

Responses to Survey Questions for Regional Haze

Survey Purpose and Instructions

“The purpose of the Regional Haze Survey was to identify key concerns and needs of WESTAR states for preparation of the upcoming Regional Haze SIPs. The WRAP Regional Haze Planning Work Group, who are preparing the 2017 WRAP Regional Haze Work Plan, are collating the responses to this survey. The Work Plan supports the technical needs of the second 10-year planning period for the WESTAR states.

The survey was sent to the states (and Albuquerque) on the mailing lists of the WESTAR Planning and Technical Committees. We asked that each state fill out one survey. Eventually every state writing a SIP will need to have someone as the point person for regional planning tasks and to facilitate interstate, tribal, and federal land manager consultation.

A separate group of state SIP writers from all the western states will likely be convened later in 2017, as an element of the WRAP 2017 Work Plan, once we learn more about the final guidance.

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WRAP Regional Haze Planning Work Group Members and Advisors:

Tom Moore	WRAP
Patricia Brewer	National Park Service
Curtis Taipale	Colorado DPHE
Jeremy Neustifter	Colorado DPHE
Mike Edwards	Idaho DEQ
Cyra Cain	Montana DEQ
Rebecca Harbage	Montana DEQ
Brenda Harpring	Nevada DEP
Rita Bates	New Mexico ED
Amber Potts	Wyoming DEQ
Krishna Viswanathan	US EPA
Molly Birnbaum	Alaska DEC
Elias Toon	Arizona DEQ
Ryan Templeton	Arizona DEQ
Bob Lebens	WESTAR

Responses to Survey Questions for Regional Haze (RH)

1. *Identify your state and agency responsible for RH SIP Preparation.*

All states, but one, and Albuquerque were able to respond to the survey.

2. *Please identify agency staff familiar with writing a Regional Haze SIP or a Regional Haze Progress Report. Please see the [Appendix](#) for additional information.*

Contacts familiar with the Regional Haze process	
Name	Agency
Lisa Tomczak	Arizona DEQ
Ryan Templeton	Arizona DEQ
Michael Burton	Arizona DEQ
Ed Merta	City of Albuquerque
Tina Suarez-Murias	California ARB
Webster Tasat	California ARB
Sylvia Vanderspek	California ARB
Karen Magliano	California ARB
Curtis Taipale	Colorado DPHE
Lisa Devore	Colorado DPHE
Daniel Bon	Colorado DPHE
Mike Madsen	Hawaii DOH
Stephen Coe	Montana DEQ
Rhonda Payne	Montana DEQ
Craig Henrikson	Montana DEQ
Rebecca Harbage	Montana DEQ
Frank Forsgren	Nevada DEP
Brenda Harpring	Nevada DEP
Rita Bates	New Mexico AQB
Neal Butt	New Mexico AQB
Kerwin Singleton	New Mexico AQB
Tom Bachman	North Dakota DOH
Rick Boddicker	South Dakota DENR
Dave McNeill	Utah DEQ
Brock LeBaron	Utah DEQ
Mark Berger	Utah DEQ
Alan Neman	Washington DOE

3. Please identify a single point of contact for Regional Haze for your agency and an alternative, including their contact information. For additional contact information please see the [Appendix](#).

State/Local Regional Haze Contacts		
Name	Agency	Geography
Cindy Heil	Alaska DEC	Alaska
Jon Wendel	Alaska DEC	Alaska
Ryan Templeton	Arizona DEQ	Arizona
Elias Toon	Arizona DEQ	Arizona
Ed Merta	City of Albuquerque	Albuquerque, NM
Dario Rocha	City of Albuquerque	Albuquerque, NM
Tina Suarez-Murias	California ARB	California
Webster Tasat	California ARB	California
Curtis Taipale	Colorado DPHE	Colorado
Jeremy Neustifter	Colorado DPHE	Colorado
Mike Madsen	Hawaii DOH	Hawaii
Keith McFall	Hawaii DOH	Hawaii
Mike Edwards	Idaho DEQ	Idaho
Mary Anderson	Idaho DEQ	Idaho
Rebecca Harbage	Montana DEQ	Montana
David Klemp	Montana DEQ	Montana
Frank Forsgren	Nevada DEP	Nevada
Brenda Harpring	Nevada DEP	Nevada
Rita Bates	New Mexico AQB	New Mexico
Neal Butt	New Mexico AQB	New Mexico
Tom Bachman	North Dakota DOH	North Dakota
Terry O'Clair	North Dakota DOH	North Dakota
Rick Boddicker	South Dakota DENR	South Dakota
Kyle Heimerl	South Dakota DENR	South Dakota
Jay Baker	Utah DEQ	Utah
Mark Berger	Utah DEQ	Utah
Anya Caudill	Washington DOE	Washington
Farren Herron-Thorpe	Washington DOE	Washington
Amber Potts	Wyoming DEQ	Wyoming
Rob Leteff	Wyoming DEQ	Wyoming

