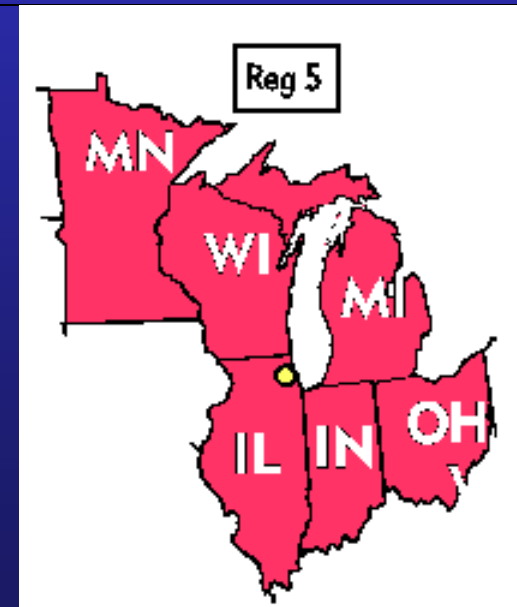


Environmental Public Health Resources at the Agency for Toxic Substances and Disease Registry (ATSDR)

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ATSDR





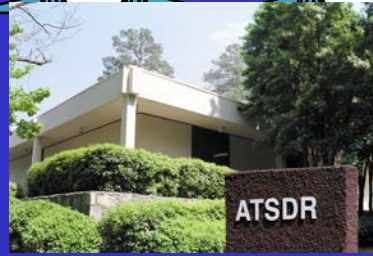
Outline

- Overview of ATSDR
- CDC/ATSDR Tribal Policy
- GLRI Projects
 - Harmful Algal Bloom Health Surveillance
 - Biomonitoring of Tribal Population
- Public health assessment process



ATSDR





Agency for Toxic Substances and Disease Registry (ATSDR)

- ATSDR created as a federal agency within the Public Health Service in 1980
- Sister agency to the National Center for Environmental Health at the Centers for Disease Control and Prevention (CDC)
- Perform Public Health Assessments at Superfund sites and in response to community petitions



ATSDR





Community Evaluations

- **Public Health Assessments-** comprehensive evaluation of environmental exposures
- **Health Consultations-** response to specific issue
- **Exposure Investigations-** confirmation of exposed populations
- **Health Studies-** disease clusters, exposure impact assessments
- **Public Health Advisories-** recommendation for immediate action



ATSDR



Other Resources

- Community fact sheets
- Toxicological Profiles
- Hazardous substance research
- Pediatric Environmental Health Specialty Units (PEHSU)
- Managing Hazardous Materials Incidents
- Medical Management Guidelines
- Case Studies in Environmental Medicine
- Health education



Website: www.atsdr.cdc.gov

1-888-422-8737

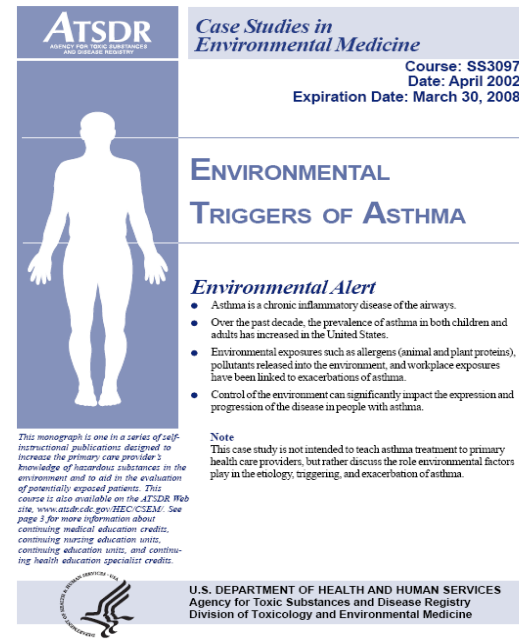


ATSDR



Healthcare Provider Education

- Case Studies in Environmental Medicine
- Continuing Medical Education Courses
 - Disease Clusters
 - Environmental Triggers of Asthma
 - Pediatric Environmental Health
- Grand Rounds- local hospitals



ATSDR
Agency for Toxic Substances and Disease Registry

Case Studies in Environmental Medicine

Course: SS3097
Date: April 2002
Expiration Date: March 30, 2008

ENVIRONMENTAL TRIGGERS OF ASTHMA

Environmental Alert

- Asthma is a chronic inflammatory disease of the airways.
- Over the past decade, the prevalence of asthma in both children and adults has increased in the United States.
- Environmental exposures such as allergens (animal and plant proteins), pollutants released into the environment, and workplace exposures have been linked to exacerbations of asthma.
- Control of the environment can significantly impact the expression and progression of the disease in people with asthma.

