



Engineering, Operations, & Technology Committee

Update on Fluoridation

Item 6d

November 18, 2024

Item 6d Update on Fluoridation

Subject

Fluoridation of drinking water supplies

Purpose

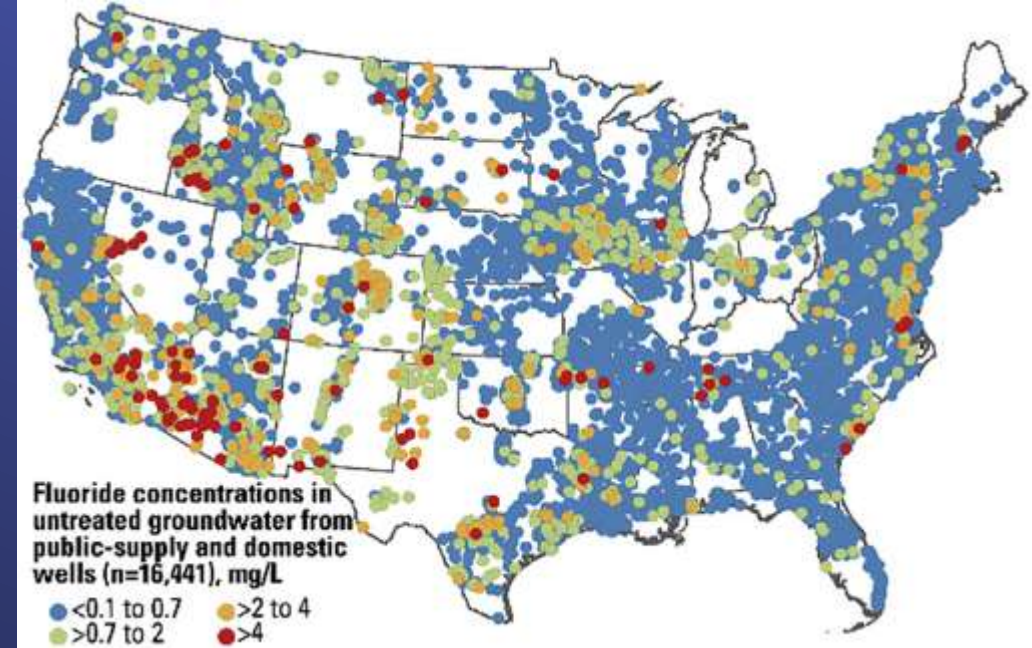
Provide background on community water fluoridation, Metropolitan's fluoridation practice, and recent district court ruling on water fluoridation

Next Steps

Track responses from regulatory authorities and respond as directed

Fluoride in Water

- Naturally occurring mineral in water
 - <0.5 mg/L in rivers and lakes
 - Higher in groundwater
- Regulated in drinking water by USEPA under SDWA
 - Maximum Contaminant Level = 4 mg/L
 - Secondary MCL (cosmetic effects) = 2 mg/L
- Other sources of fluoride include
 - Food and drink
 - Toothpaste and mouthwash
 - Fluoride supplement/tablets
 - Fluoridated salt



*Fluoride occurrence in United States groundwater
USGS, 2020. In: Science of the Total Environment*



Image credit: Thegreenj



Image credit: Wwbread

One of the greatest public health achievements of the past century – CDC

Community Water Fluoridation



Strongly Supported by Public Health Agencies

- Benefit of fluoride in protecting against tooth decay recognized over 100 years ago
- Water fluoridation in U.S. started in 1945
- Supported by national and international health service organizations – ADA, AMA, AAP, CDC, WHO
- Recommended optimal dose in drinking water is 0.7 mg/L
- U.S. DHHS Healthy People 2030 Initiative
 - Increase proportion of people whose water systems have recommended amount of fluoride
- Some countries are considering expanding community water fluoridation

Groups Opposed to Community Water Fluoridation

*Fluoride Action Network
Food & Water Watch
Citizens for Safe Drinking Water
Moms Against Fluoridation*

- Medical concerns include fluorosis and reduced IQ in children
- Ethical concern about mass medication without consent



