

**CLEAN WATER ACT SYMPOSIUM  
PCB SUPERFUND SITE & FISH  
NEWBURGH NY  
APRIL 2023**

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## OUR MISSION

Scenic Hudson brings together people and organizations to protect the natural resources at the heart of the Hudson Valley's health and prosperity.



# GOALS ARE THE HEART OF CWA & SUPERFUND

## CLEAN WATER ACT

*EPA interprets “fishable” uses under section 101(a) of the CWA to include, at a minimum, designated uses providing for the protection of aquatic communities and human health related to consumption of fish and shellfish. In other words, EPA views “fishable” to mean that not only can fish and shellfish thrive in a waterbody, but when caught, can also be safely eaten by humans.*



## Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) aka Superfund

*identify uncontrolled hazardous wastes; characterize the impacts of hazardous waste sites and emergency releases on the surrounding environment (i.e., communities, ecological systems, and ambient air, soil, water); and, institute control or remediation approaches to minimize risk from exposure to these contaminants.*



**In other words, EPA views “fishable” to mean that not only can fish and shellfish thrive in a waterbody, but when caught, can also be safely eaten by humans.**

# For decades, General Electric's upriver industrial plants used the Hudson River as a dumping ground for its PCB (polychlorinated biphenyls) waste

A combination of stronger environmental laws, including the federal Clean Water Act and CERCLA (aka Superfund) mobilized concerned citizens and burgeoning environmental groups formed from dedicated river users like fishermen, boaters, scientists etc.



# EPA Selected A Cleanup Remedy for the Hudson River Superfund Site Primarily Due to the Expedited Timeframe to Meet Interim and Final Remedial Targets In Fish.

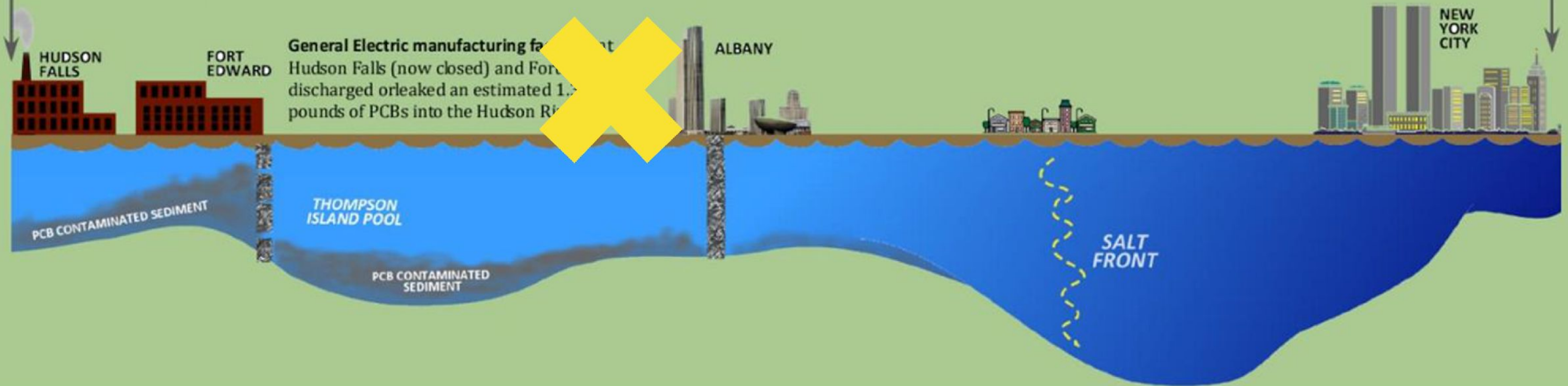
200-mile long stretch of River from Hudson Falls to NY Harbor is a PCB Superfund Site

## Upper Hudson with 40 miles of "HotSpots"

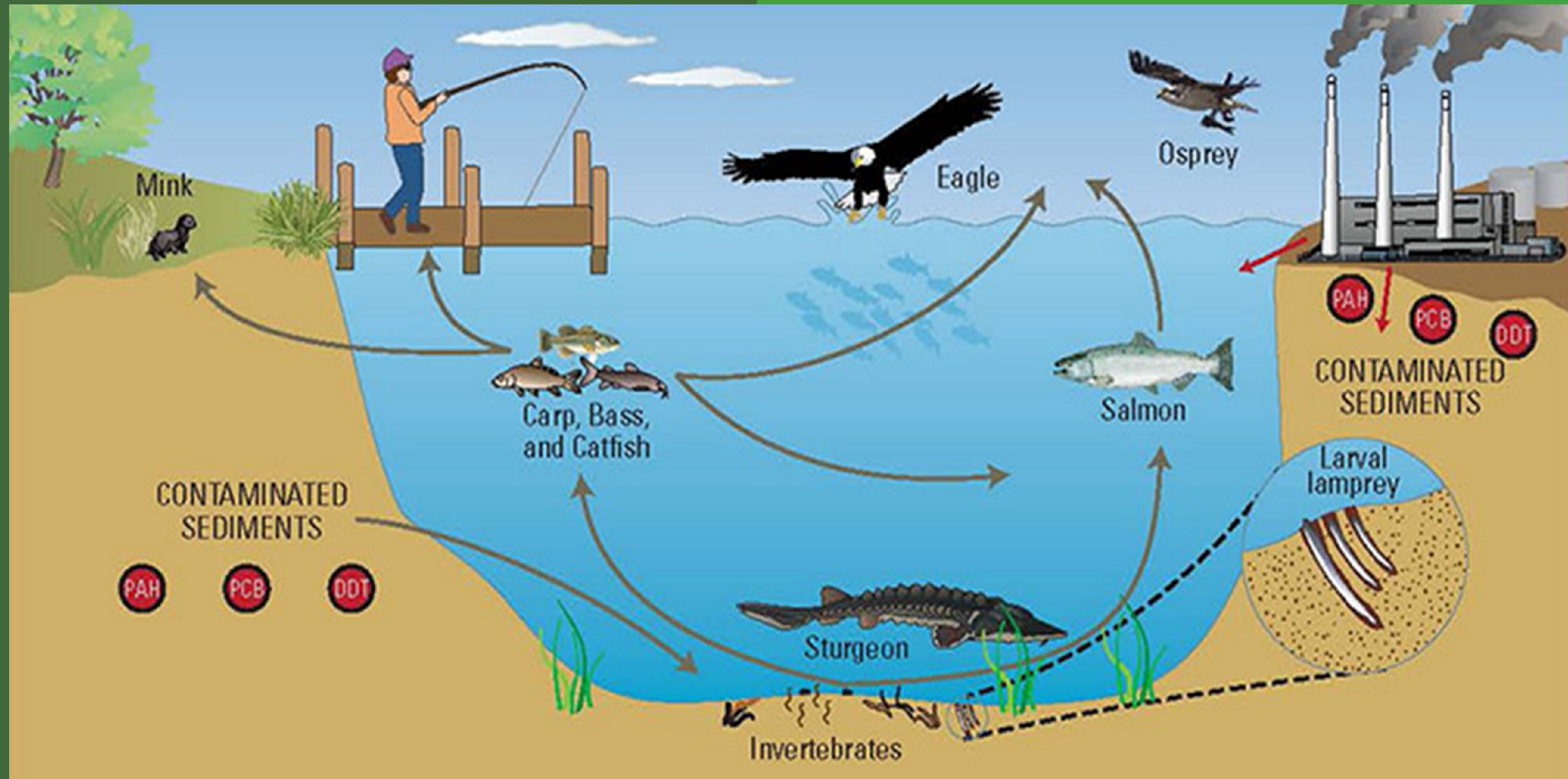
The Upper Hudson, north of Albany, is contaminated with high levels of PCBs in 40 miles of "hot spots."

