



# Community Involvement in Environmental Decision Making

## The Mercury-Free Colorado Campaign

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Colorado Department of Public Health and Environment

Presented at the 2006 EPA Innovations Conference  
Community Partners and Programs  
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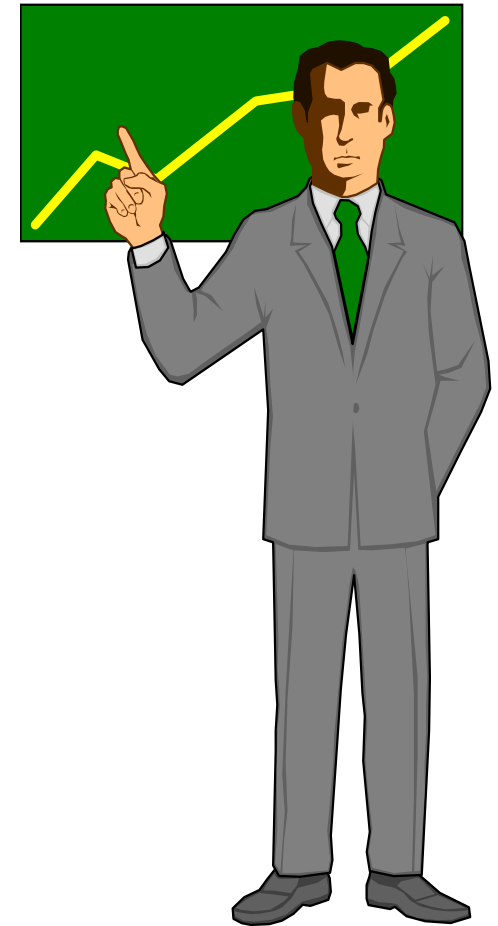
# What Is To Be Covered Today