*Fluoride Action Network
Pamphlet on Fluoridation*

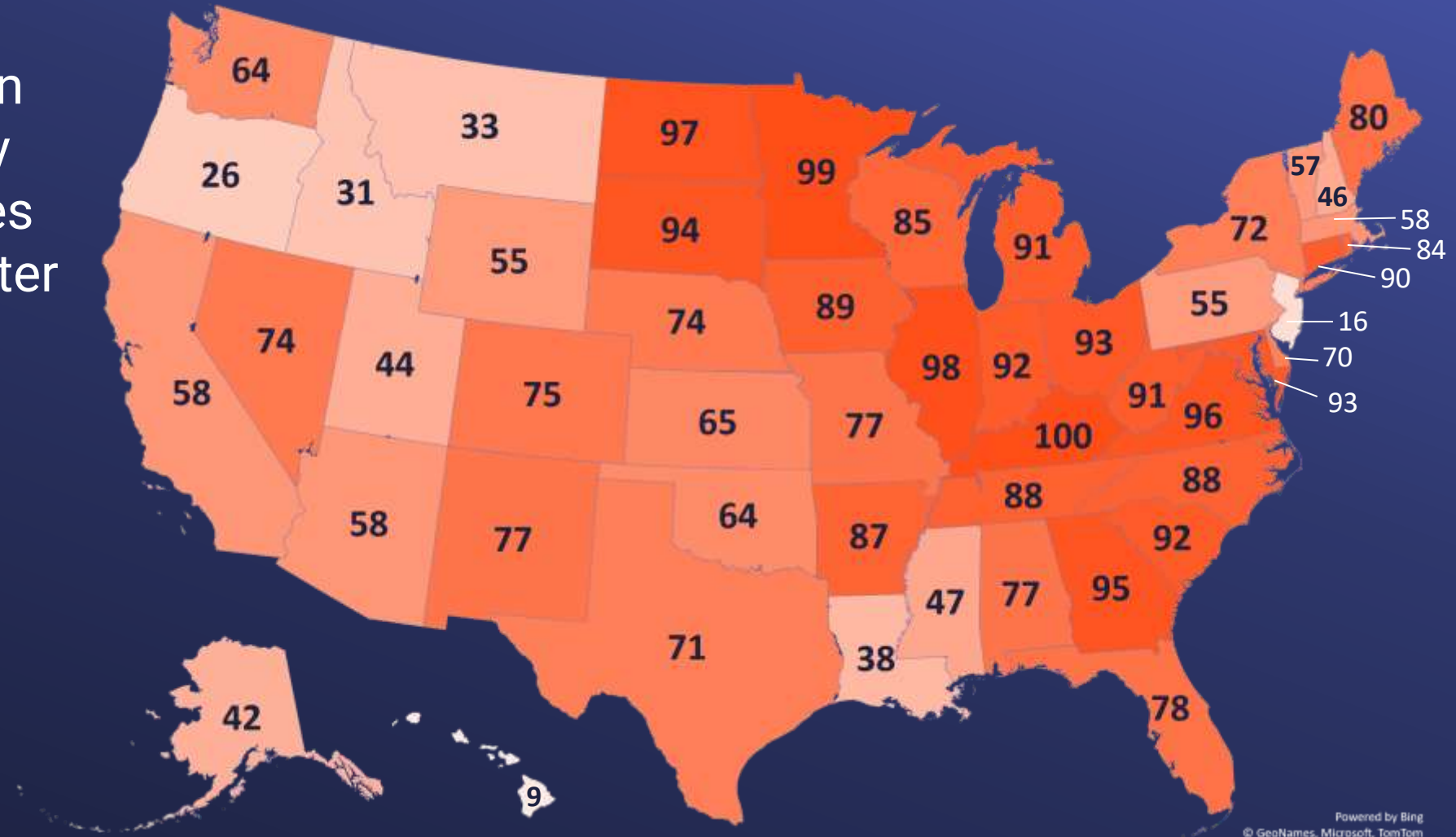
SHOTS - HEALTH NEWS

No more fluoride in the water? RFK Jr. wants that and Trump says it 'sounds OK'

NOVEMBER 4, 2024 · 3:54 PM ET

Percent of State Populations Served With Fluoridated Drinking Water

72% of U.S. population served by community water systems receives fluoridated drinking water