4. *Please identify items with which your agency may need assistance, or areas where staff lacks experience with Regional Haze SIP preparation tasks. The information below represents items that received a vote from over 70% of respondents. Items regarding modeling received the greatest interest overall. The full results can be viewed in the [Appendix](#).*

Monitoring

Developing Baseline Visibility Conditions – 73%
 Developing Natural Conditions estimates – 73%

Emission Inventories

Forecasting Inventories (2028) – 73%

Control measure analysis

Federal Lands Controls – 73%

Modeling

Splitting Natural and Anthropogenic Source Contributions – 87%
 Determining International Contributions – 87%
 Assessing In-Country but Out-of-State Contributions – 80%
 Photochemical Grid Modeling (CMAQ, CAMx) – 87%
 Projecting Future IMPROVE data (2028) – 93%

Specific Rule Requirements

Setting Reasonable Progress Goals (RPGs) – 93%

Additional Topics

Accessing data in/from other states – 73%
 Using FLM/RPO/USEPA databases – 73%

- 5 - 6. *Please identify your designated Federal Land Manager (FLM) contacts for the Class I Areas in your state and provide their contact information. If your state sources have emissions that may impact Class I Areas in other states, please list the designated FLM contact for that Class I Area.*

Federal Land Managers		
Name	Agency	Identified by which state(s)
Ronald Sherron	USFS	AZ
Christopher Marks	NPS	AZ
Tim Allen	FWS	ABQ, CO, ID, NV, NM
Joshua Hall	USFS	ABQ, CO, NM
Bret Anderson	USFS	ABQ, ID
Jack Triepke	USFS	ABQ
Pat Brewer	NPS	ABQ, CA, CO, HI, ID, NM, SD, UT, WA
Trent Procter	USFS	CA
Judy Rocchio	NPS	CA

Federal Land Managers		
Name	Agency	Identified by which state(s)
Catherine Collins	FWS	MT
Thomas Dzomba	USFS	MT
Andrea Stacy	NPS	MT
Nora Rasure	USFS	NV
Rick Graw	USFS	NV, WA
Scott Copeland	USFS	NV
Bruce Polkowsky	NPS	NV
Don Shepherd	NPS	NV, ND
Meredith Bond	FWS	ND
Jim Sander	USFS	ND
Trent Wickman	USFS	ND
Ken Hyde	NPS	SD
Debbie Miller	USFS	UT
Leonard Herr	BLM	UT
Tonnie Cummings	NPS	WA

7. *Please briefly describe your existing mechanisms for working with FLMs.* The following responses were most common. Total responses are in parentheses. Full results can be found in the [Appendix](#).

- 1) Scheduled or As-needed meetings or calls (8)
- 2) Formal correspondence (3)
- 3) WRAP Meetings (2)
- 4) Email (2)

8. *Does your agency have a Smoke Management Program (SMP)? Is it considered an enhanced SMP? Is your SMP in your Regional Haze SIP (by description only or as an enforceable control measure)?* Full results are found in the [Appendix](#).

- 93% of respondents have a Smoke Management Plan
- Of those that have a SMP, 36% are considered Enhanced SMPs
- Of those that have a SMP; 36% are in the SIP by description, 36% are enforceable in the SIP, and 14% are not in the SIP

9. *Do you plan to use your initial SIP as a model format for the next SIP, or do you anticipate changing the format?*

73% will maintain the current format
 27% will change the format

10. In the initial RH SIP, please identify who your agency consulted with. Please comment if you think these will be the same states you will consult with in the upcoming SIPS or if there will be some changes. The full results can be viewed in the [Appendix](#).

60% of states consulted with adjacent and further removed states. Most of those non-adjacent states consulted with were WRAP/WESTAR states. Most states plan to consult with the same states in upcoming SIPS.

11. Do you know which Tribes need to be notified and consulted with in your state?

73% Yes
27% No

12. Do you know how to consult with the Tribes for Regional Haze SIP purposes?

67% Yes
33% No

13. Does your state have a designated EPA contact person in your Region for Regional Haze Coordination? If yes, please include the name of your EPA region contact. All but one state has a designated EPA contact in their region. However, at least one contact was identified from each region.

