



TAKING THE
MERCURY
INITIATIVE

state of louisiana

MERCURY RISK REDUCTION PLAN

PREPARED FOR LOUISIANA GOVERNOR KATHLEEN BABINEAUX BLANCO



PREPARED BY THE LOUISIANA
DEPARTMENT OF ENVIRONMENTAL QUALITY | JULY 2007

Mercury Risk Reduction

Chris M. Piehler
Clean Waters Project
Director





“ THE MOST SIGNIFICANT RISK OF EXPOSURE TO MERCURY BY HUMANS IS FROM THE CONSUMPTION OF FISH. ”

Hg

TAKING THE MERCURY INITIATIVE

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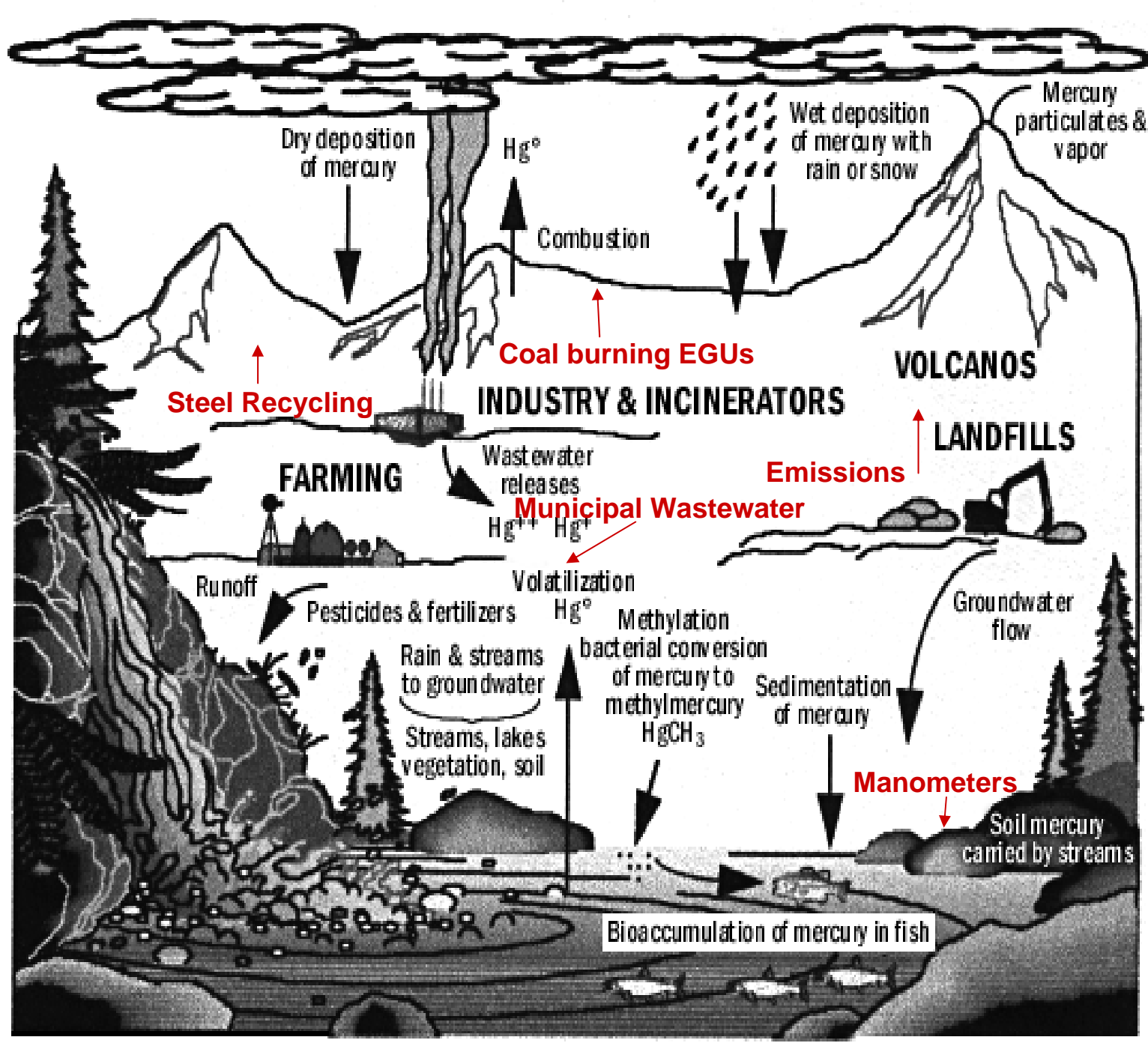
MERCURY RISK REDUCTION PLAN

