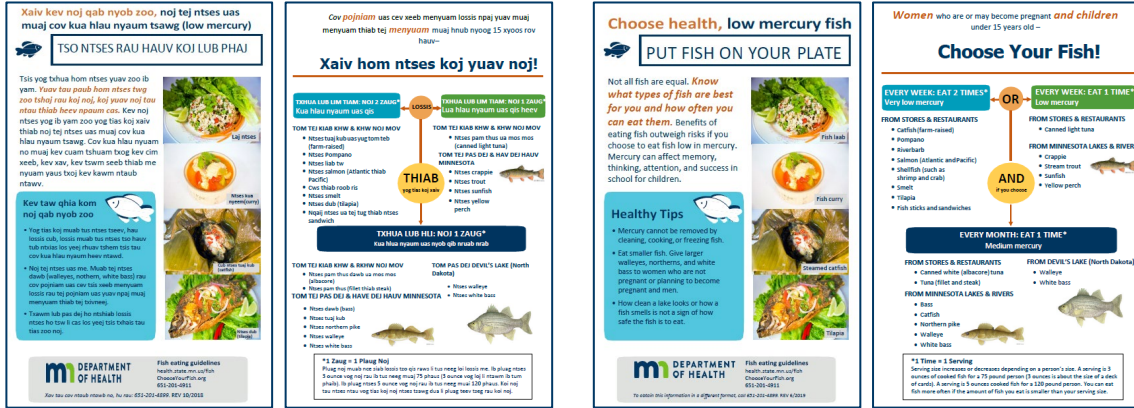
A report of HPI's campaign findings is available at [ChooseYourFish Online Marketing Strategies and Learnings \(PDF\)](https://www.health.state.mn.us/communities/environment/fish/docs/consortium/onlinemark.pdf) (<https://www.health.state.mn.us/communities/environment/fish/docs/consortium/onlinemark.pdf>).

Key People/Organizations

- SPRCDPH
- Hmong Health Care Professionals Coalition (HHCCPC)
- Asian American Radio
- MDNR-SEA
- HealthPartners Institute (HPI)

New Outreach Products Developed

Choose Health, Low Mercury Fish: PUT FISH ON YOUR PLATE handout (Hmong & English)



Hmong Video “Talk about Fish and Way of Eating Fish” revisions: [Talk about Fish and Way of Eating Fish](https://www.youtube.com/watch?v=GY0gt4tpljg&feature=youtu.be) (<https://www.youtube.com/watch?v=GY0gt4tpljg&feature=youtu.be>)

- Modified text because statewide advice changed in 2017
- Created shorter segments to post on MDH website and use in social media
- Edited website links to new revised link locations



Lessons Learned

- Trusting relationships and support from Hmong organizations/individuals are crucial for successful and effective community involvement and outreach.
- Stakeholder engagement and buy-in builds capacity and sustainability of accurate fish messaging to targeted groups.
- Utilize existing Hmong gathering places and events as backdrops for sharing fish consumption messages and collecting feedback (e.g. HmongTown Marketplace, HmongTown Festival, New Year’s Celebration).
- Having a Hmong-speaking volunteer, contractor, or staff for translation and interpreting is a valuable resource at community events.
- Hmong radio was an effective strategy to verbally engage and reach numerous listeners.
- Learning and understanding cultural ways and perceptions are important for connecting with the community and can promote outreach efforts.
- HPI’s focus groups with Hmong women of childbearing age provided fruitful and relevant insight.
 - Branding with a credible source may be helpful in reaching Hmong women of childbearing age.

- Internet is the primary source of health information. An online presence is important to reach Hmong, especially women of childbearing age.
- Continue promoting the safe fish consumption message to the Hmong population, including additional clarification that species differences are important for health and eating low-mercury fish is beneficial for women of childbearing age.
- Social media images and messages should directly target the intended audience (Hmong women) and not just Asian women generally.
- Use simple messages for general understanding and ease of translation.

Best Practices for Future Work

- Trusting relationships and support from Hmong organizations/individuals are crucial for successful and effective community involvement and outreach.
- Stakeholder engagement and buy-in builds capacity and sustainability of accurate fish messaging to targeted groups.
- Internet is the primary source of health information. An online presence is important to reach Hmong, especially women of childbearing age.

Incorporate these concepts into fish consumption messages:

- A rural/clean-looking lake/river does not mean the fish are healthy to eat.
- Choose fish that are healthy to eat by choosing the right kind and size of fish and waiting the right time in-between meals of fish.
- Fish consumption advice is different for mothers/children than it is for men.
- Eating fish plays an important role in preventing diseases and is good for babies and young children.
- Include fish consumption guidelines/advice for purchased fish popular in the community (e.g. purchased fish frequently consumed).

Recommendations for successful outreach include:

- For the impending future, implement two strategies to target younger and older generations separately using their preferred information outlet (internet and Hmong radio/tv, respectively).
- Electronic media may soon become the best, most effective, and sole outreach avenue for reaching Southeast Asians.

External Resources: Hmong Community Outreach from Non-MDH Agencies and Organizations

Barton, K. (2007). Hmong Water Research Project KEV COB QHIA ZEJ TSOOM HMOOB TXOG DEJ: Assessing Attitudes, Perceptions and Behavior about Water in Minnesota's Hmong Community. Copy available upon request.

Bengston, D.N., Schermann, M., Moua, M., & Lee, T. T. (2008). Listening to neglected voices: Hmong and public lands in Minnesota and Wisconsin. *Society and Natural Resources*, 21 (10), 876-890. Available at: <https://pubag.nal.usda.gov/download/21753/PDF>

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Appendices

Appendix 1. Hmong Outreach Materials

Appendix 2. Event/Project-Specific Outreach Materials

Appendix 3. Needs Assessment/Information Gathering Materials

Appendix 1. Hmong Outreach Materials

Outreach Period: 1990-1996

Tri-fold brochure: Which fish are safe to eat? (English)

WHICH FISH ARE SAFE TO EAT?

Minnesota Department of Health
Minnesota Fish Consumption Advisory
215-0950

WHICH FISH ARE SAFE TO EAT?

Fish are good food and are good for you. But some fish from lakes and rivers in Minnesota may have harmful chemicals in them. The fish do not taste, smell or look bad, but the chemicals in the fish may make a person sick after many months or years of eating too many fish which have harmful chemicals.

Protect yourself! Eat fish from lakes or rivers which do not have harmful chemicals in them. Eat only the safe parts of a fish.

CHEMICALS IN FISH

Some lakes and rivers may have harmful chemicals like mercury and PCBs. Mercury comes from rocks and soils. Mercury is also in the smoke that comes from factories and cars. PCBs are in oil used by industries. PCBs enter the air and water from burning or because the chemicals were not stored safely.

There are laws now that say these chemicals must be stored safely, but some chemicals are already in the water and on the bottoms of the lakes and rivers of Minnesota and other states.

These chemicals move into fish as they swim in the water. The chemicals are also in the food fish eat. These chemicals stay in the fat and meat of fish. More and more chemicals stay in a fish the longer a fish lives in water with chemicals. Big and old fish have the most chemicals in their bodies.

CHEMICALS IN YOU

Mercury and PCBs also stay in your body when you eat fish. Large amounts of chemicals may make health problems for you. Large amounts of mercury can change the way you walk, talk, see, and hear. Both mercury and PCBs can hurt a baby before it is born. The baby may not grow or learn well. Women who are going to have a baby should be careful not to eat too many fish with chemicals. A doctor can do a test to see if you have health problems from mercury or PCBs.

