

**Final Second Five-Year Review Report for
the
Hudson River PCBs Superfund Site**

APPENDIX 13

**NYSDOH OUTREACH AND
COMMUNICATION REGARDING FISH
ADVISORIES AND FISHING RESTRICTIONS**

Prepared by:
Ecology and Environment, Inc.

April 2019

**FINAL SECOND FIVE-YEAR REVIEW REPORT FOR THE
HUDSON RIVER PCBs SUPERFUND SITE**

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1 FISH CONSUMPTION ADVISORIES AND REGULATIONS

The 2002 Record of Decision (ROD) states that human health risk reduction, and therefore protectiveness of human health, will rely on institutional controls (ICs) in the form of fish consumption advisories and fishing restrictions until the relevant remediation goals are met. In particular, reductions in human health risks would rely on knowledge of and compliance with fish consumption advisories and fishing restrictions. The 2002 ROD also acknowledged that even after the dredging was completed, the selected remedy would still rely on ongoing ICs, including the fish consumption advisories and fishing restrictions, in order to protect human health.

This Appendix contains information about the implementation of the ICs based on information provided by the New York State Department of Health (NYSDOH) and the New York State Department of Environmental Conservation (NYSDEC). NYSDOH annually establishes recommended advisories for fish consumption in regions where contamination is prevalent. NYSDEC issues regulations to prevent the taking of fish -allowing only catch-and-release - in the Upper Hudson River.

This Appendix describes the implementation of outreach efforts related to the fish consumption advisories and fishing regulations. NYSDOH is responsible for implementing and updating the consumption advisories and evaluating the potential need for adjustments as necessary. The United States Environmental Protection Agency (EPA) has been coordinating with NYSDOH regarding the advisories on regular basis. EPA will continue to work with NYSDOH as fish recovery occurs.

In 1976, due to polychlorinated biphenyl (PCB) contamination in the Hudson River, NYSDEC banned all fishing in the Upper Hudson and most commercial fishing in the Lower Hudson. In 1995, NYSDEC reopened the Upper Hudson River (from Bakers Falls to the Federal Dam in Troy) to sport fishing on a catch-and-release basis only. This regulation states that fish caught in this area should be immediately returned to the water without unnecessary injury to the fish. Since no fish may be possessed here, the use or possession of fish as bait is also prohibited. This regulation applies to all tributaries in this section of the Hudson River up to the first barrier

(dam or waterfall) that is impassable to fish. Fines for violation of any of these rules carry a maximum penalty of \$250 per violation and are enforced by NYSDEC.

The mid- and lower regions of the Hudson River (from the Federal Dam in Troy to the Battery in New York City) are not subject to the catch-and-release regulation. They are, however, subject to a sportfish consumption advisory that was issued in 1975 by NYSDOH. This advisory is an IC that seeks to limit human exposure to PCBs through the consumption of fish and crab from the Hudson River.

The NYSDOH 2016 “Health Advice on Eating Sportfish and Game” includes the following advisories:

- Women of childbearing age (under 50 years old) and children (under 15 years old) should not eat fish or crabs from the Hudson River from the Corinth Dam to the Battery in New York City.
- Women over 50 years old and men over the age of 15 are advised not to eat any fish from the Route 9 Bridge Dam in Glens Falls to the Troy Dam. From Bakers Falls to the Troy Dam, the NYSDEC catch-and-release regulations apply.

These advisories apply to the tributaries and connected water of the Hudson River if there are no dams, falls, or barriers to stop the fish from moving upstream.

In addition to the catch-and-release regulation and the sportfish consumption advisory, in 2008 NYSDOH also established the Hudson River Fish Advisory Outreach Project as an IC. Pursuant to the Consent Decree, General Electric Company (GE) has contributed \$4 million to Health Research, Inc., of Rensselaer, New York, in order to support the State’s implementation of appropriate fish consumption advisories and fishing restrictions. NYSDOH implements the Hudson River Fish Advisory Outreach Project with the goal that throughout the 192-mile stretch of the Hudson River (from Hudson Falls to Battery in New York City) everyone eating Hudson River fish knows, understands, and follows NYSDOH advice on fish consumption

(NYSDOH 2016).¹ The program also seeks to reduce contaminant consumption without reducing overall healthy fish consumption.

The stated project objectives include:

- Encouraging anglers and other fish consumers to follow health advisories;
- Promoting awareness of advisories by posting signs at major fishing access sites on the river;
- Maintaining advisory awareness through education and promotional activities for targeted populations;
- Identifying reasons why anglers and fish consumers may not follow the fish advisories; and
- Modifying outreach strategies so that they are more effective.

Although the goal is to educate those who consume Hudson River fish, the project focuses on reaching women, children, and low-income citizens. The Hudson River Fish Advisory Outreach Project uses various outreach strategies that include distribution of written and electronic materials, partnerships, and a presence at community events and public venues to achieve its objectives. Much of the outreach focuses on informing the community about locations in the Hudson River that have high PCB concentrations in fish, strategies to reduce exposure to PCBs during fish consumption, and the recommended frequency of consumption of Hudson River fish.

NYSDOH fish advisory outreach work has been conducted in partnership with other state and local agencies. NYSDOH has established partnerships with fisherman's associations, recreational anglers, boating community representatives, environmental justice advocates, immigrant rights advocates, local health officials, environmental conservation officials, parks and recreations officials, health care provider representatives, community group leaders, and food pantry and community food networks. In 2009, NYSDOH issued a request for proposals and awarded mini-grants to select partners who had submitted proposals for projects that would contribute to the Hudson River Fish Advisory Outreach Project's efforts. The Cornell

¹ http://www.health.ny.gov/environmental/outdoors/fish/hudson_river/advisory_outreach_project/

Cooperative Extension (CCE) of Dutchess County and Rockland County, and the Hudson Basin River Watch (with environmental educator “River Haggie Outdoors”) were partners awarded funding in 2009. Between 2009 and 2014 the project awarded a total of about \$60,000 each year in mini-grants to a number of organizational partners.

NYSDOH and its partners have developed and distributed a variety of free materials to convey the health advice on eating Hudson River fish, including brochures, wallet cards, posters, a coloring book, and a “Cut the Fat to Cut PCBs” magnet. These materials, according to NYSDOH, are distributed via a variety of outlets and venues. For example, the coloring book can be found in health provider waiting rooms and in municipal offices that sell fishing licenses. Other materials are posted at fishing access points, or may be distributed via a listserv. Information is also posted on the Advisory Outreach Project’s website and available via a toll free telephone service (see Table 13-1 for a list of available outreach materials).

Despite ongoing outreach efforts, previous consumption surveys indicate that communities in the Lower Hudson River region (south of Bear Mountain Bridge) were less aware of the fish advisories than communities in the Mid and Upper regions of the Hudson River, according to NYSDOH. Therefore, in 2011 NYSDOH noted the continued need for outreach efforts on the Lower Hudson River region. NYSDOH also indicated that subsistence fishermen and lower-income individuals were also less aware of the fish advisories than other individuals.

Presentations by NYSDOH that serve as updates pertaining to Hudson River fishing regulations and consumption advisories are given at the Hudson River PCBs Superfund Site Community Advisory Group (CAG) meetings. The first presentation to the CAG was given in 2009. Handouts and written materials are also periodically distributed at these meetings. NYSDOH presentations and handouts associated with CAG meetings are included at the end of this appendix as attachments. More information on the project, partners, and current outreach strategies is available at the NYSDOH Hudson River Fish Advisory Outreach Project Update (2009-2016) Report on the NYSDOH Hudson River Fish Advisory Outreach Project website.²

² http://www.health.ny.gov/environmental/outdoors/fish/hudson_river/docs/2016_hudson_report.pdf

Updates to Consumption Advisories Since the 2012 Five-Year Review

As follow-up action, in the 2012 five-year review (FYR) EPA indicated that it would work with New York State counterparts to assess additional and/or more effective outreach techniques.

According to NYSDOH, at the time of the 2012 FYR challenges to gaining widespread public awareness of the fish advisories and fishing restrictions included:

- Access and trust;
- Literacy;
- Language;
- Culture;
- Lack of meal substitutes; and
- Perception
 - Water looks clean, and
 - Many people thought the dredging project was complete.

NYSDOH has informed EPA that, since 2012, the demographics of the communities along the Hudson River have changed and will continue to change. However, NYSDOH has indicated that many of the challenges associated with reaching the general public and increasing awareness about the fish advisories and fishing restrictions are still relevant. To better understand the project study area fish consumption and awareness of advisories, convenience surveys of anglers have been conducted to gather information that can be used to help tailor NYSDOH's outreach program (see Table 13-1). NYSDOH has indicated that these surveys provided information about those who fish and/or consume fish, locations where people fish, types of fish that are caught, and the types of fish from the Hudson River that are consumed. The information gathered from these surveys improves NYSDOH's understanding of local fish consumption patterns, and serves as a means of evaluating and assessing the effectiveness of existing outreach techniques in order to identify opportunities for improvement. It also allows for the identification of new challenges which require adapting outreach strategies in order to more effectively reach the public and communicate information.

Since the last FYR, the EPA has worked with NYSDOH to use the information that has been gathered to improve its outreach techniques and more effectively communicate fish advisories and fishing restrictions to the public. Some of the outreach techniques used prior to the 2012 FYR are still being implemented. However, additional techniques have also been adopted.

As presented to the CAG at the October 2016 meeting, several key changes to the NYSDOH Hudson Fish Advisory Outreach Project since 2012 include the increase in staff resources from one full-time staff member supporting the program from 2009-2011, to 1.7 full-time equivalent staff members from 2011 to 2016. From 2014 to 2016, the project also gained the support of part-time seasonal staff, including staff with Spanish and Chinese language skills, which helps address language barriers. Since the previous FYR, the amount of funding available to partners via mini-grants has also increased; from 2009 until 2014, \$60,500 of funding was available annually for partners engaged in outreach that encouraged anglers and other fish consumers to follow the New York State fish advisories. In 2014, this funding increased to \$90,000 annually, allowing for the funding of new partners including CCE of Saratoga, Rensselaer Land Trust, Arm-of-the-Sea Theater, and Hudson Sloop Clearwater via mini-grants (NYSDOH 2016). At the local level, these partners promote awareness of the health advice, provide information about who is consuming Hudson River fish, and develop educational tools and outreach activities. These grantees work in a variety of settings, including fishing locations along the river, nutrition programs, clinic waiting rooms, community events, food pantries, and programs with students and youth groups (see Attachment F).

Local partnerships have been and continue to be critical to the project. In addition to the grantees, NYSDOH has worked with numerous state and local agencies as well as other entities, and continues to seek new partners to help accomplish its objectives. NYSDOH Hudson River Fish Advisory Outreach Project partners include:

- Recreational Fishing Associations;
- Marina and Boating Community Representatives;
- Nutrition Educators;
- Neighborhood Associations and Community Group Leaders;
- Food Pantry and Community Food Networks;

- Environmental Justice Advocates;
- Environmental Educators and Non-Profits;
- Immigrant Support Networks;
- Faith Organizations;
- Local Health and Municipal Officials;
- Environmental Conservation Officials;
- Parks & Recreation Officials;
- Health Care Provider Representatives;
- Housing Authorities; and
- Schools and Youth Programs.

Since 2012, NYSDOH has also made more frequent, nearly annual, presentations to the CAG as an update on the Hudson River Fish Advisory Outreach Program. Over the years, via the CAG meetings and other forums, people have asked NYSDOH to provide more information about what fish they can eat while also reducing their exposure to contaminants such as PCBs. According to NYSDOH its messaging has responded to and reflects this shift in public interest (NYSDOH 2016). Although fish advisories exist for the Hudson River, NYSDOH outreach still encourages people to fish, be outside with their families, and enjoy eating fish as part of a healthy diet. The newest brochure for the Hudson Valley Region, for example, provides a list of waterbodies within the surrounding 13 counties that contain fish that are safe for consumption by people of all ages (NYSDOH no date). NYSDOH has also indicated that it also reached out to families during the 2016 fishing season, through social service providers in Albany and Rensselaer counties, including those at homeless shelters and other community spaces, to promote safe and healthy consumption of fish (NYSDOH 2016).

In addition to emphasizing healthy fish consumption, NYSDOH incorporates emerging health education methods in its outreach efforts. Along similar lines, NYSDOH is working to incorporate more emerging, technology-based tools and resources in its outreach strategies. For example, NYSDOH is currently working to include fish consumption advice in the popular NYSDEC “Pocket Ranger” fishing and hunting phone app.

To improve its outreach, NYSDOH has also been making educational materials more accessible to lower-literacy and non-English speaking individuals. According to NYSDOH, feedback from community partners that reviewed existing outreach materials suggested improving their effectiveness by making them more visual and meaningful to a broader and more diverse audience. In response to this feedback, signs, as well as other outreach materials including brochures, and maps, have been made more visual and translated into Spanish, simplified Chinese, traditional Chinese, Polish, and Russian.

NYSDOH is also working with partners, such as the Latinos Unidos of the Hudson Valley, the U.S. Committee for Refugees and Immigrants, and the Chinese-American Planning Council, to learn about different cultures and communities to more effectively communicate information to a more diverse audience via both existing and new venues. These efforts include making presentations to faith-based groups and establishing “youth ambassadors” to help communicate health advice to their communities. The addition of part-time project staff who attend public outreach events and possess Spanish and Chinese language skills also enables the project to reach a broader audience more effectively.

EPA believes that the presence of project staff and partners at community events and their ability to effectively communicate information and relate to the public are key components of the outreach initiative. In 2015 alone, NYSDOH staff participated in 58 “field days,” which are days on which staff attended various types of venues, spoke with the public, and handed out materials. NYSDOH and its partners continue to reach out to those who consume Hudson River fish via the following venues:

- Community festivals;
- County fairs;
- Boat and outdoor shows;
- Fishing derbies and clinics;
- Schools, headstart programs, after-school programs, and camps;
- Libraries;
- Churches;
- Environmental education programs (i.e., River Haggie Outdoors);

- Neighborhood associations;
- Farmers markets;
- Health clinics;
- Food banks; and
- Boat clubs (55 member clubs)
 - Hudson River Boat and Yacht Club Association, and
 - Mohawk-Hudson Council of Yacht Clubs.

According to NYSDOH, one method for making outreach materials more widely accessible for non-English speakers and lower-literacy individuals is using colors and graphics more often and more effectively. NYSDOH’s new maps of the Hudson corridor counties use colors to illustrate areas of NYSDEC public water access subject to consumption advisories and those that are not. Other new materials that also include more visual displays of information include the “Northern Hudson Brochure” that provides fish advisory information specific to Saratoga, Warren, and Washington counties, and a “Crab Card” that was developed to communicate the risks associated with eating crabs. By adjusting the content contained in existing outreach materials and enhancing the design of new materials, information can be more effectively communicated, which will improve the effectiveness of the outreach program (see Table 13-1 for a list of available outreach materials).

NYSDOH has also sought to increase public awareness of fish advisories by improving signage at fishing point-of-access locations. NYSDOH took measures to overcome challenges associated with getting landowners to grant permission for fish advisory signs to be posted on their properties. For example, NYSDOH worked directly with Scenic Hudson, the owner of properties along the river, to post signs that notify anglers of the advisory on the organization’s properties. To persuade municipalities and other landowners to grant permission for fish advisory signs to be posted, NYSDOH provided specific locations, including global positioning system (GPS) coordinates, for the recommended placement of signs. NYSDOH acknowledges that encouraging posting of signs has been more successful than past efforts. In 2013, over 400 signs were mailed out for posting at about 90 locations in 10 counties. Since 2015, 24 property owners agreed to the placement of 113 new signs. NYSDOH has also

developed a database containing the GPS coordinates for the location of each posted sign that, in conjunction with annual site visits, allows NYSDOH to determine if the signs are still posted and legible, or if new signs are required.

Table 13-2 highlights changes that have been made to the outreach techniques since the previous FYR. These changes seek to increase the effectiveness of public outreach as an IC by reaching more people and more effectively communicating information. There is a need to continue to sustain the ongoing outreach efforts as NYSDOH continues to work to increase public knowledge of and compliance with fish consumption advisories and fishing restrictions. For example, signage notifying the public about fish consumption advisories and fishing regulations needs to be consistently checked and replaced as needed. There are also additional opportunities for NYSDOH to continue to improve outreach. For example, EPA encourages NYSDOH to systematically distribute information about fish consumption advisories to those registering to fish in the Lower Hudson River. Human health risk reduction, and protectiveness of the selected remedy, rely on the effective implementation of these ICs through existing and new public outreach efforts.

Table 13-1: NYSDOH Fish Advisory and Fish Consumption Outreach Materials

Hudson River Health Advice on Eating Fish You Catch (translated to Chinese in 2015) <ul style="list-style-type: none">Nearly 7,000 brochures in English and 2,500 in Spanish distributed each year
Northern Hudson River Health Advice on Eating Fish You Catch in Saratoga, Warren, and Washington Counties (2015) <ul style="list-style-type: none">Over 2,000 copies of this brochure were distributed in 2015
Hudson Valley Region Health Advice on Eating Fish You Catch (2016) <ul style="list-style-type: none">Available in English, Spanish, and Chinese
Long Island and New York City Health Advice on Eating Fish You Catch (re-developed 2015) <ul style="list-style-type: none">Available in English, Spanish, Chinese, Polish, and Russian
New York State Blue Crab Cooking and Eating Guide <ul style="list-style-type: none">Available in English, Spanish, and Chinese
Wallet Cards
Can You Eat That Fish from the Hudson Poster <ul style="list-style-type: none">Available in English and Spanish
Hudson River Creatures Activity Book (2011) <ul style="list-style-type: none">Over 10,000 books distributed in 2015
Cut the Fat to Cut PCBs Refrigerator Magnets <ul style="list-style-type: none">Available in English, Spanish, and Chinese
Signs developed through stakeholder focus groups, posted at popular fishing locations <ul style="list-style-type: none">Available in English, Spanish, and Chinese

**Table 13-2: Summary of Changes to Outreach Techniques Used by NYSDOH
Hudson River Fish Advisory Outreach Project and Partners Since 2012**

Outreach is informed by additional information that was gathered through surveys of anglers and those who consume fish.
<ul style="list-style-type: none"> • NYSDOH conducted a Hudson River fishing consumption survey, a convenience sample conducted at outreach events. To date, 786 samples were collected.
<ul style="list-style-type: none"> • CCE Dutchess County began conducting a fish consumption surveys in 2013 and now coordinates surveys from the Cooperative Extensions in Columbia, Greene, Orange, Ulster, Saratoga, and Washington counties. More than 1,300 surveys have been collected, providing a better understanding of local fish consumption patterns.
Evaluating and assessing outreach efforts to determine which ones are effective and areas for improvement.
Increased staff size and diversified language capabilities
<ul style="list-style-type: none"> • Increased staff size from one full-time staff member from 2009 to 2011 to 1.7 full-time equivalent staff members from 2011 to 2016.
<ul style="list-style-type: none"> • Added part-time seasonal staff with Spanish and Chinese language skills from 2014 to 2016.
Hosted and attended diverse types of events in a variety of geographic locations.
<ul style="list-style-type: none"> • NYSDOH collaborated with the New York/New Jersey estuary program to co-sponsor a “Hook on Our Waters” day-long conference in October 2013 in New York City to raise awareness of the fish consumption advisory.
<ul style="list-style-type: none"> • In 2015, NYSDOH partner, Arm-of-the-Sea Theater, shared the Hudson fish advisory message through their unique theatrical production, “Hook Line and Sinker: Fishing the Hudson River.” <ul style="list-style-type: none"> – NYSDOH sponsored 14 shows and more than 3,000 people from New York City to Saratoga County saw the show in its first year. There were additional shows in 2016.
Improved signage to make it more effective for lower-literacy and non-English speaking individuals and encouraged and facilitated the posting of signage.
<ul style="list-style-type: none"> • Worked with Scenic Hudson to post signs on Scenic Hudson properties
<ul style="list-style-type: none"> • To persuade municipalities to post fish advisory signs in specific locations. NYSDOH visits the riverfront to provide municipalities with specific locations and GPS coordinates for where they suggest placing signs. <ul style="list-style-type: none"> – This approach to encouraging the posting of signs has been more successful than past efforts. – Since 2015, 24 of 33 property owners agreed to post a total of 113 new signs. – In total, over 400 signs were issues for posting at nearly 90 locations in 10 counties.
<ul style="list-style-type: none"> • A database with GPS coordinates for the location of posted signs has been developed. Each year sites are checked to see if signs are still posted and legible, or if new signs are required.
Identified gaps in existing materials, translated and produced materials in more languages, and made materials more visual in order to reach a broader and more diverse audience.
<ul style="list-style-type: none"> • Nine of the outreach material documents are currently produced in up to five languages.
<ul style="list-style-type: none"> • Fish consumption advisory signs, brochures, and a project website are available in both English and Spanish, as are public service announcements for the radio.
<ul style="list-style-type: none"> • Materials in English and Spanish are available for distribution.
<ul style="list-style-type: none"> • Materials now translated into both simplified and traditional Chinese.

**Table 13-2: Summary of Changes to Outreach Techniques Used by NYSDOH
Hudson River Fish Advisory Outreach Project and Partners Since 2012**

<ul style="list-style-type: none"> • Outreach staff are able to communicate in the native language(s) and can better frame messages in a culturally sensitive manner.
Developed new materials for distribution including:
<ul style="list-style-type: none"> • Maps for Hudson River corridor counties that illustrate the areas of NYSDEC public water access that are subject to consumption advisories and NYSDEC access waters that are not subject to consumption advisories. These maps include a user friendly color-coding scheme.
<ul style="list-style-type: none"> • The Northern Hudson Brochure provides readers with consumption advisory information specific to Saratoga, Warren, and Washington counties.
<ul style="list-style-type: none"> • A new Crab Card was developed to communicate the risks associated with eating crabs. This information is particularly useful because a license is not required to harvest crabs and 32 percent of those who eat fish in the Lower Hudson River also consume crab.
<ul style="list-style-type: none"> • An interactive “Go Fish” game that helps children learn health advice in a fun way.
Working with partners to distribute information via more diverse venues to a broader and more diverse audience.
<ul style="list-style-type: none"> • Working with immigrant and refugee advocates including Latinos Unidos of the Hudson Valley, the U.S. Committee for Refugees and Immigrants, and the Chinese America Planning Council.
<ul style="list-style-type: none"> • Began project with the refugee community in Albany in 2015.
<ul style="list-style-type: none"> • Building on work with the Columbia County Health Department Migrant Health Services to distribute information to migrant workers, by working with Hudson Health Plan, a health provider which accepts migrant worker vouchers. The migrant population is an audience that may potentially fish and consume fish from the Hudson River.
<ul style="list-style-type: none"> • NYSDOH staff attended the “Backstretch” health fair, at the Saratoga Race Course, in 2015 to reach the many Spanish-speaking workers.
<ul style="list-style-type: none"> • In 2015, NYSDOH began an effort to reach the Asian and Chinese communities. Staff learned about the different Chinese communities and the written and spoken dialects within New York City and the Hudson Valley.
<ul style="list-style-type: none"> • In 2016, worked with the Chinese Community Center in Albany and the New York City Chinese American Planning Council to develop teen “youth ambassadors” to communicate the health advice to the Chinese community.
<ul style="list-style-type: none"> • Presented information about health advisories and regulations at churches in Albany to reach people from Burma that live in the community.
<ul style="list-style-type: none"> • Through an agreement with NYSDEC, order forms for the advisory materials are distributed with licensing information. Some bait and tackle shops have ordered the materials and are distributing them in their shops.
NYSDOH is working with NYSDEC to include its advice in the popular NYSDEC Pocket Ranger fishing and hunting phone app.

2 REFERENCES

NYSDOH, 2016. Hudson River Fish Advisory Outreach Project Update (2009-2016).
https://www.health.ny.gov/environmental/outdoors/fish/udson_river/docs/2016_hudson_report.pdf Accessed December 2016.

NYSDOH. n.d. “Hudson Valley Region: Health Advice on Eating Fish You Catch.”
<https://www.health.ny.gov/publications/6545.pdf>

Attachments

This section includes NYSDOH materials that were presented or distributed at the Hudson River PCBs Site CAG. The NYSDOH presentations include information associated with convenience surveys that were conducted. The intent of these convenience surveys was to identify the reasons for non-compliance with the advisories and the content of the surveys was tailored to that effect. It should be noted that the use of these surveys to quantify the percentage of non-compliance would likely not be accurate as these surveys contain bias in their design and scope.

NYSDOH Materials Presented or Distributed at the Hudson River CAG

Attachment	Date of CAG meeting	Title	Description
Attachment A	May 2009	NYSDOH Fish Advisory Handout	A handout containing a map and description of the Hudson River fish advisories and the catch-and-release regulations. An overview of the Hudson River Fish Advisory Outreach Project and contact information are provided.
Attachment B	May 2009	NYSDOH Hudson River Fish Advisory Outreach Project Presentation	A presentation that provides information about the project, fish advisories and fish regulations, outreach, the status of public awareness about the fish advisories, and information about the 2009 NYSDOH's Hudson River Fish Advisory Outreach Work Plan.
Attachment C	December 2010	NYSDOH PCB Health Studies	A presentation about health risks associated with PCBs in communities along the Hudson River. Information about the Hudson River Communities Project, including methods, data, results and conclusions was presented.
Attachment D	September 2012	NYSDOH Hudson River Fish Advisory Outreach Update Presentation	A presentation that provides an update about the project, fish advisories and fish regulations. Topics covered include, outreach efforts, available outreach materials, funded partners, venues for sharing information, the status of public awareness about the fish advisories, as well as information about Hudson River fishing activity. The project's upcoming outreach efforts were also highlighted.

Attachment	Date of CAG meeting	Title	Description
Attachment E	September 2013	NYSDOH Hudson River Fish Advisory Outreach Update Presentation	A presentation that provides an update about the project, fish advisories and fish regulations, as well as information about funded partners. Additional topics addressed include the fish consumption convenience surveys, efforts to improve posted signs, the development of county maps that depict the fish advisories, as well as the distribution of available outreach materials via various outreach venues. Upcoming outreach efforts were also highlighted.
Attachment F	October 2016	NYSDOH Hudson River Fish Advisory Outreach Update Presentation	A presentation that provides an update about the project, fish advisories and fish regulations, as well as information about funded partners, and outreach venues. Examples of outreach materials that were developed to be more visual and effective and efforts to more effectively reach a broader and more diverse audience, were highlighted. Improvements that were made to signs and efforts to encourage the posting of fish advisory signs, were also discussed. Information about the convenience surveys that were conducted to better understand fishing activity, fish consumption patterns, and the effectiveness of the project's outreach was provided and data from these convenience surveys was presented. Data from these surveys were used to determine reasons for non-compliance with fishing regulations and fish consumption advisories. These data will inform the approach to future outreach efforts and may allow for more effective outreach. Upcoming outreach efforts were also highlighted.

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NYSDOH OUTREACH AND COMMUNICATION REGARDING FISH ADVISORIES AND FISHING RESTRICTIONS

Attachment 13-A May 28, 2009 NYSDOH Fish Advisory Handout

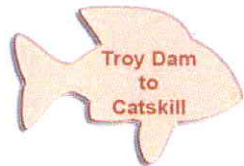
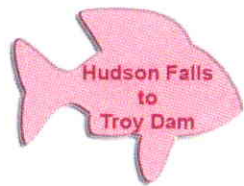
Distributed at Hudson River PCBs Site CAG

Prepared by:

Ecology and Environment, Inc.

April 2019

Hudson River Fish Advisories Downstream of Hudson Falls



Hudson River Fish Advisory Outreach Project

What is the Hudson River Fish Advisory Outreach Project?

The New York State Department of Health (NYSDOH) provides advice for eating sport fish from NY state water bodies, including the Hudson River. The advice is a guide to how much fish is OK to eat, if any, and how to clean and cook fish to keep chemicals low.

The Hudson River Fish Advisory Outreach project is an initiative for outreach on the NYSDOH Hudson River fish advisory from Hudson Falls to the southern tip of the Battery in Manhattan.

- The project goal is for all anglers and others who eat fish from the Hudson River to know about and follow the New York State fish advisories. To achieve this goal, NYSDOH will develop partnerships with local groups.

What are the project objectives?

- To make people aware of the Hudson River fish advisories
- To help people understand the advisory messages and
- To encourage people to follow the advisories

What are some of the key project messages?

- Fish are nutritious and good to eat, but some fish have levels of chemicals that may be harmful to health.
- Women of childbearing age and children under 15 are advised to not eat any fish from the Hudson River.

For More Information

On the Hudson River Fish Advisory Outreach Project:

- Call 1-800-458-1158 ext. 27530
- Email HRFA@health.state.ny.us or
- Select "H" on the "A to Z" index tab and "Hudson River Fish Advisory Outreach" at <http://www.nyhealth.gov/healthaz/#H>

On statewide fish advisories:

- Call 1-800-458-1158 ext. 27815
- Email BTSA@health.state.ny.us or
- Select "F" on the "A to Z" index tab and "Fish Advisory" at <http://www.nyhealth.gov/healthaz/#F>

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NYSDOH OUTREACH AND COMMUNICATION REGARDING FISH ADVISORIES AND FISHING RESTRICTIONS

**Attachment 13-B May 28, 2009 Hudson River Fish Advisory Outreach
Project Presentation to Hudson River PCBs Site CAG**

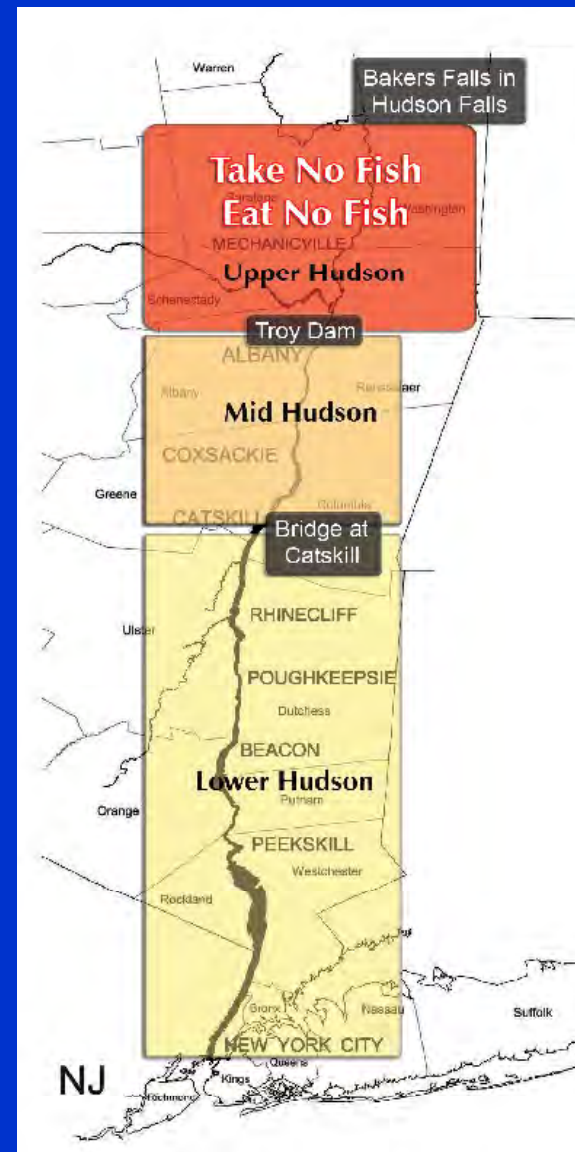
Prepared by:
Ecology and Environment, Inc.