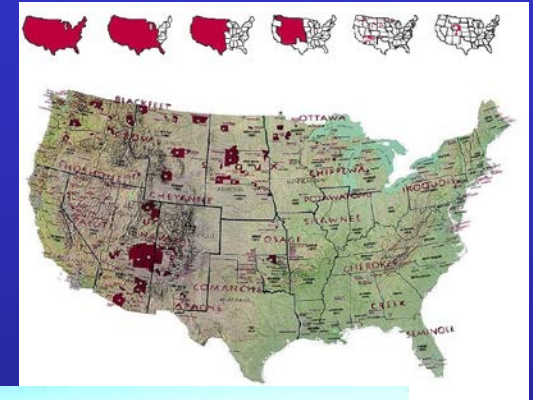
Note
This case study is not intended to teach asthma treatment to primary health care providers, but rather discuss the role environmental factors play in the etiology, triggering, and exacerbation of asthma.

This monograph is one in a series of self-instructional publications designed to increase the primary care provider's knowledge of hazardous substances in the environment and to aid in the evaluation of potentially exposed persons. This course is also available on the ATSDR Web site, www.atsdr.cdc.gov/REC-CSEM. See page 2 for more information about continuing medical education credits, continuing nursing education units, continuing education units, and continuing health education specialist credits.

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Agency for Toxic Substances and Disease Registry
Division of Toxicology and Environmental Medicine

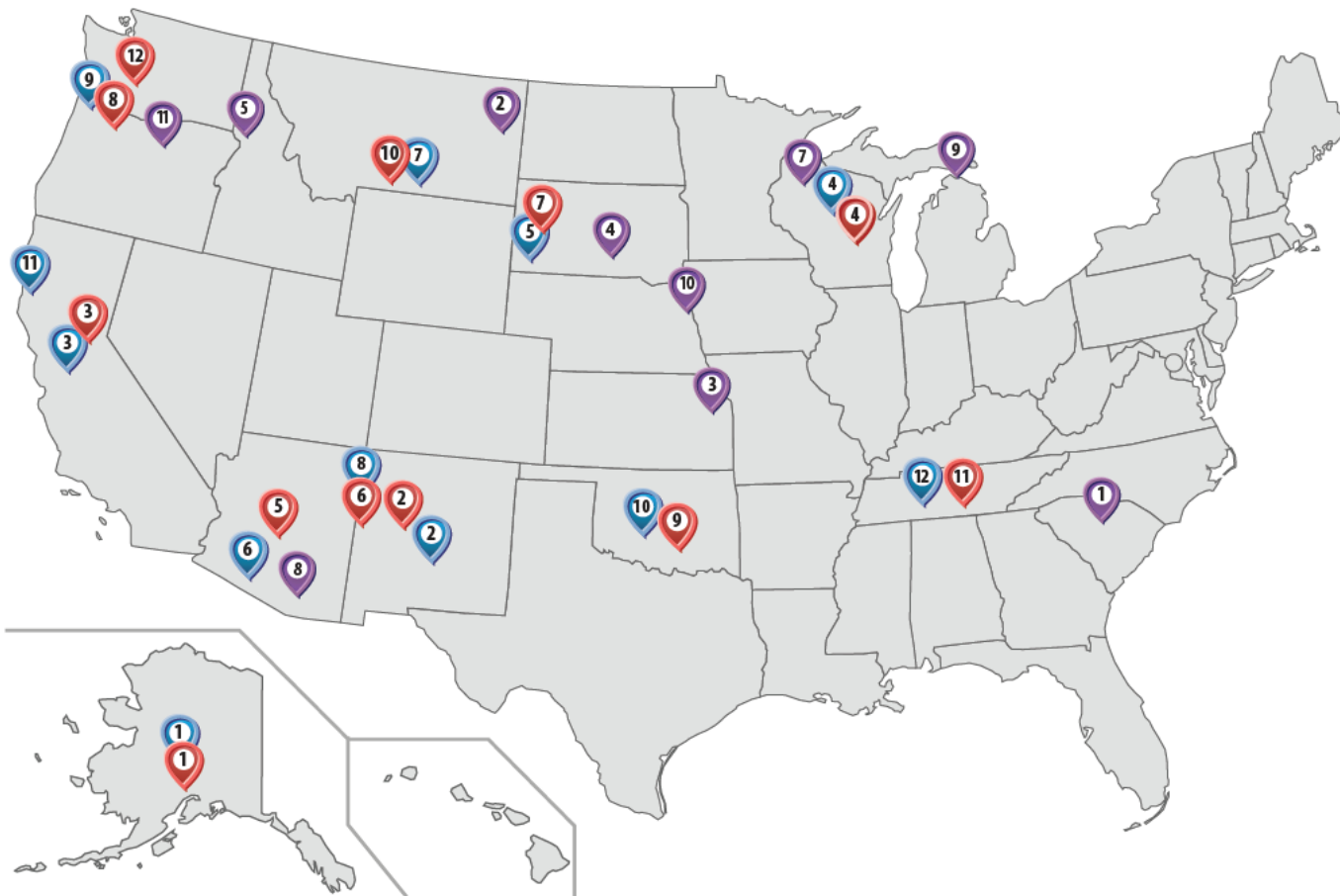
CDC/ATSDR Tribal Consultation Policy -Philosophy-