PREPARED FOR LOUISIANA GOVERNOR KATHLEEN BABINEAU BLANCO





Hg



Hg

Blood Mercury Levels in US Children and Women of Childbearing Age



- Scientists have found that methyl mercury contamination of seafood can cause heart damage and irreversible impairment to brain function in children, both in the womb and as they grow.
- Approximately 8% of women have blood mercury concentrations higher than the EPA's recommended reference dose (5.8 ppb).
- EPA reports that one in every six women of childbearing age has enough mercury in her bloodstream to threaten the health of her child.
- More than 600,000 infants are born each year in the US with blood mercury levels higher than 5.8 ppb, the EPA level of concern.



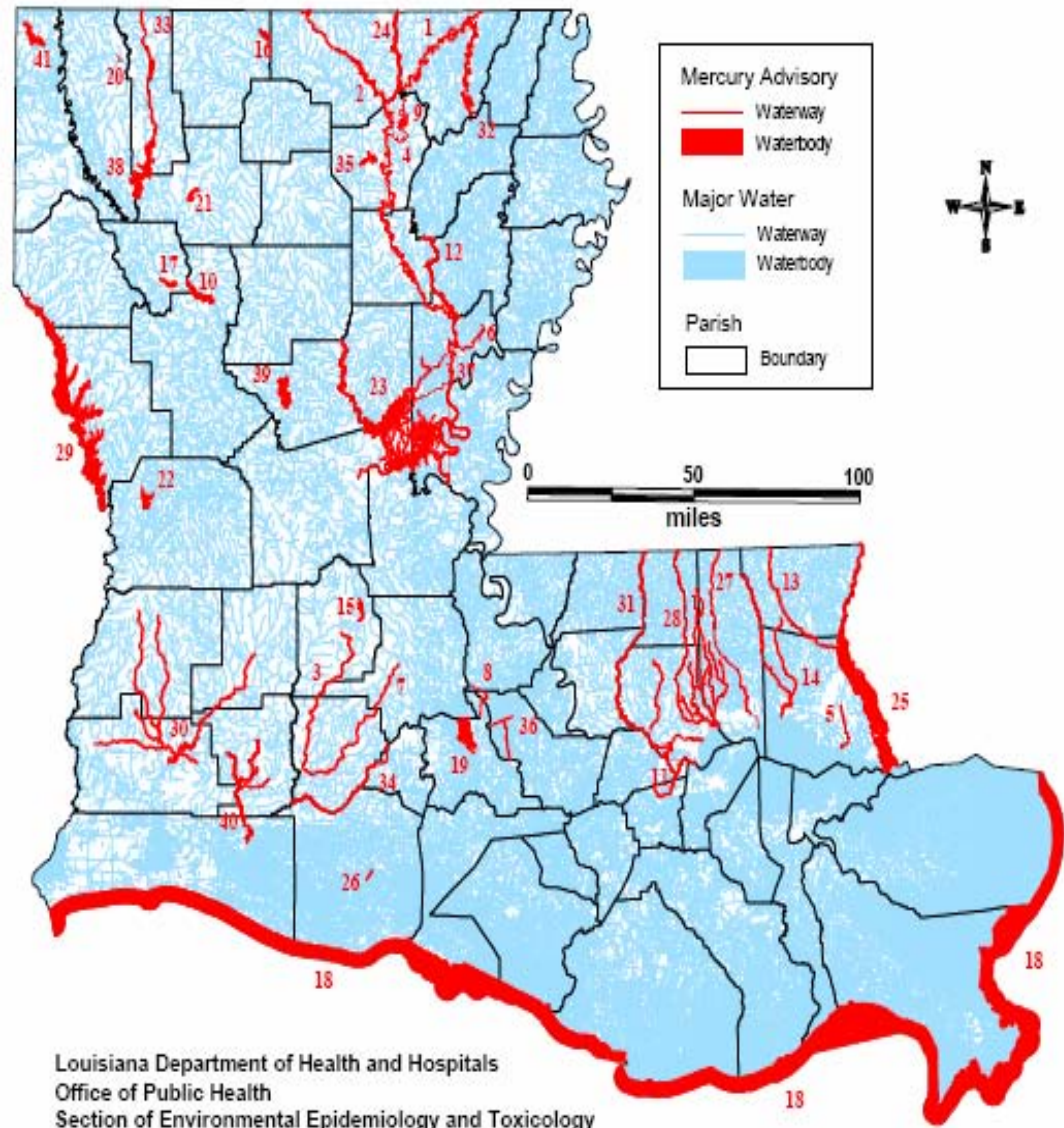
Reducing Risks

1. Reduce human-related releases
2. Manage potential exposures





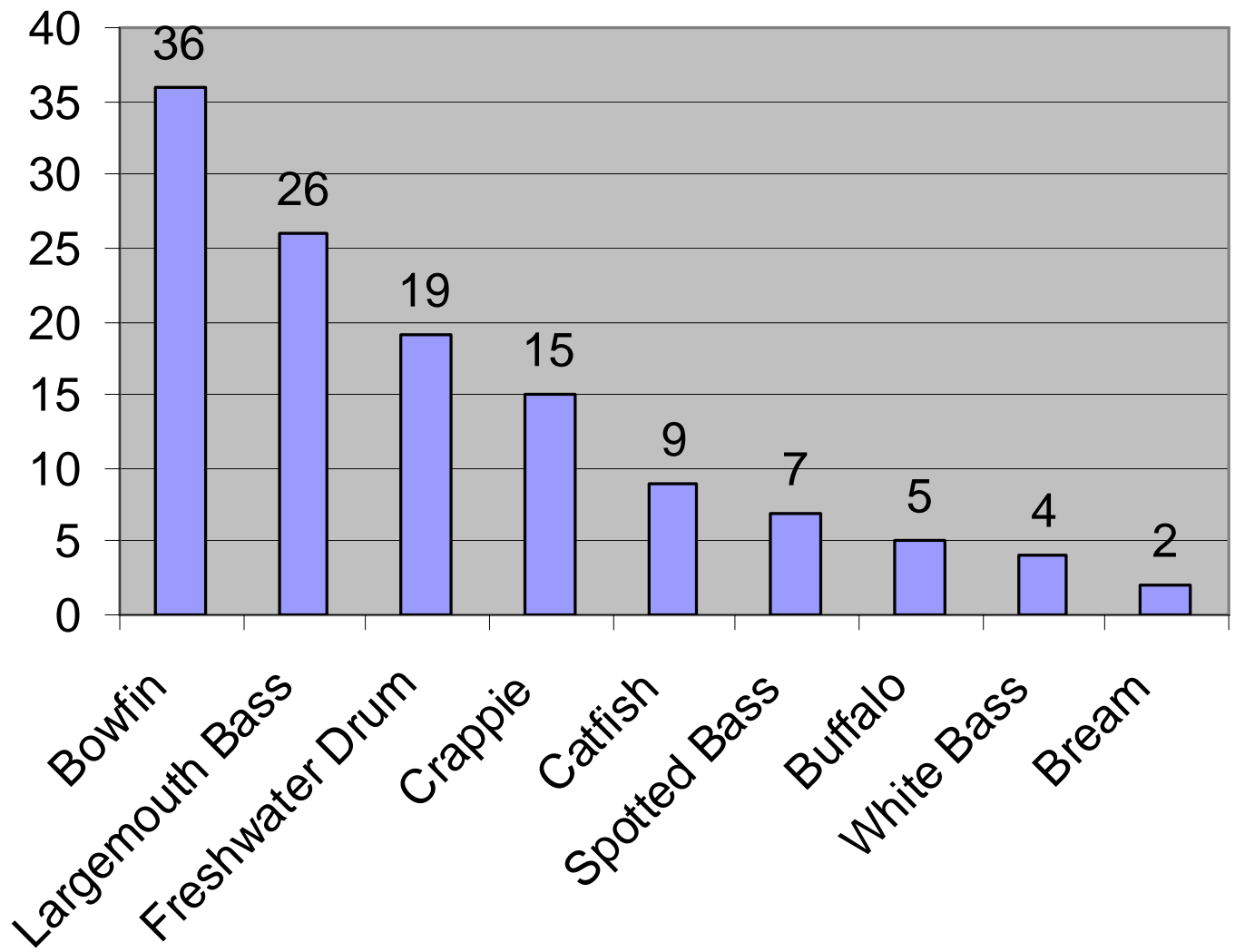
Louisiana Mercury Fish Consumption Advisories