April 2019

Hudson River Fish Advisory Outreach Project

Hudson River PCBs
Superfund Site
Community Advisory Group

May 28 2009



Hudson River Fish Advisory Outreach Project

Overview:

- What is the project
- What is a "fish advisory"
- The Hudson River fish advisory
- Grant update and project work plan



Hudson River Fish Advisory Outreach Contact Information

Regina Keenan - Hudson River
Outreach Project Coordinator

518-402-7530 or 800-458-1158 x
27530

Email: hrfa@health.state.ny.us

Website:

www.nyhealth.gov/hudsonriverfish

Hudson River Fish Advisory Outreach Project

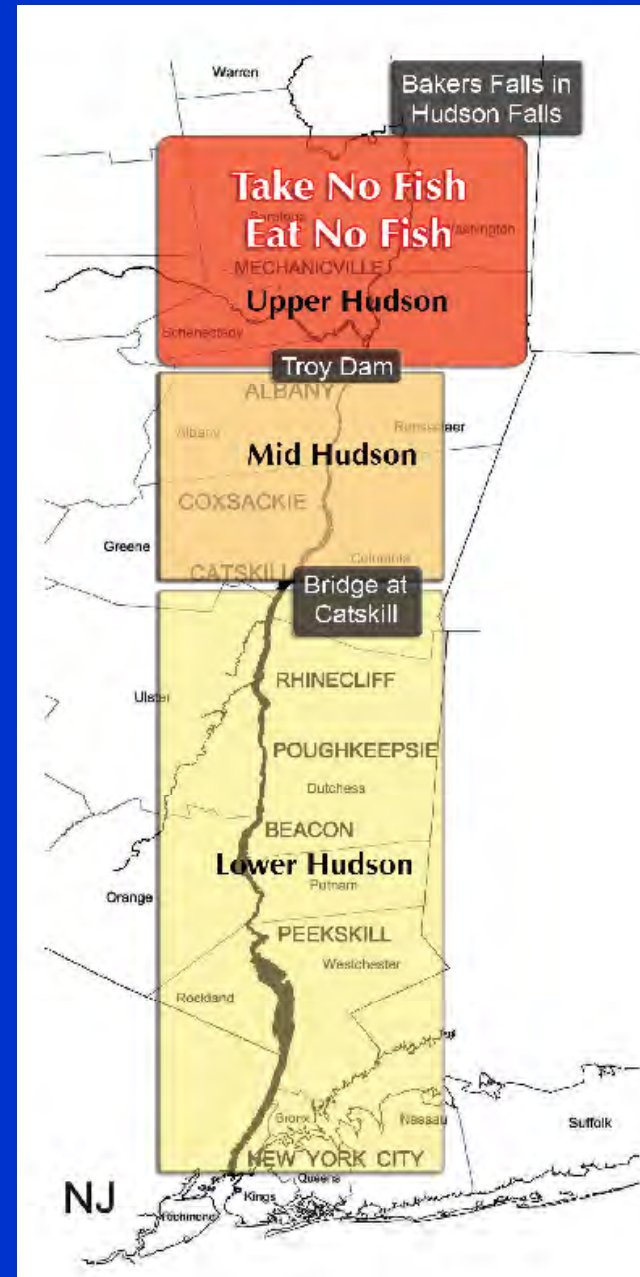
Project Goal: for everyone who eats fish from the Hudson River to know about, understand and follow the NYSDOH advisories



Project Geographic Area

From Hudson
Falls to the
Battery in New
York City

- No fishing
license required
south of Troy
dam

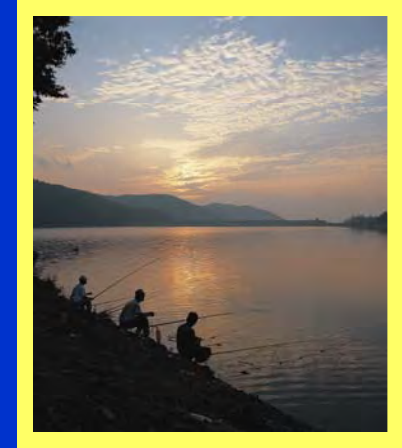


What Is a Fish Advisory?

- Fish are nutritious and good to eat but some fish have levels of chemicals that may be harmful to health
- Fish can have thousands of times the amount of chemicals in the surrounding water
- Advisories are based upon the levels of chemicals present in sportfish



NYS Fish Advisories



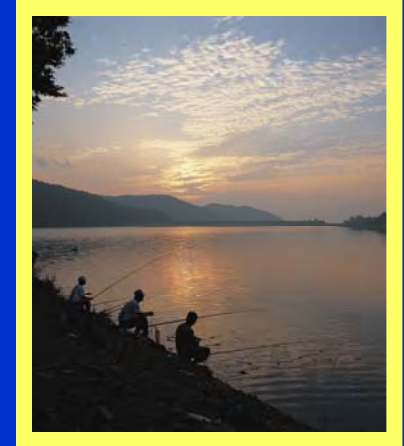
Advisories describe:

- how much fish, if any, is okay to eat
- how to cook and clean fish to limit exposure to chemicals
- locations fish are contaminated
- NYS has specific advisories for 130 waters throughout the state
- Advisories are updated annually

NYS Fish Advisories

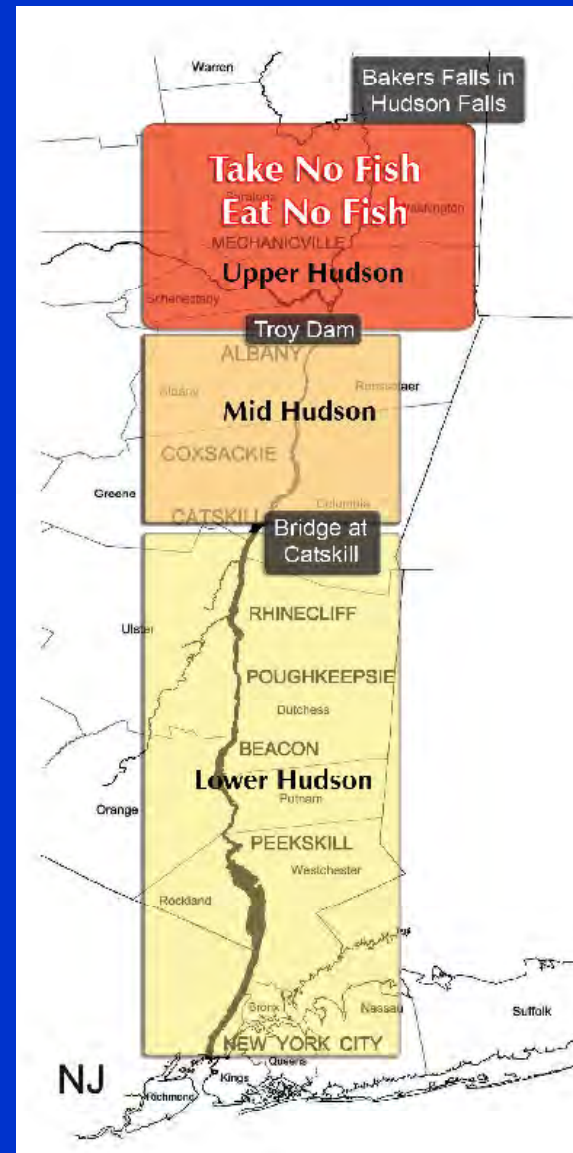
General sport fish advisory:

Eat no more than one meal
(1/2 pound) per week of any fish
from the state's freshwaters or
the marine waters at the mouth of
the Hudson

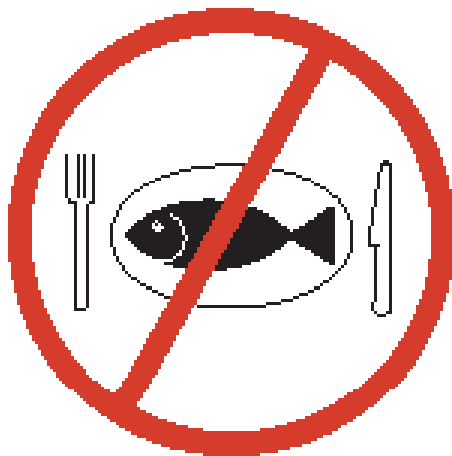


Hudson River Fish Advisory

- More PCB contamination in the northern project area
- Who you are, where you fish and which species you eat matter



Primary Project Messages



**Important note:
Women of childbearing
years and children under
15 should not eat fish
from the Hudson River.**

**And trim, skin and cook
fish on a rack**

Upper Hudson Advisory

**Upper Hudson
From Baker's Falls in Hudson Falls to
the Federal Dam at Troy**

New York's State Department of
Environmental Conservation's "catch and
release" regulations apply.

Take No Fish. Eat No Fish.

Mid Hudson Advisory

Mid Hudson From Troy Dam to Catskill

*Women beyond childbearing years and men
can eat these fish species once a month:*



Alewife



Rock bass



Blueback herring













Yellow perch

**Do not eat other fish species from the
mid Hudson.**

Lower Hudson Advisory

**Lower Hudson
From Catskill to the New York Battery**

Women beyond childbearing years and men can eat these fish species once a month:

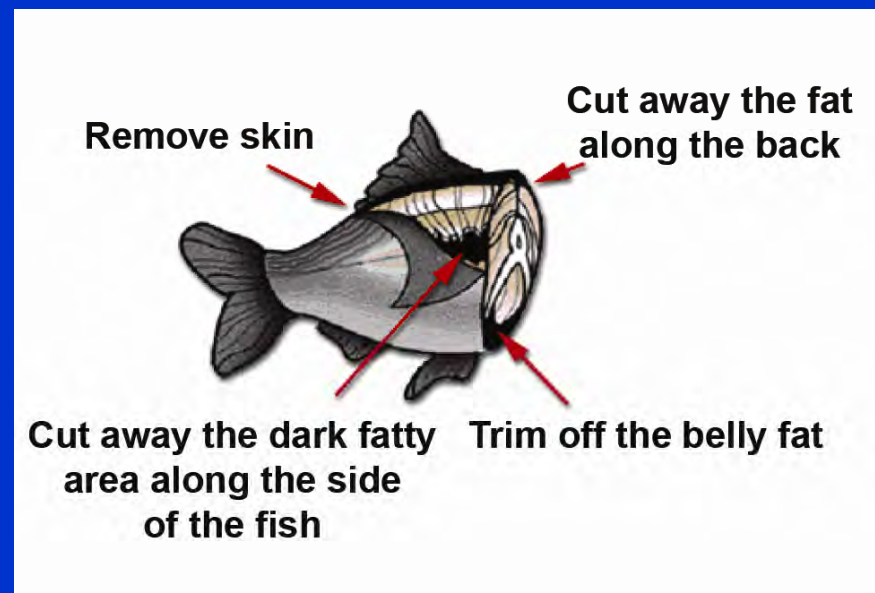
 Atlantic needlefish	 Goldfish	 Striped bass
 Bluefish	 Largemouth bass	 Walleye
 Brown bullhead	 Smallmouth bass	 White perch
 Carp	 Rainbow smelt	 Blue crab: up to six per week

All other fish species from the lower Hudson can be eaten once a week.

Reducing the Amount of PCBs You Eat in Fish

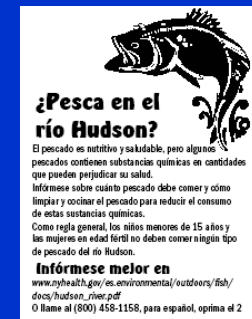
PCBs concentrate in fatty tissue

- Trimming and cooking fish properly can reduce the PCBs you eat by nearly **one half**.
- Broil, grill or bake the skinned, trimmed fish on a rack so that the fat drips away.
- Do not use cooking juices.



Outreach Efforts

- Written materials distributed annually
- License
 - fishing regulation guidebook
- Toll-free phone number
- Website, print ads, LISTSERV
- Grants



North of Rip Van Winkle
Bridge in Catskill to federal
Dam at Troy



South of Rip Van Winkle
Bridge at Catskill, including
NYC Harbor waters



Signs

NYSDEC has signs above Troy dam

Awareness of Advisories

Depends upon where you fish:

- North of Bear Mt. Bridge - 95%
- South of Bear Mt. Bridge - 58%

and the season (lower River):

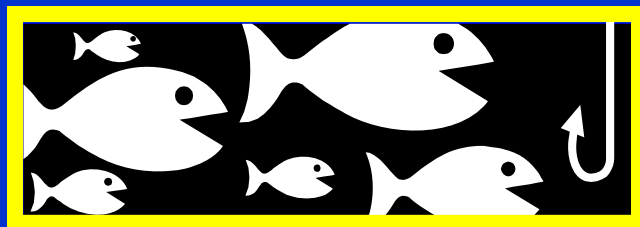
- Spring and fall 77-82%
- Summer 40-54%

Awareness of Advisories

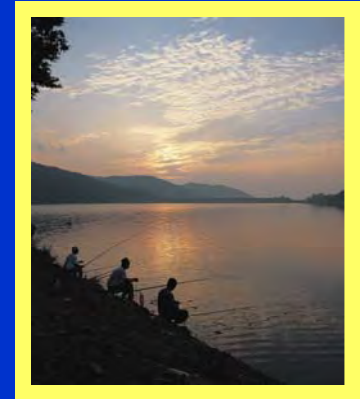
Varies by ethnicity

- White anglers - 69%
- Black anglers - 22%
- Hispanic anglers - 13%

And by income and where you live



Challenges



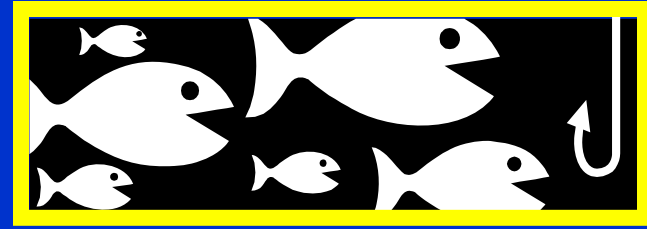
- Fishing for fun and for food
- Culture and variety of languages
- Shore has lots of property owners
- Some populations harder to reach
- Perception can see contaminants and water appears clean
- Understanding and credibility

Grants



- Local efforts
- Request for applications (RFA) in February 2009
- Targeted women, children, low-income populations
- Total amount available for mini-grants is about \$60,000 annually and eligible for renewal
- Hope to announce very shortly

Partner Outreach

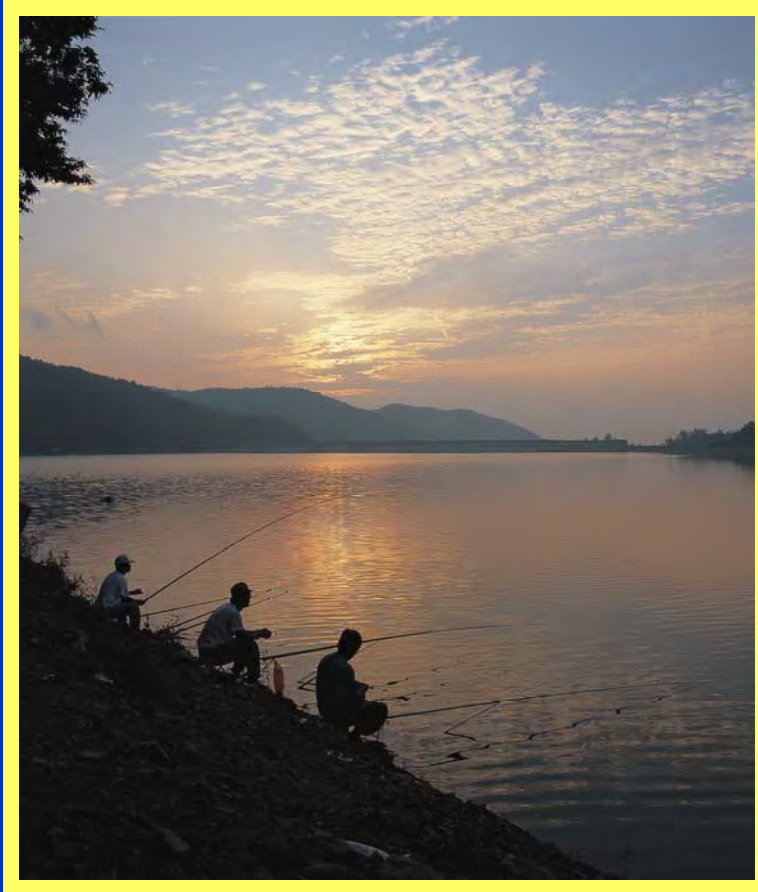


- "Point of fishing" contacts or "Outreach Specialists"
- Nutrition programs, health clinics, inservices, rod and gun clubs, filleting demonstrations, pledges
- Media campaign, posting signs

2009 NYSDOH Workplan

- Grant support: Written materials, training, translations, surveys and evaluation, site visits, community events
- Message Campaigns:
 1. Women and children
 2. Skin, Trim, Cook on a Rack
 3. Catfish (2010)
- Focus groups
- Signs
- Incorporate lessons learned...





- Questions?

Final Second Five-Year Review Report for the Hudson River PCBs Superfund Site

APPENDIX 13

NYSDOH OUTREACH AND COMMUNICATION REGARDING FISH ADVISORIES AND FISHING RESTRICTIONS

**Attachment 13-C December 9, 2010 NYSDOH PCB Health Studies
Presentation to Hudson River PCBs Site CAG**

Prepared by:
Ecology and Environment, Inc.

April 2019

PCBs and Health: The Hudson River Communities Project

- General Goal
 - Evaluate Environmental Exposure to and Nervous System Effects of PCBs Among Older Residents of Communities Along Hudson River in New York State

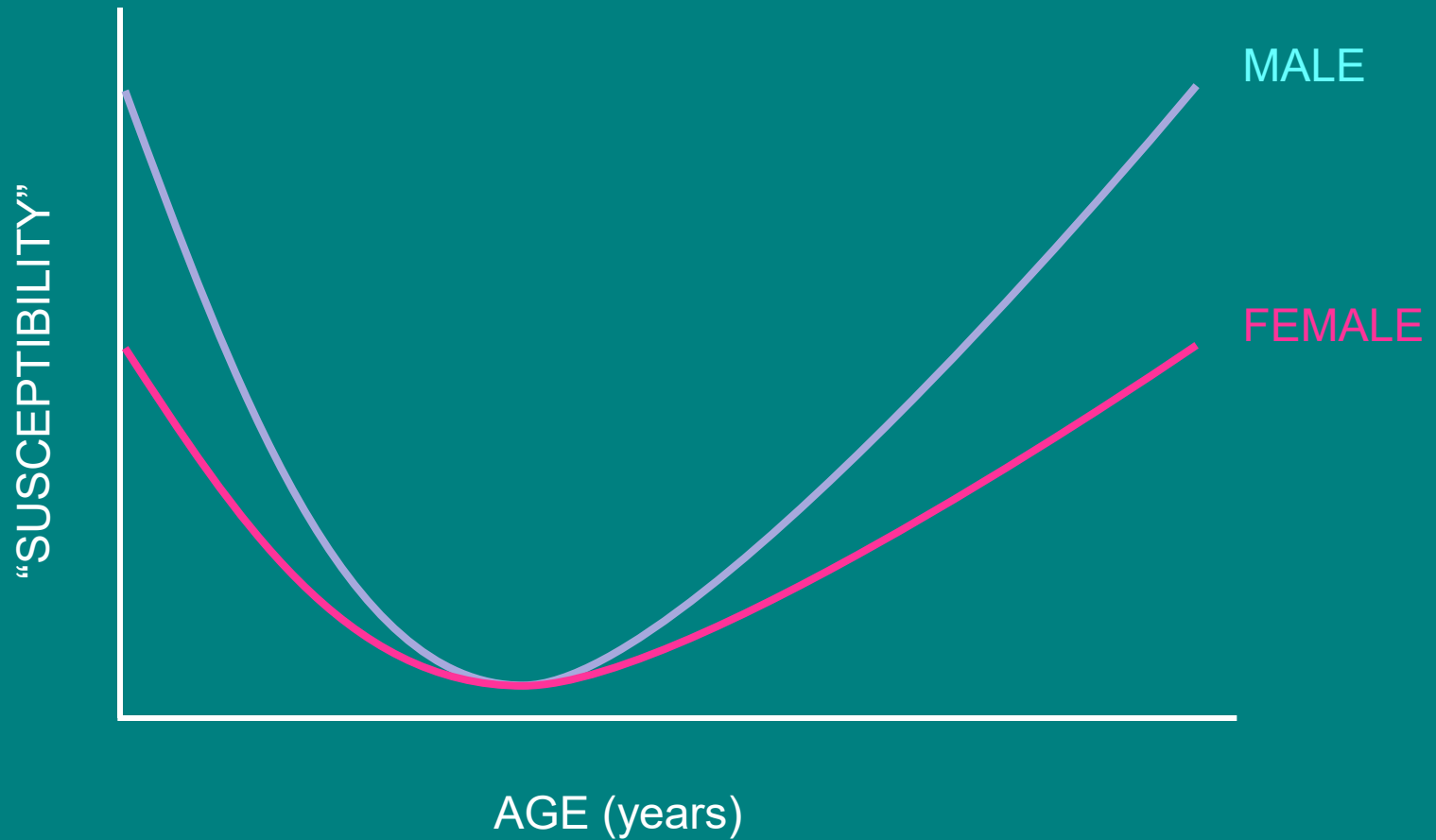
PCBs and the Nervous System

- Brain Target Organ for PCBs
 - Particularly Fetus and Infant
 - Reduced Memory and Learning, Motor Development
 - Developing Brain More Susceptible
 - Older Adults May Also Be at Risk
 - Aging Brain May Be More Susceptible
 - Accelerate Nervous System Declines That Occur Normally with Age
 - Decline May Occur Earlier or Be More Severe
 - Hypothesis Posed by Richard Seegal of NYSDOH
 - Increasing Evidence that Lead Affects Older Persons
 - Also Occur with Neurotoxins Such as PCBs?



AT- RISK POPULATIONS

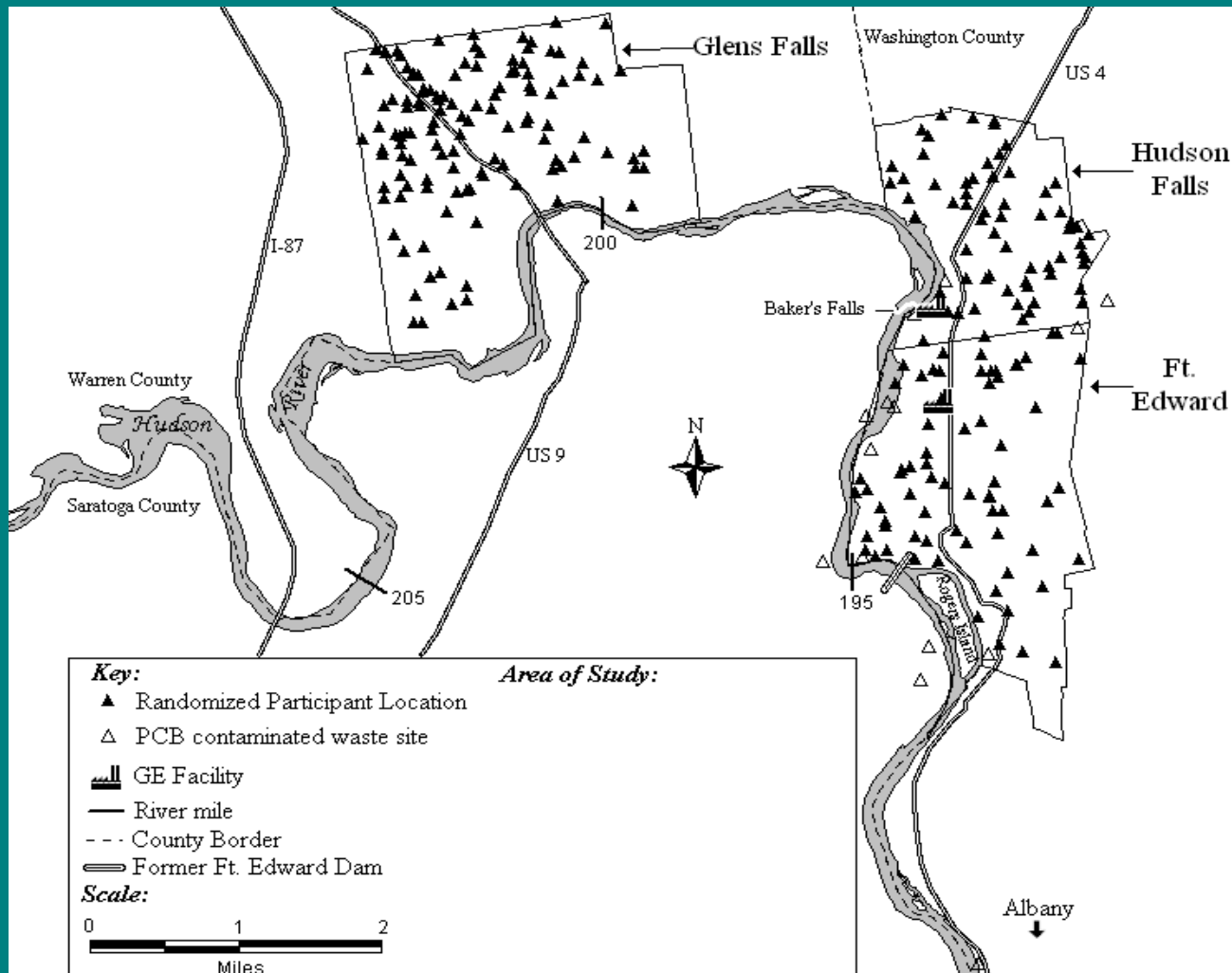
Susceptibility of Nervous System by Age and Sex



Specific Aims

- Measure Levels of PCBs in Blood of Study Participants
- Evaluate Relationship Between Levels of PCBs in Blood and Potential Sources of Exposure
 - Consumption of Fish From Hudson River
 - Levels of PCBs in Both Outdoor and Indoor Air
- Evaluate Relationship Between Levels of PCBs in Blood and Nervous System Function

Map of Study Area



Method

- Study and Comparison Populations
 - Men and Women 55 to 74 Years of Age
 - Residents of Hudson Falls or Fort Edward Villages (Study Area) or Glens Falls (Comparison Area) for at Least 25 Years
 - Randomly Selected through Computerized Telephone Directories and Other Digital Databases
 - Persons with Occupational Exposures or Severe Neurological Disorders Excluded
 - Included in Separate Study of Former GE Workers with Richard Seegal
 - Final N = 133 in Study Area and 120 in the Comparison Area

Method

- Exposure Assessment
 - Personal Interviews
 - Residential, Occupational, and Medical Histories; Health Habits; Demographics
 - Hudson River Fish Consumption By Decade
 - 1970's or Earlier, 1980's, 1990's, Last Year
 - Environmental Monitoring
 - PCB Measurements in Outdoor and Indoor Air
 - Biological Monitoring
 - PCB Measurements in Blood Serum

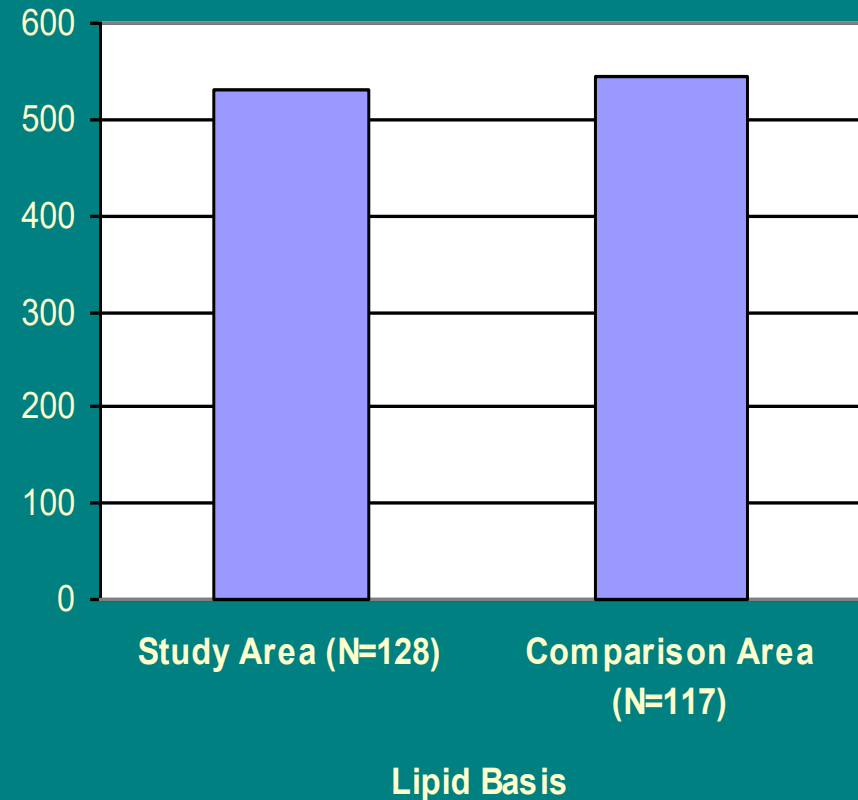
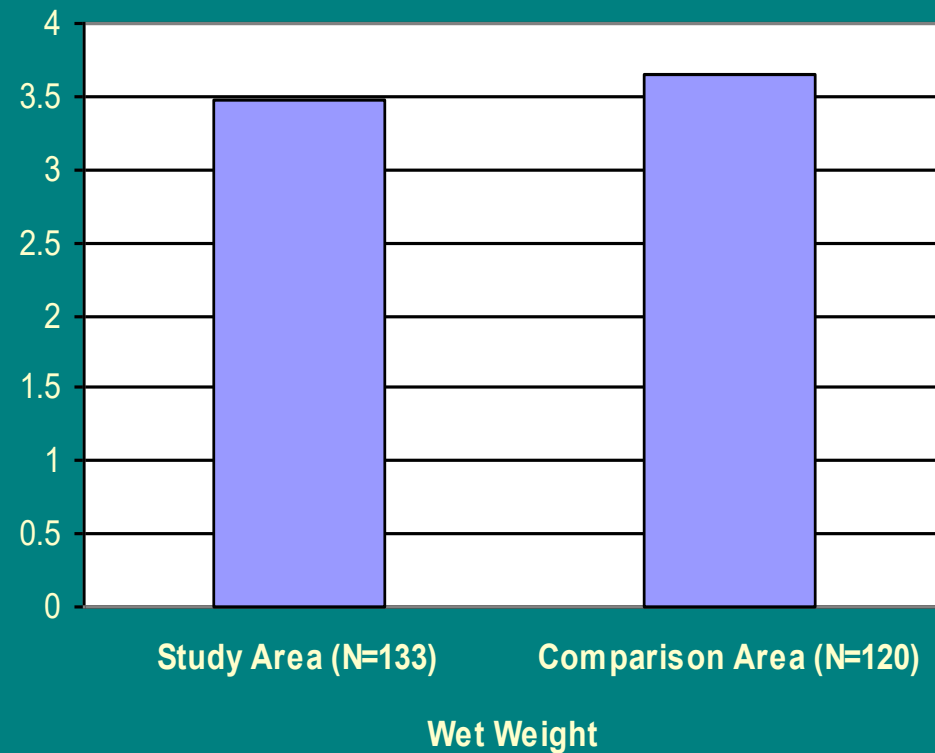
Method

- Outcome Assessment
 - Used Standard Psychological Tests to Measure Nervous System Function
 - Cognition
 - Memory and Learning
 - Intellectual Function
 - Reaction Time
 - Fine Motor Control
 - Depression and Anxiety

Serum PCB Concentrations (ppb, wet weight) for Current Study and Other Similar Studies

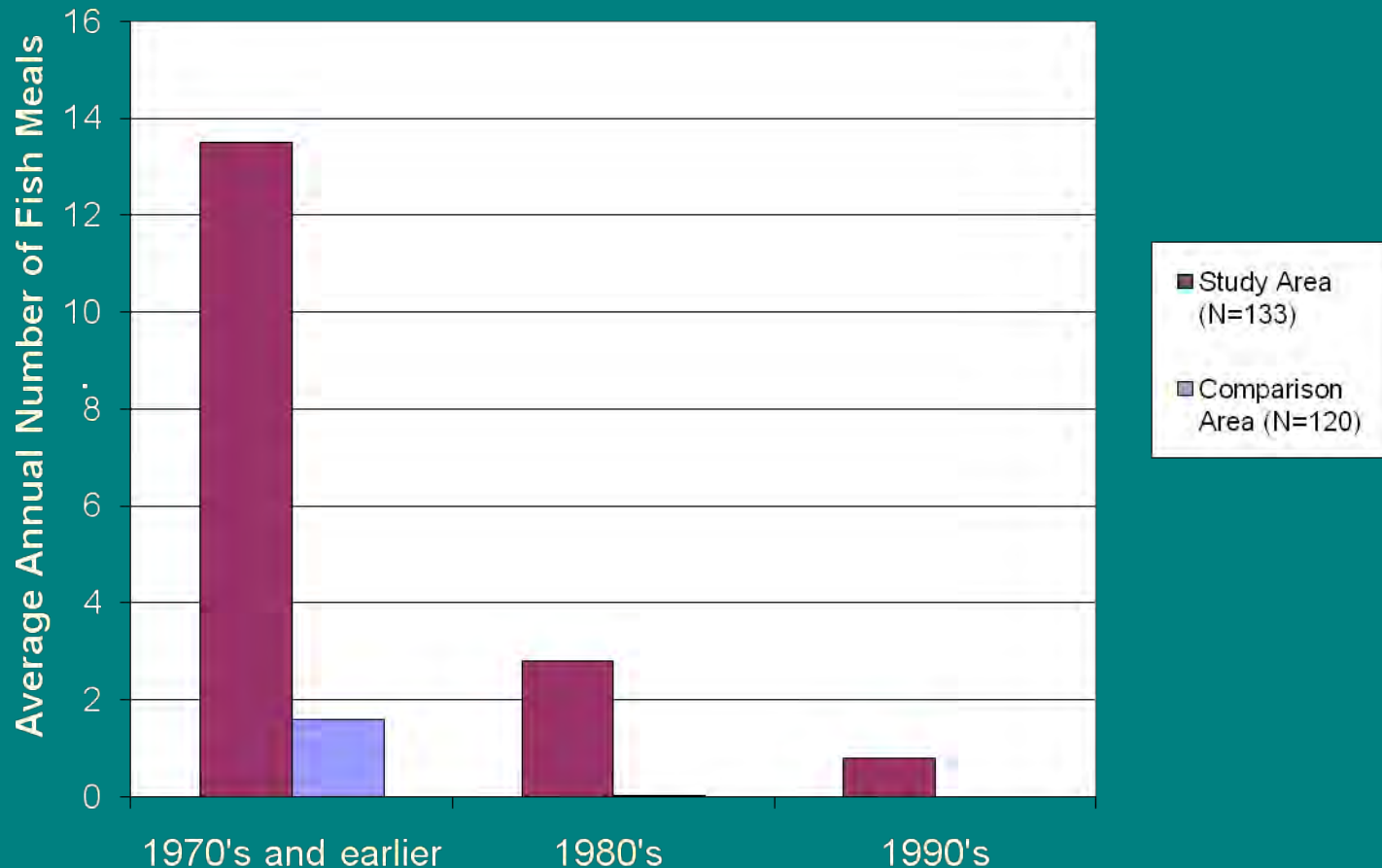
	Median	Minimum	Maximum
CDC (2005) - Background	2.4	0.6	9.6
Current Study	3.2	1.0	19.3
Seegal et al. (2010) – GE Workers	6.7	0.8	138.4
Schantz et al. (2001) – Great Lakes Fish eaters	7.9	< Detection Limit	75

