



Winter 2018
Regional Tribal Operations
Committee Meeting

February 7th, 2018

Introductions/Roll Call

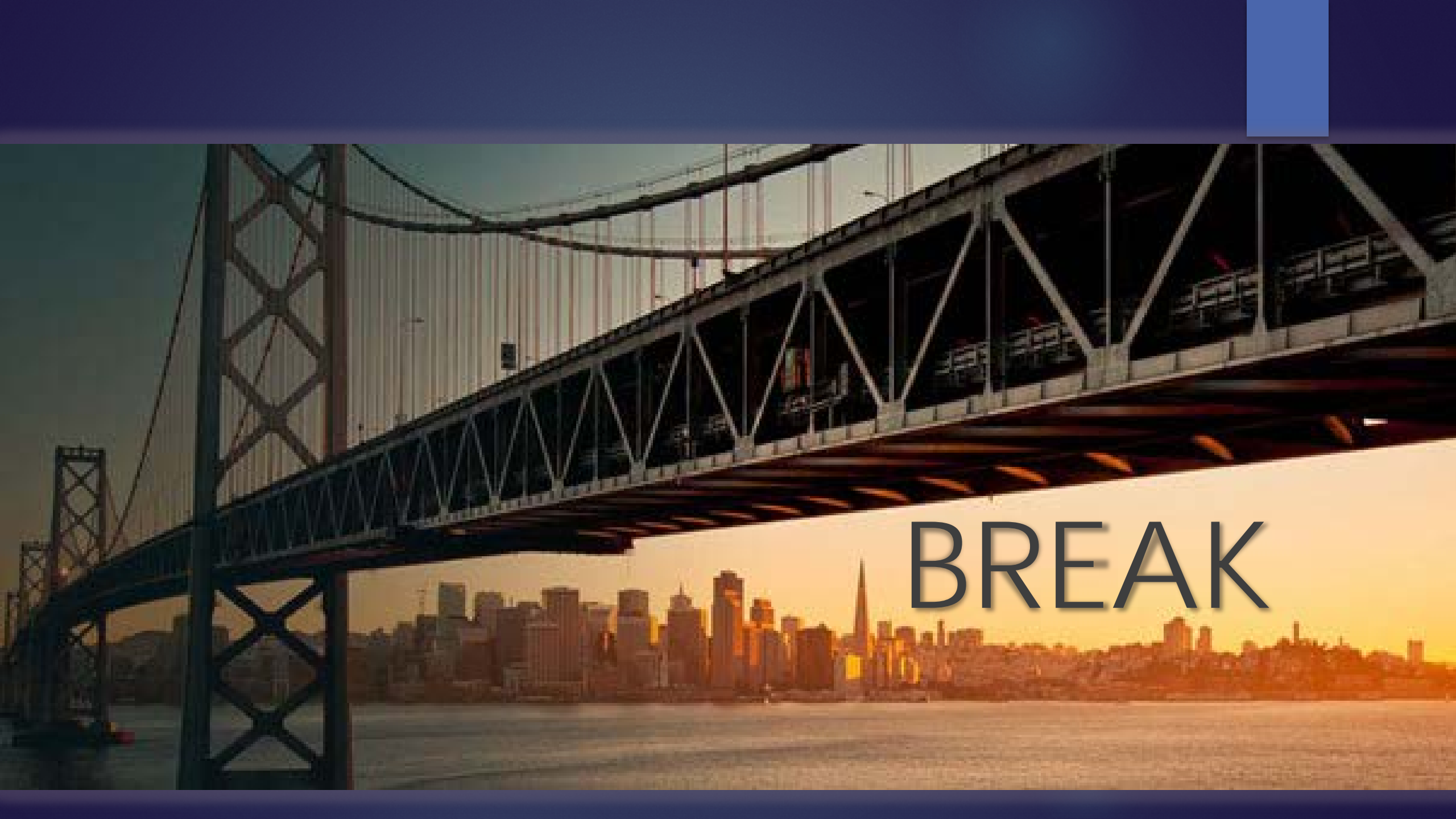
Alan Bacock and Jeff Scott
RTOC Co-Chairs

EPA Opening Remarks

Alexis Strauss,
Acting Regional Administrator
US EPA Region 9

Regional Updates on National Strategic Priorities:

EPA Region 9 Management & Division Directors



BREAK

NTOC Report & Updates

NTOC Representatives



Issues Review from Fall RTOC

FALL 2017 RTOC MEETING ACTION ITEMS

Category	From	Issue	Who	When	Status
GAP	Nevada At-Large Tribes: Clifford Banuelos, Elko Band Council	The Nevada Tribes want clarification on the ETEP cover letter signing process. We do not see a written protocol, simply that someone from the Tribe signs it and someone from EPA signs it.	Tribal Section	Will be addressed in meeting	Complete. No signature is required. See RTOC website for link to ETEP explainer document: https://www.epa.gov/sites/production/files/2016-01/documents/region-9-rtoc-winter-2016-presentation-etep-workflow.pdf
SDWA	Central California Tribes, Javier Silva, Sherwood Valley	Technical service providers - difference between RCAC and I.H.S. on providing service (drinking water). How far can RCAC go, what level can they reach? Both providing the same service - so what are the plans? Example: Sherwood hauled water for 3 months and didn't have assistance from either RCAC or I.H.S. - neither came to visit. We know RCAC is undermanned for the Central/Northern California Area.	Audrey Johnson		Complete. We are committed to resolving the technical needs of our tribal DW systems. R9 encourages tribes to reach out to your R9 DW Program Manager (or Audrey Johnson) to help facilitate conversations with technical service providers (IHS, RCAC, ITCA, for example) and find amicable solutions. Andrew Sallach will work with Javier Silva of Sherwood Valley Rancheria to facilitate a conversation with IHS and RCAC this week.
AIR	Central California Tribes; Nina Hapner, Kashia	Indoor Air Tool Kits - who has them? Cal-EPA? What does EPA have for Tribes? We know there is limited funding if any for Indoor Air. This is certainly a concern given the recent fires.	Stephanie Valentine		Complete. IAQ work can be done under GAP and CAA grants at EPA, but to be thorough and resourceful, we promote the grants from other federal agencies via the Region 9 Tribal IAQ & Health Network. Tribal programs can also get one-on-one technical support and assistance from our office – all they have to do is contact Priyanka Pathak and I can connect them to the appropriate staff, such as Katie Stewart. EPA R9 also partners with ITEP to promote and/or provide IAQ and public health related trainings. We also have outreach materials that we can mail to tribal programs on

FALL 2017 RTOC MEETING ACTION ITEMS

TRIBAL CAUCUS	Central California Tribes; Paula Britton, Cahto; Nina Hapner, Kashia	Emergency Planning Work Group needs to be reactivated. Tribes affected - should put questions together - what were our road blocks? Wake up call for Tribes. Bring in Tribes with fire departments (i.e. Hoopa, Tule River, Pala, etc.) FEMA, BIA and State Agencies that contract with BIA for fire protection on	Tribal Caucus & Sean Hogan	11/30/17	In progress. Sean Hogan will follow up with Nina Hapner for additional information. Kate sent follow up email to Nina 1/11
EPA	Central California Tribes	What is the funding outlook for FY19?	EPA	Will be addressed in meeting	Complete. Addressed in welcoming remarks. Updates will be provided as they are available.
TRIBAL CAUCUS	Central California Tribes; Paula Britton, Cahto	GAP Guidance - Asking Tribes to think about how the GAP Guidance has worked and not worked for your Tribe. Paula Britton will bring this up at the Tribal Caucus as part of the NTOC Report. This is something that the Regional GAP Work Group can work on and provide input to the National GAP Work Group. If the Regional GAP Work Group isn't active, it needs to be re-activated for this topic.	Tribal Caucus		
AIR	Northern and Central California Tribes; Nina Hapner	Request more user-friendly information on available state and local resources for Indoor Air Quality. Request that Priyanka Pathak meet with interested NoCal tribes to determine information needs.	Priyanka Pathak/ Stephanie Valentine	11/14/2017	In progress. Priyanka emailed Nina 10.30.17. Kate sent follow up email to Nina 1.11.18