## Lower Hudson is a Tidal Estuary

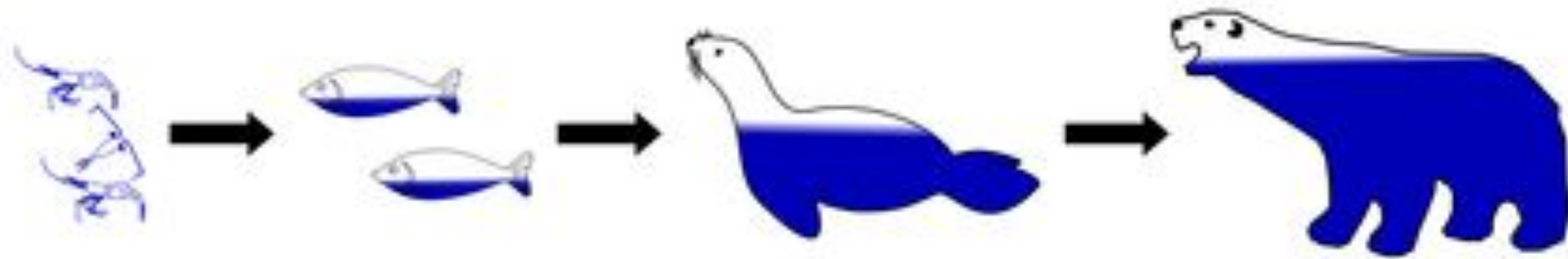
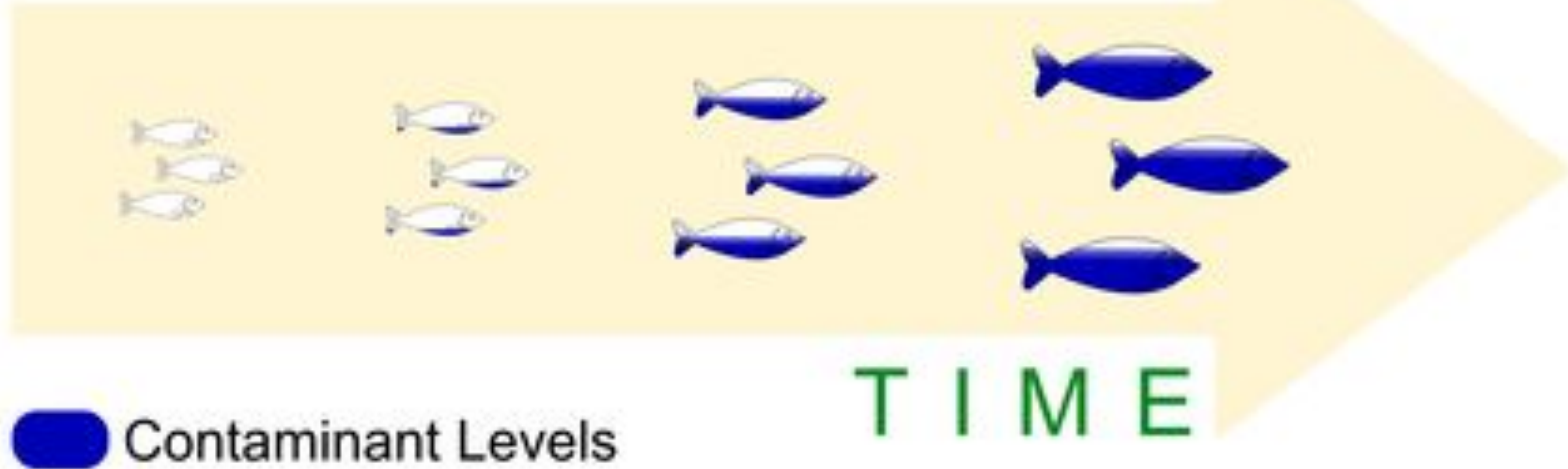
The Hudson itself is an estuary of the Atlantic Ocean and is subject to the push and pull of the tides as far north as the Federal Dam at Troy (across the River from Albany), so it is literally a river that flows both ways. The tidal portion is called the Lower Hudson; it is salty or brackish to just south of Poughkeepsie, which is called the "salt front."