Average Serum PCB Concentration (ppb) By Study and Comparison Area

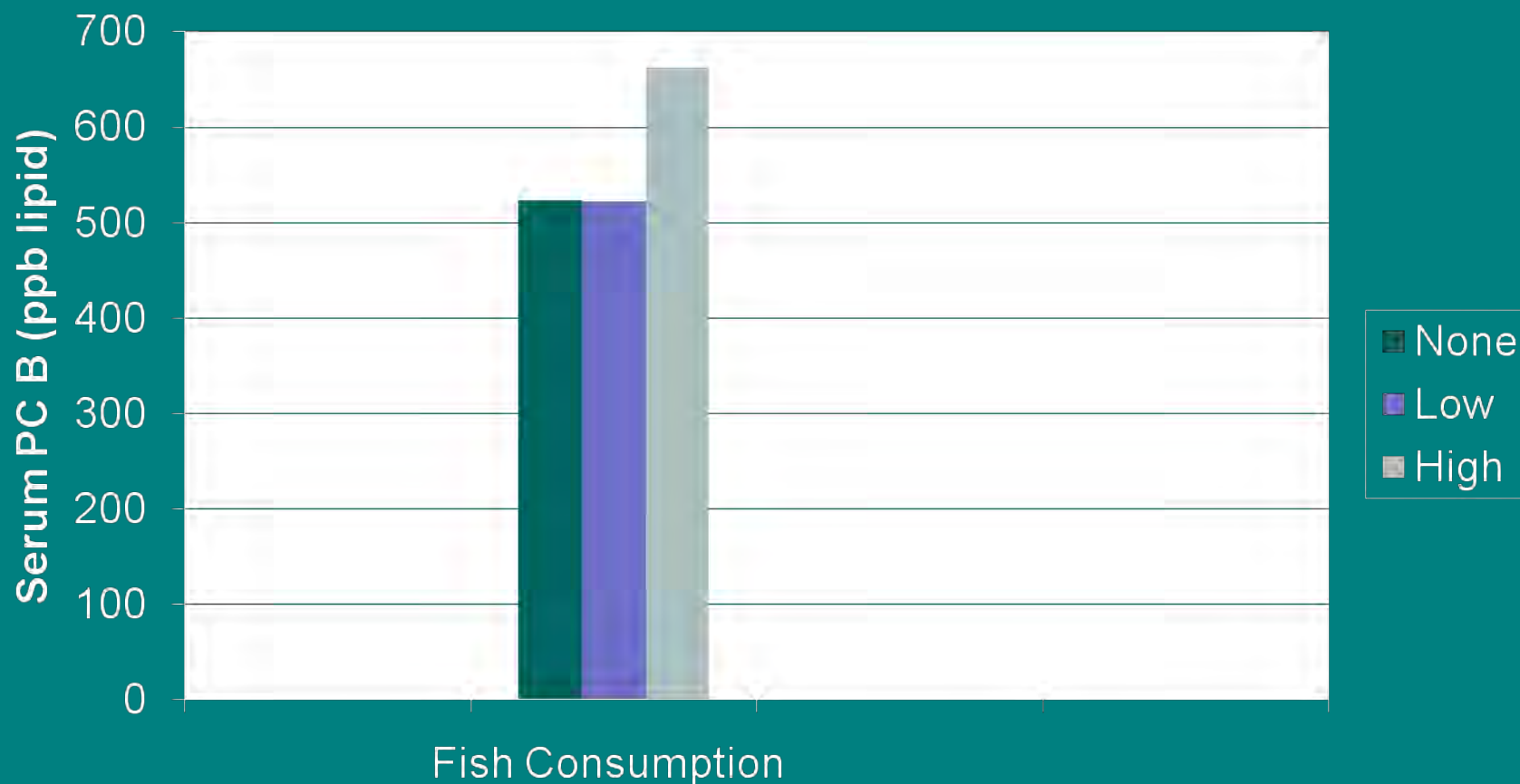


Adjusted for Age, BMI, and
Smoking

Average Annual Number of Fish Meals from Contaminated Portions of Hudson River By Decade

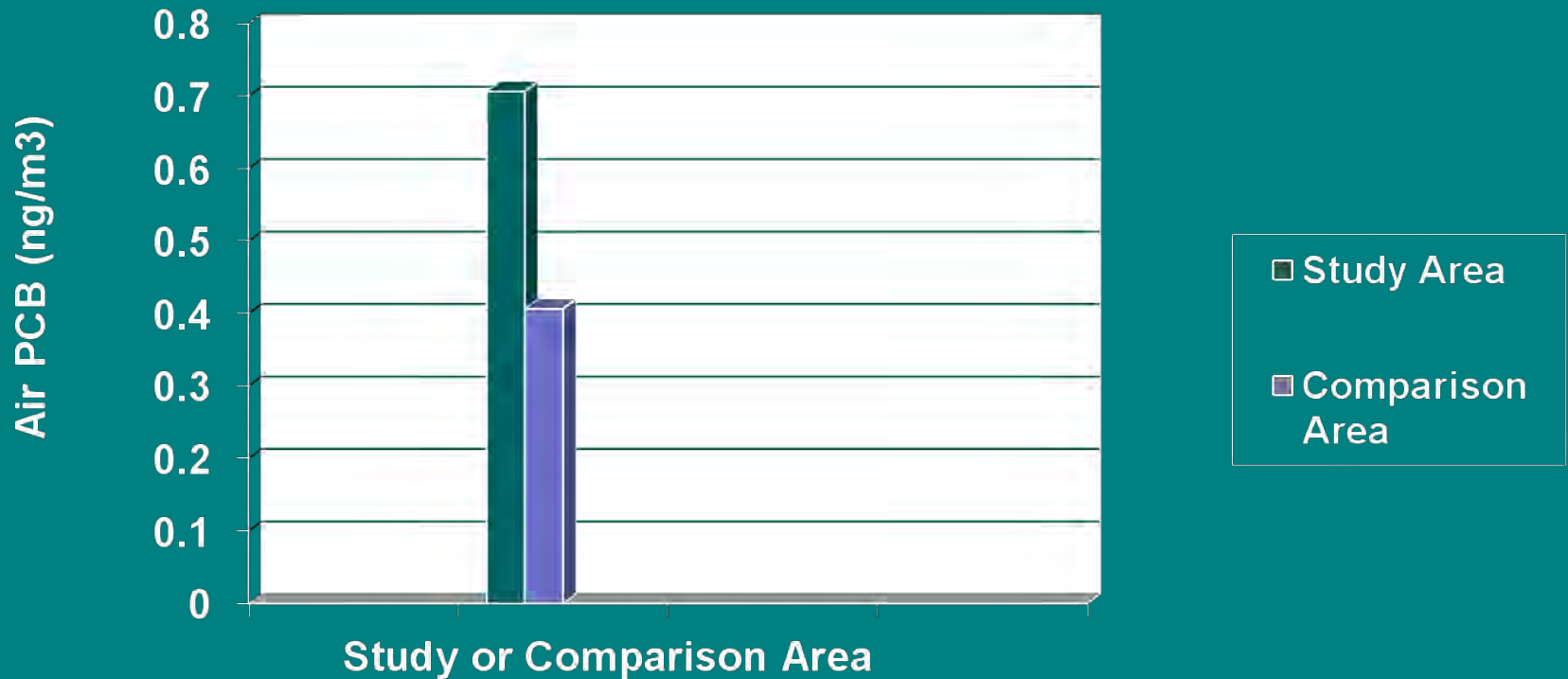


Average Serum PCB Concentration by Exposure to PCBs from Hudson River Fish Consumption: Both Areas Combined



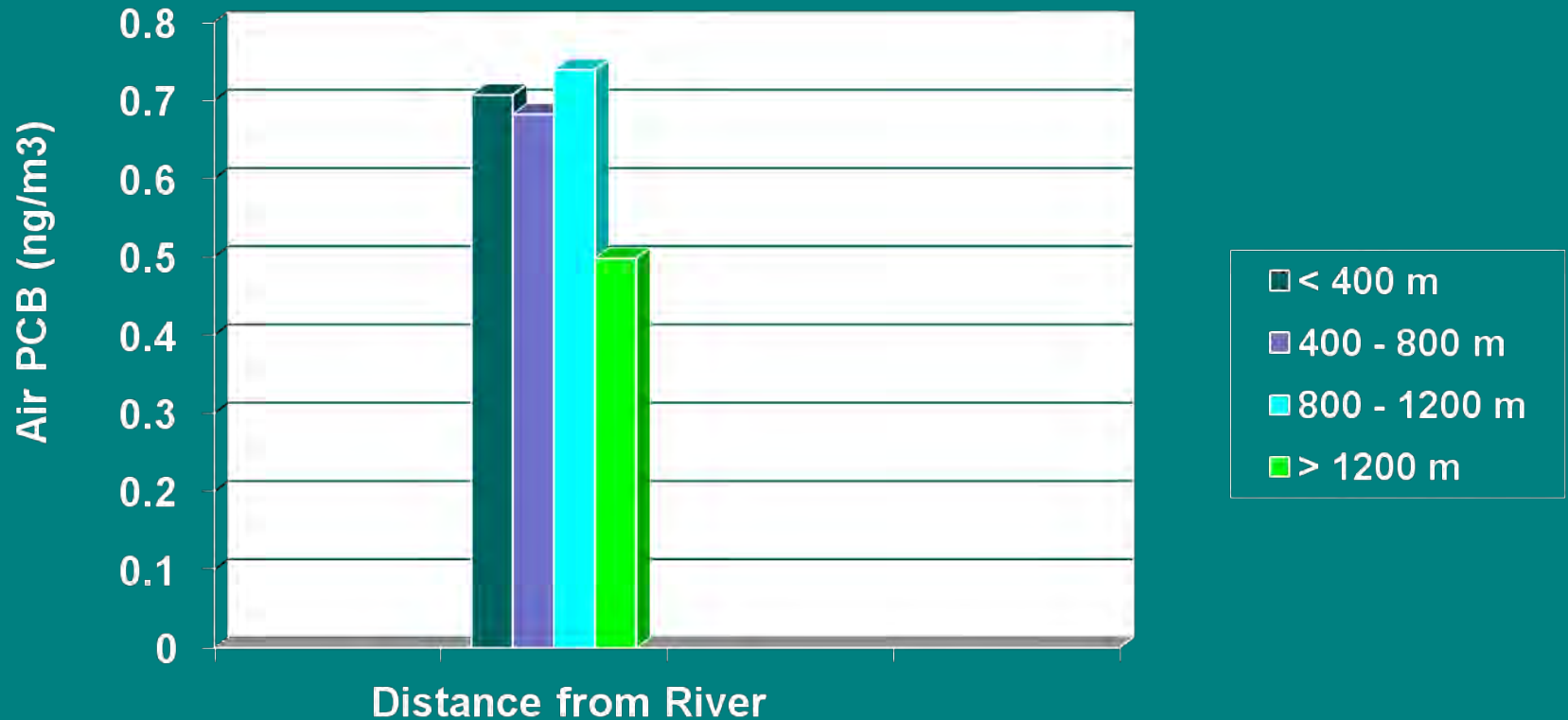
Adjusted for Age, BMI, and Smoking

Average Outdoor Air PCB Concentrations by Study or Comparison Area



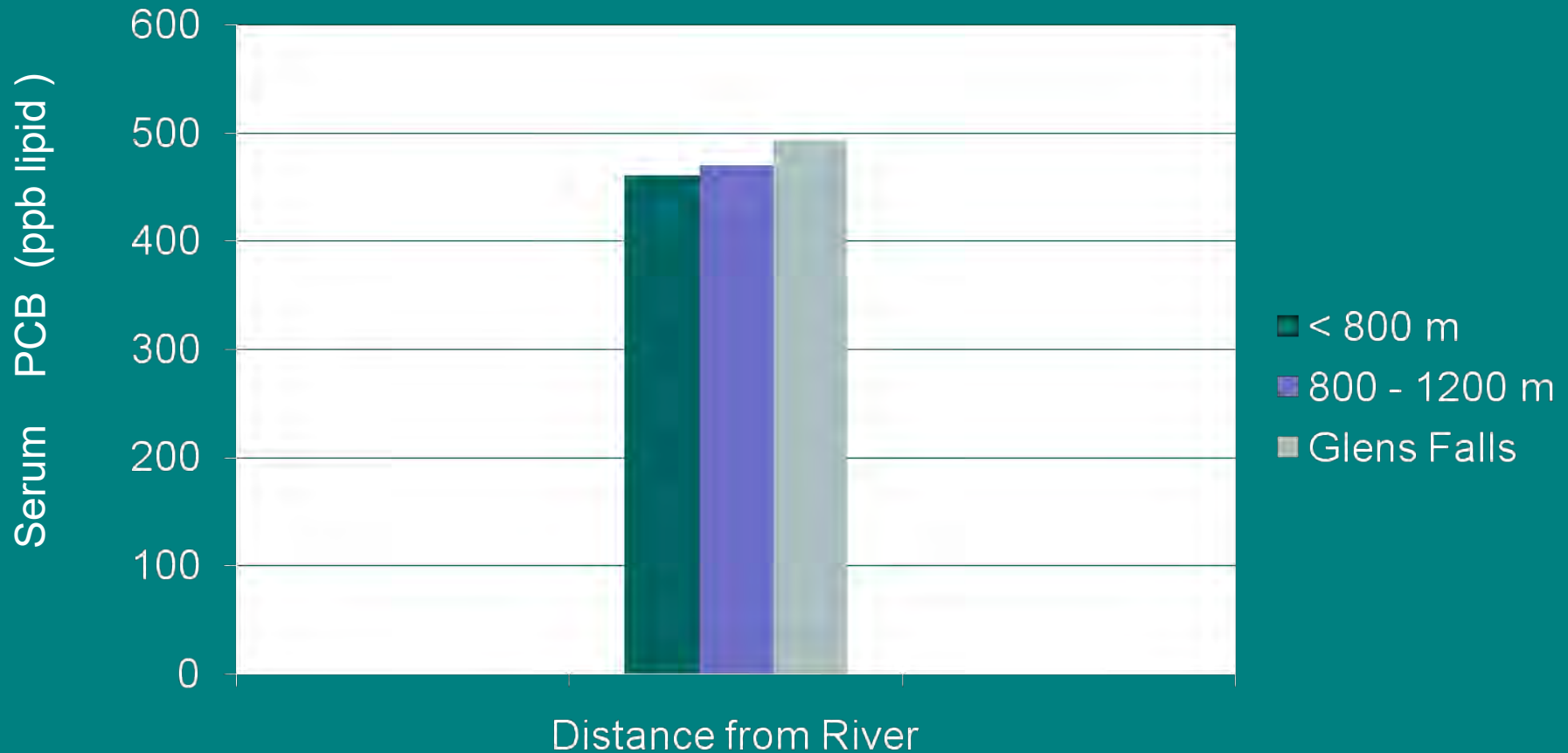
Adjusted for Temperature and Wind Speed

Average Outdoor Air PCB Concentrations by Distance from Hudson River: Fort Edward and Hudson Falls Only



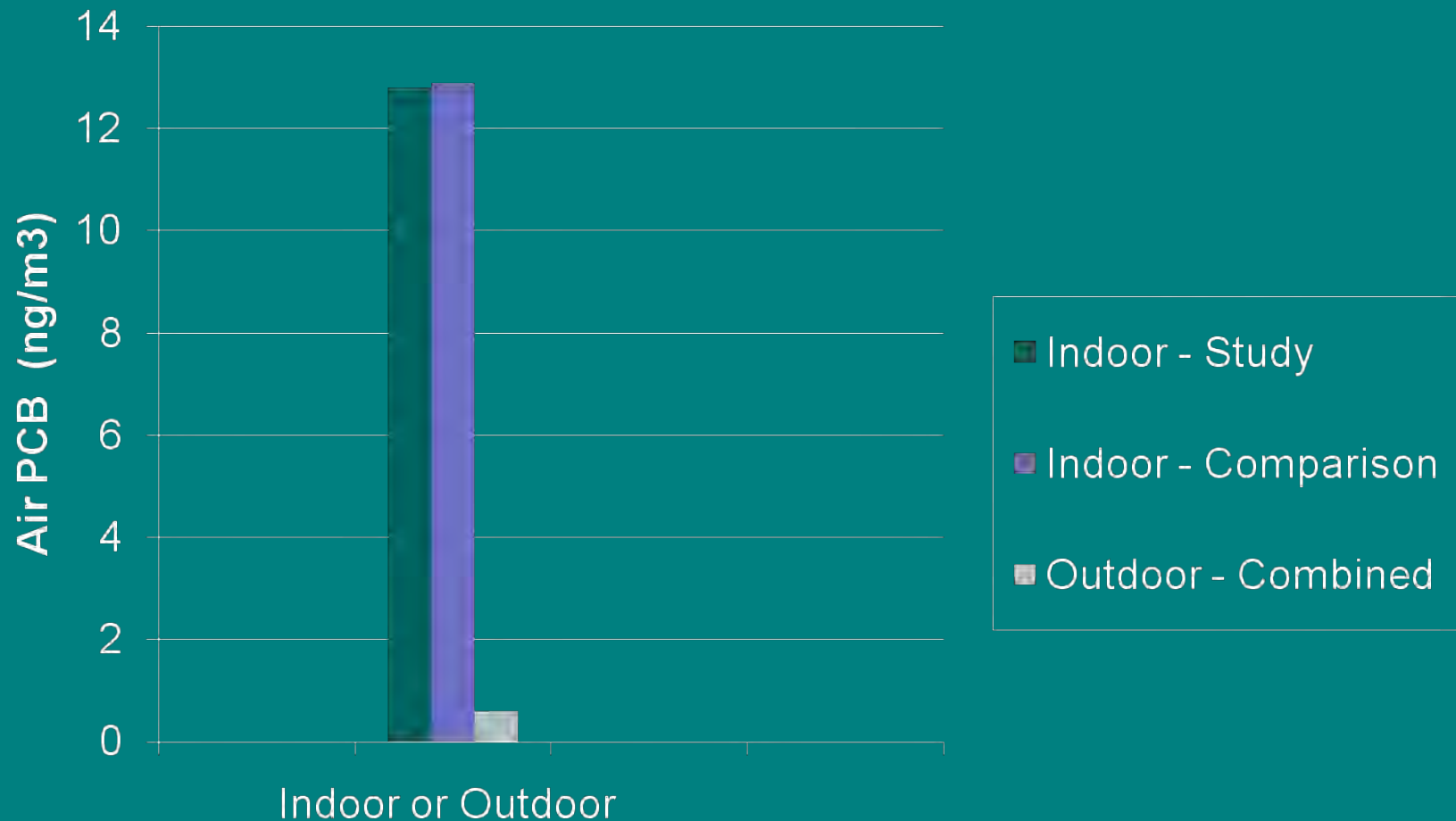
Adjusted for Temperature and Wind Speed

Average Serum PCB Concentration by Distance from Hudson River



Adjusted for Age, BMI, Smoking, and Fish Consumption

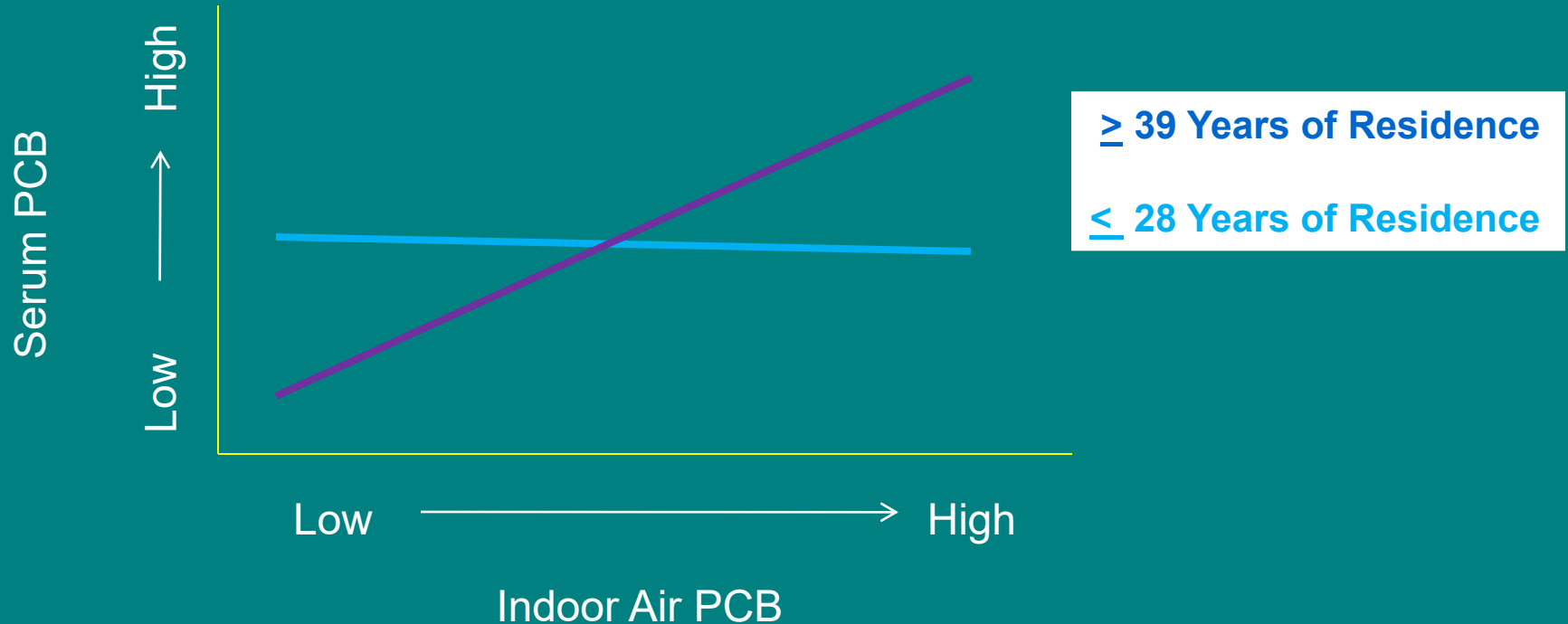
Indoor and Outdoor Air PCB Concentrations By Study or Comparison Area



Indoor Air

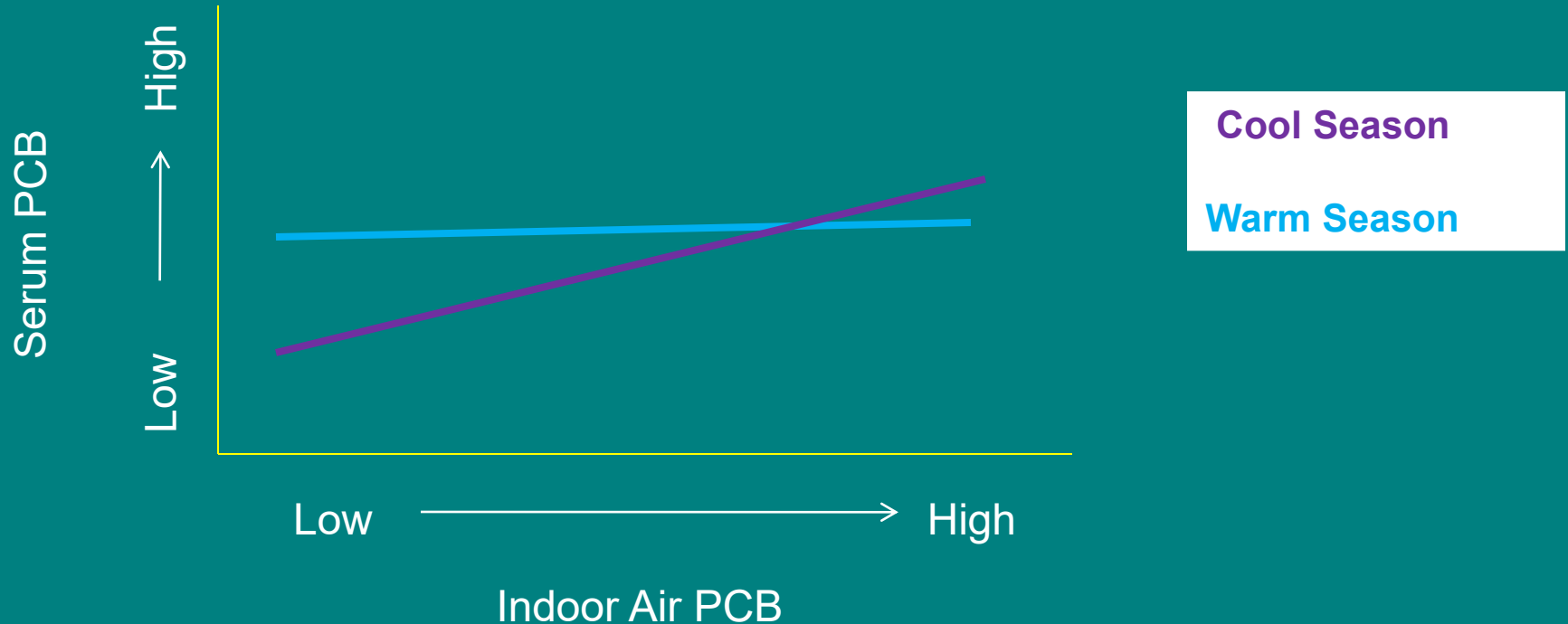
- Indoor Levels > Outdoor in Most Studies
- Due to Indoor Sources, Not River
 - Caulk and Other Building Products
 - Lights and Appliances
 - Paints and Sealers
- Common in Houses Built Before 1980
 - Average Age of Homes = 75 Years in Both Areas

Serum PCB Concentration by Indoor Air Concentration and Length of Residence



Adjusted for Age, BMI, and Hudson
River Fish Consumption

Serum PCB Concentration by Indoor Air PCB Concentration and Warm or Cool Season

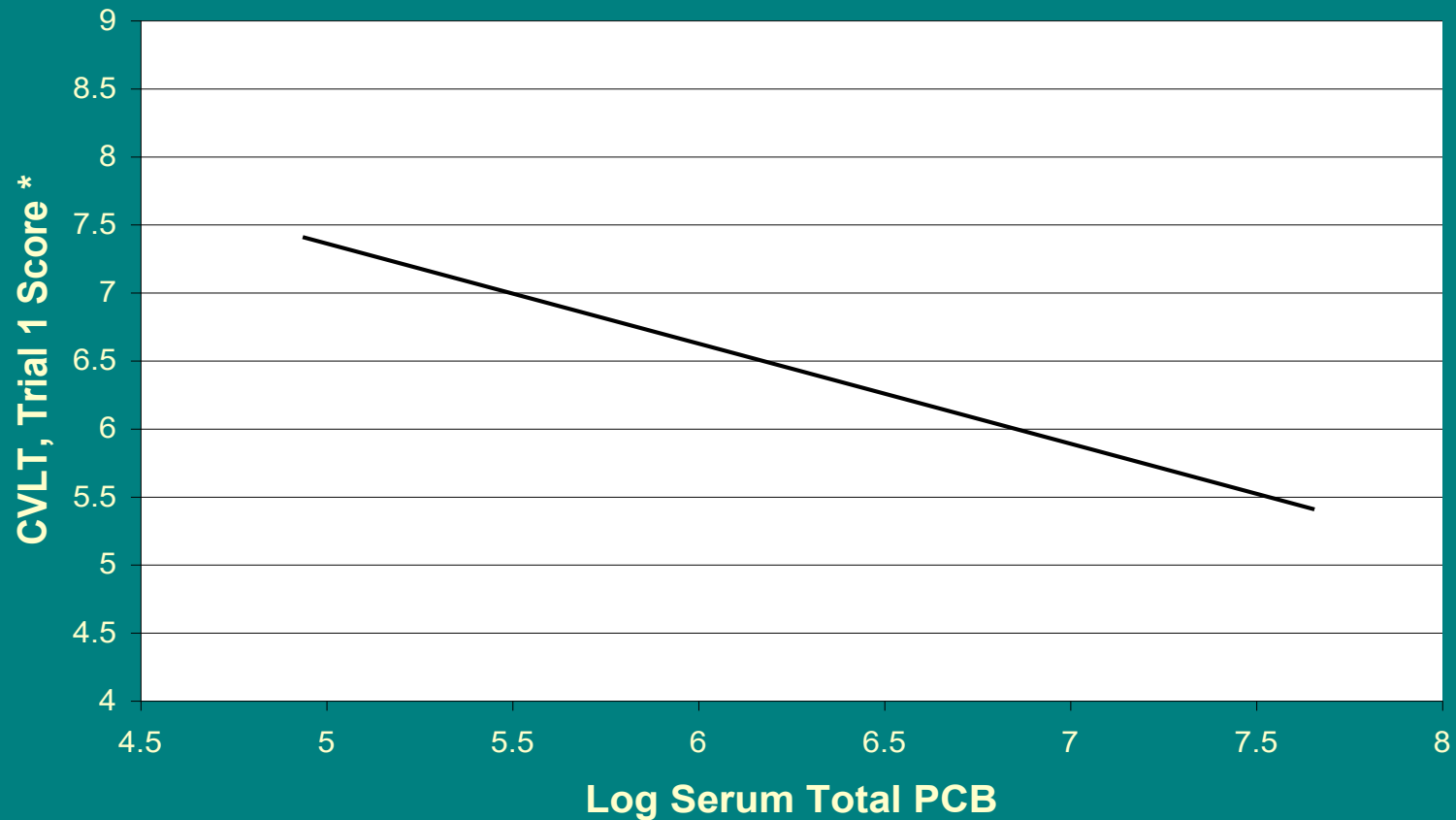


Adjusted for Age, BMI, and Hudson
River Fish Consumption

Potential Control Variables for Nervous System Tests

- Demographic Factors
 - Age, Sex, Education, Income, BMI, Marital Status, Employment Status
- Lifestyle Factors
 - Smoking, Alcohol Consumption, Physical Activity Level, Hours of Sleep Per Night
- Medical Factors
 - Health Conditions, Medications
- Exposures to Heavy Metals, Solvents, Pesticides From Jobs and Hobbies
- Concentrations of Lead and Mercury in Blood and DDE + DDT in Serum

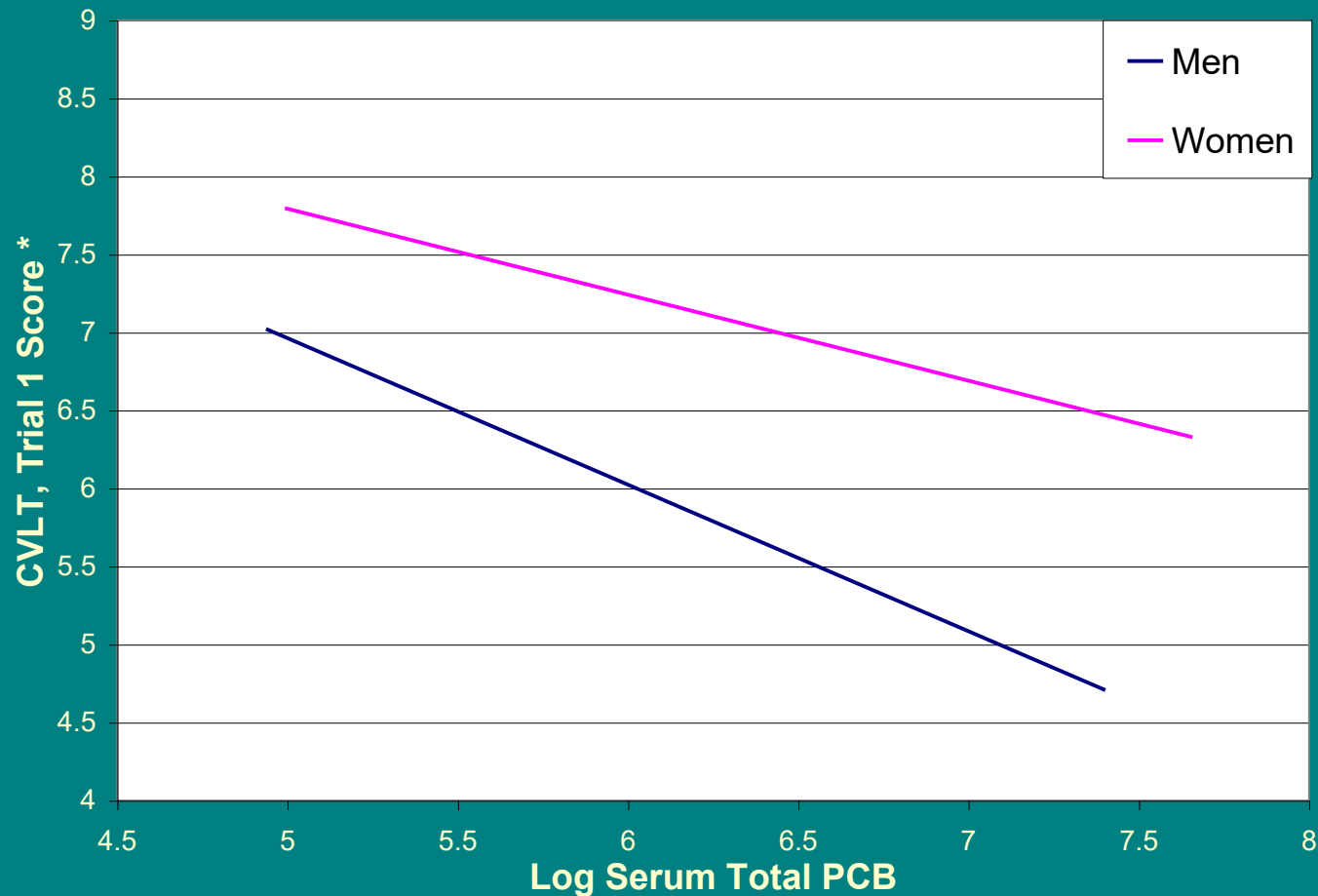
California Verbal Learning Test (CVLT), Trial 1 Score By Serum PCB Concentration



