



# **Proceedings of the 2007 National Forum on Contaminants in Fish**

## **Section II-A**

### **Welcome to the 2007 National Forum on Contaminants in Fish**

#### **Forum Co-Chairs and General Moderators:**

*Jeffrey Bigler, Office of Science and Technology, Office of Water, U.S. EPA*

*Eric Frohberg, Maine Center for Disease Control*

#### **Update on EPA's Advisory Program**

*Denise Keehner, Director, Standards and Health Protection Division,  
Office of Science and Technology, Office of Water, U.S. EPA*

#### **Welcome to Maine**

*Dora Anne Mills, Director of the Maine Center for Disease Control*

#### **Reducing Mercury in Maine Fish**

*David P. Littell, Commissioner of the Department of Environmental Protection*

*[This page intentionally left blank.]*

## **Update on EPA’s Advisory Program**

*Denise Keehner, Director, Standards and Health Protection Division,  
Office of Science and Technology, Office of Water, U.S. EPA*

### **Biosketch**

Ms. Denise Keehner is Director of the Standards and Health Protection Division in the Office of Water at EPA’s headquarters. In this capacity, Ms. Keehner is responsible for overseeing the implementation of the Water Quality Standards Program, the Beach Program and the Fish Advisory Program. Before joining the Office of Water in 2003, Ms. Keehner served as Director of the Biological and Economic Analysis Division in the Office of Pesticide Programs (OPP) and also served as the Acting Director of the Environmental Fate and Effects Division in OPP. Ms. Keehner has also held management positions in the Office of Solid Waste and Emergency Response and in the former Office of Toxic Substances. In her 27 years at EPA, she has participated in risk management decision making under the Clean Water Act; the Resource Conservation and Recovery Act; the Federal Insecticide, Fungicide, and Rodenticide Act; the Food Quality Protection Act; and the Toxic Substances Control Act.

## 2007 National Forum on Contaminants in Fish

### Update on EPA's Advisory Program

Denise Keehner, Director  
Standards and Health Protection Division  
Office of Science and Technology  
Office of Water  
US EPA



## What is the EPA Advisory Program?

- Provides technical assistance to state, federal, and tribal agencies on matters related to assessing health risks and benefits associated with consuming locally caught fish.
  - National guidance documents and outreach
  - National databases
  - Assistance in issuing advisories
  - National conferences and workshops
  - Grants for sampling and analysis
  - Conduct special studies
- Also issues advisories when necessary



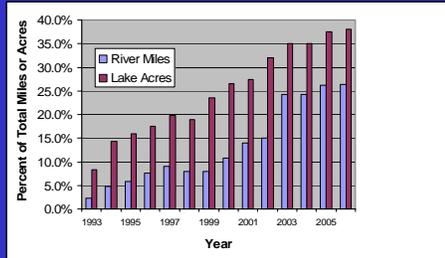
## National Listing of Fish Advisories (1993-2006)

- The NLFA is a Website that houses a compilation of fish consumption advisory information voluntarily provided to EPA by states, territories, tribes
- It contains information on the geographic locations of the waters under advisory or safe eating guidelines, the type of advisory (limit consumption or do not eat), the type of fish covered, the target population (e.g., general or children and expectant mothers), meal advice, and the lake acres and miles under advisory in 2004
- The NLFA also includes an extensive database of fish tissue contaminant data for waters of the U.S.
- During 2008, we will form a workgroup to look at the current NLFA and determine if changes need to be made to the database or public interface



## National Listing of Fish Advisories (2005-2006)

### Percentage of River Miles and Lake Acres Under Advisory, 1993-2006



Year	River Miles (%)	Lake Acres (%)
1993	~2.0	~8.0
1995	~3.0	~15.0
1997	~4.0	~18.0
1999	~5.0	~22.0
2001	~6.0	~25.0
2003	~7.0	~28.0
2005	~8.0	~32.0
2006	~9.0	~35.0



## 2007 National Listing of Fish Advisories (2005-2006)

### Number of Safe Eating Guidelines by State (2006)



Legend:

- Guidelines exist for both specific waterbodies and statewide rivers and/or lakes
- Guidelines exist for specific waterbodies only
- Statewide river and lake guidelines only
- No safe eating guidelines
- Statewide coastal guideline

State counts: Alaska=1, HI=1, AS=1, GU=1, PR=1, VT=7, CT=1, NJ=12, MD=5



## MOU with FDA

- In June 2005, EPA Office of Water and FDA CFSSAN signed a MOU regarding greater collaboration between EPA and FDA regarding contaminants in fish and shellfish and safety for consumption.
- The MOU lays out goals and objectives and describes how they will be achieved by:
  - Promoting the use of the best available science and public health policies;
  - Promoting the sharing and availability of appropriate information among the agencies' health and environmental professionals and the public;
  - Encouraging environmental monitoring efforts by FDA/CFSSAN and EPA/OW and stakeholders;
  - Encouraging the development of public health advice that considers both risks and benefits of consumption of commercial and noncommercial fish and shellfish; and
  - Promoting uniformity where appropriate in public health messages regarding consumption of commercial and noncommercial fish and shellfish.