**Mercury Issue**

**Solutions to Addressing Mercury**

- **Regulatory**
- **Pollution Prevention**

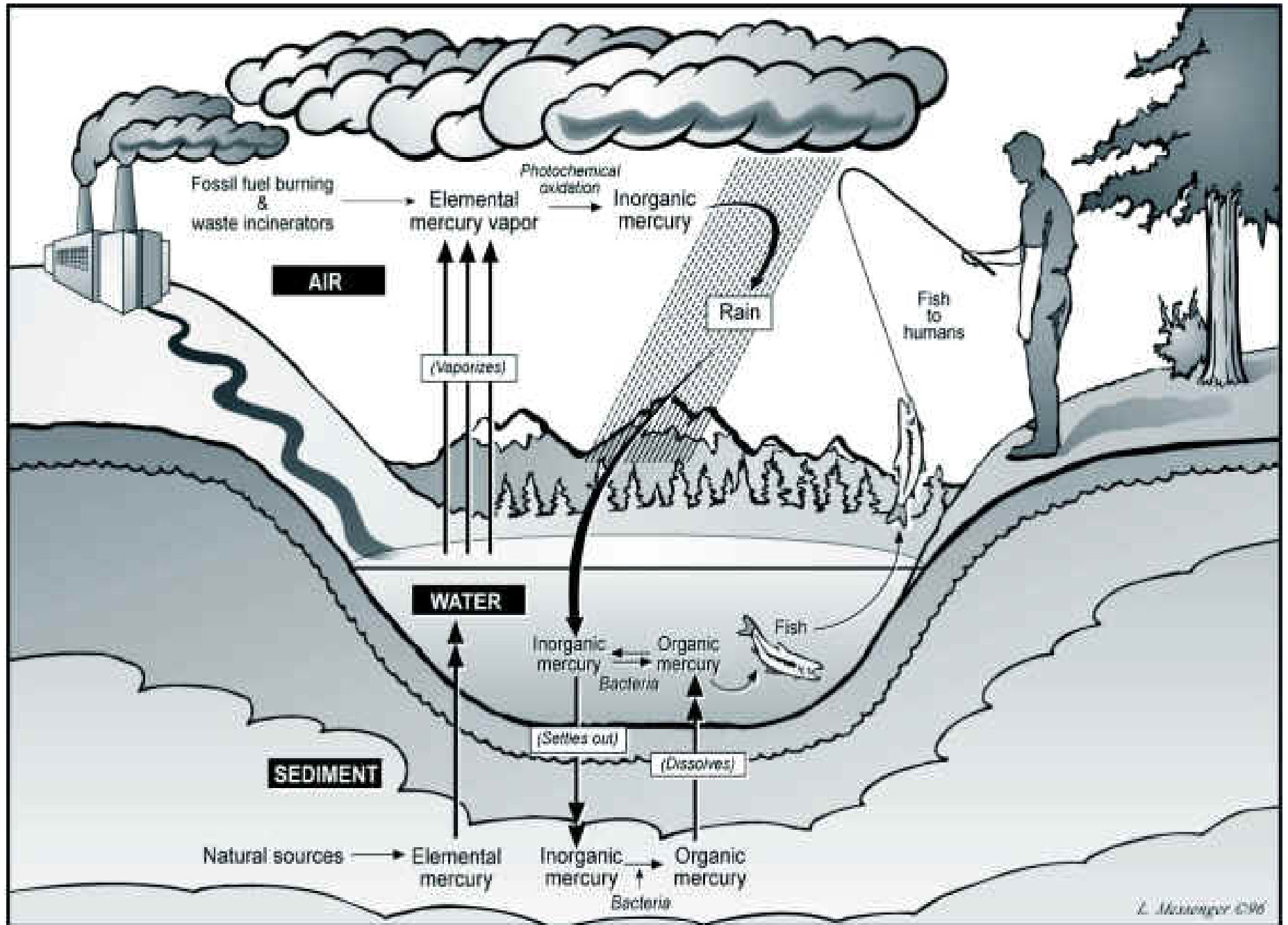
**Community Engagement**





# Mercury Toxicity

- Natural Element
- Accumulative Toxin
- Primary Exposure Pathway Through Fish Consumption
- Fish Often Measured at Levels above What is Considered Protective of Health
- States have Many Non-Compliant Waterbodies
- Pregnant Women and esp. Fetuses Most at Risk