- Tribes have an inalienable and inherent right to self-governance
- CDC and ATSDR recognize their special obligations to and unique relationship with tribes



Good Health and Wellness in Indian Country: FY 2017 Investments (35 Awards)

National Center for Chronic Disease Prevention and Health Promotion



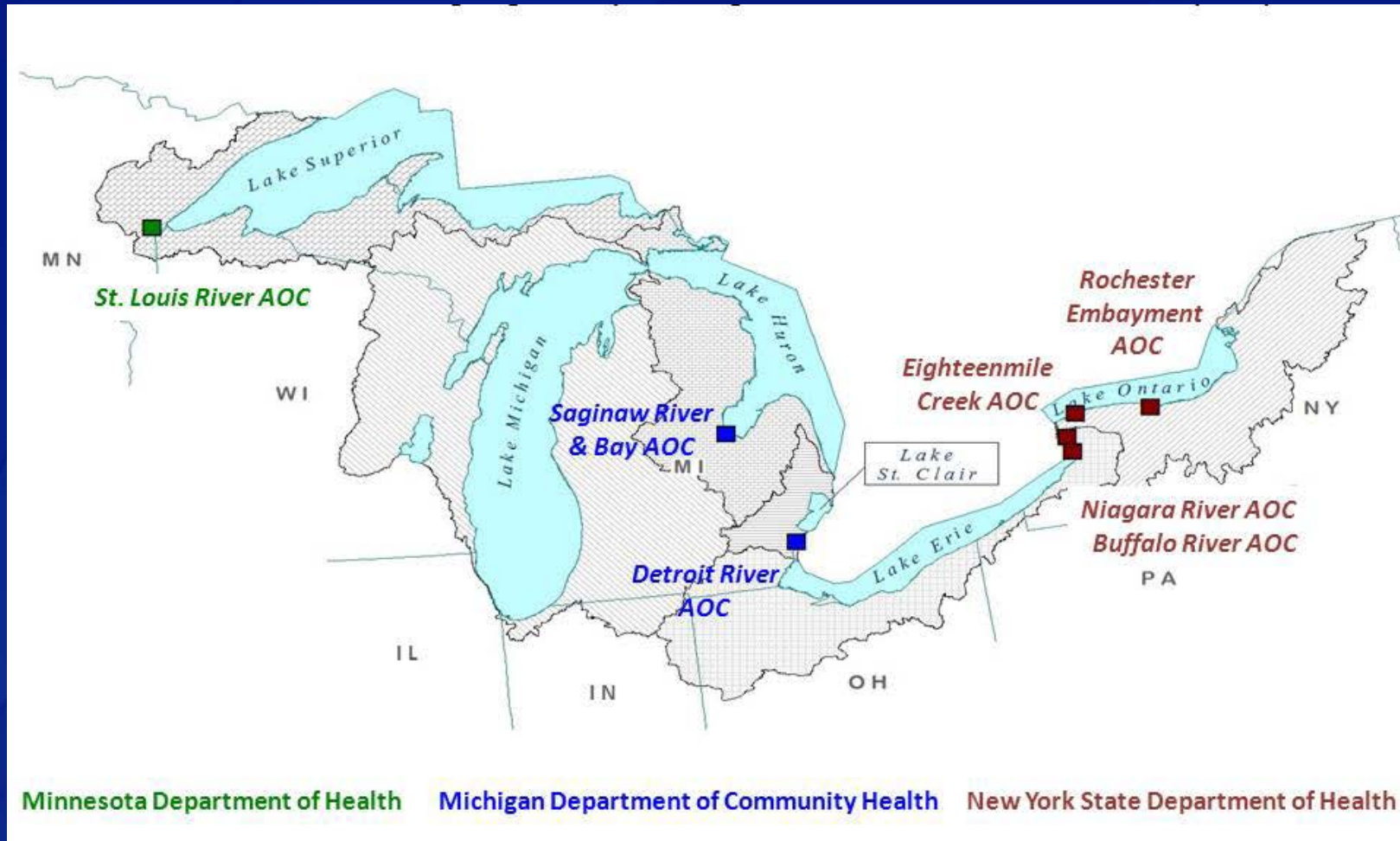
5/10/18

- Tribes (Component 1)**
 1. Catawba Indian Nation
 2. Fort Peck Community College
 3. Kickapoo Tribe in Kansas
 4. Lower Brule Sioux Tribe
 5. Nez Perce Tribe
 6. Pueblo of Santa Ana
 7. Red Cliff Band of Lake Superior Chippewa
 8. San Carlos Apache Tribe
 9. Sault Ste. Marie Tribe of Chippewa Indians
 10. Winnebago Tribe of Nebraska
 11. YellowHawk Tribal Health Center
- Tribal Organizations (Component 2)**
 1. Alaska Native Tribal Health Consortium
 2. Albuquerque Area Indian Health Board, Inc.
 3. California Rural Indian Health Board, Inc.
 4. Great Lakes Inter-Tribal Council, Inc.
 5. Great Plains Tribal Chairmen's Health Board
 6. Inter-Tribal Council of Arizona, Inc.
 7. Montana and Wyoming Tribal Leaders Council
 8. Navajo Nation Tribal Government
 9. Northwest Portland Area Indian Health Board