Source of data: 2022 Water Fluoridation Statistics, CDC

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Introduction of Fluoridation at Metropolitan

- 1995 – California Fluoridated Drinking Water Act (AB 733)
 - Requires systems with 10,000+ service connections to fluoridate water supply when funding becomes available
- 2001 – Dental health directors and county health officials in Metropolitan's service area requested implementation
- 2003 – Metropolitan's Board adopted Drinking Fluoridation Policy
- California Dental Association Foundation provided \$5.5 M grant to cover planned capital and initial O&M costs

 MWD METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA		BOARD ACTION
• Board of Directors Engineering and Operations Committee		
February 11, 2003 Board Meeting		
Subject		9-3
Drinking Water Fluoridation Policy		
Description		
In October 1995, Governor Pete Wilson signed into law Assembly Bill 733, which conditionally mandated fluoridation of any public water supplies that have at least 10,000 service connections. Under this law, a water		

*Metropolitan Board Meeting on
Fluoridation Policy, 2003*

Fluoridation at Metropolitan

- Member Agency Fluoridation Workshop in 2007
- Extensive public outreach
- California Department of Public Health approval in October 2007
- Included in state operating permit and began fluoridation at treatment plants in 2007
- Current fluoridation practice
 - Adjust naturally occurring fluoride to recommended optimum level of 0.7 mg/L
 - Fluoridation Plan and compliance monitoring

Metropolitan Fluoridation Communications Plan

Member Agency Fluoridation Workshop
Tuesday, July 31, 2007

Permit Amendments Issued after November 9, 1992	Effective Date	Permitted Modifications
1910087PA-002	10/26/2007	Implementation of fluoridation treatment at the Robert B. Diemer Treatment Plant, the Joseph Jensen Treatment Plant, the Henry J. Mills Treatment Plant, the Robert A. Skinner Treatment Plant, and the F.E. Weymouth Treatment Plant. Addition of the San Bernardino Central Feeder as an approved source of domestic water supply for Metropolitan facilities.

2007 State Permit Amendment to Include Fluoridation

Food & Water Watch, Inc., et al. vs EPA

September 24, 2024

Litigation Against Drinking Water Fluoridation

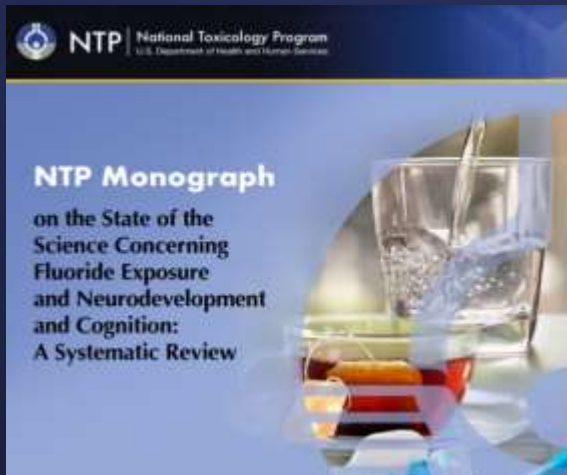
- Federal district court judge ruled that water fluoridated at levels typical in U.S. poses unreasonable risk of injury to public health
 - Unreasonable risk of reduced IQ in children
- Judge relied on National Toxicology Program Monograph
- Ruling requires EPA to take regulatory action under the federal Toxic Substances Control Act
- Ruling does not dictate what actions EPA must take

United States District Court
NORTHERN DISTRICT OF CALIFORNIA

RICHARD SEEBORG, CHIEF JUDGE
MARK B. BUSBY, CLERK OF COURT



Literature Review and Analysis

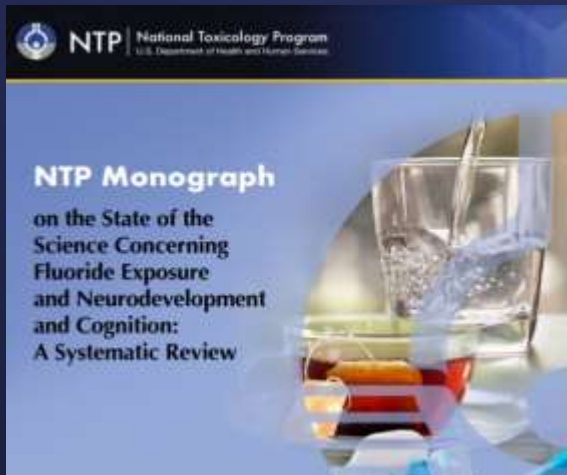


National Toxicology Program (NTP)