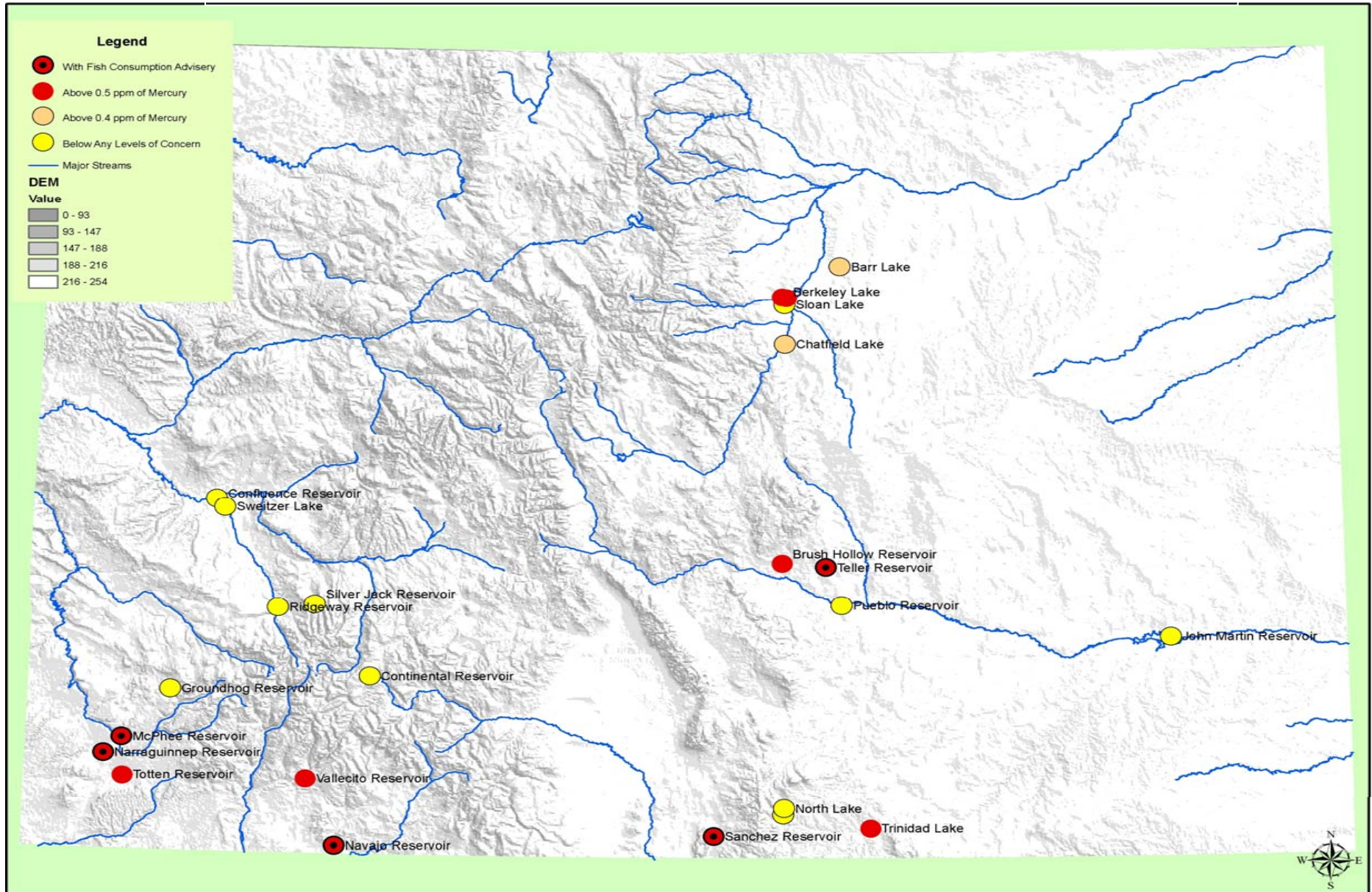


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