WASHINGTON STATE BOARD OF HEALTH

Notice of Public Meeting

Wednesday, November 8, 2023, 9:30 a.m. – 2:50 p.m.
Physical meeting location:
Washington State Department of Health
111 Israel Road S.E., Tumwater, WA 98501
Building: Town Center 2, Rooms 166 & 167
Virtual meeting: ZOOM Webinar
(hyperlink provided below)
Language interpretation available

Final Agenda

Time	Agenda Item	Speaker
9:30 a.m.	Call to Order & Introductions	Patty Hayes, Board Chair
9:45 a.m.	1. Approval of Agenda—Possible Action	Patty Hayes, Board Chair
9:50 a.m.	2. Approval of October 9, 2023, Minutes – Possible Action	Patty Hayes, Board Chair
9:55 a.m.	3. Public Comment	Please note: Verbal public comment may be limited so that the Board can consider all agenda items. The Chair may limit each speaker's time based on the number people signed up to comment.
10:15 a.m.	4. Announcements and Board Business	Michelle Davis, Board Executive Director
10:40 a.m.	5. Department of Health Update	Umair A. Shah, Secretary of Health Tao Sheng Kwan-Gett, Chief Science Officer, Department of Health Kelly Cooper, Policy & Legislative Relations Director, Department of Health, Secretary's Designee
11:10 a.m.	Break	
11:20 a.m.	6. 2024 Meeting Schedule – Possible Action	Michelle Davis, Board Executive Director Melanie Hisaw, Board Executive Assistant
11:30 a.m.	7. Legislative Statement Update	Michelle Davis, Board Executive Director

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Time	Agenda Item	Speaker
11:45 a.m.	8. Request for Delegated Rulemaking Authority – Engrossed Second Substitute House Bill (E2SHB) 1181, Climate Resilience Element in Water System Plans, Group A Public Water Supplies, Chapter 246-290 WAC – Possible Action	Patty Hayes, Board Chair Stuart Glasoe, Board Staff Mike Means, Department of Health Brad Burnham, Department of Health
12:05 p.m.	Lunch	
1:00 p.m.	9. Climate Change Story Telling Panel • Elaine Harvey, Watershed Department Manager, Columbia River Inter-Tribal Fish Commission • Paulina Lopez, Executive Director, Duwamish River Community Coalition • Ryan Oelrich, Executive Director, Priority Spokane & Spokane City Council Member • Sue Sullivan, Environmental Health Manager, Whatcom County	Patty Hayes, Board Chair Kate Dean, Board Member Andrew Kamali, Board Staff
2:30 p.m.	10. Board Member Comments and Updates	
2:50 p.m.	Adjournment	

- **To access the meeting online and to register:**
  https://us02web.zoom.us/webinar/register/WN_LWdVVDUbTgi7WPrgEOx3BQ
- **You can also dial-in using your phone for listen-only mode:**
  Call in: +1 (253) 215-8782 (not toll-free)
  Webinar ID: 845 7938 8527
  Passcode: 682856

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Important Meeting Information to Know:

- Times are estimates only. We reserve the right to alter the order of the agenda.
- Every effort will be made to provide Spanish interpretation, American Sign Language (ASL), and/or Communication Access Real-time Transcription (CART) services. Should you need confirmation of these services, please email wsboh@sboh.wa.gov in advance of the meeting date.
- If you would like meeting materials in an alternate format or a different language, or if you are a person living with a disability and need reasonable modification, please contact the State Board of Health at (360) 236-4110 or by email wsboh@sboh.wa.gov. Please make your request as soon as possible to help us meet your needs. Some requests may take longer than two weeks to fulfill. TTY users can dial 711.

Information About Giving Verbal Public Comment at Hybrid Meetings:

- For the public attending in-person: If you would like to provide public comment, please write your name on the sign-in sheet before the public comment period begins. We strongly encourage people to sign up with the Board by sending an email by 12:00 Noon the last business day before the meeting to: wsboh@sboh.wa.gov. As this is a business meeting of the Board, time available for public comment is limited (typically 2 to 4 minutes per person). The Chair will call on those who have signed up to speak to the Board, first. The amount of time allotted to each person will depend on the number of speakers present. If time remains, those who have not signed up ahead of time to speak to the Board will be called on to speak until the scheduled time for Public Comment comes to an end.
- For the public attending virtually: If you would like to provide public comment, please sign up through the Zoom webinar link by 12:00 Noon the last business day before the meeting. Your name will be called when it's your turn to comment.

Information About Giving Written Public Comment:

- Please visit the Board's Meeting Information webpage for details on how to provide written public comment.

WASHINGTON STATE BOARD OF HEALTH

Draft Minutes of the State Board of Health
October 9, 2023

Hybrid Meeting
ASL and Spanish interpretation available
Physical meeting location:
Confluence Technology Center
Methow River Room
285 Technology Center Way #102,
Wenatchee, WA 98801
Virtual meeting: ZOOM Webinar

State Board of Health members present:

Keith Grellner, Chair
Kelly Oshiro, JD, Vice Chair
Patty Hayes, RN MN
Stephen Kutz, BSN, MPH
Melinda Flores
Kate Dean, MPA
Umair A. Shah, MD, MPH
Dimyana Abdelmalek, MD, MPH
Tao Sheng Kwan-Gett, MD, MPH, Secretary's Designee
Michael Ellsworth, JD, MPA, Secretary's Designee

State Board of Health members absent:

Socia Love-Thurman, MD

State Board of Health staff present:

Michelle Davis, Executive Director
Melanie Hisaw, Executive Assistant
Michelle Larson, Communications Manager
Anna Burns, Communications Consultant
Stuart Glasoe, Health Policy Advisor
Molly Dinardo, Health Policy Advisor
Andrew Kamali, Health Policy Advisor
Jo-Ann Huynh, Administrative Assistant
Grace Cohen, Department of Health
Miranda Calmjoy, Health Policy Analyst
Lilia Lopez, Assistant Attorney General

Guests and other participants:

Dr. James Wallace, Chelan-Douglas Health District
Luke D. Davies, Administrator, Chelan-Douglas Health District
Kelly Cooper, Department of Health
John Thompson, Department of Health
Nirupama Shridhar, Department of Health
Makena Chandra, Department of Health Intern
Jeremy Simmons, Department of Health
Todd Phillips, Department of Health
Fernando Rios, Spanish Interpreter

Consuelo Villagomez, Spanish Interpreter
Donna Walker, American Sign Language (ASL) Interpreter
Angie Parsons, American Sign Language (ASL) Interpreter

Keith Grellner, Chair, called the public meeting to order at 8:00 a.m. and read from a prepared statement (on file).

Stephen Kutz, Board Member gave a land acknowledgement, recognizing that the Board was holding its meeting on the ancestral lands of the Wenatchee people. Kate Dean, Board Member, recognized Indigenous People's Day and encouraged partnership.

1. **APPROVAL OF AGENDA**
   Motion: Approve October 9, 2023, agenda
   Motion/Second: Member Hayes/Vice Chair Oshiro. Approved unanimously.

2. **ADOPTION OF AUGUST 9, 2023 MEETING MINUTES**
   Motion: Approve the August 9, 2023, minutes as amended by Member Dean and Chair Grellner to change Member Dean's credentials to MPA vs MPH and to remove the RS from Chair Grellner's credentials.
   Motion/Second: Member Kutz/Member Flores. Approved unanimously.

3. **PUBLIC COMMENT**
   Chair Grellner opened the meeting for public comment and read from a prepared statement (on file).
   Public comments can be heard in their entirety on the meeting recordings while posted.

   Melissa Leady, talked about a report showing increased deaths resulting from COVID shots, including a 31% increase in deaths in young people. Melissa said the Department of Health (Department) report did not show this increase, and this should alarm the Board. Melissa hopes to see a supplemental report on the COVID vaccinations and increased deaths.

   Gerald Braudy, talked about the most recent number of 222 deaths following COVID shots. Gerald said the information and transmission data on the Department website is inaccurate and needs to be corrected to restore trust in public health.

   Bill Osmunson, talked about being a dentist for 46 years with a master's in public health and had promoted fluoridation for years until learning about the toxicity. Bill referenced studies from a Harvard professor regarding fluoride neurotoxicity in urine and the combined evidence of harm to the developing brains of prenatal and infants. Bill said harm from fluoridation is different than alcohol, there is no warning on fluoride. Bill spoke about providing information to the Board for 18 years. He stated his opinion that if Board members are unwilling to give simple warnings then ethically, they must resign.

   Natalie Chavez, talked about a legal case of a doctor who questioned the narrative, safety, and effectiveness of the COVID vaccine. Natalie talked about the court decision in May being a win for free speech and talked about overt COVID restrictions in Washington state.

4. BOARD ANNOUNCEMENTS AND OTHER BUSINESS

Michelle Davis, Board Executive Director, announced that Socia Love-Thurman, Board Member, would be unable to join the day's meeting, as Member Love-Thurman would be celebrating Indigenous People's Day with her family.

Executive Director Davis updated the Board on staff updates, including the posting for the Equity and Engagement Manager position, the goal is to fill the position by mid-November. Executive Director Davis announced that Stuart Glasoe, Board staff, had recently submitted a formal notice of intention to retire from state service on February 1, 2024. Executive Director Davis acknowledged Stuart's service to the Board, the people of Washington, and announced that Stuart's last meeting would be November 8. Executive Director Davis also mentioned that the Board would soon be hiring for the Policy Advisor position and another Communications Consultant.

Executive Director Davis then directed Board Members to review their materials packets for a notice about changes to annual school and childcare reporting deadlines for immunizations from the Department of Health (Department). Executive Director Davis mentioned the Board's policy committees, and said that Dimyana Abdelmalek, Board Member, was selected to be the Chair of the Health Promotion Committee, and that the Environmental Health Committee would be selecting its Chair in December.

Executive Director Davis directed Board Members to correspondence regarding the rulemaking petitions that the Board reviewed and accepted at the August 2023 meeting and updated the Board on the status of those rules. Executive Director Davis said Molly Dinardo, Board staff, has begun to initiate rulemaking, including developing plans with consideration to equity and community engagement and engaging Tribes early in the rulemaking process. Staff intends to file the CR-101 by October 18, 2023, and will notify interested parties shortly after. For the water recreation petition, Executive Director Davis shared that Andrew Kamali, Board staff, has been working with the Water Recreation Technical Advisory Committee as well as the petitioner to create recommendations for rule changes, which will be presented to the Board at its January 2024 meeting.

Executive Director Davis then directed Board Members to view their materials packets for a letter on State Opioid Awareness Day and a fact sheet regarding the Public Health Infrastructure Saves Lives Act. Executive Director Davis worked with Keith Grellner, Board Chair, to sign a letter in support of this legislation.

Executive Director Davis then shared updates from the Health Impact Review (HIR) team. Since July 2023, the HIR team has received four interim requests, including SB 5435, (completed and posted online); ESHB 1589, SSB 5171, and SHB 1010. Executive Director Davis said that the team has recently met with Vicki Lowe, Executive Director, American Indian Health Commission, to discuss approaches to Tribal work, Indigeneity, and treaty rights in the HIR process. The HIR team encourages Board Members to share the HIR one-pager with their networks.

Executive Director Davis updated the Board on a recent inquiry from Environmental Justice Council (EJC) staff about the suspended school environmental health and safety rules. In response to the EJC request, Executive Director Davis worked with the Washington State Association of Local Public Health Officials (WSALPHO), the Department, and the Office of Superintendent of Public Instruction (OSPI) to identify possible funding needs to proceed with these rules. Executive Director Davis reported that the EJC included this information in their 2024 supplemental budget recommendations. EJC staff will continue gathering information to refine the final budget proposal to be submitted to the Governor and Legislature. Executive Director Davis noted that funding for this budget proposal is associated with the Climate Commitment Act, and anticipated there would be many conversations on this topic in advance of the legislative session. Executive Director Davis welcomed Board Member guidance on how best to proceed.

Executive Director Davis briefly mentioned the Board's Legislative Statement, which will be discussed at the November meeting and noted that OSPI has several budget requests focused on funding schools to improve indoor air quality and the state's investment in school infrastructure. Executive Director Davis will send this information to Board Members for review as they consider the Board's Legislative Statement over the next month.

Executive Director Davis announced the Board will be meeting in Tumwater next month. In addition to the Legislative Statement, the Board will also discuss its 2024 meeting schedule; memorandum of understanding with the Department; and the work around climate change being led by Patty Hayes, Board Member, and Andrew.

Kate Dean, Board Member, discussed the EJC's work on school environmental health and safety rules, and willingness to support Board staff as this work progresses. Member Dean asked if the Board might be able to issue a letter reflecting on the impact of the rules' current suspension and supporting the EJC's budget recommendations. Executive Director Davis said that it would be valuable to include a letter from the Board as the Governor is currently developing his budget. Member Dean then made a motion to approve this letter.

Motion: The Board will write a letter in support of the EJC's budget recommendations.
Motion/Second: Member Dean/Member Kutz. Approved unanimously.

Member Dean asked about the timeframe for the Board to weigh in on legislative or budgetary items. Executive Director Davis said that the Governor tends to receive a lot of letters on budgetary items in the fall, and that sending a letter of support would be timely. Executive Director Davis mentioned the Board may need guidance from Lilia Lopez, Assistant Attorney General (AAG) once the Governor has submitted his budget and the Legislative session starts. Executive Director Davis said in the past, the Board has needed to maintain a neutral position on budget items outside of the Governor's budget once it has been submitted; and will seek guidance from the Governor's Office on this topic. Member Dean then asked whether Board Members and staff were required to have a neutral position. Executive Director Davis replied that as a Commissioner, Member Dean has different requirements than other Members for

reporting her activities. Executive Director Davis will connect with AAG Lopez further on this topic to prepare the Board Members for the Legislative Session.

Executive Director Davis mentioned that Member Dean had offered to connect the Board with colleagues at the Washington Association of Counties regarding the school environmental health and safety rules. Executive Director Davis said local health officers have expressed interest in this topic and that Board staff would be happy to connect with these folks at a future Board meeting and to learn more about their needs.

Stephen Kutz, Board Member, thanked Board staff for their work.

5. CHELAN-DOUGLAS HEALTH DISTRICT UPDATE

James Wallace, MD, MPH, Interim Health Officer, and Luke D. Davies, MPH, Agency Administrator, Chelan-Douglas Health District (District), delivered a presentation about their agency's work. The presentation included the population served by the District, its programs and services, challenges, and future directions (see presentation on file).

Patty Hayes, Board Member, thanked Dr. Wallace and Luke for their presentation and leadership. Member Hayes complimented the District for maintaining its commitment to child, family, and community health while public health work in these areas has deteriorated nationally. Member Hayes spoke about the Help Me Grow Washington system, which the Department of Children, Youth, and Families has been involved in expanding and its goal to have universal newborn home visits, which could be a next step for the District. Luke thanked Member Hayes for creating awareness of this system and discussed the District's potential issues with funding and staffing for these services. Dr. Wallace discussed caseload difficulties created by the rural geography of the district and funding limitations.

Member Dean asked whether Federal Public Health Services (FPHS) funds were being used to fund the nursing consultation program at the District's childcare centers. Luke said that the District is using a consolidated contract with the Department of Health (Department). Luke said that the program is quite small, as they only have funding available to offer it through two of the District's 60 to 70 childcare centers. The District may consider ways to expand the program through FPHS funds. Member Dean then asked whether the two childcare centers were publicly run. Luke said that these centers signed up to be a part of the program through the Department and that the District supports them through the criterion that they have a significant amount of children enrolled in Medicaid.

Tao Sheng Kwan-Gett, Chief Science Officer, Secretary's Designee, thanked the District representatives for their presentation and leadership. Member Kwan-Gett asked about the future direction of the District's regional shared services in the next few years. Luke spoke about expanding the regional emergency response coordination and epidemiology programs using learnings from the COVID-19 pandemic. For emergency response coordination, the District is looking to grow capacity for a multi-agency response across the five counties by strengthening their relationships, developing shared dashboards, and sharing trained workforces. For epidemiology, strengthening their ability to have robust data, to educate their communities, and to advocate for resources to work on different projects. Luke said that the counties are starting to

collaborate on environmental health issues and are partnering with their local Department of Natural Resources to ensure resilience against climate change. Dr. Wallace spoke about the balance between a strong regional approach and a strong local health jurisdiction; and talked about how the different districts learn from each other because they know their respective communities so well.

Stephen Kutz, Board Member asked about the District's mental health care access. Luke talked about their community health assessments. Mental health and substance abuse have been identified as a top issue in past community health assessments, and their current assessment focuses heavily on mental health workforce and resource mapping. Luke spoke about their efforts to collect data from providers and to strengthen their opioid abuse treatment and prevention response. Dr. Wallace echoed that access to substance abuse treatment, mental health care, and general health care are top issues for their District. Dr. Wallace spoke about the workforce challenges they are currently facing locally and in the region. The District is trying to coordinate services to fill in gaps and to advocate for more resources. Luke spoke about the District's efforts to build relationships with local agencies and improve access to data for their local partners as well as for state entities like the Board.

Chair Grellner praised Dr. Wallace and Luke Davies for their work.

The Board took a break at 9:50 a.m. and reconvened at 10:05 a.m.

6. BRIEFING – NEWBORN SCREENING TECHNICAL ADVISORY COMMITTEE RECOMMENDATIONS

Kelly Oshiro, Board Vice Chair introduced this agenda item and discussed the Board's authority and technical advisory committee (TAC) formation regarding newborn screening. Vice Chair Oshiro stated that there is a decision before the Board regarding whether to add two candidate conditions to the newborn screening panel. Vice Chair Oshiro introduced Molly Dinardo to provide a staff briefing.

Molly Dinardo, Board staff, shared recommendations, background information, membership, guiding principles, and newborn screening criteria from the newborn screening TAC. Molly also introduced John Thompson, Department of Health, and Makena Chandra, University of Washington to provide an overview of Guanidinoacetate methyltransferase (GAMT) deficiency and Arginase 1 deficiency (see materials on file).

Kate Dean, Board Member asked for clarification on cost-benefit analysis regarding the net benefit, and if the analysis was temporal or per incidence. Makena stated that this was an annual cohort, so the analysis is for one year. Member Dean followed up asking if the annual assumption is that one positive test would be found. John stated that they looked at the costs and benefits across the board, not just focused on the budget analysis. They looked at healthcare costs for families. Over a period of 100 years, this would be the average benefit per year.

Motion: The Board directs staff to file a CR-101 to initiate rulemaking for chapter 246-650 WAC to consider adding Guanidinoacetate methyltransferase (GAMT) Deficiency to the Washington State newborn screening panel.

Motion/Second: Member Abdelmalek/Member Dean. Approved unanimously.

Molly transitioned into discussing the newborn screening TAC recommendation for Arginase 1 Deficiency (ARG1-D), with John and Makena providing additional background and information (see materials on file).

Motion: The Board directs staff to file a CR-101 to initiate rulemaking for chapter 246-650 WAC to consider adding Arginase 1 Deficiency (ARG1-D) to the Washington State newborn screening panel.

Motion/Second: Member Dean/Member Abdelmalek. Approved unanimously.

Stephen Kutz, Board Member, noted that it was challenging to discuss two different conditions in one day.

Vice Chair Oshiro acknowledged Molly, John, and Makena and thanked them for their efforts, and the public health lab for allowing the TAC to come into the lab for a tour.

7. RULES BRIEFING – ON-SITE SEWAGE SYSTEMS, CHAPTER 246-272A WAC

Stuart Glasoe, Board staff introduced the final informational briefing on this rulemaking, explaining Board authority for on-site sewage systems (OSS), joint administration of the rules by the Department of Health (Department) and Local Health Jurisdictions, and plans to file the CR-102, Proposed Rules, for public review and comment. Jeremy Simmons, Department of Health presented background on OSS, the history and scope of the rules, rulemaking process, highlights of key issues and revisions in the draft rules and anticipated next steps to complete the rulemaking (see materials on file).

Michael Ellsworth, Secretary's Designee asked if there is anything Board Members should be aware of with the increase in lot sizes and if comments should be anticipated. Jeremy said the increase in lot sizes is relatively small. There may be people who do not want any changes. Stuart added that's an area of the rules that historically has drawn attention and considers the proposed changes to be thoughtful. Stephen Kutz, Board Member stated that there could be issues with lot size. Stuart said the rules try to accommodate different types of lots and risks.

Jeremy said Washington's rules are some of the best in trying to match OSS treatment to lot sizes/conditions in different scenarios. The nitrogen-based approaches we are proposing give people tools and a solid path forward in difficult scenarios.

Kate Dean, Board Member said the issue and rules are relevant and important to counties, and asked if the analyses could be synthesized to be more understandable, particularly as it relates to cost issues and impacts on homeowners. Member Dean said

it will be important to come into compliance without burdening people and wants to be sure we consider equity impacts for people with lower incomes.

Stuart said staff can take information in the presentation and the analyses to create an additional educational fact sheet, with emphasis on cost impacts/controls of the rules. Stuart added that it is challenging to make all systems affordable to all people. The proposed rules should not worsen but will also not ease affordability issues with OSS.

Jeremy said the cost analysis of the rules is standardized, the cost/benefit analysis is huge and expressed interest in creating a shorter document to better share the information. Jeremy briefly mentioned examples of policy changes—definition of repair, nitrogen methods, connection to sewer—which should help consumers and save money. Member Dean said the staff did a good job with the presentation and the update to the rules and suggested including case studies and examples in summarizing the cost issues.

Michelle Davis, Executive Director reminded Board Members that this topic will be up for public hearing in January. Stuart added that the Board may also have to act on the outstanding OSS emergency rule in January depending on the timing and outcome of possible Board action in January.

8. BOARD MEMBER COMMENTS AND UPDATES

Stephen Kutz, Board Member thanked Molly for the presentation on Kratom.

Kate Dean, Board Member talked about the challenges for the Local Board of Health (LBOH) to implement the new rules regarding House Bill 1152 from the 2021-22 session, which supports measures to create comprehensive public health districts. Member Dean talked about Jefferson County being very willing to be early adopters to the rule, but they've run into several problems such as having Tribal representation and the balance of elected vs non-elected officials. Member Dean talked about considerations on revising the bill but said the Association of Counties declined to take on any revisions this session.

Michelle Davis, Executive Director mentioned a recent conversation with Member Abdelmalek, regarding the procedures of the Open Public Meetings Act (OPMA) and other challenges. Executive Director Davis said the Board may be able to provide guidance, but much depends on timing and the appointment process. Executive Director Davis suggested staff could connect with other LBOH partners to see how the implementation is going, but that it might garner 35 different responses.

Member Kutz and Executive Director Davis talked about the capacity and importance of working with partners and having Tribal representation, including the value of in-person meetings.

Patty Hayes, Board Member talked about the intent of the requirements and how to technically get the representation. Member Hayes said the State Board of Health needs

to have more conversations with Local Boards of Health and other partners such as the Public Health Advisory Board.

Keith Grellner, Chair talked about Tribal representation in Kitsap County, saying it is a good example of how it can and should work, saying it has added a richness to their board meetings. Chair Grellner said this requirement is another example of how rules are pushed through legislatively, without input from partners and those engaged and involved in the work. Chair Grellner thinks the Tribes would have said there would be difficulty getting representation for 35 different boards of health.

Member Kutz said some representation has been phenomenal. Chair Grellner can see how it can be challenging in smaller areas with less population.

Executive Director Davis recalled a conversation on the huge challenges of the level of support to prepare individuals for a governor-appointed board, such as navigating systems, processes, procedures, and perhaps an angry public.

Member Kutz said the LBOH orientation is helpful, but it is only offered once a year and talked about the value of face-to-face conversations. Chair Grellner concurred and wondered if the LBOH attendee list can be expanded, and maybe ask the Board or WSALPHO.

Mindy Flores, Board Member concurred with Member Kutz on the training, saying it needs to be expanded. Member Flores said the training has great information and energy, but then it leaves one wondering what to do next. Kelly Oshiro, Vice Chair, suggested talking to schools and giving students the opportunity to participate in the process rather than just hearing and reading about it.

Member Kutz, commented on the work within the system with fellow Board Members, local partners, Government, and the involvement and complexity of the process. Chair Grellner concurred.

Member Dean said many counties would like to roll back the rule and frame the conversation appropriately. Member Dean said Jefferson County is doing a risk analysis, saying they have great relationships, but capacity is the challenge. Member Dean said they are trying to meet the intent. Member Dean talked about giving jurisdictions the time for grace, while not letting folks off the hook, and finding ways to fulfill the intent of the law.

Executive Director Davis said there is so much good stuff in this conversation that we need to think about. She said the Board has no authority to enforce these rules. Executive Director Davis said our former staff member Kaitlyn Campbell worked with Hannah Haag on the development of these rules and we are close to having a high-level overview that we will send out for feedback.

Member Kutz, talked about the difference of the Tribes and counties, saying some Tribes were moved from counties where they formerly resided.

Chair Grellner thanked everyone for their participation and especially acknowledged Chelan-Douglas Public Health for their accomplishments in the last two years.

ADJOURNMENT

Keith Grellner, Board Chair, adjourned the meeting at 11:46 a.m.

WASHINGTON STATE BOARD OF HEALTH

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Keith Grellner, Chair

To request this document in an alternate format or a different language, please contact the Washington State Board of Health at 360-236-4110 or by email at wsboh@sboh.wa.gov
TTY users can dial 711.

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360-236-4110 • wsboh@sboh.wa.gov • sboh.wa.gov

From: sue coffman
Sent: 11/2/2023 1:41:53 PM
To: DOH WSBOH
Cc:
Subject: Public comment for Nov 8 meeting

External Email

I mistrust one of the agenda items for the next meeting on Nov 8th.

It is item #8, requesting authority regarding our water system plans, the title of which seems to be a very big mouthful of words for a fifteen minute presentation. I looked into the various portions of the RCWs brought up about the water system, and I just don't understand why the HEALTH department needs to get their hands into our water too. We have a water district already, and I understand keeping the water system updated and healthy for human consumption, but I have learned to mistrust our health agencies in the past few years, so I just don't feel reliance toward this topic of water & health.

As I've stated before...."stay in your lane."

Thank you for retaining my public comments herein.

Sue Coffman

714-337-4331
CHDwa Chapter Co-Leader

https://wa.childrenshealthdefense.org/
<https://gcc02.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwa.childrenshealthdefense.org%2

ICWA Team Leader
Legislative District #24
https://informedchoicewa.org/
<https://gcc02.safelinks.protection.outlook.com/?url=https%3A%2F%2Finformedchoicewa.org%2F&data=

From: bill teachingsmiles.com
Sent: 10/18/2023 10:48:55 AM
To: DOH WSBOH
Subject: Toxic Toxic Control Substance Act

External Email

Dear Washington State Board of Health,

A must view for the Washington State Board of Health members is a Fluoride Video <https://gcc02.safelinks.protection.outlook.com/?url=https%3A%2F%2Fthehighwire.com%2Fark-videos%2Fthe-fluoride-scandal%2F&data=05%7C01%7CWSBOH%40SBOH.WA.GOV%7C0ce08eb19bea4e9e0b4d08dbd0027e02% briefly going over the history and current status of some harms, government deposition statements and more. Much of this is based on court depositions, FOI, National Research Council, and published studies. I know you are busy, but this video is the best short overview of fluoridation authoritative knowledge and will save many days of your time. The CDC, EPA, NSF own words in depositions.

Although the Washington State Board of Health claims "Fluoridation benefits everyone," does the CDC agree?

1. What does CDC's Casey Hannan, Director, Division of Oral Health, say under oath about the safety of fluoridation and efficacy for young children or if ingested by the mother during pregnancy?
2. What does NSF say about their testing of fluoride chemicals?
3. What is the endpoint of fluoride concern in the USA, first sign of harm, intake below which is "safe"?
4. What do the NIH funded mother-child cohorts find regarding fluoridation?
5. What does EPA say about historical and current research and safety standards of fluoride?
6. Was there attempted political influence with the NTP report?
7. What does the National Toxicology Program say about fluoride's developmental neurotoxicity?
8. Does the NTP conclude we have enough scientific studies to make a determination of fluoride exposure concern?

For more information on the TSCA fluoride/EPA trial, depositions and expert testimony, see videos. <https://gcc02.safelinks.protection.outlook.com/?url=https%3A%2F%2Ffluoridealert.org%2Ffan-tv%2Ftsca-lawsuit-video-update-1-dec-2018%2F&data=05%7C01%7CWSBOH%40SBOH.WA.GOV%7C0ce08eb19bea4e9e0b4d08dbd0027e02%7C Dr. Thiessen, Dr. Lamphear, Dr. Grandjean, Dr. Hu, and 4 of the strongest fluoride neurotoxicity studies, along with margin of safety, sugar and fluoride, thyroid and more.

The most recent study <https://gcc02.safelinks.protection.outlook.com/?url=https%3A%2F%2Fpubmed.ncbi.nlm.nih.gov%2F377 this month on fluoride's developmental neurotoxicity by Grandjean.

Grandjean P, Meddis A, Nielsen F, Beck IH, Bilenberg N, Goodman CV, Hu H, Till C, Budtz-Jørgensen E. Dose dependence of prenatal fluoride exposure associations with cognitive performance at school age in three prospective studies. Eur J Public Health. 2023 Oct 5:ckad170. doi: 10.1093/eurpub/ckad170. Epub ahead of print. PMID: 37798092.

Sincerely,

Bill Osmunson DDS MPH

_____
From: Jotform
Sent: 10/28/2023 7:41:44 PM
To: DOH WSBOH
Cc:
Subject: Re: Stop The Child Vaccine Mandate Petition - Angela Janssen

External Email

<https://cdn.jotfor.ms/assets/img/logo2021/jotform-logo.png>

Stop The Child Vaccine Mandate Petition

Name

Angela Janssen

Email

angela.janssen@comcast.net

Zip

98372

You can edit this submission
<https://gcc02.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.jotform.com%2Fedit%2F574
and view all your submissions
<https://gcc02.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.jotform.com%2Ftables%2F2
easily.

From: Garry Blankenship
Sent: 10/25/2023 4:35:10 PM
To: DOH WSBOH,sheriff@co.clallam.wa.us,Berry, Allison 2
(DOHi),shahidafatin@gmail.com,ncarr@cityofpa.us,gbsjrmd@sisna.com,Mark.Ozias@ClallamCountyWA.gov
Herald,
(DOHi),chutton@heraldnet.com,customerservice@theolympian.com,news@spokesman.com,voice@spokesm
City Herald (DOHi),Van De Wege, Kevin,Chapman, Mike (LEG)
Cc:
Subject: The Plandemic Litigation Is Out of the Gates

attachments\2BF264246FA54A39_D.R. Martin Plandemic Suit Summary.pdf

External Email

This is of particular importance to all Boards of Health, medical boards and hospitals. You / they can disregard at their own peril. It is a succinct summary of the healthcare practicing future and an explanation of how our "pandemic" manifested..

Attached please find a litigation case summary against:

Mr. Alex Azar, DEFENDANT, (H.H.S.)
Dr. Anthony Fauci, DEFENDANT
Dr. Peter Daszak, DEFENDANT
Dr. Ralph Baric, DEFENDANT
FDA, DEFENDANT
CDC, DEFENDANT
NIAID, DEFENDANT
MODERNA, DEFENDANT
PFIZER, DEFENDANT

The full text can be found at
https://prosecutenow.io/dld/LitigationConsolidationSummary.pdf
<https://gcc02.safelinks.protection.outlook.com/?url=https%3A%2F%2Fprosecutenow.io%2Fdld%2FLitiga

This is one health violations lawsuit of many and the inevitable multitudes to follow. Dr. Martin is a data analytical genius. He specializes in data verification. His company does patent research and other data intense services. Much can be argued in the courts, but the facts produced by Dr. Martin are bullet proof. It is my hope that the success of this lawsuit trickles down to State and local Boards of Health, censuring medical boards, as well as the Hospitals and staff violating the Hippocratic Oath for Government offered bribery money. Health professionals must be held accountable for their pandemic harmful practices.

Sincerely,

Garry Blankenship

Executive Summary for Litigation of PLANDEMIC Crimes…

Dr. David E. Martin

Since the publication of the ***Global Vaccine Action Plan 2011-2020*** in February of 2013, Drs. Anthony Fauci of the U.S. National Institutes for Allergies and Infectious Diseases (NIAID) and Chris Elias of the Bill & Melinda Gates Foundation have declared the commercial dictum: "to extend immunization to everyone."[1] Declaring vaccination an essential "human right", they spent the decade seeking to develop and deploy a "universal vaccination". Lamenting their failure before Congress and the World Health Organization, they complained that the public was reticent to accept a "universal" vaccine. Possibly informed by the compelling failure of the influenza "vaccines" which failed to disrupt annual flu seasons, the public wasn't falling for their obsession.

In 2014, Dr. Peter Daszak (veterinarian and NIAID pandemic engineer) lamented:

"…until an infectious disease crisis is very real, present, and at an emergency threshold, it is often largely ignored. To sustain the funding base beyond the crisis, he said, we need to increase public understanding of the need for MCMs such as a pan-influenza or pan-coronavirus vaccine. ***A key driver is the media, and the economics follow the hype. We need to use that hype to our advantage to get to the real issues. Investors will respond if they see profit at the end of process****, Daszak stated."*[2] (emphasis added)

Missing the opportunity to leverage the deadly flu season of 2018, Fauci, Elias, and Daszak announced that they would construct a scenario to mandate that ALL countries respond to a "lethal respiratory pathogen." Published in September 2019, these criminal conspirators put humanity on a collision course with a manufactured "pandemic" to create vaccine dependency.

"A rapidly spreading pandemic due to a lethal respiratory pathogen (whether naturally emergent or accidentally or deliberately released) poses additional preparedness requirements. Donors and multilateral institutions must ensure adequate investment in development of innovative vaccine and therapeutics, surge manufacturing capacity, broad-spectrum antivirals and appropriate non-pharmaceutical interventions. All countries must develop a system for immediately sharing sequences of any new pathogen for public health purposes, along with the means to share limited medical countermeasures across countries.

Progress indicator(s) by September 2020

Donors and countries commit and identify timelines for: financing and development of a universal influenza vaccine, broad-spectrum antivirals and targeted therapeutics. WHO and its

[1] https://www.who.int/publications/i/item/global-vaccine-action-plan-2011-2020
[2] https://www.ncbi.nlm.nih.gov/books/NBK349040/

Member States develop options for standard procedures and timelines for sharing of sequence data, specimens and medical countermeasures for pathogens other than influenza."[3]

One month later, they announced that they would use SARS Coronavirus as a "desktop" simulation during the Event 201 exercise funded by Open Philanthropy (Facebook's Dustin Moskovitz) and hosted by the Bill & Melinda Gates Foundation, the World Economic Forum, and Johns Hopkins University.

COVID-19, the first "disease" to have NO diagnostic test to measure its existence, was a series of symptoms aggregated to form an influenza-like illness to create the illusion of a pandemic. Now discredited, the RT-PCR test (amplified to cycles that could simulate any nucleic acid sequence) was used to create the illusion of infection and spread fear around the world. And all of this was to force the public adoption of a novel mRNA "vaccine" which, by the FDA's own classification is a gene therapy[4] – not public health immunization.

Over one year later it has become self-evident that the "vaccination" terminology was adopted for branding purposes (and to attempt to secure immunity shields for manufacturers) to coerce the population into accepting an experimental, dangerous gene therapy technology. The injected are getting sick. The injected are dying "of COVID-19". There is NO evidence that the injections have disrupted transmission as the recent "Omicron variant" has made abundantly clear.

THIS WAS NEVER ABOUT PUBLIC HEALTH. This was an organized crime racket to coerce the public's adoption of a novel technology that has NEVER been shown to be safe or effective under the definitions of the FDA, the Federal Trade Commission's Deceptive Medical Practices standard, or under any other statutory criteria.

It is long past time to hold the criminals accountable for:

- Domestic and International Terrorism,
- Deceptive Medical Practices,
- Reckless Endangerment and Homicide,
- Racketeering and Anti-trust collusion, and,
- Biological Weapons Construction and Deployment.

I have been the solitary voice calling for this accountability since the inception of this scheme and I'm now leading efforts to litigate all of the matters identified above as well as hold the conspiring commercial interests liable for tax and securities fraud. In the former, each manufacturer has misused the In Process Research and Experimentation Tax Credit

[3] https://reliefweb.int/sites/reliefweb.int/files/resources/GPMB_annualreport_2019.pdf
[4] https://www.sec.gov/Archives/edgar/data/1682852/000168285220000017/mrna-20200630.htm

misrepresenting sponsored research as qualified exemptions. In the latter, each manufacturer has violated that Bayh-Dole Act and has thereby misrepresented proprietary interests to their shareholders in violation of SEC laws.

-

From: Arne Christensen
Sent: 11/1/2023 7:21:13 PM
To: DOH WSBOH
Cc:
Subject: listening to people

External Email

It seems to be taking the health department a very long time to realize that the more you lecture and dictate to people who are skeptical about you, the less likely those people are to obey your lectures.

_____
From: Jotform
Sent: 10/26/2023 3:47:03 PM
To: DOH WSBOH
Cc:
Subject: Re: Stop The Child Vaccine Mandate Petition - Malia Jorgensen

External Email

<https://cdn.jotfor.ms/assets/img/logo2021/jotform-logo.png>

Stop The Child Vaccine Mandate Petition

Name

Malia Jorgensen

Email

neilmalia@comcast.net

Zip

98028

Cell Phone Number

(206) 3359296

From: shellies4@netzero.com
Sent: 10/25/2023 10:09:59 PM
To: DOH WSBOH
Cc:
Subject: Public Comments

External Email

Regarding Agenda item #8

8. Request for Delegated Rulemaking Authority – Engrossed Second Substitute House Bill (E2SHB) 1181, Climate Resilience Element in Water System Plans, Group A Public Water Supplies, Chapter 246-290 WAC

I just want to make VERY SURE that you are NOT considering putting fluoride in our water supply!!
We the people have voted it down over and over again!
We DO NOT WANT FLUORIDE in our water supply!
We definitely want you to watch out for the publics health, but fluoride in the water and mandatory COVID shots are NOT taking care of the public! It's poisonous to humans...
Thank you for keeping common sense in the whole process!
Thank you
Michelle Anderson
Otis Orchards WA

_____

From: bill teachingsmiles.com
Sent: 11/2/2023 8:02:07 AM
To: DOH WSBOH
Cc:
Subject: November 8, 2023 Public Comment

attachments\A4E3DD73D7E74D10_WSBH 11 8 23.docx

External Email

Please add my name to speak at the November 8, 2023 Board Meeting, public comment.

TO: Washington State Board of Health, November 8, 2023

TOO MUCH FLUORIDE: THE BOARD OF HEALTH HAS NO IDEA HOW MUCH FLUORIDE AN INDIVIDUAL IS INGESTING.

In a public forum debate with a Harvard Professor, I noticed he was less than clear with the audience, trying to assume fluoridated water was the only source of fluoride. I made his deception clear. The public chose to stop fluoridation. Is the WSBOH also being intentionally deceptive in their claim of fluoridation's safety? Fluoridated water represents an estimated 30% to 70% of total exposure of fluoride, for about 90% of the public. Fluoridation is a concentration not a dosage.