EPA Contacts by Region	
Contact Name(s)	Region
John Walser, Michael Feldman	6
Aaron Worstell, Jaslyn Dobrahner, Gail Fallon, Crystal Ostigard	8
Krishna Viswanathan, Colleen McKaughan, Carol Bohnenkamp,	9
John Chi	10

14. Does your RH SIP preparation agency have any expectations for WRAP in the regional process of SIP development? Along with high responses for regional modeling, inventory coordination, and consultation facilitation, states mentioned updates and maintenance to the TSS website, developing Reasonable Progress Goals, and developing the baseline. Full results are in the [Appendix](#).

Expectation	Percentage of Respondents
Regional Modeling	87%
Inventory Coordination	80%
Consultation Facilitation	73%

15. Are there other actions that can be taken to facilitate the Regional Haze SIP preparation process? The responses included many other topics of interest that are included in the [Appendix](#).

Most Common Responses							
	White papers	Training	TSS Training	Shared consultant support	External Funding	Prepared Public Education/ Outreach materials	Facilitated meetings with interest groups or stakeholders
# of States	5	12	5	5	12	9	12
Percent	42%	80%	42%	42%	80%	60%	80%

17. Do you have any other comments that we need to consider? Due to the open ended nature of this question the full results are included below.

Overall respondents requested any and all support for Regional Haze SIP preparation.

Modeling:

- Modeling assistance is needed.
- Need consistent boundary conditions modeling platform between states.

WESTAR-WRAP:

- WESTAR-WRAP to help facilitate consultation with FLMs, interstate/interagency coordination, regular meetings and conference calls.
- WESTAR ad hoc Regional Haze Working Group should have state representatives from both planning and technical.

Visual Range:

- Develop white paper on Visual Range improvements as new method to demonstrate progress in western states.

IMPROVE data:

- Correlate PM and Ozone data at IMPROVE monitor sites, where both exist, to understand sources of emissions.
- Collaboration with WRAP and other states in examining IMPROVE monitoring data quality and uncertainty (Hawaii).

Reasonable Progress :

- IMPROVE data has been showing an improving trend for most Class I areas. In the future as large point sources become well controlled, area and mobile sources will become the focus of potential control evaluation. There is difficulty in controlling area and mobile source emissions because they are under the purview of federal regulations or these sources are so small, they are not cost effective to control. Evaluating IMPROVE data with model output data becomes a frustrating exercise because new emissions growth overwhelms most of the future emission controls. What is Reasonable Progress?

Existing studies/research papers:

- Utilizing existing EPA, FLM or university studies of nitrate deposition in waterbodies and waterways in Class I areas could shed light on sources contributing to precursor transport, atmospheric formation, and deposition.
- Utilizing existing research papers measuring meteorological, plant species, animal species changes over time at western Class I Areas might be informative for explaining changes in natural conditions.

Set priorities / establish partnerships / funding:

- Need to set priorities related to rule requirements due to uncertainty of funding. Partnerships may be required to secure funding for tasks with multiple purposes.

Tribal liaison:

Tribal liaisons may be able to help with tribal issues. Shannon Dilley is tribal liaison for CA.

Appendix

Question 2

Please identify agency staff familiar with writing a Regional Haze SIP or a Regional Haze Progress Report.

Name	Agency	email address	phone number
Lisa Tomczak	Arizona DEQ		
Ryan Templeton	Arizona DEQ	Templeton.Ryan@azdeq.gov	602-771-4230
Michael Burton	Arizona DEQ		
Ed Merta	City of Albuquerque	emerta@cabq.gov	505-768-2660
Tina Suarez-Murias	California ARB	Christine.Suarez-Murias@arb.ca.gov	916-323-1495
Webster Tasat	California ARB	Webster.Tasat@arb.ca.gov	916-323-4950
Sylvia Vanderspek	California ARB		
Karen Magliano	California ARB		
Curtis Taipale	Colorado DPHE	curtis.taipale@state.co.us	303-692-3265
Lisa Devore	Colorado DPHE		
Daniel Bon	Colorado DPHE		
Mike Madsen	Hawaii DOH		808-586-4200
Stephen Coe	Montana DEQ		
Rhonda Payne	Montana DEQ		
Craig Henrikson	Montana DEQ		
Rebecca Harbage	Montana DEQ		
Frank Forsgren	Nevada DEP	fforsgre@ndep.nv.gov	775-687-9364
Brenda Harpring	Nevada DEP	bharprin@ndep.nv.gov	775-687-9498
Rita Bates	New Mexico AQB		
Neal Butt	New Mexico AQB		
Kerwin Singleton	New Mexico AQB		
Tom Bachman	North Dakota DOH		
Rick Boddicker	South Dakota DENR		
Dave McNeill	Utah DEQ		
Brock LeBaron	Utah DEQ		
Mark Berger	Utah DEQ	mberger@utah.gov	
Alan Neman	Washington DOE		

Question 3

Please identify a single point of contact for Regional Haze for your agency and an alternative, including their contact information.