FALL 2017 RTOC MEETING ACTION ITEMS

GAP	Marta Burg	Request more detailed AIEO org chart	Kate Fenimore	11/14/2017	In progress.
GAP	Tribal Caucus	Request clearer guidance on ETEP process	Tribal Section	January RTOC	Complete. One-pager distributed in ETEP workshop at conference
AIR	Nina Hapner	Request for additional information on using VW/DERA funding with GSA vehicles and/or hydrogen fuel generators	Trina Martynowicz	11/14/2017	Complete. VW Q&A workshop scheduled for Winter RTOC Breakout Session. Kate sent follow up email to Nina 1.11.18
RIPSC	Alan Bacock	Requests list of EPA staff attending RTOC in advance of meeting	RIPSC via Kate Fenimore	prior to January RTOC	Complete. Registration list sent 1.16.18

Tribal Science Council Presentation:

Destinee Cooper (US EPA) , Javier Silva (Sherwood Valley) & Jose Zambrana (National TSC EPA Co-Chair)

The Tribal Science Council: Science Needs and Opportunities



<http://www.epa.gov/osp/tribes/tribes.htm>

Matt Small

EPA Region 9 Science Liaison

José Zambrana, Jr.

Tribal Science Council Co-Chair, Senior Science Advisor to the National Exposure Research Laboratory

Briefing to the Region 9 Regional Tribal Operations Committee (RTOC)
February 7, 2018

What is The Tribal Science Council (TSC)?

What Kind of Science Do We Do at EPA?

Tribal Research Opportunities in Region 9 and Nationally

Opportunity for Input on the Office of Research and Development's (ORD) Strategic Research Action Plans

How Can We Identify Tribal Science Needs?

What is the Tribal Science Council?



TSC Mission

“... the mission of the **National EPA-Tribal Science Council** is to provide a forum for the interaction between Tribal and Agency representatives of mutual benefit and responsibility to work collaboratively on environmental science issues... *The Tribal Science Council is committed to the development of sound scientific and cultural approaches to meet the needs of tribes.*”

TSC Overview

- Established in 2001 at National Tribal Caucus (NTC) request to provide scientific support in Indian country
- Forum for interaction between tribes and EPA to collaborate on important science issues
- Supported by Office of Research and Development (ORD)
- Only tribal partnership group with both EPA and tribal scientists and expertise
- Coordinates with NTC to integrate key science needs into EPA's annual planning and budget process



TSC Membership

- Members include representatives from:
- A federally recognized tribe in each EPA region, plus a member from the Alaska Native communities
- Each EPA program and regional office
- Current Co-Chairs
 - Carol Kriebs, Sac and Fox Nation of Missouri
 - José Zambrana, EPA ORD, National Exposure Research Laboratory



R9 Regional Tribal Science Council

- Region 9 Tribal Science Council
 - **Tribal: Carley Whitecrane**, Karuk, CA
 - **EPA: Destinee Cooper**, Region 9

<https://www.epa.gov/regionallabs/epa-region-9-laboratory-regional-science-council-contact-information>



<http://www.epa.gov/tribalportal/>

Understanding and Assisting With Environmental Science Issues in Tribal Communities

- Connect EPA laboratories and centers with tribal communities to strengthen science and outreach
- Facilitate engagement between tribal partnership groups and EPA on community environmental issues
- Science Seminar Series
- EPA Tribal Science Bulletin
- Future opportunities

Previously Identified Tribal Science Issues

- Climate Change
 - *2015 Federal Partners Climate Change Roundtable*
- Integration of Traditional Ecological Knowledge (TEK) in Environmental Science, Policy and Decision-Making
 - *TEK Workshop hosted by Onondaga Nation, June 2013*
 - *Interim Approach for Considering Traditional Ecological Knowledge during the Cleanup Process, EPA Office of Land and Emergency Management, 2016*



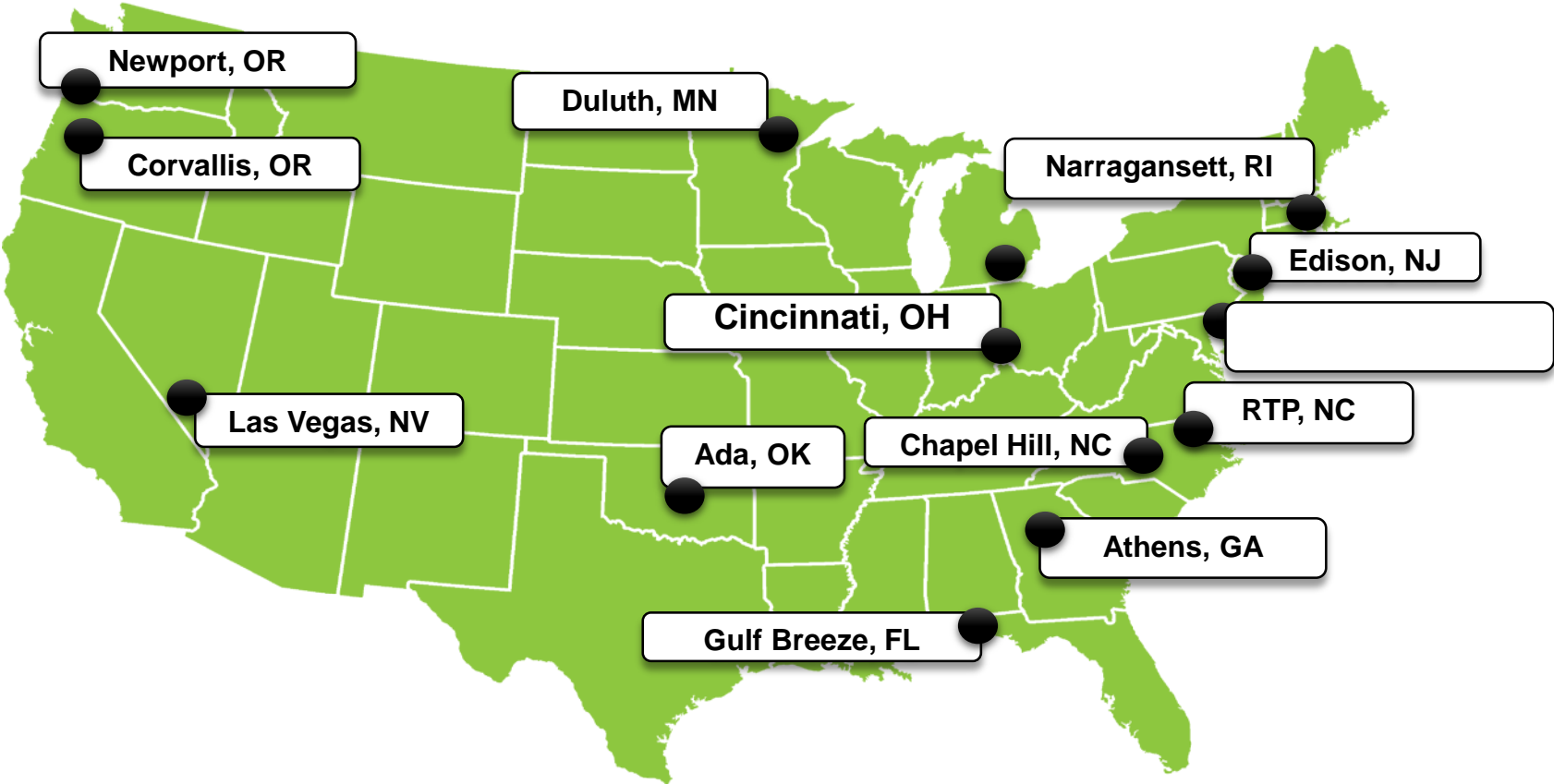
What Kind of Science Do We Do at EPA?