# Unless removed permanently, PCBs accumulate in the body and in the ecosystem.

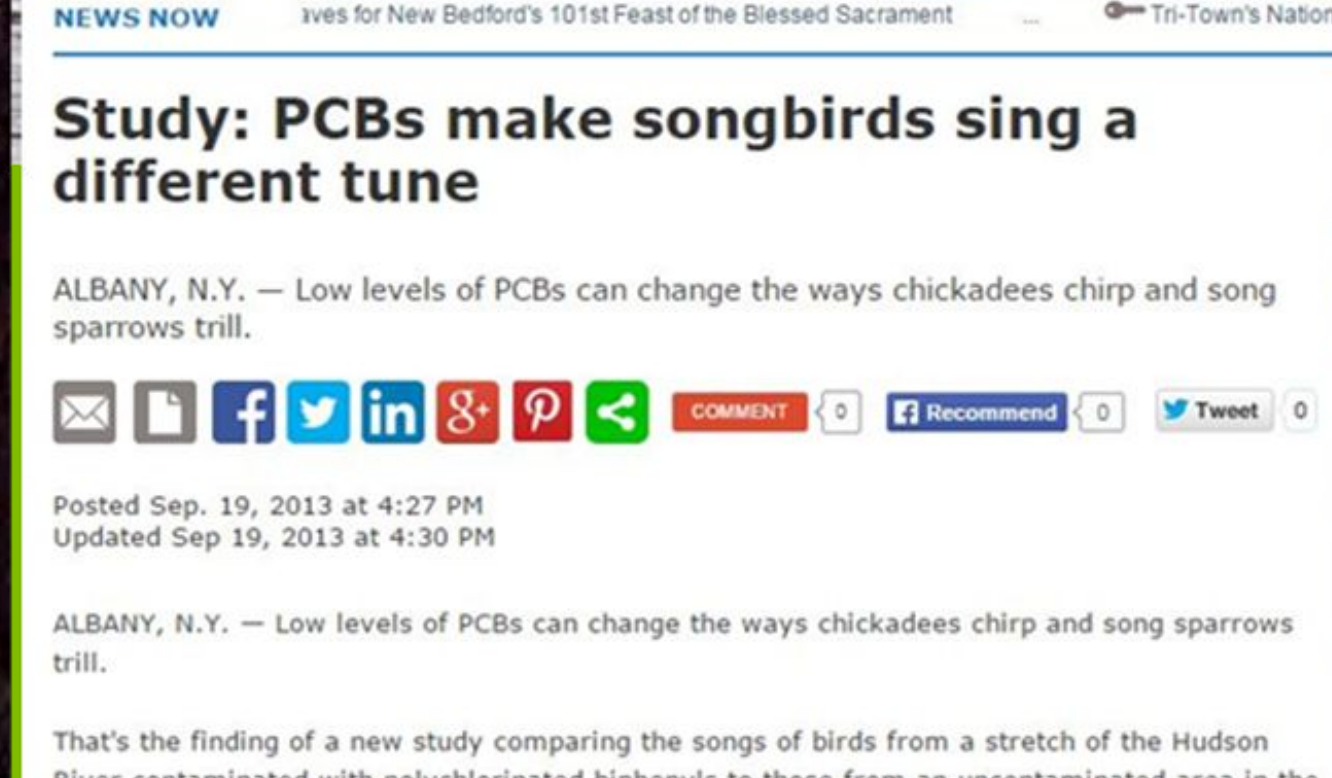