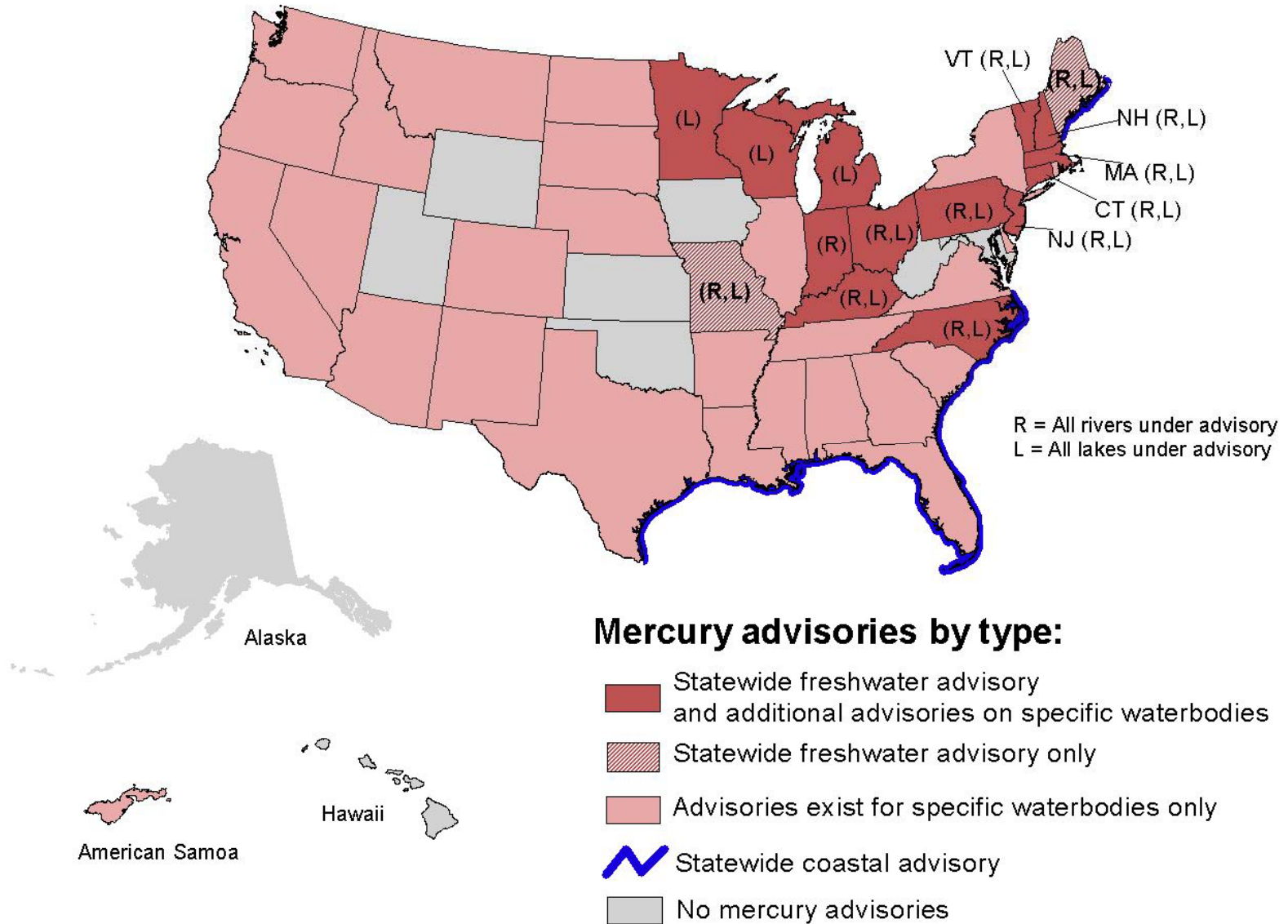