ORD Research

ORD provides the scientific foundation for US EPA to execute its mandate to protect human health and the environment.

- 1. Longer Term Research:** Conducts *innovative and anticipatory* research applied to a range of US EPA program and regional needs to solve longer term environmental challenges and provide the basis of future environmental protection.
- 2. Research on Specific Environmental Challenges:** Experts provide research support to US EPA program and regional offices, as well as states, tribes and communities, to help them respond to contemporary environmental challenges.
- 3. Technical and Emergency Support:** Because of our expertise, local, state and national officials come to us for technical support to respond to environmental crises and needs, large and small.

ORD Locations



Six ORD Research Programs - Relation to R9 Programs

**Air & Energy
(Air)**

**Sustainable &
Healthy
Communities
(Land and
Superfund)**

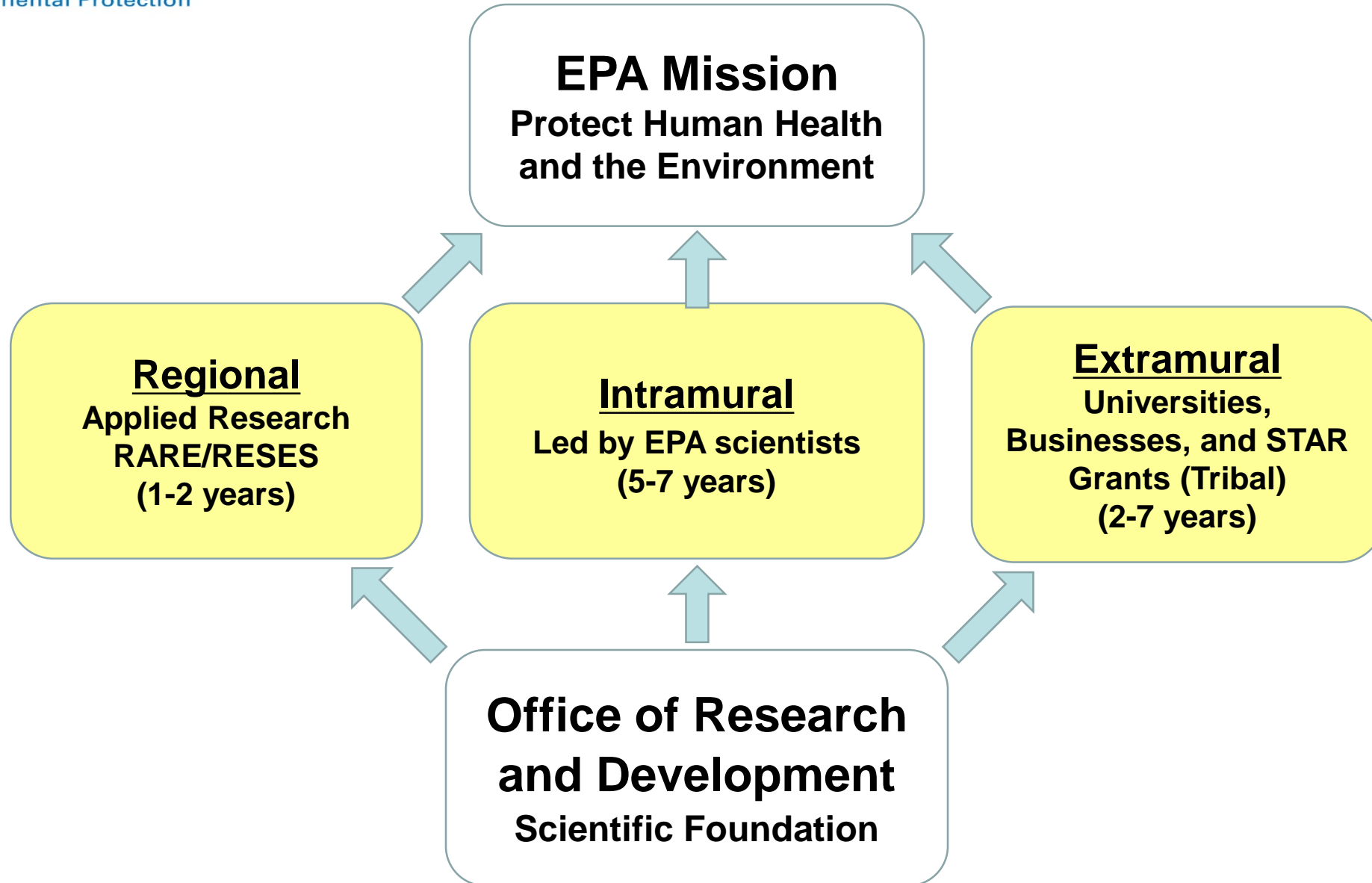
**Homeland
Security
(Emergency
Response)**

**Safe & Sustainable
Water Resources
(Water)**

**Chemical Safety for
Sustainability
(TSCA, Toxicology,
Pollution
Prevention [P2])**

**Human Health Risk
Assessment
(Toxicology/IRIS-
Integrated Risk
Information System)**

Research Areas and Time Frames



Tribal Research Opportunities in Region 9 and Nationally



<http://www.epa.gov/osp/tribes/tribes.htm>

Region 9 Research Resources

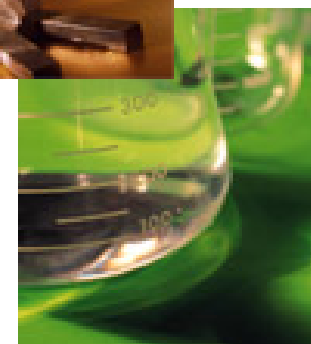
Note: You must collaborate with EPA Staff to access these resources

- Regional Applied Research Effort (RARE)
 - Managed by EPA Office of Research and Development
No money comes to R9 or Partners
 - RARE \$260K competed in R9
 - EPA Region 9 staff proposed projects
 - Proposals must address Regional Science Needs
 - Collaboration with Tribal Partners is encouraged
 - Proposals reviewed; funding not guaranteed

https://www.epa.gov/sites/production/files/2015-10/documents/rare_factsheet_102015.pdf

- Regional Sustainable Environmental Science (ReSES)
 - Managed by EPA Office of Research and Development
No money comes to R9 or Partners
 - ReSES \$800K in 2015 competed nationally
 - PA Region 9 staff proposed projects
 - Proposals must address community and sustainability issues
 - Collaboration with Tribal Partners is encouraged
 - Proposals reviewed; funding not guaranteed

<https://www.epa.gov/healthresearch/regional-sustainable-environmental-science-reses-promote-sustainable-and-healthy>