LOCATION	NUM
Atchafalaya River Drainage Basin	31
Bayou Bartholomew	1
Bayou Bonne Idee	32
Bayou Chene and Bayou Lacassine	40
Bayou De Loutre and Associated Lakes	2
Bayou des Cannes	3
Bayou DeSiard	4
Bayou Dorcheat	33
Bayou Liberty	5
Bayou Louis and Lake Louis	6
Bayou Plaquemine Bruie	7
Bayou Queue De Tortue	34
Big Alabama Bayou	8
Black Bayou Lake (Caddo)	41
Black Bayou Lake (Ouachita)	9
Black Lake	10
Blind River	11
Boeuf River	12
Bogue Chitto River	13
Bogue Falaya and Tohefunctle Rivers	14
Calcasieu River Drainage Basin	30
Cheniere Lake	35
Chicot Lake	15
Comey Lake	16
Grand Bayou Reservoir	17
Gulf of Mexico	18
Henderson Lake Area	19
I-10 Canal and Work Canal	36
Iatt Lake	39
Ivan Lake	20
Kepler Creek Lake	21
Lake Bistineau	38
Lake Vernon	22
Little River/Catahoula Lake Area	23
Ouachita River	24
Pearl River	25
Seventh Ward Canal	26
Tangipahoa River	27
Tew Lake	37
Tockfaw River Drainage Basin	28
Toledo Bend Reservoir	29

Louisiana Department of Health and Hospitals
 Office of Public Health
 Section of Environmental Epidemiology and Toxicology
 March, 2006

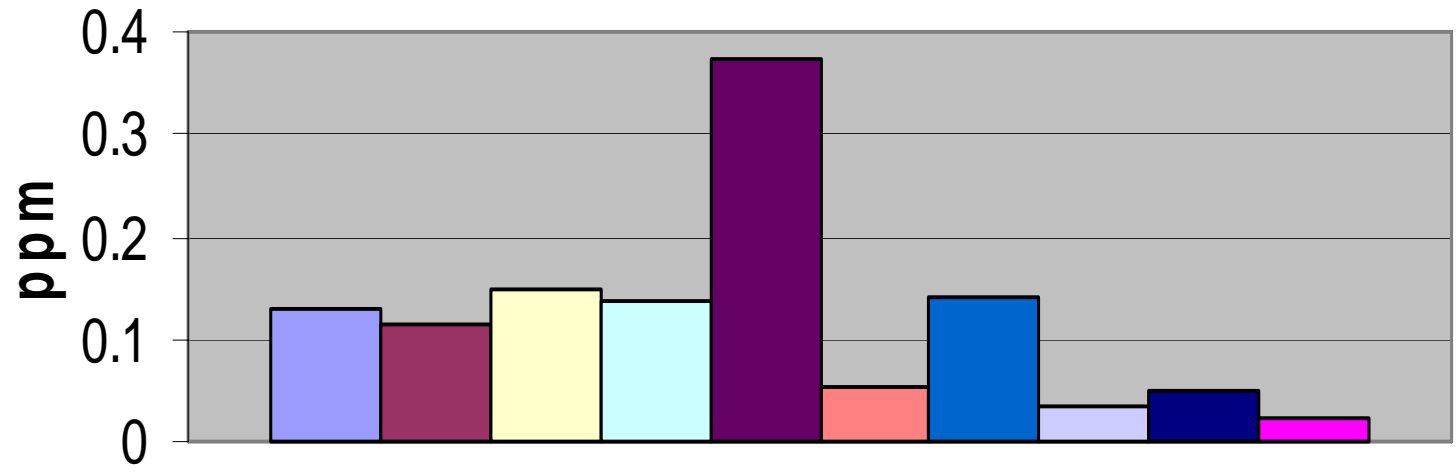
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 Section of Environmental Epidemiology and Toxicology (SEET) cannot guarantee the accuracy
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Frequency of occurrence of fish species in 40 Louisiana freshwater advisories