PROTECT YOURSELF

1. Eat fish from lakes and rivers which do not have chemicals. Fish in many parts of the Mississippi, Minnesota, and St. Croix Rivers are not safe to eat more than once a month.

Fish in most lakes near Minneapolis and St. Paul are safe to eat. Call the Minnesota Department of Health (215-0950) and ask for the free fish book called the "Minnesota Fish Consumption Advisory." You will get a book in the mail that will help you choose a safe place to fish.

2. Eat fish which have no chemicals.

The fish in the picture below have very few chemicals in them and are safe to eat. You can eat these fish every day.

SAFE

NOT SAFE

Do not eat the fat parts of these fish. Cut off the fat parts of the fish (look at the picture below) before you cook the fish. Throw away the fat or water that fish have been cooked in. Do not make fish soup.

Do not eat the fat parts of these fish. Cut off the fat parts of the fish (look at the picture below) before you cook the fish. Throw away the fat or water that fish have been cooked in. Do not make fish soup.

3. Eat fish with harmful chemicals less often. The fish in the next picture have the most chemicals in them and it is not safe to eat these fish every day.

You will not have health problems if you eat these fish only one time each month. Eat only the smallest and youngest of these fish.

For more information in another format, call TDD: 412-215-0707 or toll free 1-800-627-3529

ICF 141-0871

Tri-fold brochure: Which fish are safe to eat? (Hmong)

COV NTSES TWG THIAJ ZOO NOJ?

Minnesota Department of Health
Minnesota Fish Consumption Advisory
215-0950

COV NTSES TWG THIAJ ZOO NOJ?

Ntau yog khoom noj zoo thiab zoo rau neeg lab cev. Ab sis muaj tej cov ntse los ntawm tej lab pas dej thiab tej tus dej nyob hauv Minnesota no yuav tsis zoo nej vim muaj tshuaj (chemical) ab no nyob rau hauv lawv lab cev yuav tsis cov phien los yog zoo tauw lwm yam tiev thiab yuav noj tas qab li cas. Tab sis cov tshuaj (chemical) ab no hauv ntse lab cev yuav ua kom neeg muaj mob ntse hli ntse. xyoo tom koj qab nej noj cov ntse no.

Txuaug koj lab cev. Nej cov ntse las los ntawm cov pas dej thiab tej dej uas tauw muaj tshuaj (chemical) hauv lawv lab cev. Nej tej qhov uas zoo noj xwb.

COV TSHUAJ (CHEMICAL) HAUJ TSES LUB CEV.

Ib co pas dej thiab dej muaj cov tshuaj (chemical) hu ua "mercury" thiab PCB. "Mercury" muaj los ntawm tej pob zeb thiab ab av los. Ib co "mercury" kuj los ntawm tej pa tauw ntawm cov tsev ua haujlwm ab no thiab los ntawm lab fais los. PCB nyob rau hauv cov roj uas lawv siv nyob rau hauv tsev ua haujlwm tej ab no. Cov PCB no nkag mus rau ntawm tej huab cua thiab dej los tawm kev hlauw cov PCB no los yog. Iob ntawm tej kev hlauw cov tshuaj no cia tsis zoo.

Cov tshuaj (chemical) no nkag mus rau hauv cov ntse thaum lawv ua haum dej thiab nyob rau hauv cov zaub nov ntse noj. Cov tshuaj no nyob rau ntawm ntse cov roj thiab ngaj. Cov tshuaj (chemical) no nyob rau hauv

ntse lab cev ntev tshaj tas ntse muaj roj sia nyob rau hauv cov dej uas muaj cov tshuaj no. Cov ntse koj thiab tse las muaj cov tshuaj no nyob rau hauv lawv cov cev ntse.

COV TSHUAJ (CHEMICAL) HAUJ KOJ LUB CEV

Cov tshuaj (chemical) mercury thiab PCB nkag nyob rau koj lab cev thaum koj noj ntse. Muaj tshuaj (chemical) ntse nyob rau hauv koj lab cev yuav ua kom koj muaj meob ab no. Yog muaj cov tshuaj mercury no ntse nyob rau koj lab cev, tej zaum koj kev mas kev, kev hais la, kev pom thiab huov ab no yuav tagaw. Cov tshuaj (chemical) mercury thiab PCB no yuav ua kom muaj teebmee rau cov meyuam teem nyob hauv plab ua tej lawv yog. Thaum tau meyuam tag los tej zaum ntau yuav tsis kuj zoo thiab karent ub kawm no tau tsis tshuaj zoo. Cov poj niam muaj meyuam hauv plab tshuaj nej cov ntse muaj tshuaj (chemical) no ntau ntaw. Kwaj khom muaj qab kaw laj tau yog koj koj lab cev muaj teebmee vim muaj cov tshuaj mercury thiab PCB no ntse.

TXUAG KOJ LUB CEV.

1. Noj cov ntse los ntawm cov pas dej thiab dej uas tsis muaj cov tshuaj ntse. Cov ntse nyob hauv tus dej Mississippi, tu dej Minnesota, tus dej St. Louis thiab tus dej St. Croix no mas yuav tsis zoo noj ntaw tshaj ib hlis ib zaug.

2. Noj cov ntse uas tsis muaj tshuaj (chemical) hauv lub cev.

Cov ntse uas muaj duab nyob hauv cov no muaj tshuaj me me nyob hauv lawv lab cev xwb thiab nej yuav tsis muaj teebmee ab tsis. Cov ntse no tej ntej hawb noj los tau.

SAFE

NOT SAFE

Do not eat the fat parts of these fish. Cut off the fat parts of the fish (look at the picture below) before you cook the fish. Throw away the fat or water that fish have been cooked in. Do not make fish soup.

Do not eat the fat parts of these fish. Cut off the fat parts of the fish (look at the picture below) before you cook the fish. Throw away the fat or water that fish have been cooked in. Do not make fish soup.

3. Eat fish with harmful chemicals less often. The fish in the next picture have the most chemicals in them and it is not safe to eat these fish every day.

You will not have health problems if you eat these fish only one time each month. Eat only the smallest and youngest of these fish.

For more information in another format, call TDD: 412-215-0707 or toll free 1-800-627-3529

ICF 141-0871

FISH CONSUMPTION OUTREACH TO SOUTHEAST ASIANS IN MN


Fact Sheet: Do you like to fish? (English)

DO YOU LIKE TO FISH?

Good! Fishing is fun! But, be careful. Some fish in Minnesota/St. Paul lakes have poisons that make the fish unsafe for you to eat. The fish may not taste, smell or look bad, but the poisons in the fish may make you or your child sick after eating them for a long time.


Learn how to protect yourself!

- 1. Eat fish that are SAFE.**
These fish have very few poisons in them and are safe to eat. Most people can eat one meal of these fish 1 time a week. But pregnant or nursing women and children under age 6 should eat these fish no more than once a month.