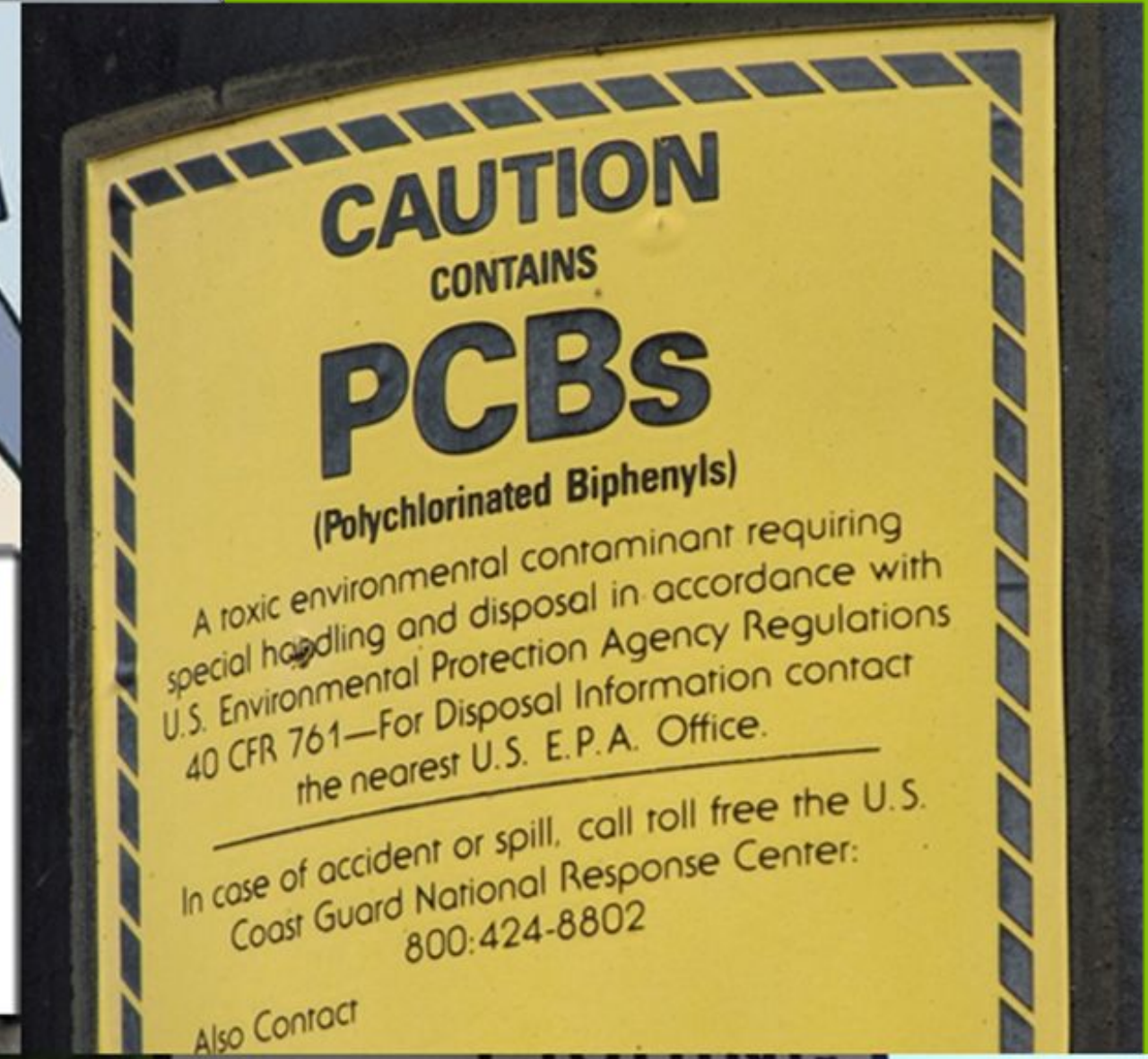
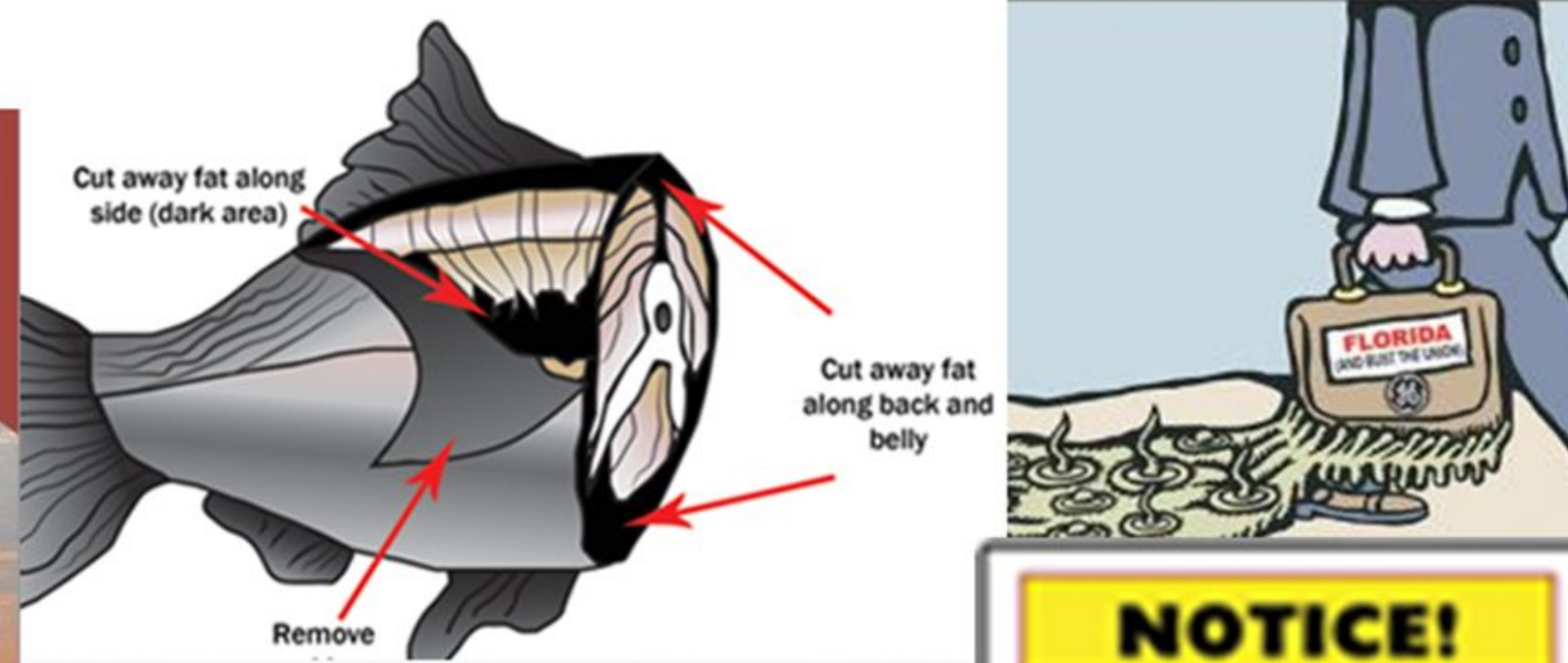
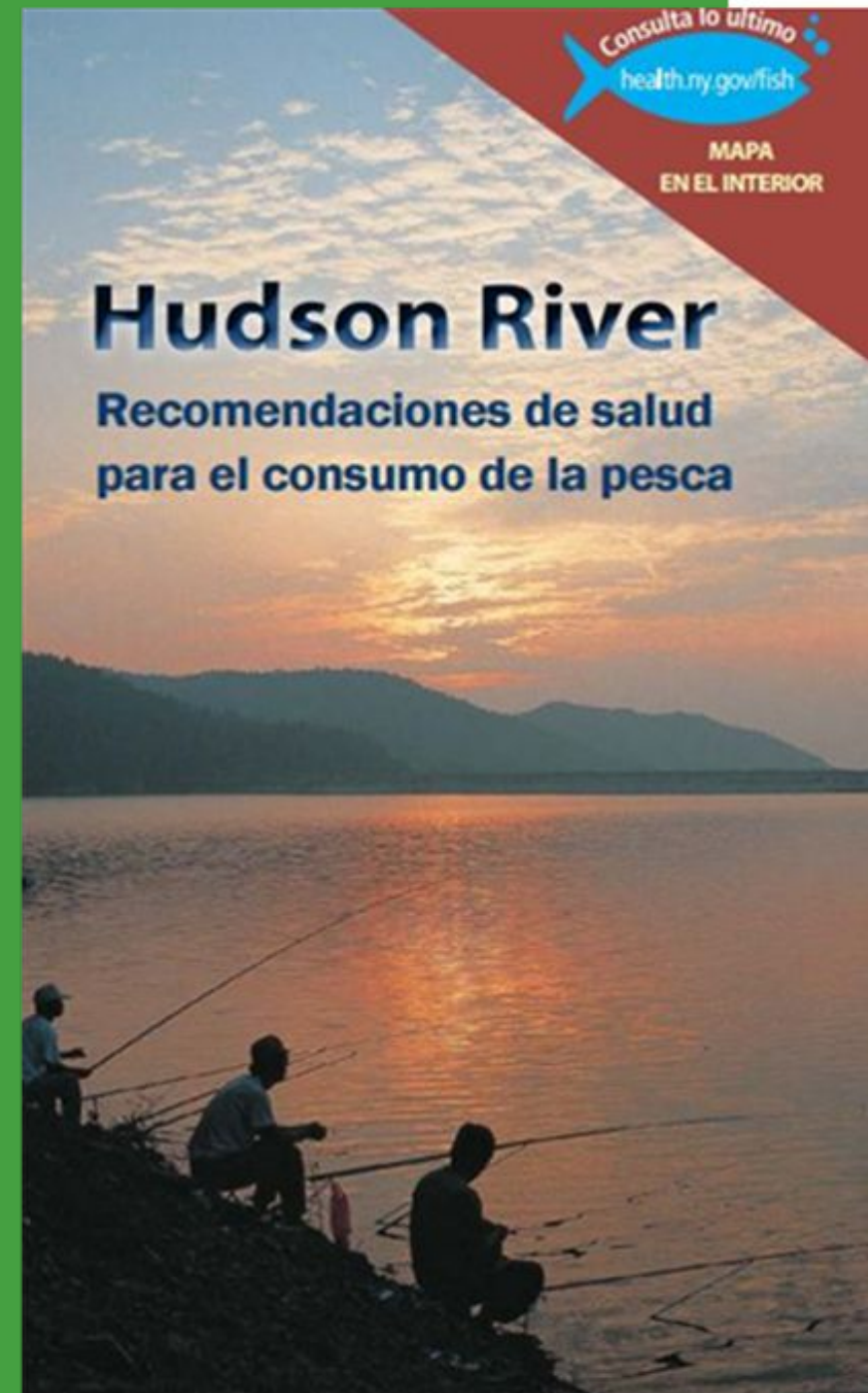