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# Colorado Mercury Advisories

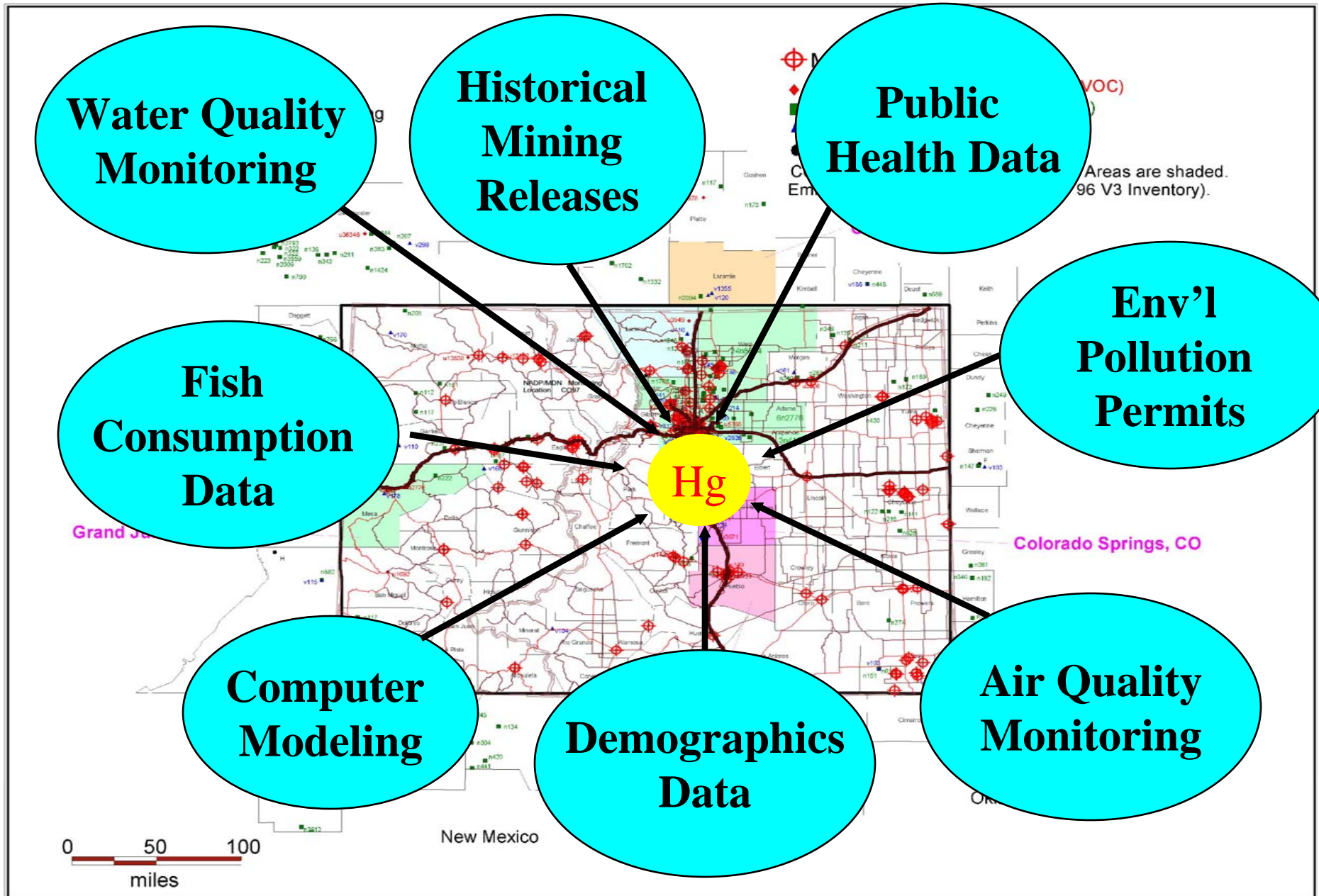


# Fish Consumption Advisories for Mercury



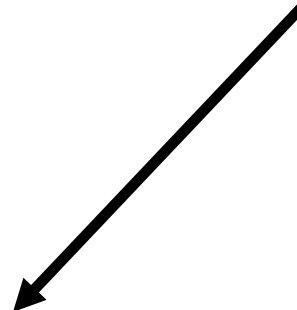
Source: National Listing of Fish and Wildlife Advisories; map courtesy of U.S. EPA

# Assessing Mercury Impacts

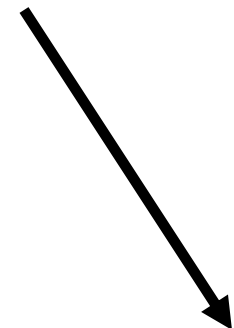




# Addressing Mercury

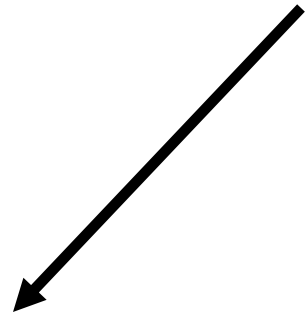


**Regulatory  
(CAMR)**

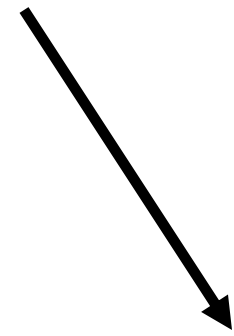


**Non-Regulatory  
(Pollution Prevention)**

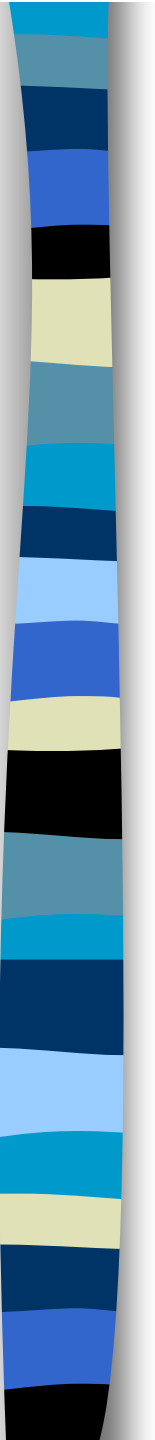
# Addressing Mercury



**Regulatory  
(CAMR)**



Non-Regulatory  
(Pollution Prevention)



## “Clean Air Mercury Rule”

- EPA Rule to Control Mercury Emissions from Coal-Fired Electric Utilities
- National Cap Distributed by EPA to States
- States Distribute Mercury Allowances to Facilities
- States to Develop Plan of Action for Allowances by November 2006
- Working with Stakeholders to Develop Plan
- Local Health Departments, Environmental Groups Participating
- Looking to Include Their Concerns and Issues Where Possible