WATER: The mean intake of water is about one liter/day. 90th percentile is about 2 liters/day. The EPA ignores 10% of the public drinking the most water. Ten percent of Washington State is 770,000 individuals. Some ingest over ten times the statistical mean of 1 liter/day. Trying to dispense a drug in water lacks dosage control and is an insane public health practice. And that is just exposure from water. See National Academies, "Fluoride in Drinking Water"
<https://gcc02.safelinks.protection.outlook.com/?url=https%3A%2F%2Fnap.nationalacademies.org%2Fcat
in-drinking-water-a-scientific-review-of-epas-
standards&data=05%7C01%7CWSBOH%40SBOH.WA.GOV%7C5a8ce740d8ea4426867708dbdbb46276%7C
and Review
<https://gcc02.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.fluorideresearch.org%2F393
172.pdf%23%3A~%3Atext%3DOn%2520March%252022%252C%25202006%252C%2520NRC%2520relea

MEDICATIONS: At 1,500 ppm (water 0.7 ppm) toothpaste has a significant potential for excess fluoride exposure. At age 11 I watched my daughter brush her teeth and told her to spit before swallowing… and I watched as she leaned over the sink and her little eve's apple bobbed and she spit. Swallowing is a reflex and toothpaste is swallowed.

Although pharmaceutical companies attempt to make the fluoride in medications (such as pills) not biologically available, on average about 10% is absorbed in the body. General anesthesia with fluoride (often used with children) can cause a huge spike in fluoride exposure.

FOODS: Fluoride tends to be a higher concentration in coffee, tea, sodas, shellfish, grapes, potatoes, baby foods, broths, stews, hot cereals made with tap water, artificial sweeteners, mechanically deboned meat and more.

POST-HARVEST FUMIGANT
<https://gcc02.safelinks.protection.outlook.com/?url=https%3A%2F%2Ffluoridealert.org%2Fcontent%2Ffl
tolerances%2F&data=05%7C01%7CWSBOH%40SBOH.WA.GOV%7C5a8ce740d8ea4426867708dbdbb4627
(sulfuryl fluoride): The EPA/Congress/WBOH permits (endorses) up to 900 ppm fluoride residue on dried eggs, often fed to school children and institutions. Many other foods may have as much as 70 ppm.

The Board of Health should not be surprised that two out of three children in the USA have dental fluorosis, a biomarker of excess fluoride exposure. However, the EPA (and in effect the WSBOH) still has their level of protection at crippling skeletal fluorosis.

Sincerely,

Bill Osmunson DDS MPH

_____

From: bill teachingsmiles.com
Sent: 10/8/2023 8:50:22 AM
To: DOH WSBOH
Cc:
Subject: Grandjean: Prenatal Fluoride and IQ

attachments\E6421F56526A47A4_Grandjean-Dose dependent prenatal_PRDTOOL_NAMETOOLONG.pdf

External Email

Dear Washington State Board of Health

Attached is a study by P. Grandjean, Professor at both Harvard and University of Southern Denmark on fluoride's effect to the developing fetal brain. Dr. Grandjean has over 500 published studies and highly respected in the field of toxicological research.

Of the three combined studies of mother-child pairs from prospective studies, "the joint benchmark concentration results reflect an approximate threshold for fluoride neurotoxicity at about 0.3 mg/l in urine."

Remember, urine fluoride and water fluoride are roughly similar. The data to date from these three studies indicates water fluoride concentrations over 0.3 ppm will harm many. And with further research, more precises, at specific time periods of development, with synergistic toxicants, we may find that water fluoride concentration drops significantly.

At a minimum, the Board must caution expectant mothers to not ingested fluoride from water, toothpaste, and foods.

The Board has listened to the "choir" promoting fluoridation. Believers rely on historic research and do not include current developmental neurotoxicity of fluoride ingestion.

If we only look at one side of an issue, we will not know what we don't know and harm the ones we love.

Sincerely,

Bill Osmunson DDS MPH

European Journal of Public Health, 1–7
Published by Oxford University Press on behalf of the European Public Health Association 2023.

https://doi.org/10.1093/eurpub/ckad170

Dose dependence of prenatal fluoride exposure associations with cognitive performance at school age in three prospective studies

Philippe Grandjean [1,2], Alessandra Meddis [3], Flemming Nielsen [1], Iben H. Beck [1], Niels Bilenberg[4], Carly V. Goodman[5], Howard Hu[6], Christine Till[5], Esben Budtz-Jørgensen[3]

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2 Department of Environmental Health, Harvard T.H. Chan School of Public Health, Boston, MA, USA
3 Department of Biostatistics, University of Copenhagen, Denmark
4 Department of Child and Adolescent Psychiatry, Odense University Hospital, Odense, Denmark
5 Department of Psychology, Faculty of Health, York University, Toronto, ON, Canada
6 Department of Population and Public Health Sciences, Keck School of Medicine, University of Southern California, Los Angeles, CA, USA

Correspondence: Philippe Grandjean, Department of Environmental Medicine, University of Southern Denmark, Campusvej 55, Odense, Denmark, Tel: +45 (0) 6550 3769, e-mail: pgrandjean@health.sdu.dk

Background: Fluoride may be a developmental neurotoxicant at elevated exposures. We merged new data from a prospective Odense Child Cohort (OCC) with results from two previous birth cohort studies from Mexico and Canada to characterize the dose–effect relationship in greater detail. **Methods:** The OCC contributed 837 mother–child pairs to the total of >1500. We measured creatinine-adjusted urine-fluoride concentrations in maternal urine samples obtained during late pregnancy. Child IQ was determined at age 7 years using an abbreviated version of the Wechsler Intelligence Scales for Children. Findings from the three cohorts were used to calculate the joint benchmark concentration (BMC) and the lower confidence limit (BMCL) after adjustment for covariables. **Results:** In the OCC, urine-fluoride concentrations varied between 0.08 and 3.04 mg/l (median 0.52 mg/l) but were not significantly associated with full-scale IQ at age 7 years ($\beta = 0.08$; 95% confidence interval −1.14 to 1.30 for a doubling in exposure). No difference was apparent between boys and girls. In the OCC, the BMC was 0.92 mg/l, with a BMCL of 0.30 mg/l. The joint analysis of all three cohorts showed a statistically significant association between urine-fluoride and IQ, with a BMC of 0.45 mg/l (BMCL, 0.28 mg/l), slightly higher than the BMC previously reported for the two North American cohorts alone. **Conclusions:** As the BMCL reflects an approximate threshold for developmental neurotoxicity, the results suggest that pregnant women and children may need protection against fluoride toxicity.

Introduction

Fluoride has beneficial effects on the dental enamel in preventing caries, while systemic exposure may lead to toxic effects.[1,2] Although fluoride has been added to drinking water in certain parts of the world since the 1940s and toothpaste since the 1960s, little attention has been paid to the possible adverse effects of fluoride intake in pregnancy until fairly recently.[1] A substantial number of studies have shown cognitive deficits in children with elevated exposure to fluoride in drinking water, although mainly cross-sectionally.[1,3,4] However, prospective studies have now become available with individual data on prenatal fluoride exposure, as indicated by maternal urine-fluoride (U-F) excretion levels during pregnancy.[5,6]

Regulatory agencies often use benchmark concentration (BMC) calculations to identify safe or tolerable exposure levels.[7,8] In a prior study, we combined data from two prospective North American studies. A benchmark response of a one-point decrement in IQ was predicted by a BMC of 0.33 mg/l (lower confidence limit, BMCL, 0.20 mg/l) expressed in terms of maternal pregnancy U-F.[9] However, the relatively small number of data points at U-F levels at or below 0.2 mg/l may have introduced uncertainty in the observed monotonic associations. Accordingly, renewed calculations would be desirable with a better representation of low exposures. In addition, an update of the BMC calculation also appears warranted by the recently expanded results from the Early Life Exposure in Mexico to Environmental Toxicants (ELEMENT) cohort that included additional exposure data.[10]

We now present findings from the prospective Odense Child Cohort (OCC),[11,12] from a Danish municipality with fluoride concentrations in drinking water that are low by international standards.[13] We examine the possible association between prenatal fluoride exposure, as represented by maternal pregnancy U-F, and IQ at school age and conduct a joint BMC analysis that includes data from the two previous prospective studies.

Methods

OCC study cohort

All new pregnant women residing in Odense municipality were contacted between 2010 and 2012; 2874 of the 4017 women agreed to be enrolled in the OCC, while 374 dropped out before and after giving birth.[12] The present study population included 837 singleton mother–child pairs with results on child IQ, a maternal urine sample analyzed for fluoride, and information about parental education, child sex and preterm birth.

Fluoride exposure

While the addition of fluoride to drinking water is not legal in Denmark, elevated fluoride concentrations up to 1.5 mg/l naturally occur in groundwater in parts of the country,[13] and some types of tea, especially black tea, constitute an additional source of exposure.[14] In Odense municipality, the fluoride concentration in drinking water is rather low, i.e. 0.2–0.3 mg/l.[13] Given the retention in and

continuous mobilization from calcified tissues, the maternal U-F concentration reflects the level in the blood that is available for passage through the placenta to reach the fetus.[1] We analyzed maternal urine samples collected at 28 weeks' gestation to assess individual fluoride exposure. Some women ($N = 384$; 45.9%) provided a 24-h urine sample, while a spot fasting urine sample was otherwise obtained in the morning ($N = 453$; 54.1%).

The fluoride concentrations were measured with an Orion™ Ion Selective Electrode (ISE 9609 BNWP) (Thermo Fisher Scientific, Waltham, MA, USA) coupled to a Model 15 pH-metre from Denver Instruments (Sartorius, Göttingen, Germany) as previously described.[14,15] All samples were diluted prior to the analysis (1:1) with total ionic-strength-adjusted buffer (TISAB II) solution, as recommended by the manufacturer. The accuracy of the method was controlled in each batch of samples by analyzing the fluoride Certified Reference Material (CRM) at 0.52 ± 0.02 mg/l (Merck, Darmstadt, Germany). The limit of determination was 0.02 mg/l, and the average imprecision of the method was <5.1% (see Supplementary Material).

All U-F concentrations were adjusted for the creatinine concentration (U-Cr) using the following equation: $U\text{-}F_{CR} = (U\text{-}F/U\text{-}Cr) \times U\text{-}Cr_m$, where $U\text{-}F_{CR}$ is the creatinine-adjusted fluoride concentration (in mg/l), U-F is the measured fluoride concentration (mg/l) and $U\text{-}Cr_m$ is the median creatinine concentration of the samples.[5] In the two previous cohorts, the creatinine-adjusted U-F was assessed by comparable analytical protocols.[6,10,16]

Cognitive assessment

At age 7, the OCC children were invited to participate in the Danish version of the abbreviated Wechsler Intelligence Scales for Children to obtain a full-scale IQ (FSIQ), and 1570 completed the test.[11] Similarly, in the ELEMENT study,[5,17] a Spanish version of the Wechsler Abbreviated Scale of Intelligence was administered to 259 children at age 6–12 to derive an age-adjusted FSIQ. In addition, the Spanish version of the McCarthy Scales of Children's Abilities was administered to 287 children at age 4 to derive a General Cognitive Index (GCI) as a standardized composite score highly correlated with the FSIQ. In the Maternal-Infant Research on Environmental Chemicals (MIREC) study,[6] the 407 children's FSIQ were assessed at age 3–4 years in either English or French. These different measures of intellectual ability are considered equally valid and highly correlated,[18] thus justifying pooling the scaled (age-adjusted) IQ scores across the cohorts. Examiners were blinded to fluoride exposure status in the OCC, ELEMENT and MIREC studies.

Covariables

In the OCC, we considered maternal, child and socioeconomic variables correlated with child FSIQ for inclusion in the statistical analyses along with sex and preterm birth (gestational age <37 weeks).[11] As a key socioeconomic variable in the Danish population, parents reported their highest achieved education, which was categorized into short (high school or less, $N = 229$), intermediate (1–4 years post high school, $N = 446$) and long (>4 years post high school, $N = 162$), as based on the highest achieved education by either parent.[11] Dichotomized maternal smoking (yes, $n = 23$) and alcohol intake (yes, $n = 209$) during pregnancy, duration of breastfeeding (dichotomized as ≤3 and >3 months), school type (public or private), school grade (preschool or first) and psychologist examiner were also considered as covariables possibly associated with the FSIQ.

In the ELEMENT cohort,[5] covariables included gestational age in weeks, birth weight, sex, age at outcome measurement, maternal parity, maternal smoking history, marital status, age at delivery, maternal IQ, education and the specific sub-cohort identity. The MIREC study[6] selected similar covariables, including sex, city of residence, HOME score, maternal education and maternal race/ethnicity.

Statistical analysis

In the OCC, we first used covariable-adjusted linear regressions to model differences in child FSIQ score by the maternal U-F concentration. Because the U-F concentrations were positively skewed, a $\log_2$ transformation was applied. Thus, the regression coefficient (beta) therefore shows the difference in FSIQ for a doubling of the maternal U-F concentration.

A simple model accounted for sex, parental education and preterm birth. In a more comprehensive model involving a subset of mother–child pairs with additional information available, we added breastfeeding duration, maternal smoking and alcohol intake during pregnancy, age of children at the time of testing, examiner, school grade and school type. In both models, sex was introduced as a potential interaction term. In addition, the creatinine-adjusted U-F was stratified for the type of urine sample available (i.e. 24 h and spot), and a joint analysis was also conducted with a fixed effect for the type of urine sample. For descriptive purposes, a cubic spline model was also developed.

BMC calculations were carried out to assess the maternal U-F concentration associated with a benchmark response of a one-point reduction in child FSIQ score, as compared with an unexposed mother and the same profile of covariates. Then the results from the OCC study were compared and merged with the results previously obtained from the studies in Mexico[5] and Canada.[6] We used a similar statistical approach as in our previous benchmark calculations using results from the North American studies,[9] but we now included the updated ELEMENT cohort data with an increased sample size.[10]

In the benchmark analysis, we applied a linear dose–response function to approximate the effect of fluoride exposure (i.e. without a log scale for U-F). To better allow for different exposure distributions across studies, we derived two piecewise linear models, with breakpoints at 0.5 and 0.75 mg/l.[9] All models were fitted separately, including sex interaction, and adjusted for parity, maternal education, smoking, gestational age and the type of urine sample.

The regression coefficients in the linear model were used for the calculation of the BMC for each cohort, and joint BMCs were obtained by combining results from the three cohorts using a weighting approach.[9] The main result of the BMC analysis is the BMCL, i.e. the lower one-sided 95% confidence limit of the BMC.[19]

Differences between the regression coefficients in the three cohorts were tested using a Wald test, and we calculated the Akaike Information Criterion (AIC) to compare the fit of the different regression models. As the linear model is nested in the piecewise linear model, the fit of these two models can be directly compared. Thus, we calculated the *P* values for the hypothesis that the concentration response is linear in a test where the alternative is the piecewise linear model; a low *P* value indicates that the linear model has a poorer fit.

Results

Table 1 shows the main characteristics of the 837 OCC children included in the present study, as compared with the characteristics of all cohort children originally recruited. Of the 837 children in the present study, 435 (52%) were boys, and their average age was 7 years (6.5–8.3 years). Most (75.9%) of the children were breastfed for more than 3 months, and only 27 (3.2%) were born preterm. The maternal U-F concentrations averaged 0.58 mg/l (SD, 0.32; range, 0.08–3.04) (with a median of 0.52 mg/l) and did not differ between the sampling conditions (Supplementary table S1) nor with season. The creatinine-adjusted U-F results from the OCC and for the two other prospective cohorts are shown in figure 1.

After adjustment for covariables, the log2-converted maternal U-F was not significantly associated with the child's FSIQ score (table 2). A doubling in maternal fluoride concentration led to a slight decrease of 0.04 FSIQ points in girls and a small increase of 0.20 points

Table 1 Characteristics of 837 children from the OCC and included in the present study, as compared with the total cohort

Variable	Present cohort sample (*N* = 837) Mean (SD)/count (%)	Total cohort (*N* = 2448) Mean (SD)/count (%)
Sex		
Girl	402 (48.03)	1155 (47.18)
Boy	435 (51.97)	1293 (52.82)
Weight at birth (g)		
Mean (SD)	3.54 (0.52)	3.53 (0.53)
Missing	0	6
Breastfeeding duration		
<3 months	165 (24.05)	429 (25.09)
>3 months	521 (75.95)	1281 (74.91)
Missing	151	738
Maternal parity		
Primiparidae	457 (54.60)	1351 (55.21)
Multiparidae	380 (45.40)	1096 (44.79)
Missing	0	1
Gestational age <37 weeks		
No	810 (96.77)	2344 (96.10)
Yes	27 (3.24)	95 (3.90)
Missing	0	9
School type		
Public school	492 (80.00)	768 (78.77)
Private school	123 (20.00)	207 (21.23)
Missing	222	1473
School grade		
1st grade	431 (58.64)	742 (59.31)
Preschool	304 (41.36)	508 (40.61)
Missing	0	6
Age at test (years)		
Mean (SD)	7.15 (0.19)	7.18 (0.21)
Missing	0	938
FSIQ score		
Mean (SD)	99.44 (12.34)	99.43 (12.04)

Note: FSIQ, Full-Scale IQ.

in boys, but the interaction between sex and fluoride exposure was marginal (figure 2). Among important covariables, a higher parental education level predicted a higher FSIQ score[11] but was of marginal importance in the fluoride–IQ analysis. The type of maternal urine sample (fixed effect in the model) had no clear effect on FSIQ scores (−0.83; 95% confidence interval −2.52 to 0.86), with no difference in a likelihood ratio test for sample interaction.

When additional covariables were included, 377 observations in the OCC were disregarded due to missing information, and the comprehensive model included complete cases of 460 children (table 2). Again, only a weak association between the U-F and child FSIQ score was observed in the OCC, with no clear interaction between sex and fluoride exposure (table 2). Stratifying regression models by urine sample type did not reveal any significant associations between the maternal fluoride excretion variables and FSIQ score, and no significant interactions by sex were observed (table 2). A cubic spline for the log-transformed fluoride concentration again showed no association with FSIQ (Supplementary figure S1).

Relative to the OCC study, stronger associations between fluoride and IQ were observed among the MIREC boys and in the full sample of the ELEMENT cohort; regression coefficients for the girls in the MIREC cohort were fairly similar to the OCC study.[5,6] Nevertheless, the adjusted linear associations between maternal U-F and cognitive function in each of the three studies did not differ statistically ($P = 0.28$), and the combined data showed that an increase in maternal pregnancy U-F by 1 mg/l significantly predicted an IQ decrease by 2.06 points (Supplementary table S2).

Detailed results of the benchmark analysis are shown in Supplementary table S3. The joint BMC based on the linear model is 0.47 mg/l in maternal U-F, with a BMCL of 0.28 mg/l. The study-specific BMC and BMCL results show only minor variability. The BMCL values are generally larger in the OCC cohort compared with the two North American cohorts. In the OCC and MIREC studies, the joint linear results for both sexes were closer to the ones obtained for boys alone, while the results for girls seemed to differ. For the linear model, the joint BMCL for the three studies (0.28 mg/l) is similar to the one obtained from the piecewise model with a breakpoint at 0.75 (0.23 mg/l), while the piecewise model with a lower breakpoint at 0.5 showed a higher BMCL of 0.42 mg/l. This tendency was apparent in the combined analysis as well as in the sex-specific BMCL calculations.

Although the piecewise model is more flexible than the linear model, the AIC results did not reveal any important differences between the model fits. The same conclusion was reached based on likelihood testing where the linear model was not rejected, i.e., with $P = 0.46$ and 0.11 when the linear model was tested against piecewise linear models with breakpoints at 0.5 and 0.75, respectively.

Discussion

Experimental and cross-sectional studies have provided evidence of fluoride neurotoxicity, especially during early brain development.[1,20] Jointly with two prospective epidemiology studies on populations exposed to fluoridated water or fluoridated salt and other sources,[5,6] both of them rated as low risk of bias,[1] the present study adds new, comparable evidence from a population exposed to low water-fluoride levels. In the absence of other important fluoride sources, U-F concentrations will often be similar to the concentration in drinking water,[21,22] but substantial elevations can occur from tea drinking.[4] The two studies from North America showed creatinine-adjusted U-F concentrations averaging 0.89 mg/l (Mexico City) and 0.85 and 0.44 mg/l in fluoridated and non-fluoridated cities (Canada), respectively. Ranges of U-F levels from these two prior studies overlapped with the exposures encountered in the OCC study that reflected the low fluoride concentrations of 0.2–0.3 mg/l in the local drinking water,[13] as likely increased by tea drinking and other sources of exposure (figure 1). We calculated regression values for linear and, for comparison, piecewise linear dose–response functions for the new, low-exposure study so that it could be compared and merged with the previous findings.[9]

In the OCC study, we did not find evidence of fluoride neurotoxicity at low maternal U-F concentrations in the third trimester. This finding is consistent with the trimester-specific MIREC results,[23] as possibly affected by the imprecision of U-F measured in a single spot sample. Given the overlapping ranges of exposure, the fluoride–IQ relationships in the three studies were similar. Although the fluoride association was not statistically significant in the OCC cohort by itself, the joint association was significant when combined with information from the other two cohorts. This result can be explained by a relatively high variability in the OCC result, whereas the combined result is based on a larger sample size.

The joint BMC was found to be 0.45 mg/l (BMCL, 0.28 mg/l), i.e. slightly higher than previously found (BMC, 0.33 mg/l; BMCL, 0.20 mg/l) for the two North American cohorts alone.[9] Also, if instead relying on the GCI as a marker of child intelligence with the slightly larger Mexican sample, the results are similar (Supplementary table S3), as also seen previously.[9] Given the combined observations on more than 1500 mother–child pairs, the overall BMC results likely reflect a threshold for adverse cognitive effects of prenatal fluoride exposure that occur at levels prevalent in many countries.[21]

Due to the brain's continued vulnerability across early development,[24] infancy may also be a vulnerable period of exposure, especially among bottle-fed infants who receive formula reconstituted with fluoridated water.[23,25] However, in the OCC, exposure to fluoride in infancy is expected to be low because the majority of children were breastfed for at least 3 months (more than three out of four

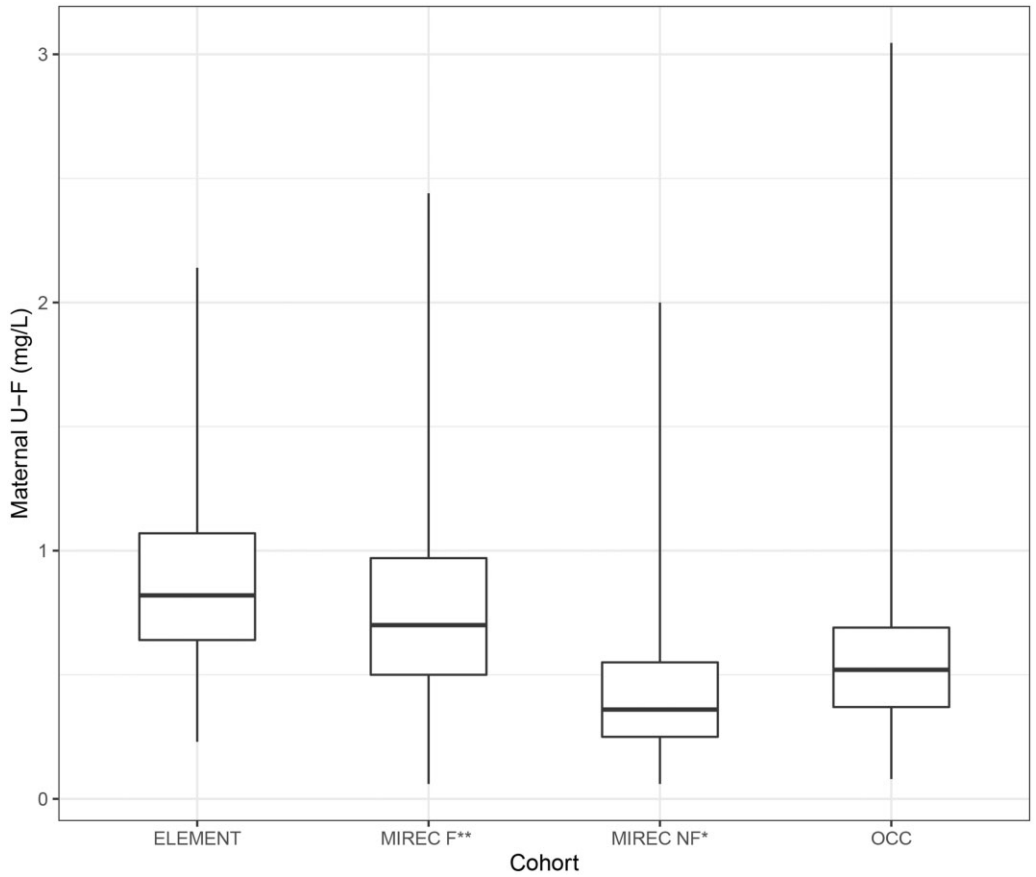

Figure 1 Maternal creatinine-adjusted urine-fluoride concentrations (U-F) in the three cohorts, where MIREC has been split into fluoridated (F) and non-fluoridated (NF) communities. Medians, quartiles, and 95% ranges are shown

Table 2 Predicted difference in FSIQ score for a doubling in the creatinine-adjusted fluoride concentration in mother's urine during pregnancy

	All samples (mg/l)		Spot samples (mg/l)		24-h samples (mg/l)	
	N	**β ^ (95% CI)**	***N***	**β ^ (95% CI)**	***N***	**β ^ (95% CI)**
Simple model[a]						
All	837	0.08 (−1.14 to 1.30)	453	−0.05 (−1.55 to 1.45)	384	0.36 (−1.73 to 2.45)
Girls	402	−0.05 (−1.80 to 1.70)	216	−0.83 (−2.98 to 1.32)	186	0.67 (−2.35 to 3.70)
Boys	435	0.20 (−1.47 to 1.87)	237	0.68 (−1.40 to 2.77)	198	0.09 (−2.75 to 2.93)
Comprehensive model[b]						
All	460	0.18 (−1.39 to 1.76)	223	0.58 (−1.53 to 2.69)	237	−0.72 (−3.24 to 1.80)
Girls	221	−0.40 (−2.52 to 1.71)	101	−0.78 (−3.64 to 2.08)	120	−0.91 (−4.27 to 2.45)
Boys	239	0.87 (−1.41 to 3.15)	122	2.14 (−0.92 to 5.20)	117	−0.50 (−4.13 to 3.13)

Notes: Results are shown for the total material with urine sample type as a fixed effect and for stratified analyses of the urine sample types by linear regression with sex as interaction. The simple model is adjusted for parental education and preterm birth. The comprehensive model accounts also for age at the time of testing, examiner, breastfeeding duration, school grade, school type and smoking and alcohol habits of the mother during pregnancy.
P values for sex interaction: a: 0.84 and b: 0.41.

children)[11] and because of the low fluoride concentration in the local drinking water.[13] As expected, the effects of fetal exposure (i.e. as represented by the U-F in pregnancy) remained significant in the MIREC study when adjusting for breastfeeding.[6] Likewise, in the ELEMENT study, the association of IQ with maternal U-F was only marginally reduced after controlling for child U-F. Further, fluoride exposure in preschool-age[23] and at school age[5] showed a weaker and non-statistically significant association with child IQ. These findings support that fetal brain development is highly vulnerable to fluoride exposure.

The IQ losses seen at elevated fluoride exposures are in accordance with findings in cross-sectional studies where the children examined had likely been exposed to chronic water-fluoride concentrations throughout development.[3,4] Similar results have been found in more recent studies that included areas with elevated water-fluoride levels.[26,27] These findings support that fluoride is a developmental neurotoxicant (i.e., causing adverse effects on brain development in early life) when exposures exceed a low background level. Given the ubiquity of elevated fluoride exposure, a recent study estimated that the population impact of adverse effects from fluoride

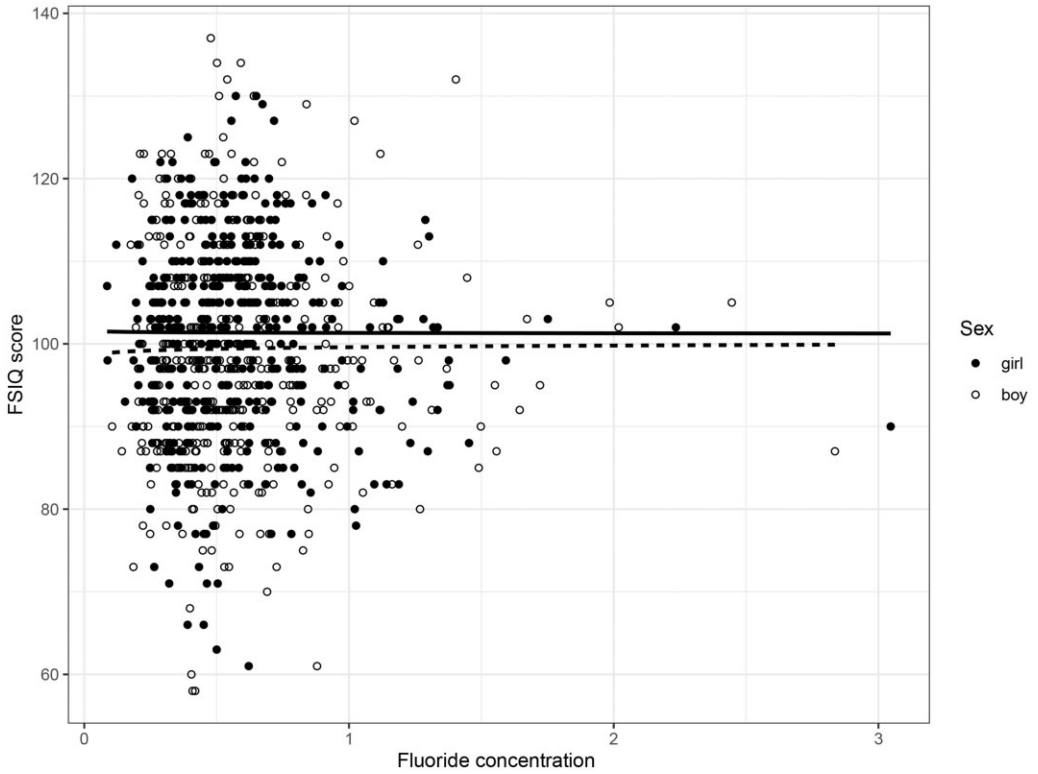

Figure 2 Creatinine-adjusted maternal U-F concentration during pregnancy as a predictor of Full-Scale IQ (FSIQ) in OCC children at age 7 with interaction by sex. The linear regression is adjusted for parental education and preterm birth (simple model). The type of urine sample is considered as a fixed effect. The filled circles and the full regression line are for girls, and the open circles and the dotted line refer to the boys

may exceed the one associated with other toxic elements like lead, mercury, and arsenic,[28] as also concluded in another modelling study.[29] Adverse effects of the latter trace elements are associated with blood concentrations substantially lower than the serum-fluoride concentration corresponding to the BMC.[24]

The OCC study focused on the FSIQ as a cognitive function indicator. Although fluoride neurotoxicity may not affect all cognitive domains equally,[10,23] the abbreviated WISC-V used in the OCC was not separated into subdomains. In addition to FSIQ as a main outcome, the ELEMENT cohort found that elevated maternal U-F concentrations were also associated with higher parent ratings of inattention on the Conners' Rating Scale, a common symptom of Attention-Deficit/Hyperactivity Disorder (ADHD).[16] Other studies on attention outcomes found an association between water fluoridation and diagnosis of ADHD in Canada, although cross-sectional data on child U-F did not replicate this association,[30] perhaps reflecting water-fluoride as a more stable proxy of early-life exposure compared with U-F measured in a later spot sample.

Individual vulnerability, including genetic predisposition,[31,32] may play a role in fluoride neurotoxicity. In the original MIREC study, boys were more vulnerable to prenatal fluoride neurotoxicity than girls,[6] perhaps suggesting sex-dependent endocrine disruption.[33] However, this tendency was not replicated in the present study. Other predisposing factors, such as iodine deficiency in pregnancy,[34] may also affect the outcome, though not likely in Denmark, where table salt is iodized. Overall, variability in such factors may result in difficulties documenting adverse cognitive effects at minor elevations of fluoride exposure.

Both the North American studies adjusted for a substantial number of covariables, including other neurotoxicants. Prenatal and early postnatal exposure to lead did not influence the fluoride-associated IQ deficits in the ELEMENT study.[5] Likewise, adjustment for arsenic, lead, perfluorooctanoic acid and mercury exposure did not appreciably change the estimates in the MIREC study.[6] The OCC cohort data were not adjusted for these other neurotoxicants, though the environmental exposures are low in the Odense area. Parental education was a key covariable in the Danish community,[11] while other socioeconomic factors were also considered important in the more diverse MIREC and ELEMENT populations.

The availability of 24-h urine samples might provide more precise fluoride exposure information, compared with morning spot urines, but the creatinine-adjusted results in the present study failed to show any important difference between the two exposure measures in association with the IQ outcome. Although maternal U-F seems to correlate with fluoride concentrations in serum that may pass the placenta,[1,21] the amount of fluoride that reaches the brain during early development is unknown. In addition, the OCC study collected urine on only one occasion during the third trimester, likely increasing imprecision, as suggested by previous studies that included multiple urine samples throughout pregnancy.[6,35] Thus, the maternal U-F averaged over three trimesters is a stronger predictor of child IQ than trimester-specific U-F.[23] Further, the creatinine-adjusted U-F is known to be the highest in the third trimester,[36] suggesting possible overestimation of fluoride exposure in the OCC cohort compared with the two other studies that relied on averages across trimesters. When occurring at random, such imprecision will tend to underestimate the fluoride association with the neurotoxicity outcome.[37]

The pooling of results from three prospective cohorts conducted in areas with wide ranges of overlapping exposure levels offers strong evidence of prenatal neurotoxicity, and these findings should inspire a revision of water-fluoride recommendations aimed at protecting pregnant women and young children. For example, the World Health Organization's recommendation of 1.5 mg/l as an upper limit for fluoride in drinking water[21] does not consider developmental neurotoxicity. While fluoride has dental health benefits,[38] the recent report on oral health from the National Institutes of Health (NIH)[39] emphasized improvements in preventing caries due to the increased topical use of new dental dentifrices, fluoride sealants and varnishes

in children above 2 years of age, i.e. after the teeth have erupted.[2,40] Although the NIH report stated that water fluoridation benefits the entire population (page I-39),[39] fluoridated toothpaste and other topical treatment are favoured as primary means of caries prevention.[2]

The present study contributes new information on the weak association between fairly low levels of prenatal fluoride exposure and cognitive function at school age in a Danish birth cohort. A possible negative association could not be confirmed within the exposures measured in the OCC. When merged with data from two previous prospective studies at higher exposures, a revised BMCL fluoride concentration of about 0.3 mg/l in maternal pregnancy urine suggests that elevated fluoride intakes, whether from drinking water, black tea, or other sources, during pregnancy may require public health attention.

Supplementary data

Supplementary data are available at *EURPUB* online.

Acknowledgements

The authors gratefully acknowledge Nimisha Krishnankutty for carrying out the U-F analyses. The present study benefitted from helpful comments from Tina Kold Jensen and Henriette Boye (OCC), Jillian Ashley-Martin and Bruce Lanphear (MIREC), and Martha María Téllez Rojo (ELEMENT). The OCC study also benefitted from the contributions by the staff at Hans Christian Andersen's Children's Hospital and affiliated psychologists, especially Kirstine A. Davidsen and Anne A. Rasmussen. The MIREC fluoride study was supported by the coordinating staff, site investigators, and a research team that also included Rivka Green, Richard Hornung, David Flora, E. Angeles Martinez-Mier, Pierre Ayotte and Gina Muckle. Data for the ELEMENT study were generated by a team that included Karen Peterson, Morteza Bashash, Angeles Martinez-Mier, Brisa Sanchez, Niladri Basu, Adrienne Ettinger, Lourdes Schnaas, Adriana Mercado-Garcia and Mauricio Hernandez-Avila.

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Author contributions

P.G. and E.B.J. supervised this study and are the guarantors. P.G., A.M. and E.B.J. designed the study. P.G., F.N., I.H.B., N.B., C.G., C.T. and H.H. contributed to data collection. I.B.H., N.B., C.G., C.T. and H.H. contributed to data analysis and interpretation. All authors provided advice regarding critically important intellectual content and helped to draft the manuscript and approved submission of this manuscript.

Conflicts of interest: P.G. has served as an expert on the hazards of environmental chemicals on behalf of the plaintiffs in Food & Water Watch v. U.S. EPA, where H.H. served as a fact witness regarding ELEMENT research on fluoride. All other authors have no interest to declare regarding this research.

Data availability

The dataset analyzed in this study is not publicly available due to national data security legislation on sensitive personal data.

Key points

- In the OCC birth cohort, prenatal fluoride exposure was estimated using creatinine-adjusted maternal urine-fluoride concentrations, and child IQ was determined at age 7 years. No clear association was found at the relatively low levels of exposure.
- Merging these results with data from two more highly exposed cohorts strengthened the dose–response assessment and allowed calculation of more accurate benchmark concentrations for developmental fluoride neurotoxicity.
- Because fluoride excretion may vary over time and sources of fluoride intake were not assessed, the exposure assessment in the three cohorts may involve some degree of imprecision that could dilute the findings.
- While analyses were controlled for child sex, parental education, and prematurity, population differences may not have been fully captured by adjustment for covariables.
- The joint benchmark concentration results reflect an approximate threshold for fluoride neurotoxicity at about 0.3 mg/l in urine, which is more reliable than previous results, as now based on more than 1500 mother–child pairs from prospective studies.

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From: Arne Christensen
Sent: 10/16/2023 10:36:12 AM
To: DOH WSBOH
Cc:
Subject: Friday Pfizer news release and vaccine mandates

External Email

I'm writing to call the Health Department's attention to the linked press release from Pfizer.
https://gcc02.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.pfizer.com%2Fnews%2Fpress-release%2Fpress-release-detail%2Fpfizer-amends&data=05%7C01%7Cwsboh%40sboh.wa.gov%7Ccb53b48054f54624477a08dbce6e6328%7C11d0e

-us-government-paxlovid-supply-agreement-and

The bottom of the Pfizer release has some cautionary paragraphs about Comirnaty. For example:
"Myocarditis (inflammation of the heart muscle) and pericarditis (inflammation of the lining outside the heart) have occurred in some people who have received mRNA COVID-19 vaccines. Myocarditis and pericarditis following Pfizer-BioNTech COVID-19 vaccines have occurred most commonly in adolescent males 12 through 17 years of age."
And: "The Pfizer-BioNTech COVID-19 Vaccine may not protect everyone."

Does the Board understand what folly it would've been to force adolescents to get this vaccine in order to go to public school?

Arne Christensen

From: bill teachingsmiles.com
Sent: 10/6/2023 8:49:13 AM
To: DOH WSBOH
Cc:
Subject: My Public Comments

attachments\459227240CA24727_WSBH 10 9 23 Osmunson.docx

External Email

Washington State Board of Health, Public Comment, October 2023

Bill Osmunson DDS MPH

Dear Washington State Board of Health and Department of Health,

The Board's website <https://gcc02.safelinks.protection.outlook.com/?url=https%3A%2F%2Fsboh.wa.gov%2Fsites%2Fdefault%01%2FSledge%2520-%2520BOH%2520Strategies.pdf&data=05%7C01%7Cwsboh%40sboh.wa.gov%7C0ee00bfee3434345e1fd0, states: "Access to community water fluoridation benefits the health of everyone: children, adults, and seniors (wrong). Recommendation: Expand and maintain access to community water fluoridation." Regardless of science and logic, the Board recommends expanding the policy rather than reviewing the science. . . a definition of "fake science."

The Board's unscientific claim is unethical, illogical and harming many. Dr. Limeback PhD, DDS provides this comparison.