# Bioaccumulation



# Biomagnification

# CURRENT VISION OF THE HUDSON RIVER





# So where are we today?

EPA issued a Certificate of Completion to General Electric although much of its toxic PCBs remain in the Hudson River—including in sediments, water, and fish

Upper Hudson Third Five Year Review announced in April

- Anticipated completion in 2023; draft for public comment released around June 2023

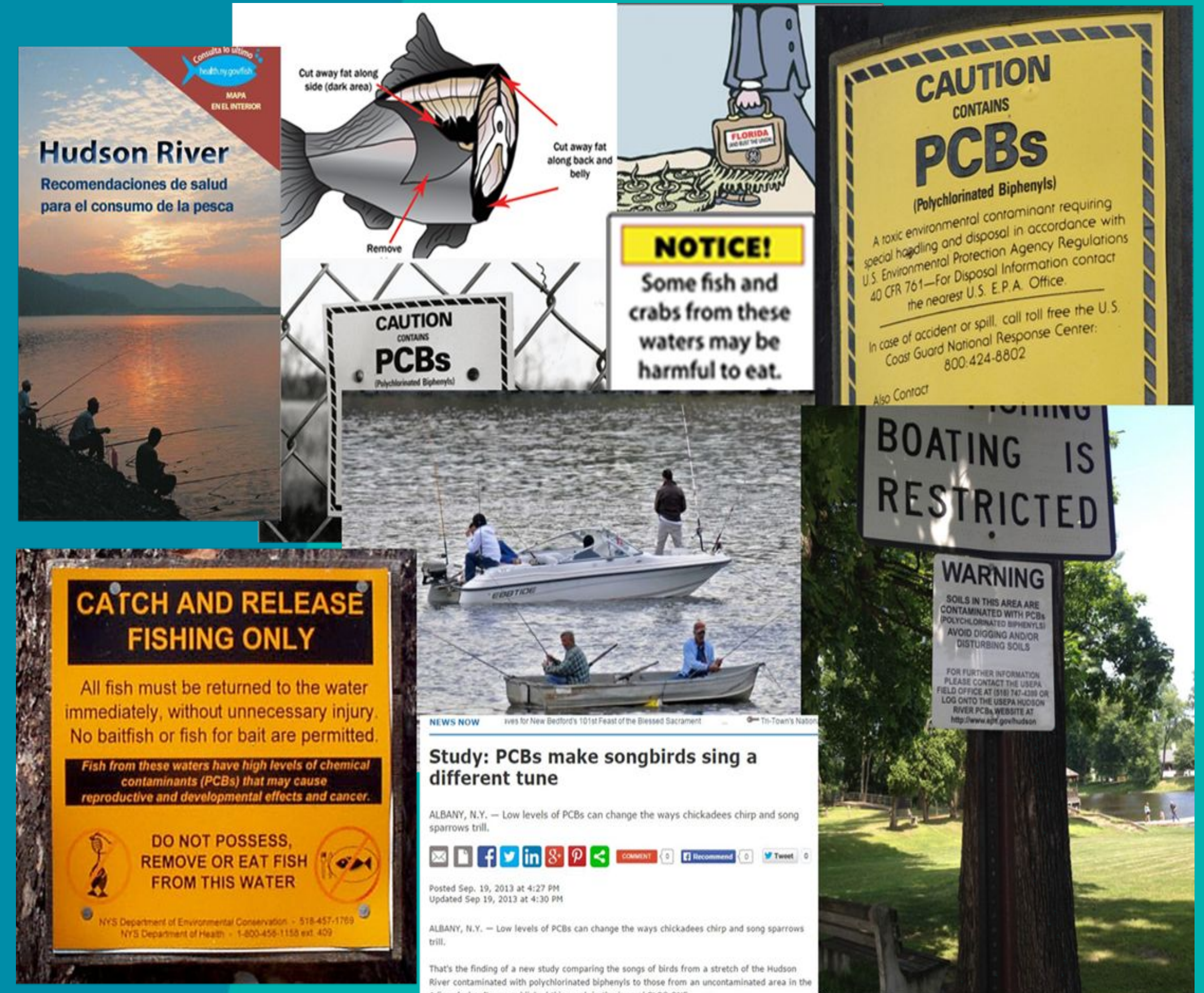
Upper Hudson Floodplains

- RI/FS underway and Record of Decision expected within the next year

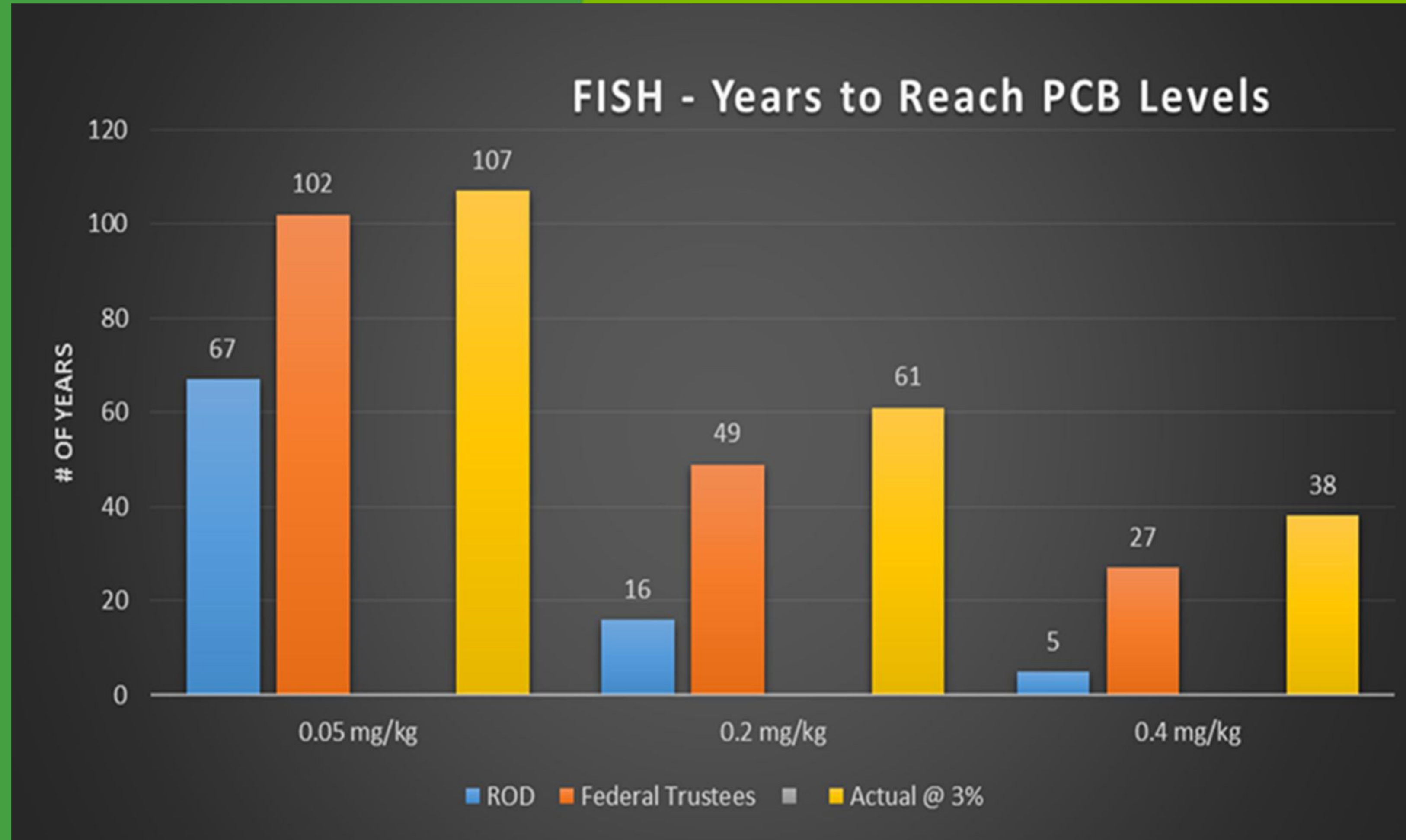
Lower Hudson Remedial Investigation anticipated

- GE sampling voluntarily, but need accountability and oversight of an RI/FS
- Serious concerns about subsistence fishing and uncontrolled exposures