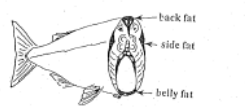
bluegill crappie rock bass perch

- 2. Eat fish that are NOT SAFE less often.**
These fish have the most poisons in them. Pregnant or nursing mothers and children under age 6 should never eat these fish. Others should eat these fish once a month or less. It is best to eat the smallest and youngest of these fish.



carp sucker white bass catfish buffalo

- 3. Do not eat the fatty parts of fish.**
Some poisons build up in the fatty parts of fish. It is best if you cut off the fatty parts before you cook the fish. Throw away the water that fish have been cooked in. Do not make fish soup.



back fat
side fat
belly fat

- 4. Eat fish from safe lakes.**

A. Bluegill, sunfish and crappie from these lakes are SAFE to eat every day.

B. Bluegill, sunfish, crappie, pike and small walleye (less than 20 inches) from these lakes are SAFE to eat every day.

Big Camellian (May Township) Byllesby Reservoir (Randolph Township) Coon (Columbus Township) Elmo Lake (Elmo) Forest (Forest Lake) Long (New Brighton) Minnesota (Minnesota) Parley (Lakewood) Rebecca (Hastings) Snelling (Fort Snelling State Park) Wasserman (Lakewood) Wirth (Minneapolis)	Big Marine (New Scandia) Christmas (Shorewood) Crystal (Burnsville) East Vadnais (Vadnais Heights) Harriet (Minneapolis) Madison (Plymouth) O'Dowd (Shakopee) Pickens (Lyleville) Rebecca (Greenfield) Wagona (Wagona) White Bear (White Bear Lake)	Big Camellian (May Township) Big Marine (New Scandia) Byllesby Reservoir (Randolph Township) Christmas (Shorewood) Coon (Columbus Township) Crystal (Burnsville) Elmo Lake (Elmo) Harriet (Minneapolis) Long (New Brighton) Minnesota (Minnesota) Parley (Lakewood) Snelling (Fort Snelling State Park) Wasserman (Lakewood) White Bear (White Bear Lake)
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Most fish from the Mississippi, Minnesota and St. Croix Rivers in the Minneapolis/St. Paul area, are NOT SAFE to eat.

MINNESOTA DEPARTMENT OF HEALTH • SECTION OF HEALTH RISK ASSESSMENT • 925 S.E. DELAWARE ST., MINNEAPOLIS, MN 55414 • 612/627-5046 9/93
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Fact Sheet: Do you like to fish? (Hmong)

KOJ PUAS NYIAM NUV NTSES?

Zoo heev! Nuv ntsees yeej lom zem kawg! Tiamais, yuav tsum nyiam nwm nwm. Muaj tej cov ntsees nyob hauv cov pas dej nyob rau thaj team Minneapolis/St. Paul sas muaj TSHUAI LOM NEEG nyob hauv cov ntsees no ua rau cov ntsees tsej hauv saw dawb noj. Tej zaum cov ntsees no rias kuj tas tsej phum, tiamais cov tshuaj lom neeg nyob hauv cov ntsees no yuav ua rau koj, los yog koj cov ntsees muaj mob yog hais tas nej tau noj cov ntsees no rau zaug thab noj tau rau los saem.


Kawm kom koj paub tiv thav koj tas kheej!

- 1. Noj cov ntsees sas ZOO NOJ xwb.**
Cov ntsees no tsum muaj tshuaj lom neeg mi ntsees xwb mas thab li zoo noj. Saw dawb team coob tsum noj tau cov ntsees no 1 zaug toj li sas thab. Tiamais, cov poj ntsees muaj nyiam hauv plab los yog cov poj ntsees nyob nwm nis, tsum cov ntsees 6 xyoo rau hauv, yuav tsum tas thob noj cov ntsees no rau thab 1 zaug toj li nis.



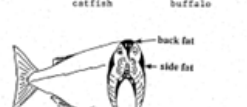
bluegill crappie rock bass perch

- 2. Thab noj cov ntsees sas IBS ZOO NOJ hee-hee.**
Cov ntsees no muaj tshuaj lom neeg ntsees hee. Cov poj ntsees muaj nyiam hauv plab los yog cov poj ntsees nyob nwm nis thab thab cov ntsees 6 xyoo rau hauv yuav tsum tas thob noj cov ntsees no li. Lwm cov neeg tsum noj tau cov ntsees no 1 zaug toj li nis xwb los yog tsum thab 1 zaug toj li nis. Tas tas li, cov ntsees no mas yuav tsum noj cov ntsees me-me xwb thab zoo noj mi ntsees.



carp sucker white bass catfish buffalo

- 3. Tas thab noj tej NOAJ NTSES ROG.**
Muaj tshuaj lom neeg rau nyob rau hauv cov ntsees noj. Koj yuav tsum muaj tej qho noj ntsees noj hais pov tag tag ua nej koj muab coj los ua noj. Cov ntsees mas yuav tsum muab pov tag. Tas thab ua kua ntsees hauv li.



back fat
side fat
belly fat

- 4. Noj cov ntsees sas nyob hauv cov PAS DEJ HUJ-HUV xwb.**

Cov ntsees muaj npe hu ua bluegill, sunfish thab crappie sas nyob hauv cov PAS DEJ npe hu raws li nram no thab li ZOO NOJ.

Big Camellian (May Township) Byllesby Reservoir (Randolph Township) Coon (Columbus Township) Elmo Lake (Elmo) Forest (Forest Lake) Long (New Brighton) Minnesota (Minnesota) Parley (Lakewood) Rebecca (Hastings) Snelling (Fort Snelling) Wagona (Wagona) White Bear (White Bear Lake)	Big Marine (New Scandia) Christmas (Shorewood) Crystal (Burnsville) East Vadnais (Vadnais Heights) Forest (Forest Lake) Madison (Plymouth) O'Dowd (Shakopee) Pickens (Lyleville) Rebecca (Greenfield) Wasserman (Lakewood) Wirth (Minneapolis)	Byllesby Reservoir (Randolph Township) Crystal (Burnsville) Forest (Forest Lake) Madison (Plymouth) Parley (Lakewood) Rebecca (Greenfield) Wasserman (Lakewood)
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Feem coob cov ntsees sas nyob rau hauv 3 bag dej koj npe hu ua Mississippi, Minnesota thab St. Croix Rivers nyob rau thaj team Minneapolis/St. Paul li no mas TSHUAI ZOO NOJ li.

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Fish and Your Health: Safe and Unsafe Fish 2-page infosheet (English)

Fish and Your Health/English

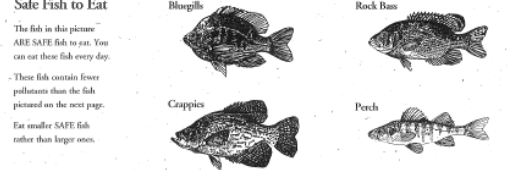
FISH AND YOUR HEALTH



Safe Fish to Eat

The fish in this picture ARE SAFE fish to eat. You can eat these fish every day.

These fish contain fewer pollutants than the fish pictured on the next page. Eat smaller SAFE fish rather than larger ones.



Bluegills Rock Bass
Crappies Perch

What are Pollutants?
Some Minnesota lakes and rivers have pollutants in them. Pollutants come from factories, waste sites, and cars. Pollutants get into lakes and rivers through the air, water, and ground. More Minnesota fish are good for you, but some kinds of fish have pollutants like mercury and PCBs.

Mercury is a poison that can make it hard for a person to walk, talk, see and hear. Babies with mercury poisoning do not walk as soon as they should.

PCBs are poisons that make people sick and can cause cancer after many years. Babies with PCB poisoning may have trouble learning.