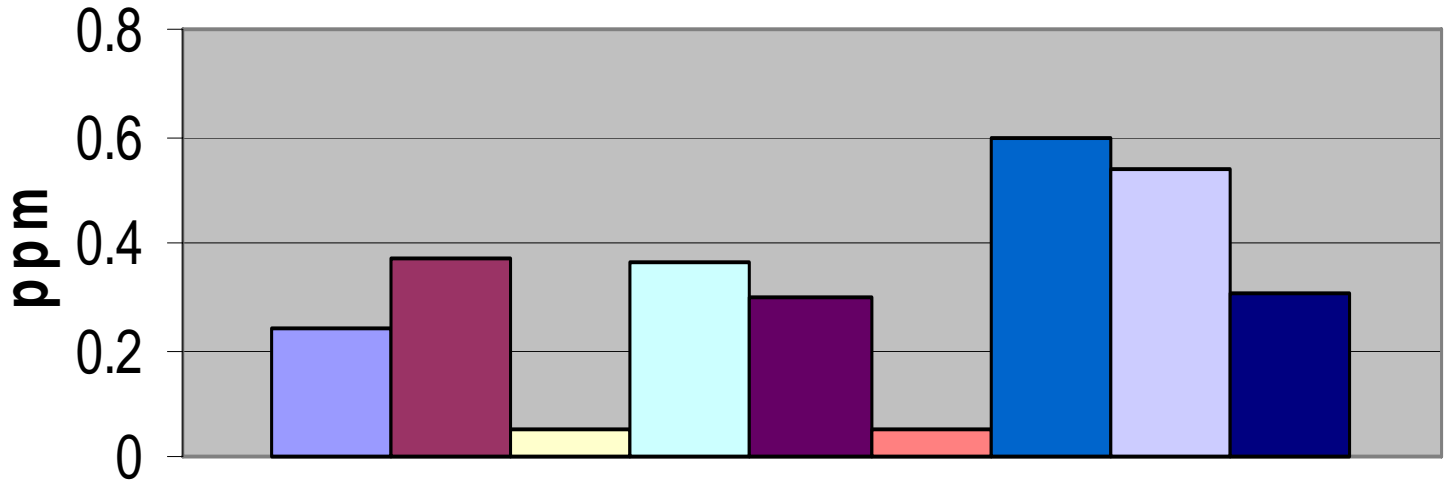
Mercury in Finfish and Shellfish



- | | |
|------------------|-------------------|
| SPOTTED SEATROUT | SOUTHERN FLOUNDER |
| SHEEPSHEAD | RED DRUM |
| GAFTOPSAIL | ATLANTIC CROAKER |
| BLACK DRUM | WHITE SHRIMP |
| EASTERN OYSTER | CRAWFISH |