See Attached graph: Prenatal Fluoride = Prenatal Alcohol

Wait, wait, alcohol is a choice and fluoridation is authority mandated.

Who should you trust? The scientific literature? The Food and Drug Administration? The National Toxicology Program? Or dental and public health industry?

"The FDA defines a drug, in part, as "intended for use in the diagnosis, cure, mitigation, treatment, or prevention of disease" and "articles (other than food) intended to affect the structure or any function of the body of man or other animals." Refer to section 201(g) of the Federal Food Drug and Cosmetic Act <https://gcc02.safelinks.protection.outlook.com/?url=https%3A%2F%2Fuscode.house.gov%2Fview.xhtmlprelim-title21-section321%26num%3D0%26edition%3Dprelim&data=05%7C01%7Cwsboh%40sboh.wa.gov%7C0ee00bf(FD&C Act)."

FDA continues: "How is a product's intended use established?

Intended use may be established in a number of ways. The following are some examples:

* Claims stated on the product labeling, in advertising, on the Internet, or in other

promotional materials. Certain claims may cause a product to be considered a drug, even if the product is marketed as if it were a cosmetic. Such claims establish the product as a drug because the intended use is to treat or prevent disease or otherwise affect the structure or functions of the human body. Some examples are claims that products will restore hair growth, reduce cellulite, treat varicose veins, increase or decrease the production of melanin (pigment) in the skin, or regenerate cells.
* Consumer perception, which may be established through the product's reputation. This means asking why the consumer is buying it and what the consumer expects it to do.
* Ingredients that cause a product to be considered a drug because they have a well-known (to the public and industry) therapeutic use. An example is fluoride in toothpaste."

Fluoride ingestion has never been approved by the FDA CDER.

Industry circumvented the FDA CDER and the FDA for fluoridated bottled water and was "notified" of a health claim.

1. The WSBH's claim makes fluoridation a drug by FDA, RCW, FD&C Act definitions of drugs.
2. The WSB of Pharmacy (now called "Pharmacy quality assurance commission") determined fluoride is a drug.
3.

RCW RCW 69.50.101 <https://gcc02.safelinks.protection.outlook.com/?url=http%3A%2F%2Fapp.leg.wa.gov%2FRCW%2Fdefaul
"(x) [(24)] "Drug" means (1) [(a)] a controlled substance recognized as a drug in the official United States pharmacopoeia/national formulary or the official homeopathic pharmacopoeia of the United States, or any supplement to them; (2) [(b)] controlled substances intended for use in the diagnosis, cure, mitigation, treatment, or prevention of disease in individuals or animals; . . . ." Fluoride is listed in the US pharmacopoeia.

4.

Is fluoride a drug or poison?

"RCW 69.38.010 <https://gcc02.safelinks.protection.outlook.com/?url=http%3A%2F%2Fapp.leg.wa.gov%2FRCW%2Fdefaul
"Poison" defined.

As used in this chapter "poison" means:

(1) Arsenic and its preparations;

(2) Cyanide and its preparations, including hydrocyanic acid;

(3) Strychnine; and

(4) Any other substance designated by the pharmacy quality assurance commission which, when introduced into the human body in quantities of sixty grains or less, causes

violent sickness or death."

[2013 c 19 § 52
<https://gcc02.safelinks.protection.outlook.com/?url=https%3A%2F%2Flawfilesext.leg.wa.gov%2Fbienniu
14%2FPdf%2FBills%2FSession%2520Laws%2FHouse%2F1609.SL.pdf%3Fcite%3D2013%2520c%252019%
; 1987 c 34 § 1
<https://gcc02.safelinks.protection.outlook.com/?url=https%3A%2F%2Fleg.wa.gov%2FCodeReviser%2Fd
.] (Emphasis supplied)

Sixty grains is 3,888 milligrams. Wolford estimated a lethal dose of fluoride at 5 mg/kilogram of body weight. A 10 Kg toddler could die ingesting 50 mg of fluoride. The WSBP determined 50 mg is less than 3,888 mg. It does not take a math major to realize 50 is less than 3,888. However, the Board of Health does not appear to understand the math and is harming the public.

Certainly the WSBH does not consider hydrofluorosilicic acid (fluoridation chemicals) to be a "natural mineral" or poison such as "soluble inorganic forms like arsenious acid (H_3AsO_3), and arsenic acid (H_3AsO_4), which are the compounds of concern in drinking water." If the Board does not place fluoride added to public water in the definition of drug, then the WSBH is promoting the administration without consent of a known poison, "fluoride." Poisoning people is not the Board's intent. Treating people is the Board's intent, which makes fluoride a drug, regulated as a drug under drug laws. GET FDA CDER APPROVAL or stop promoting fluoride ingestion.

Because fluoride is a drug, it is regulated under the FDA CDER (Food and Drug Administration Center for Drug Evaluation and Research). To date the FDA CDER has not approved the ingestion of fluoride because the evidence of efficacy at any dosage is "incomplete."

The FDA answers the question:

"1. Is it legal to import medicines into the U.S. from other countries?

"No. The United States Federal Food, Drug, and Cosmetic Act (The Act) prohibits the interstate shipment (which includes importation) of unapproved new drugs. Thus, the importation of unapproved new drugs, whether for personal use or otherwise, violates the Act and is illegal. Unapproved new drugs include any drugs – including drugs approved in another country but which lack FDA approval -- that have not been distributed in accordance with FDA approval."

Fluoridation products are now coming in from China, in part, because the USA does not manufacture enough and China, based on good scientific evidence, does not fluoridate their public water. China does not want their children to have lower IQ.

Anytime new science helps us change our understanding of an issue, we must carefully review and protect the public.

The WSBH must start to protect the public from excess fluoride exposure. Start by warning/advising pregnant mothers to not ingest fluoridated water and not make formula with fluoridated water.

Sincerely,

Bill Osmunson DDS MPH

_____
From: Jotform
Sent: 10/27/2023 6:49:34 AM
To: DOH WSBOH
Cc:
Subject: Re: Stop The Child Vaccine Mandate Petition - Denis Sparks

External Email

<https://cdn.jotfor.ms/assets/img/logo2021/jotform-logo.png>

Stop The Child Vaccine Mandate Petition

Name

Denis Sparks

Email

denissparks@comcast.net

Zip

98011

Cell Phone Number

(206) 3216622

From: WA.gov
Sent: 10/4/2023 2:18:49 PM
To: DOH WSBOH
Cc:
Subject: Webform submission from the WA.gov website.

External Email

This email was sent from the Government Agency Directory <https://gcc02.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwa.gov%2Fagency&data=05%7C0 found on WA.gov. The message and details of the person contacting you are as follows:

Your Name
leslie Citlalli Rodriguez

Your Email
rodriguezleslie129@gmail.com <mailto:rodriguezleslie129@gmail.com>

Subject
SPAIN DISHES

Message
The boy Jacob stach has HIV AND STDs . blames it on somebody like me leslie rodriguez who has never got intercourse after dating a japanese boy who is extremely healthy from my behalf known justin. leslie todriguez is worry how clinics , impoverishment boys attitudes play with blood clots in leslie human anatomy in United states .

Jacob stach 16 hoffmanshof hanover Germany
Leslie Rodriguez , CA , USA

LESLIE RODRIGUEZ TALK TO YOU YOU SHOULD HAVER HELP THAT BOY WHO LIKES ANYBODY FOR SEX NEEDS.

Note: Please do not reply to this email as this inbox is not monitored. If you have questions regarding this service, please use our contact form <https://gcc02.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwa.gov%2Fwebform%2Fcontact-wagov-team&data=05%7C01%7CWSBOH%40SBOH.WA.GOV%7Cda679ed1212744bb269c08dbc51f7d63%7C11d0
.

From: Dusty Flamand
Sent: 10/25/2023 5:12:22 PM
To: hisgarness@comcast.net,DOH WSBOH,sheriff@co.clallam.wa.us,Berry, Allison 2 (DOHi),shahidafatin@gmail.com,ncarr@cityofpa.us,gbsjrmd@sisna.com,Mark.Ozias@ClallamCountyWA.gov
Herald,
(DOHi),chutton@heraldnet.com,customerservice@theolympian.com,news@spokesman.com,voice@spokesm
City Herald (DOHi),Van De Wege, Kevin,Chapman, Mike (LEG)
Cc:
Subject: Re: The Plandemic Litigation Is Out of the Gates

External Email

Yepper. Only 1 4# fish. Got planar line in prop and had to find lost board yesterday. So Only fished 2 hours yesterday. Cold, windy and big water today so fished 4 hours. No rain or snow so that was a blessing.

Note: You need to hit ... or Show History link at end of message to see previous or forwarded emails.

"Jesus is Lord"

Gene Dusty Flamand

A-I Consolidated, Inc.

4970 N Manufacturing Way Ste 2

Coeur D Alene, ID 83815

www.aiconsol.com
<https://gcc02.safelinks.protection.outlook.com/?url=http%3A%2F%2Fwww.aiconsol.com%2F&data=05%

Personal Email: dustyfl@protonmail.com

Personal Cell: 208-659-3319

Sent from Proton Mail mobile

-------- Original Message --------
On Oct 25, 2023, 4:33 PM, Garry Blankenship < hisgarness@comcast.net> wrote:

This is of particular importance to all Boards of Health, medical boards and hospitals. You / they can disregard at their own peril. It is a succinct summary of the healthcare practicing future and an explanation of how our "pandemic" manifested..

Attached please find a litigation case summary against:

Mr. Alex Azar, DEFENDANT, (H.H.S.)
Dr. Anthony Fauci, DEFENDANT
Dr. Peter Daszak, DEFENDANT
Dr. Ralph Baric, DEFENDANT
FDA, DEFENDANT
CDC, DEFENDANT
NIAID, DEFENDANT
MODERNA, DEFENDANT
PFIZER, DEFENDANT

The full text can be found at
https://prosecutenow.io/dld/LitigationConsolidationSummary.pdf
<https://gcc02.safelinks.protection.outlook.com/?url=https%3A%2F%2Fprosecutenow.io%2Fdld%2FLitiga

This is one health violations lawsuit of many and the inevitable multitudes to follow. Dr. Martin is a data analytical genius. He specializes in data verification. His company does patent research and other data intense services. Much can be argued in the courts, but the facts produced by Dr. Martin are bullet proof. It is my hope that the success of this lawsuit trickles down to State and local Boards of Health, censuring medical boards, as well as the Hospitals and staff violating the Hippocratic Oath for Government offered bribery money. Health professionals must be held accountable for their pandemic harmful practices.

Sincerely,

Garry Blankenship

Executive Summary for Litigation of PLANDEMIC Crimes…

Dr. David E. Martin

Since the publication of the ***Global Vaccine Action Plan 2011-2020*** in February of 2013, Drs. Anthony Fauci of the U.S. National Institutes for Allergies and Infectious Diseases (NIAID) and Chris Elias of the Bill & Melinda Gates Foundation have declared the commercial dictum: "to extend immunization to everyone."[1] Declaring vaccination an essential "human right", they spent the decade seeking to develop and deploy a "universal vaccination". Lamenting their failure before Congress and the World Health Organization, they complained that the public was reticent to accept a "universal" vaccine. Possibly informed by the compelling failure of the influenza "vaccines" which failed to disrupt annual flu seasons, the public wasn't falling for their obsession.

In 2014, Dr. Peter Daszak (veterinarian and NIAID pandemic engineer) lamented:

"…until an infectious disease crisis is very real, present, and at an emergency threshold, it is often largely ignored. To sustain the funding base beyond the crisis, he said, we need to increase public understanding of the need for MCMs such as a pan-influenza or pan-coronavirus vaccine. ***A key driver is the media, and the economics follow the hype. We need to use that hype to our advantage to get to the real issues. Investors will respond if they see profit at the end of process****, Daszak stated."*[2] (emphasis added)

Missing the opportunity to leverage the deadly flu season of 2018, Fauci, Elias, and Daszak announced that they would construct a scenario to mandate that ALL countries respond to a "lethal respiratory pathogen." Published in September 2019, these criminal conspirators put humanity on a collision course with a manufactured "pandemic" to create vaccine dependency.

"A rapidly spreading pandemic due to a lethal respiratory pathogen (whether naturally emergent or accidentally or deliberately released) poses additional preparedness requirements. Donors and multilateral institutions must ensure adequate investment in development of innovative vaccine and therapeutics, surge manufacturing capacity, broad-spectrum antivirals and appropriate non-pharmaceutical interventions. All countries must develop a system for immediately sharing sequences of any new pathogen for public health purposes, along with the means to share limited medical countermeasures across countries.

Progress indicator(s) by September 2020

Donors and countries commit and identify timelines for: financing and development of a universal influenza vaccine, broad-spectrum antivirals and targeted therapeutics. WHO and its

[1] https://www.who.int/publications/i/item/global-vaccine-action-plan-2011-2020
[2] https://www.ncbi.nlm.nih.gov/books/NBK349040/

Member States develop options for standard procedures and timelines for sharing of sequence data, specimens and medical countermeasures for pathogens other than influenza."[3]

One month later, they announced that they would use SARS Coronavirus as a "desktop" simulation during the Event 201 exercise funded by Open Philanthropy (Facebook's Dustin Moskovitz) and hosted by the Bill & Melinda Gates Foundation, the World Economic Forum, and Johns Hopkins University.

COVID-19, the first "disease" to have NO diagnostic test to measure its existence, was a series of symptoms aggregated to form an influenza-like illness to create the illusion of a pandemic. Now discredited, the RT-PCR test (amplified to cycles that could simulate any nucleic acid sequence) was used to create the illusion of infection and spread fear around the world. And all of this was to force the public adoption of a novel mRNA "vaccine" which, by the FDA's own classification is a gene therapy[4] – not public health immunization.

Over one year later it has become self-evident that the "vaccination" terminology was adopted for branding purposes (and to attempt to secure immunity shields for manufacturers) to coerce the population into accepting an experimental, dangerous gene therapy technology. The injected are getting sick. The injected are dying "of COVID-19". There is NO evidence that the injections have disrupted transmission as the recent "Omicron variant" has made abundantly clear.

THIS WAS NEVER ABOUT PUBLIC HEALTH. This was an organized crime racket to coerce the public's adoption of a novel technology that has NEVER been shown to be safe or effective under the definitions of the FDA, the Federal Trade Commission's Deceptive Medical Practices standard, or under any other statutory criteria.

It is long past time to hold the criminals accountable for:

- Domestic and International Terrorism,
- Deceptive Medical Practices,
- Reckless Endangerment and Homicide,
- Racketeering and Anti-trust collusion, and,
- Biological Weapons Construction and Deployment.

I have been the solitary voice calling for this accountability since the inception of this scheme and I'm now leading efforts to litigate all of the matters identified above as well as hold the conspiring commercial interests liable for tax and securities fraud. In the former, each manufacturer has misused the In Process Research and Experimentation Tax Credit

[3] https://reliefweb.int/sites/reliefweb.int/files/resources/GPMB_annualreport_2019.pdf
[4] https://www.sec.gov/Archives/edgar/data/1682852/000168285220000017/mrna-20200630.htm

misrepresenting sponsored research as qualified exemptions. In the latter, each manufacturer has violated that Bayh-Dole Act and has thereby misrepresented proprietary interests to their shareholders in violation of SEC laws.

-

Washington State Board of Health, Public Comment, October 2023

Bill Osmunson DDS MPH

Dear Washington State Board of Health and Department of Health,

The Board's website, states: **"Access to community water fluoridation benefits the health of everyone: children, adults, and seniors (wrong). Recommendation: Expand and maintain access to community water fluoridation." Regardless of science and logic, the Board recommends expanding the policy rather than reviewing the science. . . a definition of "fake science."**

The Board's unscientific claim is unethical, illogical and harming many. Dr. Limeback PhD, DDS provides this comparison.

Prenatal fluoride = prenatal alcohol

Insert "alcohol or fluoridated water" here

Fetal Alcohol Syndrome	Fetal Fluoride Syndrome
Slow physical growth, joint deformities	premature birth, low birth weight, slow growth
Problems with kidneys, bones	dental, bone and kidney problems
intellectually disability, learning disorders, poor memory	lowered IQ, learning disorders
hyperactivity	ADHD
mood changes, poor social skills, behaviour problems	not studied in humans

based on updated research, higher prenatal fluoride exposure is linked to mood changes, altered social skills, and poor behaviour.

Wait, wait, alcohol is a choice and fluoridation is authority mandated.

Who should you trust? The scientific literature? The Food and Drug Administration? The National Toxicology Program? Or dental and public health industry?

"The FDA defines a drug, in part, as "intended for use in the diagnosis, cure, mitigation, treatment, or prevention of disease" and "articles (other than food) intended to affect the structure or any function of the body of man or other animals." Refer to section 201(g) of the Federal Food Drug and Cosmetic Act (FD&C Act)."

FDA continues: "How is a product's intended use established?

Intended use may be established in a number of ways. The following are some examples:

- Claims stated on the product labeling, in advertising, on the Internet, or in other promotional materials. Certain claims may cause a product to be considered a drug, even if the product is marketed as if it were a cosmetic. Such claims establish the product as a drug because the intended use is to treat or prevent disease or otherwise affect the structure or functions of the human body. Some examples are claims that products will restore hair growth, reduce cellulite, treat varicose veins, increase or decrease the production of melanin (pigment) in the skin, or regenerate cells.
- Consumer perception, which may be established through the product's reputation. This means asking why the consumer is buying it and what the consumer expects it to do.
- Ingredients that cause a product to be considered a drug because they have a well-known (to the public and industry) therapeutic use. An example is fluoride in toothpaste."

Fluoride ingestion has never been approved by the FDA CDER.

Industry circumvented the FDA CDER and the FDA for fluoridated bottled water and was "notified" of a health claim.

1. **The WSBH's claim makes fluoridation a drug by FDA, RCW, FD&C Act definitions of drugs.**
2. **The WSB of Pharmacy (now called "Pharmacy quality assurance commission") determined fluoride is a drug.**
3. RCW **RCW 69.50.101 "(x) [(24)] "Drug" means (1) [(a)] a controlled substance recognized as a drug in the official United States pharmacopoeia/national formulary or the official homeopathic pharmacopoeia of the United States, or any supplement to them; (2) [(b)] controlled substances intended for use in the diagnosis, cure, mitigation, treatment, or prevention of disease in individuals or animals; . . . ." Fluoride is listed in the US pharmacopoeia.**

4. **Is fluoride a drug or poison?**

"RCW 69.38.010 "Poison" defined.

As used in this chapter "poison" means:

(1) Arsenic and its preparations;

(2) Cyanide and its preparations, including hydrocyanic acid;

(3) Strychnine; and

(4) Any other substance designated by the pharmacy quality assurance commission which, when introduced into the human body in quantities of sixty grains or less, causes violent sickness or death."

[2013 c 19 § 52; 1987 c 34 § 1.] (Emphasis supplied)

Sixty grains is 3,888 milligrams. Wolford estimated a lethal dose of fluoride at 5 mg/kilogram of body weight. A 10 Kg toddler could die ingesting 50 mg of fluoride. The WSBP determined 50 mg is less than 3,888 mg. It does not take a math major to realize 50 is less than 3,888. However, the Board of Health does not appear to understand the math and is harming the public.

Certainly the WSBH does not consider hydrofluorosilicic acid (fluoridation chemicals) to be a "natural mineral" or poison such as "soluble inorganic forms like arsenious acid (H_3AsO_3), and arsenic acid (H_3AsO_4), which are the compounds of concern in drinking water." If the Board does not place fluoride added to public water in the definition of drug, then the WSBH is promoting the administration without consent of a known poison, "fluoride." Poisoning people is not the Board's intent. Treating people is the Board's intent, which makes fluoride a drug, regulated as a drug under drug laws. GET FDA CDER APPROVAL or stop promoting fluoride ingestion.

Because fluoride is a drug, it is regulated under the FDA CDER (Food and Drug Administration Center for Drug Evaluation and Research). To date the FDA CDER has not approved the ingestion of fluoride because the evidence of efficacy at any dosage is "incomplete."

The FDA answers the question:

"1. Is it legal to import medicines into the U.S. from other countries?

"No. The United States Federal Food, Drug, and Cosmetic Act (The Act) prohibits the interstate shipment (which includes importation) of unapproved new drugs. Thus, the importation of unapproved new drugs, whether for personal use or otherwise, violates the Act and is illegal.

Unapproved new drugs include any drugs – including drugs approved in another country but which lack FDA approval -- that have not been distributed in accordance with FDA approval."

Fluoridation products are now coming in from China, in part, because the USA does not manufacture enough and China, based on good scientific evidence, does not fluoridate their public water. China does not want their children to have lower IQ.

Anytime new science helps us change our understanding of an issue, we must carefully review and protect the public.

The WSBH must start to protect the public from excess fluoride exposure. Start by warning/advising pregnant mothers to not ingest fluoridated water and not make formula with fluoridated water.

Sincerely,

Bill Osmunson DDS MPH

TO: Washington State Board of Health, November 8, 2023

TOO MUCH FLUORIDE: THE BOARD OF HEALTH HAS NO IDEA HOW MUCH FLUORIDE AN INDIVIDUAL IS INGESTING.

In a public forum debate with a Harvard Professor, I noticed he was less than clear with the audience, trying to assume fluoridated water was the only source of fluoride. I made his deception clear. The public chose to stop fluoridation. Is the WSBOH also being intentionally deceptive in their claim of fluoridation's safety? Fluoridated water represents an estimated 30% to 70% of total exposure of fluoride, for about 90% of the public. Fluoridation is a concentration not a dosage.

WATER: The mean intake of water is about one liter/day. 90th percentile is about 2 liters/day. The EPA ignores 10% of the public drinking the most water. Ten percent of Washington State is 770,000. Some ingest over ten times the statistical mean of 1 liter/day. Trying to dispense a drug in water lacks dosage control and is an insane public health practice. And that is just exposure from water. See National Academies, "Fluoride in Drinking Water" and Review

MEDICATIONS: At 1,500 ppm (water 0.7 ppm) toothpaste has a significant potential for excess fluoride exposure. At age 11 I watched my daughter brush her teeth and told her to spit before swallowing… and I watched as she leaned over the sink and her little eve's apple bobbed and she spit. Swallowing is a reflex and toothpaste is swallowed. Although pharmaceutical companies attempt to make the fluoride in medications not biologically available, on average about 10% is absorbed in the body. General anesthesia with fluoride (often used with children) can cause a huge spike in fluoride exposure.

FOODS: Fluoride tends to be a higher concentration in coffee, tea, sodas, shellfish, grapes, potatoes, baby foods, broths, stews, hot cereals made with tap water, artificial sweeteners, mechanically deboned meat and more.

POST-HARVEST FUMIGANT (sulfuryl fluoride): The EPA/Congress/WBOH permits (endorses) up to 900 ppm fluoride residue on dried eggs, often fed to school children and institutions. Many other foods may have as much as 70 ppm.

The Board of Health should not be surprised that two out of three children in the USA have dental fluorosis, a biomarker of excess fluoride exposure. However, the EPA (and in effect the WSBOH) still has their level of protection at crippling skeletal fluorosis.

Sincerely,

Bill Osmunson DDS MPH

European Journal of Public Health, 1–7
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Dose dependence of prenatal fluoride exposure associations with cognitive performance at school age in three prospective studies

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Background: Fluoride may be a developmental neurotoxicant at elevated exposures. We merged new data from a prospective Odense Child Cohort (OCC) with results from two previous birth cohort studies from Mexico and Canada to characterize the dose–effect relationship in greater detail. **Methods:** The OCC contributed 837 mother–child pairs to the total of >1500. We measured creatinine-adjusted urine-fluoride concentrations in maternal urine samples obtained during late pregnancy. Child IQ was determined at age 7 years using an abbreviated version of the Wechsler Intelligence Scales for Children. Findings from the three cohorts were used to calculate the joint benchmark concentration (BMC) and the lower confidence limit (BMCL) after adjustment for covariables. **Results:** In the OCC, urine-fluoride concentrations varied between 0.08 and 3.04 mg/l (median 0.52 mg/l) but were not significantly associated with full-scale IQ at age 7 years ($\beta = 0.08$; 95% confidence interval −1.14 to 1.30 for a doubling in exposure). No difference was apparent between boys and girls. In the OCC, the BMC was 0.92 mg/l, with a BMCL of 0.30 mg/l. The joint analysis of all three cohorts showed a statistically significant association between urine-fluoride and IQ, with a BMC of 0.45 mg/l (BMCL, 0.28 mg/l), slightly higher than the BMC previously reported for the two North American cohorts alone. **Conclusions:** As the BMCL reflects an approximate threshold for developmental neurotoxicity, the results suggest that pregnant women and children may need protection against fluoride toxicity.

Introduction

Fluoride has beneficial effects on the dental enamel in preventing caries, while systemic exposure may lead to toxic effects.[1,2] Although fluoride has been added to drinking water in certain parts of the world since the 1940s and toothpaste since the 1960s, little attention has been paid to the possible adverse effects of fluoride intake in pregnancy until fairly recently.[1] A substantial number of studies have shown cognitive deficits in children with elevated exposure to fluoride in drinking water, although mainly cross-sectionally.[1,3,4] However, prospective studies have now become available with individual data on prenatal fluoride exposure, as indicated by maternal urine-fluoride (U-F) excretion levels during pregnancy.[5,6]

Regulatory agencies often use benchmark concentration (BMC) calculations to identify safe or tolerable exposure levels.[7,8] In a prior study, we combined data from two prospective North American studies. A benchmark response of a one-point decrement in IQ was predicted by a BMC of 0.33 mg/l (lower confidence limit, BMCL, 0.20 mg/l) expressed in terms of maternal pregnancy U-F.[9] However, the relatively small number of data points at U-F levels at or below 0.2 mg/l may have introduced uncertainty in the observed monotonic associations. Accordingly, renewed calculations would be desirable with a better representation of low exposures. In addition, an update of the BMC calculation also appears warranted by the recently expanded results from the Early Life Exposure in Mexico to Environmental Toxicants (ELEMENT) cohort that included additional exposure data.[10]

We now present findings from the prospective Odense Child Cohort (OCC),[11,12] from a Danish municipality with fluoride concentrations in drinking water that are low by international standards.[13] We examine the possible association between prenatal fluoride exposure, as represented by maternal pregnancy U-F, and IQ at school age and conduct a joint BMC analysis that includes data from the two previous prospective studies.

Methods

OCC study cohort

All new pregnant women residing in Odense municipality were contacted between 2010 and 2012; 2874 of the 4017 women agreed to be enrolled in the OCC, while 374 dropped out before and after giving birth.[12] The present study population included 837 singleton mother–child pairs with results on child IQ, a maternal urine sample analyzed for fluoride, and information about parental education, child sex and preterm birth.

Fluoride exposure

While the addition of fluoride to drinking water is not legal in Denmark, elevated fluoride concentrations up to 1.5 mg/l naturally occur in groundwater in parts of the country,[13] and some types of tea, especially black tea, constitute an additional source of exposure.[14] In Odense municipality, the fluoride concentration in drinking water is rather low, i.e. 0.2–0.3 mg/l.[13] Given the retention in and

continuous mobilization from calcified tissues, the maternal U-F concentration reflects the level in the blood that is available for passage through the placenta to reach the fetus.[1] We analyzed maternal urine samples collected at 28 weeks' gestation to assess individual fluoride exposure. Some women ($N = 384$; 45.9%) provided a 24-h urine sample, while a spot fasting urine sample was otherwise obtained in the morning ($N = 453$; 54.1%).

The fluoride concentrations were measured with an Orion™ Ion Selective Electrode (ISE 9609 BNWP) (Thermo Fisher Scientific, Waltham, MA, USA) coupled to a Model 15 pH-metre from Denver Instruments (Sartorius, Göttingen, Germany) as previously described.[14,15] All samples were diluted prior to the analysis (1:1) with total ionic-strength-adjusted buffer (TISAB II) solution, as recommended by the manufacturer. The accuracy of the method was controlled in each batch of samples by analyzing the fluoride Certified Reference Material (CRM) at 0.52 ± 0.02 mg/l (Merck, Darmstadt, Germany). The limit of determination was 0.02 mg/l, and the average imprecision of the method was <5.1% (see Supplementary Material).

All U-F concentrations were adjusted for the creatinine concentration (U-Cr) using the following equation: $U\text{-}F_{CR} = (U\text{-}F/U\text{-}Cr) \times U\text{-}Cr_m$, where $U\text{-}F_{CR}$ is the creatinine-adjusted fluoride concentration (in mg/l), U-F is the measured fluoride concentration (mg/l) and $U\text{-}Cr_m$ is the median creatinine concentration of the samples.[5] In the two previous cohorts, the creatinine-adjusted U-F was assessed by comparable analytical protocols.[6,10,16]

Cognitive assessment

At age 7, the OCC children were invited to participate in the Danish version of the abbreviated Wechsler Intelligence Scales for Children to obtain a full-scale IQ (FSIQ), and 1570 completed the test.[11] Similarly, in the ELEMENT study,[5,17] a Spanish version of the Wechsler Abbreviated Scale of Intelligence was administered to 259 children at age 6–12 to derive an age-adjusted FSIQ. In addition, the Spanish version of the McCarthy Scales of Children's Abilities was administered to 287 children at age 4 to derive a General Cognitive Index (GCI) as a standardized composite score highly correlated with the FSIQ. In the Maternal-Infant Research on Environmental Chemicals (MIREC) study,[6] the 407 children's FSIQ were assessed at age 3–4 years in either English or French. These different measures of intellectual ability are considered equally valid and highly correlated,[18] thus justifying pooling the scaled (age-adjusted) IQ scores across the cohorts. Examiners were blinded to fluoride exposure status in the OCC, ELEMENT and MIREC studies.

Covariables

In the OCC, we considered maternal, child and socioeconomic variables correlated with child FSIQ for inclusion in the statistical analyses along with sex and preterm birth (gestational age <37 weeks).[11] As a key socioeconomic variable in the Danish population, parents reported their highest achieved education, which was categorized into short (high school or less, $N = 229$), intermediate (1–4 years post high school, $N = 446$) and long (>4 years post high school, $N = 162$), as based on the highest achieved education by either parent.[11] Dichotomized maternal smoking (yes, $n = 23$) and alcohol intake (yes, $n = 209$) during pregnancy, duration of breastfeeding (dichotomized as ≤3 and >3 months), school type (public or private), school grade (preschool or first) and psychologist examiner were also considered as covariables possibly associated with the FSIQ.

In the ELEMENT cohort,[5] covariables included gestational age in weeks, birth weight, sex, age at outcome measurement, maternal parity, maternal smoking history, marital status, age at delivery, maternal IQ, education and the specific sub-cohort identity. The MIREC study[6] selected similar covariables, including sex, city of residence, HOME score, maternal education and maternal race/ethnicity.

Statistical analysis

In the OCC, we first used covariable-adjusted linear regressions to model differences in child FSIQ score by the maternal U-F concentration. Because the U-F concentrations were positively skewed, a $\log_2$ transformation was applied. Thus, the regression coefficient (beta) therefore shows the difference in FSIQ for a doubling of the maternal U-F concentration.

A simple model accounted for sex, parental education and preterm birth. In a more comprehensive model involving a subset of mother–child pairs with additional information available, we added breastfeeding duration, maternal smoking and alcohol intake during pregnancy, age of children at the time of testing, examiner, school grade and school type. In both models, sex was introduced as a potential interaction term. In addition, the creatinine-adjusted U-F was stratified for the type of urine sample available (i.e. 24 h and spot), and a joint analysis was also conducted with a fixed effect for the type of urine sample. For descriptive purposes, a cubic spline model was also developed.

BMC calculations were carried out to assess the maternal U-F concentration associated with a benchmark response of a one-point reduction in child FSIQ score, as compared with an unexposed mother and the same profile of covariates. Then the results from the OCC study were compared and merged with the results previously obtained from the studies in Mexico[5] and Canada.[6] We used a similar statistical approach as in our previous benchmark calculations using results from the North American studies,[9] but we now included the updated ELEMENT cohort data with an increased sample size.[10]

In the benchmark analysis, we applied a linear dose–response function to approximate the effect of fluoride exposure (i.e. without a log scale for U-F). To better allow for different exposure distributions across studies, we derived two piecewise linear models, with breakpoints at 0.5 and 0.75 mg/l.[9] All models were fitted separately, including sex interaction, and adjusted for parity, maternal education, smoking, gestational age and the type of urine sample.

The regression coefficients in the linear model were used for the calculation of the BMC for each cohort, and joint BMCs were obtained by combining results from the three cohorts using a weighting approach.[9] The main result of the BMC analysis is the BMCL, i.e. the lower one-sided 95% confidence limit of the BMC.[19]

Differences between the regression coefficients in the three cohorts were tested using a Wald test, and we calculated the Akaike Information Criterion (AIC) to compare the fit of the different regression models. As the linear model is nested in the piecewise linear model, the fit of these two models can be directly compared. Thus, we calculated the *P* values for the hypothesis that the concentration response is linear in a test where the alternative is the piecewise linear model; a low *P* value indicates that the linear model has a poorer fit.

Results

Table 1 shows the main characteristics of the 837 OCC children included in the present study, as compared with the characteristics of all cohort children originally recruited. Of the 837 children in the present study, 435 (52%) were boys, and their average age was 7 years (6.5–8.3 years). Most (75.9%) of the children were breastfed for more than 3 months, and only 27 (3.2%) were born preterm. The maternal U-F concentrations averaged 0.58 mg/l (SD, 0.32; range, 0.08–3.04) (with a median of 0.52 mg/l) and did not differ between the sampling conditions (Supplementary table S1) nor with season. The creatinine-adjusted U-F results from the OCC and for the two other prospective cohorts are shown in figure 1.

After adjustment for covariables, the log2-converted maternal U-F was not significantly associated with the child's FSIQ score (table 2). A doubling in maternal fluoride concentration led to a slight decrease of 0.04 FSIQ points in girls and a small increase of 0.20 points

Table 1 Characteristics of 837 children from the OCC and included in the present study, as compared with the total cohort

Variable	Present cohort sample (*N* = 837) Mean (SD)/count (%)	Total cohort (*N* = 2448) Mean (SD)/count (%)
Sex		
Girl	402 (48.03)	1155 (47.18)
Boy	435 (51.97)	1293 (52.82)
Weight at birth (g)		
Mean (SD)	3.54 (0.52)	3.53 (0.53)
Missing	0	6
Breastfeeding duration		
<3 months	165 (24.05)	429 (25.09)
>3 months	521 (75.95)	1281 (74.91)
Missing	151	738
Maternal parity		
Primiparidae	457 (54.60)	1351 (55.21)
Multiparidae	380 (45.40)	1096 (44.79)
Missing	0	1
Gestational age <37 weeks		
No	810 (96.77)	2344 (96.10)
Yes	27 (3.24)	95 (3.90)
Missing	0	9
School type		
Public school	492 (80.00)	768 (78.77)
Private school	123 (20.00)	207 (21.23)
Missing	222	1473
School grade		
1st grade	431 (58.64)	742 (59.31)
Preschool	304 (41.36)	508 (40.61)
Missing	0	6
Age at test (years)		
Mean (SD)	7.15 (0.19)	7.18 (0.21)
Missing	0	938
FSIQ score		
Mean (SD)	99.44 (12.34)	99.43 (12.04)

Note: FSIQ, Full-Scale IQ.

in boys, but the interaction between sex and fluoride exposure was marginal (figure 2). Among important covariables, a higher parental education level predicted a higher FSIQ score[11] but was of marginal importance in the fluoride–IQ analysis. The type of maternal urine sample (fixed effect in the model) had no clear effect on FSIQ scores (−0.83; 95% confidence interval −2.52 to 0.86), with no difference in a likelihood ratio test for sample interaction.

When additional covariables were included, 377 observations in the OCC were disregarded due to missing information, and the comprehensive model included complete cases of 460 children (table 2). Again, only a weak association between the U-F and child FSIQ score was observed in the OCC, with no clear interaction between sex and fluoride exposure (table 2). Stratifying regression models by urine sample type did not reveal any significant associations between the maternal fluoride excretion variables and FSIQ score, and no significant interactions by sex were observed (table 2). A cubic spline for the log-transformed fluoride concentration again showed no association with FSIQ (Supplementary figure S1).

Relative to the OCC study, stronger associations between fluoride and IQ were observed among the MIREC boys and in the full sample of the ELEMENT cohort; regression coefficients for the girls in the MIREC cohort were fairly similar to the OCC study.[5,6] Nevertheless, the adjusted linear associations between maternal U-F and cognitive function in each of the three studies did not differ statistically ($P = 0.28$), and the combined data showed that an increase in maternal pregnancy U-F by 1 mg/l significantly predicted an IQ decrease by 2.06 points (Supplementary table S2).

Detailed results of the benchmark analysis are shown in Supplementary table S3. The joint BMC based on the linear model is 0.47 mg/l in maternal U-F, with a BMCL of 0.28 mg/l. The study-specific BMC and BMCL results show only minor variability. The BMCL values are generally larger in the OCC cohort compared with the two North American cohorts. In the OCC and MIREC studies, the joint linear results for both sexes were closer to the ones obtained for boys alone, while the results for girls seemed to differ. For the linear model, the joint BMCL for the three studies (0.28 mg/l) is similar to the one obtained from the piecewise model with a breakpoint at 0.75 (0.23 mg/l), while the piecewise model with a lower breakpoint at 0.5 showed a higher BMCL of 0.42 mg/l. This tendency was apparent in the combined analysis as well as in the sex-specific BMCL calculations.

Although the piecewise model is more flexible than the linear model, the AIC results did not reveal any important differences between the model fits. The same conclusion was reached based on likelihood testing where the linear model was not rejected, i.e., with $P = 0.46$ and 0.11 when the linear model was tested against piecewise linear models with breakpoints at 0.5 and 0.75, respectively.

Discussion

Experimental and cross-sectional studies have provided evidence of fluoride neurotoxicity, especially during early brain development.[1,20] Jointly with two prospective epidemiology studies on populations exposed to fluoridated water or fluoridated salt and other sources,[5,6] both of them rated as low risk of bias,[1] the present study adds new, comparable evidence from a population exposed to low water-fluoride levels. In the absence of other important fluoride sources, U-F concentrations will often be similar to the concentration in drinking water,[21,22] but substantial elevations can occur from tea drinking.[4] The two studies from North America showed creatinine-adjusted U-F concentrations averaging 0.89 mg/l (Mexico City) and 0.85 and 0.44 mg/l in fluoridated and non-fluoridated cities (Canada), respectively. Ranges of U-F levels from these two prior studies overlapped with the exposures encountered in the OCC study that reflected the low fluoride concentrations of 0.2–0.3 mg/l in the local drinking water,[13] as likely increased by tea drinking and other sources of exposure (figure 1). We calculated regression values for linear and, for comparison, piecewise linear dose–response functions for the new, low-exposure study so that it could be compared and merged with the previous findings.[9]

In the OCC study, we did not find evidence of fluoride neurotoxicity at low maternal U-F concentrations in the third trimester. This finding is consistent with the trimester-specific MIREC results,[23] as possibly affected by the imprecision of U-F measured in a single spot sample. Given the overlapping ranges of exposure, the fluoride–IQ relationships in the three studies were similar. Although the fluoride association was not statistically significant in the OCC cohort by itself, the joint association was significant when combined with information from the other two cohorts. This result can be explained by a relatively high variability in the OCC result, whereas the combined result is based on a larger sample size.