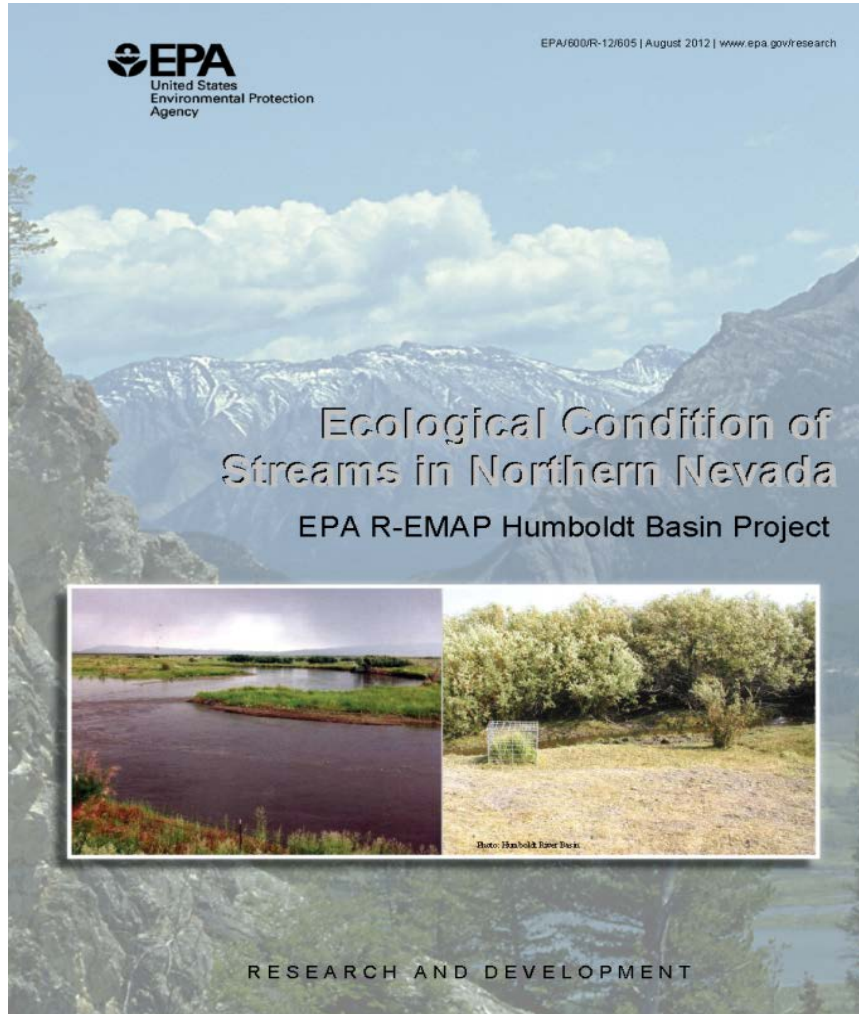
Example Regional Tribal Research Projects

- Using sensors to document improvements in indoor air pollution after stove replacement and home weatherization on the **Navajo Nation** [RARE, \$70K, Region 9, *Kathleen Stewart*]
- Floating Vegetation Islands: Using TEK for Development of Leading Indicators of Ecosystem Function for BMP Effectiveness, Water Quality Standards, Biological Criteria, and Control of Harmful Algal Blooms (HABs), [ReSES, \$100K, Region 9, *Robert Hall*, 2015 **Chemehuevi and Colorado River Indian Tribes**]
- Coal Use for Home Heating and Cooking on **Navajo Nation**: Home Energy Interventions to Improve Children's Health [RARE, \$45K, Region 9, *Kathleen Stewart*, 2011]
- Investigation to Determine Efficacy of Utilizing Restored Anadromous Fisheries Resulting from Dam Removal in Support of Tribal Sustenance and Sustainability [RARE, \$75K, Region 1, **Penobscot Nation**, 2016]



Dipnetting salmon at Lyle Falls on the Klickitat River. photo credit: Dave Terpening US EPA

Intramural Tribal Related Research in R9



http://cfpub.epa.gov/si/si_public_record_Report.cfm?dirEntryId=246611

- Southwest Ecosystems Services
EPA ORD Lab in Las Vegas, NV
 - Tribal Pilot
[*John Lin, Robert K. Hall, Nita Tallent-Halsell*]
 - Properly Functioning Condition of
Ecosystems Tribal-Focused
Environmental Risk and Sustainability
Tool, T-FERST
[*John Lin, Robert K. Hall, Valerie
Zartarian*]
- Arsenic Removal System Tohono O’Odham
Nation, Covered Wells Regional Drinking
Water System



Science to Achieve Results (STAR) Research Grants (Extramural)

STAR grants are the only EPA research grants that directly fund Tribes

Depending on solicitation, STAR grants are available to Tribes, universities, businesses, governments, non-profits

<https://www.epa.gov/research-grants>

STAR Tribal Environmental Health
Research Program

This solicitation does not occur every year, but is open specifically to tribes



Moon Falls, 2001, Karl Banks, Water Division.

<https://www.epa.gov/research-grants/tribal-environmental-health-research>

STAR Tribal Research Grantees



- **Alaska Native Tribal Health Consortium (Anchorage, AK)** - assess, monitor, and adapt to the threats of a changing environment to the sustainability of food and water in remote Alaska native villages.
- **Swinomish Indian Tribal Community (La Conner, WA)** - examine coastal environmental impacts to traditional foods, cultural sites, and tribal community health and well-being.
- **Yurok Tribe (Klamath, CA)** - identifying, assessing, and adapting to environmental change impacts to Yurok water and aquatic resources, food security and tribal health.
- **Little Big Horn College (Crow Agency, MT)** - researching environmental change adaptation and waterborne disease prevention on the Crow Reservation.
- **University of Tulsa (Tulsa, OK)** - examining ways to improve indoor air quality and reduce environmental asthma triggers in tribal homes/ schools.
- **University of Massachusetts-Amherst (Amherst, MA)** - measuring indoor air quality in tents as related to wood smoke exposures and identify potential health risks in remote subsistence hunting communities in North America.

Research Question 3	Activities	Planned Final Grant Deliverable	Year One Completed	Scheduled Work
What are potential risks and risk reduction strategies to protect vital resources from adverse impacts of climate change to water and food resources?	Analysis of differential exposure & impacts to vulnerable subpopulations within the tribe: youth, elders, traditional harvesters and ceremonial practitioners. Identification of potential health risks and issues with food security & safety, related to climate change impacts.	Tribal Climate Change and Tribal Health Mitigation Summary Report.	<ul style="list-style-type: none"> • 1750 CTR has established schedule for and held monthly conference calls to coordinate work on Adaptation Plan including health impacts. • To work to AAN as working on primary data on baseline conditions to inform analysis of proposed impacts. 	<ul style="list-style-type: none"> • RFP for contract for Public Health researchers to be issued October 2023 after first year of summer low flow data collected for analysis.



Opportunity for Input on the Office of Research and Development's (ORD) Strategic Research Action Plans

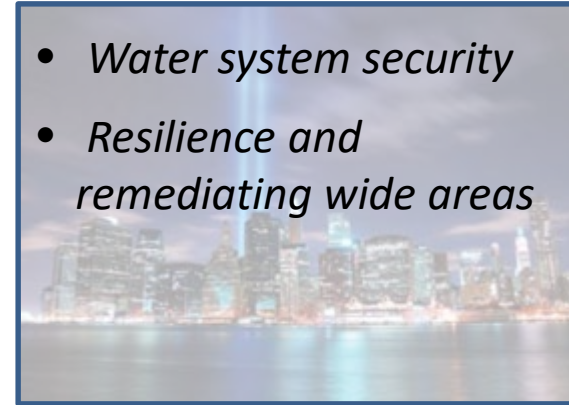
Air and Energy

- 
- *Air pollution*
 - *Air quality modeling*
 - *Decision support tools*

Sustainable & Healthy Communities

- 
- *Ecosystem services*
 - *Human health*
 - *Sustainable materials management*

Homeland Security

- 
- *Water system security*
 - *Resilience and remediating wide areas*


Chemical Safety for Sustainability

- 
- *Computational toxicology and exposure*
 - *Evaluation of risk across life cycle of manufactured chemicals, materials and product*

Human Health Risk Assessment

- 
- *Risk assessments for specific chemicals*
 - *Risk assessment methods*

Safe & Sustainable Water Resources

- 
- *Water treatment and infrastructure*
 - *Watersheds and aquatic ecosystems*
 - *Source/recreational water protection*



ORD Currently “Refreshing” Strategic Research Action Plans (STRAPs) for Next 5 to 7 Years of Research

- STRAPs determine how we spend our EPA research funds
- We want R9 needs incorporated in the new STRAPs as possible
- We are at the beginning of this effort
- Comment process is still being developed
- Current plan is to comment on existing STRAPs from the Region 9 perspective:
 - What current research is important to us and should continue
 - What current research is not important - possibly disinvest
 - What future research should be considered for new efforts
 - What specific products do we need
- **We plan to include State and Tribal input in R9 comments to ORD**

<https://www.epa.gov/research/strategic-research-action-plans-2016-2019>

How Can We Identify Tribal Science Needs?