Some Fish Have Pollutants
Rain and snow carry pollutants in the air down into the lakes and rivers. Tiny animals in the water eat the pollutants. When small fish eat the tiny animals they eat the pollutants and the pollutants go into the small fish. Big fish eat many small fish and the big fish end up with the most pollutants.

- Polluted fish do not look sick. They feel, move, and taste the same as safe fish.
- Larger, older, and fat fish (white bass, and carp) in rivers have the most pollutants.

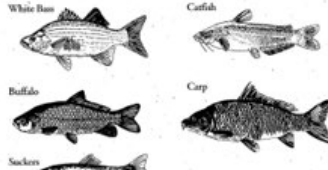
Pollutants in Fish Can Make You Sick
Pollutants stay in your body when you eat polluted fish. Pollutants in fish can make people sick, but only after many months or years of eating them. A man, woman, child, or baby may not get sick, but may be sick in ways you cannot easily see.

Minnesota Department of Health
Printed on 100% recycled paper using a minimum of 80% post-consumer waste.

Fish that are Not Safe to Eat

In these fish in this picture are not safe to eat.

In lakes, these fish are safer to eat. If you must eat these fish from the rivers, eat only one meal of fish a month and cut off and throw away the fatty parts of the fish before cooking.



White Bass Catfish
Buffalo Carp
Suckers

CLEANING FISH:
By cleaning the fish, you can take away some of the pollutants and make fish safer to eat. It's important to remove the guts and throw them away. Clean the fish as shown in the steps below.

- 1. Cut along the bone to get just the meat and skin.**
- 2. Fat is under the skin. Cut off the skin with the fat and throw away.**
- 3. You cannot see fat in meat. Cut off and throw away meat on the stomach.**
- 4. Use only the meat, throw away all other parts of the fish.**


For More Information in English about Pollutants in Fish and Eating Safe Fish:
call: County or City Health Department or Minnesota Department of Health, telephone: 612/215-4950 or 1-800-627-3908 or write: Fish and Your Health, Minnesota Department of Health P.O. Box 64977, St. Paul, MN 55164-0975

To Request this Document in Another Format call:
612/215-0700, TDD: Minnesota, Relay Services: 612/215-0700 or call Toll Free: 1-800-627-3529 (in Greater Minnesota).

Remember:
To fish in Minnesota, you must buy a fishing license. Children and adults need to wear a life jacket when fishing from shore or a boat.

SC #31-0432 MCH 9/96

Promotional Sheet for Hmong Video: "Are these fish edible?"



Fish Facts


Video Resource for Hmong Family Health

Reducing risks from environmental contaminants is the subject of a new video tape in Hmong language entitled, "Cov Ntes No Noj Puas Tau?" or, "Are These Fish Edible?" Made by the producer of the nationally-awarded weekly television program *Kej Koom Shub*, Mr. Puong Her, the video presents information in an upbeat message designed to appeal to the Hmong community.

The video was crafted to appeal to the Hmong community that loves fishing and relies on fish as a staple.


This educational tool is a project of the Minnesota Department of Natural Resources (DNR), funded by a grant from the McKnight Foundation. It was developed with the guidance and assistance of Hmong health and environmental specialists, and the Minnesota Department of Health.

A 1993 DNR survey of Twin Cities Hmong residents revealed that the Hmong community is at risk for harmful health effects from exposure to environmental contaminants in fish.



To get an order form for educational materials on health risks and fish contaminants, call (612) 215-0950. To request this document in another format, call (612) 215-0700. TDD (612) 215-0707 or 1 (800) 627-3529.

MDH/Env/Div
 Sept. 1995


 Minnesota Department of Health • Division of Environmental Health • 121 East Seventh Place, P.O. Box 64975, St. Paul, MN 55164-0975
 Printed on Recycled Paper

612/215-0700 • TDD 612/215-3908 or 1-800/627-3529

Outreach Period: 1997-2007

SPRCDPH and MDH "Hooked on Fish?" 2-page infosheet

Hooked on Fish?

A Guide to Eating Fish in Minnesota

Minnesota has over 10,000 lakes with an abundance of fish, but there are some things you need to know about the fish in our rivers, streams and lakes before you eat them.

Fish are great to eat because they have protein, vitamins, minerals and healthy oils. Eating fish may help prevent heart disease. And most fish are healthy to eat.

Any fish you catch or buy could have pollutants, such as mercury or PCBs that can be harmful, especially for women of child-bearing age, women who are pregnant or breastfeeding and young children.

Continue to include fish in your diet, but because mercury and PCBs can be found in fish, be careful of the kind of fish you eat and how much fish you eat.

Fish Caught in Minnesota

- Sunfish
- Crappie
- Yellow Perch
- Bullheads

1 meal a week.

- Walleyes shorter than 20 inches
- Northern Pike shorter than 30 inches
- Smallmouth and Largemouth bass
- Channel and Flathead catfish
- White sucker
- Cray
- Burbot

1 meal a month.

- Gauger
- Carp
- Lake trout
- White bass
- Rock bass
- Whitefish
- Other species

DO NOT EAT.

Fish Bought in a Store or Eaten in a Restaurant

- Salmon
- Cod
- Pollock
- Canned "light" tuna
- Catfish
- Tilapia
- Herring
- Sardines
- Shrimp
- Crab
- Scallops
- Oysters

2 meals a week.

- Canned "white" tuna
- Tuna steak
- Halibut
- Lobster


2 meals a month.


- Shark
- Swordfish
- Tiesfish
- King Mackerel

DO NOT EAT.

Remember to consider all sources of fish when making a choice to eat another type of fish.

For more information on eating fish in Minnesota:
 MN Department of Health-Fish Advisory Program
 651.201.4911
www.health.state.mn.us/divs/eh/fish


 St Paul-Ramsey County Public Health
 Environmental Health Section
www.co.ramsey.mn.us
 AskKing@co.ramsey.mn.us


 St Paul-Ramsey County Public Health
 Environmental Health Section
www.co.ramsey.mn.us
 AskKing@co.ramsey.mn.us

A Guide to Eating Fish in Minnesota

Keep mercury from harming your health by helping to reduce the amount of mercury that gets into our environment.

Mercury is found in some common household items, such as household thermostats, and fluorescent lights. These should not be put into the trash. If you have these items at home, most counties have household hazardous waste sites where you may bring them and they will be disposed of properly.

Fish Caught in Minnesota

- Sunfish
- Crappie
- Yellow Perch
- Bullheads

Unlimited amount.

- Walleyes
- Northern Pike
- Smallmouth and Largemouth bass
- Channel and Flathead catfish
- White sucker
- Drum
- Burbot
- Gauger
- Carp
- Lake trout
- White bass
- Rock bass
- Whitefish
- Other species

1 meal a week.

Fish Bought in a Store or Eaten in a Restaurant

Limit the following:

- Shark
- Swordfish
- Tiesfish
- King Mackerel

1 meal a month.

Adults who eat fish only during vacation or one season of the year can eat fish twice as often as recommended by these guidelines.

Frequently Asked Questions

Who should use these guidelines? Everyone should follow these guidelines, but the guidelines are different for different types of people. Women of child-bearing age, women who are pregnant or breastfeeding and young children have more strict guidelines. Adults have slightly less strict guidelines.

How does mercury get into the fish? Mercury can come from natural and man-made sources. Most of the mercury that pollutes our air and water comes from coal-burning power plants, coal mining and coal burning. Mercury can also be found in trash that may have fluorescent lights, household thermostats and thermostats, which have mercury in them. Mercury in the air settles in lakes and rivers and builds up in fish. All fish have some mercury.