 10. Oklahoma City Area Inter-Tribal Health Board
 11. United Indian Health Services, Inc.
 12. United South and Eastern Tribes, Inc.
- Tribal Epidemiology Centers (TEC)**
 1. Alaska Native Epidemiology Center
 2. Albuquerque Area Southwest TEC
 3. California TEC
 4. Great Lakes Inter-Tribal Epi Center
 5. Inter-Tribal Council of Arizona TEC
 6. Navajo TEC
 7. Great Plains TEC
 8. Northwest Portland TEC
 9. Oklahoma Area TEC
 10. Rocky Mountain TEC
 11. United South and Eastern TEC
 12. Urban Indian Health Institute

CDC & Indian Country Working Together -
<https://www.cdc.gov/chronicdisease/tribal/index.htm>



Study Locations - Seven Great Lakes AOCs



Minnesota

- Title “Fond du Lac Community Biomonitoring Study”
- Areas of Concern
 - Lake Superior /St. Louis River
- Target Population
 - Tribal members who live in Carleton and St. Louis county
- Sampling Strategy
 - Simple random sampling from clinic roster for eligible tribal members
- 491 Participants



Fond du Lac Community Biomonitoring Study

- ❑ **Minnesota Department of Health (MDH) and the Fond du Lac Band (FDL) of Lake Superior Chippewa collected blood and urine from 491 participants in the Study.**