Reporting Back on Themes from the Nov 2017 TSC Face-to-Face Meeting, Phoenix, AZ

- **Bolster communication and networking**
- **Feature tribal science and tribal work**
- **Continue EPA serving as a resource**
- **Obtain additional feedback on lead curriculum modules**
- **Identify key science needs for Tribes**



Science Needs - Example Areas of Interest

- **Lead exposures and health effects**
- **Health effects of wildfires**
- **Data (analysis, quality control)**
- **Environmental/ecosystem valuation**
- **Tribal health indicators**
 - **Specific to indigenous populations**
 - **Holistic and inclusive of cultural lifeways**



R9 Tribal Science Council Discussion Session Tomorrow 9:00-10:00

- **What kinds of issues are you working on?**
- **What answers and/or science tools could provide the greatest help?**
- **How can TEK be protected?**



Thank you!

**José L. Zambrana, Jr., Senior Science Advisor &
Tribal Science Co-Chair**

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US EPA Office of Research and Development

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Region 9, US EPA

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LUNCH

Strengthening RTOC

Update from Monday's
Special Session

Afternoon Session Themes for Strengthening RTOC:

- Communication & Technology
 - Reworking website
 - Using interactive communication tools
- Sessions & Meeting Themes
- Training Materials/Understanding EPA
- Cultural Considerations/Understanding Tribes
- Strengthening Workgroups
- Understanding Representatives Roles & Responsibilities
- Issues around Tribal Consultation

- ***Next Steps:***
 - Send to Charter Workgroup
 - Incorporate Session requests into next agendas
 - Tribal Section evaluation of website updates, training needs, and potential materials to be developed
 - Identify other workgroups to develop action plans, create new workgroups as needed, identify other resources needed to address issues

Lead and Copper Rule:

Proposed Revisions and Tribal Consultation
Process

Bob Rose & Lisa Christ, US EPA Office of Water



Lead and Copper Rule Revisions

Office of Ground Water and Drinking Water

**Informational Webinar
For
Tribal Consultation**

January 31, 2018



Purpose & Overview

Purpose

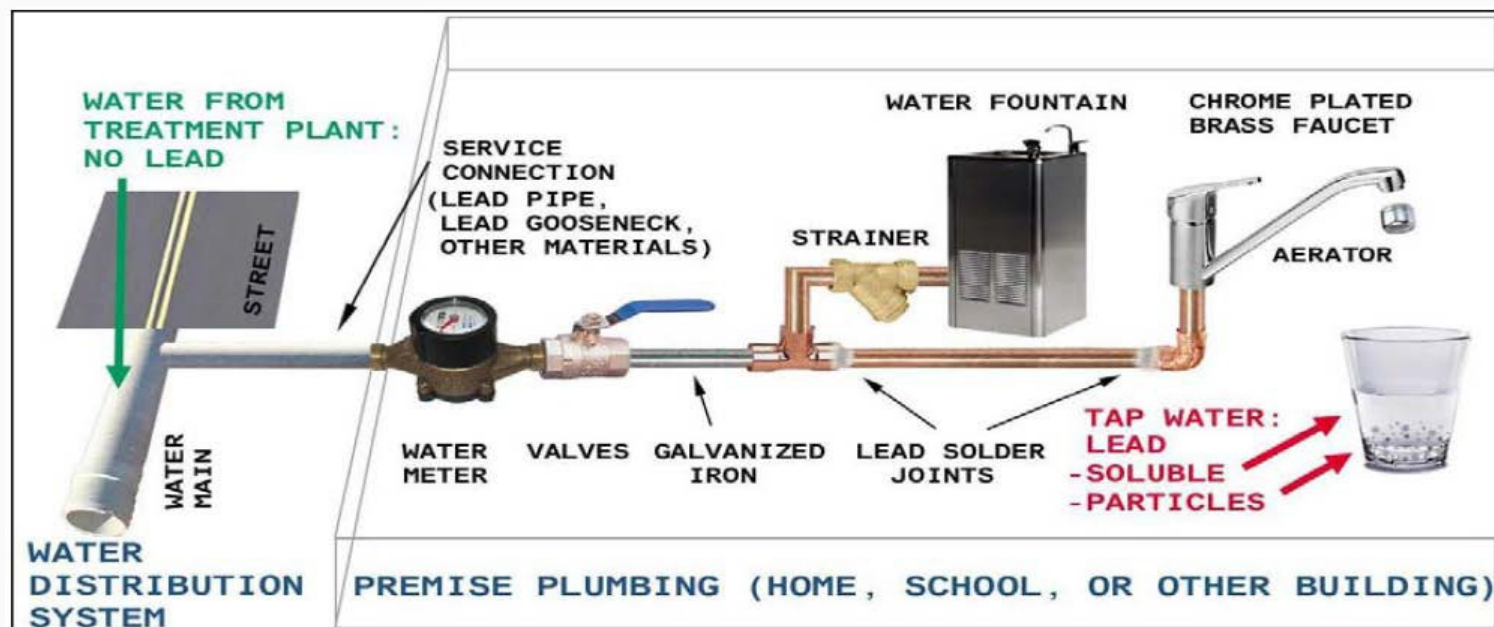
- To provide an overview of potential revisions to key areas of the Lead and Copper Rule and obtain input from tribal officials.
- Consultation comments due: March 16, 2018
- Submit comments to LCRConsultation@epa.gov

Agenda

- Background on the Lead and Copper Rule (LCR)
- Key areas for potential rule revisions
- Cost Information
- Next steps

Lead and Copper Rule (LCR)

- The National Primary Drinking Water Regulation for Lead and Copper was promulgated June 7, 1991.
- Applies to 68,000 public water systems serving ~300 million people (~1,000 systems operating on tribal land (850 owned by tribes) and 1.4 million people on tribal lands)
- Lead and copper enter drinking water mainly from corrosion of lead and copper containing plumbing materials.
- The LCR requires water systems to sample taps and to take actions including treating water to make it less corrosive to plumbing materials that contain lead and copper, educating consumers and replacing lead service lines.