The joint BMC was found to be 0.45 mg/l (BMCL, 0.28 mg/l), i.e. slightly higher than previously found (BMC, 0.33 mg/l; BMCL, 0.20 mg/l) for the two North American cohorts alone.[9] Also, if instead relying on the GCI as a marker of child intelligence with the slightly larger Mexican sample, the results are similar (Supplementary table S3), as also seen previously.[9] Given the combined observations on more than 1500 mother–child pairs, the overall BMC results likely reflect a threshold for adverse cognitive effects of prenatal fluoride exposure that occur at levels prevalent in many countries.[21]

Due to the brain's continued vulnerability across early development,[24] infancy may also be a vulnerable period of exposure, especially among bottle-fed infants who receive formula reconstituted with fluoridated water.[23,25] However, in the OCC, exposure to fluoride in infancy is expected to be low because the majority of children were breastfed for at least 3 months (more than three out of four

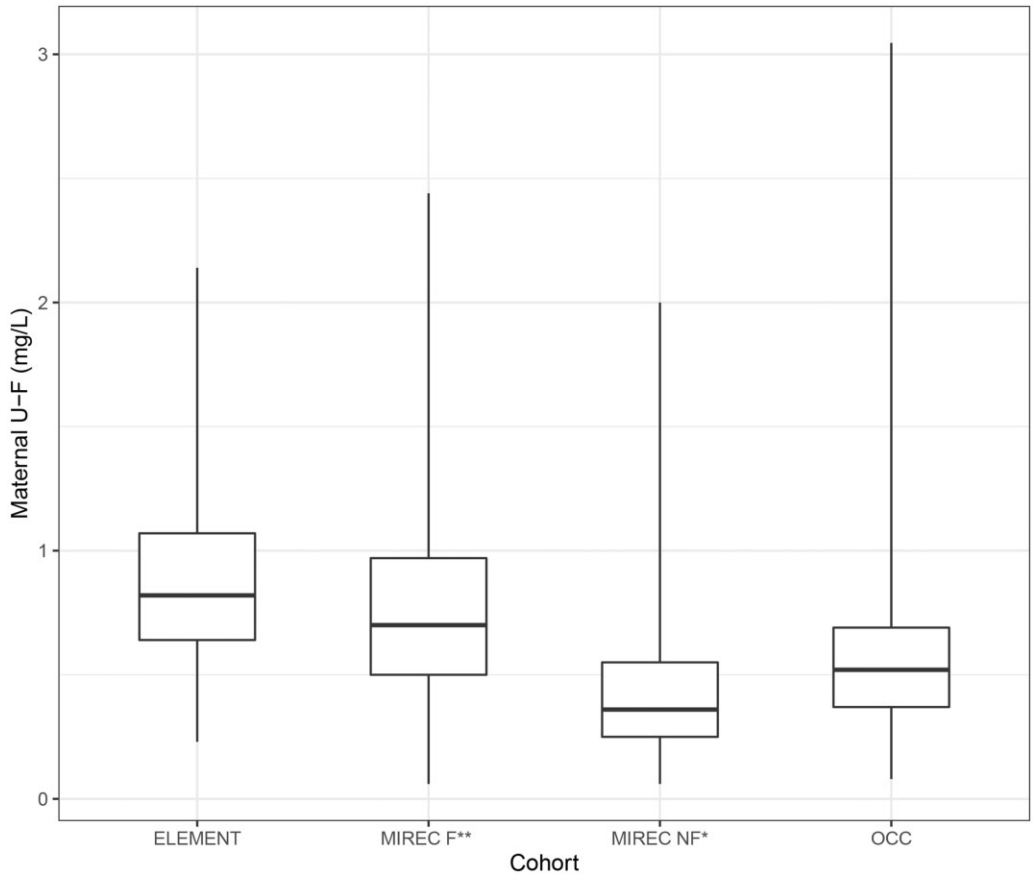

Figure 1 Maternal creatinine-adjusted urine-fluoride concentrations (U-F) in the three cohorts, where MIREC has been split into fluoridated (F) and non-fluoridated (NF) communities. Medians, quartiles, and 95% ranges are shown

Table 2 Predicted difference in FSIQ score for a doubling in the creatinine-adjusted fluoride concentration in mother's urine during pregnancy

	All samples (mg/l)		Spot samples (mg/l)		24-h samples (mg/l)	
	N	**β ^ (95% CI)**	***N***	**β ^ (95% CI)**	***N***	**β ^ (95% CI)**
Simple model[a]						
All	837	0.08 (−1.14 to 1.30)	453	−0.05 (−1.55 to 1.45)	384	0.36 (−1.73 to 2.45)
Girls	402	−0.05 (−1.80 to 1.70)	216	−0.83 (−2.98 to 1.32)	186	0.67 (−2.35 to 3.70)
Boys	435	0.20 (−1.47 to 1.87)	237	0.68 (−1.40 to 2.77)	198	0.09 (−2.75 to 2.93)
Comprehensive model[b]						
All	460	0.18 (−1.39 to 1.76)	223	0.58 (−1.53 to 2.69)	237	−0.72 (−3.24 to 1.80)
Girls	221	−0.40 (−2.52 to 1.71)	101	−0.78 (−3.64 to 2.08)	120	−0.91 (−4.27 to 2.45)
Boys	239	0.87 (−1.41 to 3.15)	122	2.14 (−0.92 to 5.20)	117	−0.50 (−4.13 to 3.13)

Notes: Results are shown for the total material with urine sample type as a fixed effect and for stratified analyses of the urine sample types by linear regression with sex as interaction. The simple model is adjusted for parental education and preterm birth. The comprehensive model accounts also for age at the time of testing, examiner, breastfeeding duration, school grade, school type and smoking and alcohol habits of the mother during pregnancy.
P values for sex interaction: a: 0.84 and b: 0.41.

children)[11] and because of the low fluoride concentration in the local drinking water.[13] As expected, the effects of fetal exposure (i.e. as represented by the U-F in pregnancy) remained significant in the MIREC study when adjusting for breastfeeding.[6] Likewise, in the ELEMENT study, the association of IQ with maternal U-F was only marginally reduced after controlling for child U-F. Further, fluoride exposure in preschool-age[23] and at school age[5] showed a weaker and non-statistically significant association with child IQ. These findings support that fetal brain development is highly vulnerable to fluoride exposure.

The IQ losses seen at elevated fluoride exposures are in accordance with findings in cross-sectional studies where the children examined had likely been exposed to chronic water-fluoride concentrations throughout development.[3,4] Similar results have been found in more recent studies that included areas with elevated water-fluoride levels.[26,27] These findings support that fluoride is a developmental neurotoxicant (i.e., causing adverse effects on brain development in early life) when exposures exceed a low background level. Given the ubiquity of elevated fluoride exposure, a recent study estimated that the population impact of adverse effects from fluoride

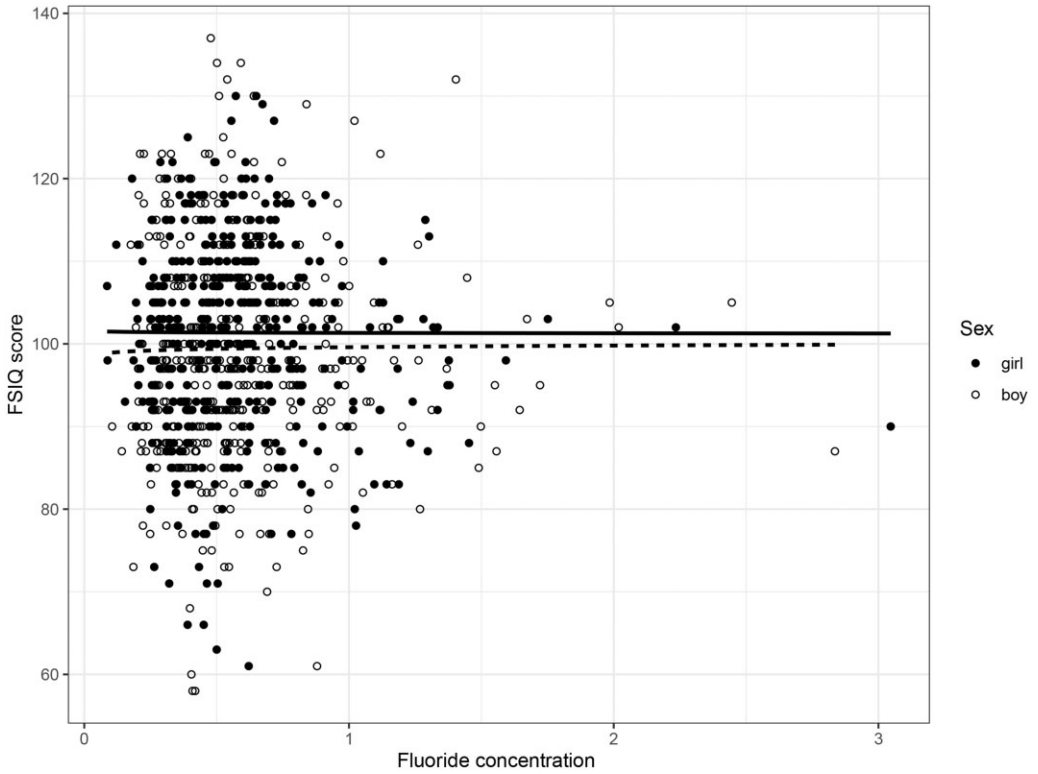

Figure 2 Creatinine-adjusted maternal U-F concentration during pregnancy as a predictor of Full-Scale IQ (FSIQ) in OCC children at age 7 with interaction by sex. The linear regression is adjusted for parental education and preterm birth (simple model). The type of urine sample is considered as a fixed effect. The filled circles and the full regression line are for girls, and the open circles and the dotted line refer to the boys

may exceed the one associated with other toxic elements like lead, mercury, and arsenic,[28] as also concluded in another modelling study.[29] Adverse effects of the latter trace elements are associated with blood concentrations substantially lower than the serum-fluoride concentration corresponding to the BMC.[24]

The OCC study focused on the FSIQ as a cognitive function indicator. Although fluoride neurotoxicity may not affect all cognitive domains equally,[10,23] the abbreviated WISC-V used in the OCC was not separated into subdomains. In addition to FSIQ as a main outcome, the ELEMENT cohort found that elevated maternal U-F concentrations were also associated with higher parent ratings of inattention on the Conners' Rating Scale, a common symptom of Attention-Deficit/Hyperactivity Disorder (ADHD).[16] Other studies on attention outcomes found an association between water fluoridation and diagnosis of ADHD in Canada, although cross-sectional data on child U-F did not replicate this association,[30] perhaps reflecting water-fluoride as a more stable proxy of early-life exposure compared with U-F measured in a later spot sample.

Individual vulnerability, including genetic predisposition,[31,32] may play a role in fluoride neurotoxicity. In the original MIREC study, boys were more vulnerable to prenatal fluoride neurotoxicity than girls,[6] perhaps suggesting sex-dependent endocrine disruption.[33] However, this tendency was not replicated in the present study. Other predisposing factors, such as iodine deficiency in pregnancy,[34] may also affect the outcome, though not likely in Denmark, where table salt is iodized. Overall, variability in such factors may result in difficulties documenting adverse cognitive effects at minor elevations of fluoride exposure.

Both the North American studies adjusted for a substantial number of covariables, including other neurotoxicants. Prenatal and early postnatal exposure to lead did not influence the fluoride-associated IQ deficits in the ELEMENT study.[5] Likewise, adjustment for arsenic, lead, perfluorooctanoic acid and mercury exposure did not appreciably change the estimates in the MIREC study.[6] The OCC cohort data were not adjusted for these other neurotoxicants, though the environmental exposures are low in the Odense area. Parental education was a key covariable in the Danish community,[11] while other socioeconomic factors were also considered important in the more diverse MIREC and ELEMENT populations.

The availability of 24-h urine samples might provide more precise fluoride exposure information, compared with morning spot urines, but the creatinine-adjusted results in the present study failed to show any important difference between the two exposure measures in association with the IQ outcome. Although maternal U-F seems to correlate with fluoride concentrations in serum that may pass the placenta,[1,21] the amount of fluoride that reaches the brain during early development is unknown. In addition, the OCC study collected urine on only one occasion during the third trimester, likely increasing imprecision, as suggested by previous studies that included multiple urine samples throughout pregnancy.[6,35] Thus, the maternal U-F averaged over three trimesters is a stronger predictor of child IQ than trimester-specific U-F.[23] Further, the creatinine-adjusted U-F is known to be the highest in the third trimester,[36] suggesting possible overestimation of fluoride exposure in the OCC cohort compared with the two other studies that relied on averages across trimesters. When occurring at random, such imprecision will tend to underestimate the fluoride association with the neurotoxicity outcome.[37]

The pooling of results from three prospective cohorts conducted in areas with wide ranges of overlapping exposure levels offers strong evidence of prenatal neurotoxicity, and these findings should inspire a revision of water-fluoride recommendations aimed at protecting pregnant women and young children. For example, the World Health Organization's recommendation of 1.5 mg/l as an upper limit for fluoride in drinking water[21] does not consider developmental neurotoxicity. While fluoride has dental health benefits,[38] the recent report on oral health from the National Institutes of Health (NIH)[39] emphasized improvements in preventing caries due to the increased topical use of new dental dentifrices, fluoride sealants and varnishes

in children above 2 years of age, i.e. after the teeth have erupted.[2,40] Although the NIH report stated that water fluoridation benefits the entire population (page I-39),[39] fluoridated toothpaste and other topical treatment are favoured as primary means of caries prevention.[2]

The present study contributes new information on the weak association between fairly low levels of prenatal fluoride exposure and cognitive function at school age in a Danish birth cohort. A possible negative association could not be confirmed within the exposures measured in the OCC. When merged with data from two previous prospective studies at higher exposures, a revised BMCL fluoride concentration of about 0.3 mg/l in maternal pregnancy urine suggests that elevated fluoride intakes, whether from drinking water, black tea, or other sources, during pregnancy may require public health attention.

Supplementary data

Supplementary data are available at *EURPUB* online.

Acknowledgements

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Author contributions

P.G. and E.B.J. supervised this study and are the guarantors. P.G., A.M. and E.B.J. designed the study. P.G., F.N., I.H.B., N.B., C.G., C.T. and H.H. contributed to data collection. I.B.H., N.B., C.G., C.T. and H.H. contributed to data analysis and interpretation. All authors provided advice regarding critically important intellectual content and helped to draft the manuscript and approved submission of this manuscript.

Conflicts of interest: P.G. has served as an expert on the hazards of environmental chemicals on behalf of the plaintiffs in Food & Water Watch v. U.S. EPA, where H.H. served as a fact witness regarding ELEMENT research on fluoride. All other authors have no interest to declare regarding this research.

Data availability

The dataset analyzed in this study is not publicly available due to national data security legislation on sensitive personal data.

Key points

- In the OCC birth cohort, prenatal fluoride exposure was estimated using creatinine-adjusted maternal urine-fluoride concentrations, and child IQ was determined at age 7 years. No clear association was found at the relatively low levels of exposure.
- Merging these results with data from two more highly exposed cohorts strengthened the dose–response assessment and allowed calculation of more accurate benchmark concentrations for developmental fluoride neurotoxicity.
- Because fluoride excretion may vary over time and sources of fluoride intake were not assessed, the exposure assessment in the three cohorts may involve some degree of imprecision that could dilute the findings.
- While analyses were controlled for child sex, parental education, and prematurity, population differences may not have been fully captured by adjustment for covariables.
- The joint benchmark concentration results reflect an approximate threshold for fluoride neurotoxicity at about 0.3 mg/l in urine, which is more reliable than previous results, as now based on more than 1500 mother–child pairs from prospective studies.

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WASHINGTON STATE BOARD OF HEALTH

Governor Appoints Patty Hayes as State Board of Health Chair

Hayes brings more than 35 years of experience in public health and policy

Tumwater, WA – October 25, 2023 - Governor Jay Inslee appointed Patty Hayes as the State Board of Health's (Board) new Chair. Hayes currently sits on the Board as a representative experienced in matters of health and sanitation. The position of Chair was previously held by Kitsap Public Health Administrator Keith Grellner.

Hayes brings over 35 years of experience in public health and policy, recently retiring from service in 2021 from Public Health – Seattle & King County. Her previous positions include Executive Director of WithinReach, Assistant Secretary for the State Department of Health's (Department) Community Family Health Division, and Director of the Department's Policy Legislative and Constituent Relations Office. Hayes received her undergraduate and master's degree from the University of Washington (UW) School of Nursing. Hayes has received numerous awards including being inducted into the Washington Nursing Hall of Fame in 2002; the UW Alumna Summa Laude Dignata Award in 2020; and the MLK Medal of Distinguished Service in 2021 from the King County Council.

"I am extremely honored to be appointed by Governor Inslee to Chair the State Board of Health," said Hayes. "The Board's work is critical for the health and wellbeing of every Washingtonian. I look forward to the work ahead and want to express my gratitude to outgoing Chair Grellner for his service to the Board and Public Health."

"Patty is a respected public health leader," said Michelle Davis, Executive Director of the Board. "She brings a wealth of experience, expertise, and a deep commitment to advancing equity and improving public health to the position of Board Chair. We are so pleased the Governor has selected her as our next Chair."

"I wish congratulations to Patty. Her experience and expertise in all matters of public health will serve the citizens and Board very well." stated Keith Grellner, Administrator for the Kitsap Public Health District and outgoing Chair. "Chairing the State Board of Health has been an incredible honor. Executive Director Davis and her team are hard-working professionals who are a pleasure to work with. I want to thank Governors Gregoire and Inslee for appointing me to the Board."

Hayes first meeting as Board Chair will be held Wednesday, November 8, 2023, from 9:30 a.m. to 2:50 p.m. Meeting location and online access will be made available on our November 8 meeting materials webpage.

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###

Established by the state constitution in 1889, the State Board of Health has served the people of Washington for 132 years, providing leadership and advancing public health practices that protect and improve the public's health. Our work focuses on analyzing policies, developing rules, promoting partnerships, and encouraging public engagement in the public health system.

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STATE OF WASHINGTON

WASHINGTON STATE BOARD OF HEALTH

PO Box 47990 • Olympia, Washington 98504-7990

WHEREAS the Washington State Board of Health was established by the State Constitution in 1889;

WHEREAS the Board provides a forum for developing public health policy in Washington State and is empowered to hold hearings and explore ways to improve the health status of people in Washington;

WHEREAS Keith Grellner was appointed to the Board in March 2011 by Governor Gregoire to serve as an individual with experience in matters of health and sanitation; and Governor Inslee subsequently reappointed him three times, and appointed him as Chair of the Board in November 2014;

WHEREAS Mr. Grellner has dedicated his career to protecting and improving the health of people in his community through his work at Kitsap Public Health District since 1989, serving as the Environmental Health Director from 2009 - 2016, and serving as the District's Administrator for the last six years, where he led the District's response to the COVID-19 pandemic;

WHEREAS Mr. Grellner has, as President of the Board of the Washington State Association of Local Public Health Officials, humbly guided and mentored his public health colleagues across the state in their efforts to collaborate, advance and transform public health, educate and inform policymakers on local health issues, and advocate for public health policy; and through these efforts has helped secure new, significant funding to help assure that foundational public health services can be equitably provided by the governmental public health system in every Washington community;

WHEREAS during his time at the Board, Mr. Grellner has sponsored the development of numerous environmental public health and safety rules covering topics such as food and drinking water safety, school environmental health, rabies, shellfish, contaminated properties, and animal waste, and has capably chaired the Boards' Environmental Health Committee, all the while generously sharing his expertise with colleagues and mentoring Board staff;

WHEREAS Mr. Gellner has created a safe, and welcome space for the public to share their concerns, ideas, hopes, and feedback on a broad array of policy issues including high-interest issues such as immunizations, vapor products, and pandemic response;

WHEREAS Mr. Grellner has approached his work with a commitment to fairness, evidence-based decision making and equity;

THEREFORE BE IT RESOLVED that the Board thanks and recognizes Keith Grellner for his dedicated and outstanding service to the people of Washington State by working to protect and advance the public's health, while striving to do what is right rather than what is easy, as a member of the Washington State Board of Health.

Kelly Oshiro, Vice Chair

STATE OF WASHINGTON

OFFICE OF FINANCIAL MANAGEMENT

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October 17, 2023

Umair A. Shah, MD, MPH, Secretary
Department of Health
P.O. Box 47890
Olympia, WA 98504-7890

Dear Secretary Shah:

In accordance with Section 712, Chapter 475, Laws of 2023 (ESSB 5187), I have approved your request to transfer the remaining funds for foundational public health services from the Office of Financial Management to the Department of Health.

I authorize this transfer because your August 21, 2023 letter indicates you have met the requirements in RCW 43.70.515. OFM allocates to the Department of Health $11,838,000 from General Fund-State for fiscal year 2024 (EA code 6T1) and $40,906,000 from General Fund-State for fiscal year 2025 (EA code 6T2). OFM also allocates $28,050,000 from the Foundational Public Health Services Account-State (EA code 6W0) for the biennium.

These funds will be used for new foundational public health service activities that support the public health system. There are no remaining funds to allocate. Please submit an operating allocation allotment packet.

If you have any questions, please contact Cynthia Hollimon, Senior Budget Advisor, at (360) 810-1979 or Cynthia.Hollimon@ofm.wa.gov.

Sincerely,

David Schumacher
Director

cc: Susan Howson, Senior Staff Coordinator, Senate Ways and Means Committee
Dave Johnson, Fiscal Coordinator, House Appropriations Committee
Monica Fontaine, Fiscal Analyst, Senate Ways and Means Committee
Lily Smith, Fiscal Analyst, House Appropriations Committee
Kelly Cooper, Director of Policy and Legislative Relations, Department of Health
Amy Ferris, Chief Financial Officer, Department of Health
Vicki Lowe, Executive Director, American Indian Health Commission
Steve Kutz, Chair, American Indian Health Commission
Jaime Bodden, Director, Washington State Association of Local Public Health Officials
Keith Grellner, Chair, State Board of Health
Molly Voris, Senior Policy Advisor for Public Health and Health Care, Office of the Governor
Sam Pskowski, Policy Advisor for Public Health, Office of the Governor
Cynthia Hollimon, Senior Budget Advisor, Office of Financial Management
Breann Boggs, Budget Advisor, Office of Financial Management

STATE OF WASHINGTON
WASHINGTON STATE BOARD OF HEALTH
PO Box 47990 • Olympia, Washington 98504-7990

October 26, 2023

The Honorable Jay Inslee
Washington State Governor
Post Office Box 40002
Olympia, Washington 98504-0002

Sent via email

Dear Governor Inslee:

I am writing to urge you to support and include in your 2024 Supplemental Budget the Environmental Justice Council (Council) 2024 Climate Commitment Act funding recommendations that relate to school environmental justice. The Council recommends removing the budget proviso that blocks revision and implementation of the school environmental health and safety rules, and endorses recommendations from the Board's 2022 State Health Report, related to making school environments healthy and safe.

Council staff approached Board staff in August, inquiring about the status of the longstanding budget proviso that has suspended implementation of the rules since 2010, and specifically asked what resources might be needed in order to lift the budget proviso. This discussion informed the Council's recommendations which specifically call out:

- Funding for local health jurisdictions to stand up environmental health and safety programs to assess and inspect schools and help schools identify, prioritize and address environmental public health risks.
- Directing the Department of Health to work with local health jurisdictions, Office of Superintendent of Public Instruction, and the State Board of Health to conduct a school environmental health and safety review and needs assessment, including existing inequities to inform updates to the K-12 School Health and Safety Guide and future rulemaking and to prioritize schools in need of repair or replacement that serve overburdened communities.
- Funding K-12 school heating, ventilation and air conditioning system maintenance and necessary upgrades, particularly for schools in overburdened communities.
- Funding the State Board of Health to develop cross-disciplinary partnerships to review the current and school rules and make recommendations for next steps.

Local environmental public health professionals are uniquely qualified and play a critical role in helping identify risks, potential problems, and strategies for improving health and

safety in schools. Regular health and safety inspections can help identify air quality issues and other hazards to help prevent illness and injury. Indoor air quality is a key factor in student health and performance, but schools may not have access to adequate resources to immediately fix or address the structural or environmental issues that lead to poor indoor air quality. The pandemic highlighted the critical importance of public health and school officials working together to improve ventilation to reduce the transmission and spread of respiratory illness.

The suspension of rule implementation has been included in each state operating budget since the 2009- 2011 biennium. With the budget proviso in place, the Board can neither implement the 2009 rules, nor can it update these rules to address environmental health factors such as indoor air quality, climate change, and more, with the most up-to-date science. The proviso also prevents the Board from revising the rules to align with changes to state law, including changes needed to comply with school drinking water testing requirements.

The Council's budget recommendations provide a significant opportunity to enable schools to improve environmental health and safety for the students that they serve, particularly for those schools that have serve children in overburdened communities. The Board urges you to include these recommendations in your proposed 2024 Supplemental Budget. The Board stands ready to assist with further information as discussion occurs on this important topic.

Sincerely,

Patty Hayes

Patty Hayes,
Chair

cc: Dave Schumacher
Maria Batayola
The Honorable Jarred-Michael Erickson
Kelly Wicker
Rob Duff
Jim Cahill
Pat Sullivan
Anna Lising
Kelsey Rote
Molly Voris
Carrie Sessions
Sam Pskowski
Becky Kelley
Sierra Rotakhina

STATE OF WASHINGTON
WASHINGTON STATE BOARD OF HEALTH
PO Box 47990 • Olympia, Washington 98504-7990

October 18, 2023

Kim Tuminello
Association for Creatine Deficiencies
6965 El Camino Real #105-598
Carlsbad, CA, 92009

Sent Via Email

Dear Kim Tuminello:

Thank you again for the rulemaking petition you submitted to the State Board of Health (Board) requesting to amend chapter 246-650 WAC to add Guanidinoacetate methyltransferase (GAMT) deficiency as a condition for newborn screening. The purpose of this letter is to follow up on your petition and provide an update on recent Board action.

As we mentioned in your March 2023 petition denial letter, the Board directed staff to work with the Department of Health (Department) to convene a technical advisory committee (TAC) to evaluate GAMT deficiency against the Board's five newborn screening criteria for inclusion in chapter 246-650 WAC. The TAC met on September 8th, 2023, and after presentations from subject matter experts, discussion, and voting, recommended that the Board add GAMT deficiency to the list of conditions for which all Washington-born newborns must be screened.

The Board and Department staff presented the TAC's recommendation at the Board's October 9th meeting. The Board agreed with the TAC's recommendation and directed staff to file a CR-101, Preproposal Statement of Inquiry, to initiate rulemaking for chapter 246-650 WAC. Board staff will soon file the CR-101 and begin work on this rulemaking.

We thank you for all the time and effort that you have put into this work. If you require further assistance, please don't hesitate to contact Molly Dinardo, Health Policy Advisor in our office, at 564-669-3455 or at Molly.Dinardo@sboh.wa.gov.

Sincerely,

Keith Grellner, Chair

STATE OF WASHINGTON
WASHINGTON STATE BOARD OF HEALTH
PO Box 47990 • Olympia, Washington 98504-7990

October 18, 2023

Christine Zahn
Arginase 1 Deficiency Foundation
9803 49th Ave SW
Seattle, WA, 98136

Sent Via Email

Dear Christine Zahn:

Thank you again for the rulemaking petition you submitted to the State Board of Health (Board) requesting to amend chapter 246-650 WAC to add Arginase 1 deficiency (ARG1-D) as a condition for newborn screening. The purpose of this letter is to follow up on your petition and provide an update on recent Board action.

As we mentioned in your April 2023 petition denial letter, the Board directed staff to work with the Department of Health (Department) to convene a technical advisory committee (TAC) to evaluate ARG1-D against the Board's five newborn screening criteria for inclusion in chapter 246-650 WAC. The TAC met on September 8th, 2023, and after presentations from subject matter experts, discussion, and voting, recommended that the Board add ARG1-D to the list of conditions for which all Washington-born newborns must be screened.

The Board and Department staff presented the TAC's recommendation at the Board's October 9th meeting. The Board agreed with the TAC's recommendation and directed staff to file a CR-101, Preproposal Statement of Inquiry, to initiate rulemaking for chapter 246-650 WAC. Board staff will soon file the CR-101 and begin work on this rulemaking.

We thank you for all the time and effort that you have put into this work. If you require further assistance, please don't hesitate to contact Molly Dinardo, Health Policy Advisor in our office, at 564-669-3455 or at Molly.Dinardo@sboh.wa.gov.

Sincerely,

Keith Grellner, Chair

PREPROPOSAL STATEMENT OF INQUIRY

CR-101 (October 2017)
(Implements RCW 34.05.310)
Do **NOT** use for expedited rule making

CODE REVISER USE ONLY

OFFICE OF THE CODE REVISER
STATE OF WASHINGTON
FILED

DATE: October 18, 2023
TIME: 4:26 PM

WSR 23-22-004

Agency: Washington State Board of Health

Subject of possible rule making: Auditory screening of school-age children. The Washington State Board of Health (Board) is considering amending the auditory screening sections of chapter 246-760 WAC, Auditory and Visual Standards – School Districts, to align with current national evidence-based practices and assess potential options regarding whether to include otoacoustic emission (OAE) screening technology in the Board's rules. The Board may also consider other technical or editorial changes as needed.

Statutes authorizing the agency to adopt rules on this subject: RCW 28A.210.020

Reasons why rules on this subject may be needed and what they might accomplish: The Board sets standards in chapter 246-760 WAC for the auditory and visual screening of children attending schools in Washington under the authority provided in RCW 28A.210.020. The purpose of these standards is to screen and identify students in Washington who may be experiencing hearing or vision impairments and refer them for diagnostic evaluation and care by an appropriate healthcare provider. Hearing screenings provide the opportunity to help detect a student's hearing loss or previously unrecognized hearing loss and intervene to limit further loss or otherwise address the loss and improve learning.

In response to a petition for rulemaking, the Board, in consultation with the Office of Superintendent of Public Instruction (OSPI), will consider revisions to the auditory screening sections of the chapter, specifically, regarding the potential inclusion of otoacoustic emission (OAE) screening technology. The auditory screening sections of the rule haven't been updated since 2002. As such, other possible revisions may include aligning Washington standards with national school childhood hearing screening guidelines; for example, the American Academy of Audiology (AAA) Clinical Practice Guidelines and the American Speech-Language-Hearing Association (ASHA) Childhood Hearing Screening Guidelines, and making other technical or editorial changes as needed.

Identify other federal and state agencies that regulate this subject and the process coordinating the rule with these agencies: Per RCW 28A.210.020, the Board must seek the recommendations of the Superintendent of Public Instruction (OSPI) regarding the administration of school auditory screening before revising the rules. The Board will conduct this rulemaking in consultation with OSPI. In addition, the Department of Children, Youth, and Families (DCYF) has authority over screenings in early learning facilities. The Board will invite DCYF to participate in this rulemaking to ensure coordination, as applicable.

Process for developing new rule (check all that apply):

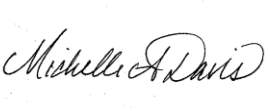
- ☐ Negotiated rule making
- ☐ Pilot rule making
- ☐ Agency study
- ☒ Other (describe) The Board will use a collaborative rulemaking approach in developing the proposed rules.

Interested parties can participate in the decision to adopt the new rule and formulation of the proposed rule before publication by contacting:

	(If necessary)
Name: Molly Dinardo	Name:
Address: PO Box 47990, Olympia, WA 98504-7790	Address:
Phone: 564-669-3455	Phone:

Fax: 360-236-4088	Fax:
TTY: 711	TTY:
Email: molly.dinardo@sboh.wa.gov	Email:
Web site: sboh.wa.gov	Web site:
Other:	Other:

Additional comments: The Board will work with partner agencies and may convene listening sessions or an advisory group for additional input. The Board will keep interested parties informed of the rulemaking through email, the Board's listserv and rulemaking website, and notices in the Washington State Register. Interested parties, including those who implement Chapter 246-760 WAC, will have opportunities to provide comments through the rulemaking process, including informal review of the draft rule, formal review and comment on the proposed rule, and at the Board's public hearing.

Date: October 18, 2023 **Name:** Michelle A. Davis **Title:** State Board of Health Executive Director	**Signature:** 

CODE REVISER USE ONLY

RULE-MAKING ORDER
EMERGENCY RULE ONLY

CR-103E (December 2017)
(Implements RCW 34.05.350 and 34.05.360)

OFFICE OF THE CODE REVISER
STATE OF WASHINGTON
FILED

DATE: October 06, 2023
TIME: 9:45 AM

WSR 23-21-016

Agency: State Board of Health

Effective date of rule:

Emergency Rules

☒ Immediately upon filing.

☐ Later (specify)

Any other findings required by other provisions of law as precondition to adoption or effectiveness of rule?

☐ Yes ☒ No If Yes, explain:

Purpose: The State Board of Health (board) adopted an emergency rule regarding substitute components of registered products as part of the certification and registration of proprietary treatment products used in on-site sewage systems. The original emergency rule was filed on June 15, 2022 (WSR 22-13-101). Emergency rules have been filed continuously thereafter with the most recent filing on June 09, 2023 (WSR 23-13-018). Only one change has been made to the amendments since the filing of the original emergency rule. This emergency rule is being adopted without change to the previous emergency rule.

This fifth emergency rules amends WAC 246-272A-0110 to allow manufacturers to make a written request to the Department of Health (department) to substitute components of a registered product's construction in cases of a demonstrated supply chain shortage or similar manufacturing disruptions that may impact installations, operation, or maintenance. The request must include information that demonstrates the substituted component will not negatively impact performance or diminish the effect of the treatment, operation, and maintenance of the original registered product. The emergency rule will also allow manufacturers of registered proprietary treatment products to replace components of their products that are not available due to supply chain shortages or similar manufacturing disruptions with like components, as long as the components will not negatively impact performance, treatment, operation, or maintenance of the original registered product.

The current rule requires manufacturers of proprietary treatment products used in on-site sewage systems to test their products with the NSF and register their products with the department based on NSF test results before the product is allowed to be permitted or installed in Washington. Without the emergency rule, the current rule would impede home sales when maintenance of proprietary products has not been completed as noted on home inspections for property transfers because replacement parts with NSF registration are unavailable. New construction is likewise impacted as many active or pending permits include on-site sewage systems using Salcor products. Salcor manufactures a disinfecting ultraviolet (UV) light system incorporated into several proprietary treatment products used in Washington State. There are other manufacturers of disinfecting UV light systems that can be substituted into proprietary treatment products in place of Salcor products. Salcor was sold and the new owner is working with NSF to get their products approved but this process will take several months. In order to continue to protect the public's health, safety, and welfare, it is necessary to adopt afifth emergency rule to allow the department to consider written requests from manufacturers of proprietary treatment products for substitutes to proprietary treatment product components so their systems will be able to function properly without negatively impacting treatment, operation or maintenance during supply chain shortages. To date, four manufacturers have received department approval to substitute the Salcor 3G UV lamp with an alternate UV lamp.

In 2018, the board filed a CR-101, Preproposal Statement of Inquiry (WSR 18-06-082), to initiate permanent rulemaking and update the on-site sewage system rules. That rulemaking is still underway and is expected to

conclude in 2024. As directed by the board at the June 8, 2022 meeting, the emergency rule amendment will be considered for incorporation into the permanent rulemaking that is currently underway.

Citation of rules affected by this order:

New: None
Repealed: None
Amended: WAC 246-272A-0110
Suspended: None

Statutory authority for adoption: RCW 43.20.050 (3)

Other authority:

EMERGENCY RULE

Under RCW 34.05.350 the agency for good cause finds:

☒ That immediate adoption, amendment, or repeal of a rule is necessary for the preservation of the public health, safety, or general welfare, and that observing the time requirements of notice and opportunity to comment upon adoption of a permanent rule would be contrary to the public interest.

☐ That state or federal law or federal rule or a federal deadline for state receipt of federal funds requires immediate adoption of a rule.

Reasons for this finding: : The board finds that in order to protect the public's health, safety, and welfare it is necessary to adopt the emergency rule to amend WAC 246-272A-0110 to allow the department to consider written request from manufacturers of proprietary treatment products to substitute a proprietary treatment product component so their systems may continue to function properly without negatively impacting performance or diminish the effect of the treatment, operation, or maintenance during supply chain shortages.

Note: If any category is left blank, it will be calculated as zero. No descriptive text.

Count by whole WAC sections only, from the WAC number through the history note. A section may be counted in more than one category.

The number of sections adopted in order to comply with:

Federal statute:	New	0	Amended	0	Repealed	0
Federal rules or standards:	New	0	Amended	0	Repealed	0
Recently enacted state statutes:	New	0	Amended	0	Repealed	0

The number of sections adopted at the request of a nongovernmental entity:

	New	0	Amended	0	Repealed	0

The number of sections adopted on the agency's own initiative:

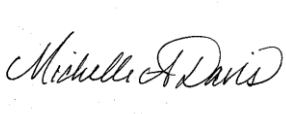
	New	0	Amended	1	Repealed	0

The number of sections adopted in order to clarify, streamline, or reform agency procedures:

	New	0	Amended	0	Repealed	0

The number of sections adopted using:

Negotiated rule making:	New	0	Amended	0	Repealed	0
Pilot rule making:	New	0	Amended	0	Repealed	0
Other alternative rule making:	New	0	Amended	1	Repealed	0

Date Adopted: October 6, 2023 **Name:** Michelle Davis, MPA **Title:** Executive Director Washington State Board of Health	**Signature:** 

AMENDATORY SECTION (Amending WSR 05-15-119, filed 7/18/05, effective 9/15/05)

WAC 246-272A-0110 Proprietary treatment products—Certification and registration. (1) Manufacturers shall register their proprietary treatment products with the department before the local health officer may permit their use.

(2) To qualify for product registration, manufacturers desiring to sell or distribute proprietary treatment products in Washington state shall:

(a) Verify product performance through testing using the testing protocol established in Table I and register their product with the department using the process described in WAC 246-272-0120;

(b) Report test results of influent and effluent sampling obtained throughout the testing period (including normal and stress loading phases) for evaluation of constituent reduction according to Table II;

(c) Demonstrate product performance according to Table III. All ((~~thirty-day~~)) 30-day averages and geometric means obtained throughout the test period must meet the identified threshold values to qualify for registration at that threshold level; and

(d) For registration at levels A, B, and C verify bacteriological reduction according to WAC 246-272A-0130.

(3) Manufacturers verifying product performance through testing according to the following standards or protocols shall have product testing conducted by a testing facility accredited by ANSI:

(a) ANSI/NSF Standard 40—Residential Wastewater Treatment Systems;

(b) NSF Standard 41: Non-Liquid Saturated Treatment Systems;

(c) NSF Protocol P157 Electrical Incinerating Toilets - Health and Sanitation; or

(d) Protocol for bacteriological reduction described in WAC 246-272A-0130.

(4) Manufacturers verifying product performance through testing according to the following standards or protocols shall have product testing conducted by a testing facility meeting the requirements established by the Testing Organization and Verification Organization, consistent with the test protocol and plan:

(a) EPA/NSF—Protocol for the Verification of Wastewater Treatment Technologies; or

(b) EPA Environmental Technology Verification Program protocol for the Verification of Residential Wastewater Treatment Technologies for Nutrient Reduction.

(5) Treatment levels used in these rules are not intended to be applied as field compliance standards. Their intended use is for establishing treatment product performance in a product testing setting under established protocols by qualified testing entities.

(6) Manufacturers may submit a written application to the department requesting to substitute components of a registered product's construction in cases of supply chain shortage or similar manufacturing disruptions that may impact installations, operation, or maintenance. The application must include a report stamped, signed, and dated by a professional engineer that demonstrates the substituted component will not negatively impact performance or diminish the effect of the treatment, operation, and maintenance of the original registered

product. The department's approval of the substituted component is in effect until it is rescinded by the department.