What are PCBs? PCBs are chemicals that were used as flame retardants until the late 1970s. PCBs can also be made when some types of plastics, like vinyl, are burned, or when products containing chlorine, like paper bleached with chlorine, are burned.

What are the health effects of mercury and PCBs? In adults, mercury can cause tingling, prickling, or numbness in hands and feet; they can damage the kidneys and nervous system, as well as cause changes in vision. In young children and babies, small amounts of mercury can harm their brains as they grow. Too much mercury can affect a child's behavior and cause learning problems later in life.

PCBs can cause cancer. Babies who are exposed to PCBs during a woman's pregnancy may be born small and have problems growing. PCBs can also cause learning problems.

Can I clean and cook fish to remove mercury and PCBs? Mercury is found in the flesh of the fish and cannot be removed by cleaning or cooking. However, PCBs and other contaminants can be reduced by removing fat and skin from the fish.

Information contained in this fact sheet adapted from MN Department of Health-Fish Advisory Program website, www.health.state.mn.us/divs/eh/fish, 3/15/06.

Outreach Period: 2015 - current

Choose Health, Low Mercury Fish: PUT FISH ON YOUR PLATE handout (Hmong)

Xaiv kev noj qab nyob zoo, noj tej ntses uas muaj cov kua hlau nyaum tsawg (low mercury)

TSO NTSES RAU HAUV KOJ LUB PHAJ

Tsis yog txhua hom ntses yuav zoo ib yam. *Yuav tau paub hom ntses twg zoo tshaj rau koj noj, koj yuav noj tau ntau thiab heev npaum cas.* Kev noj ntses yog ib yam zoo yog tias koj xaiv thiab noj tej ntses uas muaj cov kua hlau nyaum tsawg. Cov kua hlau nyaum no muaj kev cuam tshuam txog kev cim xeeb, kev xav, kev tswm seeb thiab me nyuam yaus txoj kev kawm ntaub ntawv.

Kev taw qhia kom noj qab nyob zoo

- Yog tias koj muab tus ntses tseeb, hau lossis cub, lossis muab tus ntses tso hauv ntau thiab los yeej rhuav tshem tsis tau cov kua hlau nyaum heev ntawd.
- Noj tej ntses uas me. Muab tej ntses dawb (walleyes, northern, white bass) rau cov pojniam uas cev tsis xeeb menyuam lossis rau tej pojniam uas yuav npaj muaj menyuam thiab tej txivneej.
- Txawm lub pas dej ho ntshiab lossis ntses ho tsw li cas los yeej tsis txhais tau tias zoo noj.

DEPARTMENT OF HEALTH
Fish eating guidelines
health.state.mn.us/fish
ChooseYourFish.org
651-201-4911
Xav tau cov ntaub ntawv no, hu rau: 651-201-4899. REV 10/2018

Cov pojniam uas cev xeeb menyuam lossis npaj yuav muaj menyuam thiab tej menyuam muaj hnub nyoog 15 xyoos rov hauv-

Xaiv hom ntses koj yuav noj!

TXHUA LUB LIM TIAM: NOJ 2 ZAUG*
Kua hlau nyaum uas qis

TXHUA LUB LIM TIAM: NOJ 1 ZAUG*
Lua hlau nyaum uas qis heev

LOSSIS

THIAB
yog tias koj xaiv

TXHUA LUB HLI: NOJ 1 ZAUG*
Kua hlau nyaum uas nyob qib nruab nrab

TOM TEJ KIAB KHW & KHW NOJ MOV

- Ntses tuaj kub uas yug tom teb (farm-raised)
- Ntses Pompano
- Ntses liab tw
- Ntses salmon (Atlantic thiab Pacific)
- Cws thiab roob ris
- Ntses smelt
- Ntses dub (tilapia)
- Nqaj ntses ua tej tug thiab ntses sandwich

TOM TEJ KIAB KHW & KHW NOJ MOV

- Ntses pam thus ua mos mos (canned light tuna)

TOM TEJ PAS DEJ & HAV DEJ HAUV MINNESOTA

- Ntses crappie
- Ntses trout
- Ntses sunfish
- Ntses yellow perch

TOM TEJ KIAB KHW & RKHW NOJ MOV

- Ntses pam thus dawb ua mos mos (albacore)
- Ntses pam thus (fillet thiab steak)

TOM PAS DEJ & HAV DEJ HAUV MINNESOTA

- Ntses dawb (bass)
- Ntses tuaj kub
- Ntses northern pike
- Ntses walleye
- Ntses white bass

TOM PAS DEJ DEVIL'S LAKE (North Dakota)

- Ntses walleye
- Ntses white bass

***1 Zaug = 1 Plaug Noj**
Plaug noj muab nce siab lossis too qis raws li tus neeg lei lossis me. Ib plaug ntses 3 ounce vog noj rau ib tus neeg muaj 75 phaus (3 ounce vog lei li ntawm ib tum phalb). Ib plaug ntses 5 ounce vog noj rau ib tus neeg muaj 120 phaus. Koi noj tau ntses ntau vog tias koj noj ntses tsawg dua li plaug teev tseg rau koi noj.

Choose Health, Low Mercury Fish: PUT FISH ON YOUR PLATE handout (English)

Choose health, low mercury fish

PUT FISH ON YOUR PLATE

Not all fish are equal. **Know what types of fish are best for you and how often you can eat them.** Benefits of eating fish outweigh risks if you choose to eat fish low in mercury. Mercury can affect memory, thinking, attention, and success in school for children.

Healthy Tips

- Mercury cannot be removed by cleaning, cooking, or freezing fish.
- Eat smaller fish. Give larger walleyes, northern, and white bass to women who are not pregnant or planning to become pregnant and men.
- How clean a lake looks or how a fish smells is not a sign of how safe the fish is to eat.

DEPARTMENT OF HEALTH
Fish eating guidelines
health.state.mn.us/fish
ChooseYourFish.org
651-201-4911
To obtain this information in a different format, call 651-201-4899. REV 6/2019

Women who are or may become pregnant **and children** under 15 years old –

Choose Your Fish!

EVERY WEEK: EAT 2 TIMES*
Very low mercury

OR

EVERY WEEK: EAT 1 TIME*
Low mercury

AND
if you choose

EVERY MONTH: EAT 1 TIME*
Medium mercury

FROM STORES & RESTAURANTS

- Catfish (farm-raised)
- Pompano
- Riverbarb
- Salmon (Atlantic and Pacific)
- Shellfish (such as shrimp and crab)
- Smelt
- Tilapia
- Fish sticks and sandwiches

FROM STORES & RESTAURANTS

- Canned light tuna

FROM MINNESOTA LAKES & RIVERS

- Crappie
- Stream trout
- Sunfish
- Yellow perch

FROM STORES & RESTAURANTS

- Canned white (albacore) tuna
- Tuna (fillet and steak)

FROM MINNESOTA LAKES & RIVERS

- Bass
- Catfish
- Northern pike
- Walleye
- White bass

FROM DEVIL'S LAKE (North Dakota)

- Walleye
- White bass

***1 Time = 1 Serving**
Serving size increases or decreases depending on a person's size. A serving is 3 ounces of cooked fish for a 75 pound person (3 ounces is about the size of a deck of cards). A serving is 5 ounces cooked fish for a 120 pound person. You can eat fish more often if the amount of fish you eat is smaller than your serving size.