LCR: Health Effects

- Lead:
 - Lead damages the brain, red blood cells and kidneys
 - Studies consistently demonstrate the harmful effects of lead exposure on children, including cognitive function, decreased academic performance and poorer performance on tests of executive function.
 - Lead exposure is also associated with decreased attention, and increased impulsivity and hyperactivity in children.
 - Lead is particularly dangerous to children because their growing bodies absorb more lead than adults and their brains and nervous systems are more sensitive to the damaging effects of lead.
- Copper:
 - Can cause stomach and intestinal distress, liver or kidney damage, and complications of Wilson's disease in genetically predisposed people



Key Challenges with the Current LCR

- The LCR is one of the most complicated drinking water regulations for primacy agencies and drinking water utilities to implement.
- The LCR is the only drinking water regulation that requires sampling in homes, often by the consumers themselves, with very specific sampling procedures that are not always followed.
- The current structure of the rule compels additional protective actions by water systems only after a potential problem has been identified; under the current rule, up to 10% of samples can have highly elevated levels of lead with no additional requirement for actions.
- Many systems have not fully optimized corrosion control treatment or have not maintained optimized treatment, and small systems are not required to optimize corrosion control unless more than 10% of samples exceed the action level.
- In most communities, lead service lines are partially or entirely privately owned and a number of homeowners or renters may be unwilling or unable to replace the portion of the line at their home.



Key Areas for Rule Revisions

- Lead Service Line Replacement
- Corrosion Control Treatment
- Tap Sampling
- Public Education and Transparency
- Copper Requirements



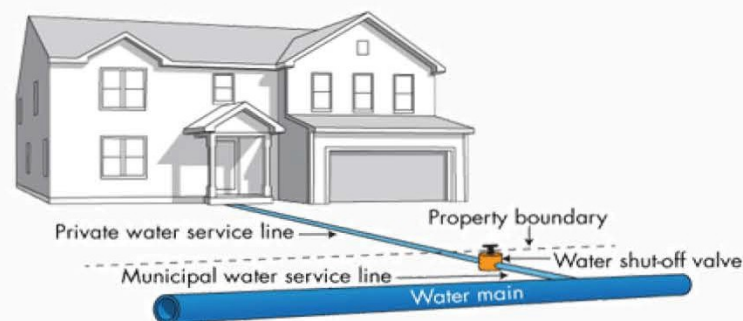
Lead Service Line Replacement

Current Requirements

- Systems that exceed the lead Action Level (AL) after installing corrosion control treatment (CCT) must replace 7% of lead service lines per year (the primacy agency can accelerate)
- Systems are only required to replace portion of the LSL owned by the PWS
- Systems may consider an LSL replaced if a sample from that line is below the AL
- Systems must offer to replace customer owned portion at customer cost
- LSLR can stop when lead \leq AL for 2 consecutive monitoring periods

Challenges

- Most homeowners have declined the opportunity to replace their portion of the lead service line.
- Partial replacements may be harmful due to the disruption of the service line dislodging lead





Lead Service Line Replacement Key Questions

- What are the opportunities and challenges to tribal water systems if EPA were to modify the LCR to:
 - Require systems to create an inventory of lead service lines
 - Require proactive full lead service line replacement on a specified schedule (e.g., 10, 15, 25, 35 years from promulgation)
 - Potential mandatory lead service line replacement requirement would not direct the water system on how to pay for the replacement of lines outside of its ownership or control
 - Allow partial LSLR only for emergency repair or “unwilling or unable customers” when conducting infrastructure replacement (e.g., main replacement)
 - Require pitcher filters to be distributed and regularly maintained by the PWS for three months immediately following lead service replacement



Corrosion Control Treatment

Current Requirements

- Systems serving $>50,000$ required to perform CCT
- Systems serving $\leq 50,000$ required to perform CCT if AL exceeded
- System proposes treatment (or changes) and primacy agency approves

Challenges

- Primacy agencies and water systems often lack needed expertise
- Some small systems with lead service lines are not required to perform CCT





Corrosion Control Treatment Key Questions

- What are the opportunities and challenges to tribes if the LCR was modified to:
 - Target systems required to install CCT differently:
 - Change the current system size threshold (50,000 people served), or
 - Require systems with lead service lines (regardless of population served) to install and maintain
 - Require plumbed in point of use treatment devices to be provided to households with lead service lines and regularly maintained
 - Change the requirements for designating optimal CCT to:
 - Prescribe a default CCT that must be maintained unless a system can demonstrate equivalent C to the primacy agency, or
 - Require the system to conduct a periodic re-evaluation of CCT to be reviewed by the primacy agency
 - Require system to find and fix problems in corrosion control treatment

if a tap sample exceeds an action level



Transparency & Public Education

Current Requirements

- The annual Consumer Confidence Report sent to all consumers must include lead sampling results and an informational statement about the health effects of lead and actions to reduce exposure
- Systems that exceed lead action level must begin public education within 60 days after end of monitoring period:
 - Educational materials must include information on health effects of lead, sources of lead, and steps consumers can take to reduce exposure to lead in drinking water
- The 2016 Water Infrastructure Improvement for the Nation Act (WIIN) requires notice of exceedance of AL within 24 hours

Challenges

- Intensive public education only occurs after a problem has been identified
- Information on lead in drinking water is confusing, particularly results in comparison to the action level



Transparency & Public Education: Key Questions

- What do tribes think are the most effective ways for water systems to deliver educational information to consumers
- What opportunities and challenges would tribal water systems face if the LCR was revised to require:
 - Water systems to provide on-going targeted outreach with a special emphasis on all customers with lead service lines
 - Water systems to provide notification to consumers within 24 hours of exceeding an action level (as required by the 2016 WIIN Act)
 - Water Systems to make information accessible to consumers on results of all tap sampling, results of water quality parameter (WQP) monitoring and the number and locations of LSLs



LCR Tap Sampling

Current Requirements

- Collect samples at residential taps that are at high risk of lead contamination
- 90th Percentile result compared to Action Levels based on treatment feasibility
 - 15 ppb ($\mu\text{g/L}$) lead
 - 1.3 ppm (mg/L) copper

Challenges

- Complicated sampling procedure
- Procedures are not always followed
- Up to 10% of samples can have highly elevated levels of lead with no additional requirement for actions





Tap Sampling Key Questions

- What are the opportunities and challenges for tribal water systems if the rule changed sampling protocols, including:
 - Changing where water systems are required to collect tap samples
 - At sites based on customer request,
 - At schools served by the system,
 - Change the way samples are collected to be more representative of exposure
 - Increase the number of samples required
 - Instruct consumers to sample when they are drawing water for drinking or cooking.
 - Establish a household action level that if exceeded would trigger a report to the consumer and to the applicable health agency for follow up



Copper

Current Requirements

- Copper samples are collected at the same time and customer taps as lead samples.
- The 90th% value of results is compared to the copper AL of 1.3 mg/L.
- If the copper AL is exceeded, water systems must implement CCT.



Copper Revisions

Key Questions

- What opportunities and challenges would tribal water systems face if EPA revised the LCR to:
 - Establish a screen to determine if water systems have water aggressive to copper
 - If water is aggressive, require:
 - monitoring and/or
 - public education and/or
 - CCT
 - Modify tap sampling to require separate sampling sites for copper



How Does it All Fit Together?