$b = -0.576, p = 0.035$

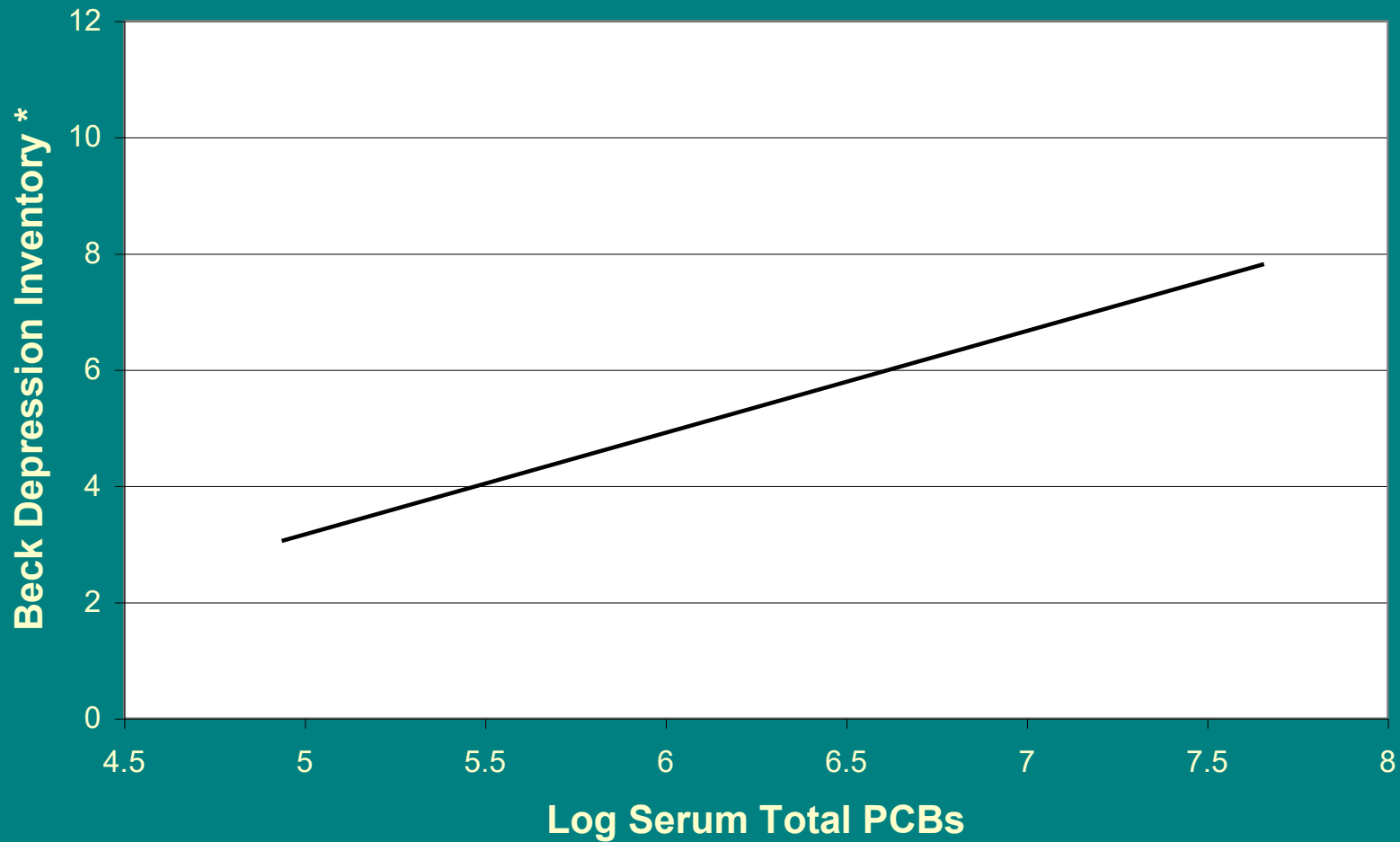
Adjusted for gender, age, education, IQ, smoking, and activity level

CVLT, Trial 1 Score by Serum PCB Concentration and Sex



Adjusted for education, IQ, smoking, and activity level

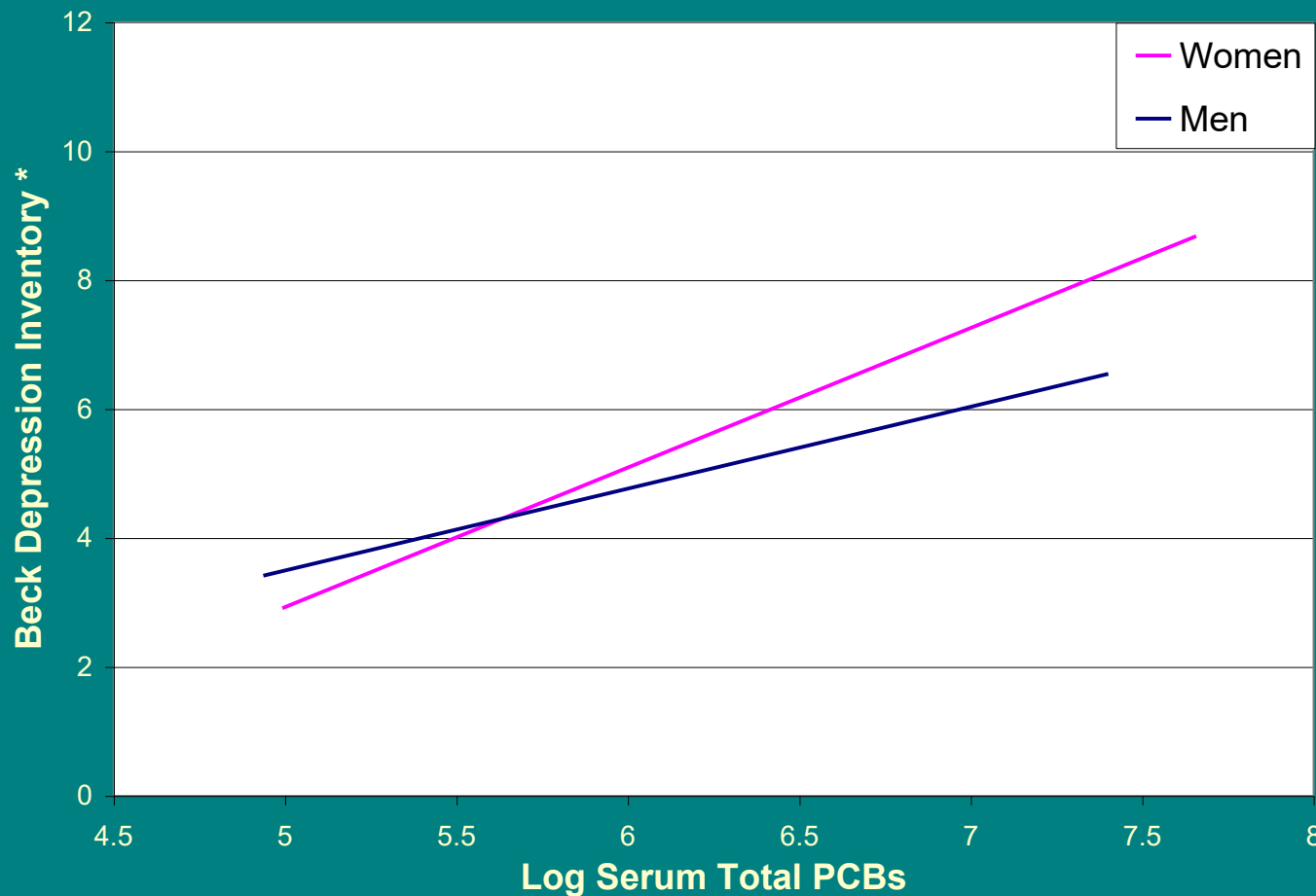
Beck Depression Inventory by Serum PCB Concentration



$b = 1.189, p = 0.007$

Adjusted for BMI, trait anxiety, employment status, gout meds, and antidepressants

Beck Depression Inventory by Serum PCB Concentration and Sex



* Adjusted for BMI, trait anxiety, employment status, gout meds, and antidepressants

Limitations

- Serum PCB Concentrations May Have Been Higher in Past
 - Current Levels Relatively Low
- Accuracy of Fish Consumption Histories
- Association Between PCB Levels in Serum and Nervous System Function Does Not Prove Cause and Effect
 - May Be Due to Some Other Uncontrolled Factor
- Results Indicate Subtle Changes in Nervous System Function, But Relationship to Neurological Diseases Such as Alzheimer's Uncertain
- Further Studies of How Chemical Exposures Affect Nervous System of Older Adults Needed

Conclusions to Date – Exposure

- Hudson River Fish Consumption
 - Consumption Declined Over Time
 - Consistent with Ban and Advisories
 - Past Consumers Had 30% Higher Serum PCB Levels
- Outdoor Air PCB Levels
 - Higher Closer to Hudson River, But Difference Small
 - Not Related to Serum PCB Concentrations
- Indoor Air PCB Levels
 - 20 x Higher than Outdoor Levels
 - Positively Related to Serum PCB Concentrations If Lived in Home for ≥ 39 Years or if Sampled in Cool Season
 - 50% Increase in Indoor Air PCB Associated with 10% Increase in Serum PCB

Conclusions to Date – Nervous System Function

- Serum PCB Concentrations Associated with:
 - Deficits in Verbal Memory
 - More Frequent Symptoms of Depression
- Other Studies of PCBs and of Lead Also Report Cognitive and other Nervous System Effects in Older Persons
- Suggest that Older Persons, Like Infants and Children, May Be Sensitive Subgroup

Final Second Five-Year Review Report for the Hudson River PCBs Superfund Site

APPENDIX 13

NYSDOH OUTREACH AND COMMUNICATION REGARDING FISH ADVISORIES AND FISHING RESTRICTIONS

**Attachment 13-D September 27, 2012 NYSDOH Hudson River Fish
Advisory Outreach Update Presentation to Hudson River PCBs Site CAG**

Prepared by:
Ecology and Environment, Inc.

April 2019

Hudson River Fish Advisory Outreach Project Update & Public Water Supply PCB Sampling Data

New York State Department of Health

Hudson River Fish Advisory Outreach



Can you eat that fish from the Hudson River? www.health.ny.gov/fish



PCBs Superfund Site
Community Advisory Group
September 27, 2012



Hudson River Fish Advisory Project Update

- What is the health advice about eating Hudson River fish and crabs
- How are the New York State Department of Health and its partners getting out the word
- Moving forward

Why Is Eating Hudson Fish a Concern?

Hudson River fish have polychlorinated biphenyls (PCBs)

- Follow the health advice to reduce exposure
- Can't taste or smell PCBs in fish
- No immediate health effects
- Persistent in the environment and the body
- Because PCBs accumulate in fat, fish can have up to thousands of times the amount of PCBs in water



Hudson River Fish Advisory Outreach

Advice on eating fish you catch depends upon

- who you are
- where you fish
- what you catch

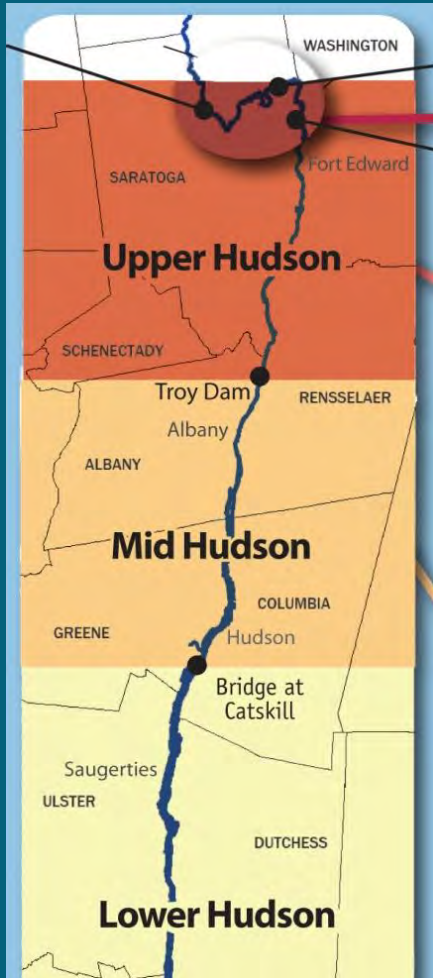


Hudson River: Who You Are

- Women under 50 (childbearing years) and children under 15 should not eat fish or crabs from most of the Hudson River (Corinth Dam to NYC Battery)
 - Women who eat highly contaminated fish may have an increased risk of having babies who are slower to develop and learn
- For men over 15 and women over 50, advice depends on where you fish



Hudson River: Where You Fish



Upper Hudson

From the Rt. 9 Bridge to Troy Dam

Do not eat fish from the Route 9 Bridge to the Troy Dam.

From Baker's Falls to the Troy Dam, New York's State Department of Environmental Conservation's "catch and release" regulations apply.

Take No Fish. Eat No Fish.

Mid Hudson

From Troy Dam to Bridge at Catskill

Eat up to one meal a month:



Alewife



Rock bass



Blueback herring



Yellow perch

Do not eat other fish from the Mid Hudson including striped bass

Hudson River: Where You Fish

Striped bass are an extremely popular fish

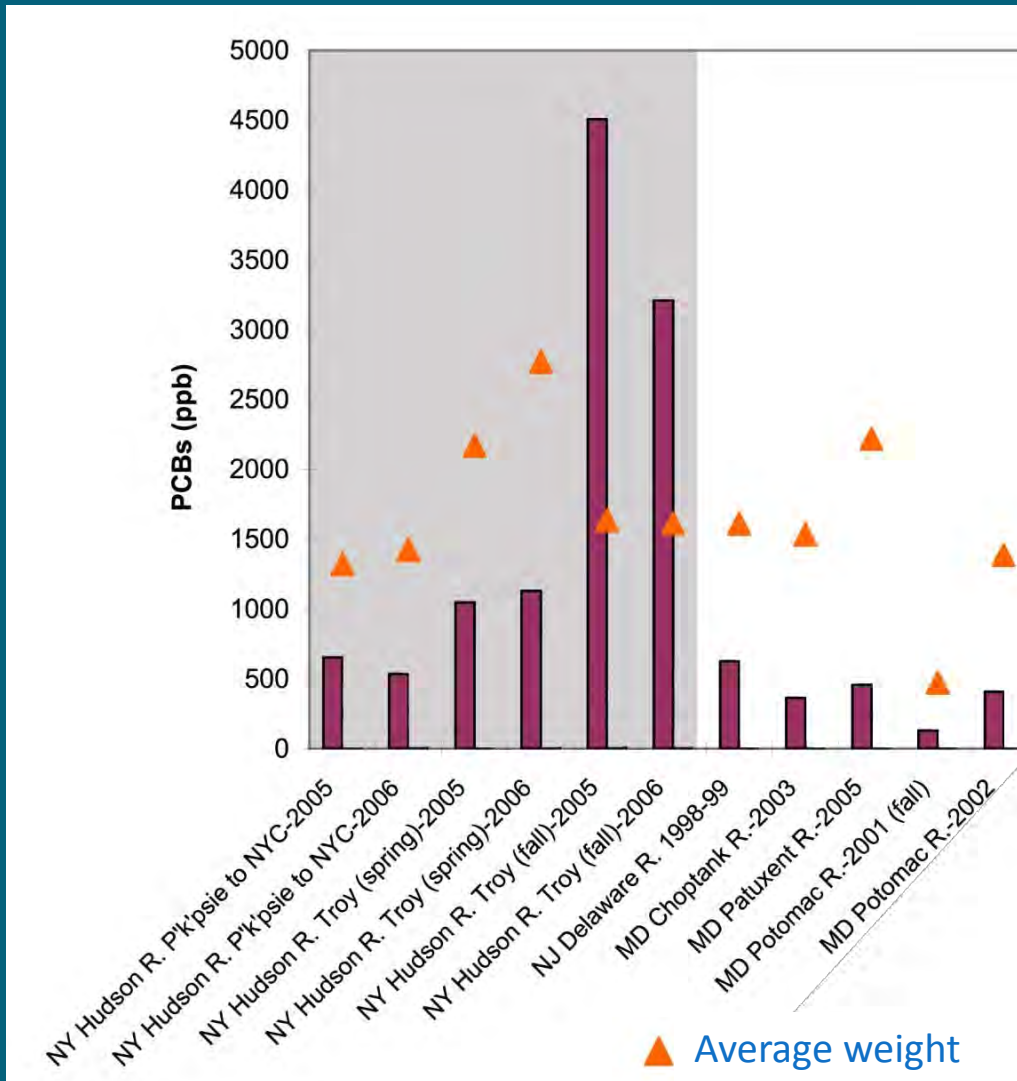
- In spring, they migrate from the ocean into the Hudson to spawn

In 2008, a workgroup of agency staff from the Atlantic Coast states evaluated PCB levels and advisories for striped bass and bluefish



Hudson River: Where You Fish

Average PCBs Levels in Striped Bass



Shaded area is the Hudson

- NYC to Poughkeepsie
- Troy in spring
- Troy in fall

From the 2008 Report of the Atlantic Coast Interstate Workgroup on Recreationally-Caught Striped Bass and Bluefish

Hudson River: What You Catch (Men over 15 and Women over 50)

Lower Hudson

From Bridge at Catskill to the NYC Battery

Don't eat:



White catfish



Channel catfish



American eel*



Gizzard shad

**Eat up to one
meal a month:**



Striped bass



White perch



Carp



Walleye



Bluefish



Brown bullhead



Smallmouth bass



Largemouth bass



Rainbow smelt



Goldfish



Atlantic needlefish

**Eat up to six
crabs a week:**



Blue crab

Do not eat the tomalley (green stuff, mustard) or reuse cooking water

**Eat up to four
meals a month:**

All other species

**DEC regulations prohibit taking American eel for food from the Hudson River*

Crabs



- Eating crabs is very popular
- No license needed
- Remove the “green stuff” in crabs
 - Green stuff acts like a liver and chemicals concentrate there
- Discard cooking juices and don’t use them to make sauces or soups

Goal and Strategies

Goal

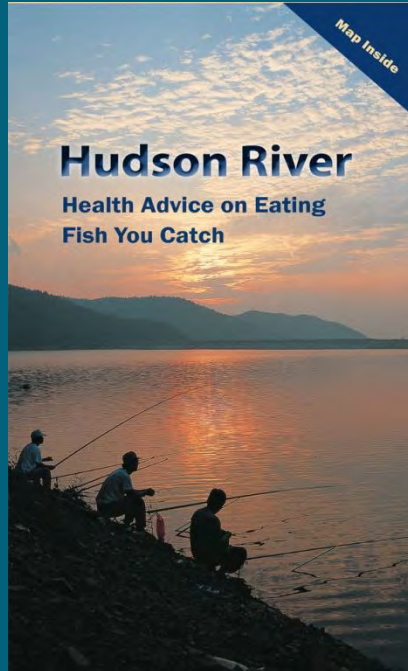
- All people who eat fish from the Hudson River know about, understand and follow the fish advisories

Strategies

- With 192 miles of river, the Project creates local partnerships
- Reach out to anglers and family members
 - with a range of free materials that target different audiences
 - through a variety of venues



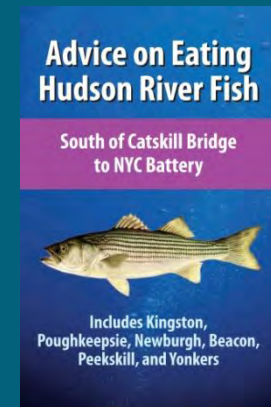
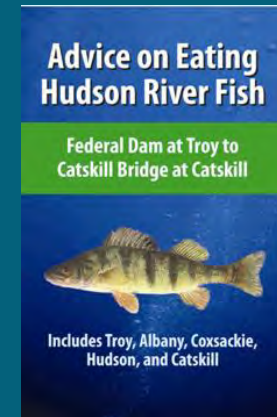
Variety of Free Materials



Brochure

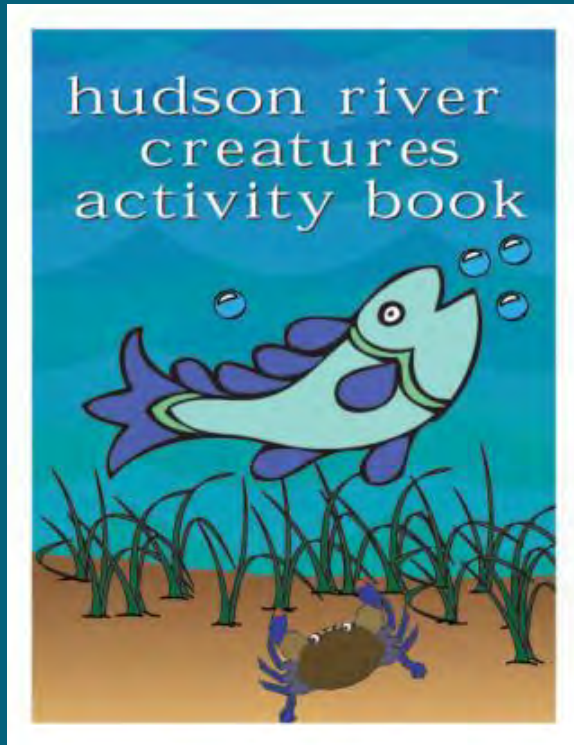


Poster



Wallet-sized Angler Cards

Variety of Free Materials



Coloring Book



Magnet

Signs, brochures, posters and magnets available in Spanish

Website health.ny.gov/hudsonriverfish

Signs South of Troy

NOTICE!

Some fish and crabs from these waters may be harmful to eat.



Learn more!

Call NYS Department of Health
518-402-7800
800-458-1158

south of the bridge at Catskill

WARNING!

Fish and crabs from these waters contain chemicals and may be harmful to eat, especially for women and children.



Learn more!

Call NYS Department of Health
518-402-7800
800-458-1158

north of the bridge at Catskill

Voluntary by property owners
Conflicts with “No Trespassing”



Funded Partners

Hudson Basin River Watch – “River Haggie Outdoors” environmental educator

- School, library, camp and environmental education programs

Cornell Cooperative Extension of Dutchess County

- In-home nutrition education program
- Formed a Dutchess County Hudson River Fish Advisory Committee



March 2012 - Celebrating Fishing on the Hudson

Committee :

- NYS Fish and Wildlife Management Board
- Coastal Conservation Association
- Hudson Valley BassMasters
- Mid-Hudson Trout Unlimited
- Hudson River Sloop Clearwater
- Scenic Hudson
- NYSDEC

Topics: History of fishing in the Hudson, update on fishing regulations, the advisory, promoting fish habitat

Over 100 participants





Funded Partners

Cornell Cooperative Extension of Rockland County

- Collaborate with Rockland DOH nutritionist and Americorps interns
- Developed Rockland-specific materials and run a bus ad each year
- Organize annual “River Romp” day for children, work with day camps and approach anglers on the river



Who Do We Need to Reach?

- Downstate less aware
- DOH shoreline survey (1999) - 63% of white, 22% of black and 13% of Hispanic anglers aware of advisory
- DOH and partners' survey at boat and outdoor shows (2010):
 - 25% fished the Hudson
 - 60% share catch with family and friends



Who Do We Need to Reach?

Cornell Cooperative Extension of Dutchess County - began surveys through in-home nutrition program and at community settings in 2011

- 40% ate fish they or someone they knew caught
 - 31% ate Hudson fish
 - 24% reported eating Hudson crabs
 - The most popular way to cook is frying
 - #1 reason participants ate local fish: TASTE



Challenges

- Access and trust
- Literacy
- Languages
- Culture
- Do not provide a substitute meal
- Water looks “clean”
- Many people think the dredging project is done



Reaching New Hudson Valley Residents

- Migrant workers
- ESL classes
- Food banks
- Work with immigrant-refugee advocates





Outreach Partners



Cornell Cooperative Extension

NYS DEC

Fishing license locations

Municipalities along the river

Dutchess Advisory Committee

Hudson River Fisherman's
Association

EPA

NYS Canal Corps

Clearwater, Scenic Hudson,
Riverkeeper, Groundworks

Hudson River Park Trust

Hudson Crossing

Parks/Thruway

Health clinics and perinatal
associations

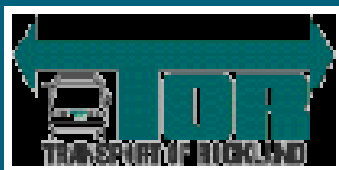
Boat club associations

County health departments

Chambers of Commerce

NYC Parks and other city agencies

And many others



Outreach Venues



- Community festivals
- County fairs
- Boat and outdoor shows
- Fishing derbies and clinics
- Schools, after-school programs, camps and libraries
- Environmental education programs
- Neighborhood associations and farmers markets
- Food banks



2012

Focused on events north of
Catskill where fish are heavily
contaminated



Tugboat Roundup, Waterford



Summer at the Plaza, Albany



River Street Festival, Troy

New Partners and Venues

Saratoga County Fair

- Cornell Cooperative Extension of Saratoga County



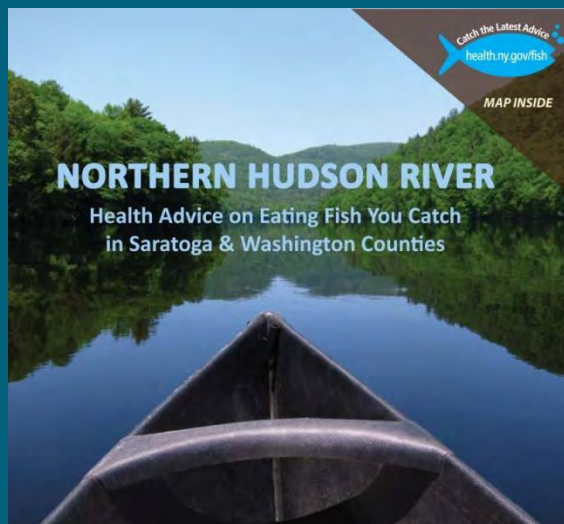
Boat clubs – 55 member clubs

- Hudson River Boat and Yacht Club Association
- Mohawk-Hudson Council of Yacht Clubs



Moving Forward

- Expanding CCE nutrition program consumption survey to 3 more counties
- Brochure for upstream of Hudson Falls
- Online demonstration of how to trim and skin fish
- DOH Hudson fish consumption surveys
- Crab cooking and picking guide
- Developing more connections in NYC
- Faith-based organizations
- Housing authorities



Support the Project

- Distribute materials
- Link to our website
- Invite us to events, or to talk to staff or membership

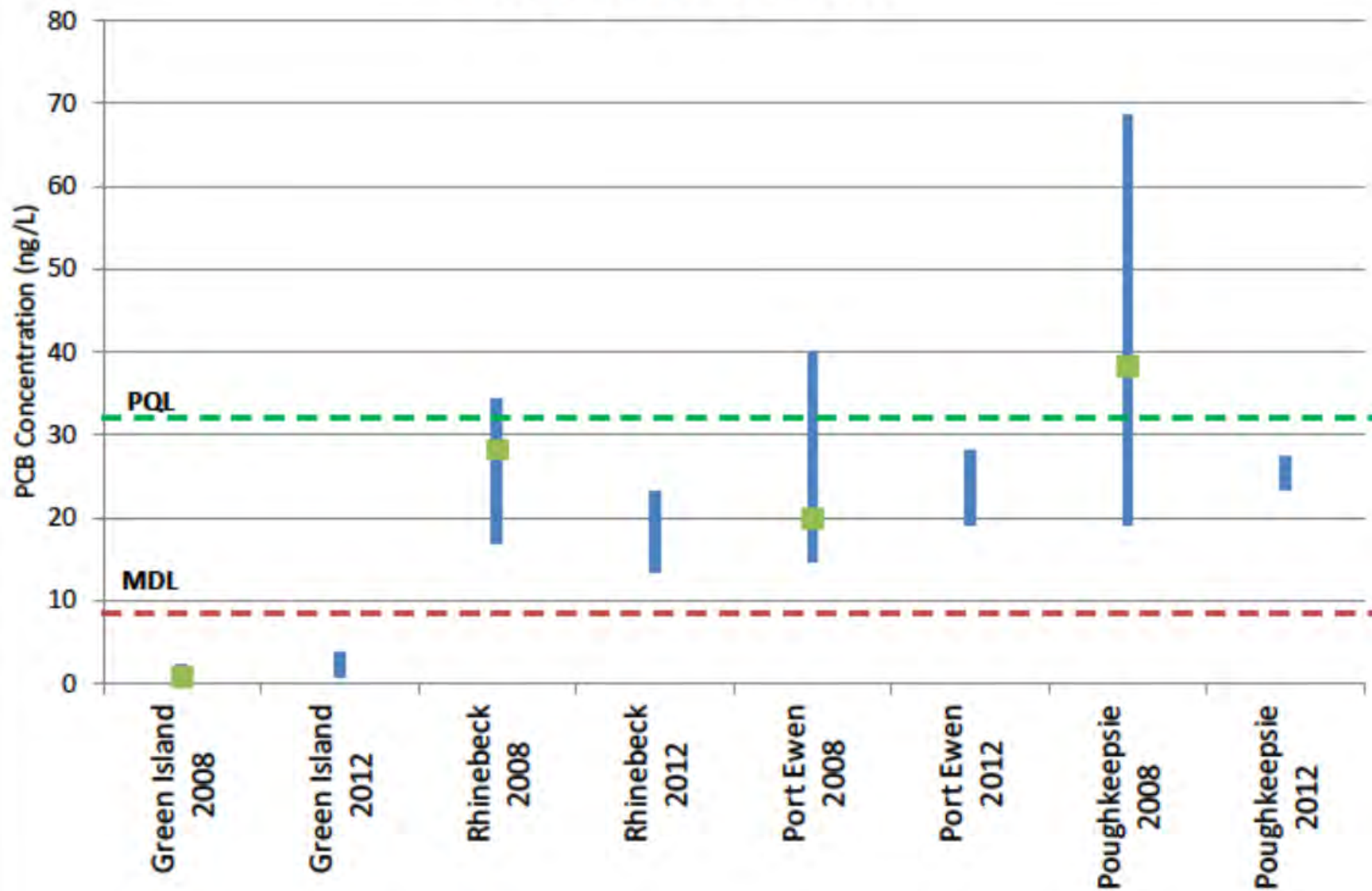
Regina Keenan 518-402-7530
rmk05@health.state.ny.us