TABLE I

Testing Requirements for Proprietary Treatment Products	
Treatment Component/ Sequence Category	**Required Testing Protocol**
Category 1 Designed to treat sewage with strength typical of a residential source when septic tank effluent is anticipated to be equal to or less than treatment level E.	ANSI/NSF 40— Residential Wastewater Treatment Systems (protocols dated between July 1996 and the effective date of these rules)
Category 2 Designed to treat high-strength sewage when septic tank effluent is anticipated to be greater than treatment level E. (Such as at restaurants, grocery stores, mini-marts, group homes, medical clinics, residences, etc.)	EPA/NSF Protocol for the Verification of Wastewater Treatment Technologies/ EPA Environmental Technology Verification (April 2001)
Category 3 Black water component of residential sewage (such as composting and incinerating toilets).	NSF/ANSI Standard 41: Non-Liquid Saturated Treatment Systems (September 1999) NSF Protocol P157 Electrical Incinerating Toilets - Health and Sanitation (April 2000)
Total Nitrogen Reduction in Categories 1 & 2 (Above)	Protocol for the Verification of Residential Wastewater Treatment Technologies for Nutrient Reduction/EPA Environmental Technology Verification Program (November, 2000)

TABLE II

Test Results Reporting Requirements for Proprietary Treatment Products	
Treatment Component/Sequence Category	**Testing Results Reported**
Category 1 Designed to treat sewage with strength typical of a residential source when septic tank effluent is anticipated to be equal to or less than treatment level E.	Report test results of influent and effluent sampling obtained throughout the testing period for evaluation of constituent reduction for the parameters: $CBOD_5$, and TSS:

Test Results Reporting Requirements for Proprietary Treatment Products	
	□ Average □ Standard Deviation □ Minimum □ Maximum □ Median □ Interquartile Range □ 30-day Average (for each month) For bacteriological reduction performance, report fecal coliform test results of influent and effluent sampling by geometric mean from samples drawn within ((~~thirty-day~~)) 30-day or monthly calendar periods, obtained from a minimum of three samples per week throughout the testing period. See WAC 246-272A-0130. Test report must also include the individual results of all samples drawn throughout the test period.
Category 2 Designed to treat high-strength sewage when septic tank effluent is anticipated to be greater than treatment level E. (Such as at restaurants, grocery stores, mini-marts, group homes, medical clinics, residences, etc.)	Report all individual test results and full test average values of influent and effluent sampling obtained throughout the testing period for: $CBOD_5$, TSS and O&G. Establish the treatment capacity of the product tested in pounds per day for $CBOD_5$.
Category 3 Black water component of residential sewage (such as composting and incinerating toilets).	Report test results on all required performance criteria according to the format prescribed in the NSF test protocol described in Table I.
Total Nitrogen Reduction in Categories 1 & 2 (Above)	Report test results on all required performance criteria according to the format prescribed in the test protocol described in Table I.

TABLE III

Product Performance Requirements for Proprietary Treatment Products						
Treatment Component/Sequence Category	**Product Performance Requirements**					
Category 1 Designed to treat sewage with strength typical of a residential source when septic tank effluent is anticipated to be equal to or less than treatment level E.	**Treatment System Performance Testing Levels**					
	Level	**Parameters**				
		$CBOD_5$	**TSS**	**O&G**	**FC**	**TN**
	A	10 mg/L	10 mg/L	——	200/100 ml	——
	B	15 mg/L	15 mg/L	——	1,000/100 ml	——
	C	25 mg/L	30 mg/L	——	50,000/100 ml	——
	D	25 mg/L	30 mg/L	——	——	——
	E	125 mg/L	80 mg/L	20 mg/L	——	——
	N	——	——	——	——	20 mg/L
	Values for Levels A - D are 30-day values (averages for $CBOD_5$, TSS, and geometric mean for FC.) All 30-day averages throughout the test period must meet these values in order to be registered at these levels. Values for Levels E and N are derived from full test averages.					
Category 2 Designed to treat high-strength sewage when septic tank effluent is anticipated to be greater than treatment level E.	All of the following requirements must be met:					

Product Performance Requirements for Proprietary Treatment Products	
Treatment Component/Sequence Category	**Product Performance Requirements**
(Such as at restaurants, grocery stores, mini-marts, group homes, medical clinics, residences, etc.)	(1) All full test averages must meet Level E; and (2) Establish the treatment capacity of the product tested in pounds per day for $CBOD_5$.
Category 3 Black water component of residential sewage (such as composting and incinerating toilets).	Test results must meet the performance requirements established in the NSF test protocol.
Total Nitrogen Reduction in Categories 1 & 2 (Above)	Test results must establish product performance effluent quality meeting Level N, when presented as the full test average.

Washington State Department of Health Update

Umair A. Shah, MD, MPH

SECRETARY OF HEALTH, WA

Tao Kwan-Gett, MD, MPH

CHIEF SCIENCE OFFICER, WADOH

Washington State Board of Health
11/08/23 | Tumwater

Washington State Department of HEALTH

@WaDeptHealth
@WaHealthSec
@Ushahmd

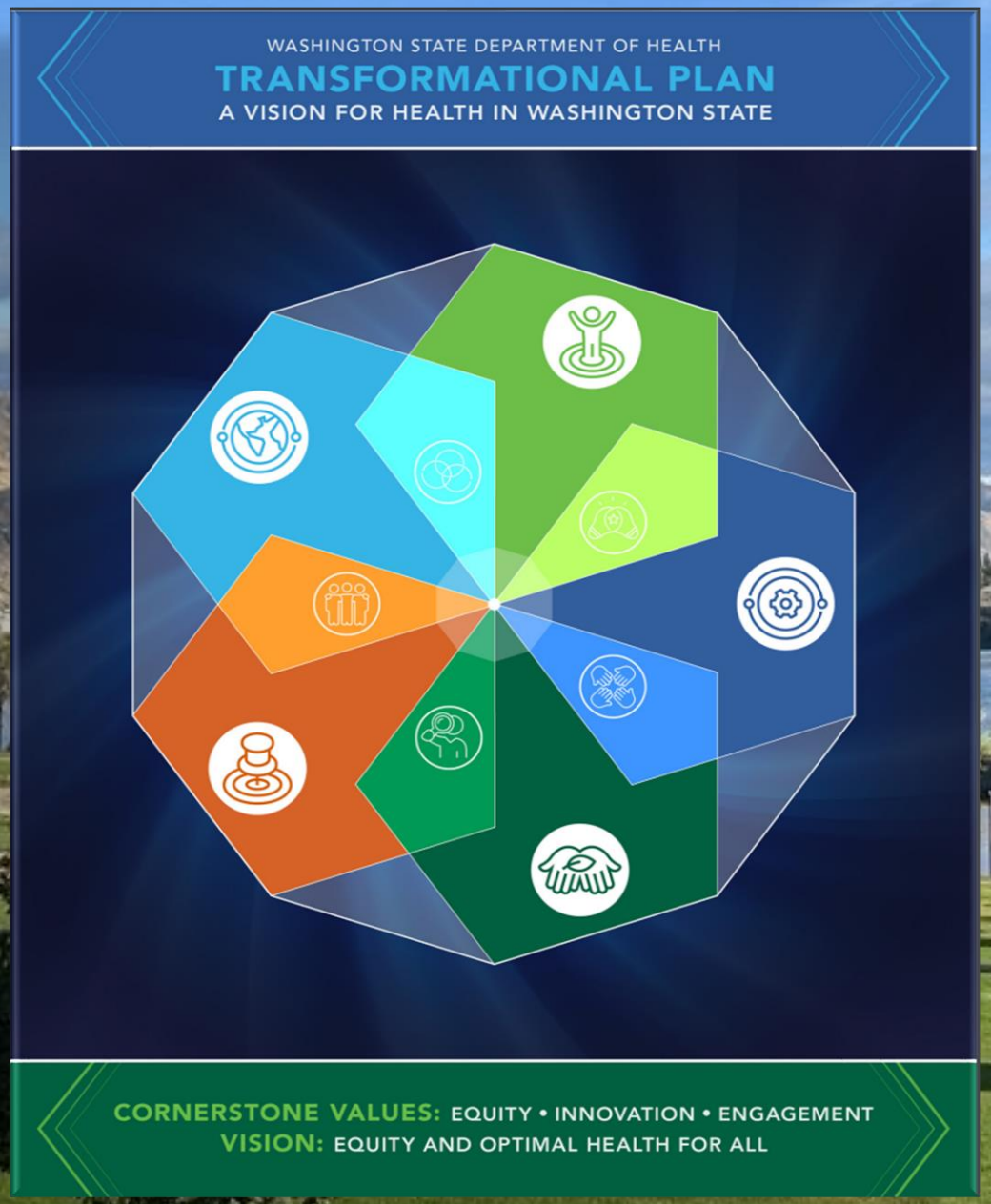
What is Public Health?

"What we as a society do *collectively* to assure the conditions in which people can be healthy."

- The future of the Public's Health in the 21st Century, Institute of Medicine, 2003

WA State Health Ecosystem

- Population – nearly 8 million – 13th most populous state
- Area – 71,362 square miles – 18th largest state
- 29 Federally Recognized Tribes
- 35 Local Health Departments (39 Counties)
- 500,000 licensed health care professionals and nearly 100 hospitals

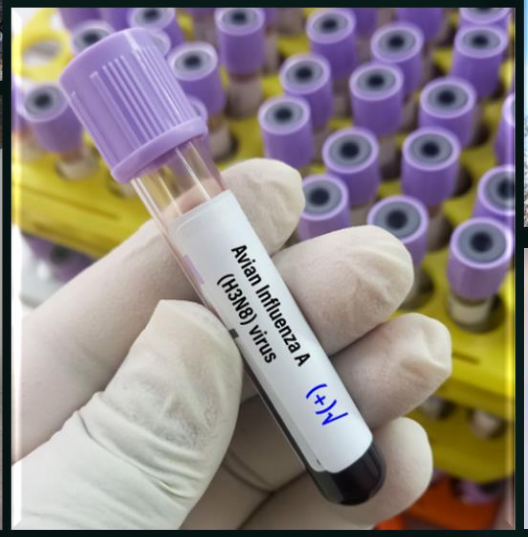


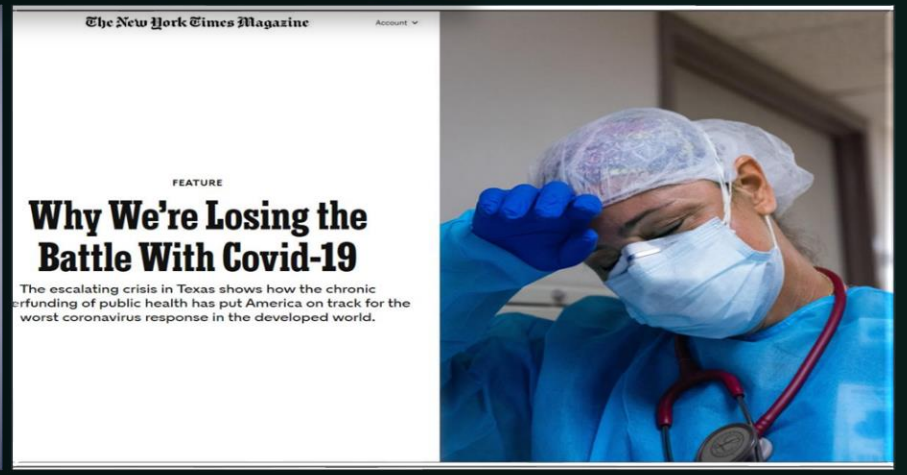
Health

Where Equity, Innovation and Engagement meet

Public Health Never Sleeps:

The Long Road Continues





WA State
Leading Causes of Death
2022

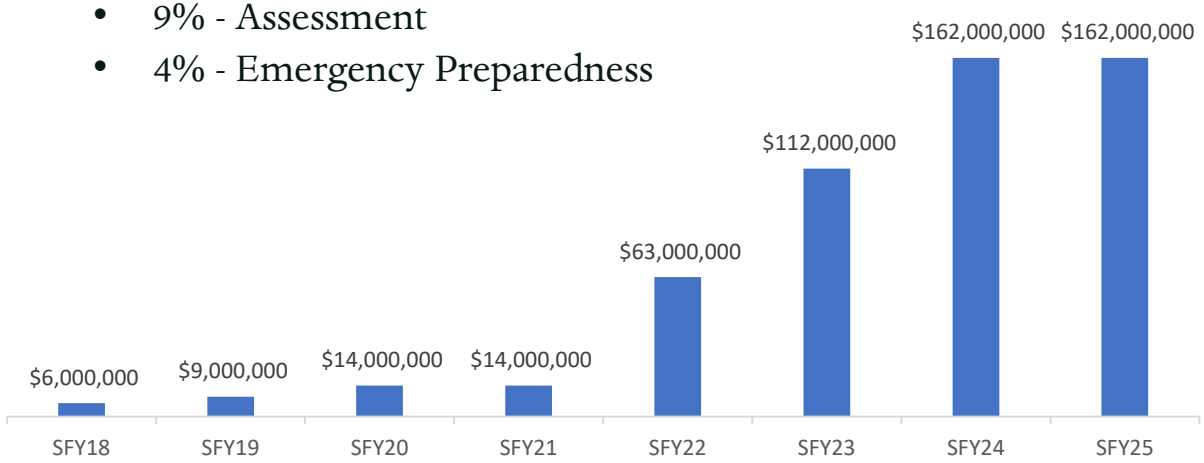
1. Malignant Neoplasms
2. Diseases of Heart
3. Unintentional Injury
4. Alzheimer's Disease
5. Cerebrovascular Disease
6. Chronic Lower Respiratory Disease
7. COVID-19
8. Diabetes
9. Chronic Liver Disease
10. Suicide

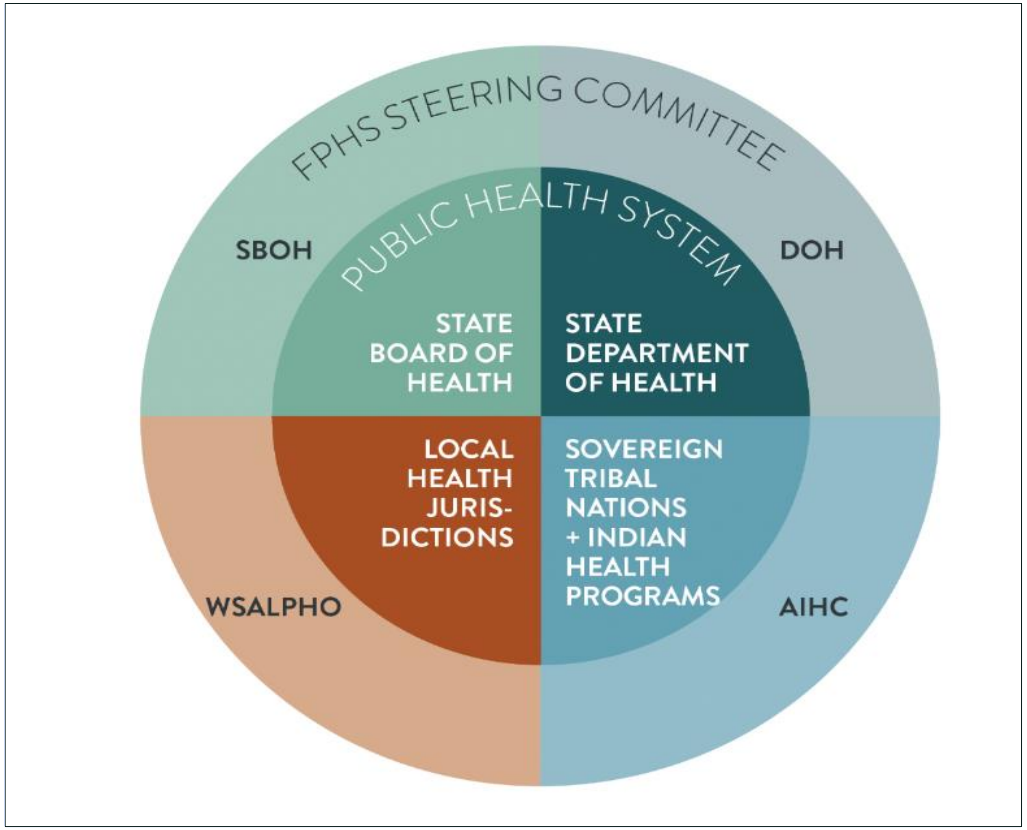

WORKING TOGETHER …

Foundational Public Health Services - WA

- Legislature Appropriated $324 Million for the 23-25 Biennium (72% of 2018 estimated need)

- FPHS has grown from a $6M, one-time investment in SFY18 to an ongoing annual investment of $162M in SFY24
- Investment areas include:
  - 36% - Foundational Capabilities
  - 24% - Communicable Disease
  - 17% - Life course
  - 10% - Environmental Health
  - 9% - Assessment
  - 4% - Emergency Preparedness

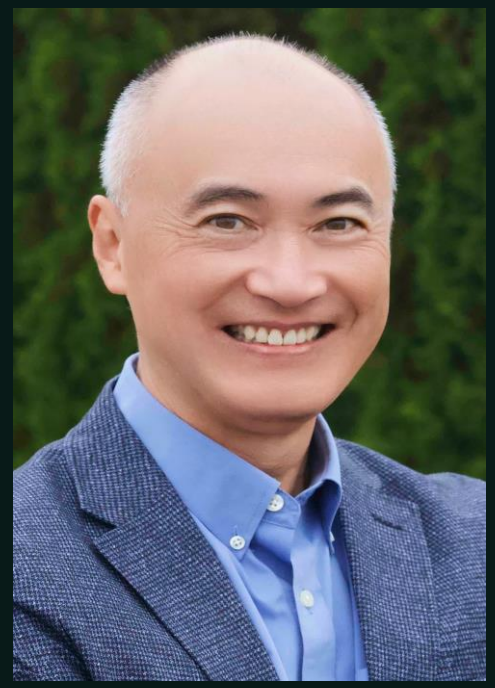




Health in WA Moving Forward

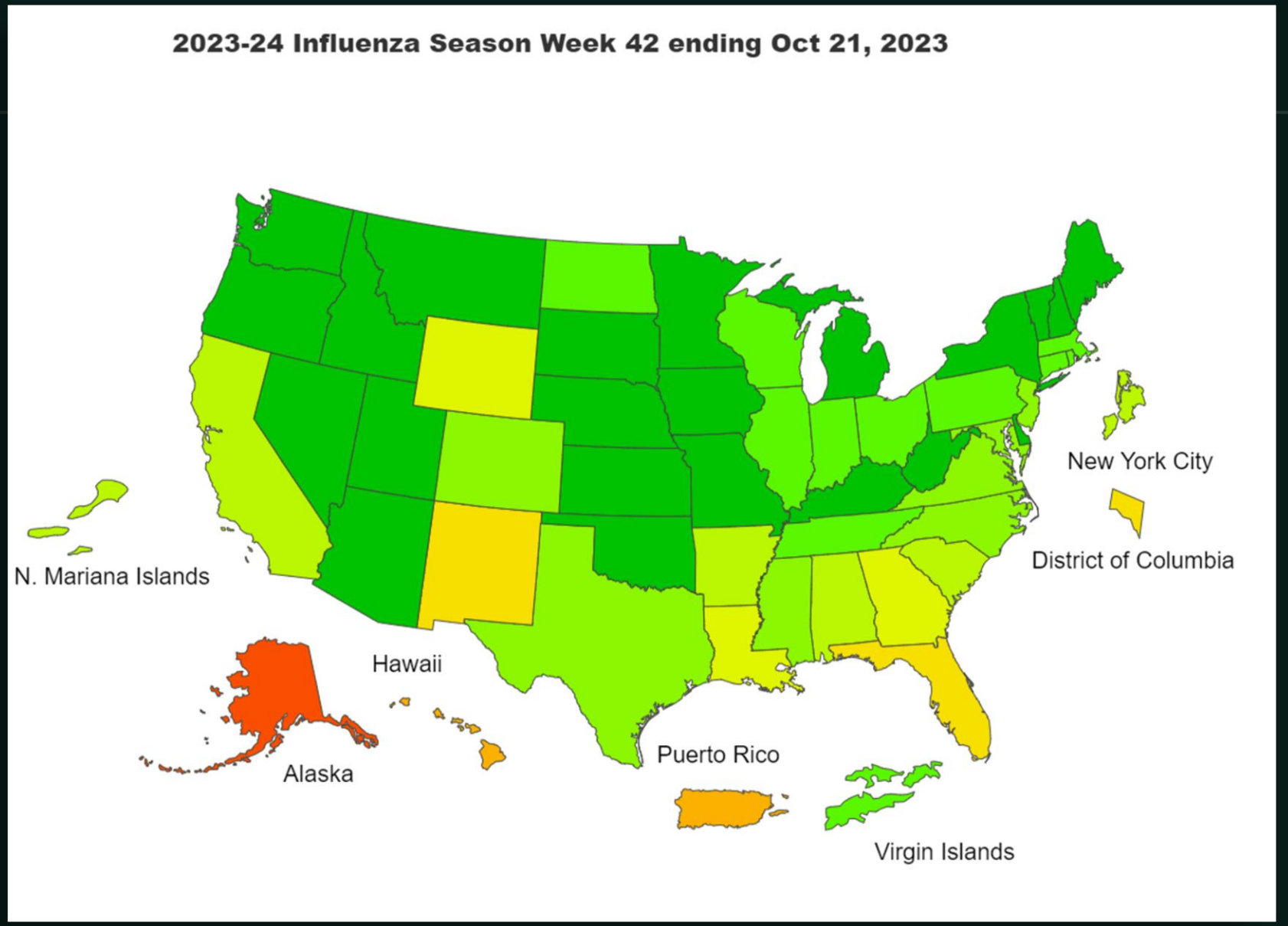
- Transformational Health
- Investment / Workforce
- Behavioral Health / FOCUS Taskforce
- Digital Health / Tech
- Climate and Health
- Social Drivers of Health
- Healthcare Delivery / Access to Care
- Respiratory Season Response

Update on Respiratory Disease Season

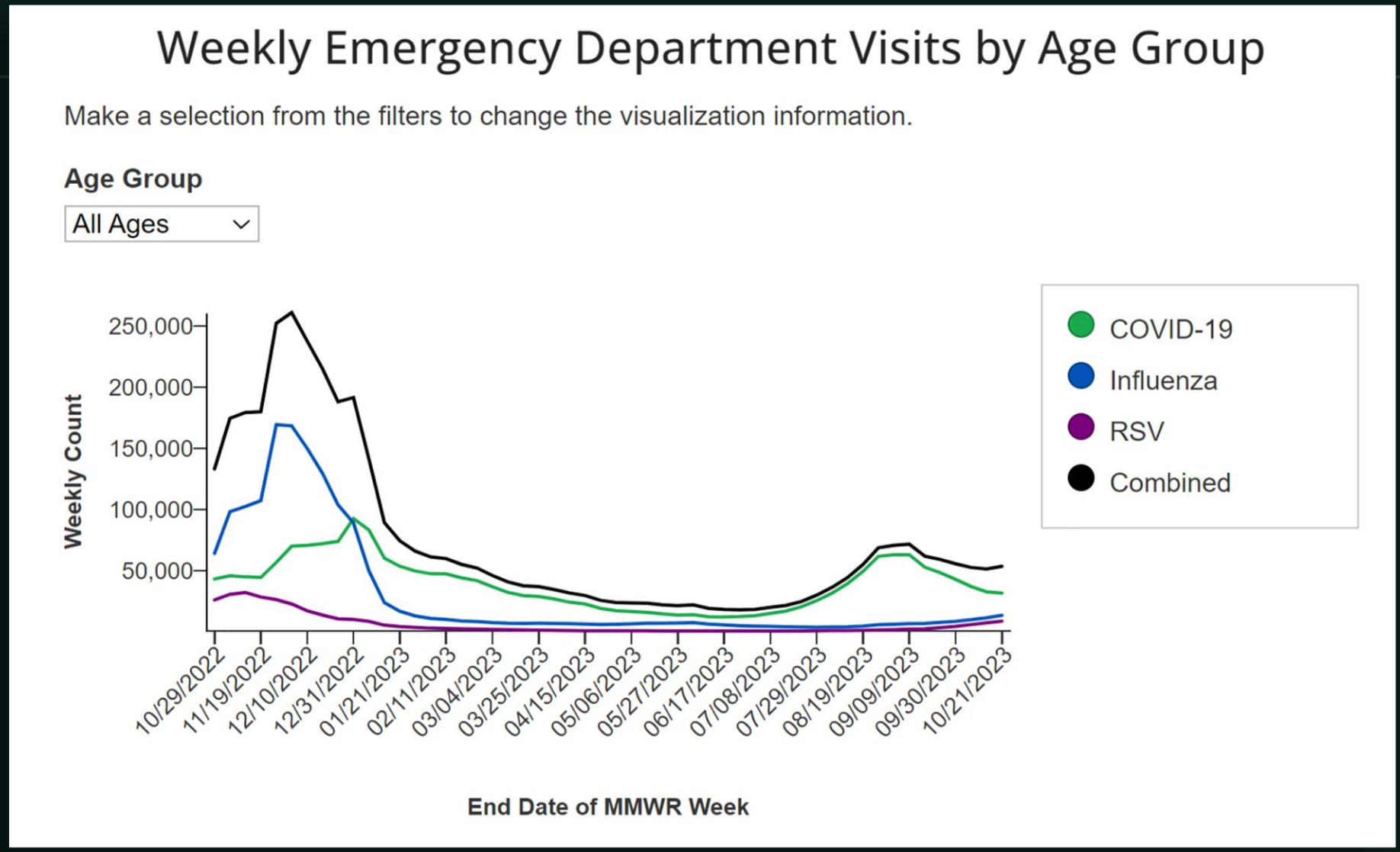


Tao Kwan-Gett, MD, MPH
Chief of Science Officer

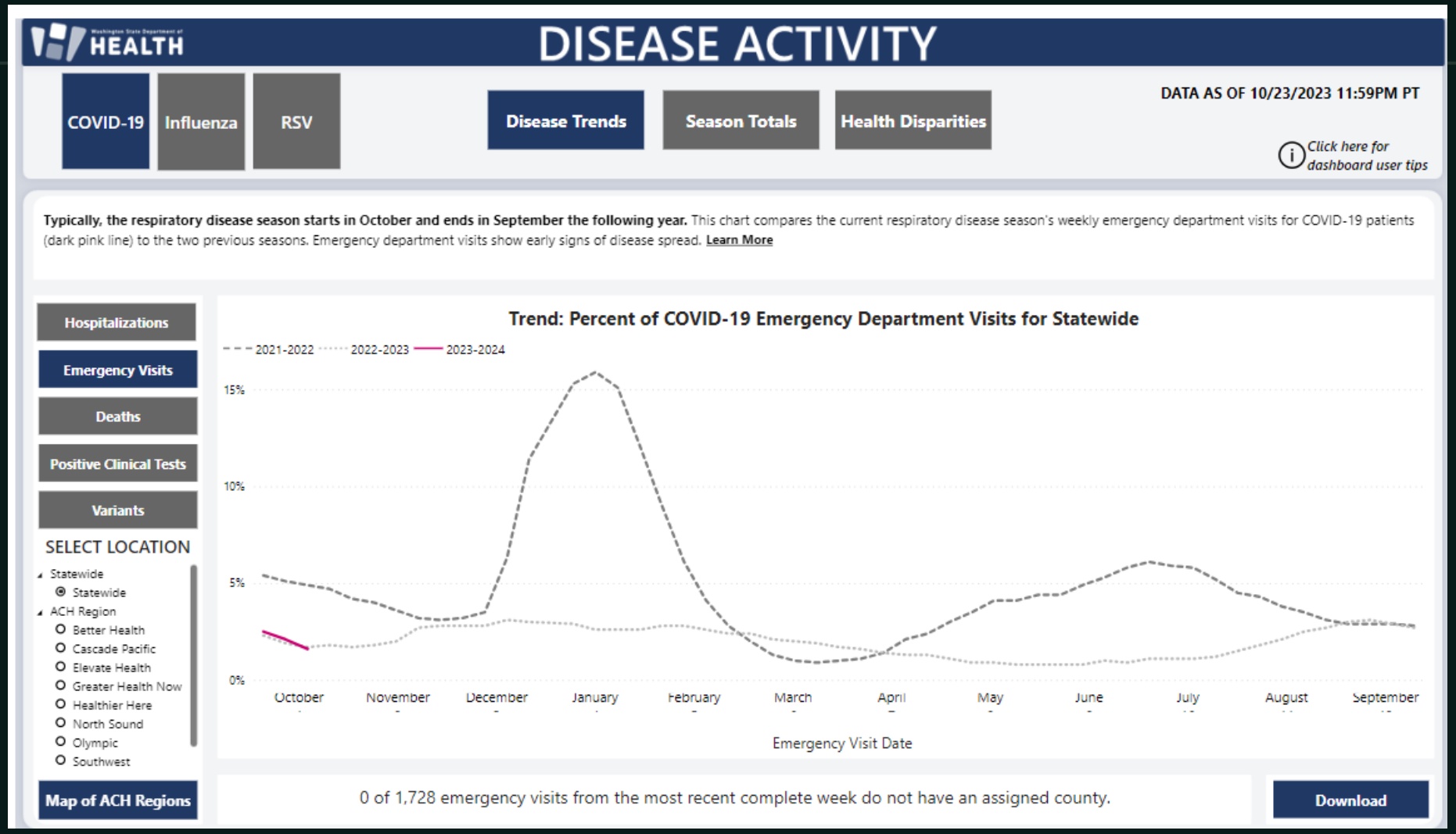
U.S. Influenza Activity



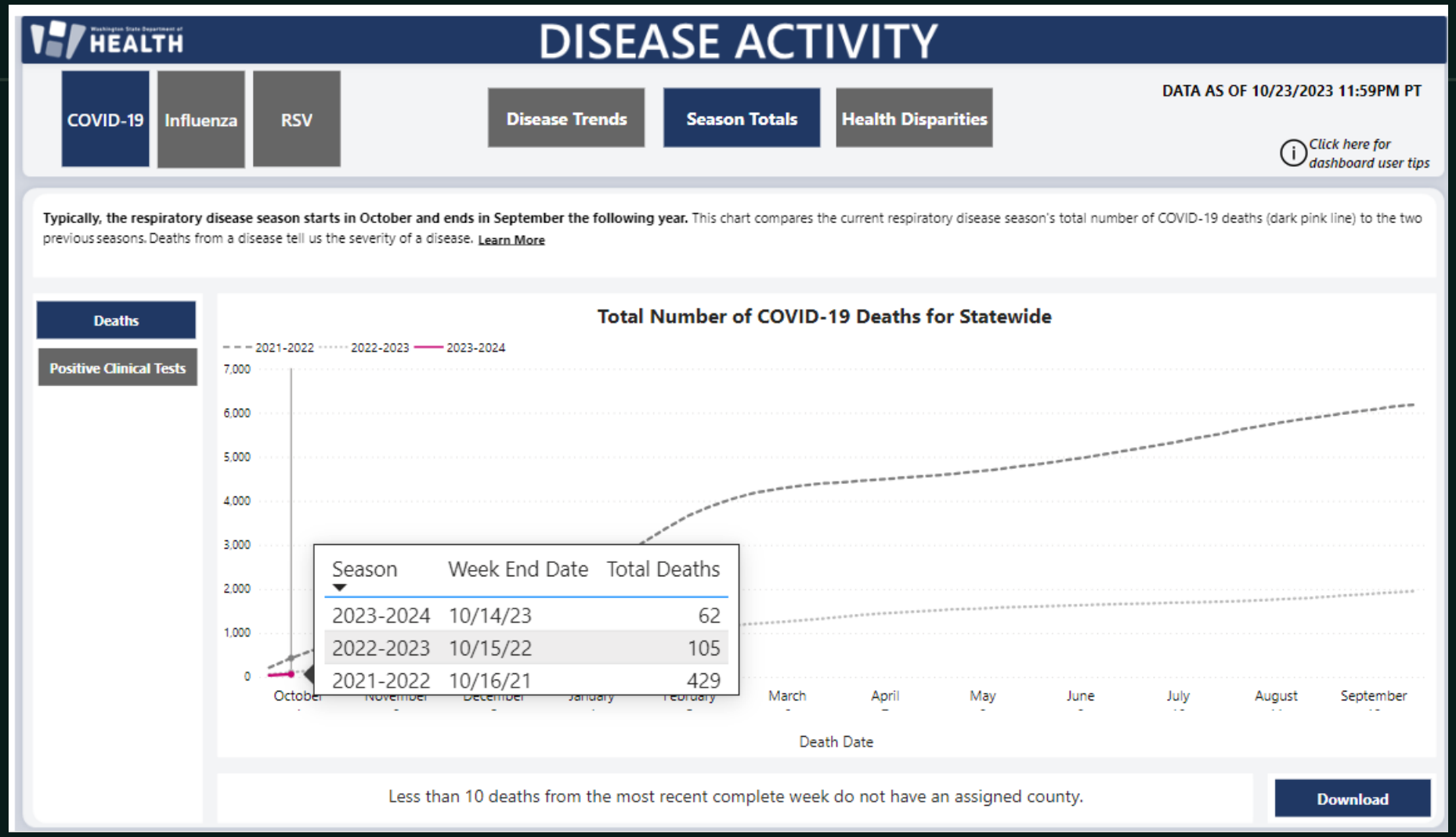
U.S. Emergency Department Visits for Respiratory Disease



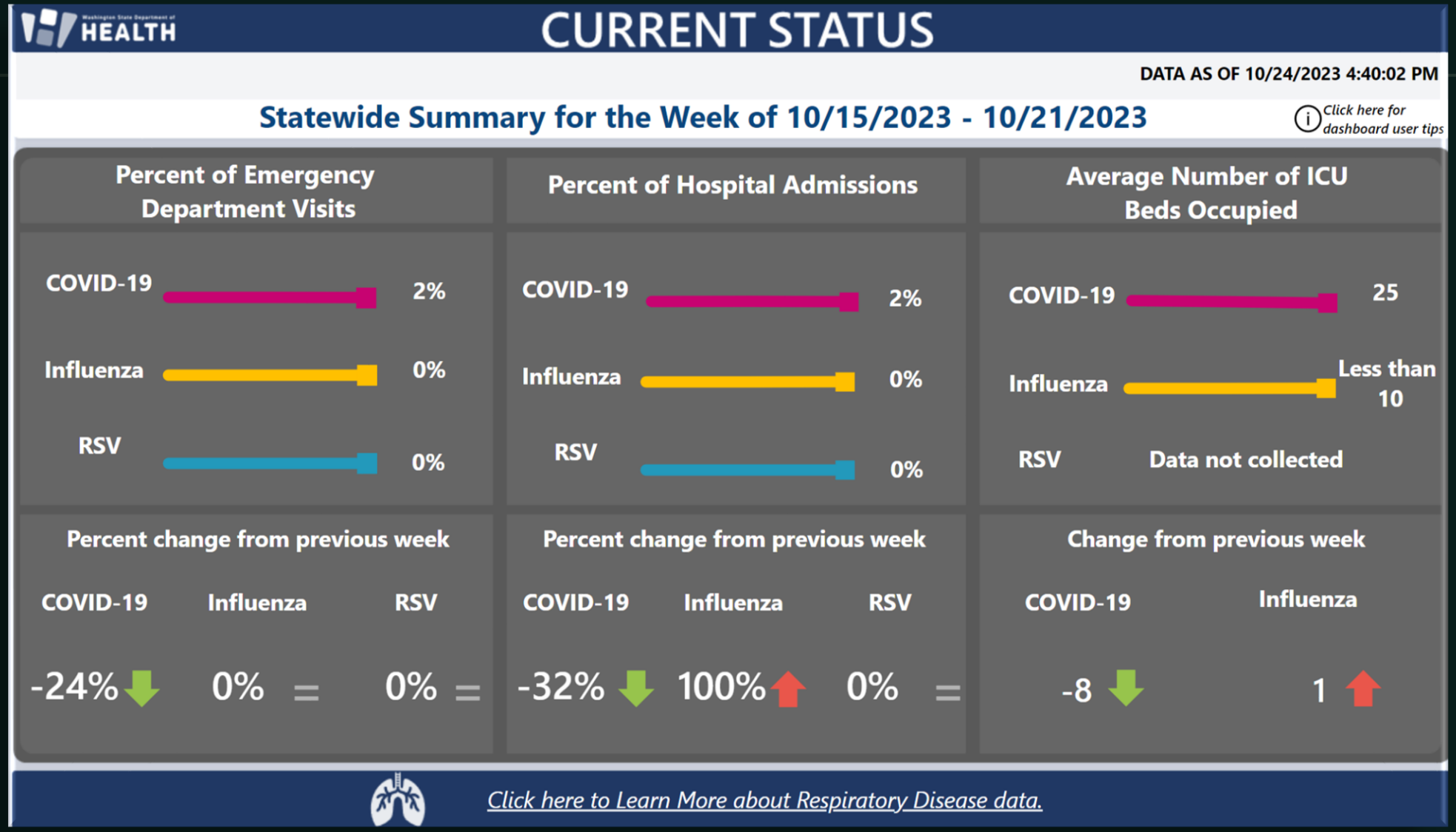
WA Respiratory Illness Dashboard



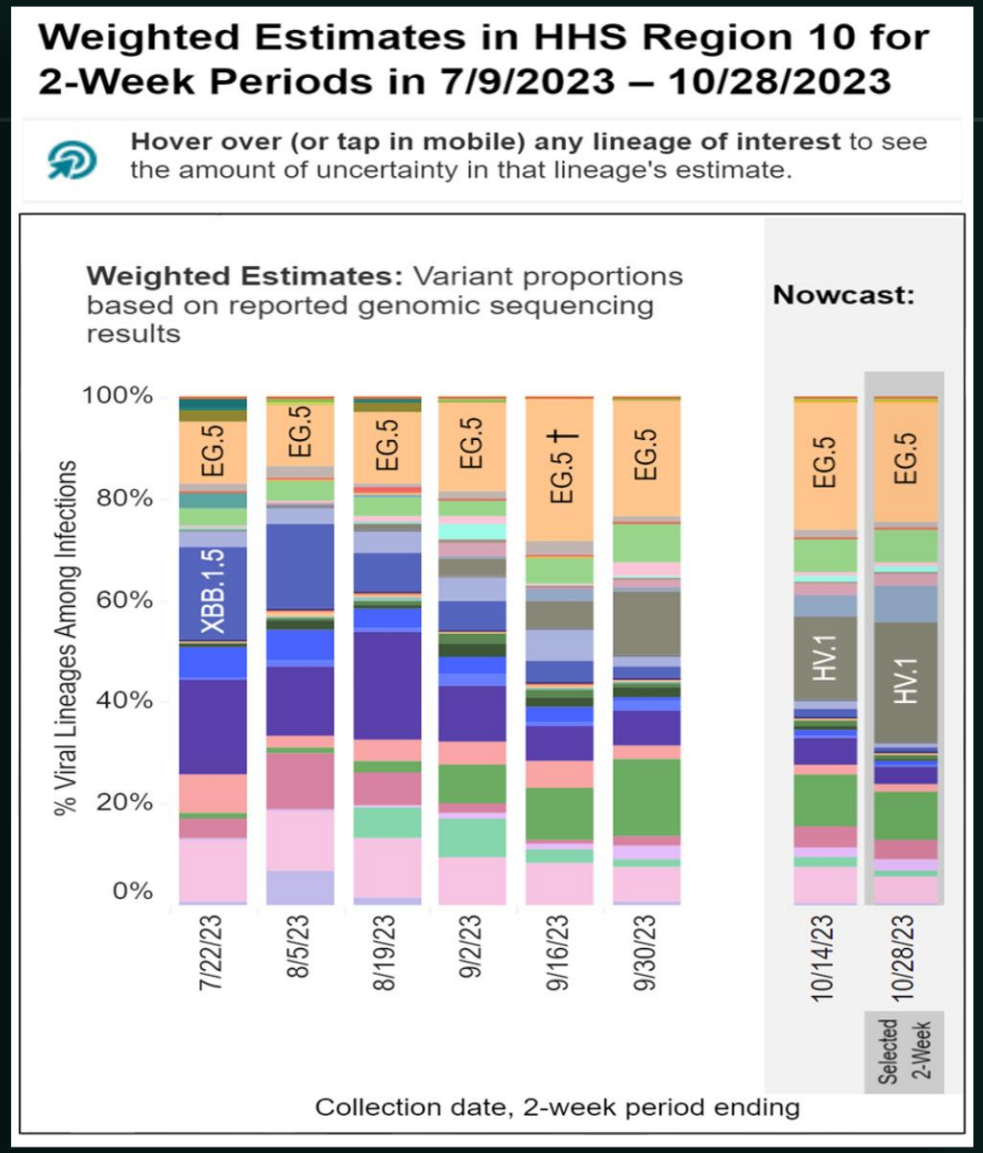
WA Respiratory Illness Dashboard



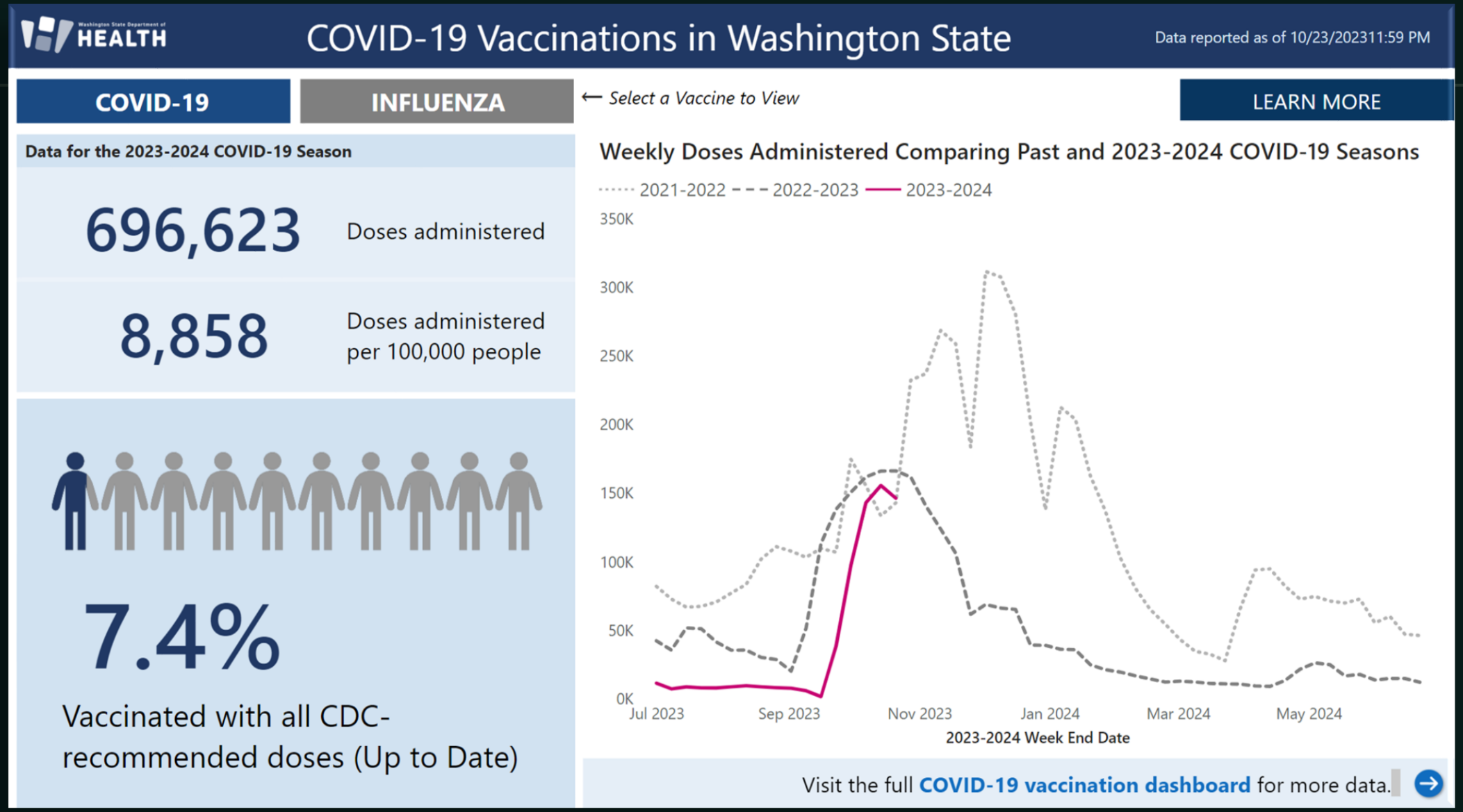
WA Respiratory Illness Dashboard



HHS Region 10 COVID-19 Variants



WA COVID-19 Vaccinations



How to Protect Yourself and Others

Prevent Flu and other respiratory viruses

Take these actions to help keep you and your family safe from respiratory illnesses, including flu, COVID-19, and RSV.