### MOU Outreach for The Joint Federal Advisory

- Various outreach tools have been developed
- To improve our outreach, EPA and FDA have conducted several surveys on the public's perception of, and sources of information about, the benefits and risks of fish consumption
- FDA and EPA attend National Medical Conferences to increase awareness about Risks and Benefits of Fish Consumption among Medical Professionals




7

### Current EPA Projects

- Release of the National Lake Fish Tissue Study
  - Currently undergoing Peer review, scheduled for release this Fall
- Study on Personal Care Products and Pharmaceuticals in Fish Tissue
  - Five selected sites in effluent dominated streams
- Study on the Awareness and Effectiveness of the Mississippi Delta Advisory
  - Joint EPA/FDA/Mississippi Department of Environmental Quality Project
- Study of Historical Mercury Advisory Sites
  - In cooperation with several state advisory programs
- IRIS Study on PBDEs
  - Completed draft, undergoing final agency review



8

### What are the Future Directions?

- Continue working on approaches to evaluating how health benefits may play a larger role in developing advisories and messages
- Continue looking at emerging contaminants
  - PPCPs and other PBTs
- Complete study on historical mercury advisories
  - Have tissue levels changed enough to warrant revising advisories?
- Continue working with states on increased monitoring and issuing advisories or safe eating guidelines
- Continue work with FDA on environmental contaminants in fish and shellfish and the safety of fish and shellfish for consumption by U.S. consumers



9

### What are the Future Directions? (continued)

- Continue developing and distributing outreach products to consumers – including a new brochure aimed at subsistence fishers
- Plan for the 2009 forum
- Last, we will continue working with or state and appropriate federal partners to identify and invite more Tribes, Alaska villages, and representatives of various ethnic groups to join us in this Forum.



10

*[This page intentionally left blank.]*

## **Welcome to Maine**

*Dora Anne Mills, Director of the Maine Center for Disease Control*

### **Biosketch**

Dr. Dora Anne Mills (M.D., M.P.H.) is Director of the Maine Bureau of Health. Dr. Mills is a native of Maine and a graduate of Bowdoin College, the University of Vermont College of Medicine, the Children’s Hospital of Los Angeles Internship and Residency Program, and the Harvard School of Public Health. She practiced medicine in Tanzania, East Africa; Los Angeles, CA; and Farmington, ME, before taking her current job in 1996 as the Director of the Maine Bureau of Health and as Maine’s Chief Health Officer. Dr. Mills is a frequent public speaker on a range of health issues.



**Welcome to Maine**



**Maine Health and Human Services**  
**Maine Center for Disease Control and Prevention**

*Our vision is Maine people enjoying safe, healthy and productive lives.*

**This is Maine's State Bird**



**This is NOT Maine's State Bird**

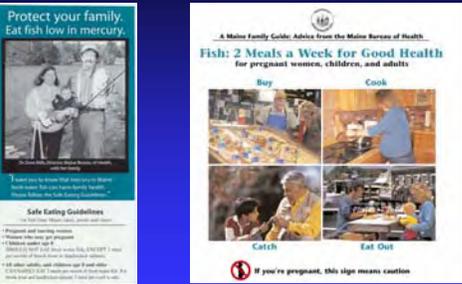


Black Fly



Black-capped Chickadee

**The Maine CDC and Fish Advisories**



**Protect your family. Eat fish low in mercury.**

**Fish: 2 Meals a Week for Good Health for pregnant women, children, and adults.**

**Safe Eating Guidelines:**

- Pregnant and nursing women
- Women planning pregnancy
- Children under 6
- All other adults and children age 6 and older