Interagency program supported by three federal agencies within Dept. Health and Human Services – Toxicological Research, Environmental Health Sciences, Occupational Safety and Health

- Review of published studies on fluoride health effects
- Multiple drafts & reviews of NTP report over 8 years
- Systematic review of 19 studies (2003-2020)
 - China - 10; Mexico - 3; Canada - 2; India - 3; Iran – 1
 - No studies in U.S.
- Study populations also exposed to variety of potentially complicating factors
 - Arsenic, smoking, iodine, lead, health conditions

National Toxicology Program (NTP) Monograph



Literature Review and Analysis

- Final report/monograph published August 2024
- Concluded with moderate confidence that drinking water with fluoride concentrations exceeding 1.5 mg/L is associated with lower IQ in children
 - Did not address whether sole exposure to fluoride at optimum dose in U.S. (0.7 mg/L) is associated with a measurable effect on IQ
 - Did not assess the benefits of fluoride in oral health or provide a risk/benefit analysis

Additional Fluoride-IQ Studies

- National Toxicology Program additional review of studies published after 2020
 - 9 studies found association of higher fluoride with reduced IQ
 - 3 studies found no association with reduced IQ
- California Dept. Public Health review (Kumar et al., 2023)
 - Fluoride exposure relevant to community water fluoridation is not associated with lower IQ scores in children
 - Authors claim that uncritical acceptance of fluoride-IQ studies and poor study design clouds conclusions

Association between low fluoride exposure and children's intelligence: a meta-analysis relevant to community water fluoridation

Jayanth V. Kumar ^{a, *}, Mark E. Moss ^b, Honghu Liu ^c, Susan Fisher-Owens ^d

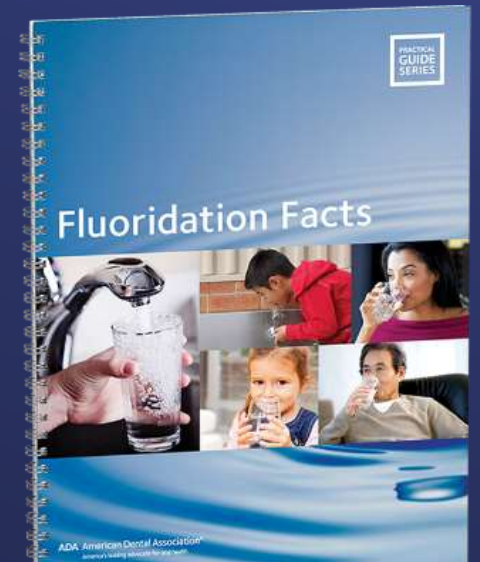
^a California Department of Public Health, MS 7208, 1616 Capitol Ave, Sacramento, CA 95814, USA

Response to Federal District Court Fluoridation Ruling

- EPA and California Division of Drinking Water have not provided public responses
 - EPA may appeal the ruling
- Leading health organizations continue to support community water fluoridation at current low levels in drinking water
- California requires community drinking water fluoridation for water systems with 10,000+ service connections

American Dental Association Press Release

The district court ruling against the Environmental Protection Agency provides no scientific basis for the ADA to change its endorsement of community water fluoridation as safe and beneficial to oral health



ADA, Fluoridation Facts Handbook

Drinking Water Fluoridation at Metropolitan



Next Steps

- No change in Metropolitan's current treatment operations is required
- Continue to comply with all regulatory requirements and operating permit
- Monitor legal and regulatory developments on the court ruling, including any federal action by the incoming administration
- Coordinate with the Division of Drinking Water and industry associations (AWWA, ACWA)
- Provide updates to Board and Member Agencies as regulatory authorities develop a response