Appendix 2. Event/Project-Specific Outreach Materials

Outreach Period: 1997-2007

Hmong Times/Ngay Nay Vietnamese articles

- [Hmong Times/Ngay Nay Vietnamese articles \(PDF\)](https://www.health.state.mn.us/communities/environment/fish/docs/seasiansarticles.pdf)
(<https://www.health.state.mn.us/communities/environment/fish/docs/seasiansarticles.pdf>)

2006 SPRCDPH ECHO TV show key messages

Key Messages for ECHO Show #18 “What’s Fishy About Mercury?”

Finalized Script Deadline: Friday, February 17th, 2006
Translation Deadline: Tuesday, February 28th, 2006

Translators: Translate only the words not “number 1, number 2, number 3”. Please contact Larry Bogoslaw with any questions. Good luck work!

Number 1: Mercury is a pollutant found in our air and water and ends up in the fish we eat.

Number 2: Eating fish is healthy, but because mercury is found in some fish, we need to limit what fish we eat and how much we eat.

Number 3: Keep mercury out of the environment by taking used florescent bulbs and thermometers to household hazardous waste sites.

2006 SPRCDPH ECHO TV show

<p>ECHO Show #18 “What’s Fishy About Mercury?”</p> <p>Deadlines: English version February 17, 2006 MTL translates ALL six version March 3rd, 2006 Ethnic Talent tracks script: TBD/2006</p> <ol style="list-style-type: none">1. Millions of Americans enjoy the outdoors, especially fishing. Most people catch fish for fun, but there is a danger in the water that we can’t always see, smell or taste. That danger is mercury in fish.2. Mercury is a basic chemical element scientists classify as a metal like iron or gold. However when mercury gets into our air and water, it can be harmful. Eventually, mercury ends up in the fish that we eat, whether we caught the fish in the water, bought it from a store, or ordered it at a restaurant.3. Most of the mercury that dirties or pollutes our air and water comes from coal mining and power plants that burn coal. Mercury can also be found in the household. Fluorescent lights that light our homes, thermometers and thermostats that measure heating and cooling all have mercury in them.4. Why is mercury dangerous? For adults, too much mercury can damage kidneys or affect our central nervous system including the brain and spine.5. Pregnant mothers, breast-fed babies and young children are at most risk, because a small amount of mercury can cause damage to a growing brain. Too much mercury may affect a child’s behavior and lead to learning problems later in life.6. Eating fish is healthy for all ages, because it contains valuable protein, vitamins, minerals and oils. Unfortunately, mercury cannot be removed through cooking or cleaning the fish. However, you can take out other pollutants from the fish by cutting away the fat.7. To reduce the amount of mercury that goes into your body, it is important to think about the type of fish you eat and how often you eat fish. Larger fish, older fish and fatty fish have higher amounts of pollutants. Fish that survive by eating other fish, like walleye, northern pike and bass, have the highest amounts of mercury in their meat. Just like us, when these fish eat food with mercury, it becomes a part of their bodies. <p><small>1/ Written and produced by the Emergency & Community Health Outreach Collaborative (ECHO). All rights reserved. For information about ECHO visit www.echomnnesota.org / February 2006</small></p>	<ol style="list-style-type: none">8. Another way to keep mercury from harming your health is to help reduce the amount of mercury that gets into our environment. Mercury is found in some common household items, such as thermometers, thermostats, and fluorescent lights. These should never be put into the trash. Most counties have special places called “household hazardous waste sites” where you can bring them and they will be disposed of properly.9. Fluorescent lights use less energy so we save money on electric bills, but the bulbs also have mercury in them. So, when the fluorescent lights no longer work do not throw them in the trash, but take them to a county household hazardous waste site.10. One of the best ways to keep mercury out of the home and the environment is to not buy goods made with mercury. Making choices to limit mercury in our diet and our environment improves our health and our community. The less mercury in our air and water, the more our lakes and rivers will be healthy and clean for everyone to enjoy! <p>WORD COUNT 511</p> <p><small>2/ Written and produced by the Emergency & Community Health Outreach Collaborative (ECHO). All rights reserved. For information about ECHO visit www.echomnnesota.org / February 2006</small></p>
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FISH CONSUMPTION OUTREACH TO SOUTHEAST ASIANS IN MN

2006 SPRCDPH ECHO TV show

Sent041906

Questions & Sample Answers
ECHO-TV Show #18 "What's Fishy About Mercury?"
(Taping Date: Tuesday, April 25th, 2006 / 3:00-5:00 pm-TPT)

1. What is mercury and where does it come from?

Answer:

- Mercury is a naturally occurring mineral found in the earth's crust. It is present in coal and metal ores. When coal is burned to generate electricity, the mercury is released.
- Mercury also comes from taconite mines where iron ore is harvested to make steel for buildings.
- We benefit from mercury because it's used in household items like fluorescent light bulbs, computer screens, thermostats and more.

2. Mercury has many uses but why should we be concerned about mercury?

Answer:

- Too much exposure to mercury can be toxic (harmful) to our health. It's especially harmful to babies, young children and pregnant women.
- We are now finding that the most common way that mercury gets into our body is from eating fish.

ECHO #18 (What's Fishy About Mercury?)
Q & A: March 2006 by ECHO (Emergency and Community Health Outreach) Minnesota
Page 1 of 1

Sent041906

3. How does mercury get in the fish we eat?

Answer:

- Most of the mercury that pollutes our air and water comes from power plants burning coal and the wind carries this pollutant across states and Countries.
- When people throw away items that contain mercury like thermometers, the chemical ends up in our land, rivers and lakes causing our fish to be contaminated.

4. How can mercury affect our health?

Answer:

- Exposure to some mercury will happen because it's a natural part of our environment but too much exposure to mercury can cause harm to kidneys and other organs or affect our central nervous system.
- Most people at risk are pregnant mothers, nursing or breast-fed babies, and young children because exposure to mercury is harmful to a young, developing nervous system.

ECHO #18 (What's Fishy About Mercury?)
Q & A: March 2006 by ECHO (Emergency and Community Health Outreach) Minnesota
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Sent041906

5. What are the types of fish that have less mercury than others?

Answer:

- All fish, whether we caught it in the river or lake, bought it in the market or ordered fish in a restaurant have some mercury in them.
- In general, big and older fish have more mercury in them compared to smaller fish like sunfish and crappies.

6. To avoid mercury, should we simply not eat fish?

Answer:

- Eating fish is a healthy part of our diet because it's low fat and a good source of protein that may reduce the risk of some illnesses.
- For most people, 1 - 2 meals of fish per week is enough to balance the health benefits and the risk of eating contaminants in fish.
- In addition to eating fish, other sources of protein are healthy for your diet including meats, poultry, pork, nuts and tofu.

ECHO #18 (What's Fishy About Mercury?)
Q & A: March 2006 by ECHO (Emergency and Community Health Outreach) Minnesota
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Sent041906

7. How can we reduce our exposure to mercury when eating fish?

Answer:

- The bigger the fish the more mercury in the fish so eat small, young fish that will naturally have less contaminants in them.
- You can't remove mercury in fish by cleaning or cooking it away but you can remove other pollutants found in fish by cutting away the fat.
- Know what kinds of fish in your area are more likely to carry mercury and limit how much of those kinds of fish from your diet.