**If you're pregnant, this sign means caution**



**Portland Head Light**



**Maine Health and Human Services**  
**Maine Center for Disease Control and Prevention**

## Reducing Mercury in Maine Fish

*David P. Littell, Commissioner of the Department of Environmental Protection*

### **Biosketch**

Mr. David Littell is Commissioner of the Maine Department of Environmental Protection. He was appointed by Governor John Baldacci in December 2005. In this capacity, he is charged with protecting and improving public health and Maine's water, air, and environmental quality and overseeing more than 400 scientists, engineers, geologists, and environmental specialists in four offices across the state. Mr. Littell graduated with Honors from Harvard Law School, and he served as Managing Editor of the *Harvard Environmental Law Review*. Mr. Littell graduated *magna cum laude* at Princeton majoring in the Woodrow Wilson School of Public and International Affairs. He also served as Chairman of for Princeton's Honor Committee and Class President. Mr. Littell served as an Intelligence Officer in the U.S. Naval Reserve, resigning in 2003 as a Lieutenant Commander. Mr. Littell's previous professional work experience includes

2 years as Department of Environmental Protection Deputy Commissioner and 11 years as a partner at a nationally recognized Portland (Maine) law firm, where he specialized in environmental and land-use regulations. Mr. Littell's personal commitment to environmental protection consists of involvement in many organizations, including Portland Trails as President and 10-year trustee, the Casco Bay Estuary Project, President of the Portland Downtown Corporation, and a member of the Portland Bayside Brownfield Redevelopment Committee. He also serves on the Maine Center for Disease Control and Prevention's Childhood Lead Poisoning Prevention Advisory Committee, and he has performed *pro bono* legal work to represent children in state child-protective proceedings.

## Reducing Mercury in Maine Fish



National Fish Contamination Forum July 23, 2007 Portland, Maine  
David P. Littell, Commissioner Maine Department of Environmental Protection

prepared by Maine DEP 1

## Welcome to Maine

- 5,800 lakes and ponds
- 32,000 miles of rivers and streams
- 5,300 miles of coastline
- Nearly 90% forested; most heavily forested state in the nation
- Home to approximately 20% of the nation's intact brook trout populations and the primary steward of 97 percent of the wild brook trout inhabiting large lakes in the eastern US.

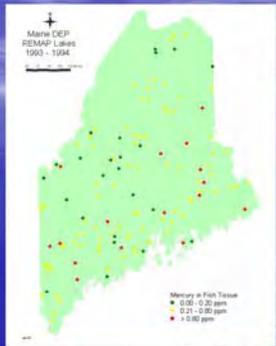
prepared by Maine DEP 2

## Maine has great water

- 95% of Maine waters meet their CWA designated uses.
- 98% of our rivers and streams are well above CWA Act minimum standards.

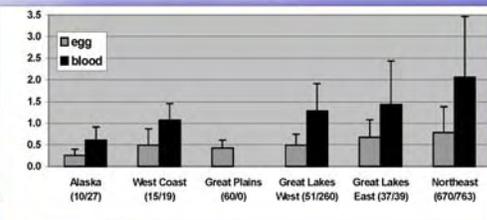
prepared by Maine DEP 3

## Except... Maine also has statewide mercury fish advisories



prepared by Maine DEP 4

## Mean Egg and Blood Hg Levels North American Loons



Region	Sample Size	Mean Egg Hg (ppm)	Mean Blood Hg (ppm)
Alaska	10/27	~0.2	~0.6
West Coast	15/19	~0.5	~1.1
Great Plains	60/0	~0.4	~0.5
Great Lakes West	51/260	~0.5	~1.3
Great Lakes East	37/39	~0.7	~1.4
Northeast	670/763	~0.8	~2.1

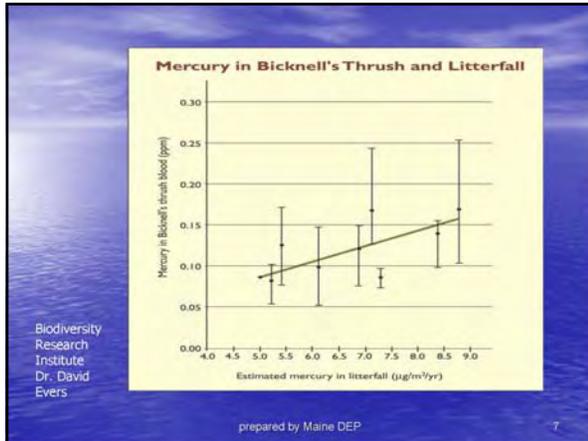
Biodiversity Research Institute  
Dr. David Evers

prepared by Maine DEP 5

## Results from Maine's participation in EPA's 1993 REMAP Project prompted

- First statewide fish advisory in 1994
- Surface Water Ambient Toxics program
  - yearly sampling and research of Hg and other toxics continues
  - includes emerging contaminants such as PBDE's and Endocrine Disruptor effects.