Audrey Van Genechten
agl02@health.state.ny.us

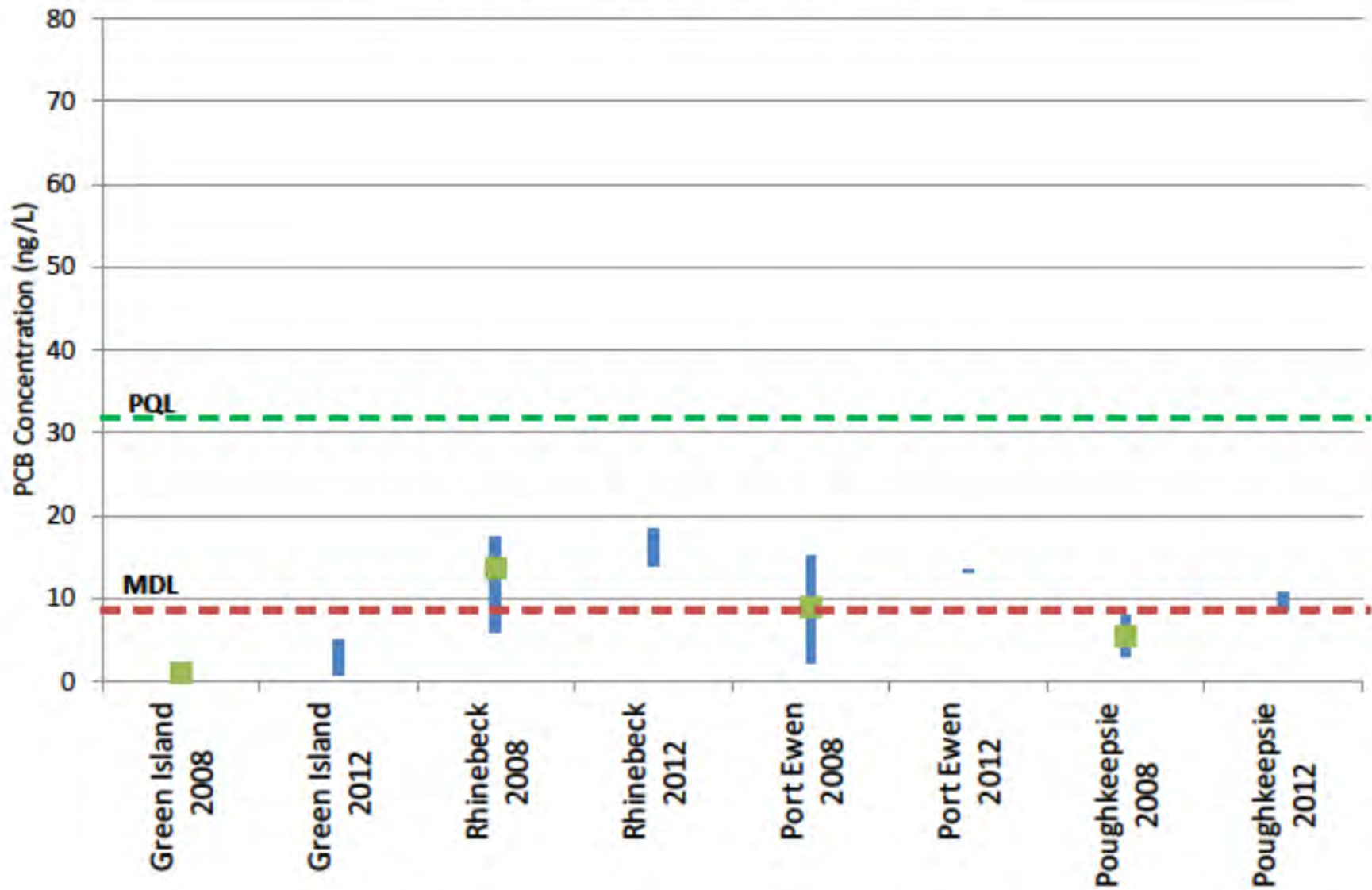
hrfa@health.state.ny.us



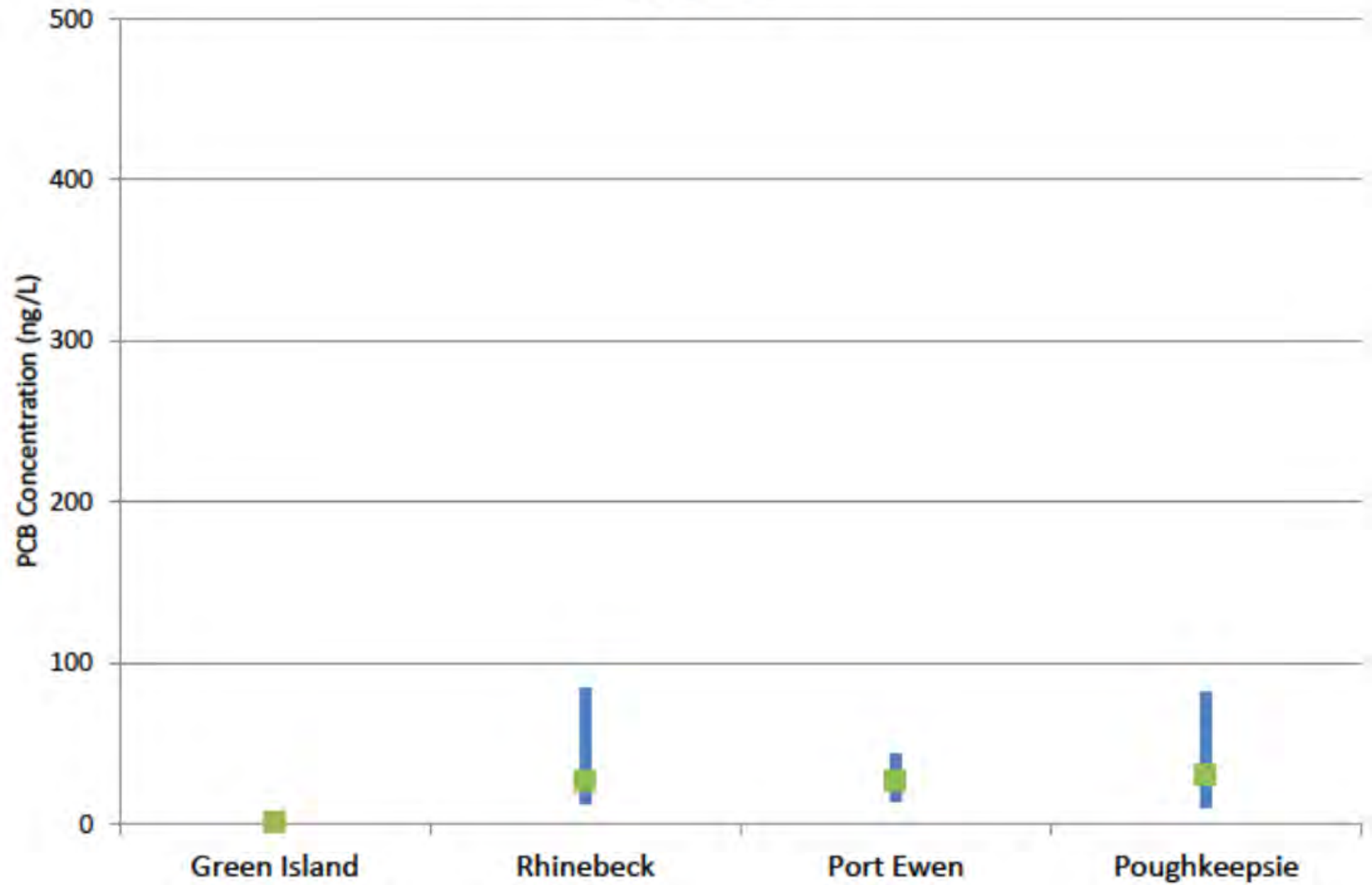
Lower Hudson PWS Data Raw Water, 2008 and 2012



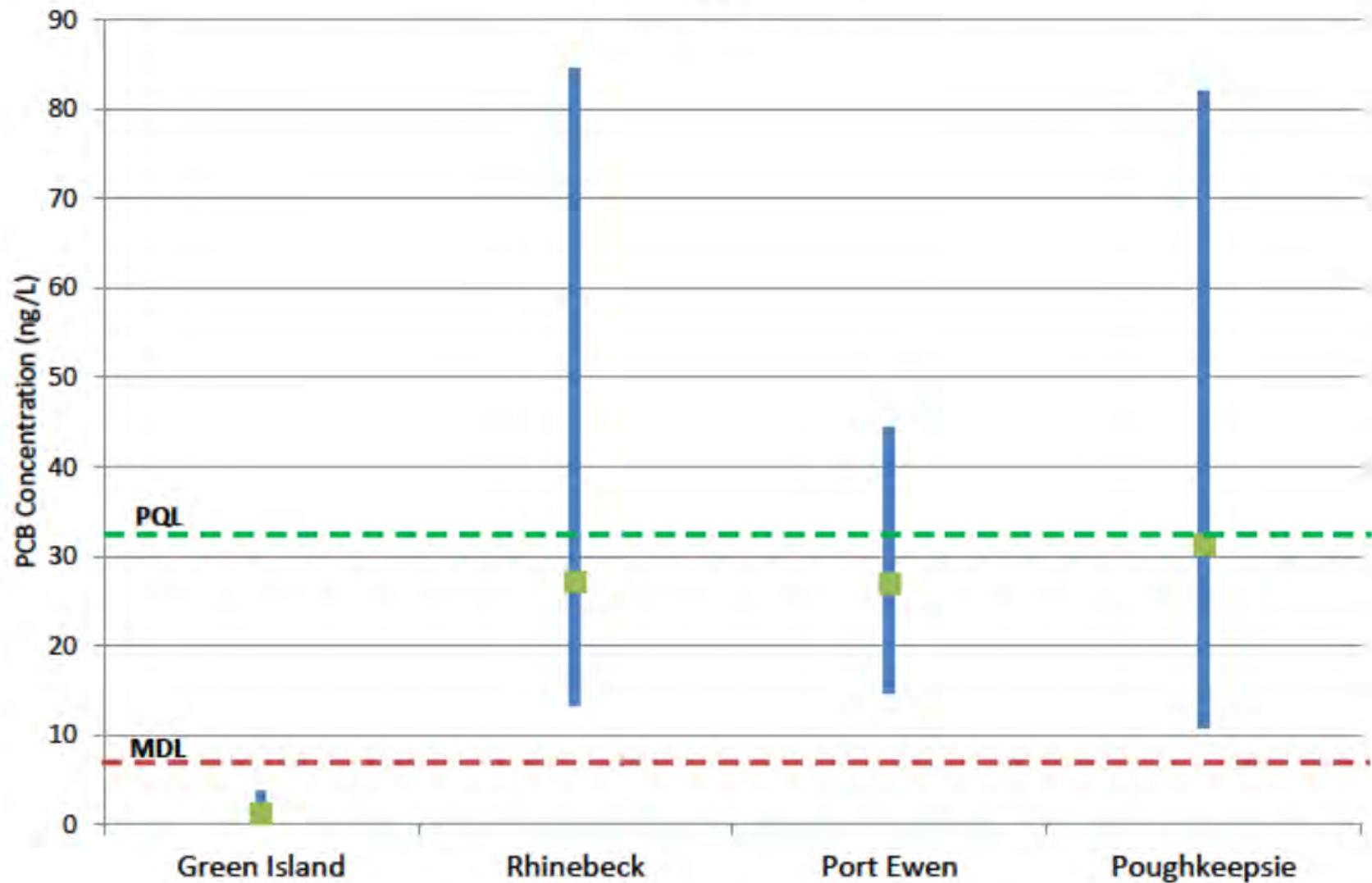
Lower Hudson PWS Data Finished Drinking Water, 2008 and 2012



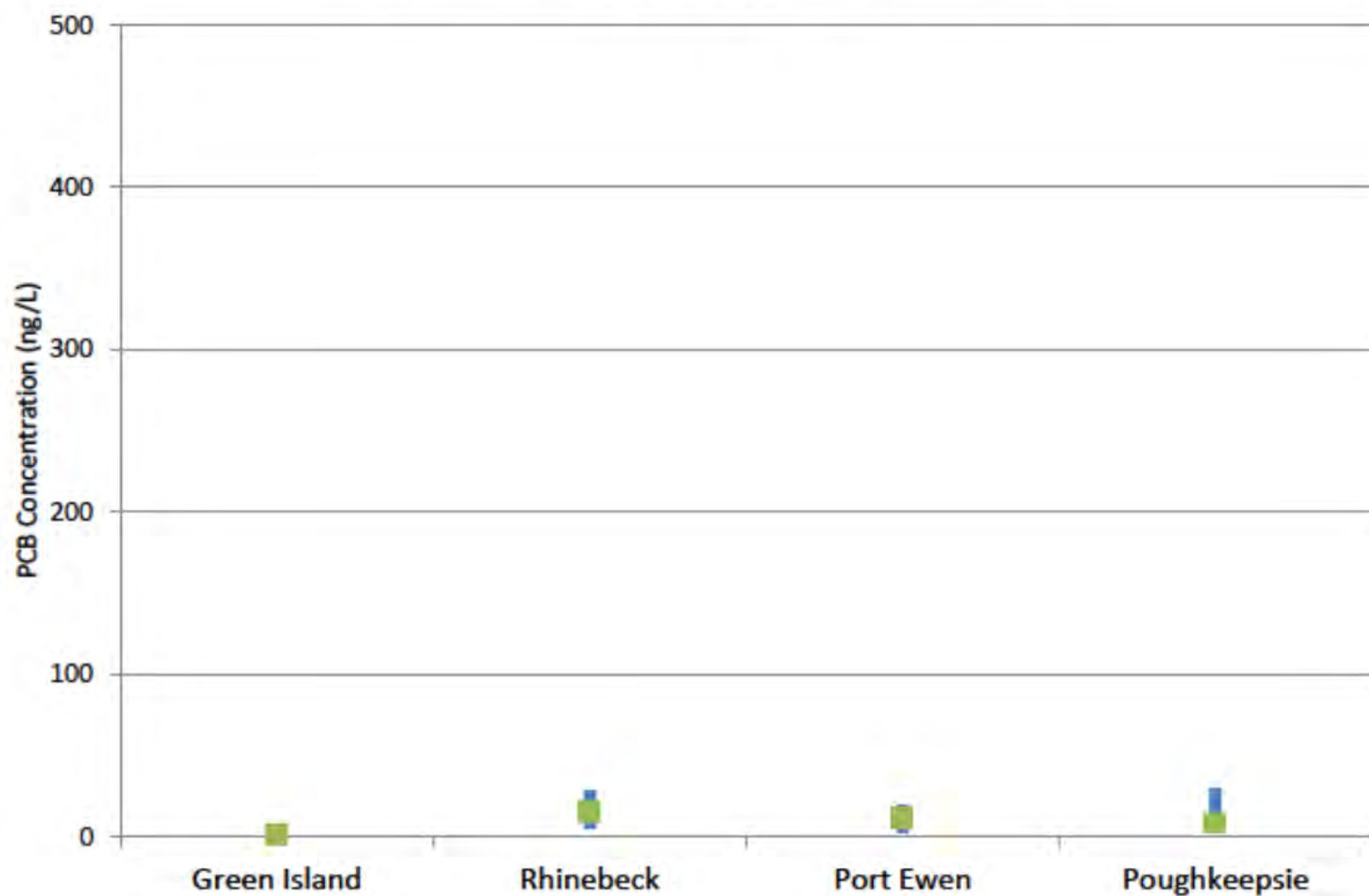
Lower Hudson PWS Data, Raw Water 2008-2012



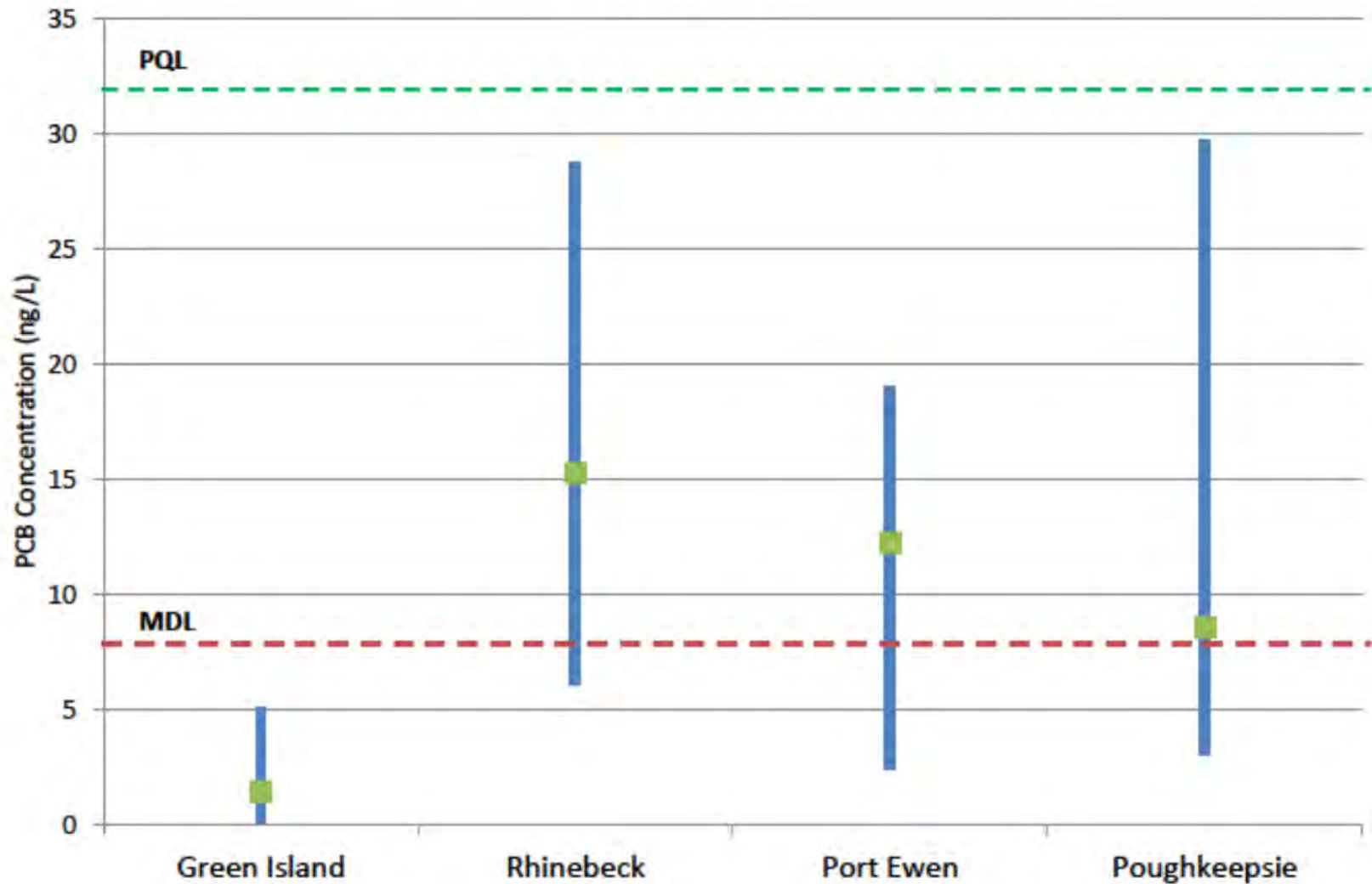
Lower Hudson PWS Data, Raw Water 2008-2012



Lower Hudson PWS Data, Finished Drinking Water 2008-2012



Lower Hudson PWS Data, Finished Drinking Water 2008-2012



Final Second Five-Year Review Report for the Hudson River PCBs Superfund Site

APPENDIX 13

NYSDOH OUTREACH AND COMMUNICATION REGARDING FISH ADVISORIES AND FISHING RESTRICTIONS

**Attachment 13-E September 19, 2013 NYSDOH Hudson River Fish
Advisory Outreach Update Presentation to Hudson River PCBs Site CAG**

Prepared by:
Ecology and Environment, Inc.

April 2019

Hudson River Fish Advisory Outreach Project Update



PCBs Superfund Site
Community Advisory Group
September 19, 2013

Hudson River Fish Advisory Outreach Project Update

- Funded partners
- Consumption surveys
- Signs and materials
- 2013 outreach
- Moving forward



Funded Partners

- “River Haggie Outdoors”
environmental educator
School, library, camp and environmental
education programs
- Cornell Cooperative Extension (CCE)
of Dutchess County
In-home nutrition education program
- Cornell Cooperative Extension of
Rockland County
Work with Americorps and local DOH



Funded Partners



- River Haggie Outdoors, environmental educator
- Over 4,000 schoolchildren and 2,000 adults
- Exercise with fish pictures to learn the advice



Nutrition Program Consumption Surveys

2012- CCE Dutchess County compiled surveys from Dutchess, Ulster, Greene and Columbia counties (327)

- nutrition classes and at community settings

18% ate fish or crabs they or someone they knew caught (60)

- Of local fishers, 35% checked they ate Hudson fish
- 61% including “bass/striper” eaters

Nutrition Program Consumption Survey

- Very small numbers!! – beginning data collection
- Hudson consumers - 11% of total surveys
- 62% women and 48% women under 50
- 51% ate annually
- 32% ate crabs



Nutrition Program Consumption Survey



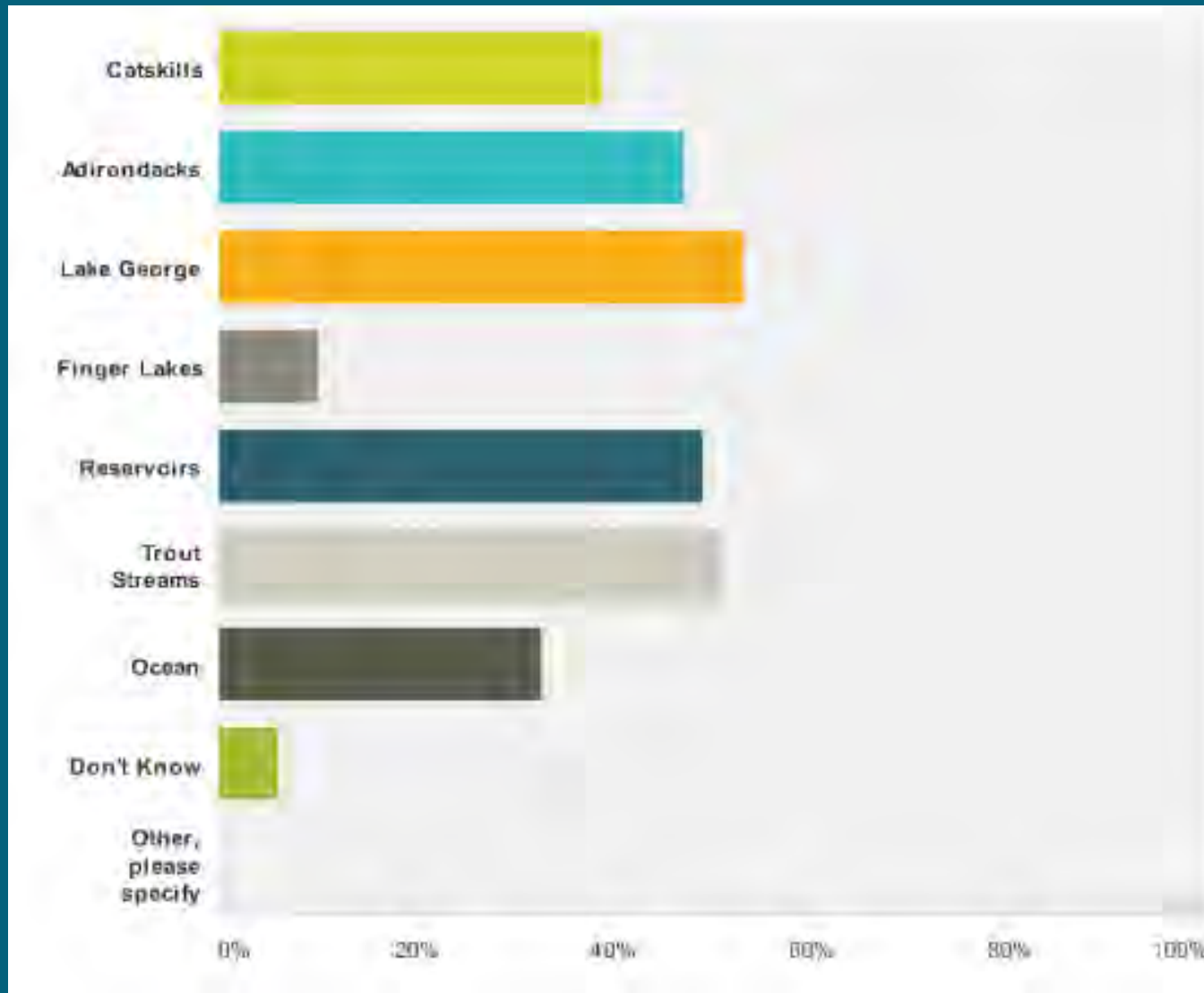
- 62% were in zip code 12401 - Kingston
- 26% of clients in 12401 ate Hudson fish
- 74% aware of advice vs 52% of people eating any local fish

DOH Hudson Fish Consumption Surveys

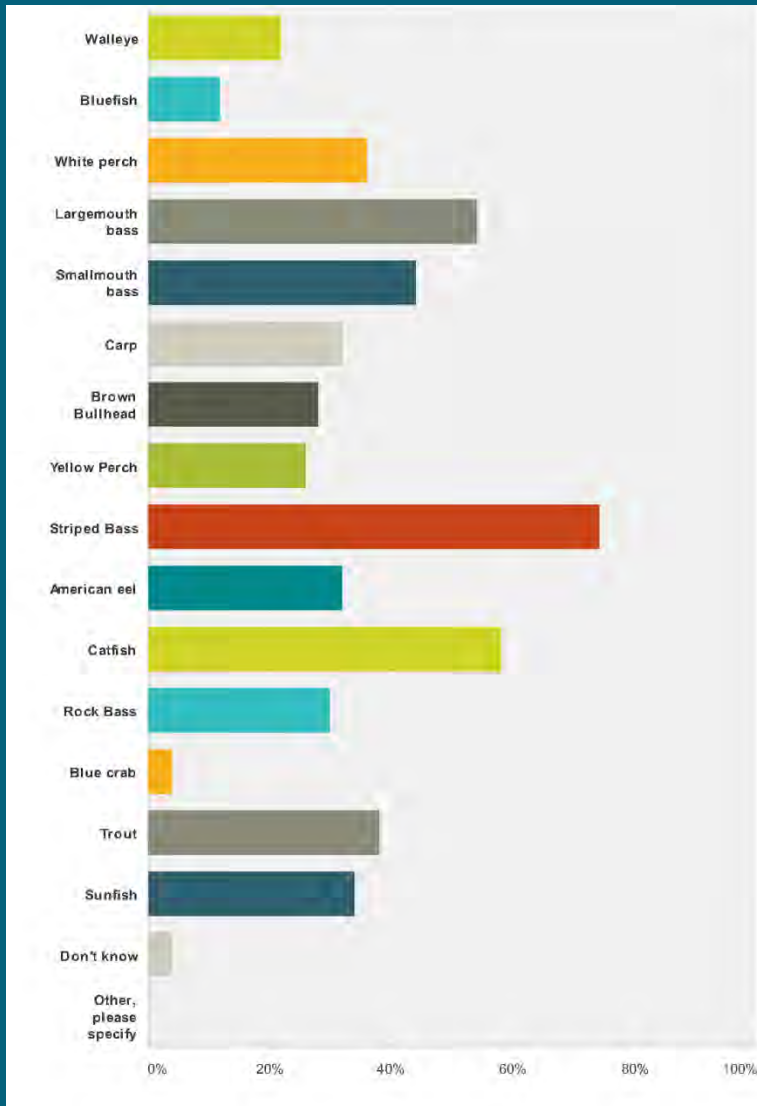
- Short convenience samples at 2013 outreach events from Saratoga to Rockland County
- To develop some baselines, see patterns



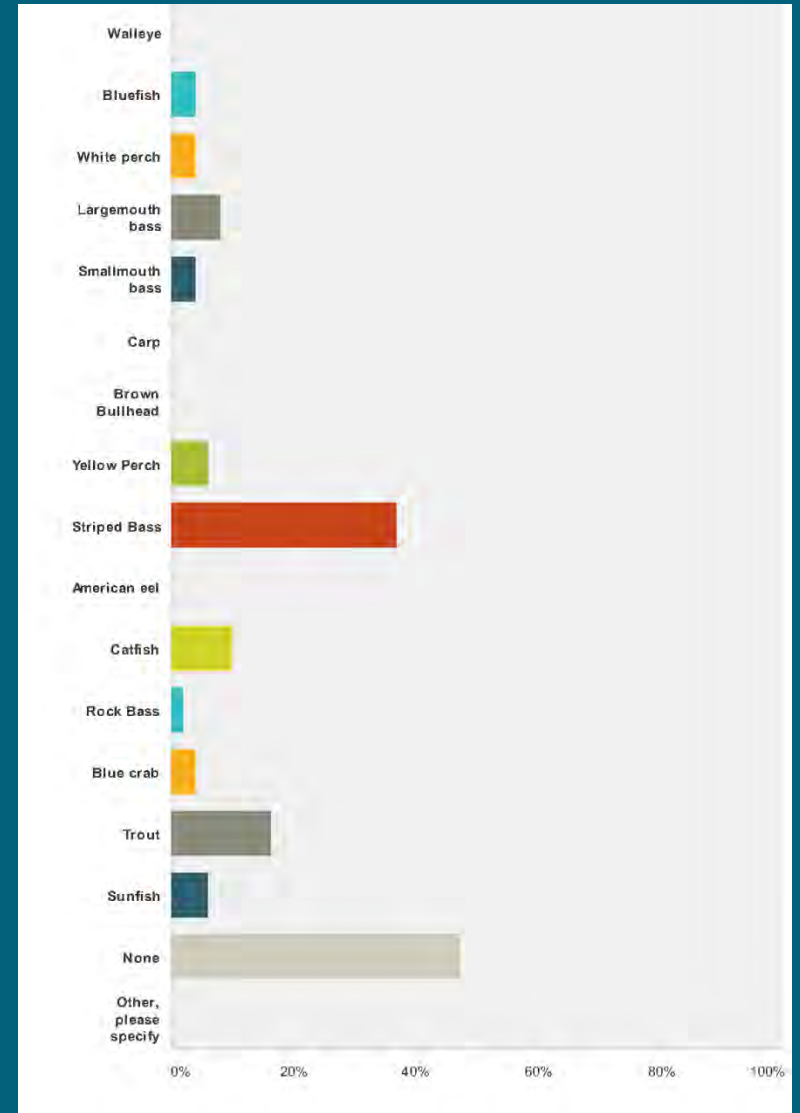
Where else do you fish?



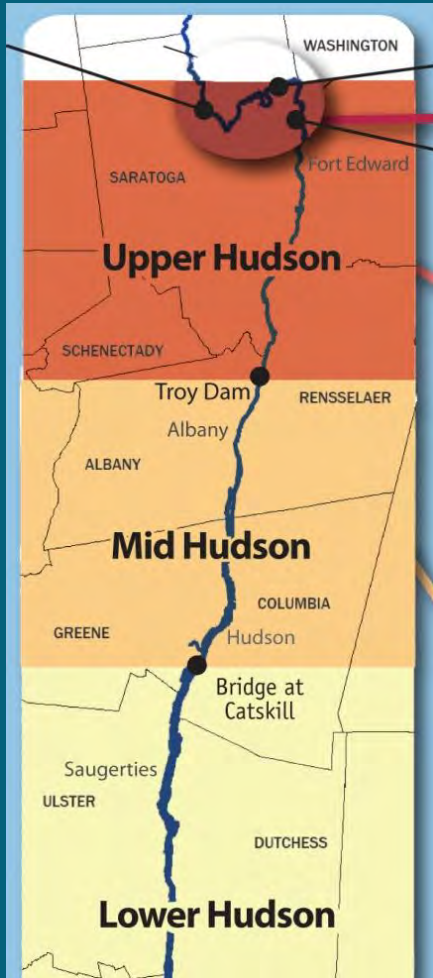
What do you catch?



What do you eat?



Hudson River: Where You Fish



Upper Hudson

From the Rt. 9 Bridge to Troy Dam

Do not eat fish from the Route 9 Bridge to the Troy Dam.

From Baker's Falls to the Troy Dam, New York's State Department of Environmental Conservation's "catch and release" regulations apply.

Take No Fish. Eat No Fish.