8. What is the best way to keep mercury out of our lakes and rivers?

Answer:

- Never throw away household items that contain mercury like thermometers, fluorescent light bulbs and computers in the trash because the garbage may end up in rivers, lakes and fish.
- Take items that contain mercury to special places called "household hazardous waste sites". These sites collect chemicals found in paints, motor oil and mercury made items and stores them safely away from land, air and water.
- Local county agencies can tell you where to find household hazardous waste sites near your home.
- Use less energy! Turn off the lights!

ECHO #18 (What's Fishy About Mercury?)
Q & A: March 2006 by ECHO (Emergency and Community Health Outreach) Minnesota
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Sent041906

9. Where can we learn more about mercury in fish and mercury found in household products?

Answer:

- Local and State health departments can tell you where to properly dispose of mercury made items.
- Many areas have pollution control agencies that monitor pollutants.
- The ECHO web site lists resources for Minnesota including the Department of Health, Pollution Control agency and the Department of Natural resources.

10. Is there anything else you think we should know on this topic?

Answer:

- o Most often mercury comes from plants burning coal to make electricity or from taconite mines where iron is collected to make steel products.
- o Mercury pollutants are carried in the air we breathe and end up in our land, water and fish.
- o Too much mercury can damage the central nervous system especially in the fetuses of pregnant mothers and children under 15.
- o It's okay to eat fish as long as you limit yourself to species with low levels of mercury and eat 1 or 2 meals a week.

ECHO #18 (What's Fishy About Mercury?)
Q & A: March 2006 by ECHO (Emergency and Community Health Outreach) Minnesota
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Example of FIN sign: Gervais Mill Pond

FISHING *in the* **NEIGHBORHOOD**

THE DNR FISHING IN THE NEIGHBORHOOD (FIN) PROGRAM AIMS TO INCREASE ANGLING OPPORTUNITIES AND ENVIRONMENTAL STEWARDSHIP

GERVAIS MILL POND
The City of Little Canada and the DNR Fishing in the Neighborhood Program have partnered to stock these ponds with bluegill sunfish, black crappie, and largemouth bass. Fish can also enter the ponds from Gervais Lake. The main pond is 10 feet deep and helps keep Gervais Lake clean by filtering stormwater runoff. The Ramsey-Washington Metro Watershed District has restored much of the shoreline with native vegetation.

VALUES OF NATIVE VEGETATION

- Provides food, shelter and nesting sites for both fish and wildlife.
- Controls shoreline erosion.
- Protects water quality by absorbing nutrients.

ARE FISH SAFE TO EAT?
Women who are or may become pregnant and kids can eat bluegill and crappie once per week and can generally eat other fish species once per month. For others, there are no restrictions for eating bluegill or crappie. Other fish species can be eaten once per week.

For more information please contact the MN Department of Health 651-201-4911 or www.health.state.mn.us

BLUEGILL SUNFISH: More sunfish are caught in Minnesota than any other fish.

BLACK CRAPPIE: The best way to catch crappie is with a small minnow.

LARGEMOUTH BASS: The male bass will guard its nest of eggs until they hatch.

WHAT IS FIN?
The Fishing in the Neighborhood (FIN) Program provides a great fishing opportunities for residents and visitors in the Minneapolis-St. Paul metropolitan area. FIN works with local partners to make safe, family settings situated in residential areas where you can enjoy a day in the park and good fishing. Along with these local partners, FIN stocks fish, provides fishing piers and platforms, restores shoreline habitat and sponsors MinnAqua aquatic education programs to create quality fishing opportunities.

TO FIND OUT MORE ABOUT FIN CHECK OUT THE DNR WEBSITE AT www.dnr.state.mn.us/fishing/fin OR CALL THE DNR INFORMATION CENTER TOLL-FREE AT 1-888-646-6367

MINN AQUA RESOURCE PROGRAM Little Canada FIN

Outreach Period: 2011-12

Hmong Community Event Flyers

DO YOU FISH??

If you Fish or Eat Fish this is a great event for you. Come and join us:

Sunday, October 23rd from 1pm-4pm at Lao Family Community Center.



This event is **FREE** and open to **ALL AGES** in the **Hmong Community**. Education about Fish and Eating Fish will be provided by Minnesota Dept of Health and DNR. There will also be a **Cooking Demonstration** on how to properly cook fish and samples will be given out.

Please contact Amay Yang to RSVP or for more information
 Work: 651-222-
 Cell: 651-308-6996
 amayang@aahwmn.org



32nd Annual J4 Hmong Freedom Celebration

JUNE 30 & JULY 1ST, 2012 - COMO PARK - ST. PAUL, MN






J4 FACT SHEET

Known simply as "J4", no other annual event in the global Hmong community carries as much prestige and economic significance. Held traditionally during the Fourth of July weekend in St. Paul, J4 holds many distinctions which make it "one of the premier events in the State of Minnesota..." Here are some interesting facts about J4:

- 1. Largest annual gathering of Hmong people in the world.**
 Originally a small community picnic held at St. Paul's Harriet Island in 1980, the J4 Hmong Freedom Celebration hosted by Lao Family Community has blossomed into the single largest annual gathering of Hmong people in the world, infusing millions of out-of-state dollars into the local economy. While the championship sports remain the main attraction, it's the friendships made and kept that make J4 the time-honored tradition that is has become over the decades.
- 2. The biggest Asian-American sports event in the country.**
 The 2010 Census revealed Asian-Americans to be the fastest growing population group in America. While a litany of cultural festivals can be found in cities like San Francisco and New York, no other Asian-American sports event is bigger than St. Paul's very own J4 Hmong Freedom Celebration! With participants representing more than 20+ ethnic groups, J4 is one of the most diverse festivals as well.
- 3. One of Minnesota's favorite events for out-of-state visitors.**
 While events like the Minnesota State Fair and Grande Ole Days draw thousands of in-state attendees, J4 Hmong Freedom Celebration draws visitors from all throughout the country who swell into local restaurants, hotels and nightlife spots. Entire families are known to arrange their summer schedules to accommodate J4 and the annual trek to the Land of 10,000 Lakes where the economic impact of J4 reaches into the millions of dollars.
- 4. There's much, much more than just sports at J4 !!!**
 With over 50 food-booths, 250+ retail vendors and an entertainment main stage there are tons of things to enjoy outside of sports at J4. This year in particular is significant with many new events and activities, including the first ever "Miss Hmong Teen" pageant and the first time J4 will collaborate with mainstream media outlets such as KDWB and KFJL radio stations to reach out to a wider audience. So while old traditions are still cherished, new experiences and a refreshed approach to J4 will make this year the best yet!

Lao Family Community of Minnesota (LFCD) is a community-based, non-profit organization established in 1987 as the Hmong Association of Minnesota by Hmong refugees who had fought alongside the U.S. "Secret War" in Laos during the Vietnam War. The agency was incorporated in 1988 under its current name. Its mission is "to facilitate and promote the interests of Hmong Americans in Minnesota, while also representing and supporting other Hmong and refugee populations".

"Your generous donation goes towards the education of and social programs at Lao Family."

Lao Family Community is a 501(c)(3) organization.