Natural Resource Damage Assessment and Restoration Plan nearing completion

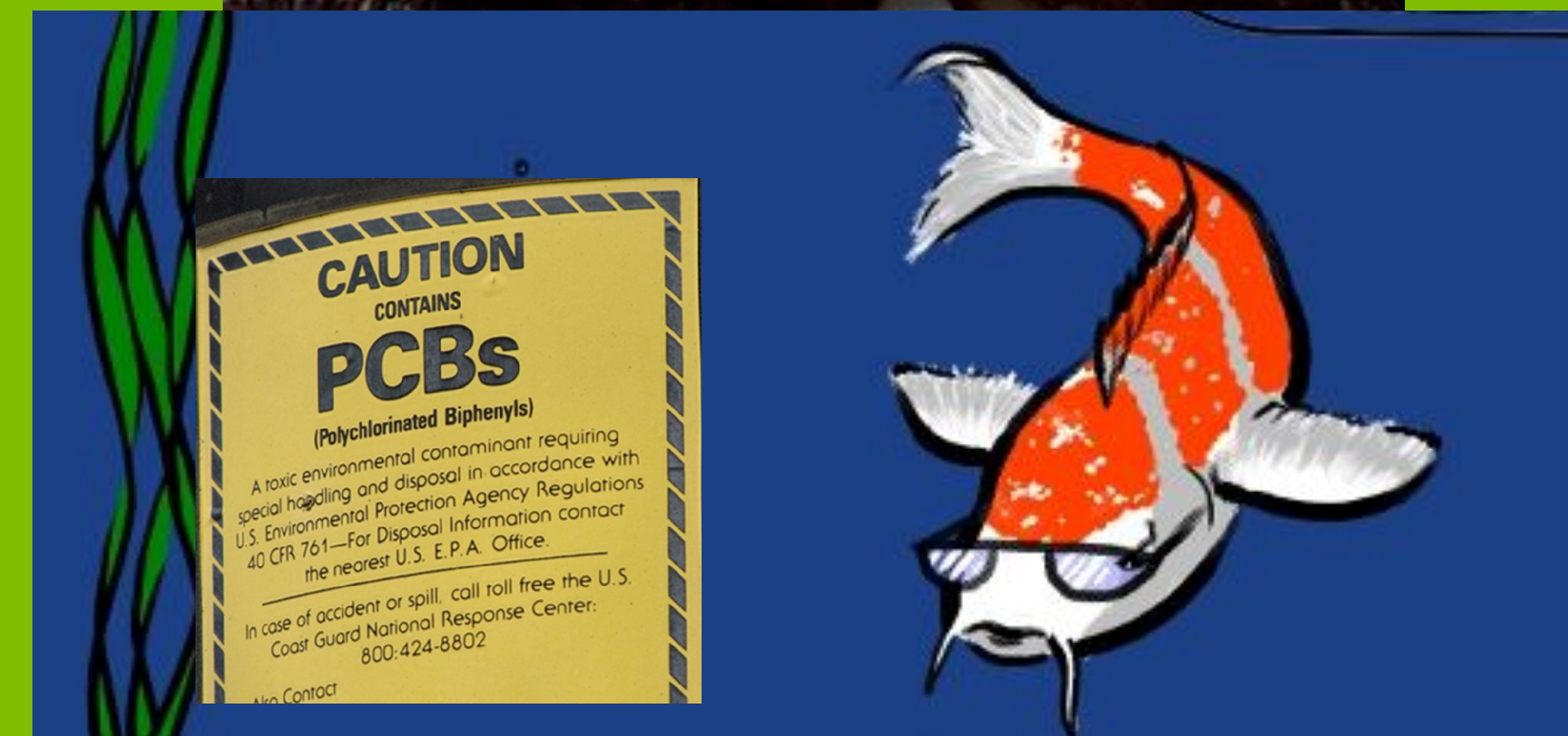


# Rapid risk reduction was key driver for Superfund remediation



EPA reported and is counting on 8% per year decline in fish tissue but actual data results in consistently lower average recovery rates.

- Fish tissue levels remain 300% greater than the first interim goal—0.4 mg/kg—which, according to the ROD, should have been reached by 2020. EPA acknowledges that it is extremely unlikely the next target will be met either.
- EPA admits that the Lower Hudson is not responding as predicted to the dredging upriver and that it appears that local sediments, rather than upstream load, are the main driver of fish body burdens of PCBs.
- EPA’s remedy for Hudson River sediment removal (“OU2 Remedy”) to date is on track to fail to achieve rapid reductions of PCBs within the specific timeframes established to protect human health and the environment.



**Bottom line, the river will remain excessively contaminated for decades. And despite public health warnings, many Hudson Valley residents—particularly those in disadvantaged communities—continue to eat and even subsist on Hudson River fish, while recreational fishing is limited to catch-and-release**

# SCIENCE SHOULD ALWAYS LEAD THE WAY

Integrated Risk Information System (IRIS)  
Chemical Assessment Summary