Get vaccinated

Wash your hands

Cover your cough

- Get vaccinated if possible. Vaccines for Flu and COVID-19 are your best defense against respiratory illnesses.
- Avoid close contact with people who are sick.
- Stay home and stay safe if you are sick.
- Cover coughs and sneezes with a tissue, or elbow.
- Consider wearing a mask in indoor or crowded places
- Wash your hands regularly. Use soap and water. If there is no soap available, use an alcohol-based hand sanitizer.
- Clean and disinfect surfaces that may be contaminated with viruses.

Key Take Aways

- Advancing the public's health will take all of us and all of our efforts – leadership, people, policies, tools, communications, partnerships, and investments.
- A successful road ahead means removing silos and advancing multisectoral partnerships to solve public health challenges.
- While there are multiple health challenges we are facing, protecting ourselves and those around us during respiratory disease season by taking appropriate preventive measures remains critically important.

IN IT TOGETHER!

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WASHINGTON STATE BOARD OF HEALTH

2024 Meeting Schedule

Proposed to the Board November 8, 2023

	Meeting Date	Location
Board	**Wednesday** **January 10, 2024**	**Hybrid:** • **Physical Location; Washington State Department of Health, 111 Israel Road S.E., Tumwater, WA 98501, Building: Town Center 2, Rooms 166 & 167** • **Virtual Meeting via ZOOM Webinar; hyperlink provided on website and agenda. Public Attendees can pre-register and access the meeting online.**
Board	**Wednesday** **March 13, 2024**	**Hybrid:** • **Physical Location; To Be Determined (TBD), possibly La Conner, WA, Swinomish Indian Tribal Community** • **Virtual Meeting via ZOOM Webinar; hyperlink provided on website and agenda. Public Attendees can pre-register and access the meeting online.**
Board	**Wednesday** **April 10, 2024**	**Hold date – meet only if necessary**
Board	**Wednesday** **June 12, 2024**	**Hybrid:** • **Physical Location; To Be Determined (TBD)** • **Virtual Meeting via ZOOM Webinar; hyperlink provided on website and agenda. Public Attendees can pre-register and access the meeting online.** *(note: WA State Association of Local Public Health Officials (WSALPHO) Annual meeting is in Spokane, June 4-6, 2024)*
Board	**Wednesday** **July 10, 2024**	**Hold date – meet only if necessary**

Board	**Wednesday August 14, 2024**	**Hybrid:** • **Physical Location; Capitol Campus, Cherberg Building, Conference Room ABC, 304 15 Ave SW, Olympia, WA 98501** • **Virtual Meeting via ZOOM Webinar; hyperlink provided on website and agenda. Public Attendees can pre-register and access the meeting online.**
Board	**Monday October 7, 2024**	**Hybrid:** • **Physical Location; To Be Determined (TBD) or Yakima** • **Virtual Meeting via ZOOM Webinar; hyperlink provided on website and agenda. Public Attendees can pre-register and access the meeting online.** *(note: WA State Public Health Association (WSPHA) Annual conference is in Yakima, October 9-11, 2024. The WSALPHO Environmental Public Health Directors meeting is Oct 1-4 in Leavenworth)*
Board	**Wednesday November 13, 2024**	**Hybrid:** • **Physical Location; Tumwater, WA** • **Virtual Meeting via ZOOM Webinar; hyperlink provided on website and agenda. Public Attendees can pre-register and access the meeting online.**

Start time is 9:30 a.m. unless otherwise specified. Time and locations subject to change as needed. See the Board of Health Web site and the Health Disparities Council Web site for the most current information.

Last updated 11/08/2023

Statement of the Board on Possible Legislative Issues
2023-2024 Biennium

It is the policy (Policy 01-001) of the Washington State Board of Health (Board) to comment on legislative proposals that affect the Board's:

- Statutory authority and rules,
- 2022 State Health Report Recommendations, and
- 2017-2022 strategic plan activities

This statement represents the Sense of the Board and is used to guide staff and members in their communications on legislative and budget proposals. The statement is not intended to be an exhaustive list of anticipated legislative proposals, but it is focused on priority issues.

Foundational Public Health Services

The Board believes that *Public Health is Essential* and supports the recommendations developed by the Foundational Public Health Services (FPHS) Policy Workgroup to modernize the public health system, and provide state funding to the governmental public health system for the delivery of FPHS, so they are available in every community. The governmental public health system must be able to monitor health, focus on prevention, assure health for all, and be capable of all-hazards response. Providing ongoing sustained resources to the governmental health system is critical in order to innovate, modernize, and address inequities. This includes increasing the Board's capacity to meet its statutory obligations under chapter 43.20 RCW and other state laws.

The Board believes it is critical for the state to provide adequate, dedicated, stable funding for full implementation of FPHS statewide that keeps pace with inflation and demand for services. The Board supports the Governor's proposed 2023-25 budget, which builds upon the current investment in FPHS by $100 million. The Board **opposes** reductions to funding for the governmental public health system, including changes in fee authority or reductions to funding sources such as the Model Toxics Control Act.

Local Health Officer Authority

Washington's COVID-19 pandemic response has shown the critical importance of assuring our public health partners have evidence-based knowledge and resources to quickly identify and respond to disease outbreaks and other health threats in our communities. Much of the ability to respond to outbreaks and other public health threats falls under the local health officer's authority. The local health officer is appointed by a county's local board of health. Local boards of health, local health administrators, and officers have a statutory duty to carry out the state's public health laws and rules. Public health response should not be partisan or politicized. The Board **opposes** legislation that diminishes local health officer duties or authorities.

Advancing Equity in State Government

The Board recognizes that racism is a public health crisis. Racism and other forms of discrimination have been and continue to be institutionalized and perpetuated through policies and practices that prevent meaningful community engagement and limit opportunity and access to important public services. The Board would support legislation that is anti-racist and prioritizes and operationalizes equity across state government.

As part of its five-year strategic plan, the Board commits to supporting the Governor's Interagency Council on Health Disparities (Council) and to incorporating the Council's recommendations in the Board's State Health Report.

Through a proviso in the 2019-2021 operating budget, the Legislature directed the Council to convene an Office of Equity Task Force to develop an operations plan for a future Washington State Office of Equity. In 2020, the Board endorsed the Task Force's recommendations as well as legislation that created the Washington State Office of Equity. The Board supports legislative proposals that align with the Task Force's recommendations, including proposals that assure ongoing and adequate funding for the Office of Equity.

Data Disaggregation

Disaggregated data that reveal inequities across and within groups are instrumental for public health efforts related to preventing and controlling diseases and conditions. However, the collection of demographic data in Washington is currently decentralized and inconsistent, often working within the parameters of outdated federal data standards. Collecting data in greater detail is an essential part of identifying and eliminating health inequities, undoing institutional racism, and advancing equity within public health and the broader governmental system.

The collection and analysis of disaggregated data helps the governmental public health system identify and address health inequities and prioritize resources for communities. COVID-19 shed light on the systemic and structural inequities in the healthcare and public health systems. Collection and use of disaggregated data was, and continues to be, vital to identifying impacted populations. Together disaggregated data and qualitative data—stories from disproportionately impacted communities—support effective public health responses, including partnering with communities on outreach, prevention, and access to care. Without these data, the public health system cannot effectively and equitably respond to a public health crisis.

The Board would support legislative action to ensure the collection of disaggregated race, ethnicity, and language data, beyond Census-level categories, as well as data to identify and eliminate health inequities (e.g., housing status, country of origin, tribal affiliation, and Indigenous background, Veteran status, sexual orientation, gender, occupation, income, and disability status). Variables such as these can provide insight into the social and political determinants of health and equity. The Board would also

support legislation to improve the interoperability of public health and health care data systems to ensure functionality to facilitate the collection and meaningful use of these data.

Health and Wellness of People who are pregnant or postpartum and their Children

The Board supports enhancing systems and support for people who are pregnant or postpartum, infants, and children, and the monitoring of mortality due to pregnancy-related conditions. The Board supports the recommendations in the Council's Literature Review on Inequities in Reproductive Health Access, as required by SSB 6219 (2018).

Additionally, the Board supports the Council's position (adopted September 2022) to use a Reproductive Justice framework when considering and addressing inequities in health and access and recognizes that a legal right to abortion and other reproductive health care services is critical. A Reproductive Justice framework expands beyond personal choice, focusing on access to services and emphasizing the human right to maintain personal bodily autonomy, have children, not have children, and raise the children we have in safe and sustainable communities. The Board shares the Council's commitment to understanding how racialized power systems limit access to health and opportunity and commits to centering racial justice in our work and consideration of proposed legislation.

The Board also supports the recommendations in the Department of Health's Healthy Pregnancy Advisory Committee Report on Strategies for Improving Maternal and Infant Health Outcomes.

Healthy Environment for All (HEAL) Act

The Board agrees with the Environmental Justice Task Force's statement that "Washington cannot achieve equity without [environmental justice]" and that "t]he pathway to reaching an equitable Washington is only possible through ongoing anti-racism, environmental conservation, public health, and community engagement work." In 2021, the Legislature passed the Healthy Environment for All (HEAL) Act. The HEAL Act created the Environmental Justice Council and created obligations for seven state agencies to integrate environmental justice into agency decision-making, policy, and practice, as well as specific provisions to update and maintain the Washington Tracking Network's Environmental Health Disparities Map. Other agencies may opt-in to the obligations. Three agencies, including the Board, have opted to join in a "Listen and Learn" capacity and are participating in meetings of the Environmental Justice Council and implementing HEAL Act requirements as resources allow. The Board supports ongoing and increased funding to support implementation of the HEAL Act and additional environmental justice efforts across state agencies.

Health Impact Reviews

Under RCW 43.20.285 the Board conducts Health Impact Reviews (HIRs) at the request of the Governor or a legislator. HIRs are objective, non-partisan, evidence-based analyses of proposed legislative or budgetary changes to determine the potential impacts on health and equity. The Board received funding for an additional 1.0 FTE in

the 2021-2022 Foundational Public Health Services budget, which brings the total staffing for this work to 2.6 FTE. The additional capacity will enable the Board to conduct more HIRs, thereby improving the state's ability to use evidence to inform policy and to promote health and equity. While the Board supports other state and legislative efforts to assess equity impacts of legislative proposals, the Board recognizes the unique value that HIRs add to legislative decision-making. The rigorous HIR research approach, which utilizes both quantitative and qualitative research, as well as lived experience, provides legislators with a nuanced understanding of how proposed policy may impact the status quo and health and equity in the state. The Board supports the retention of HIRs and will continue to offer assistance and support to ensure any new proposed tools align with and do not duplicate the work of HIRs.

The Board supports legislative action to ensure long-term, sustainable solutions to obtain peer-reviewed literature access for HIR work. The Board believes that there is also a need for all state entities (agencies, boards, commissions, councils, etc.) to have access to research and published literature to inform evidence-based policy and program development.

School Environmental Health and Safety

The Board believes that all children should be able to attend schools that are built, maintained, and operated to assure a safe and healthy environment. The Board supports removal of the budget proviso that suspends the Board's rules related to environmental health and safety standards for primary and secondary schools (Chapter 246-366A WAC). Until the Board's suspended school rules can be implemented, the Board supports the Department of Health's November 2016 recommendations in response to the Governor's directive on lead as they relate to school environmental health and safety.

The Board has long recognized that ongoing, regular inspections and technical assistance provided by local health jurisdictions are critical to ensuring schools are designed, built, and maintained to protect students' health. Only eighteen of Washington's thirty-five local health jurisdictions have school environmental health and safety programs. Providing basic health and safety protections for all school children across the state, local health jurisdictions must have sufficient resources and capacity to conduct school environmental health and safety inspections.

Indoor air quality is a key component of a healthy school environment. Higher ventilation rates can improve absenteeism and student performance, as well as reduce transmission and spread of respiratory illness, including SARS-CoV-2 (the virus that causes COVID-19). Indoor air quality can also be adversely impact by increased wildfire and extreme weather events. Regular inspection, maintenance, and regular repairs of heating, ventilation, and air conditioning (HVAC) systems, as well as adequate ventilation to dilute contaminants, can improve indoor air quality and school safety.

The Board would support legislation to adequately fund school environmental health and safety programs as well as legislation to assess, improve, and update ventilation systems and other strategies to improve indoor air quality in school facilities.

On-Site Sewage Systems

The Board recognizes that on-site sewage systems are an important and effective means of treating and dispersing effluent if the systems are properly permitted, sited, operated, and maintained. The Board supports legislation that preserves the authority of local health officers and boards of health to develop and implement on-site sewage system regulations and plans which protect public health and meet community needs. The Board supports efforts to assure local on-site site sewage management programs have adequate funding.

Food Safety

The Board recognizes that food service is evolving. The COVID-19 pandemic has, and continues to have, major impacts on food service and has prompted creative ideas to improve food access and equitable entry into the restaurant industry. This session, the Board anticipates legislation on topics including microenterprise or commercial kitchens, community pantries and/or refrigerators, foods offered in bed and breakfast settings, and regulations of non-permanent structures. The Board's support of food service-related legislation depends on whether the proposal includes critical public health safeguards that uphold essential food safety standards (including but not limited to permitting, inspections, plan review, time to temperature controls, and other public health measures). The Board would oppose legislation that would exempt currently unregulated practices such as microenterprise home kitchens from fundamental environmental health and safety requirements for food service facilities.

Aquatic and Water Recreation Facilities

The Board recognizes that drowning is the leading cause of death for children ages 1-4 and a significant source of morbidity in children under age 19. State and local regulations on aquatic facilities, water recreation facilities, and designated swim areas are necessary and important to protect the health, safety, and welfare of those who use them. The Board supports legislation that aims to prevent injury, illness, and death at facilities such as swimming pools, hot tubs, splash pads, water parks, natural designated swim areas, and more.

Shellfish Sanitation

The Board recognizes that sanitary controls are essential for the safe production, harvest, processing, and marketing of shellfish. Historically, the Board's rulemaking authority and the Department of Health's regulatory authority have focused on the commercial and recreational harvest of bivalve molluscan shellfish such as clams, oysters, mussels, and geoduck. The Board and its partners have observed shifting needs related to climate change, marine biotoxins, and other shellfish, such as crab. In 2021 and 2022, SHB 1508 nearly passed. This bill would amend chapter 69.30 RCW,

Sanitary Control of Shellfish, authorizing Board rulemaking to establish sanitary controls for commercial crab harvesting and processing as it pertains to marine biotoxins such as domoic acid and paralytic shellfish poisoning. This bill will likely be reintroduced in the 2023 session and the Board supports its passage.

Drinking Water

The Board recognizes that safe, reliable drinking water systems and drinking water supplies are essential for public health protection and community well-being. The Board's Group A rules cover the state's largest public water systems, and its Group B rules apply to public systems that generally serve fewer than fifteen connections. The Board supports budget and policy proposals that strengthen implementation of these rules, drinking water infrastructure, and source water protection. In the 2023 Legislative Session, the Board anticipates and supports policy and funding proposals to:

- Develop programs to support public water system compliance and assist counties and others with failing water systems that fall into receivership and threaten community access to safe drinking water;
- Find alternate drinking water sources and solutions for communities on wells and small water systems with contaminated drinking water sources; and
- Secure adequate state funding to match federal funding in the Bipartisan Infrastructure Law to support implementation of Board rules and Safe Drinking Water Act compliance.

Governor's Directive on Lead

Governor Inslee issued Directive 16-06 on May 2, 2016, to address lead remediation in the built environment. Environmental pathways for lead exposure include drinking water, homes, schools, and outdoor areas.

The Board continues to support the Department of Health's November 2016 report recommendations to the Governor, including continuing the initial investment made to test drinking water at schools, provide remediation funds to replace fixtures, improve remediation assistance for low-income and rental properties, and targeted blood testing for children at greatest risk of exposure to lead and subsequent case management. The Board was pleased with the passage of E2SHB 1139 during the 2021 legislative session, which requires lead testing and remediation in school drinking water. The Board also supports:

- Updating the *Health and Safety Guide for K–12 Schools in Washington State.*
- Gathering data to evaluate and update chapter 246-366A WAC, Environmental Health and Safety Standards for Primary and Secondary Schools, including updates to align with E2SHB 1139 and recent revisions made to the federal lead and copper rules.
- Including environmental health and safety in decisions using the funding formula for school construction and modernization.

- Encouraging healthcare providers to follow DOH blood lead screening recommendations.

Preventing Smoking and Vaping

In August 2016, the Board adopted Resolution 2016-01 to increase the age of purchase for tobacco and vapor products from age 18 to 21 years. During the 2019 legislative session, EHB 1074 passed, raising the legal age for purchasing tobacco and vapor products from age 18 to 21 years. While EHB 1074 was an essential public health intervention to prevent youth access, Washington still needs to reform its commercial tobacco laws, policies, and enforcement practices that negatively affect individuals, namely youth, and instead, shift the responsibility to commercial tobacco businesses or industry actors. The Board supports legislation that improves the effectiveness of Purchase, Use, and Possession (PUP) laws in Washington and reduces inequitable enforcement.

In addition, the Board supports enhancing current strategies to prevent marketing, sales, and use of commercial tobacco products (cigarettes, e-cigarettes, cigars, hookah, heated tobacco, smokeless tobacco, etc.) and cannabis to youth, including a ban on all flavored vapor and tobacco products and adding additional authority for the Secretary of Health to issue product bans and recalls of smoking and vapor products. The Board would support legislation that improves regulation of Washington's vapor product industry, including requiring vapor ingredient disclosure and routine lab testing for vapor products, requiring signage regarding health risks of these products, removing the preemption of vapor product retail licensing, allowing for product bans and recalls, and instituting nicotine limits in products sold in Washington.

In response to an outbreak of e-cigarette and vapor product-associated lung injury, the Board adopted rules to ban the use of vitamin E acetate in vapor products. Compounds, such as Delta-8 THC, and other additives, continue to emerge on the market with little known about their impacts on health. The Board supports efforts to understand and address emerging compounds that result in negative health effects.

Oral Health

The Board supports legislation that will advance its 2015 oral health recommendations, including maintaining and building upon effective programs like Access to Baby and Child Dentistry and University of Washington's Regional Initiatives in Dental Education (RIDE). The Board would also support the development of a state oral health officer at the Department of Health.

Immunizations

The Board recognizes the research and data that demonstrate that immunizations reduce the incidence of vaccine-preventable disease in our community and protect those who are immunocompromised and those unable to be vaccinated. The Board supports legislation that helps reduce the number of children who are out of compliance with state immunization documentation requirements, assists schools and childcares in monitoring the immunization status of children, and increases immunization rates

across all age groups. The Board supports additional funding to increase school nurse capacity and improve access to and use of the Washington State Immunization Information System. The Board also supports the Department of Health's efforts to promote vaccination against COVID-19 by making these vaccines accessible.

Obesity Prevention and Access to Healthy Food

The rate of increase in obesity among Washington residents has slowed compared to other states. The Board supports efforts to create equitable access to safe, well-lit public spaces that promote movement, including parks and playgrounds. The Board supports efforts to increase access to healthy foods including fresh fruits and vegetables, maintaining and expanding access to programs such as WIC, WIC/SNAP at farmers markets, USDA's school lunch program, and efforts to increase access to culturally relevant foods, reduce food insecurity, and increase opportunities for physical activity.

The Board also supports maintaining funding for the Fruit and Vegetable Incentive Program, which provides incentives to people with low incomes experiencing food insecurity to support healthy food options.

Opioids

The Board supports the goals, strategies, and actions outlined in the updated 2021-2022 Opioid and Overdose Response Plan and the forthcoming updated plan, to effectively combat the opioid epidemic. Its goals are to:

- Prevent opioid and other drug misuse.
- Identify and treat opioid misuse and stimulant use disorder.
- Ensure and improve the health and wellness of people who use opioids and other drugs
- Use data and information to detect opioid misuse, monitor health effects for persons who use drugs, analyze population health, and evaluate interventions.
- Support individuals in recovery.

Increase Access to Health Insurance Coverage

A number of efforts have increased access to affordable health insurance for people in Washington, including federal initiatives like the Affordable Care Act, Medicaid expansion, and American Rescue Plan Act, and state initiatives like Cascade Care. Access to health insurance increases access to and use of healthcare services and improves health outcomes. In 2021, the legislature passed supplemental legislation to further increase the affordability and availability of Cascade Care. This included a new premium and cost-sharing subsidy program administered by the state. Coupled with expanded federal subsidies, some people will be able to enroll in a plan with premiums under $10/month for the 2023 plan year. The legislature also took action to explore options for extending health insurance access regardless of immigration status. With the end of the federal COVID-19 Public Health Emergency, approximately 13% of Medicaid enrollees (300,000 people) in Washington may lose healthcare coverage, making

access to affordable health insurance critical. The Board supports legislation that continues to build and sustain access to affordable health coverage across the state for all Washingtonians and legislation that alleviates cost concerns of those who are underinsured.

Mental Health Services

The Board recognizes the disparate access to consistent and culturally appropriate mental health services in the state, particularly for communities that have been disproportionately impacted by the COVID-19 pandemic. In recent years, there have been efforts to increase access to video and audio platforms that provide mental health services. The Board would support continued efforts to increase access to these services across our communities.

The Board also recognizes the workforce challenges that plague the mental healthcare system. New provider types such as certified peer counselors have expanded capacity for support services, but gaps still exist. Additionally, studies continually show that there are public health benefits to providers reflecting the racial/ethnic diversity of their patients, by increasing trust, participation in care, and an increase in patient comfort. The Board supports efforts to increase and diversify the mental health workforce in Washington. The COVID-19 pandemic has had a profound impact on youth and families and exacerbated the need for access to age-appropriate services, especially in schools. During the 2022 session, the legislature approved an increase in the prototypical funding formula (2SHB 1664) to support more school counselors, social workers, and psychologists as part of basic education in Washington. The Board supports efforts to make mental health services readily available to youth in Washington and increase social and emotional supports in schools.

Washington State Board of Health
Policy & Procedure

Policy Number:	**2001-001**
Subject:	**Monitoring and Communicating With the Legislature About Legislation Relevant to the State Board of Health**
Approved Date:	**January 10, 2001 (Revised June 13, 2012)**

Policy Statement

The Washington State Board of Health monitors and communicates with the Legislature on proposed legislation that:

- Has a direct impact on the Board's statutory powers and duties;
- Runs counter to the Board's intent or direction as stated in existing rule;
- Is directly related to priorities established by the Board each biennium, supported by a Board-approved strategic plan, work plan, interim document, or final report;
- Is directly related to a policy issue addressed in the Board's "Statement on Likely Legislative Issues."
- May adversely impact the public health system.

Procedure

Prior to each legislative session, Board staff, under the direction of the Executive Director, will identify policy issues that are likely to come before the Legislature that have any bearing on the Board's broad statutory authority, its rule making activities, or its priorities. The Executive Director will present a list of these issues to the Board for discussion at a meeting prior to legislative session. The Board may choose to adopt a "Statement on Likely Legislative Issues" that reflects the Board's position on those issues.

During legislative session, Board staff will routinely review legislative bill introductions, committee agendas, and monitor legislative meetings. The Executive Director will provide regular legislative updates to Board members, which may include: upcoming hearings or work sessions, staff activities, bill summaries and recommendations, and budget information.

Action on Bills of Interest

Board staff, in consultation with the Executive Director, shall prepare a summary of concerns, draft messages, and suggested technical solutions for the Chair's approval that Board members or staff may use to communicate the Board's position to a bill's sponsor, appropriate committee chairs, other legislators, and legislative staff.

The Executive Director and the Board Chair or his or her designee must review and approve all correspondence to legislators and legislative staff that conveys the Board's position on legislation or other issues before the Legislature. The correspondence should routinely be copied and sent to the Office of the Secretary – Policy, Legislative, and Constituent Relations.

Responsibility for Communicating with the Legislature
The Board Chair may recommend a specific amendment or other action on proposed legislation to legislators or legislative staff on behalf of the Board, if the Chair believes the position is generally consistent with the wishes of the majority of the Board. The Executive Director or Board staff may transmit or deliver these communications for the Chair.

A Board member may communicate his or her views on Board letterhead and may ask Board staff to help communicate his or her views only if the communication is consistent with Board position and this policy.

This policy is not intended to prevent a Board member from communicating with the Legislature on proposed legislation or other matters of personal interest to the member. However, in these cases, the Board member must clarify that his or her communications do not necessarily reflect the views of the Board and that he or she is acting on his or her own personal behalf.

Agency Request Legislation
Board staff must prepare agency request legislation according to Office of Financial Management (OFM) guidelines and schedules. The Executive Director shall work closely with other state agencies to assure the bill does not conflict with other agency authorities. Consistent with OFM guidelines, all agency request legislation must receive Governor's approval before the Executive Director may seek sponsors or promote the bill to legislators.

Recommendations to the Governor
If the Legislature passes a bill that the Board has testified on or sought amendments to, Board staff, in consultation with the Executive Director and Board Chair, may develop a recommendation to the Governor to sign, partially veto, or veto the legislation. The memo must briefly describe the bill, the Board's position, and recommend Governor's action (sign, partial veto, or veto). Prior to submitting a memo to the Governor's office, staff must complete an enrolled bill analysis for the Governor's executive policy analyst assigned to the legislation.

PDC Reporting
Any Board or staff member who has in-person contact with legislators or legislative staff, including in meetings and at hearings, regarding legislation on behalf of the Board must report the activity to the Executive Director. This report must include the date of the communication, length of time spent with the individual(s), and the topic of discussion, including bill numbers. The Executive Director may need to include these reports in the Board's consolidated quarterly lobbying report as required by the Public Disclosure Commission under RCW 42.17A.635.

WASHINGTON STATE BOARD OF HEALTH

Date: November 8, 2023

To: Washington State Board of Health Members

From: Patty Hayes, Chair

Subject: Request for Delegated Rulemaking Authority – E2SHB 1181, Climate Resilience Element in Water System Plans, Group A Public Water Supplies, Chapter 246-290 WAC

Background and Summary:

The Department of Health (Department) is requesting delegation of rulemaking authority from the State Board of Health (Board) to update and align public water system planning requirements in chapter 246-290 WAC, Group A Public Water Supplies, with new state law. RCW 43.20.050(2)(a)(iv) authorizes the Board to adopt rules concerning water system planning for Group A public water systems. WAC 246-290-100 lists the core regulatory requirements for Group A water system plans.

In the 2023 session, the legislature passed Engrossed Second Substitute House Bill (E2SHB) 1181 to improve the state's climate response planning framework. The comprehensive bill includes a section requiring Group A public water systems with 1,000 or more connections to include a climate resilience element in their water system plans beginning with plans initiated after June 30, 2025. The bill includes additional details of the required climate resilience element and is codified in state law as RCW 43.20.310.

The Board may delegate any of its rulemaking authority to the Department under RCW 43.20.050(4). Board Policy number 2000-001 further outlines conditions and circumstances for "Considering Delegation of Rules to Department of Health." If delegated, this rulemaking authority would allow the Department to revise WAC 246-290-100 to incorporate the new law on climate resilience elements in Group A water system plans.

Joining us today from the Department's Office of Drinking Water are Mike Means, Capacity Development and Policy Manager, and Brad Burnham, Policy and Planning Section Manager. They will discuss the new state law and the Department's request for delegated rulemaking authority.

Recommended Board Actions:

The Board may wish to consider, amend if necessary, and adopt the following motion:

(continued on the next page)

The Board delegates to the Washington Department of Health rulemaking authority to amend WAC 246-290-100 to incorporate the requirements of RCW 43.20.310, requiring Group A public water systems to include climate resilience elements in their water system plans.

Or

The Board does not delegate to the Washington Department of Health rulemaking authority to amend WAC 246-290-100 to incorporate the requirements of RCW 43.20.310, requiring Group A public water systems to include climate resilience elements in their water system plans.

Staff
Stuart Glasoe

STATE OF WASHINGTON
DEPARTMENT OF HEALTH
DIVISION OF ENVIRONMENTAL PUBLIC HEALTH
PO Box 47820 ○ Olympia, Washington 98504-7820
(360) 236-3000 ○ TTY Relay Service: (800) 833-6388

November 8, 2023

TO: Michelle Davis, Executive Director
Washington State Board of Health

FROM: Lauren Jenks, Assistant Secretary
Division of Environmental Public Health

SUBJECT: State Board of Health Rule Making Authority Delegation Request-
Chapter 246-290 WAC, Group A Public Water Supplies, Climate Resilience in Water System Planning.

The Department of Health (department) is requesting delegation of rule-making authority from the State Board of Health (board) to adopt amendments into chapter 246-290 WAC, Group A public water supplies in accordance with Engrossed Second Substitute House Bill (E2SHB) 1181, codified as Chapter 228, Laws of 2023.

E2SHB 1181 added a new section to chapter 43.20 RCW. The new law requires Group A community public water systems with 1,000 or more connections to include a climate resilience element in their water system plans. Additionally, it requires the department to update the Water System Planning Guidebook -DOH Pub 331-068 (Guidebook) and provide technical assistance to these water systems in developing their climate resilience element. The new law also requires the University of Washington climate impacts group to assist the department in developing tools and resources for technical assistance to water systems, subject to the availability of funding.

Changes to the chapter under this delegation request, if approved, will be limited to adding the climate resilience element to WAC 246-290-100, Water system plan, and reference the new section of statute, RCW 43.20.310. Minor editorial and organizational changes, which will not materially change the statutory language, may be considered and included, if needed for clarity.

Details of the climate resilience element will be added to the Guidebook update as required by the new law. The Guidebook updates will also include tools and resources developed in partnership with the University of Washington. The department anticipates completing this ahead of the compliance date of June 30, 2025.

Conformance with the State Board of Health Delegation Criteria:

The board's policy (Policy Number 2000-001) for Considering Delegation of Rule to the Department of Health provides the following elements for consideration*:*

The extent to which the proposed rule revision is expected to include editorial and/or grammatical changes that do not change the substance of the rule:

- Editorial changes and technical corrections may be necessary to improve clarity and align the statutory language with the structure and organization of the chapter. None of these changes will affect the substance of the statutory language being incorporated into the chapter.

The extent to which the proposed rule may make significant changes to a policy or regulatory program.

- Changes to the chapter will be necessarily limited to the statutory language if using the Expedited Rulemaking process.
- The different elements of water system plans are detailed in the Guidebook. The Guidebook is the standard operating procedure and does not change the regulatory program or process.

The extent to which the rule revision process would benefit from the board's role as a convener of interested parties.

- The department does not anticipate any controversy or opposition to the rule change as this is already a statutory requirement. It is being adopted into rule to maintain all the required water system planning elements in WAC 246-290-100. This is where water systems expect to find the required elements for their water system plans.
- The department will keep water systems informed throughout the process using existing GovDelivery accounts of interested and regulated parties, as well as during regularly scheduled meetings like the Drinking Water Advisory Group. After rule adoption, the department will continue working with water systems as guidance is being developed to ensure a smooth implementation by June 30, 2025.

For additional information, please contact Holly Myers, Director of the Office of Drinking Water, holly.myers@doh.wa.gov

Washington State Department of HEALTH

REQUEST FOR DELEGATED RULEMAKING FOR HOUSE BILL 1181

State Board of Health Meeting
November 2023
Office of Drinking Water

Presenters

Mike Means

Capacity Development and Policy Manager

Office of Drinking Water

Division of Environmental Public Health

mike.means@doh.wa.gov

Brad Burnham

Policy and Planning Section Manager

Office of Drinking Water

Division of Environmental Public Health

brad.burnham@doh.wa.gov

Summary of House Bill 1181 Related to Drinking Water

- **Requirements for Department of Health:**
  - Require a climate resilience element in water system plans initiated after June 30, 2025
  - Update DOH's Water System Planning Guidebook
  - Provide technical assistance
  - Provide financial assistance to eligible projects

Summary of House Bill 1181 Related to Drinking Water (cont.)

- **Requirements for University of Washington Climate Impacts Group:**
  - Assist DOH in developing tools and resources to help public water systems comply with the new requirements

- **Requirements for Group A community public water systems serving 1,000 or more connections:**
  - Assess climate risk
  - Assess critical assets
  - Complete cost benefit analysis

Potential Changes to Rule

- Add climate resilience element to WAC 246-290-100, Water system plan
- Reference RCW 43.20.310, Water system plans—Climate resilience element
- Non-substantive editorial changes to make the text easier to understand

SBOH Delegation Consideration

- Request aligns with the Board policy titled *Considering Delegation of Rules to Department of Health*
  - Minimal rulemaking changes-no material change to statutory language
  - No conflict with the substance of the state's current rule
  - Have broad public and professional consensus
  - Aligns with our current program practices
  - Opportunities for public review and comment on the proposed rule, including at a public hearing

DOH Preparation and Capacity for Rulemaking

- Rulemaking for chapter 246-290 WAC, Group A public water supplies:
  - Working with DOH Environmental Public Health rules staff and Board staff to prepare for rulemaking
  - Updated Drinking Water Advisory Group

- Office of Drinking Water has an internal workgroup to assist with:
  - Rulemaking activities, as needed
  - Webpages with resources
  - Guidance on compliance with the rule

Questions?

To request this document in another format, call 1-800-525-0127. Deaf or hard of hearing customers, please call 711 (Washington Relay) or email civil.rights@doh.wa.gov.

RCW 43.20.310 Water system plans—Climate resilience element.

(1)(a) Beginning with water system plans initiated after June 30, 2025, the department shall ensure water system plans for group A community public water systems serving 1,000 or more connections include a climate resilience element at the time of approval.

(b) The department must update its water system planning guidebook to assist water systems in implementing the climate resilience element, including guidance on any available technical and financial resources.

(c) The department shall provide technical assistance to public water systems based on their system size, location, and water source, by providing references to existing state or federal risk management, climate resiliency, or emergency management and response tools that may be used to satisfy the climate resilience element.

(d) Subject to the availability of amounts appropriated for this specific purpose, the University of Washington climate impacts group shall assist the department in the development of tools for the technical assistance to be provided in (c) of this subsection.

(2) To fulfill the requirements of the climate resilience element, water systems must:

(a) Determine which extreme weather events pose significant challenges to their system and build scenarios to identify potential impacts;

(b) Assess critical assets and the actions necessary to protect the system from the consequences of extreme weather events on system operations; and

(c) Generate reports describing the costs and benefits of the system's risk reduction strategies and capital project needs.