Mid Hudson

From Troy Dam to Bridge at Catskill

Eat up to one meal a month:



Alewife



Rock bass



Blueback herring



Yellow perch

Do not eat other fish from the Mid Hudson including striped bass

Hudson River: What You Catch (Men over 15 and Women over 50)

Lower Hudson

From Bridge at Catskill to the NYC Battery

Don't eat:



White catfish



Channel catfish



American eel*



Gizzard shad



Striped bass



White perch



Carp



Walleye



Bluefish



Brown bullhead



Smallmouth bass



Largemouth bass



Rainbow smelt



Goldfish



Atlantic needlefish

**Eat up to six
crabs a week:**



Blue crab

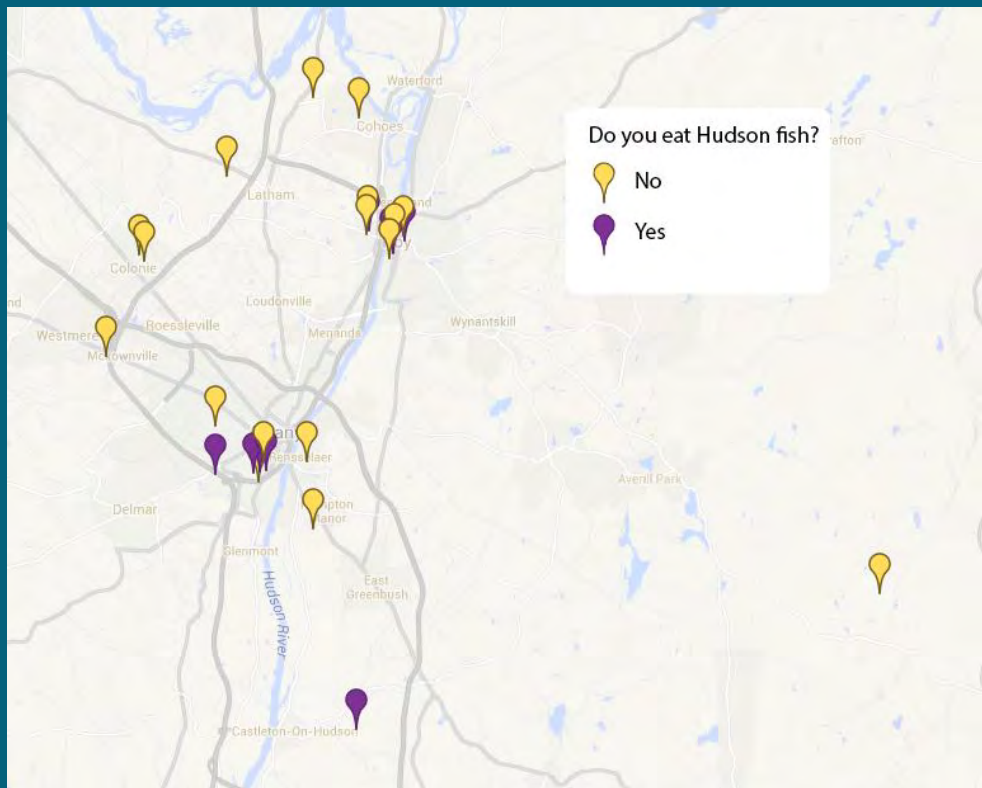
Do not eat the tomalley (green stuff, mustard) or reuse cooking water

**Eat up to four
meals a month:**

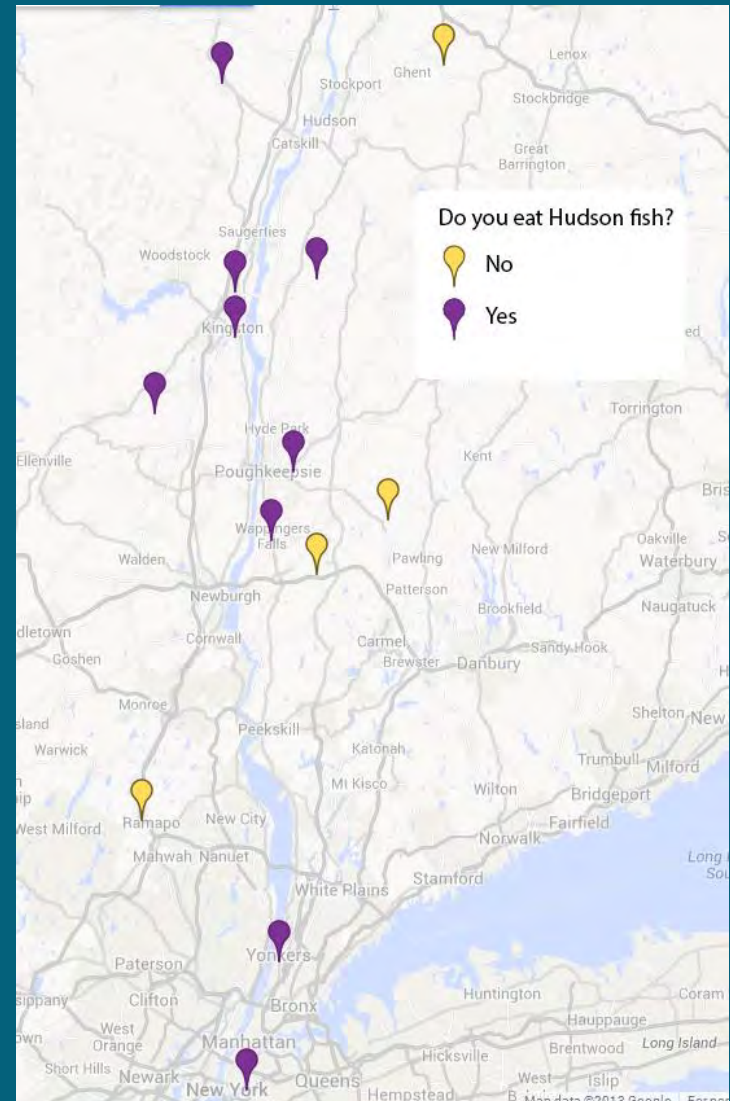
All other species

**DEC regulations prohibit taking American eel for food from the Hudson River*

Eating Hudson fish



Capital District



Lower Hudson

Signs South of Troy

WARNING!

Fish and crabs from these waters contain chemicals and may be **harmful to eat**, especially for women and children.



Learn more!

Call NYS Department of Health
518-402-7800
800-458-1158

north of the Rip Van Winkle
Bridge at Catskill

NOTICE!

Some fish and crabs from these waters may be **harmful to eat**.



Learn more!

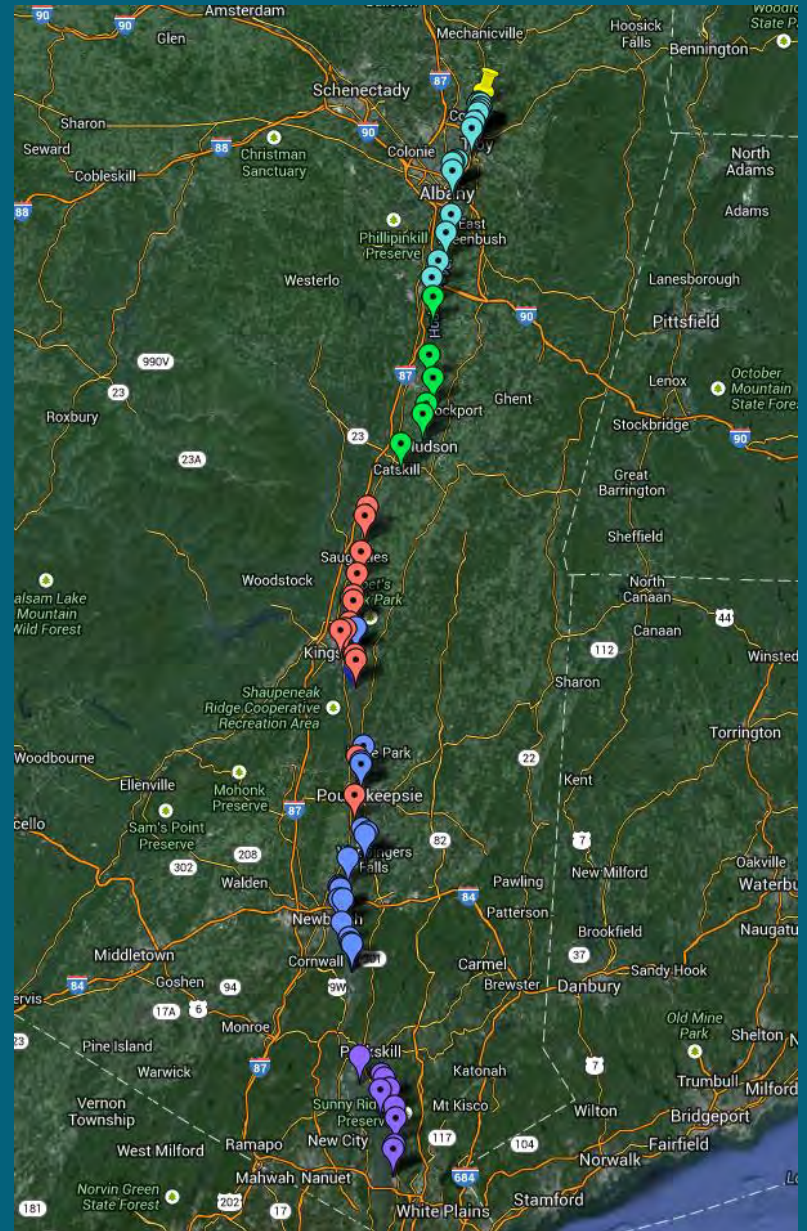
Call NYS Department of Health
518-402-7800
800-458-1158

south of the Rip Van Winkle
Bridge at Catskill

Advisory Sign Reconnaissance



Advisory Sign Reconnaissance



Saratoga County Popular Fishing Waters

DOH Fish Advisories & DEC Public Access



All outlined waters are DEC public access waters; there may be other fishing access sites in your county.

- General Advisory Applies (whole family 4 fish meals/month)
- Specific Advisory Applies (women under 50 & kids under 15 do not eat, men over 15 & women over 50 see page 2)
- Indicates Dam Location
- County Line
- Indicates stream flow

County Maps

Material Distribution

- DEC includes order form with licensing information

January - August

12,000 coloring books

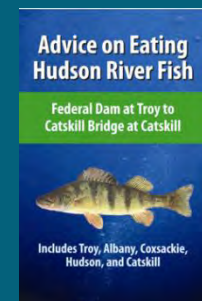
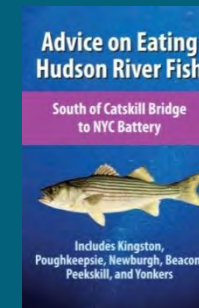
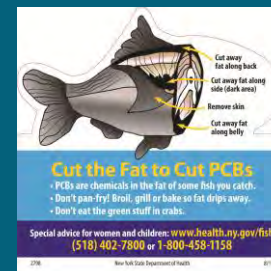
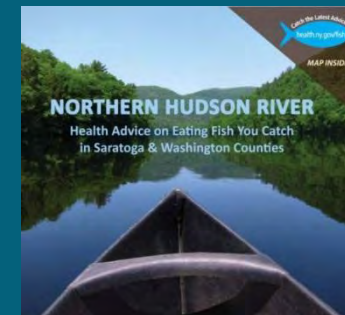
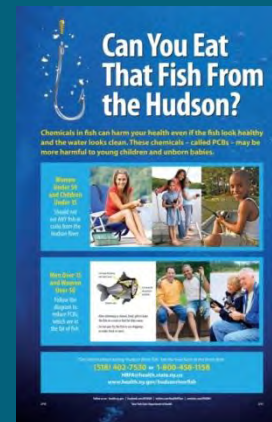
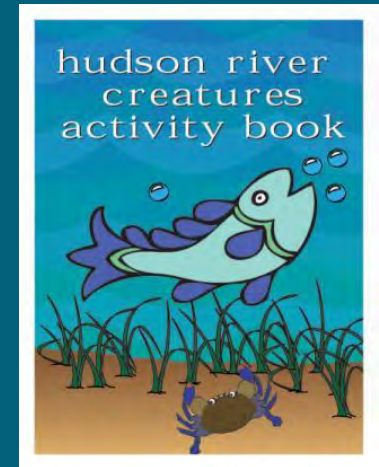
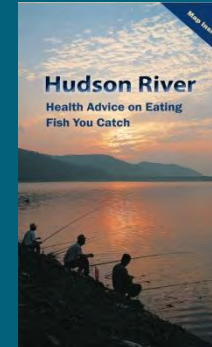
5,000 angler cards

500 posters

6,000 brochures

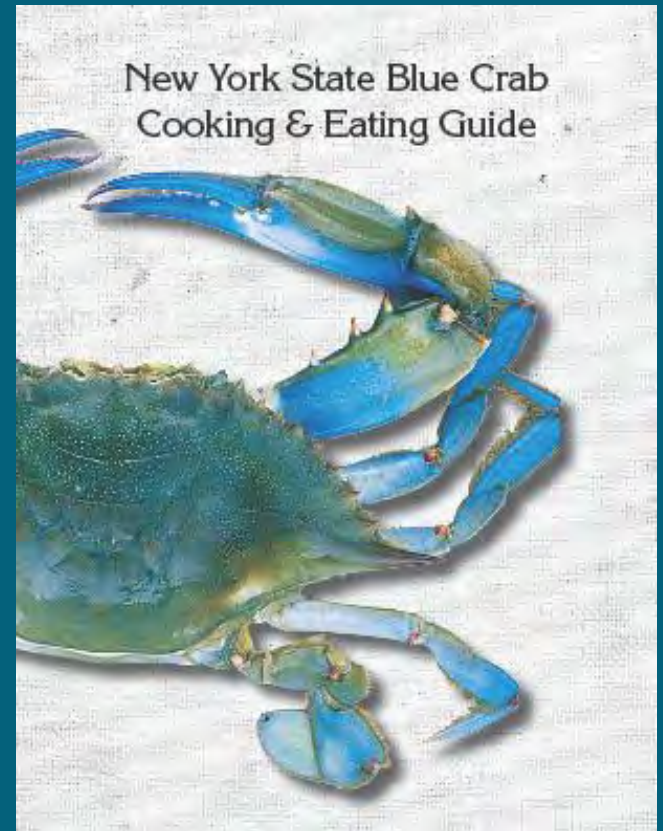
5,500 magnets

2,000 Northern Hudson



New Materials: Crab Card

- No license required to harvest crabs
- In the nutrition survey, 32% of the Hudson fish eaters ate crabs
- 25% ate the tomalley



Downstate Less Aware

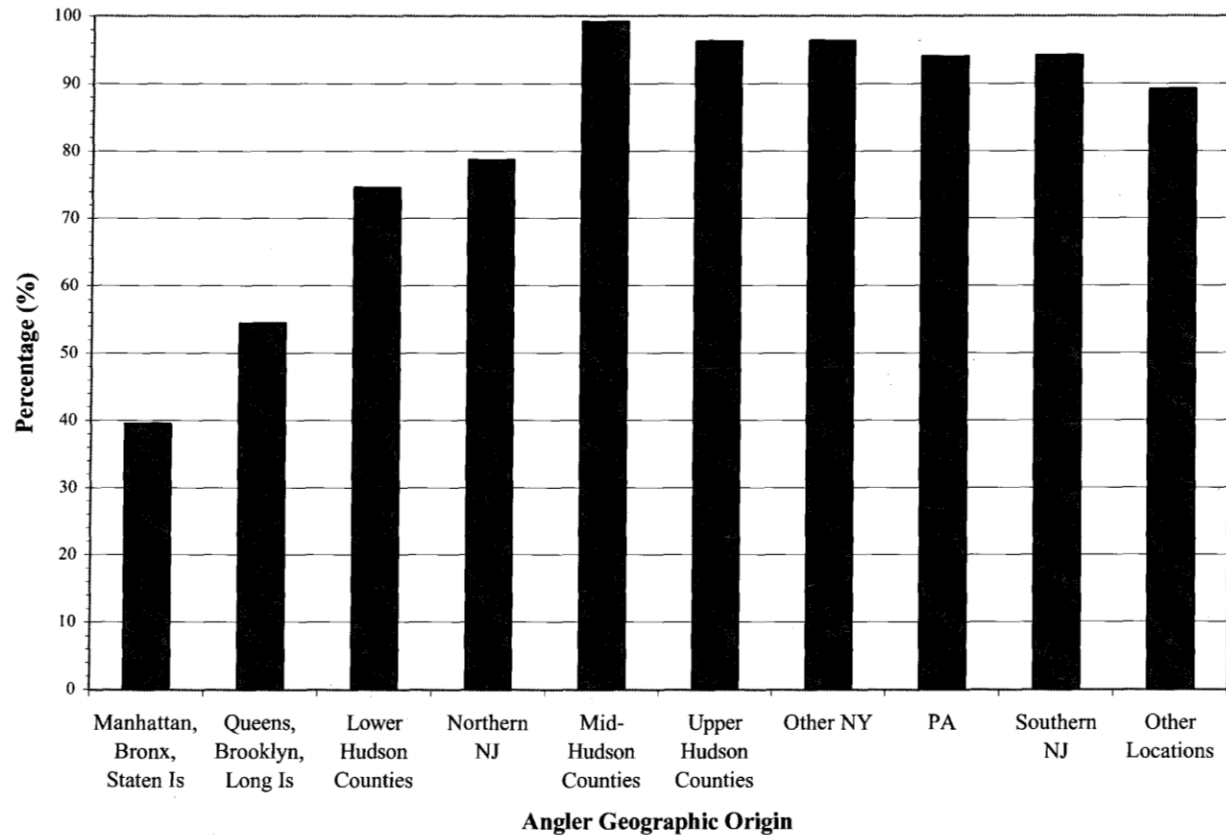


Figure 3.7-7

Percentage of anglers by residence aware of health warnings about eating fish from the Hudson River in 2001.

“Hooked on our Waters”

Forum in Manhattan
Saturday October 19th

Cosponsor - NY-NJ Harbor
& Estuary Program



- NYS Department of Environmental Conservation - I FISH NY & Hudson River Estuary Program
- New York City Health Department
- Hudson River Fishermen's Association
- New York Harbor School & Harbor Foundation
- NY/NJ Baykeeper
- NYC Watertrail Association
- Mount Sinai Medical Center
- NYC Parks
- Hudson River Park Trust

2013 Outreach Venues

- Tech Valley High School, Albany
- PCB Forum, Poughkeepsie
- Hudson River Boat and Yacht Club Association
- Hudson River Fishermen's Assn. Family Fishing Derby
- Saint Peter's Church, Yonkers
- Troy River Fest
- Clearwater festival
- GE Kids Day, Albany



2013 Outreach Venues

- Saratoga County Fair
- African American Family Day, Albany
- Cardboard Boat Race, Schuylerville
- Columbia, Dutchess, and Ulster County Fairs
- Mississippi Day in Albany
- Hudson Health Plan
- Clarkstown Hunting and Fishing Day



Moving forward

- Request for Application for funded partners
- Discussion with DEC on supporting Catch and Release signage
- Brochure and signs in Chinese
- Crab card and Hudson Valley brochure
- Continue Hudson fish consumption surveys
- County maps
- Catfish
- Boat and outdoor shows





Hudson River Waterfowl Consumption Advisory

- Waterfowl between Hudson Falls and Troy have higher PCB levels than from other portions of the Hudson River
- Likely to have higher PCB levels than waterfowl from other areas of the state.
- Advise to harvest waterfowl from other locations on the Hudson River or in other areas of New York State
 - Particularly in the early season when many of the available birds are likely to be resident waterfowl (i.e., non-migratory).
- Advice for the state: Eat up to two meals per month of wild waterfowl, remove skin and fat. Do not eat mergansers.

Support the Project

- Distribute materials
- Link to our website
- Invite us to events, or to talk to staff or membership

Regina Keenan 518-402-7530

rmk05@health.state.ny.us

Audrey Van Genechten

agl02@health.state.ny.us

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Final Second Five-Year Review Report for the Hudson River PCBs Superfund Site

APPENDIX 13

NYSDOH OUTREACH AND COMMUNICATION REGARDING FISH ADVISORIES AND FISHING RESTRICTIONS

**Attachment 13-F October 27, 2016 NYSDOH Hudson River Fish Advisory
Outreach Update Presentation to Hudson River PCBs Site CAG**

Prepared by:

Ecology and Environment, Inc.

April 2019

NYSDOH Hudson River Fish Advisory
Outreach Program Update
Hudson River PCBs Superfund Site
Community Advisory Group October 27, 2016

New York State Department of Health

Hudson River Fish Advisory Outreach

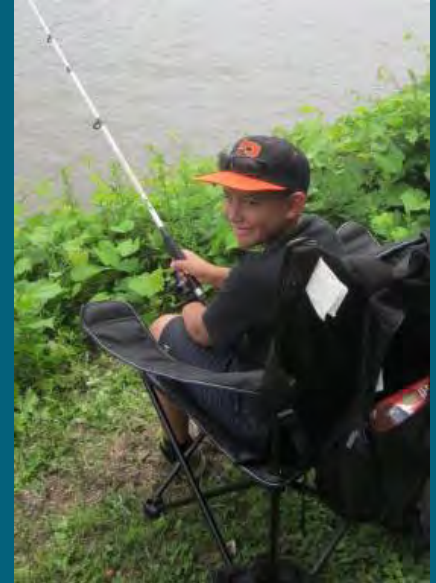


Can you eat that fish from the Hudson River? www.health.ny.gov/fish



Hudson River Fish Advisory Outreach Project

- Scope of Work: Everyone eating Hudson River fish knows, understands and follows the New York State Department of Health (NYSDOH) advice on fish consumption for 192 miles from Hudson Falls to NYC
- Commitment of 20 years through 2027
- Focus on community partnerships



Challenge: Reduce contaminant consumption but not reduce overall healthy fish consumption

Hudson River Fish Advisory Outreach Project Activities

- Identify and support a group of partners who can develop and administer fish advisory outreach programs
- Secure permission from property owners to post signs at major fishing access sites, provide signs and ensure they are posted
- Broadcast public service announcements
- Evaluate outreach efforts to determine which ones are working
- Incorporate emerging health education methods into outreach efforts
- Develop and implement strategies to encourage people to follow the advisories

Hudson Fish Advisory Outreach

What Is the Advice?

- The advice depends upon who you are, where you fish, and what you catch
- Women under 50 (childbearing years) and children under 15 should not eat any Hudson fish or crabs downstream of Corinth in Saratoga County to the New York Battery
- A priority outreach audience is young women with families

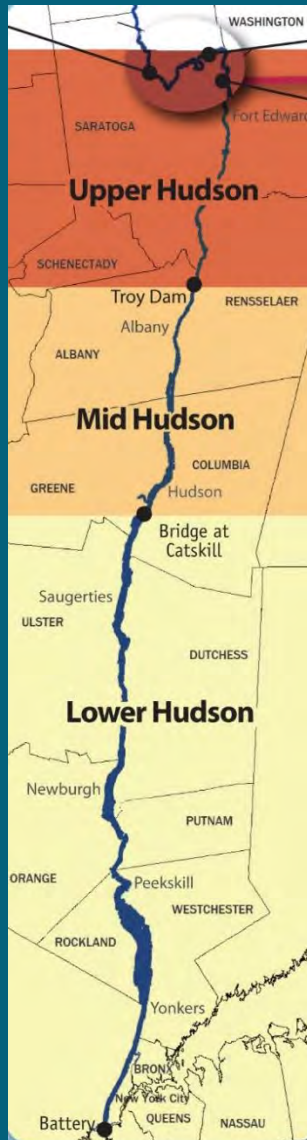
WARNING!

Fish and crabs from these waters contain chemicals and may be harmful to eat, especially for women and children.



Learn more! Call NYS Department of Health
518-402-7800
800-458-1158

Hudson River Advice for Men and Women above 50: Hudson Falls to Catskill



Upper Hudson

From the Rt. 9 Bridge to Troy Dam

Do not eat fish from the Route 9 Bridge to the Troy Dam.

From Baker's Falls to the Troy Dam, New York's State Department of Environmental Conservation's "catch and release" regulations apply.

Take No Fish. Eat No Fish.

Mid Hudson

From Troy Dam to Bridge at Catskill

Eat up to one meal a month:



Alewife



Rock bass





















Blueback herring



Yellow perch

Do not eat other fish from the Mid Hudson including striped bass

Hudson River Advice for Men and Women above 50: Catskill to NYC

<p>Lower Hudson</p> <p>From Rip Van Winkle Bridge at Catskill to the NYC Battery</p>	 Men over 15 and Women over 50	 Women under 50 and Children under 15
<div>      </div> <p>Walleye White catfish Channel catfish American eel* Gizzard shad</p> <p><i>*DEC regulations prohibit taking American eel for food from the Hudson River</i></p>	<p>DON'T EAT</p>	<p>DON'T EAT</p>
<div>     </div> <p>Striped bass Smallmouth bass Largemouth bass Bluefish</p> <div>     </div> <p>Brown bullhead White perch Carp Rainbow smelt</p> <div>   </div> <p>Goldfish Atlantic needlefish</p>	<p>Up to 1 meal/month</p>	<p>DON'T EAT</p>
<div>  </div> <p>Blue crab</p> <p>Do not eat the tomalley (green stuff, mustard) or reuse cooking water</p>	<p>Up to 6 crabs/week</p>	<p>DON'T EAT</p>
<p>All other species</p>	<p>Up to 4 meals/month</p>	<p>DON'T EAT</p>

Hudson Fish Advisory Outreach

What Is the Advice: Crabs

- More common south of Kingston
- Very popular – people who catch them, eat them
- In NYC rivers, dioxin, PCBs and cadmium build up in the mustard/tomalley
- Crab mustard/tomalley consumption is common for a number of ethnic groups
- 80% of the PCBs move into the cooking water - discard cooking juices and don't use to make sauces or soups



Hudson Fish Advisory Outreach

What Is the Advice: Reducing Chemicals in a Meal



For men and women above 50 who eat Hudson fish

- PCBs build up in the fat and skin of fish
- Removing skin and fat and cooking so fat drips off can cut the PCBs in a meal nearly in half
- Many ethnic groups prefer to use the whole fish

NYSDOH Hudson Fish Advisory Outreach Program



Budget

- Total of \$4 million with a twenty year commitment that the program will continue through 2027
- Projected budget of somewhat higher spending in years closer to dredging period

Issued two Requests for Applications for “Minigrants” to establish partnerships with local groups who know about Hudson fish consumption in their community

- 2009 to 2013 – approximately \$60,000 per year in subcontracts to four community partners
- 2014 to present - \$ 90,000 in subcontracts to six community partners

Staff:

- 2009 to 2011 – 1 full time and 2011 to 2016 – 1.7 full time staff
- 2014 to 16 – part-time seasonal staff, some with Spanish and Chinese language skills

Current Funded Minigrant Partners

Six minigrant partners:

- Cornell Cooperative Extension (CCE) Dutchess
- CCE Rockland
- CCE Saratoga
- Arm of the Sea Theater (through October 2016)
- Rensselaer Land Trust
- Hudson Sloop Clearwater

Partners table at events and distribute materials, do presentations and classes at schools, do informal surveys on Hudson fish consumption, develop local materials and radio Public Service Announcements

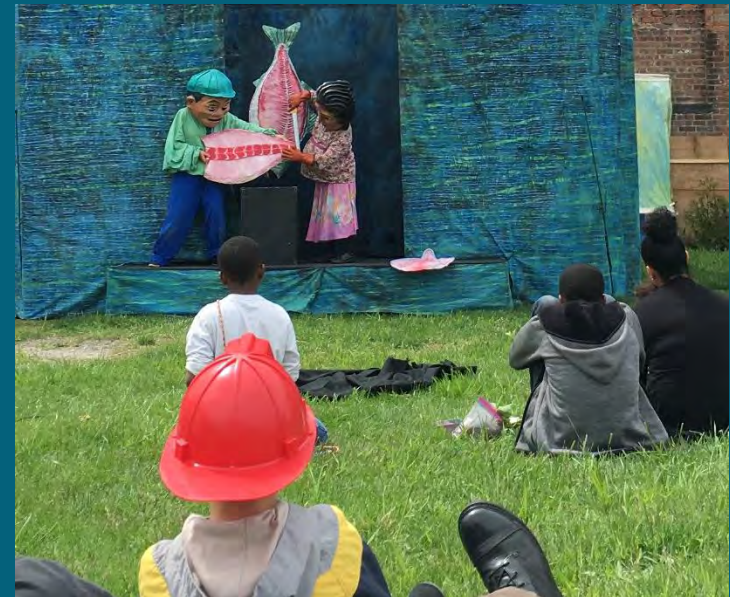


Minigrant Partner Arm of the Sea Theater

- Arm of the Sea Theater developed “Hook Line and Sinker: Fishing the Hudson River”
- In 2015 the show reached over 3,000 people with project-funded performances



“PCB molecule” and its friend the catfish



Characters demonstrate removing the skin and fat, which reduces PCBs in a Hudson fish meal

Examples of Making Outreach Materials and Activities More Effective

- Develop materials that are more visual, use pictures of fish, tables, maps
- Use positive messaging - what can you eat? Suggest local alternatives to Hudson fish
- Continue to develop strategies for lower literacy audiences and for people for whom English is a second language
- Create interactive learning exercises

[illegible]

Hudson River between Bakers Falls (in Hudson Falls) and the Federal Dam at Troy:

- Cat and Hare (only only) - Same regulation apply to the portion of the Hudson River north of Troy.
- All other species in the first better regulated by fish.
- All fish caught must be immediately returned to the water upstream.

General Health Advisory

For the water used here, the general health advice presented below is:

- Women of childbearing age (not including under 15 childbearing age) should not drink water from the Hudson River.
- Other people should follow the recommendations provided for each water used below and should not eat any more than one meal per week of any fish species not listed.

Hudson River

- Cat and Hare - not more than one meal per month of brown trout over 14 inches long.
- Kestrelhead Lake - Cat and Hare - not more than one meal per month of American eel.
- Nameka Lake - Cat and Hare - not more than one meal per month of American eel.
- Valatie Kill between County Route 18 and Nameka Lake - Cat and Hare.

Hudson River and All Tributaries to the First Barrer Impassable by Fish:

- Hudson River downstream to Dam at Rome's Bridge in South Glens Falls - Cat and Hare - not more than one meal per month of muskellunge over 14 inches long.
- Shawangunk Island downstream to feeder dam at South Glens Falls - Cat and Hare - not more than one meal per month of carp.
- Wolf's Bridge in South Glens Falls in Federal Dam at Troy - Cat and Hare.
- Federal Dam at Troy north of bridge at Catskill -

Boysie Creek Reservoir (Putnam Co.)

- Cat and Hare - not more than one meal per month of largemouth bass over 16 inches and walleye.

Whitney, Van Hook and West Branch Reservoirs (Putnam Co.)

- Cat and Hare - not more than one meal per month of walleye.

Big Brook Reservoir (Putnam Co.)

- Cat and Hare - not more than one meal per month of walleye over 21 inches.

Arnawalk and Cross River Reservoirs (Westchester Co.)

- Cat and Hare - not more than one meal per month of largemouth and muskellunge over 14 inches.

Sawamkill River (Westchester Co.)

- Cat and Hare - not more than one meal per month of largemouth.

Sheldrake River (Westchester Co.)

- Cat and Hare - not more than one meal per month of gizzard shad.

Tillemus Reservoir (Westchester Co.)

- Cat and Hare - not more than one meal per month of white perch.

Inland Waters of Lowland

Fingerpond Reservoir and Grand Park Pond (Putnam Co.)

- Cat and Hare - not more than one meal per month of carp.

Lake Cayuga (Orleans Co.)

- Cat and Hare - not more than one meal per month of American eel and muskellunge.

Half-Pond Reservoir (Orleans Co.) and Spring Pond-Middle Island (Orleans Co.)

- Cat and Hare - not more than one meal per month of carp.
- Cat and Hare - not more than one meal per month of carp or gizzard shad.

Skidder's Pond (Putnam Co.)

- Cat and Hare - not more than one meal per month of largemouth.

St. James Pond (Putnam Co.)



















- Cat and Hare - not more than one meal per month of largemouth.

South Pond at Roseton Park (Putnam Co.)

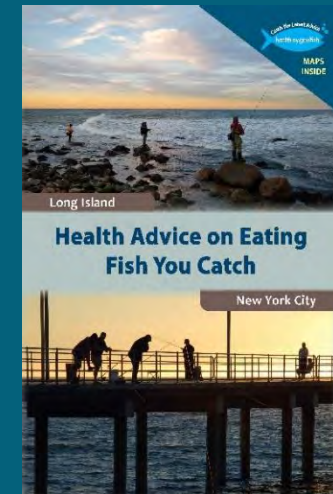
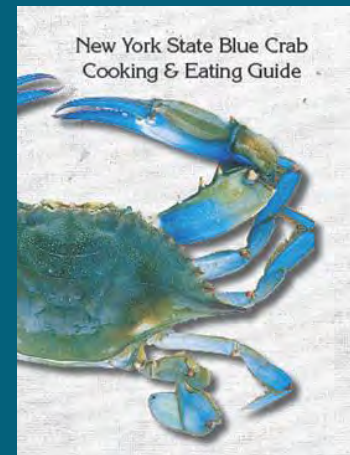
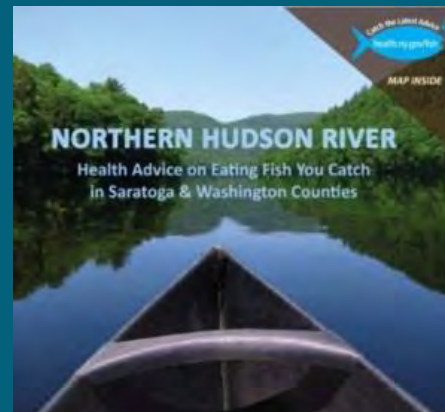
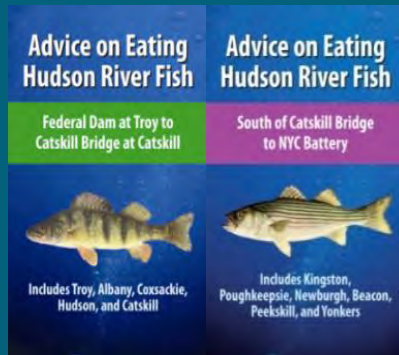
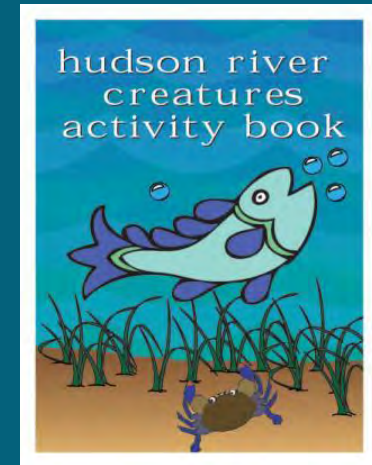
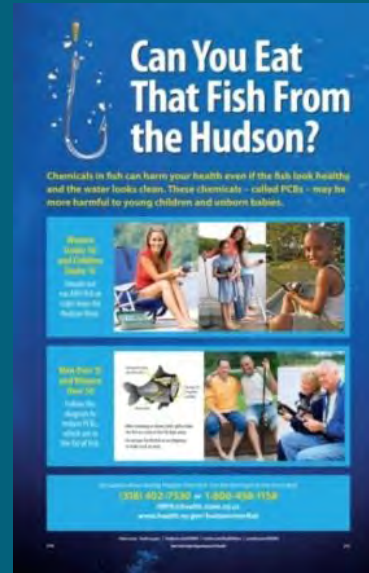
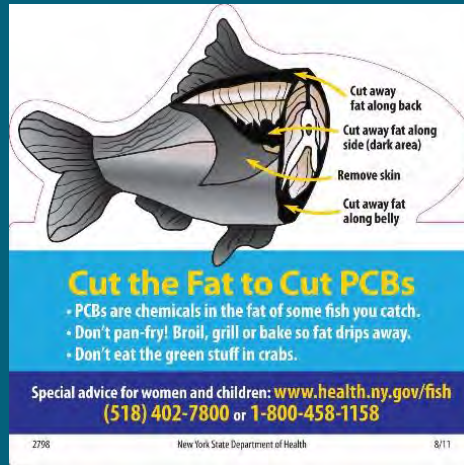
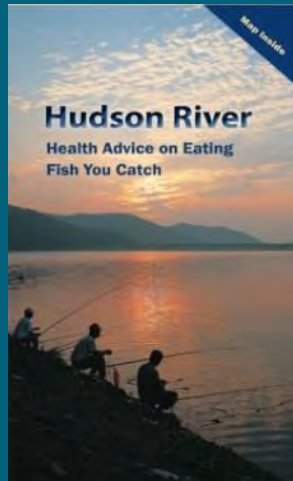
- Cat and Hare - not more than one meal per month of carp and gizzard shad.