U.S. Environmental Protection Agency  
National Center for Environmental Assessment

## Polychlorinated biphenyls (PCBs); CASRN 1336-36-3

Human health assessment information on a chemical substance is included in the IRIS database only after a comprehensive review of toxicity data, as outlined in the [IRIS assessment development process](#). Sections I (Health Hazard Assessments for Noncarcinogenic Effects) and II (Carcinogenicity Assessment for Lifetime Exposure) present the conclusions that were reached during the assessment development process. Supporting information and explanations of the methods used to derive the values given in IRIS are provided in the [guidance documents located on the IRIS website](#).

### STATUS OF DATA FOR PCBs

File First On-Line 05/01/1989

Category (section)	Assessment Available?	Last Revised
Oral RfD (I.A.)	message	06/01/1994
Inhalation RfC (I.B.)	not evaluated	
Carcinogenicity Assessment (II.)	yes	10/01/1996

**POLYCHLORINATED  
BIPHENYLS AND  
POLYBROMINATED  
BIPHENYLS**

VOLUME 107

IARC MONOGRAPHS  
ON THE EVALUATION  
OF CARCINOGENIC RISKS  
TO HUMANS

International Agency for Research on Cancer  
World Health Organization

# SCIENCE SHOULD ALWAYS LEAD THE WAY

## **Member**

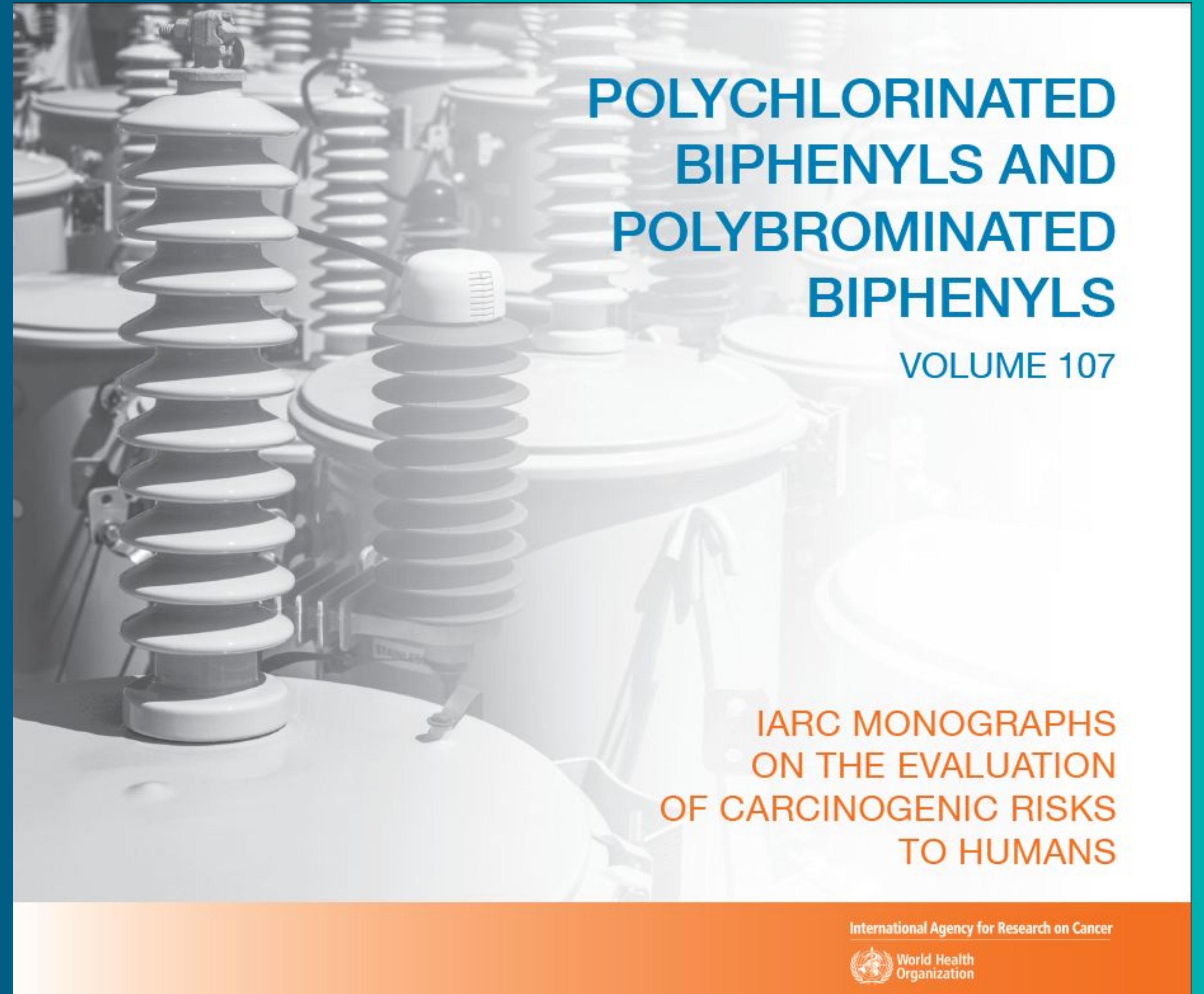
Vincent Cogliano (Overall Chair)  
Integrated Risk Information System (IRIS)  
US Environmental Protection Agency  
Washington DC  
USA