Hmong Community Event Outreach Materials (given to attendees)

Eating fish from Minnesota Waters

Women of Childbearing age (18-40) and Children

	Sunfish	1 serving per week
	Crappie	10 as this, 10 plug
	Perch	
	Bullhead	
	Walleye shorter than 20 inches	1 serving per month
	Northern shorter than 30 inches	10 lb, 10 plug
	All sizes of species not listed	
	Walleye longer than 20 inches	Do not eat
	Tilapia	Do not eat

Other Adults

	Sunfish	Unrestricted
	Crappie	10 as this, 10 plug
	Perch	
	Bullhead	
	All sizes of other species	1 serving per week

Tips for Eating Fish

- Eat smaller fish. Bigger fish have more contaminants.
- Eat more panfish (sunfish, crappies) and less fish that eat other fish (walleyes, northern pike, lake trout).
- Trim skin and fat, especially belly fat. Also, eat fewer fatty fish such as carp, catfish, and lake trout.

Tej yam qhia noj ntxe kom txhob muaj teeb meem

- Yuav txum noj cov ntxe me. Cov ntxe loj muaj ntau yam tsis txawv. Txawv: tau txawv lub cev txawv.
- Noj cov ntxe plawv xws li (xawv = sunfish, kabob = crappies) thab yog cov ntxe xws tom lum yam ntxe no cas noj kom txawv xws li (xawv = walleyes, novtau phaj) = northern pike, lej ntau = lake trout.
- Yim cov txawv thab roj, qhov txawv cas b thab yog cov roj txawv ntau plawv. Tis tag li xwb yuav txum noj cov ntxe noj kom txawv li txawv tau xws li panna, ntxe txawv, thab (hej ntau) = lake trout.

For more information: Call The Minnesota Dept of Health at 651-201-4911, toll-free at 800-657-3908 or Visit www.health.state.mn.us

WOMEN CHILDBEARING AGE & CHILDREN

	Sunfish	One meal per week
	Crappie	10 as this, 10 plug
	Perch	
	Bullhead	
	Walleye shorter than 20 inches	One meal per month
	Northern shorter than 30 inches	10 lb, 10 plug
	All sizes of species not listed	

OTHER ADULTS

	Sunfish	Unrestricted
	Crappie	10 as this, 10 plug
	Perch	
	Bullhead	
	Walleye longer than 20 inches	Do not eat
	Northern longer than 30 inches	10 lb, 10 plug
	All sizes of other species	One meal per week

For more information Call the Minnesota Dept of Health at 651-201-4911, toll-free at 800-657-3908 or Visit www.health.state.mn.us

Tips for safe fish eating

- Eat smaller fish. Bigger fish have more contaminants.
- Eat more panfish (sunfish, crappies) and less fish that eat other fish (walleyes, northern pike, lake trout).
- Trim skin and fat, especially belly fat. Also, eat fewer fatty fish such as carp, catfish, and lake trout.

Tej yam qhia noj ntxe kom txhob muaj teeb meem

- Txum noj cov ntxe me. Cas ntxe loj muaj ntau yam tsis txawv. Txawv: tau txawv lub cev txawv.
- Noj cov ntxe plawv xws li (xawv = sunfish, kabob = crappies) thab yog cov ntxe xws tom lum yam ntxe no cas noj kom txawv xws li (xawv = walleyes, novtau phaj) = northern pike, lej ntau = lake trout.
- Yim cov txawv thab roj, qhov txawv cas b thab yog cov roj txawv ntau plawv. Tis tag li xwb yuav txum noj cov ntxe noj kom txawv li txawv tau xws li panna, ntxe txawv, thab (hej ntau) = lake trout.

For more information Call the Minnesota Dept of Health at 651-201-4911, toll-free at 800-657-3908 or Visit www.health.state.mn.us

Appendix 3. Needs Assessment/Information Gathering Materials

2018 Hmong-Owned Businesses and Potential Public Outlets for Fish Consumption Outreach

Senior Centers

- Hmong MN Senior Center: 2905 Country Dr #140, Little Canada, MN 55117, (651) 770-0338
- Hmong Elder Center: 430 Dale St N #1, St Paul, MN 55103, (651) 224-2774
- Hmong Elder Center: 1337 Rice St, St Paul, MN 55117
- Tsev Laus Kaj Siab: 948 Rice St, St Paul, MN 55117, (651) 488-2768

Funeral Homes

- Legacy Funeral Homes:
225 Eaton St, St Paul, MN 55107, (651) 491-4699
2042 English St, Maplewood, MN 55109
3720 E River Rd, Fridley, MN 55421
- Glenwood Funeral Home: 1312 Glenwood Ave, Minneapolis, MN 55405, (651) 442-5112
- Koob Moo Funeral Chapel: 1235 Arcade St, St Paul, MN 55106, (651) 793-4400
- Saint Paul Funeral Home: 199 Plato Blvd, St Paul, MN 55107, (651) 888-2078

Churches

- Hmong American Alliance: 2515 W Maplewood Dr, St Paul, MN 55109; (651) 765-2443
- Saint Paul Hmong Alliance: 1770 McMenemy St, St Paul, MN 55117, (651) 774-7955
- Hmong Hope Community: 8375 Pierce St NE, Spring Lake Park, MN 55432, (651) 216-1275
- Good News Hmong Baptist: 1280 Regis Ln NE, Minneapolis, MN 55432, (763) 574-2548
- Hmong Central Lutheran: 301 W Fuller Ave, St Paul, MN 55103, (651) 222-1844
- Hmong Alliance: 11299 Hanson Blvd NW, Coon Rapids, MN 55433, (763) 754-7882
- Hmong Baptist National Association: 7475 15th St N #204, Oakdale, MN 55128, (651) 772-0994
- First Hmong Assembly of God: 1630 E Geranium Ave, St Paul, MN 55106, (651) 771-2672
- Hmong Evangelical Lutheran: 784 Jackson St, St Paul, MN 55117, (651) 224-1645
- Hmong First Baptist: 100 6th Ave N, South St Paul, MN 55075, (651) 330-8275
- Hmong Peace Assembly of God: 1088 University Ave W, St Paul, MN 55104, (651) 313-0662
- Hmong UPCI (Pentecostal): 207 Lexington Pkwy N, St Paul, MN 55104, (651) 770-0825
- Church of Jesus Christ of Latter Day Saints- Hmong Branch: 2335 Edgerton St, Little Canada, MN 55117, (651) 484-5497

Hmong-Owned Medical Clinics

- Moua-Lor Chiropractic & Acupuncture, 616 Rice St, St Paul, MN 55103, 651-224-9400
- Family Medical Center, 1239 Payne Ave, St Paul, MN 55130, 651-209-8350
- Dr. Peter Yang, 491 University Ave W, St Paul, MN 55103, (651) 771-5778
- Xoua Thao Medical Center, 796 E 7th St, St Paul, MN 55106, (651) 774-0347
- Saint Paul Medicine Surgery Aesthetics, 301 University Ave W, St Paul, MN 55103, 651-447-7113

Hmong-Owned Dental Clinics

- Dr. Pase Lor, 491 University Ave W A, St Paul, MN 55103, (651) 489-3681
- Vang Dental Clinic, 225 University Ave W # 124, St Paul, MN 55103, (651) 222-6738

Hmong Facebook Pages (open to the public):

- Hmong Minnesota Fishing (HMF)
- Hmong Health Care Professionals Coalition
- Kuv Yog Hmoob - I am Hmong
- HmongBaby
- Hmong Women Today
- Hnub Tshiab: Hmong Women Achieving Together
- Cavity-Free Hmong Baby