(3) Climate readiness projects, including planning to meet the requirements of this section and actions to protect a water system from extreme weather events, including infrastructure and design projects, are eligible for financial assistance under RCW 70A.125.180. The department must develop grant and loan eligibility criteria and consider applications from water systems that identify climate readiness projects. [2023 c 228 § 17.]

Washington State Board of Health
Policy & Procedure

Policy Number:	**2000-001**
Subject:	**Considering Delegation of Rules to Department of Health**
Approved Date:	**November 8, 2000 (Revised June 13, 2012)**

Policy Statement

In some instances, the Washington State Board of Health may determine it is appropriate to delegate its authority for rulemaking to the Department of Health (RCW 43.20.050). The Board and the Department recognize the need to balance both broad constituent participation and administrative efficiency when making decisions about any rule delegation. For this reason, the Board and the Department have agreed upon a set of criteria to assist Board members in their decisions related to rule delegation.

The Board's decision to delegate a specific rule will be made on a case-by-case basis. The Board will determine the breadth of the delegation, which may range from specific aspects of a single rule section to a broader body of regulatory authority, such as an entire chapter of rules. Each Board delegation is for a single rulemaking process unless specified in an approved motion to be a continuing delegation until rescinded. Once a rule has been delegated, the Department will keep the Board informed about the rule making process through periodic progress reports. The Board may rescind its delegation at any time.

When considering delegation of authority to modify or adopt a rule, the Board may consider the following criteria:

- The extent to which the proposed rule revision is expected to include editorial and/or grammatical changes that do not change the substance of the rule;
- The extent to which the proposed rule seeks to adopt federal requirements in which the state has little or no discretion;
- The extent to which the substance and direction of the proposed rule is expected to have broad public and professional consensus;
- The extent to which the proposed rule may make significant changes to a policy or regulatory program; and
- The extent to which the rule revision process would benefit from the Board's role as a convener of interested parties.

Procedure

When the Board receives a request from the Department to delegate authority for rulemaking, the Executive Director will review the request compared with the above policy criteria. The Executive Director will prepare or direct staff to prepare a recommendation for the Board to consider at its next most convenient meeting. The Executive Director will consult with the Board Chair and members of any appropriate policy committee to formulate the recommendation. The Board may take action to delegate authority to the Department as requested or may otherwise specify rulemaking authority it delegates.

If the Board is not scheduled to meet again within two months and the Department justifies a pressing need to begin rulemaking, the Board's Chair may delegate the Board's rulemaking authority to the Department without a vote of the Board. The Board's Chair will consider recent actions of the Board that inform the collective philosophy of the Board, along with recommendations from the Executive Director and an appropriate policy committee of the Board before deciding to delegate authority to the Department without a vote of the Board. The Chair will limit any such delegation to a single rulemaking process. The Chair or Executive Director shall notify Board members of the delegation.

Board Authority

RCW 43.20.050

Powers and duties of state board of health—Rule making—Delegation of authority—Enforcement of rules.

(1) The state board of health shall provide a forum for the development of public health policy in Washington state. It is authorized to recommend to the secretary means for obtaining appropriate citizen and professional involvement in all public health policy formulation and other matters related to the powers and duties of the department. It is further empowered to hold hearings and explore ways to improve the health status of the citizenry.

In fulfilling its responsibilities under this subsection, the state board may create ad hoc committees or other such committees of limited duration as necessary.

(2) In order to protect public health, the state board of health shall:

(a) Adopt rules for group A public water systems, as defined in RCW 70A.125.010, necessary to assure safe and reliable public drinking water and to protect the public health. Such rules shall establish requirements regarding:

(i) The design and construction of public water system facilities, including proper sizing of pipes and storage for the number and type of customers;

(ii) Drinking water quality standards, monitoring requirements, and laboratory certification requirements;

(iii) Public water system management and reporting requirements;

(iv) Public water system planning and emergency response requirements;

(v) Public water system operation and maintenance requirements;

(vi) Water quality, reliability, and management of existing but inadequate public water systems; and

(vii) Quality standards for the source or supply, or both source and supply, of water for bottled water plants;

(b) Adopt rules as necessary for group B public water systems, as defined in RCW 70A.125.010. The rules shall, at a minimum, establish requirements regarding the initial design and construction of a public water system. The state board of health rules may waive some or all requirements for group B public water systems with fewer than five connections;

(c) Adopt rules and standards for prevention, control, and abatement of health hazards and nuisances related to the disposal of human and animal excreta and animal remains;

(d) Adopt rules controlling public health related to environmental conditions including but not limited to heating, lighting, ventilation, sanitary facilities, and cleanliness in public facilities including but not limited to food service establishments, schools, recreational facilities, and transient accommodations;

(e) Adopt rules for the imposition and use of isolation and quarantine;

(f) Adopt rules for the prevention and control of infectious and noninfectious diseases, including food and vector borne illness, and rules governing the receipt and conveyance of remains of deceased persons, and such other sanitary matters as may best be controlled by universal rule; and

(g) Adopt rules for accessing existing databases for the purposes of performing health related research.

(3) The state board shall adopt rules for the design, construction, installation, operation, and maintenance of those on-site sewage systems with design flows of less than three thousand five hundred gallons per day.

(4) The state board may delegate any of its rule-adopting authority to the secretary and rescind such delegated authority.

(5) All local boards of health, health authorities and officials, officers of state institutions, police officers, sheriffs, constables, and all other officers and employees of the state, or any county, city, or township thereof, shall enforce all rules adopted by the state board of health. In the event of failure or refusal on the part of any member of such boards or any other official or person mentioned in this section to so act, he or she shall be subject to a fine of not less than fifty dollars, upon first conviction, and not less than one hundred dollars upon second conviction.

(6) The state board may advise the secretary on health policy issues pertaining to the department of health and the state.

[**2021 c 65 § 37**; **2011 c 27 § 1**; **2009 c 495 § 1**; **2007 c 343 § 11**; **1993 c 492 § 489**; **1992 c 34 § 4**. Prior: **1989 1st ex.s. c 9 § 210**; **1989 c 207 § 1**; **1985 c 213 § 1**; **1979 c 141 § 49**; **1967 ex.s. c 102 § 9**; **1965 c 8 § 43.20.050**; prior: (i) **1901 c 116 § 1**; **1891 c 98 § 2**; RRS § 6001. (ii) **1921 c 7 § 58**; RRS § 10816.]

WASHINGTON STATE BOARD OF HEALTH

Date: November 8, 2023

To: Washington State Board of Health Members

From: Patty Hayes, Board Chair
Kate Dean. Board Member

Subject: Climate Change Storytelling Panel

Background and Summary:

Under the authority of RCW 43.20.050(1), the State Board of Health (Board) is directed to serve as a public forum. The Board is committed to monitoring the health effects of climate change and is hosting a storytelling panel to engage and learn how climate change is impacting Tribes and communities that are overburdened in Washington state. Climate change is a high priority and part of the Board's current strategic plan.

Climate change will impact every part and everyone in Washington State in some way. Climate change impacts health across a broad spectrum of areas, including air quality, drinking water, extreme heat, flooding, and shellfish. Human activities have expedited the increase in atmospheric levels of greenhouse gases at an unprecedented rate. It is causing the earth's climate to rapidly warm, leading to rising sea levels, and extreme climate and environmental events. The Board recognizes that the effects of climate change are not equally dispersed and certain regions and populations will experience more dramatic and consequential results.

The Board will hear directly from Tribes and communities that are overburdened about how climate change has impacted their communities and health. The Board will also learn about plans or efforts that communities are engaged in to help mitigate the effects of the changing climate. The panel is an opportunity for the Board to hear concerns and experiences from different communities, so the Board can align future initiatives with the needs of people living in Washington state. The concerns and experiences shared by panel members will also help the Board to prioritize topics to focus on within their authority related to climate change.

The Panel consists of four members representing communities from across the state. These individuals serve their communities in many ways, each with a special focus on the impacts of climate change. The panel includes:

- Elaine Harvey, Watershed Department Manager, Columbia River Inter-Tribal Fish Commission
- Paulina Lopez, Executive Director, Duwamish River Community Coalition
- Ryan Oelrich, Executive Director, Priority Spokane & Spokane City Council Member
- Sue Sullivan, Environmental Health Manager, Whatcom County

(continued on the next page)

Washington State Board of Health
November 8, 2023 Meeting Memo
This informational briefing involves no Board action. The information shared today will be used to inform the future work of the Board. Board staff will inform panel participants of how their shared insights have impacted the work of the Board.

Staff

Andrew Kamali

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WASHINGTON STATE BOARD OF HEALTH

SBOH Rules Impacted by Climate Change

Washington Administrative Code Number	Rule Title	How Climate Change impacts the topic
246-100 & 101	Communicable And Certain Other Diseases & Notifiable Conditions	[1] As the climate changes, the risk also increases for health threats, such as: ► Anaplasmosis ► Anthrax ► Antibiotic-resistant infections ► Cryptosporidiosis ► Dengue ► Ehrlichiosis ► Fungal diseases like valley fever and histoplasmosis ► Giardiasis ► Hantavirus ► Harmful algal bloom-associated illness ► Lyme disease ► Plague ► Rabies ► Spotted fever rickettsiosis ► Salmonellosis ► Vibriosis ► West Nile virus disease [1] Milder winters, warmer summers, and fewer days of frost make it easier for infectious diseases to expand into new geographic areas and infect more people. To understand climate change's impact, it's important to look at some of the common ways these diseases spread — through mosquito and tick bites, contact with animals, fungi, and water.

[1] Centers for Disease Control and Prevention. (2022, August 2). Climate change and infectious diseases. Centers for Disease Control and Prevention. https://www.cdc.gov/ncezid/what-we-do/climate-change-and-infectious-diseases/index.html

WASHINGTON STATE BOARD OF HEALTH

SBOH Rules Impacted by Climate Change

Washington Administrative Code Number	Rule Title	How Climate Change impacts the topic
246-260 & 262	Water Recreation Facilities & Recreational Water Contact Facilities	[2] Harmful algal blooms (HABs) involving blue-green algae in freshwater are increasing in frequency and severity across the globe. Warming, heavy rainfall, and nutrient pollution are driving factors behind HABs — and climate change is amplifying the risks. Toxic blooms pose both short- and long-term risks to human health and well-being. They can also be deadly for pets, livestock, and wildlife.
246-280 & 282	Recreational Shellfish Beaches & Sanitary Control of Shellfish	[3] The chart below shows why shellfish beaches in Puget Sound were classified as prohibited for harvesting in 2018: • 61% were near wastewater treatment plant outfalls. • 29% were impacted or potentially impacted by nonpoint pollution sources such as poorly functioning on-site sewage systems (septic), farms, wildlife, and other potential sources. • 8% were near marinas. • 2% were prohibited based on other sources. [4] To grow healthy shellfish, farmers need clean water, robust ecosystems, and a stable climate. It is important to prioritize environmental conservation and climate mitigation, both on and off the water.

[2] *Toxic algae blooms in a changing climate.* Toxic Algae Blooms in a Changing Climate | Climate Central. (n.d.). https://www.climatecentral.org/climate-matters/harmful-algal-blooms
[3] https://www.epa.gov/salish-sea/shellfish-harvesting
[4] https://www.nature.org/en-us/what-we-do/our-priorities/tackle-climate-change/climate-change-stories/shellfish-growers-climate-coalition/

WASHINGTON STATE BOARD OF HEALTH

SBOH Rules Impacted by Climate Change

Washington Administrative Code Number	Rule Title	How Climate Change impacts the topic
246-290 & 291	Group A Public Water Supplies & Group B Public Water Systems	[5] Climate change is likely to increase people's demand for water while also shrinking water supplies. In mountainous and cold-weather regions, many people depend on snowpack for drinking water, agriculture, and other uses. [6] Warmer temperatures and changes in precipitation are reducing snowpack. In some areas, less snow is falling, as more precipitation is falling as rain rather than snow. Higher temperatures are also causing snowpack to melt earlier. [7] Climate change is expected to harm water quality. For example, increased rainfall can lead to more runoff of sediments, nutrients, pathogens, and other substances into water bodies. Increases in nutrient runoff, along with warming water temperatures, can also lead to harmful algal blooms. These algal blooms can kill fish, shellfish, and other animals. They can also make drinking and recreational water sources unsafe for people and pets. Climate change threatens to increase the salinity of water bodies and groundwater through saltwater intrusion. Rising sea level and increased drought can enable saline water to advance farther upstream and inland in estuaries, wetlands, and aquifers. Higher salinity can contaminate freshwater supplies and harm aquatic plants and animals.

[5] Lall, U., et al. (2018). Ch. 3: Water. In: Impacts, risks, and adaptation in the United States: Fourth national climate assessment, volume II. U.S. Global Change Research Program, Washington, DC, p. 150.
[6] EPA. (2021). Climate change indicators: Snowpack.
[7] Lall, U., et al. (2018). Ch. 3: Water. In: Impacts, risks, and adaptation in the United States: Fourth national climate assessment, volume II. U.S. Global Change Research Program, Washington, DC, p. 154

WASHINGTON STATE BOARD OF HEALTH

SBOH Rules Impacted by Climate Change

Washington Administrative Code Number	Rule Title	How Climate Change impacts the topic
246-366 & 366A	Primary And Secondary Schools & Environmental Health and Safety Standards for Primary and Secondary Schools	Climate change has led to an increase in ambient temperatures. This has led to warmer indoor air temperatures. Some schools in the state have classrooms that reach over 90 degrees in late spring and early fall days. These temperatures impact the health, safety, and learning outcomes of students. These types of situations disproportionately impact communities that are overburdened. High indoor air temperatures are also perceived as poorer air quality.
246-374	Outdoor Music Festival	Insect, rodent, and dust control become more difficult due to climate change, warmer and dryer seasons increase the amount of dust in an area designated for an outdoor music festival. Due to more mild winters, insects, particularly mosquitos and ticks can reproduce for longer periods of time and can increase vector borne illnesses.

WASHINGTON STATE BOARD OF HEALTH

Health Impacts of Climate Change
Community Storytelling Panelist
SBOH Public Meeting
November 8, 2023

Sue Sullivan, Environmental Health Manager

Sue Sullivan is the Environmental Health Manager for Whatcom County Health and Community Services. Originally from NY, Sue graduated with a Bachelors in Env. Science from SUNY Plattsburgh and received an MBA from Western Washington University. She is a collaborative leader with 2 decades of experience in occupational health and safety and environmental health in higher education before moving over to Whatcom County's Health and Community Services in 2021.

Sue currently lives in Bellingham with her partner, two daughters and their dog Thompson. She is a foodie, enjoys all things nature, and venturing out to music shows.

Whatcom County Health Department

The Whatcom County Health Department serves Whatcom County by advancing equity and partnering with their community to promote health through policy and systems improvement; prevent disease and injury; provide accurate and reliable health communication, information, and data; prepare for and respond to emergencies; and preserve a healthy environment where everyone can thrive.

The Health Department recently created their strategic plan for 2023-2027 which is built upon the foundation of community engagement through other recent or ongoing outreach by the department. In addition, staff at all levels of the department, along with community partners and key leaders participated during the process to offer insights and feedback.

WASHINGTON STATE BOARD OF HEALTH

Health Impacts of Climate Change
Community Storytelling Panelist
SBOH Public Meeting
November 8, 2023

Elaine Harvey, Watershed Department Manager

Elaine Harvey currently works for the Columbia River Inter-Tribal Fish Commission as the Watershed Department Manager and has also previously worked for Yakama Nation Fisheries since 2006. Elaine is also a citizen of the Kamiltpah (Rock Creek) Band of the Yakama Nation. She was the manager for the Rock Creek Fish and Habitat Project for 13 years and served as the Hydro Systems Oversight Coordinator and Environmental Coordinator at the Yakama Nation Fisheries. She was also a Columbia River Inter-Tribal Fisheries Commissioner for the Yakama Nation and serves as an Executive Board member for the Columbia Land Trust.

Elaine dedicates her career to conserving and enhancing the First Foods for the Yakama Nation during a time of warming climate conditions. Her work includes enhancing streams for all native aquatic resources in many streams, riparian corridors, and wetlands in the streams in the Rock Creek, Klickitat, White Salmon, and Yakima drainages. She also actively works with national forests to protect and enhance huckleberry habitats in the various huckleberry fields utilized by the Yakama Nation. Elaine works with her tribal departments to improve root gathering areas for tribal members on the Yakama reservation. She also is dedicated to sharing her traditional knowledge with the younger generations of the Yakama Nation.

Columbia River Inter-Tribal Fish Commission (CRITFC)

CRITFC brings tribal views to the table in an effort to ensure that salmon are provided the respect accorded by tribal cultural beliefs and required under law. It also allows the tribes to develop common strategies to educate non-Indians on the importance of salmon to the environment, culture, economy, and ultimately the entire region's wellbeing. No other entity in the Columbia River Basin acts with such a purpose. The organization provides support as requested to each of its member tribes' fisheries programs to support their efforts to restore salmon and watersheds within their own territories. CRITFC, together with its member tribes' fisheries programs, enables the tribes to advocate views and protect treaty rights at all levels. In working to restore salmon and rivers, its work benefits all the citizens of the region. By accepting the challenge of restoring salmon to the rivers and streams and implementing the treaties, the four tribes acting together through the of the Columbia River Inter-Tribal Fish Commission have turned the tide and restored the commitment that tribal people expected under their treaties. CRITFC also does work in a myriad of other topics including climate change.

WASHINGTON STATE BOARD OF HEALTH

Health Impacts of Climate Change
Community Storytelling Panelist
SBOH Public Meeting
November 8, 2023

Paulina Lopez, Executive Director

Paulina has over 25 years of experience working on issues of civil rights, social environmental justice, equity, education, and diversity. Paulina is keenly in tune with the strengths and challenges of this community as it moves toward environmental health and social and climate justice. Paulina is a highly regarded organizer, facilitator, community and policy strategist, movement builder focused on building systems of power and shifting power outward to those most impacted by injustice and oppression. Developed consulting with governments, organizations, community, and foundations to identify ways to shift power dynamics and develop frameworks for collaborative co- creating and transformative governance.

Through this work and her leadership in social, environmental, and racial justice organizations, Paulina has developed expertise in multi-sector stakeholder engagement, networks, collaborative problem solving, and building power with BIPOC communities of color, immigrants, and refugees. Paulina emigrated to the U.S. from Ecuador and has made Seattle her home for the past 18 years. She first joined DRCC/TAG as a volunteer, advocating in her community for access to a safe, clean environment for South Park's families. She holds a master's degree in Human Rights Law from St. Thomas University

Duwamish River Community Coalition

The Duwamish River Community Coalition was established in 2001 to provide resources, knowledge, and action to create just environmental futures. It represents an alliance of community, tribal, environmental, and small business groups that have been impacted by the pollution of the lower Duwamish River. Their Mission is to elevate the voices of those impacted by the pollution of the Duwamish River and other environmental injustices to help establish a clean, healthy, and equitable environment for people and wildlife. The coalition promotes place-keeping and prioritizes community capacity and resilience. Additionally, the coalition has done work in the areas of climate justice, youth leadership, advocacy, and clean air.

WASHINGTON STATE BOARD OF HEALTH

Health Impacts of Climate Change
Community Storytelling Panelist
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Ryan Oelrich, Executive Director

Ryan Oelrich has been a citizen of Spokane since 2000 when he attended Whitworth and then Gonzaga University. He's been the executive director of multiple organizations in Spokane including Priority Spokane, The Ambassadors Foundation, and Quest Youth Groups as well as a small business owner. He's a Culture of Health Fellow with the Robert Wood Johnson Foundation and has an MA in Leadership and an MBA. He was awarded the Peirone Prize for service in 2016 and was voted "Best Philanthropist" by Inlander readers in 2017. In 2019 he was selected as one of eight "Difference Makers" by the Spokesman Review and has received congressional recognition for his work on poverty and homelessness issues. Oelrich has presented at conferences and trainings across the United States and in China, Costa Rica, and Sweden.

Also an artist, Oelrich built a life size model of a Hobbit house that's become a regional attraction. Oelrich has founded 3 nonprofits focused on youth issues, and he's an advocate for increased collaboration and coordination which was the subject of one of his TEDx talks. Ryan is married to his best friend and partner, Robert Thompson, and they have two delightful dogs together.

Priority Spokane

Priority Spokane is an endeavor to create a vibrant future for Spokane County by implementing community-defined goals. It is through collaborative and focused efforts on improvements that Spokane County will be a flourishing community for all who live and work there. In 2004, Eastern Washington University's (EWU) Institute for Policy and Economic Analysis commenced the Community Indicators Initiative (CII). This initiative involved the collection of data – or indicators – to assess the state of the Spokane community in terms of economic vitality, education, health, environment, and numerous other factors. A group of community leaders involved in the CII process recognized the value of the indicators for identifying priority community problems and for measuring change on these issues over time. These leaders represented local government, businesses, nonprofit organizations, and local funders. With the vision to prioritize community action to measurably improve the community, these leaders officially launched Priority Spokane in 2008. Currently their top 4 priorities are to Provide greater access to mental health services/resources to improve public safety; Expand childcare capacity to boost the economy; Expand the tree canopy to enhance the environment; Explore alternative housing such as shared equity, tiny homes, co-housing, etc. to address housing issues.

Ryan Oelrich, Executive Director of Priority Spokane & Spokane City Council Member

Spokane County Assessment & Climate Impacts

Sponsored by

PRIORITY SPOKANE

JUNIOR LEAGUE OF SPOKANE

SpokaneTrends.org

SPOKANE REGIONAL HEALTH DISTRICT

Thank you to our Priority Spokane members:

- Asuris Northwest Health
- Avista Corporation
- Believe in Me Foundation
- City of Spokane
- City of Spokane Fire Department
- Community Building Foundation
- Community Minded Enterprises
- Eastern Washington University
- Empire Health Foundation
- Excelsior Wellness Center
- Gonzaga University
- Greater Spokane Inc.
- Innovia Foundation
- Junior League of Spokane
- Kaiser Permanente
- Kalispel Tribe of Indians
- MultiCare
- Numerica Credit Union
- Providence Health Services
- Spokane County
- Spokane Regional Health District
- Spokane Valley Fire Department
- United Way of Spokane County
- Washington State University Spokane
- Women Helping Women Foundation

Join our membership! Visit www.PrioritySpokane.org and contact us for more information.

The Assessment Process

- 6 Focus Areas: *Economy, Education, Environment, Health, Housing, Public Safety*
- 12 Community Meetings
- 376 participants
- Weighted Vote (over 1,400 votes cast)
- 73 data indicators identified
- 11 Focus/Feedback Groups Held with disproportionately impacted communities

60-% to 80+%

272 of 339 & 95%

176 & 57

We succeed when we work together.

Focus Area	Priority #1	Priority #2
Economy	“Work to make local housing more affordable”	“Build out local capacity for childcare.”
Education	“Improve mental health resources/services in schools”	“Promote a sense of belonging and assure students feel safe at school”
Environment	“Increase the tree canopy”	“Increase conservation of wild and open lands”
Health	"Identify mental health problems early”	“Improve the built environment to promote & support healthy lifestyles.”
Housing	“Promote housing innovations such as shared equity housing, tiny homes, and co-operative living”	"Require multifamily projects include a percentage of affordable housing”
Public Safety	“Provide greater access to services/resources for patients with mental health needs”	“Prevent the further spread of fentanyl.”

Prioritization Criteria *(in no particular order) for Voting*

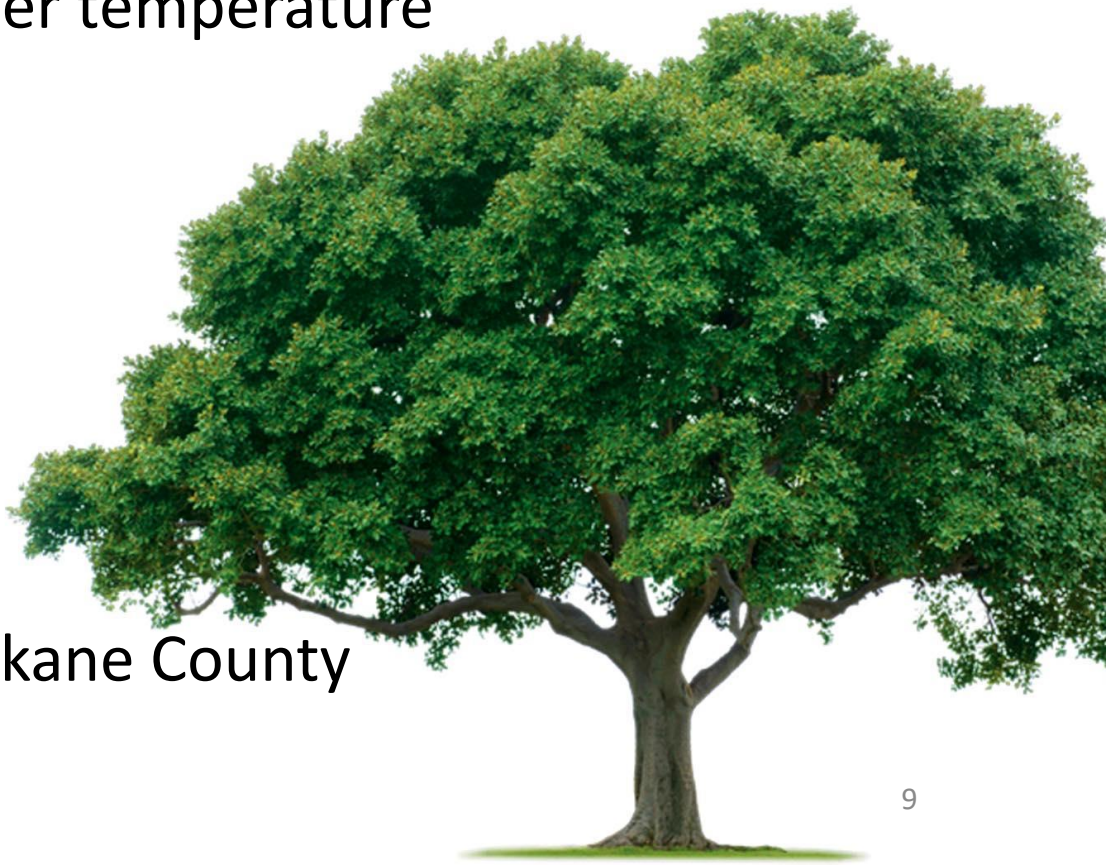
1. An issue that affects the greatest number of residents.
2. An issue that that has a disproportionate impact on minority communities.
3. A condition that is unambiguously below or above where we want it to be.
4. A condition that we want to preserve.
5. An indicator that is predictive of other outcomes and positively impacts several goals.
6. A condition that we, locally, have some opportunity to change.
7. An issue we can impact in 3-5 years.

The Voting Results…

Available at www.PrioritySpokane.org

Why Expand the Tree Canopy?

- Spokane County has seen a 725% increase in the number of dangerous heat days since 2000
- Tree shade provides as much as a 25% cooler temperature
- Trees clean the air of smoke and pollution
- Trees increase property values
- Trees improve mental health
- Trees filter ground water
- Trees aid in drought
- Trees improve rain chances
- There are significant heat zones across Spokane County



Climate increasingly plays a major role in Spokane County

- Mental Health (stress, trauma, etc.)
- Public Safety (wildfire threats, smoke, storm intensity)
- Housing Innovations (fire threats, sustainable materials)
- Tree Canopy

- Intense Weather Events
- Fire Danger
- Drought & Water Scarcity

HOMELESSNESS

PRIORITY SPOKANE

Continue to follow this process at www.PrioritySpokane.org and on Facebook at "Priority Spokane"

Want to join our membership? *Contact us!*

Thank you!

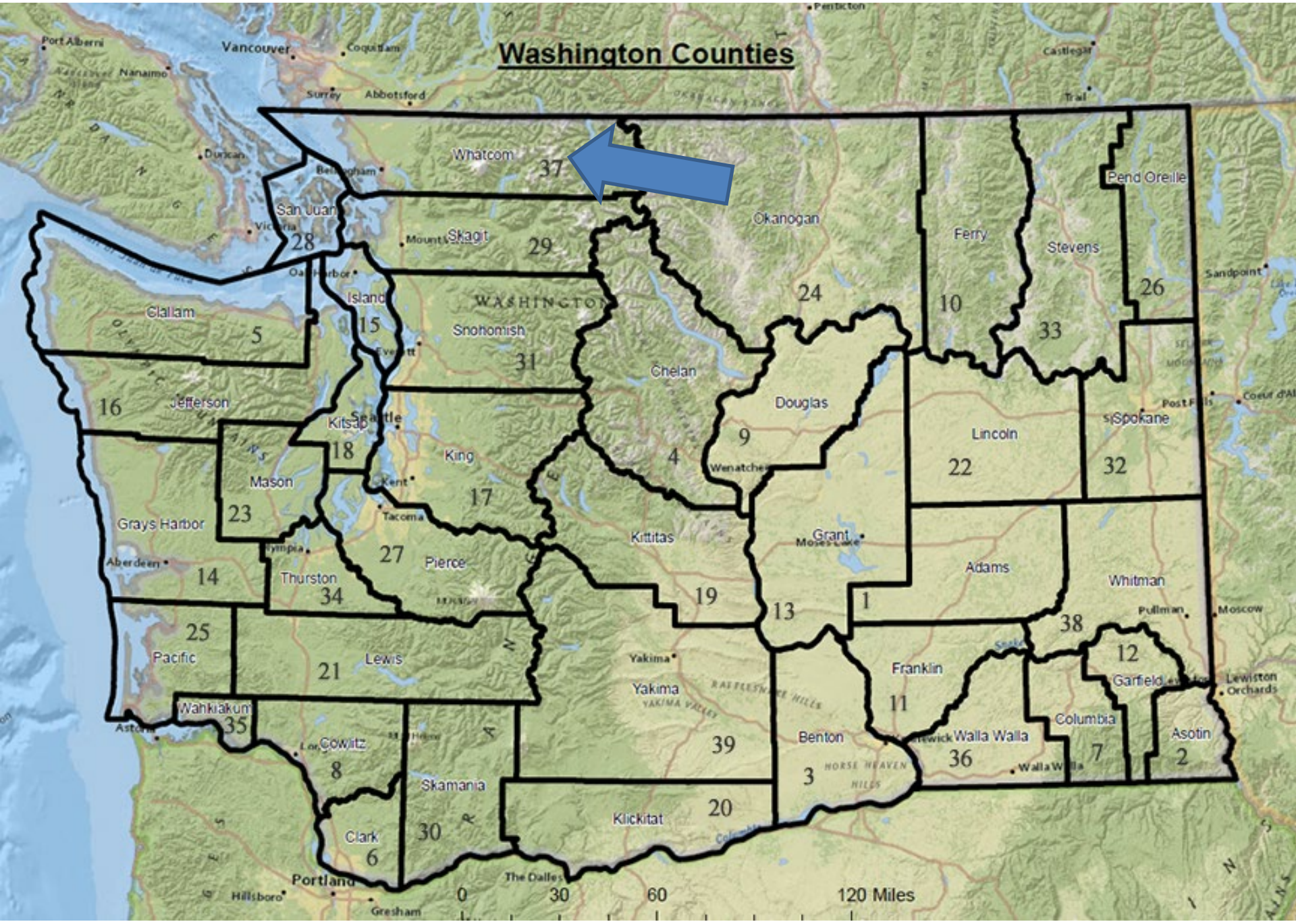
Building Resilience Against Smoke and Heat (BRASH)

Sue Sullivan

November 8, 2023

WA State Board of Health

WHATCOM COUNTY HEALTH AND COMMUNITY SERVICES


Washington Counties
Whatcom
37
San Juan
28
Skagit
29
Island
15
Snohomish
31
Okanogan
24
Ferry
10
Stevens
33
Pend Oreille
26
Clallam
5
Jefferson
16
Kitsap
18
Seattle
King
17
Chelan
4
Douglas
9
Wenatchee
Lincoln
22
Spokane
32
Mason
23
Grays Harbor
14
Aberdeen
Thurston
34
Tacoma
27
Pierce
Kittitas
19
Grant
Moses Lake
13
Adams
1
Whitman
38
Pullman
Moscow
Pacific
25
Lewis
21
Yakima
39
Franklin
11
Garfield
12
Lewiston
Orchards
Wahkiakum
35
Cowlitz
8
Skamania
30
Klickitat
20
Benton
3
Walla Walla
36
Columbia
7
Asotin
2
Clark
6
Portland
Hillsboro
Gresham
The Dalles
0
30
60
120 Miles

Environmental Health Division

BRASH: Building Resilience Against Smoke & Heat

Identifying public health impacts of extreme heat and wildfire smoke on residents of Whatcom County

BRASH Goals

- Operationalize equity in County's climate planning work
- Build lasting relationships and partnerships

Project Approach

- Identify
  - geographic areas
  - frontline communities
  - known risk factors
- Assess overall capacity of various systems

Project Planning

Steering Committee

Project Planning

Qualitative Assessment

Identification of stakeholders

- Frontline communities
- Local government organizations
- Community partners

Community Engagement

- Focus groups and stakeholder interviews

Project Planning

Quantitative Assessment

Evaluate 3 components of vulnerability

- Exposure
- Sensitivity
- Adaptive capacity

Development of Story Map

- Engaging narrative and accessible display to communicate results to the public

BRASH TIMELINE

WHATCOM COUNTY HEALTH AND COMMUNITY SERVICES

At-a-glance

DATA & EVALUATION

Identify specific areas at higher risk for smoke and heat. Conduct asset inventory.

2023

Sept to December

COMMUNITY ENGAGEMENT

Hold several community events and collect input

23-24

October to Feb.

ESRI STORYMAP

Compile and present existing spatial data, including maps, photos, stories

23-24

Nov.- March

FEEDBACK

Connect with stakeholders and steering committee on final report draft

23-24

Dec. to April

CLOSURE AND PHASE II

Present final report including recommendations to Council, plan for implementation phase

2024

April and Beyond

Phase II: Infrastructure, Program and Policy Development

Thank you

WHATCOM COUNTY
HEALTH AND
COMMUNITY
SERVICES

CLIMATE CHANGE AND TRADITIONAL ECOLOGICAL KNOWLEDGE

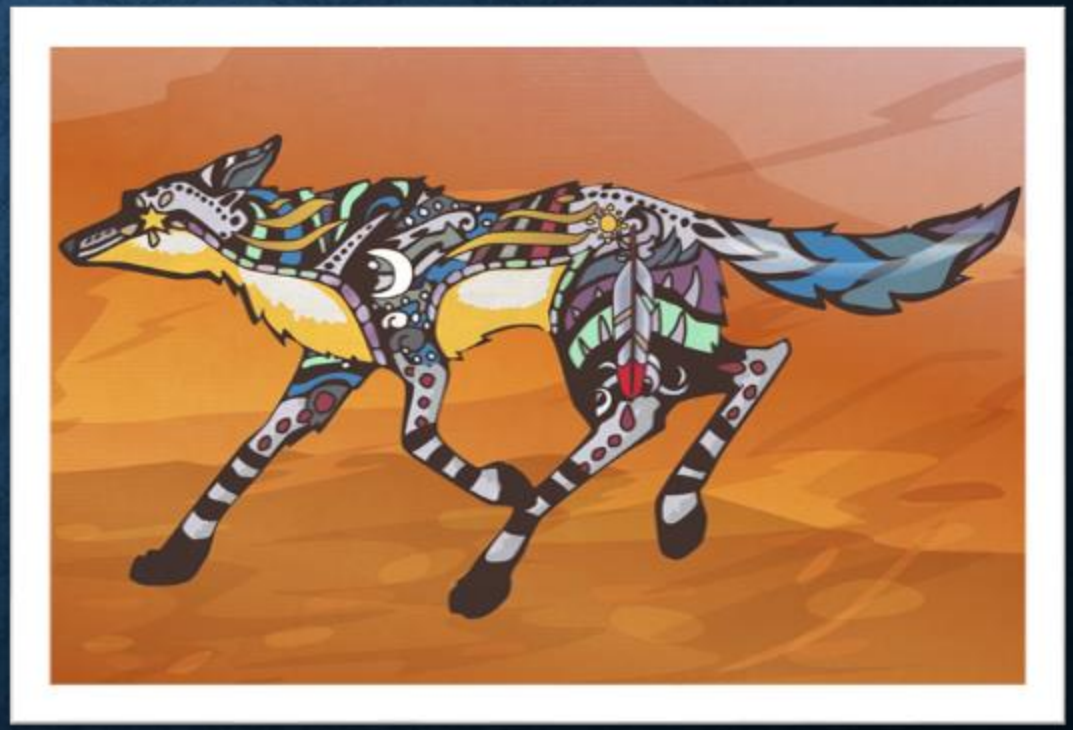
Elaine Harvey

Columbia River Inter-Tribal Fish Commission

Watershed Department Manager

WHAT IS TRADITIONAL ECOLOGICAL KNOWLEDGE AND INDIGENOUS KNOWLEDGE?

- Knowledge passed down from tribal the elders and leaders
- Lessons learned through ‘Spilyi’ coyote legends
- Springtime birds and flowers bring message that the salmon and root season is near
- Tribal people are still connected to the land and the resources and can tell when there are changes to the seasons, wildlife and fish migrations, and changes to the growing seasons



INDIGENOUS TRADITIONAL ECOLOGICAL KNOWLEDGE (ITEK) IN FEDERAL DECISION-MAKING PRACTICES

- November 15, 2021
- President Biden established policy to include ITEK into federal decision-making processes
- This also included regular, meaningful, and robust consultation with tribal officials in the development of federal research, policies, and decisions

HOW CAN TRADITIONAL ECOLOGICAL KNOWLEDGE (TEK) AND INDIGENOUS KNOWLEDGE (IK) BE APPLIED?

TEK and IK can be applied to the following management strategies:

- Forestry (prescribed fire)
- Rangeland
- Fish and Wildlife management
- Habitat restoration
- Climate change adaptation planning


THE PLATEAU SEASONAL ROUND
JANUARY
FEBRUARY
MARCH
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER
NOVEMBER
DECEMBER

EVERYTHING HAS A PURPOSE, AND EVERYTHING IS CONNECTED ON MOTHER EARTH


Salmon
Berries
Water
Game
Roots

NATURAL RESOURCES ARE OUR CULTURAL RESOURCES

TRIBAL MEMBERS ARE AWARE THAT CLIMATE CHANGE HAS BEEN HAPPENING WITH THE ACTIVE CHANGES OF FIRST FOOD GATHERING OCCURRING OVER THE PAST FEW DECADES.