South Pond at Rockville Center and Upper Massapequa Reservoir (Nassau Co.)

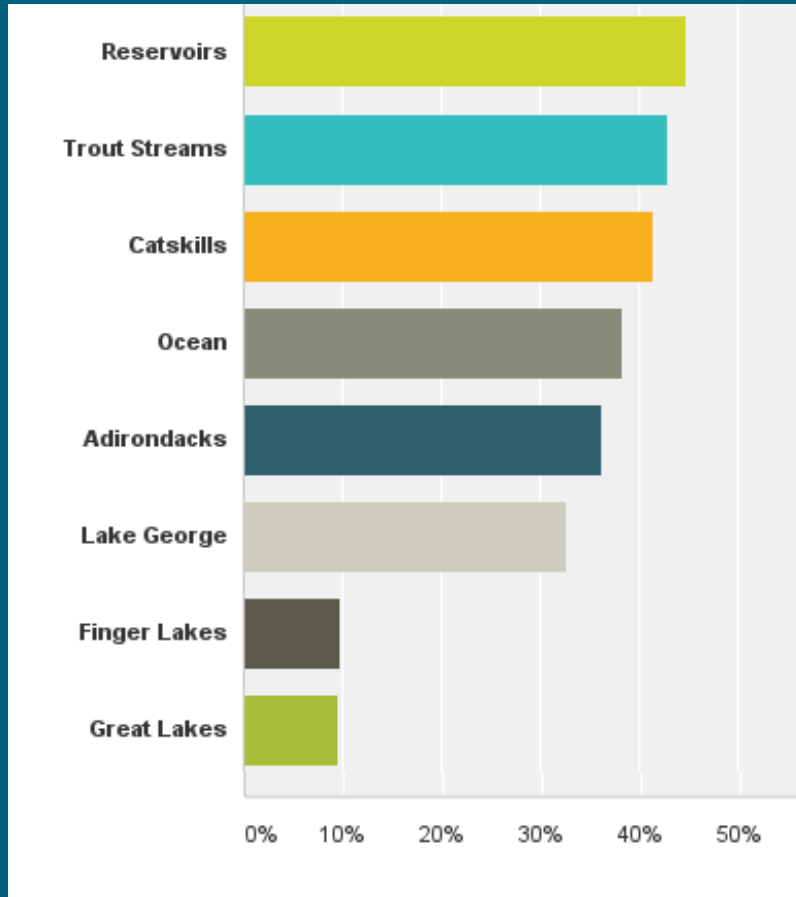
- Cat and Hare - not more than one meal per month of white perch.

<p>Lower Hudson</p> <p>From Rip Van Winkle Bridge at Catskill to the NYC Battery</p>	 <p>Men over 15 and Women over 50</p>	 <p>Women under 50 and Children under 15</p>
 <p>Walleye</p>  <p>White catfish</p>  <p>Channel catfish</p>  <p>American eel*</p>  <p>Gizzard shad</p> <p><i>*DEC regulations prohibit taking American eel for food from the Hudson River</i></p>	<p>DON'T EAT</p>	<p>DON'T EAT</p>
 <p>Striped bass</p>  <p>Smallmouth bass</p>  <p>Largemouth bass</p>  <p>Bluefish</p>  <p>Brown bullhead</p>  <p>White perch</p>  <p>Carp</p>  <p>Rainbow smelt</p>	<p>Up to 1 meal/month</p>	<p>DON'T EAT</p>
 <p>Goldfish</p>  <p>Atlantic needlefish</p>		
 <p>Blue crab</p> <p>Do not eat the tomalley (green stuff, mustard) or reuse cooking water</p>	<p>Up to 6 crabs/week</p>	<p>DON'T EAT</p>
<p>All other species</p>	<p>Up to 4 meals/month</p>	<p>DON'T EAT</p>

Free Hudson River Fish Advisory Materials



Many People Who Fish the Hudson Fish River Also Fish in Other Water Bodies



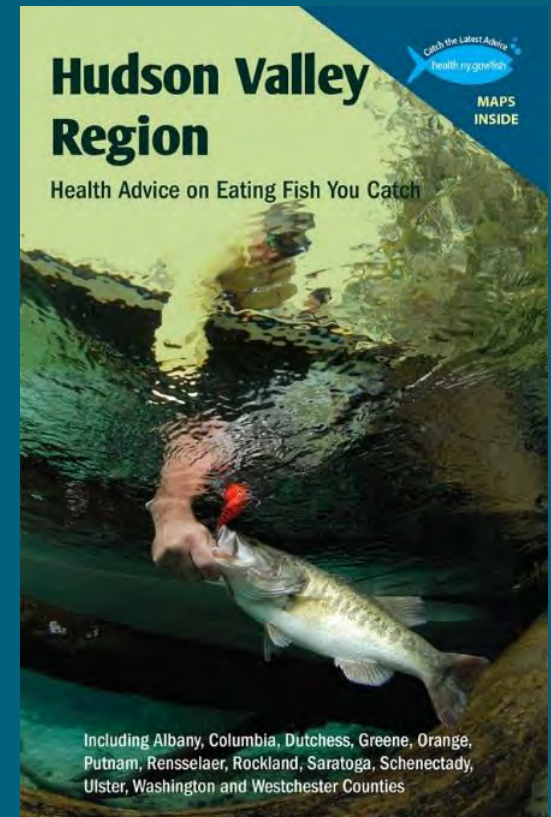
- NYSDOH does short convenience-sample surveys about Hudson fish consumption at events. We ask “Besides the Hudson, What Other Places in New York Do You Fish?”
- Many people who fish the Hudson also fish in other water bodies. We want to encourage families who want to eat fish to eat it from waters that are healthier choices.

Newest Brochure

- Positive messaging to encourage following the advice - suggest where a family can eat fish as healthier alternatives

2015 - Hudson Valley Region

- Has advice for all waters in 13 Hudson counties
- Also includes a list of waters with DEC access where the family can eat fish
- In English, Spanish and Chinese
- Over 4,000 distributed in 2016

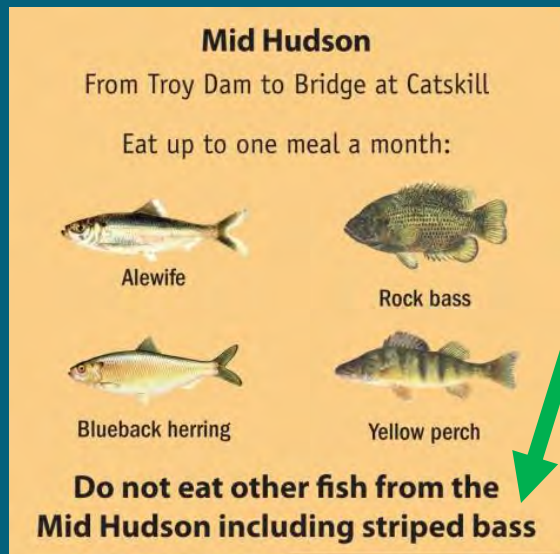


Collaboration on Educational Materials



Materials are distributed by outreach staff and minigrant partners, community organizations, municipalities and other entities that sell fishing licenses

- Work with audiences and partners to refine materials
- Gil Hawkins of the Hudson River Fisherman's Association suggested "including striped bass" for the Hudson River brochure
- Asian Community Unity Society representative suggested we use pictures of fish with names in English
- New York State Department of Environmental Conservation (NYSDEC) summarizes NYS advice in freshwater fishing regulations guide





Hudson River Fish Advisory Signs

- NYSDOH developed signs with focus groups that has a stronger message for Catskill to Troy
- Signs are in English, Spanish, and Chinese
- Posting signs is voluntary on the part of property owners
- Signs require maintenance – are frequently damaged or removed
- In 2013, NYSDOH began annual inspections of riverfront fishing access south of Troy
- Followed up by letter and phone with property owners
- Mailed out over 400 signs for posting at about 90 locations in 10 counties
- Since 2015, of 33 property owners, 24 agreed to 113 new signs



Outreach Venues and Partners



To reach people who fish and their families, DOH staff do presentations and table at a range of events - 20+ field days each year (58 in 2015)

- County fairs
- Community and ethnic festivals
- Fishing and hunting shows
- Fishing organizations
- Boating associations
- Neighborhood associations
- Headstart and WIC clinics

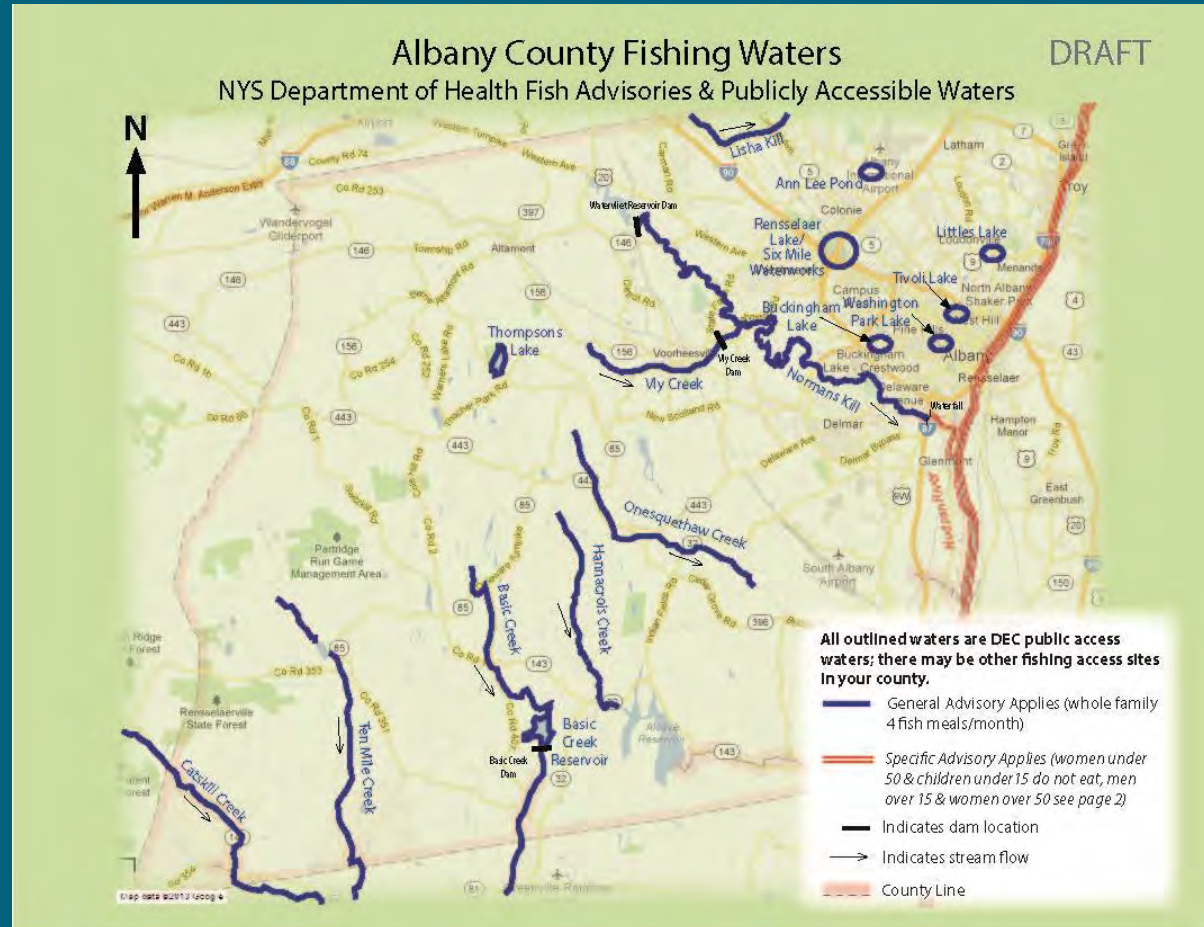


Network with local organizations at events

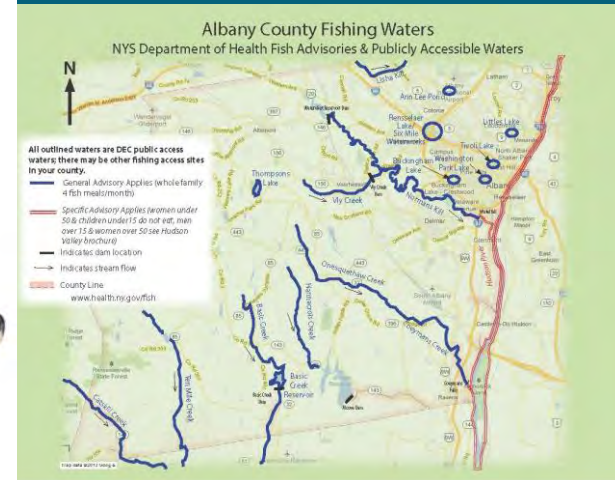
We have been in all 13 counties of the project area and most major cities, but focus heavily on the Capital District as fish there are most highly contaminated that can be legally eaten

Maps Help People Make Better Choices

- Women and children should not eat fish from the Hudson
- For many Hudson counties, the whole family can eat fish up to four times a month from many other local waters (blue waters)
- Hope to get maps online in 2017



Interactive “Go Fish” Game for Tabling



Can you keep your fish or should you throw it back?

Red Waters

Families should avoid eating fish from waters in red.
Throw it back!

Blue Waters

Fish from blue waters are a good choice for the whole family. You can keep your fish!

Children take home a paper fish from the good (blue) waters

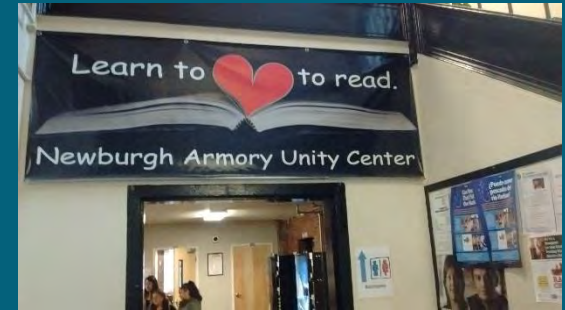
Outreach to Immigrants



- Often are less aware of contamination
- Need to rely on community partners to identify and connect
- Cultural practices – may eat whole fish, fatty species like catfish, make fish paste, eat crab tomalley (mustard)
- Some newcomers eat substantially more local fish - in a NYSDOH study in Buffalo, people from Burma ate five times (102 locally-caught fish meals per year) as much fish as licensed anglers ate

Outreach to Immigrants

- Language and literacy barriers - develop and use different strategies
- Have partnered with organizations who work with agricultural and other immigrant workers
- In 2016 we focused on Newburgh, where we are lucky to work with Latinos Unidos of the Hudson Valley
- CCE Rockland is partnering with the Rockland Immigration Coalition
- Made connections with the Spanish speaking community in Dutchess County for spring 2017
- Are collaborating with “Refugee Roundtable” volunteers who are connected to the refugee community in Albany to reach out through churches



Karen Community “Photovoice” Project

- In 2015, NYSDOH and Karen youth participated in a project in which the youth took pictures of “Our Healthy Foods from Around the World at Home”.
- The Tomhannock reservoir is a water body in Rensselaer County where families can eat fish up to four times a month.

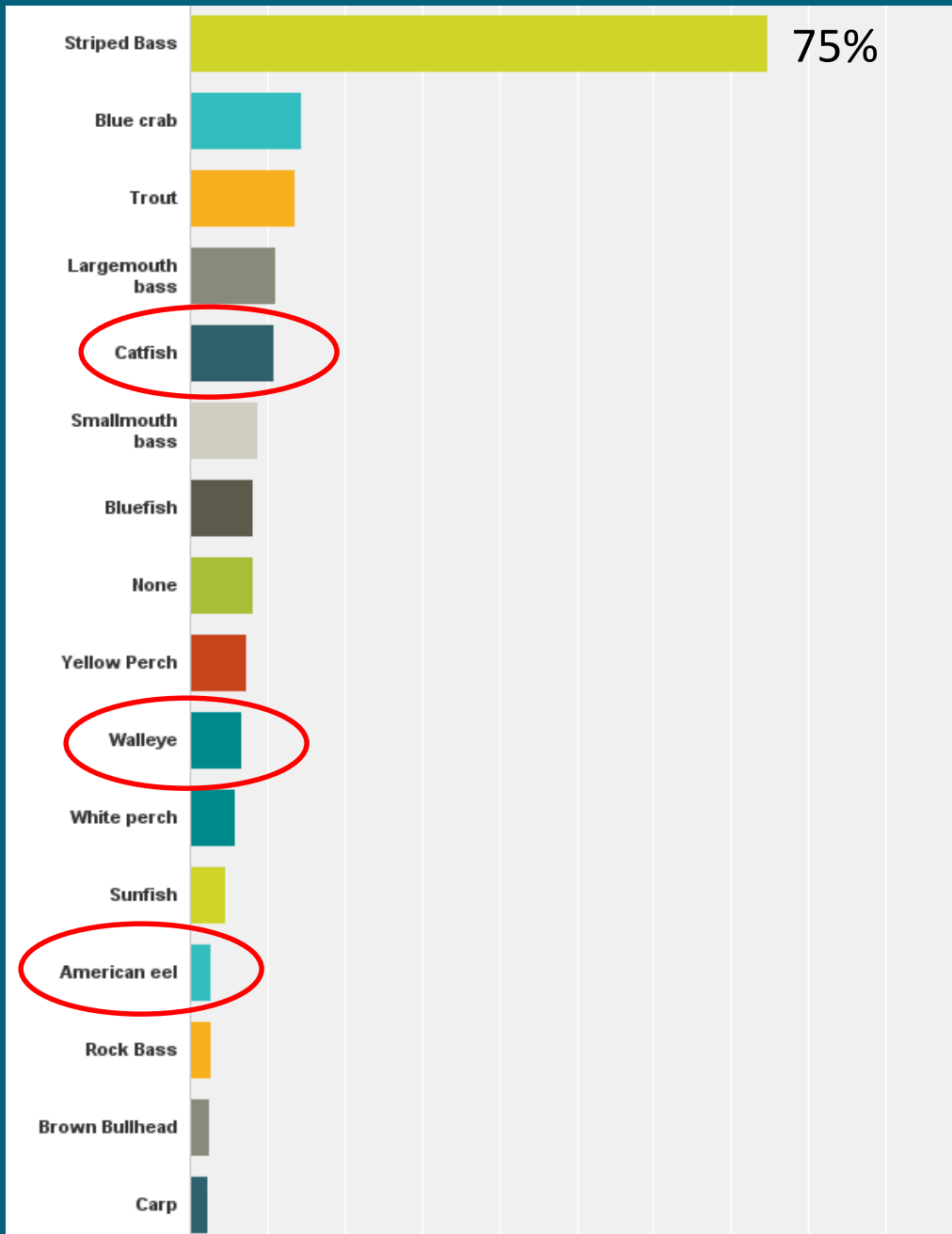


Food in the Water. Food in the Pot:
Fish is good. This dish has fish, olives, turmeric and paprika. The Karen men caught the fish in the Tomhannock Reservoir. (Saw Shi)



Single Fish:
My cousin and I went fishing on the Tomhannock Reservoir and he caught this fish. We ate it for dinner. My mom fried it in a pan. (Lay Doh Say)

NYSDOH Hudson Fish Consumption (460)



What fish do you most frequently eat from the Hudson? (all that apply)

NYSDOH advises on one should eat Hudson catfish, (as of 2016) walleye and eel

Many people feel striped bass are “ocean fish” and do not know, or do not agree, that they should not eat them from Troy to Catskill

There are no alternative local waters for striped bass, as there is for catfish and walleye

Increasing Understanding about Contamination in Striped Bass to Encourage Following the Advice



Can you eat that fish from the Hudson?

The Hudson River has many sought after fish, but none as coveted as the mighty striped bass. Striped bass are long-lived fish that can reach lengths of greater than 45 inches and are prized by anglers for their feisty nature and delicious taste.

Most anglers know that striped bass spend part of their time at sea and part of their time in tidal tributaries like the Hudson river. But many anglers are not aware that the New York State Department of Health (NYSDOH) advisory for Hudson River fish includes striped bass.

Striped bass migrate but still accumulate PCBs (polychlorinated biphenyls). The NY State Department of Environmental Conservation samples many striped bass from Troy to the GW Bridge (NYC) every year to monitor PCB levels in fish. While many striped bass have low levels of PCBs, some have levels higher than the FDA marketplace standard of 2 ppm.

Fish caught between the Federal Dam at Troy and the Rip Van Winkle Bridge at Catskill are more likely to contain high levels of PCBs than fish caught south of Catskill. New tagging studies (David Secor, University of Maryland) show some striped bass stay in the River longer than previously thought, allowing more time for PCBs to build up. Follow up studies are planned.

Striped bass are by far the most popular fish consumed from the Hudson River. When surveyed, nearly 50% of anglers say they eat striped bass from the River at least a few times a year. We urge all anglers and their families to know and follow the advice for striped bass:

Between the Federal Dam at Troy and the Rip Van Winkle Bridge at Catskill:

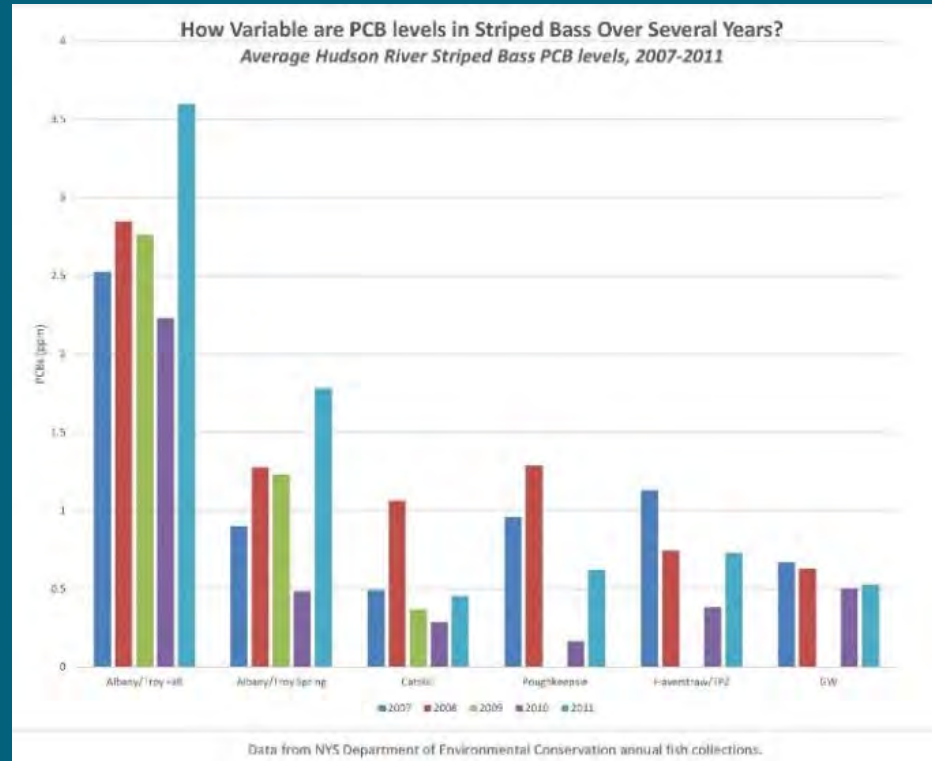
Everyone - don't eat striped bass, practice catch & release fishing.

Between the Rip Van Winkle Bridge at Catskill and the NYC Battery:

Men over 15 and Women over 50 - eat up to 1 meal/month of striped bass.

Women under 50 and children under 15 - don't eat, practice catch & release fishing.

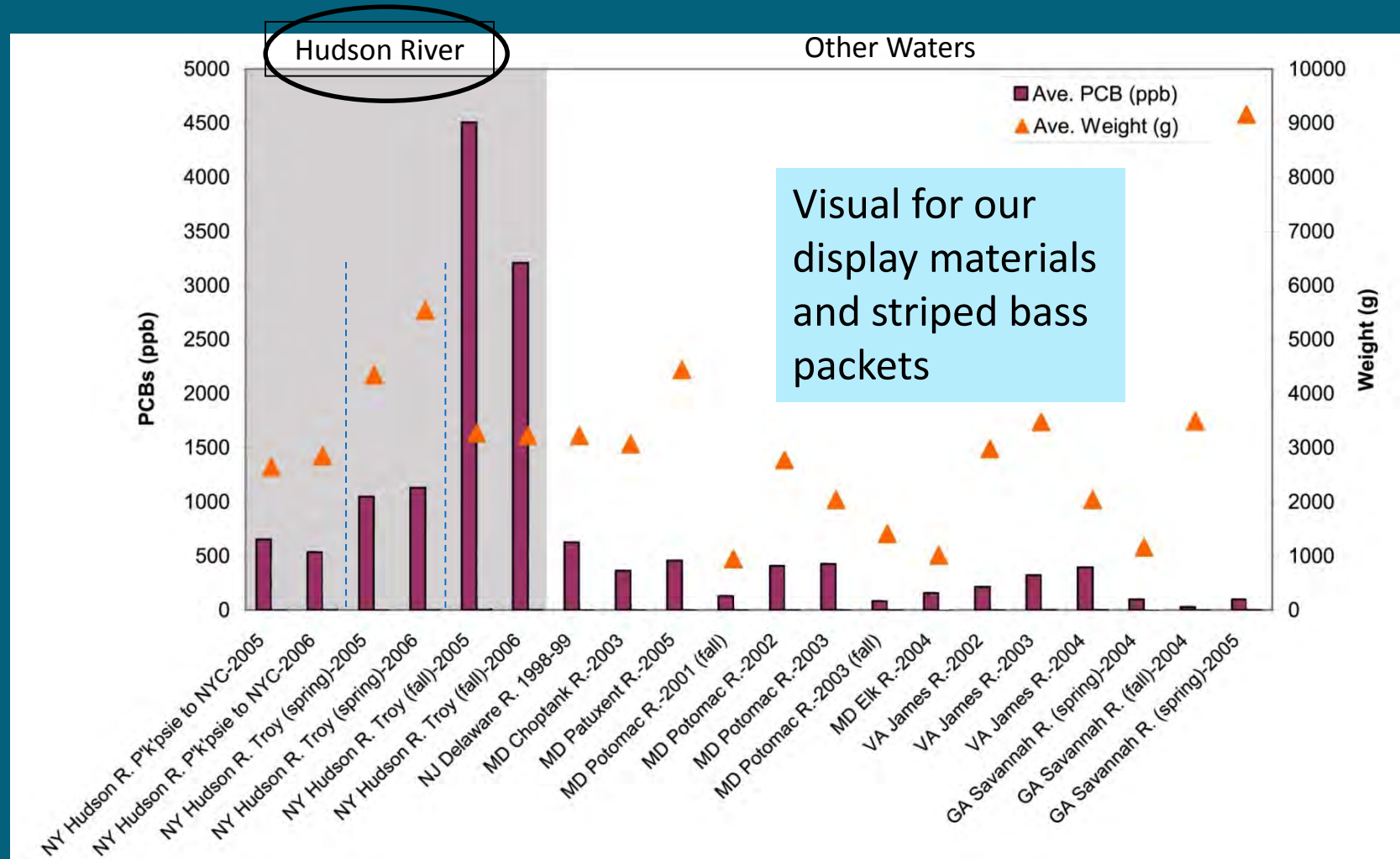
This packet contains more information specifically about striped bass - included are graphs of striped bass PCB levels, summary slides of new research being done on striped bass tagging and migration studies, and an age to length chart.



In 2016 we began to provide information packets about Hudson striped bass PCB contamination and migration to people interested in knowing more

PCBs in Striped Bass

In the Hudson River vs. other East Coast Rivers



Report of the Interstate Workgroup on Evaluating Atlantic Coastal Advisories for Recreationally Caught Striped Bass and Bluefish based on PCBs – 10/1/2008

NYSDOH and Hudson River Fish Advisory Minigrant Partner Surveys

NYSDOH and partner surveys meet two important outreach goals:

- Education - local fish eaters receive fish advisory materials after survey
- Information collected helps our program target resources



NYSDOH and Hudson River Fish Advisory Minigrant Partner Surveys

Survey limitations:

- All are self-report
- CCE surveys are collected at a variety of community locations, but respondents are not selected to statistically represent Hudson Valley residents
- NYSDOH surveys reflect the people at the events we attend
- Surveys reflect bias of who chooses to participate

NYSDOH and Hudson River Fish Advisory Minigrant Partner Surveys

Survey limitations continued:

- Surveys are very short to encourage participation
 - we do not collect information on how much of each species is consumed or how each type of fish is prepared
- People do not answer every question and in upcoming slides we present results for the number of people who answered the question, may be slightly different from the total responses

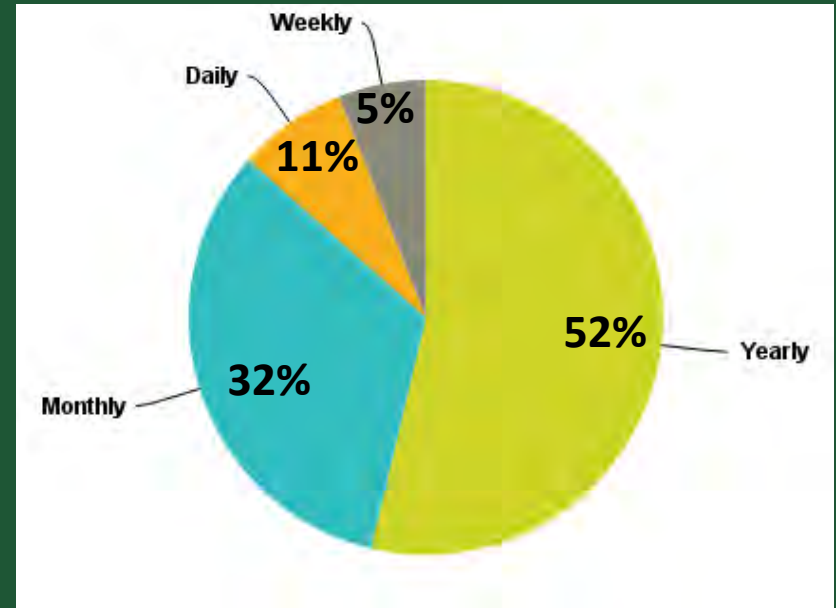
CCE Dutchess Partners

Local Fish Consumption Surveys

- Since 2012, CCE Dutchess has coordinated local fish consumption surveys from Dutchess, Columbia, Greene, Orange and Ulster counties
- Surveys are collected at food banks, low income daycare centers, clinics, and other sites used to recruit nutrition program clients
- 75% of respondents are women and 72% are under 55
- 23% black, 23% Hispanic/Latino

CCE Dutchess Partners Local Fish Consumers

- 1338 surveys
- 17% report they ate fish or crabs they or someone they knew caught from a local water (232)
- Over half of local fish eaters ate fish or crabs from the Hudson – about 10% of all respondents (136)
- 46% of Hudson fish consumers were aware of the advice



How Often Do You Eat
Locally Caught Fish?