# Addressing Mercury



Regulatory



**Non-Regulatory  
(Pollution Prevention)**



**Question:** How Target Important Issues?

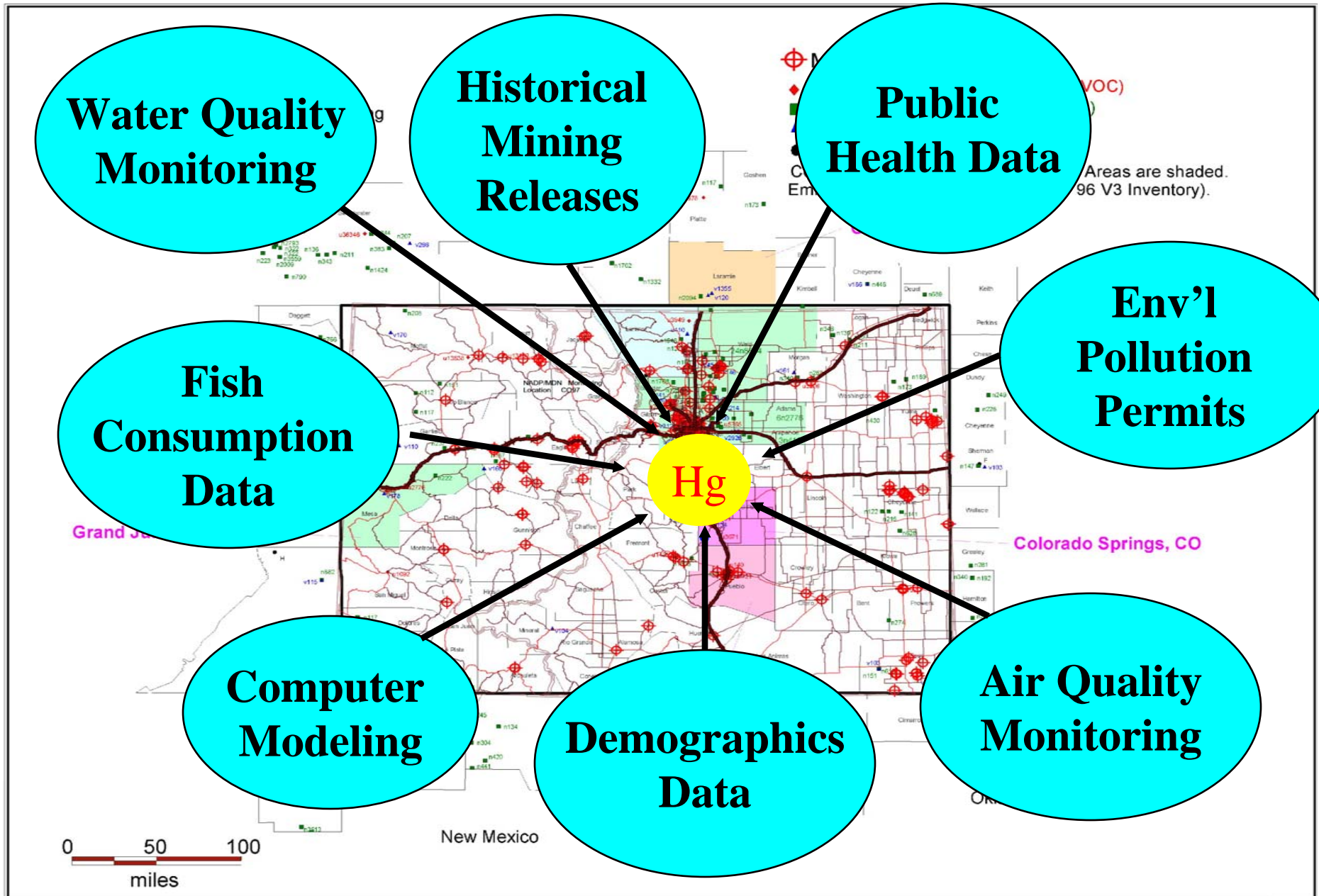


Question: How Target Important Issues?