## **Invited specialist**

David O. Carpenter  
Institute for Health and the Environment  
University of Albany  
Rensselaer, NY  
USA

## **Observers**

Erik A. Carlson  
General Electric Company  
Niskayuna, NY  
USA



# Shocking' levels of PCB chemicals in UK killer whale Lulu



The West Coast pod is the only resident group of killer whales in the seas around the British Isles. Lulu was named when she first appeared among them in 1995 and remained with the pod until she died. Now there are only eight whales left in the pod and no calves have ever been spotted, making this population likely to become extinct.

NEWS NOW News for New Bedford's 101st Feast of the Blessed Sacrament ... Tri-Town's Nation

## Study: PCBs make songbirds sing a different tune

ALBANY, N.Y. — Low levels of PCBs can change the ways chickadees chirp and song sparrows trill.

        COMMENT 0  Recommend 0  Tweet 0

Posted Sep. 19, 2013 at 4:27 PM  
Updated Sep 19, 2013 at 4:30 PM

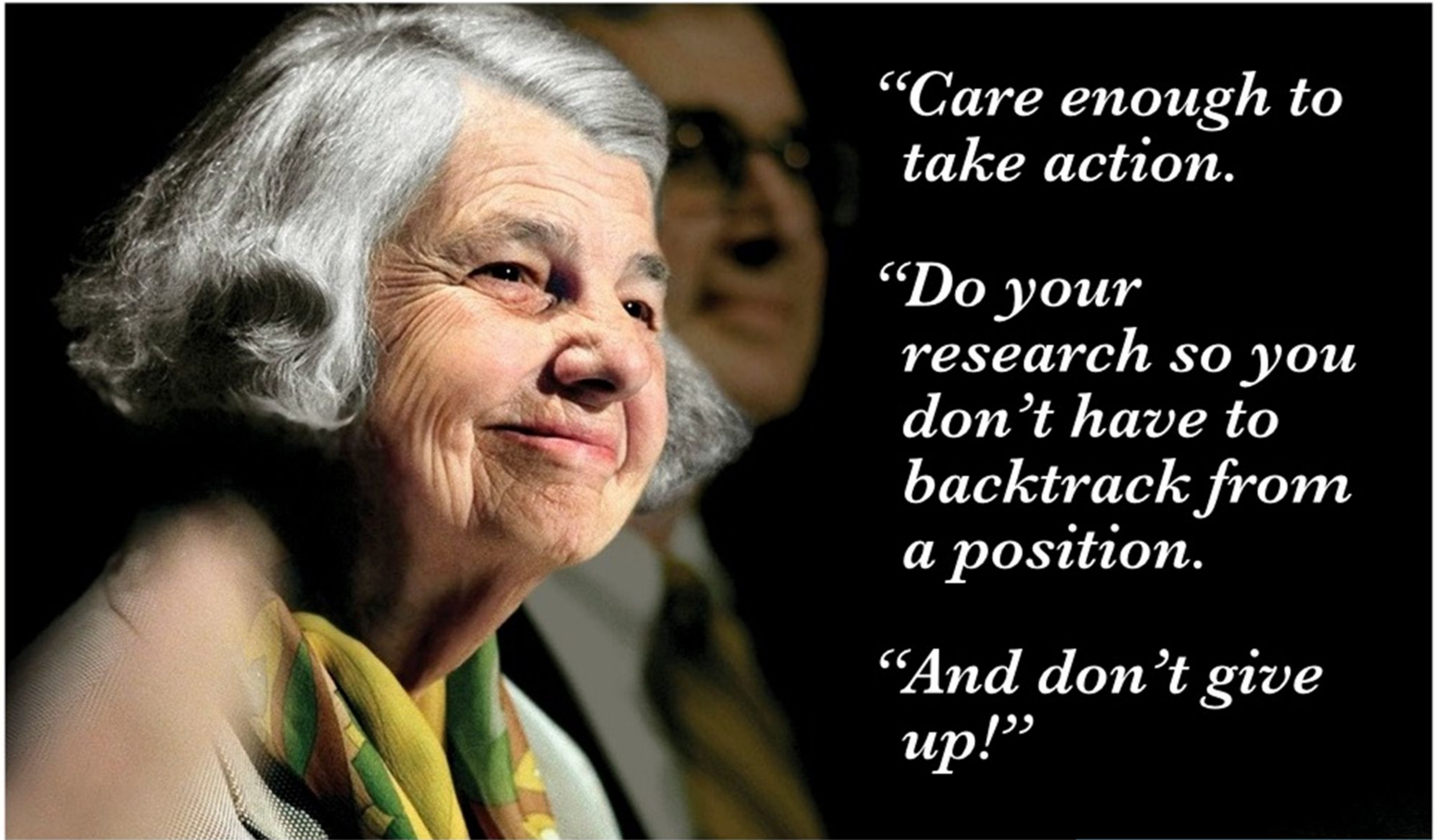
ALBANY, N.Y. — Low levels of PCBs can change the ways chickadees chirp and song sparrows trill.

That's the finding of a new study comparing the songs of birds from a stretch of the Hudson River contaminated with polychlorinated biphenyls to those from an uncontaminated area in the Adirondacks. It was published this week in the journal PLOS ONE.



# A BETTER VISION FOR THE HUDSON RIVER





*“Care enough to  
take action.”*

*“Do your  
research so you  
don’t have to  
backtrack from  
a position.”*

*“And don’t give  
up!”*