- The LCR is a composite of multiple requirements that apply to systems differently depending on system size and water quality
- The revised LCR would similarly bring together multiple key requirements that could vary according to system specific conditions
- One important factor in considering potential changes to the LCR is cost. The following slides provide representative examples of the costs of a few key potential requirements



Example Costs for Key Potential Requirements

Lead Service Line Replacement

- Based on preliminary estimates, replacing a full LSL would cost on average \$4,700 per line replaced
- Cost can vary greatly depending on the length and the amount of pavement that must be restored. Costs may range from \$1,200 - \$12,300 per line replaced





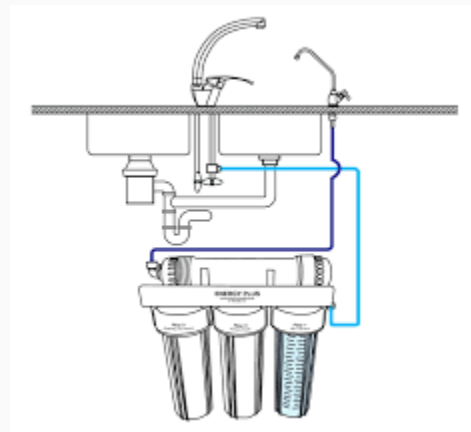
Example Costs for Key Potential Requirements

Estimated Costs for Centralized Orthophosphate Treatment (CCT) Systems				
Public Water System Size (People Served)	Total System Capital Cost (\$)	Annual System O&M Cost (\$)	Total Capital Cost per Household (\$)	Annual O&M Cost per Household (\$)
25-100	18,000	2,000	78	740
100-500	19,000	2,000	21	170
500-1000	21,000	3,000	12	72
1000-3300	22,000	6,000	8	31
3300-10000	39,000	8,000	3	17
10000-50000	48,000	25,000	3	5
50000-100000	63,000	81,000	3	2
100000-500000	92,000	265,000		1

In this table total system and household capital costs are one time costs and are not annualized values. Annualized capital cost would normally be calculated over the useful life of the technology.

Example Costs for Key Potential Requirements

- Plumbed in Point of Use filter devices would have an estimated total annual cost of \$120 per household





Discussion

- Do you have any other approaches that you would like EPA to consider?
- Any additional information or concerns you would like to share with EPA?
- EPA would appreciate any information, and specific data, tribes could provide on their experiences with:
 - lead service line replacement
 - corrosion control treatment (studies and implementation)
 - sampling programs or
 - other aspects of drinking water lead control programs.



Next Steps

- Comments due: March 16, 2018
- Submit comments to LCRConsultation@epa.gov
- For tribes wishing to request government-to-government consultation, we ask that those requests be submitted to the above email address before March 16.
- Additional Information on the LCR:
<https://www.epa.gov/dwreginfo/lead-and-copper-rule>



Questions?

- Tribal Consultation Questions and Follow-up: Bob Rose
Email: LCRConsultation@epa.gov
Phone: 202-564-0322
- Questions about the LCR: Erik Helm
Email: Helm.Erik@epa.gov
Phone: 202-566-1049

Tribal Caucus Report

Alan Bacock, Tribal Co-Chair



Water Quality Impacts and Ongoing Water Quality Monitoring Related to CA Wildfires

Bruce Macler, US EPA Toxicologist

CALIFORNIA WILDFIRE WATER QUALITY IMPACTS



BRUCE MACLER
USEPA REGION 9

WILDFIRES



- About two-thirds of western US municipalities rely on water from forested watersheds
- Wildfires can abruptly and adversely impact these watersheds
- These effects of wildfires are complex and long-lasting

CALIFORNIA WILDFIRES OCTOBER, DECEMBER 2017

9900 HOMES
AND STRUCTURES

500,000 ACRES





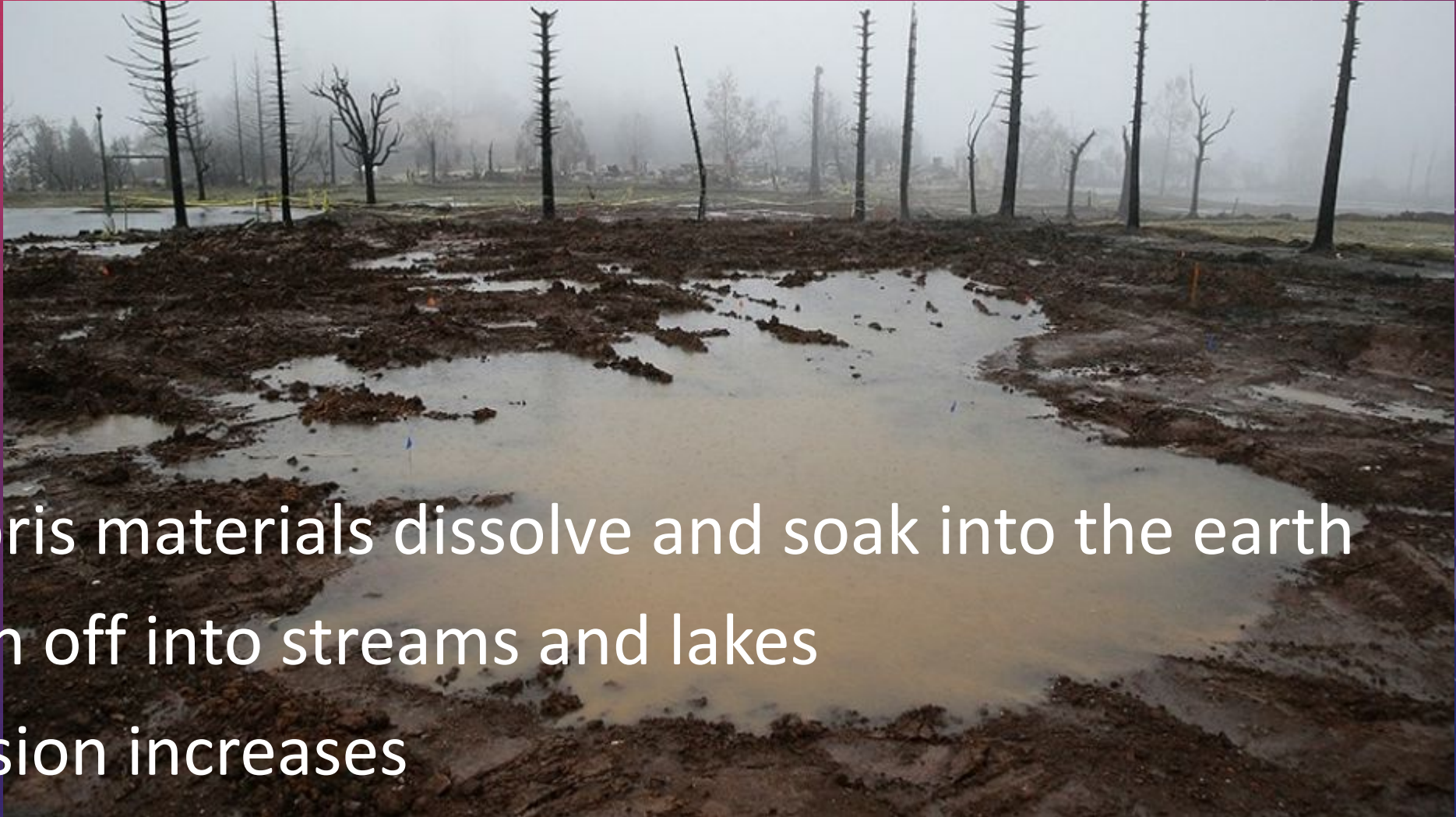
WHAT'S IN THE ASHES?



AND WHERE MIGHT IT GO?



AND THEN THE RAINS COME....