**Answer: Environmental Problem Solving**

- Immediate, urgent, or significant human health risk?
- Potential for environmental harm or significant benefit?
- Is there a well-defined set of impacts?
- Is the problem recurring or a cluster of occurrences?
- Is it within the agency's role and jurisdiction?
- Is it conceivable that success could be measured?
- **What are the public expectations?**
- **Is the problem important to the public?**
- **Would staff and stakeholders be willing to work on it?**

# Assessing Mercury Impacts



# Mercury-Free Colorado Campaign Initiatives

- Problem Characterization
- Industry (Automotive Switch)
- Dental
- Consumer
- Public Education and Outreach
- Crematoria

**2005  
Champion**



2005

# Problem Characterization



- TRI Captures *Some* Mercury Releases
  - Significant Amounts not Inventoried Including Computers, Auto Switches, Thermostats, Fluorescent Bulbs, Dental Amalgam, Crematories, Thermometers, Etc.
- CDPHE Prepared More Comprehensive Inventory
- ~ 7800 Pounds of Mercury Released Annually\*
  - Includes Natural and Man Made Sources
- Important Areas for Targeting Identified

\* Circa 2004 Estimate



# Industry Mercury Project

Goal: Reduce mercury pollution via implementation of automotive switch removal program designed to ultimately reduce air emissions at steel mill;

## Environmental Metrics/ Measurable Results

- Cooperative effort between CDPHE and the Colorado Automotive Recyclers
- Identification of four dozen participating automotive recycling entities
- Implementation of switch removal program at numerous automotive sites
- Tens of thousands of switches removed to date
- Over 130 pounds of mercury diverted from area steel mill in first two years
- Citizen group providing input on how to expand program to neighboring states
- CAR assisting with design of new ideas, programs





# Dental P2 Project

Goal: Reduce mercury releases to wastewater from dental offices by implementing P2 pilot program at Colorado dental offices

Also, reduce mercury released to other media (air - incineration, land – disposal)

## Environmental Metrics/ Measurable Results

- Partner with the City of Pueblo, Pueblo City-County Health Department, and Colorado Mental Health Institute
- Established a baseline of the information, resources, and equipment used by or available to dentists
- Identified barriers to implementing best management practices and best available technologies for mercury recovery
- Conducted trainings with area dentists
- Pueblo Area Dentists Implementing BMPs, looking statewide



# Consumer Mercury Project

- Goal:
- 1) Prevent disposal of mercury-containing thermostats to landfills through promotion of thermostat collection and recycling, and;
  - 2) Raise public awareness to this mercury source

## Environmental Metrics/ Measurable Results

- Education Materials Developed for Heating, Ventilation and Air Conditioning Contractors
- To Date, Nearly 1,300 Thermostats Diverted
- Local HDs Working to Collect Additional Hg-Containing Materials





# Public Education and Outreach

Goal: Raise Awareness to Mercury Issues and Inform Citizens of Options Available to Them

## Environmental Metrics/ Measurable Results

- Survey Developed for Citizens and Local Agencies Throughout State – Allowing For their Involvement and Feedback
- Outreach Strategy Developed
- Website Active and Popular
- Email Service Effective – Many pounds of Mercury Diverted
- Numerous Presentations Made (Community Groups, Universities, etc.)
- Press Releases, Newsletters (Colo. EH Assoc.), etc.
- Traditional Household Hazardous Waste Program Partnerships, Local HD
- Thermometer Exchange - over 10,000 Households Reached
- Fish Consumption Advisories, Eventual Consumer Surveys



# Crematory Initiative

- Dental Amalgam Known Mercury Source
- Mercury Released When Dental Fillings Are Volatilized During Cremation
- Mercury Inventory Identifies Crematoria as Significant Source
- Up to 100 Pounds Released Annually from Colorado Sources
- Prefer Pollution Prevention “Carrot” over Regulatory “Stick”
- Effort to Work with Colorado Crematoria, Funeral Homes and Trade Associations to Identify Best Management Practices
- Possibly Work Through Organ Donor Alliances
- CDPHE Success with Approach When Applied to Other Industries
- Some Obvious Challenges - Social and Ethical Mainly





## Lessons Learned with Mercury

- While Comprehensive Programs Exist, May Need to Do More in Reducing Mercury to Meet Health Mandates, Public Expectations
- Public **IS** Interested in Mercury, Very Passionate about Link Between Environment and Public Well Being
- Community Participation Important to the “Process”
- Efforts with Communities, Broad SHs Almost Always with Better Outcomes (Support/Buy In, Meeting Community Needs)
- Community Involvement More Challenging – Competing Interests, Limited Time/ Knowledge to be Fully Engaged
- EH/PH Issues are Complex - Communities Turn to Us for Leadership
- Agencies Have Many Opportunities to Engage Communities

# Contact Information

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Mercury and Environmental Problem Solving Programs

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