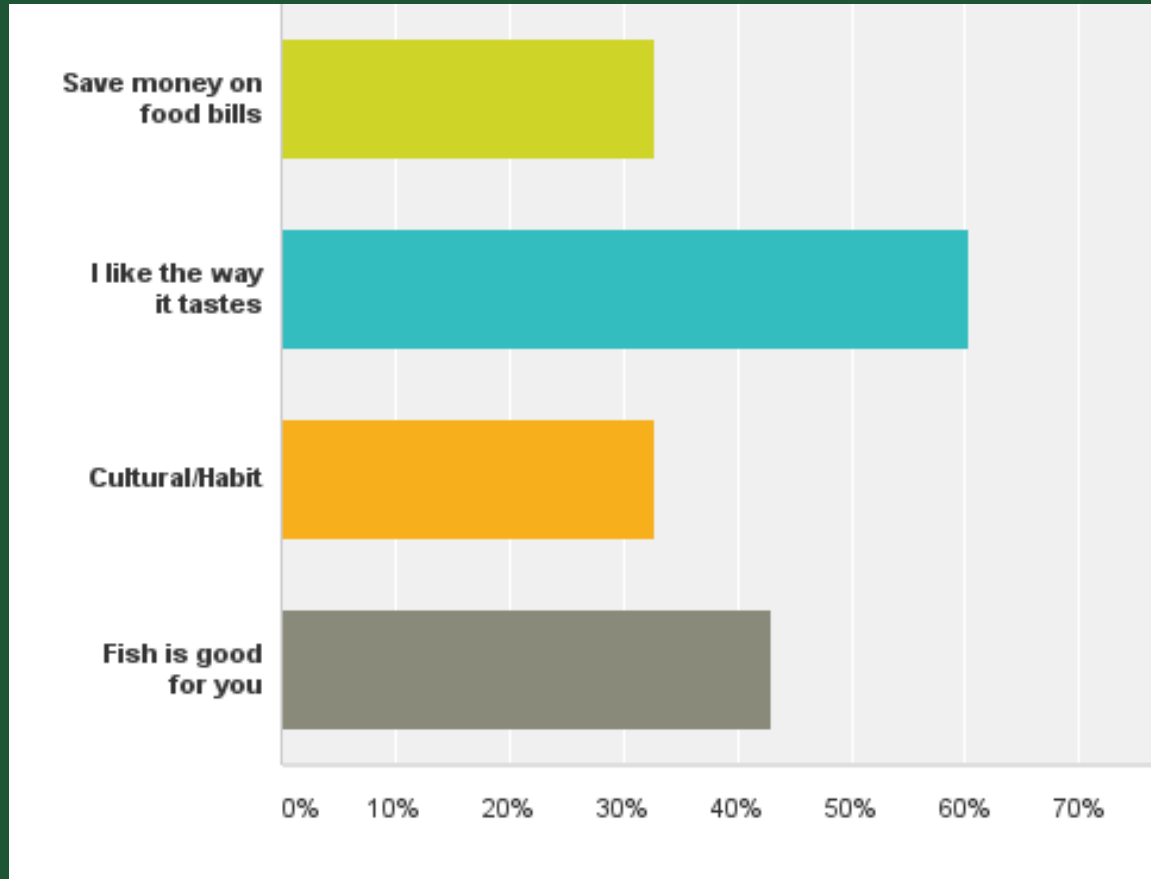
CCE Dutchess Partners Hudson Fish Consumers

Number	Eating Hudson Fish	Eating Hudson Crabs	Eating Hudson Fish or Crabs
Respondents	72	64	136
Women under 55	29	20	49

1338 surveys

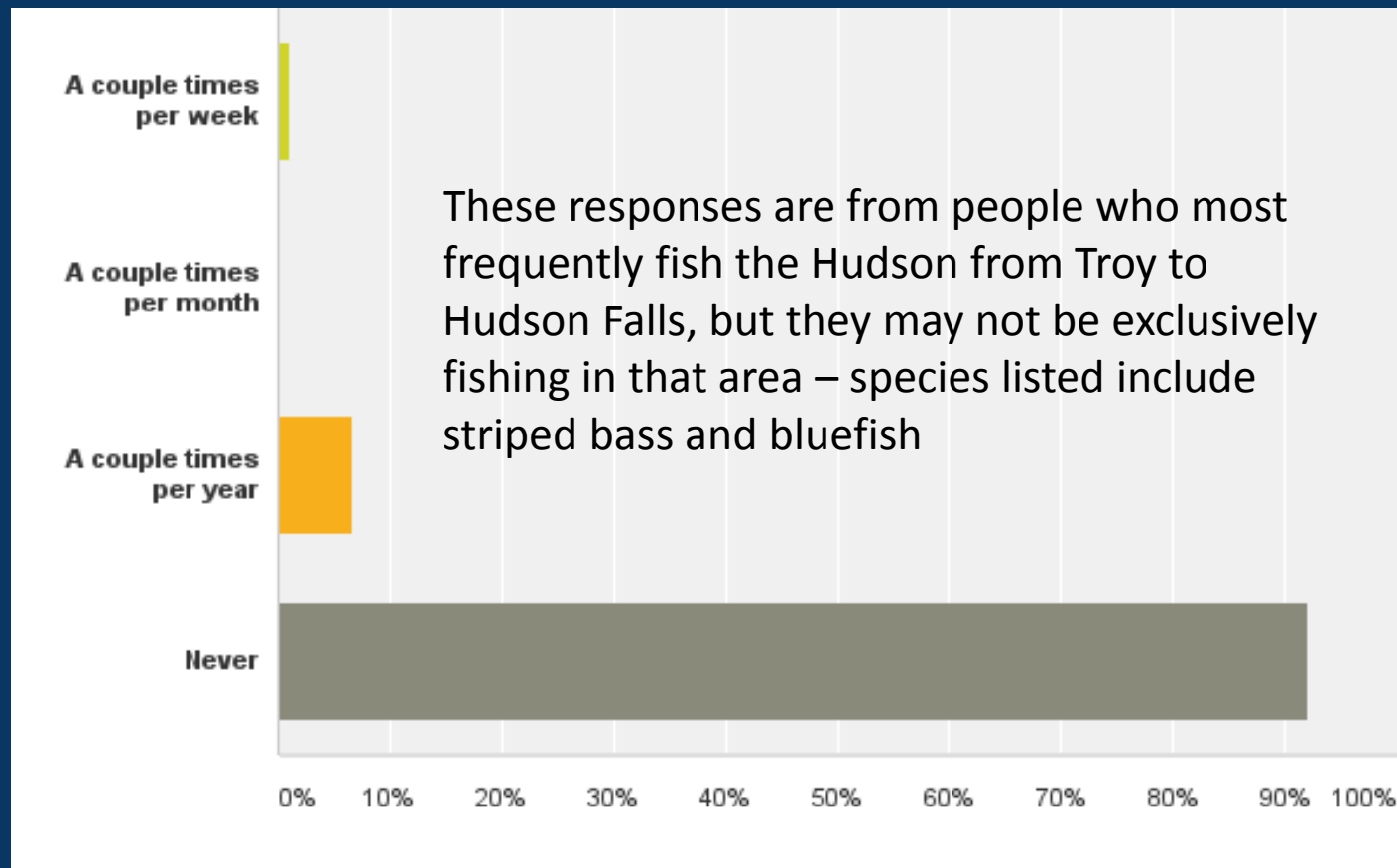
- 29 respondents reported their children under 15 ate Hudson fish

CCE Dutchess Partners Hudson Fish Consumers



Responses from people eating Hudson fish to “What are the best reasons for eating fish or crabs that you catch? (check all that apply)”

CCE Saratoga Partner Hudson Fish Consumption Troy to Hudson Falls



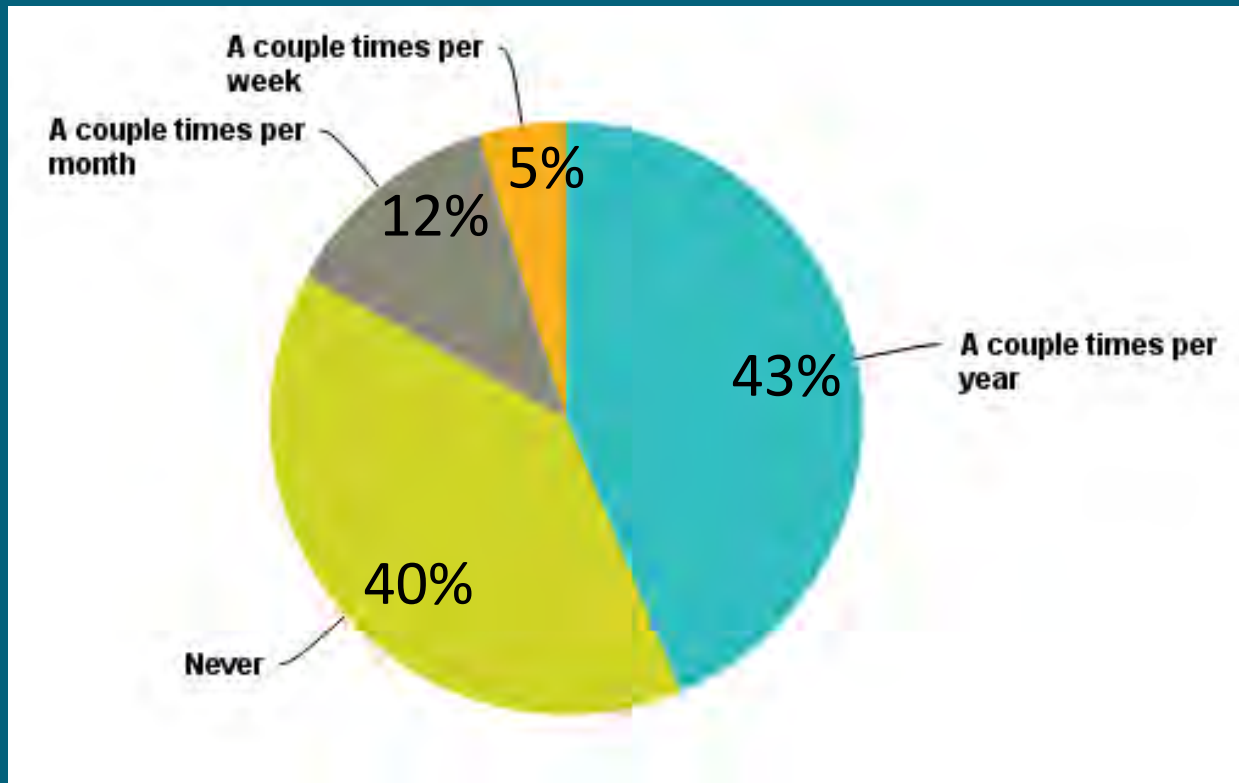
How often
do you eat
Hudson
fish?
(107)

NYSDOH Hudson Fish Consumption Survey



- 786 “convenience” samples – one page surveys done since 2013 at outreach events NYSDOH staff attend in the Hudson Valley from Saratoga to NYC
- All respondents fish on the Hudson River
- 85% male, 82% white, 7% African American, 6% Hispanic/Latino, 42% over 50
- 50% fish most frequently from Catskill to the Tappan Zee
- About 460 report they ate Hudson fish and 168 ate crabs

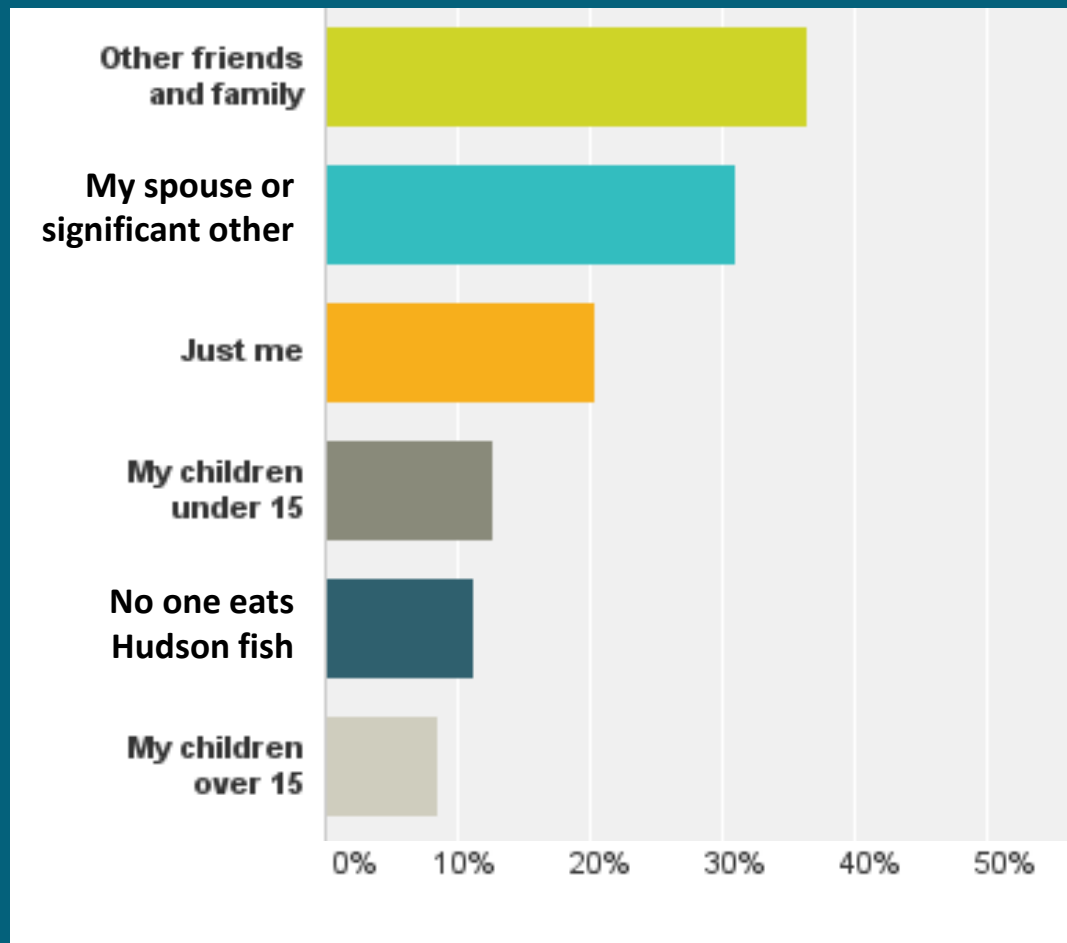
NYSDOH How Often Do You Eat Hudson Fish (All 786 Respondents)



40% of respondents say they practice catch and release

NYSDOH Who Else Eats Hudson Fish?

(460 Hudson Fish Consumers)

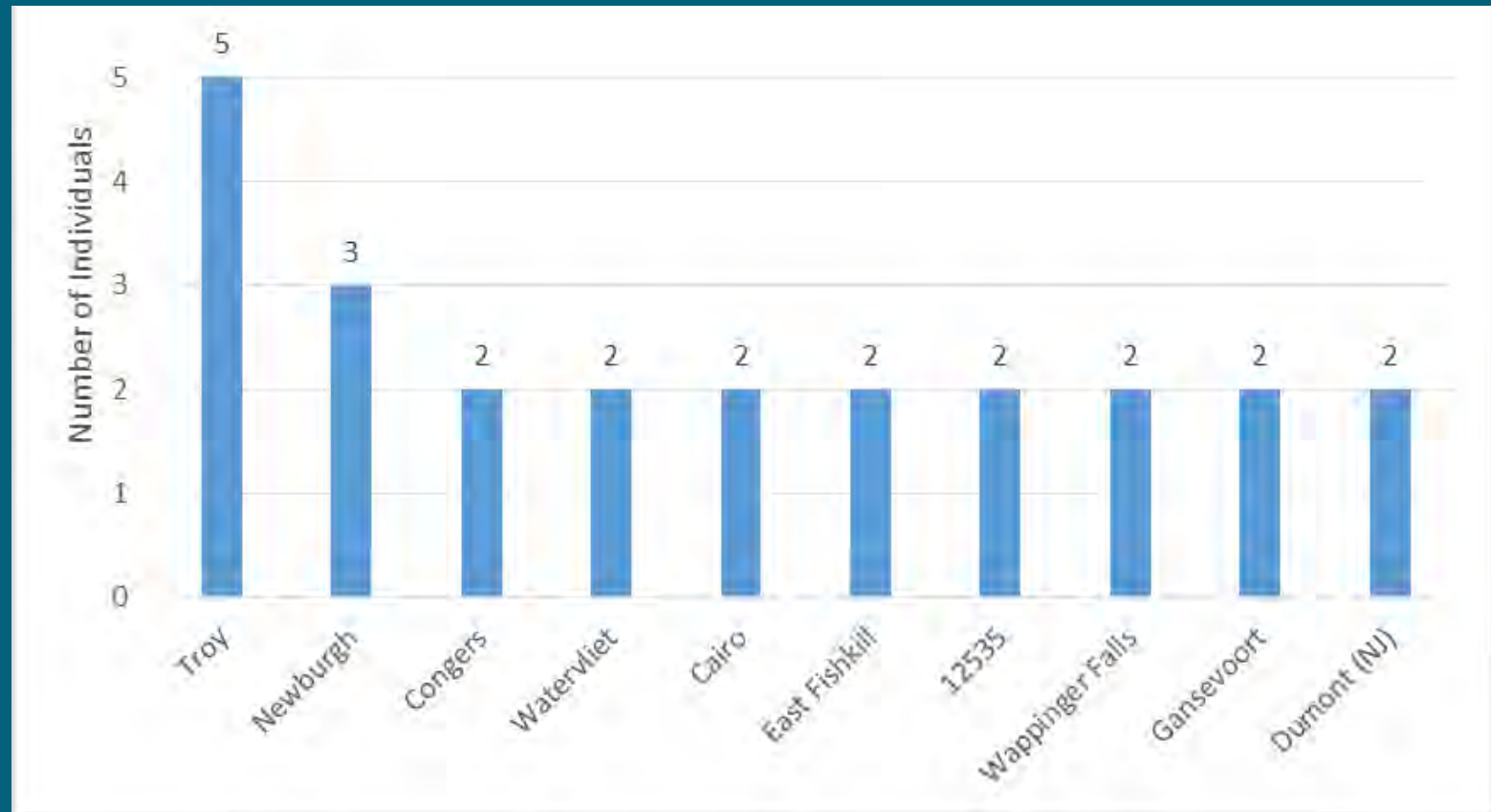


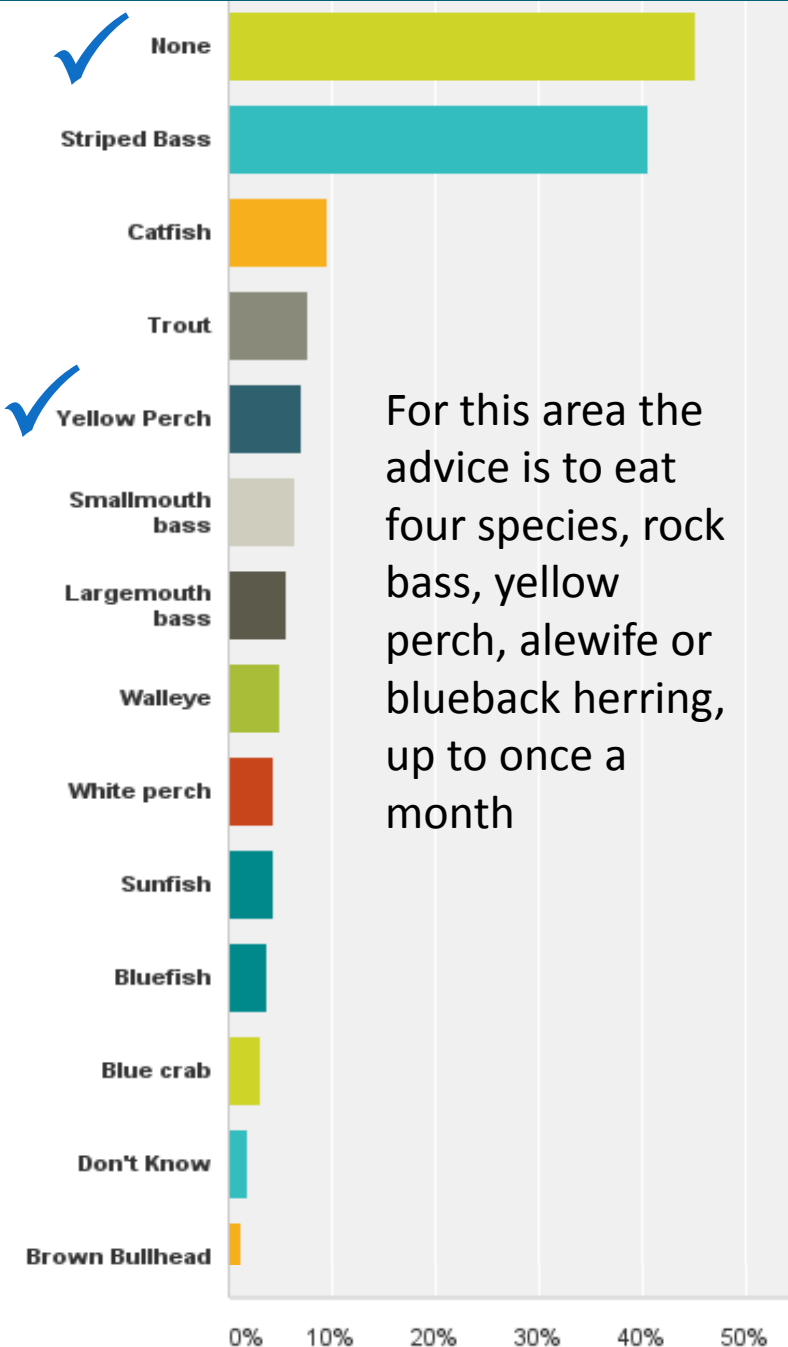
Sharing is common

Sharing with children under 15 is a concern (58)

24 women under 50 reported eating Hudson fish

NYSDOH: 10 Locations With Women under 50 Eating Hudson Fish or Crabs (Residence Zip Code) (24)



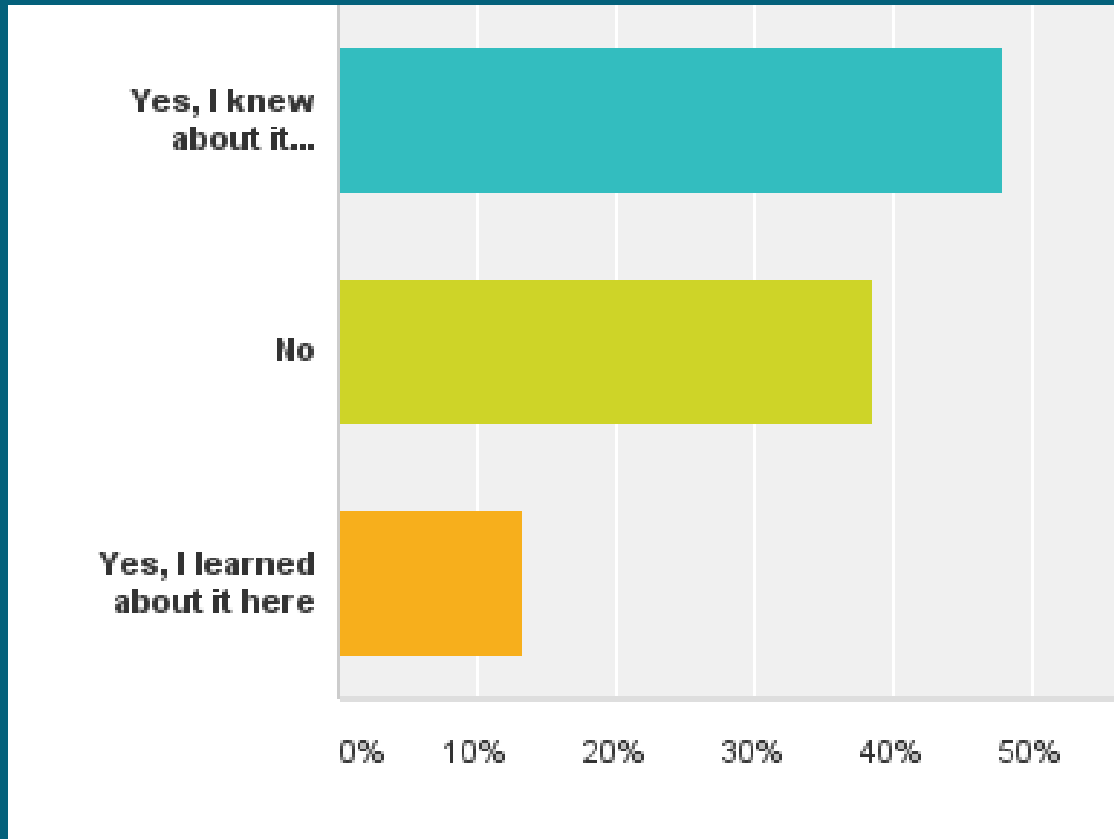


Fish Consumed Troy to Catskill (186)

- Most fish consumption from Troy to Catskill is not consistent with the NYSDOH advice

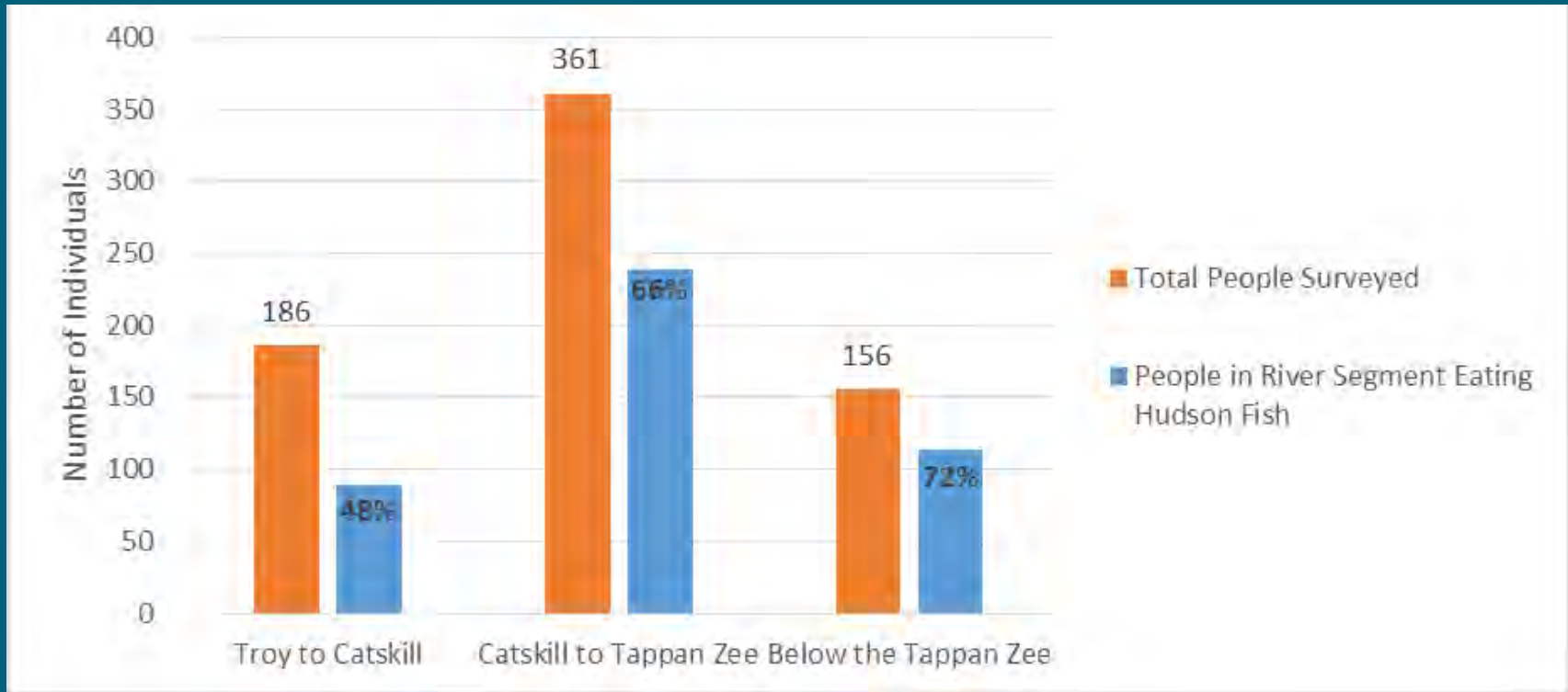


NYSDOH Awareness of Advice (460 Hudson Fish Consumers)



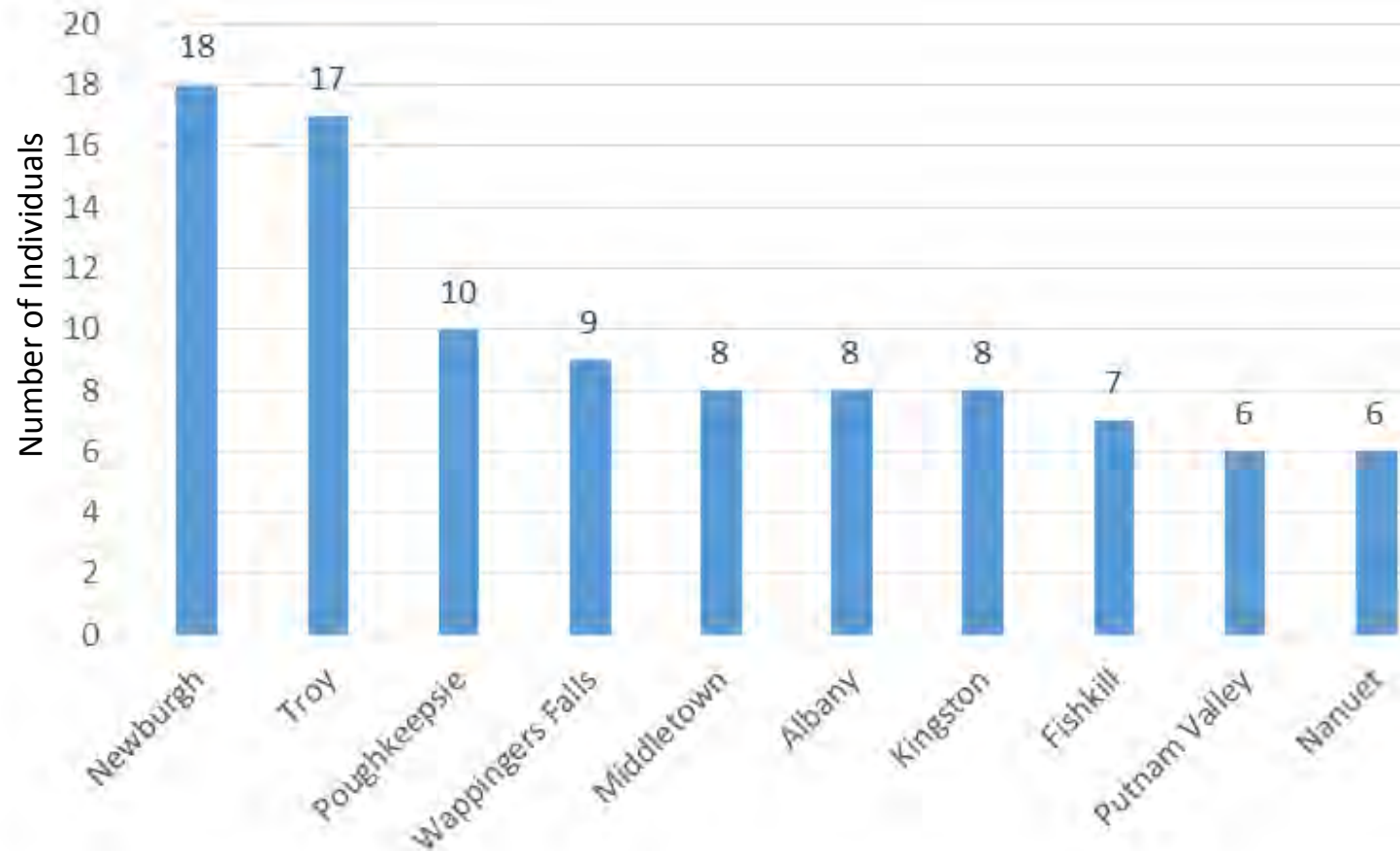
Many Hudson fish consumers report they do not know the advice

NYSDOH Percentage of People Eating Hudson Fish Varies Along the River



Fewer people report eating Hudson fish from Troy to Catskill

NYSDOH: 10 Locations With Largest Number of People Eating Hudson Fish or Crabs (Residence Zip Code)



NYSDOH Follow-up: What Do You Remember from Reading Materials or Talking to NYSDOH?

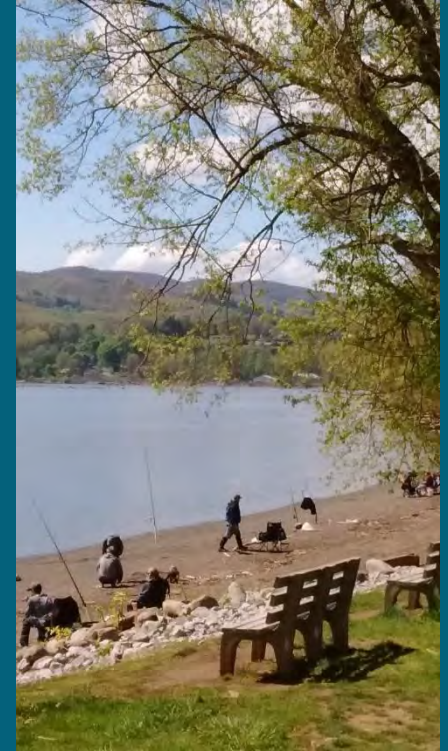
Response (all that apply) – I remember	Percentage (N=24)
PCBs stay in the fat and skin of fish	70%
Striped bass have chemicals like other fish in the Hudson	48%
Making a fillet and baking or grilling fish can cut down PCBs in a fish meal	43%
The NYSDOH advice around Albany and Troy is to not eat most fish	30%
The graph with PCB levels in striped bass	22%

Response (all that apply)	Percentage (N=24)
No one	8%
My family	54%
A friend	21%
More than one friend	54%

Who Did You Share the Information With?

Moving Forward

- Invite partners who connect with the Hudson fishing community to join us!
- Reinforce that contamination levels in fish will take a long time to drop after the dredging
- Reinforce the advice for the Capital District and that the advice applies to striped bass
- Create more connections to immigrant communities and use ethnic media to promote the advice
- Seek more information on minority community consumption
- Try to learn more about Hudson fish consumption in NYC



For more information:

www.health.ny.gov/hudsonriverfish

http://www.health.ny.gov/environmental/outdoors/fish/hudson_river/advisory_outreach_project/hrfa@health.ny.gov or regina.keenan@health.ny.gov or 518-402-7530