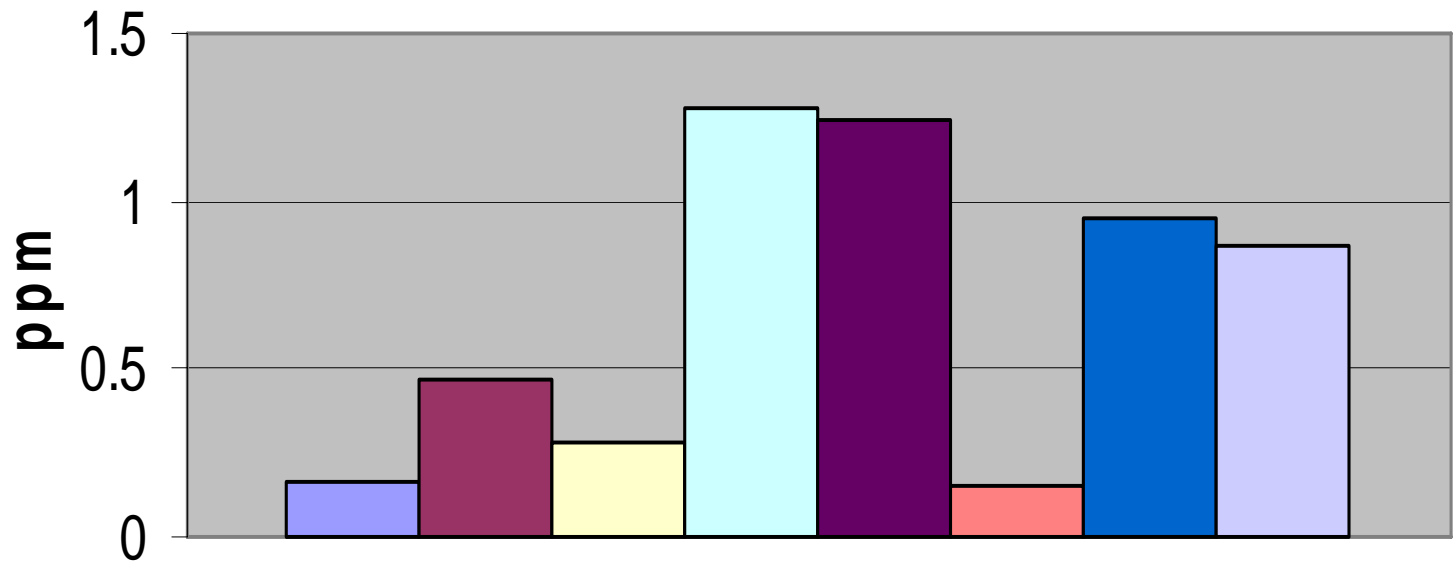
Mercury in Marine Reef Fishes



- YELLOWEDGE GROUPE
- WARSAW GROUPE
- TRIPLETAIL
- SCAMP
- RED SNAPPER
- LANE SNAPPER
- JACK CREVALLE
- GREATER AMBERJACK
- GAG GROUPE



Mercury in Marine Pelagic Finfish



- YELLOWFIN TUNA
- SPANISH MACKEREL
- KING MACKEREL
- COBIA
- WAHOO
- LITTLE TUNNY
- DOLPHIN FISH
- BLACKFIN TUNA



Mercury in the Environment

Man-Made Sources:

- Nearly 8 million pounds of mercury were produced in the U.S. in 1986 from primary and secondary mining.
- Mercury is/was used in manufacturing processes:
 - Chlorine Production
 - Crude Oil Refining
 - Lumber, Pulp and Paper Mills
 - Carbon Black
 - Steel recycling
- Mercury is present in combustion sources
 - Coal-fired Power Plants
 - Municipal Waste Incineration
 - Crematoria



Man-Made Sources cont'd:

Mercury is/was used in products

- Mercury Manometers Used in Natural Gas Transmission
 - Estimated 25,000 – 30,000 throughout the state.



- Drilling Muds Used Oil and Gas Exploration and Production
- Dentistry
- Laboratories
- Medical Facilities
- Mercury Manometers Used in Dairy Production
- Other Mercury-added products
 - Paints, batteries, fluorescent lighting, switches, relays, thermostats, thermometers



Mercury in Products

- Thermostats 46.7%
- Dental Amalgams 21.0%
- Light Switches 14.1%
- Auto switches 4.7%
- Thermometers 4.7%
- Appliances switches 2.4%
- Batteries 0.6%
- Fluorescent Lights 0.5%



Man-Made Sources cont'd:

- Mercury in Waste
 - Sanitary Sewage Treatment Systems
 - Landfills
- Agricultural and Forestry Practices
 - Mercury has been used extensively in agricultural applications of pesticides and fungicides.
 - Phenyl mercuric compounds were used extensively as slimicides in paper mills.

Natural Sources

- Volcanism
- Geothermal Systems
- Erosion of Mineral Deposits and Soils
- Marine Waters
- Forest Fires