- Fire debris materials dissolve and soak into the earth
- They run off into streams and lakes
- Soil erosion increases

WATER + BURNED MATERIALS = WHAT? CONSTITUENTS OF CONCERN

- From burned wildlands vegetation
 - Nutrients: nitrogen and phosphorous
 - Organic carbon and carbon combustion products (PAHs)
- From burned structures
 - Metals: lead, aluminum, mercury, arsenic
 - Organic carbon and carbon combustion products
- From ash
 - pH changes
 - Sediment and turbidity



IMPACTS ON WATERSHEDS

- Loss of aquatic habitat from sedimentation and scouring
 - Debris and mud flows may be catastrophic
- Changes in species or ecosystems from chemical toxicity
- Eutrophication, dissolved oxygen effects from algal blooms
- Possible toxicity from algal blooms



POST-FIRE WATER QUALITY MONITORING

- In some cases, monitoring may be appropriate
- There is a general consensus on watershed constituents of concern
 - Turbidity/ total suspended solids
 - Total organic carbon
 - Total nitrogen (nitrate, ammonia)
 - Phosphorous
 - pH



MONITORING CONSIDERATIONS

- Post-fire water quality can change over months or years, depending on rainfall and recovery
- Useful to have a baseline sample before first significant runoff
- Sample “first flush” (first storm-related increase in flows)
- Sample subsequent flushes from later storms
- If in snow country, sample during spring melt



SHORT-TERM MITIGATION STRATEGIES

- Removal of toxic materials and debris from burned structures and adjacent land
- Installation of wattles, hay bales and silt screens to control bulk sediment and ash flows into waterbodies
- Installation of artificial groundcover
- Reseeding

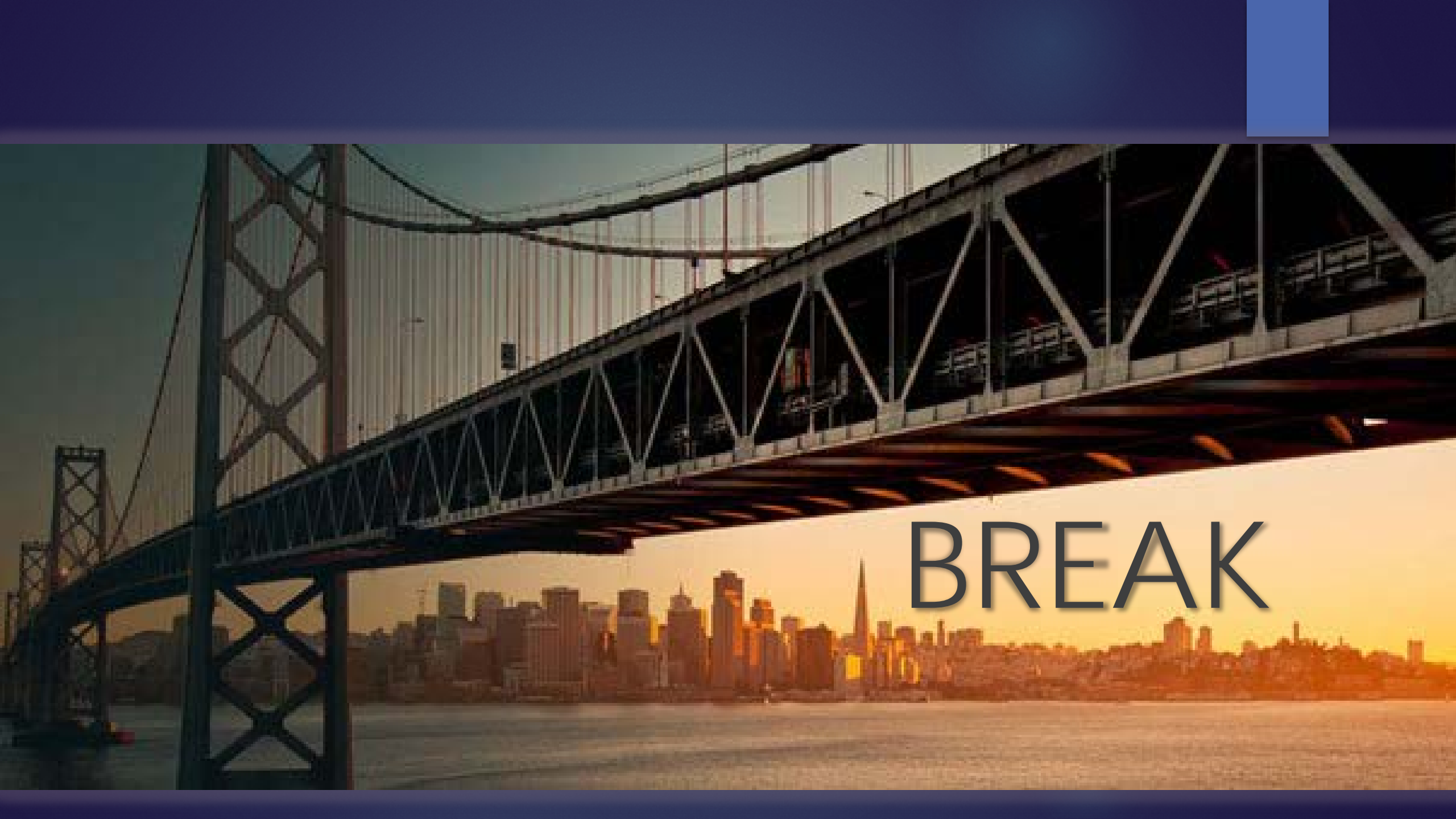


QUESTIONS?



Workgroup Leads Report Out

Recent Activities, Planned
Meetings, and Goals for the
Year



BREAK



EPA Response to Tribal Caucus Report

- Written responses will be posted on the RTOC website within 30 days
- GAP Workgroup, 2:30 – 3:30pm
- Grants.gov Training, 11:30 – 12:00pm (CA Room)

- Would like the full list of action items to be available within a month of the RTOC Meeting. We couldn't locate them on the EPA Website or in an email.
- Noted that it is hard to have three meetings so close together in San Francisco. Is there a possibility one will be in the North Bay? Maybe the Annual Conference in Sonoma County?

- Please provide a status update on WOTUS rule changes. Tribes monitor Tribal waters and there is no requirement for Tribal waters to be WOTUS to utilize EPA funding for monitoring. Therefore, any WOTUS change should not affect the ability of Tribes to use federal funding to implement Tribal WQS. Does EPA concur with this? Since EPA retains enforcement authority under the Clean Water Act, how will enforcement of violations to Tribal WQS on streams be implemented if the definition of WOTUS changes to exclude ephemeral or intermittent streams?
- Is the effort to develop federal Water Quality Standards still being considered?

- Many Tribes desire to start or expand air quality monitoring but funding is not available. How will EPA work to increase funding for the Tribal CAA 103 program?

- Heard that EPA has a new policy on leasing buildings. Was told that the EPA lab in Richmond, CA is being moved to another region. Is there going to be a regional replacement so that we are able to continue to have access for our lab work? What other EPA offices are being affected by this?

- Who is the lead for the Emergency Planning Work Group? Could we have another updated workgroup list sent out?

- Please provide a more detailed response to the issue previously raised requesting the EPA Project Officers respond and approve quarterly reports in a timely manner (e.g. 60 days) and not doing more than a one-year review.

For individual grant management issues, tribes are encouraged to contact the relevant manager as needed:

Laura Ebbert
(Tribal Section Manager)
415-947-3561

Jason Brush
(Tribal Water Section Manager)
415-972-3483

Stephanie Valentine

- Re: Anaconda Mine, the tribes are questioning whether they should be meeting with the region or with HQ, as decisions do not appear to be made at the regional level. Specific concerns include: inadequate consultation, EPA's failure to meet with decision makers, demand for equal representation and advanced notice of any meetings or visits, and concern that information being provided to states can impact the tribes authority and force tribes to go through states for funding.
- What is the status of pending applications for TAS applications under both the CWA and the CAA?
- What is the status of staffing (FTE) at the agency? Concern that EPA staffing reductions are impacting tribal funding and/or technical support for tribes.



Review New Issues & Action Items

WINTER 2018 RTOC MEETING ACTION ITEMS

ACTION ITEM	WHO	WHEN	STATUS

Closing Comments

Alan Bacock & Jeff Scott
RTOC Co-Chairs

Thank you for joining us!

You can find all the information from today on the RTOC website:

<https://www.epa.gov/tribal/regional-tribal-operations-committee-region-9>