- ❑ **To identify the following for a select number of environmental chemicals**
 - the amount of each chemical in participants' blood or urine;
 - how the amounts found in participants compare to results from other studies;
 - whether any groups, such as women or elders, have greater amounts of study chemicals in their bodies; and
 - how study participants may have contacted the chemicals

Core Questionnaire Domains

- ❑ Demographics
- ❑ Residential history
- ❑ Housing characteristics
- ❑ Job history
- ❑ Lifestyle factors
- ❑ Dietary intake
- ❑ Recreational activities
- ❑ Smoking history
- ❑ Fish consumption patterns with a focus on fish species and locally caught fish
- ❑ Women's reproductive history



Fond du Lac Community Biomonitoring Study



The screenshot shows the website for the Fond du Lac Band of Lake Superior Chippewa. At the top left is a photo of the Black Bear Casino Resort. The main header features the band's name and logo. A navigation bar includes links for Government, Tribal Culture, Enterprises, Programs & Services, Media, and Contact. Below this is the 'Fond du Lac Human Services Division' banner. The main content area is titled 'Community Health - Biomonitoring Study' and contains three paragraphs of text. A search bar is located on the right side. A vertical menu on the right lists various services, with 'COMMUNITY HEALTH' currently selected. A blue box highlights a definition of biomonitoring.

BLACK BEAR CASINO RESORT

*Fond du Lac Band
of Lake Superior Chippewa*

NAH-GAH-CHI-WA-NONG
FOND DU LAC
RESERVATION

GOVERNMENT TRIBAL CULTURE ENTERPRISES PROGRAMS & SERVICES MEDIA CONTACT

Fond du Lac
Human Services Division

Community Health - Biomonitoring Study

The Great Lakes are among the world's most important freshwater resources. The region's ecosystem is an invaluable environmental and economic resource. The lakes and the surrounding lands provide natural beauty and are vital to the lives of tens of millions of people.

A long history of careless practices contaminated the Great Lakes ecosystem with numerous chemicals and byproducts of modern life. For decades, the Lake Superior watershed has been impacted by commercial, municipal and industrial activities, resulting in chemical spills, abandoned hazardous waste sites, waste disposal and discharges, and contaminated surface runoff.

The Great Lakes Restoration Initiative (GLRI) was established under the stewardship of the U.S. Environmental Protection Agency in 2009 to protect, restore and maintain the Great Lakes ecosystem. With support from the GLRI, the Agency for Toxic Substances and Disease Registry (ATSDR) within the Centers for Disease Control and Prevention created a Great Lakes Biomonitoring Program to fund projects to gather baseline data on environmental chemicals in people within the Great Lakes Basin.

In September 2010, ATSDR gave funds to state health agencies in Minnesota, Michigan, and New York to conduct biomonitoring. From January through November 1, 2013, the Minnesota Department of Health (MDH) and the Fond du Lac Band (FDL) of Lake Superior Chippewa collected blood and urine from 491 participants in the Fond du Lac Community Biomonitoring Study.

Biomonitoring is a tool that can be used to better understand exposures to environmental chemicals. It involves directly measuring the types and amount of substances in a persons body at one point in time.

The study was designed to identify the following for a select number of environmental chemicals:

Search Site:

- ADMINISTRATIVE
- DIABETES PREVENTION
- DIABETES PROGRAM +
- MEDICAL +
- DENTAL +
- OPTICAL
- PHARMACY +
- SOCIAL SERVICES +
- BEHAVIORAL HEALTH +
- PREVENTION
- COMMUNITY HEALTH -
- MAIN PAGE
- BIOMONITORING
- FAMILY SERVICES
- DOULA PROGRAM
- WIC PROGRAM
- ADULT SERVICES
- HEALTH EDUCATION
- STAFF

Study Website: <http://www.fdlrez.com/HumanServices/biomonitoring.htm>

Fond du Lac Community Biomonitoring Study – Community Reports

- ❑ Three reports are available on the study website
 - Bisphenol A, Triclosan, 1-Hydroxypyrene, and PFAS
 - Cadmium, Lead and Mercury
 - Persistent, Bioaccumulative Chemicals