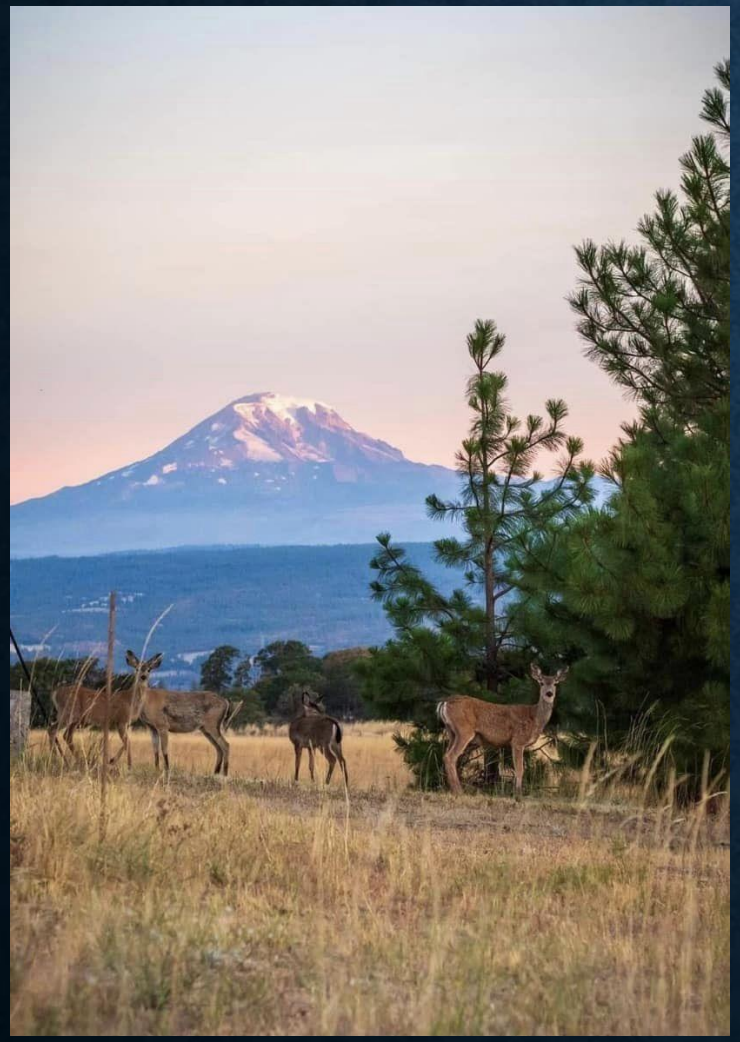
“THE FISHING, ROOT, AND BERRY HARVEST SEASONS ARE NO LONGER CONSISTENT AND ARE A REFLECTION OF A CHANGING CLIMATE.”
QWATASHA

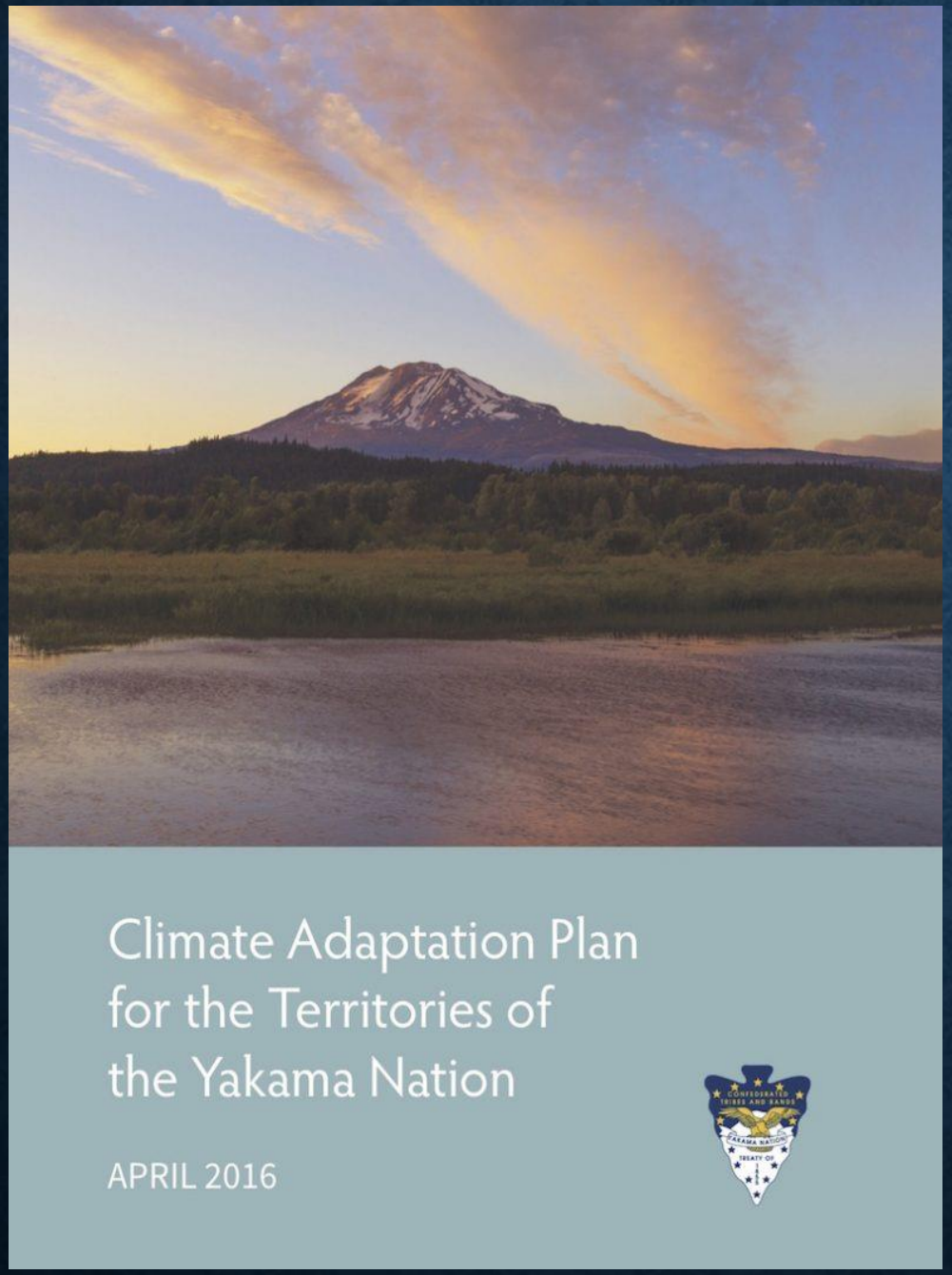
THE WARMING COLUMBIA RIVER AND TRIBUTARIES

2021 Heat Wave

Sockleye salmon were stranded at Drano Lake, WA.

HOW YAKAMA NATION IS TAKING STEPS TOWARDS CLIMATE RESILIENCY…





- The Yakama Nation's Climate Adaptation Plan for the Territories of the Yakama Nation was officially adopted by the Tribal Council in 2021
- We work in collaboration with federal, state, and other NGO's to discuss what types of actions can be taken to protect and conserve critical habitats and species in the Yakama Nation Usual and Accustomed Lands
- Yakama Nation is one of the 4 Treaty Tribes of the Columbia River Inter-Tribal Fish Commission (CRITFC).

HERE ARE STEPS WE ARE TAKING TO ADDRESS CLIMATE CHANGE IN YAKAMA COUNTRY

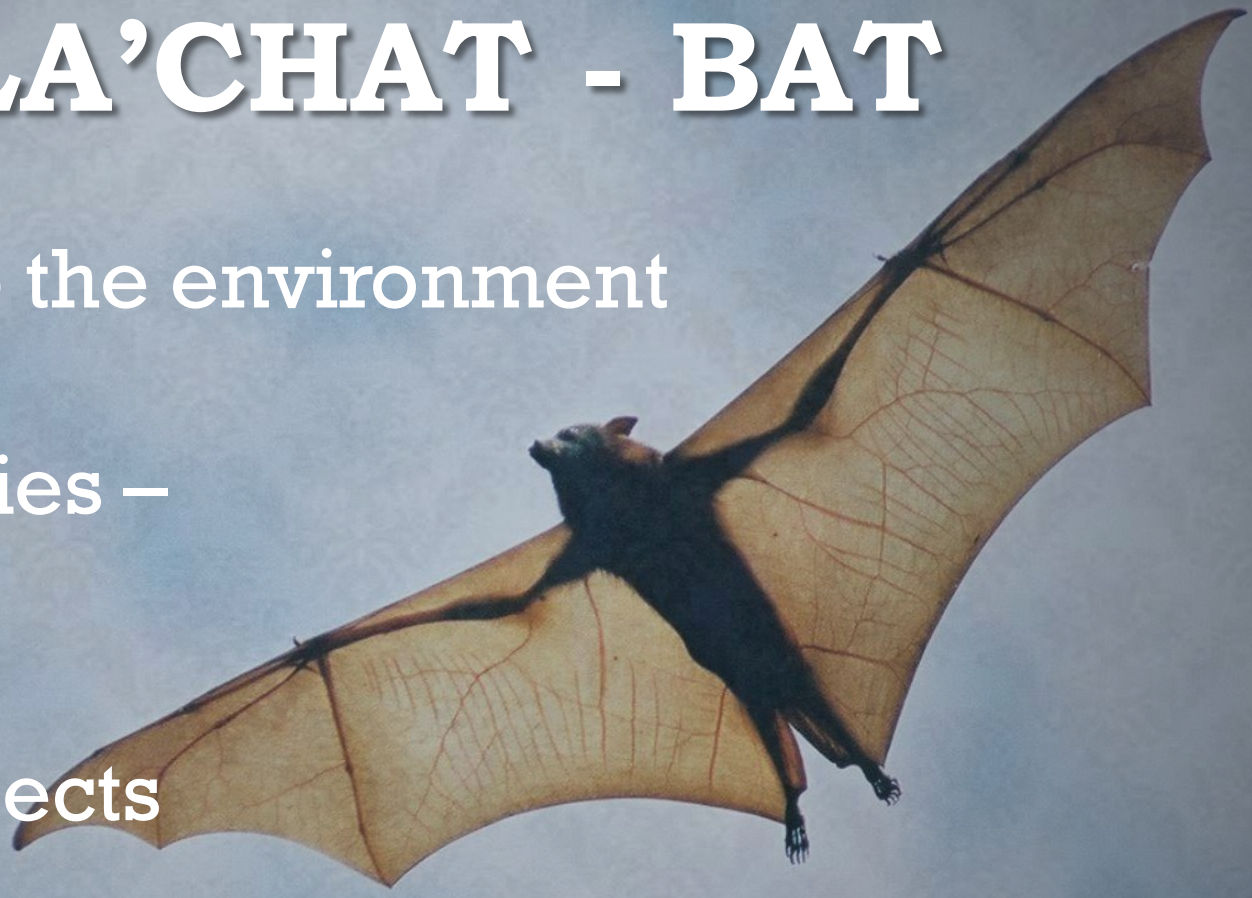
- Yakama Nation Department of Natural Resources (Forestry, Wildlife, Fisheries, Water Resources, Range, etc..) manage their projects to adequately monitor the current conditions in relation to historical conditions to assist in developing conservation and restoration strategies for the future
- Bringing back "*Wishpoosh*" beaver back to their natal drainages to assist in water storage
- Yakama Nation DNR projects incorporate Climate Resilient components into many of their conservation and restoration projects

CREATING ‘WIWNU’ (HUCKLEBERRY) RESILENCY INTO THE FUTURE

- Utilizing Traditional Ecological Knowledge, restoration sites for huckleberry enhancement on the national forest lands and Yakama reservation
- Tree thinning and burning of post logging areas were preliminary strategies
- Additional strategies have been identified and are planned for upcoming seasons
- Natural burn areas in huckleberry habitat areas are being monitored

LA'CHAT LA'CHAT - BAT

Importance of bats to the environment



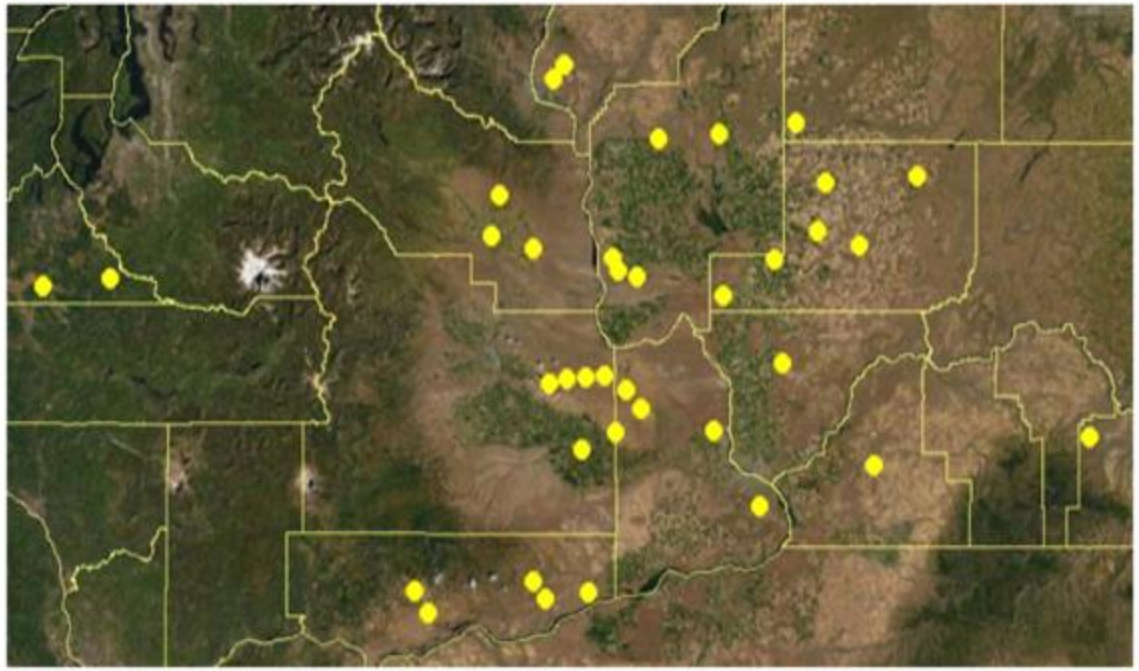
- Very sensitive species – Indicator Species
- Pollinators
- Control invasive insects

Think about their habitat and contribution to the local ecosystem. What if they are removed out of the system and what ecological impacts could there be?

ALL TRIBES HAVE VESTED INTERESTS IN THEIR ANCESTRAL LANDS AND RESOURCES FOR ALL FUTURE GENERATIONS

CLIMATE CHANGE AND THE "GREEN ENERGY MOVEMENT"

Solar proposals in Washington



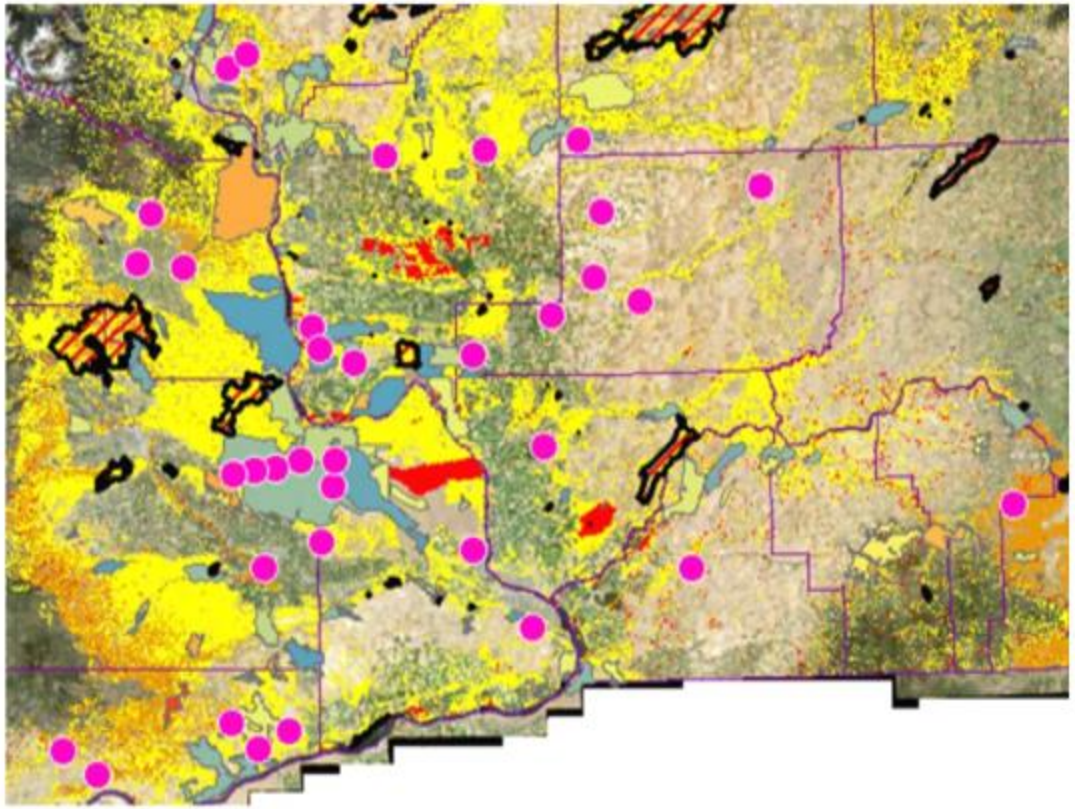
- 37 Solar Projects proposed to date
- > 50,000 acres
- > 78 square miles

- Shrubsteppe habitat in yellow, overlaid by fires from 1991-2020

- Projects are:
  - operational (one project)
  - constructed (two projects)
  - in permitting (four)
  - proposed/potential (28)
  - West-side projects (see previous slide)

- 92% of projects are in Columbia Plateau ecoregion

- 80% of eastern WA projects have NOT initiated permitting, but many have spent several years in pre-permitting work



REPORTAGE

When renewables threaten the sacred

How a lack of tribal consent for green energy projects is perpetuating environmental injustice.

BY SARAH SAX

JEREMY TAKALA, a Yakama citizen, was fishing for sockeye and summer chinook a few years ago, just downstream from the John Day Dam on the Columbia River. He was accompanied by a Yakama elder, who pointed to a high ridge towering above them covered in juniper bushes, shrubs and grasses that plunged dramatically

gigawatts of new solar additions, 4 gigawatts of offshore wind, and 2 gigawatts of onshore wind. (The average size of a coal plant in the U.S. is about 0.6 gigawatts; the biggest offshore wind farm in the world, Hornsea One, can generate up to 1.2 gigawatts.)

The Columbia River Basin is key to this

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and to carve a tunne
would irreversibly
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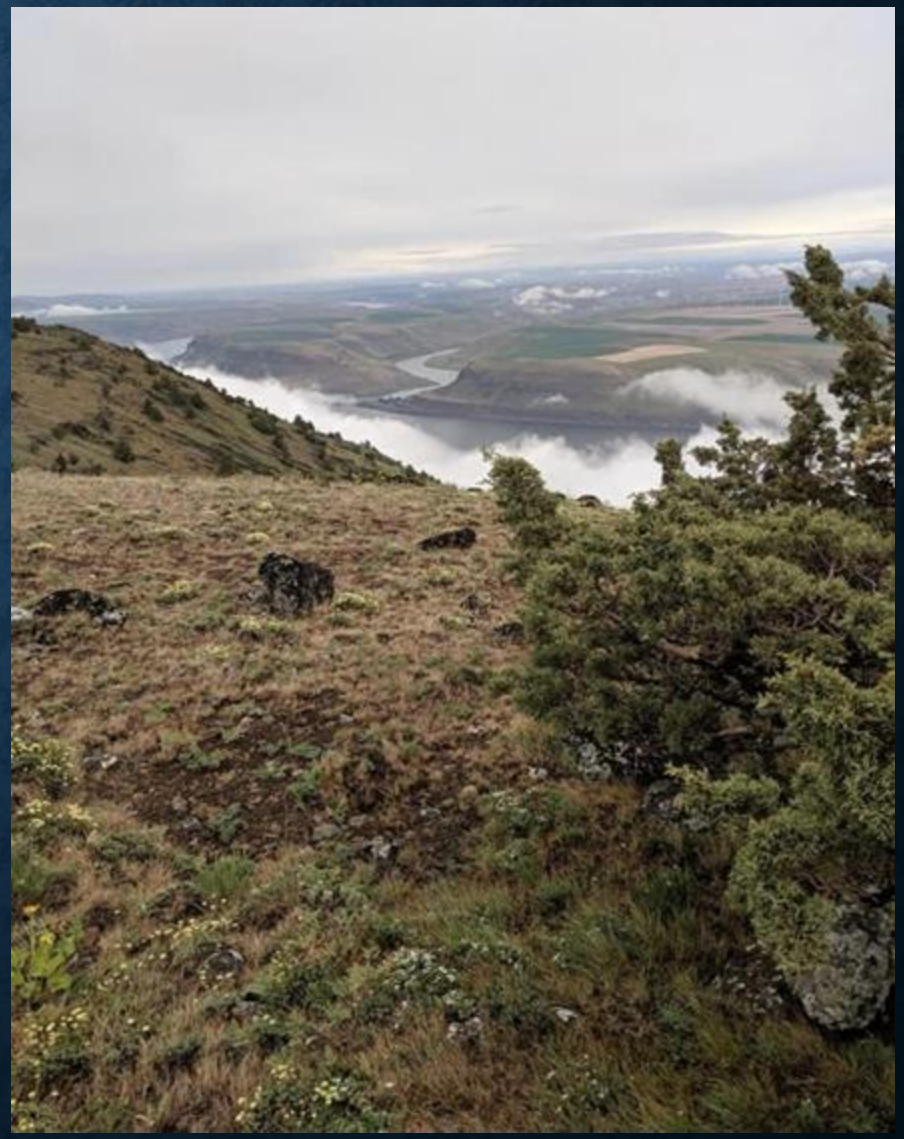
DAMS ON THE COLUMBIA RIVER HAVE BEEN IMPACTING OUR WAY OF LIFE SINCE 1938 - 1975

WIND FARMS ALONG THE COLUMBIA RIVER

https://www.youtube.com/c/KGWNews8

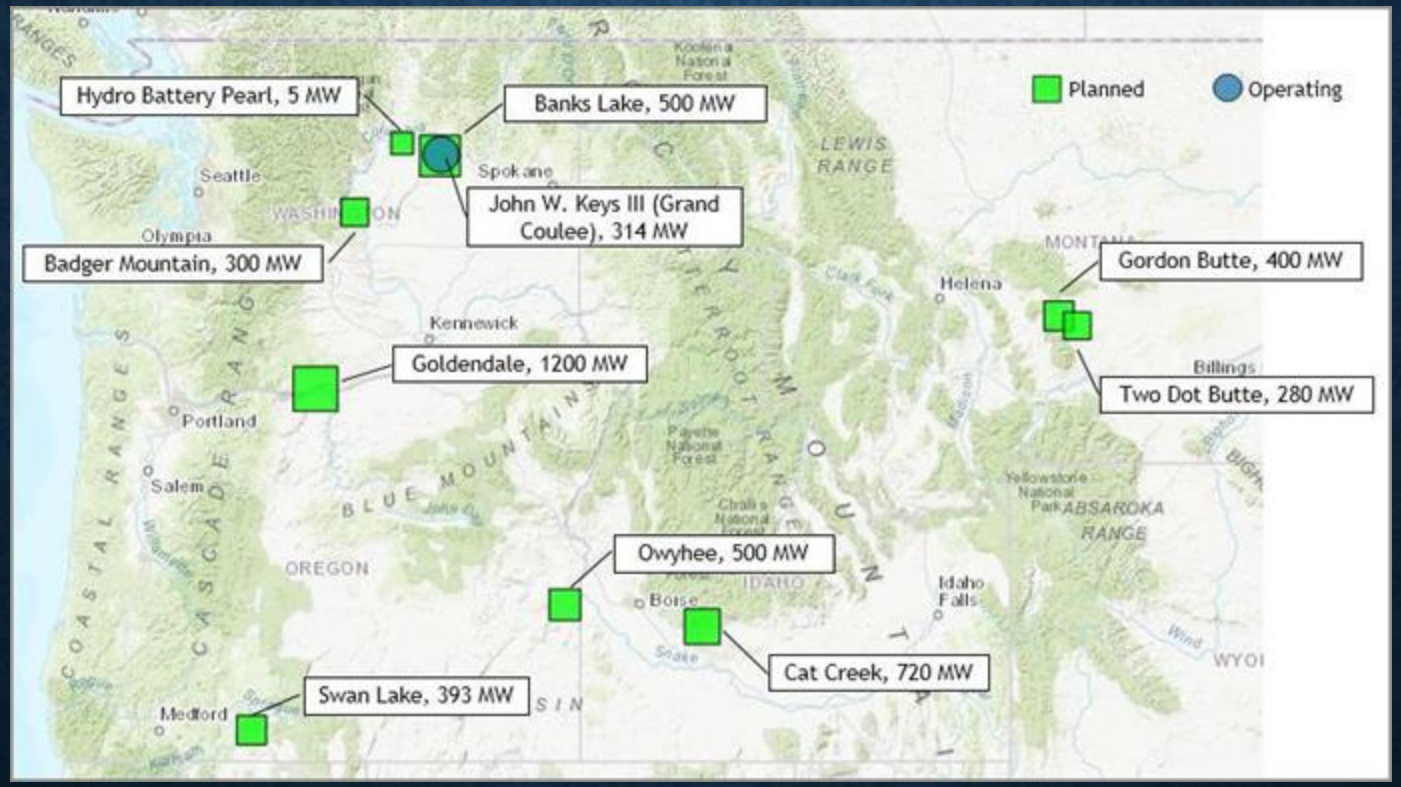
PUT'A-LISH "JUNIPER POINT"



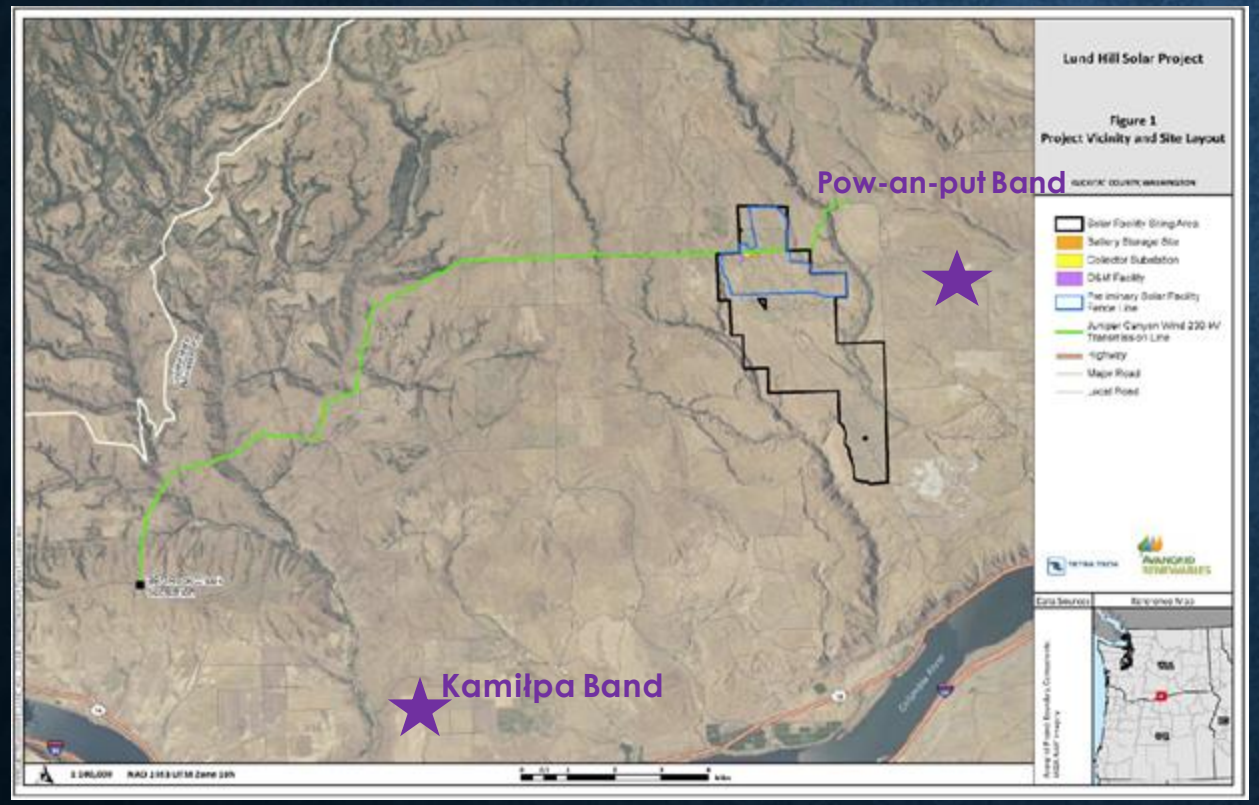
THREATS TO TRIBAL CULTURAL RESOURCES & SACRED SITE

"Green Energy Projects": Water-pump Storage Project, Wind, & Solar

ADDITIONAL WATER PUMP STORAGES IN THE NORTHWEST REGION



Lund Hill Solar Project
Blue Bird Solar Project



515,700 solar panels on 1,800 acres in Bickleton, WA

Loss of shrub steppe habitat

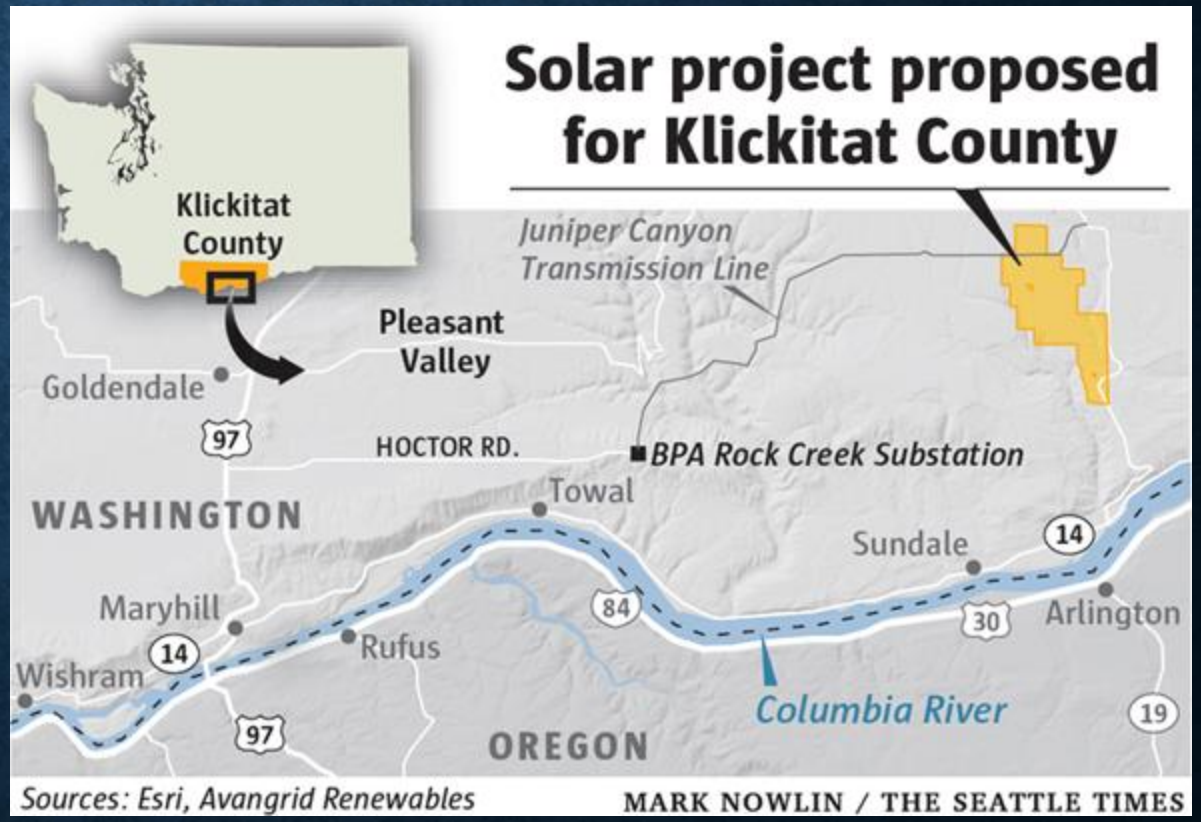
There are many culturally significant plants that grow in this vicinity

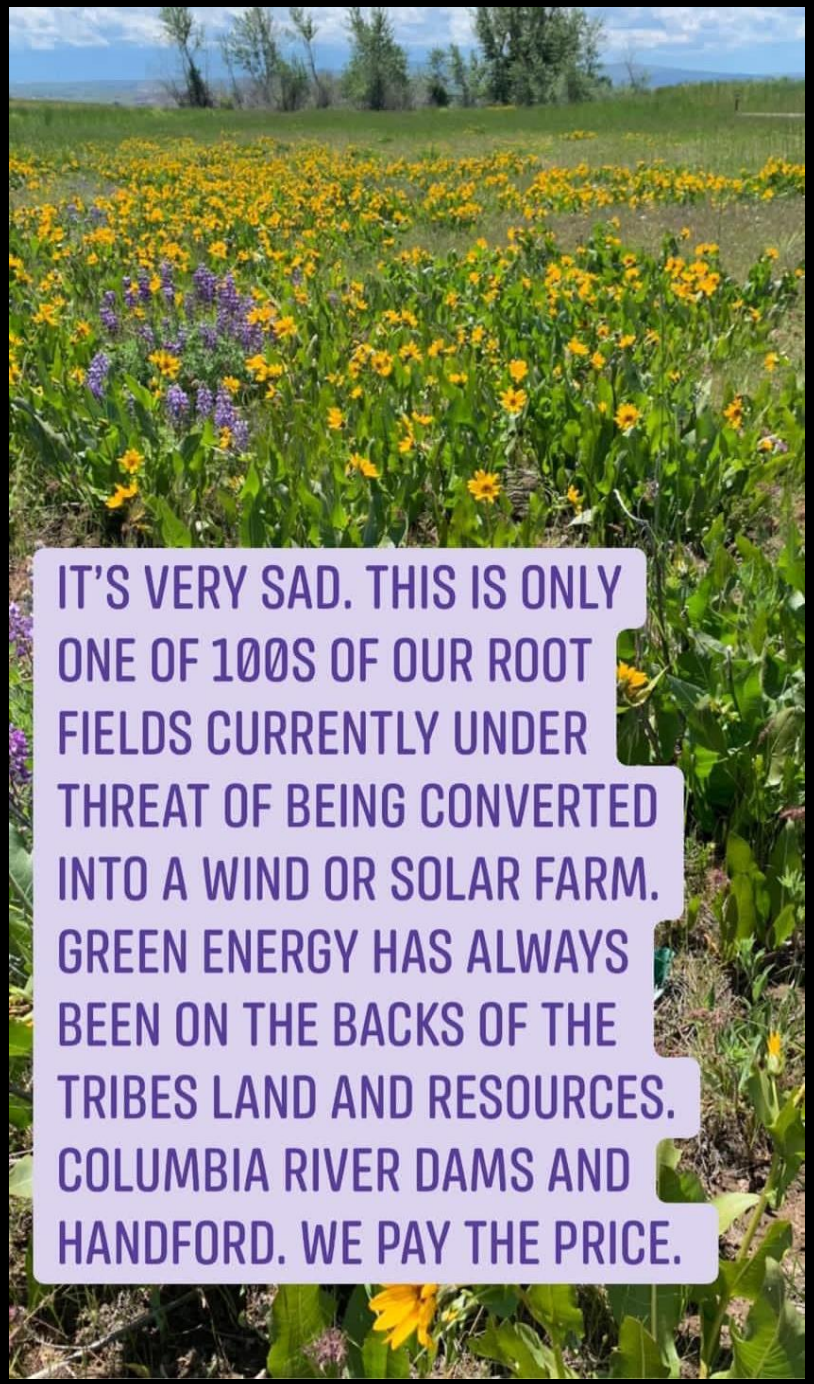
This project is within the Pow-an-put Band (Pine Creek Band) usual and accustomed root gathering area

What were the potential impacts to the deer over wintering habitat if solar panels will cover 1,700 acres?

Water withdrawals from Pine Creek and Wood Gulch which would impact rearing steelhead in both streams

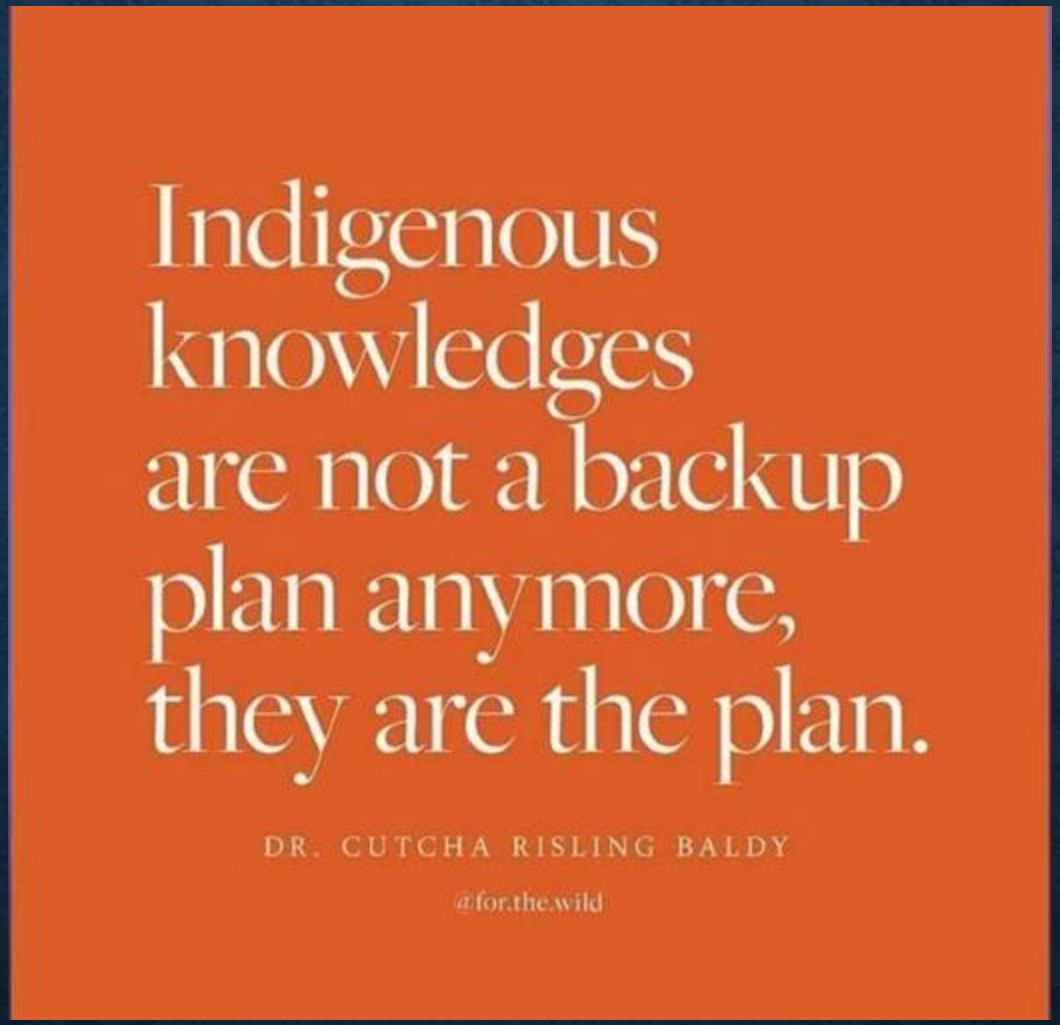
INDUSTRIAL SOLAR IMPEDES OUR ACCESS TO OUR TRADITIONAL FOOD GATHERING SITES





IT'S VERY SAD. THIS IS ONLY ONE OF 100S OF OUR ROOT FIELDS CURRENTLY UNDER THREAT OF BEING CONVERTED INTO A WIND OR SOLAR FARM. GREEN ENERGY HAS ALWAYS BEEN ON THE BACKS OF THE TRIBES LAND AND RESOURCES. COLUMBIA RIVER DAMS AND HANDFORD. WE PAY THE PRICE.


Protect our Cultural Resources!
stop
solar
farms
cease2020.org
REGULATE
INDUSTRIAL
SOLAR
CEASE2020.ORG
PIC.GRID


Indigenous knowledges are not a backup plan anymore, they are the plan.
DR. CUTCHA RISLING BALDY
@for.the.wild