prepared by Maine DEP 6



### One of the Nation's Strictest Mercury Emissions Limits

- New Maine Hg emission limits of 35 lbs/facility/yr dropping to 25lbs/facility/yr Jan 1, 2010
- Required Hg reduction plans for Facilities emitting Hg at more than 10 lbs/yr after Jan 1, 2007

prepared by Maine DEP 8

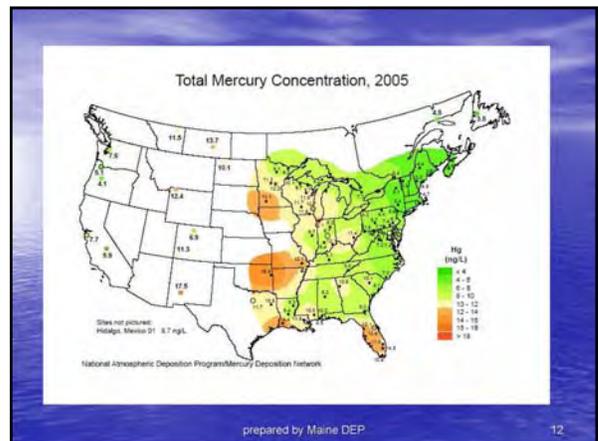
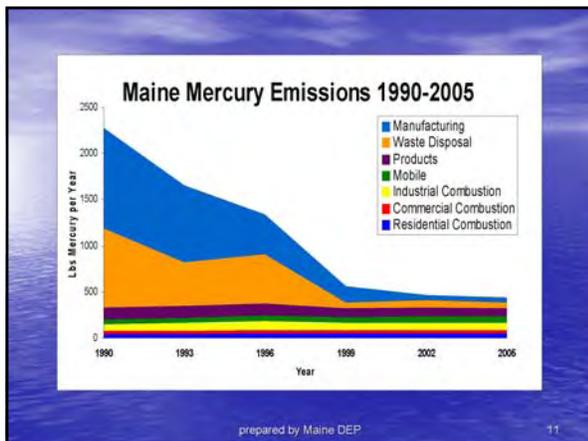
### Reduce Hg in our waste stream

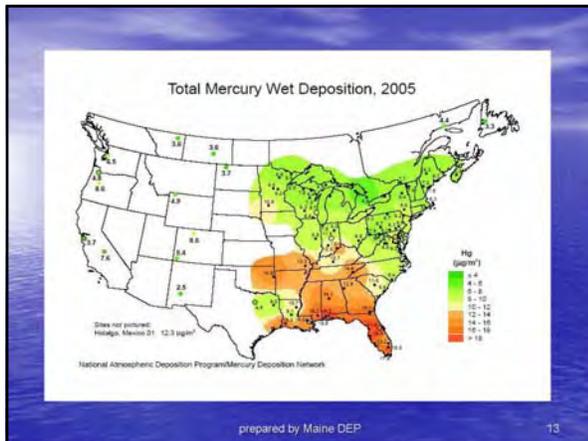
- 2002 Ban on fever thermometers, dairy manometers
- 2003 Ban on switches, relays, instruments, measuring devices accounting for 75% of historical use of Hg in Maine products
- 2003 First in the nation mandated switch removal from junk autos
  - Court challenge successfully upheld Maine's law including product stewardship principals
  - Other states passed similar laws that led to National Switches MOU with industry 2006
- 2004 Mandated amalgam separators
- 2005 Hg products disposal ban for households

prepared by Maine DEP 9

### 1<sup>st</sup> in the nation button cell battery ban effective June 2011

prepared by Maine DEP 10





### Landmark Binational Mercury Reduction Efforts

- 1998 New England Governor's/Eastern Canadian Premier's landmark Mercury Action Plan with work ongoing
- 2002 goal of 50% reduction from in region sources was exceeded
- 75% reduction goal for 2010

prepared by Maine DEP 14

Northeast regional mercury emissions decreased approximately 70% between 1998 and 2002

In region reductions will continue as a result of comprehensive mercury product legislation now in effect in all Northeast states, air emissions limits that control 90-95% of mercury emissions as well as requirements for dental amalgam separators <sup>1</sup>Regional TMDL fact sheet

prepared by Maine DEP 15

### Northeast Regional TMDL-2007

- The New England States and New York have developed a regional TMDL plan so fish will be safe to eat
- Substantial reductions in anthropogenic emissions are needed to eliminate fish consumption advisories

prepared by Maine DEP 16

**Given that at least 90 percent control on out-of-region coal-fired power plants is achievable and cost-effective, the Northeast TMDL calls for this level of control as the minimum initial first stage of out-of-region implementation.**

prepared by Maine DEP 17