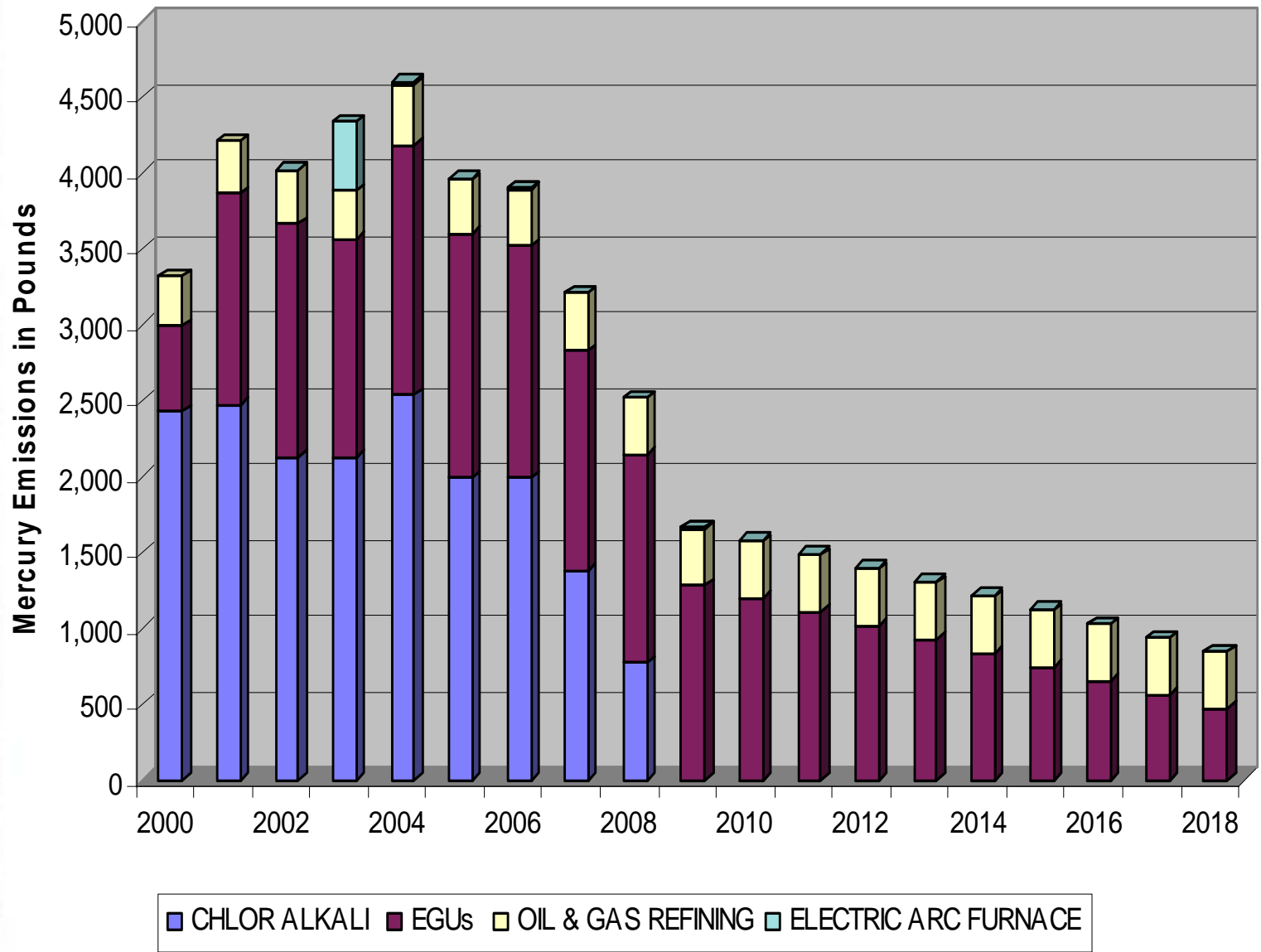
Louisiana Mercury Risk Reduction Plan

- Act 126 of 2006: Mercury Risk Reduction Act
 - Notifications/Disclosure
 - Labeling
 - Collection
 - Product Bans and Phase Outs
 - Auto/appliance switch removal
 - Dental uses
 - Prohibitions of uses in water/waste water systems



Louisiana Mercury Risk Reduction Plan

- Chlor-alkali conversions
- Clean Air Mercury Rule
- Steel Recycling
- Legacy contamination
 - Manometers
 - Lumber/Agriculture uses
- Dental guidelines
- Municipal waste incineration
- Hospitals
- STP scrutiny: Hg Minimization





Louisiana Mercury Risk Reduction Plan

- Enhancing public awareness
 - Video/PSAs
 - Information pamphlets
 - Publications
 - Website (deq.louisiana.gov)
- Enhancing recycling opportunities
- Environmental education
- Promote energy efficiency
- Formalizing partnerships on the Louisiana Mercury Task Force