Community Report for Bisphenol A, Triclosan, 1-Hydroxypyrene, and Perfluorochemicals

Fond du Lac Community Biomonitoring Study

October 30, 2015



Fond du Lac Community Biomonitoring Study – Community Reports

Community Report for Cadmium, Lead, and Mercury

Fond du Lac Community Biomonitoring Study

July 1, 2014



Community Report for Persistent, Bioaccumulative Chemicals

Fond du Lac Community Biomonitoring Study

June 29, 2015



Optimize the Monitoring and Use of Waterborne Disease and Outbreak Health Data

- ❑ Centers for Disease Control and Prevention (CDC) has received GLRI funding to expand public health surveillance
 - Build state and regional public health capacity related to harmful algal blooms and ambient waterborne disease in the Great Lakes
 - Engage in state and federal partnerships, data and information sharing
 - Collect better data to assess Great Lakes ecosystem health and GLRI project impacts

- ❑ Project activities include
 - Support for waterborne disease surveillance work in state health departments
 - The One Health Harmful Algal Bloom System (OHHABS)





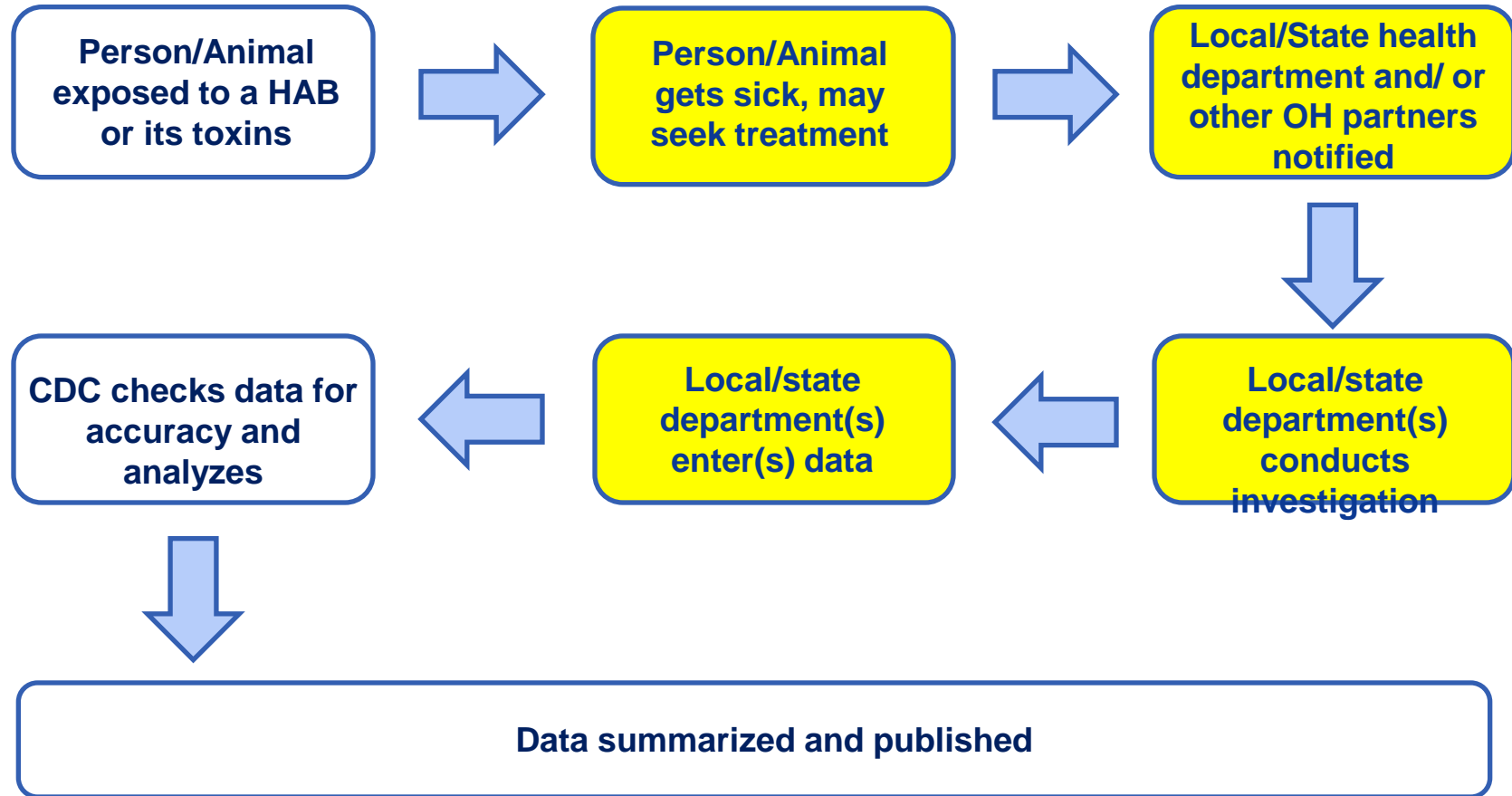
- ❑ **Electronic reporting**
 - Web-based, password-protected system
 - Systematic data collection
 - Launched in 2016

- ❑ **One Health surveillance for fresh and marine water events**
 - HAB events (environmental data)
 - HAB-associated human cases of illness
 - HAB-associated animal cases of illness

- ❑ **Voluntary reporting to CDC**
 - Local, state, and territorial public health partners
 - Their designated environmental health and animal health partners

- ❑ **Reporting frequency**
 - Event-based, not routine water monitoring
 - Not a real-time notification or case investigation system
 - Passive surveillance

General HAB-associated Illness Reporting Process



Data uses:

Summary reports, other publications, data and statistics

Development and support of programs, health promotion, and policies

Related Resources

- ❑ Harmful Algal Bloom – Associated Illnesses: www.cdc.gov/habs
- ❑ HAB health promotion materials: www.cdc.gov/habs/materials/index.html
- ❑ OHHABS information: www.cdc.gov/habs/ohhabs

Harmful Algal Bloom (HAB)-Associated Illness

Harmful algal blooms (HABs) are the rapid growth of algae that can cause harm to animals, people, or the local ecology. A HAB can look like foam, scum, or mats on the surface of water and can be different colors. HABs can produce toxins that have caused a variety of illnesses in people and animals. HABs can occur in warm fresh, marine, or brackish waters with abundant nutrients and are becoming more frequent with climate change.

Publications, Data, & Statistics

HAB Resources

- Health Promotion Materials
- One Health Harmful Algal Bloom System (OHHABS)

Healthy Water Sites

- Healthy Water
 - Drinking Water
 - Healthy Swimming
 - Global WASH
 - Other Uses of Water
 - WASH-related Emergencies &

GENERAL INFORMATION
Frequently asked questions...

ILLNESS & SYMPTOMS
Signs, symptoms, and outcomes...

SOURCES OF EXPOSURE & RISK FACTORS
Who gets it and how...

HABS & THE ENVIRONMENT
Factors that promote growth of HABs...

PREVENTION & CONTROL
How to stay healthy and prevent illness...



Public Health Assessments

- Evaluates exposure to chemicals in the environment and determine if those exposures may cause harm to health
- Reviews exposure pathways, toxicological information, health outcome data, and community concerns
- Reports the results of its evaluation in a public health assessment and recommendations for specific actions to protect health
- Engage the community in planning, implementation, and communication of the assessment



ATSDR



Evaluation- Exposure

- Recreational and subsistence fish consumption is significantly greater than general U.S. population
 - Average diet: 10 - 17.9 g/day
 - Sport fishing amount: 12 - 54 g/day
 - Subsistence fishing: 150 - 500 g/day
- Body burden levels in vulnerable populations are 2 - 8 X higher than general U.S. population



ATSDR



Toxicology: Exposure Doses

- An exposure dose is an estimate of the total amount of a chemical that enters a person's body when exposed to the chemical by inhalation, ingestion, or dermal contact
- Site-specific exposure doses are calculated in order to assess whether exposures are severe enough to caused health effects



Public Health Assessment Process

- Conclusions and Recommendations
 - Identify Hazard Category
 - Identify Data Gaps
 - Follow-up Health Activities
- Public Health Action Plan
 - Determine actions to be taken
 - Identify who will perform actions



ATSDR