Name	Agency	Email Address	Phone Number
*Cindy Heil	Alaska DEC	cindy.heil@alaska.gov	
Jon Wendel	Alaska DEC	jon.wendel@alaska.gov	
*Ryan Templeton	Arizona DEQ	Templeton.Ryan@azdeq.gov	
Elias Toon	Arizona DEQ	Toon.Elias@azdeq.gov	
*Ed Merta	City of Albuquerque	emerta@cabq.gov	505-768-2660
Dario Rocha	City of Albuquerque		505-768-2637
*Tina Suarez-Murias	California ARB	Christine.Suarez-Murias@arb.ca.gov	916-323-1495
Webster Tasat	California ARB	Webster.Tasat@arb.ca.gov	916-323-4950
*Curtis Taipale	Colorado DPHE	curtis.taipale@state.co.us	303-692-3265
Jeremy Neustifter	Colorado DPHE	jeremy.neustifter@state.co.us	303-692-6302
*Mike Madsen	Hawaii DOH		808-586-4200
Keith McFall	Hawaii DOH		808-586-4200
*Mike Edwards	Idaho DEQ	Mike.Edwards@deq.idaho.gov	208-373-0438
Mary Anderson	Idaho DEQ	Mary.Anderson@deq.idaho.gov	208-373-0202
*Rebecca Harbage	Montana DEQ		
David Klemp	Montana DEQ		
*Frank Forsgren	Nevada DEP	fforsgre@ndep.nv.gov	775-687-9364
Brenda Harpring	Nevada DEP	bharprin@ndep.nv.gov	775-687-9498
*Rita Bates	New Mexico AQB		
Neal Butt	New Mexico AQB		
*Tom Bachman	North Dakota DOH		
Terry O'Clair	North Dakota DOH		
*Rick Boddicker	South Dakota DENR		
Kyle Heimerl	South Dakota DENR		
*Jay Baker	Utah DEQ	jbaker@utah.gov	
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Farren Herron-Thorpe	Washington DOE	Ferren.herron-thorpe@ecy.wa.gov	360-407-7658
*Amber Potts	Wyoming DEQ	amber.potts@wyo.gov	307-777-2489
Rob Leteff	Wyoming DEQ	robert.leteff@wyo.gov	307-777-7740

*Primary Contact

[Question 4](#)

Please identify items with which your agency may need assistance, or areas where staff lacks experience with Regional Haze SIP preparation tasks. Check all that apply. (This will help assess training needs.)

Item	Total	Percentage
Monitoring		
Developing Baseline Visibility Conditions	11	73%
Developing Natural Conditions estimates	11	73%
Analysis of IMPROVE speciated monitor data, including trend analyses	8	53%
Evaluating IMPROVE monitoring needs	8	53%
Determining RAVI monitoring requirements	5	33%
Emission Inventories		
Emissions Inventory preparation and NEI refinement	7	47%
Inventory trend analysis (over time and season)	8	53%
Tracking prescribed fires (timing, location, emissions)	4	27%
Tracking wildfires (timing and impact areas)	7	47%
Forecasting Inventories (2028)	11	73%
Control measure analysis		
Top-down BACT (4-factor analysis for single facility source(s))	3	20%
Area Source Controls	9	60%
Federal Lands Controls	11	73%
Assessing reasonable controls (4-factor analysis for source categories)	10	67%
Modeling		
Back-Trajectory - Hysplit modeling	10	67%
Splitting Natural and Anthropogenic Source Contributions	13	87%
Determining International Contributions	13	87%
Assessing In-Country but Out-of-State Contributions	12	80%
Photochemical Grid Modeling (CMAQ, CAMx)	13	87%
Source Plume Modeling (e.g. CalPuff)	8	53%
Projecting Future IMPROVE data (2028)	14	93%
Specific Rule Requirements		
Setting Reasonable Progress Goals (RPGs)	14	93%
Consultation with other States	7	47%
Consultation with Tribes	6	40%
Additional Topics		
Accessing data in/from other states	11	73%
Outreach and Public Education	6	40%
Using FLM/RPO/USEPA databases	11	73%
Using WRAP TSS and other WRAP tools	8	53%
RAVI processes	3	20%

[Question 7](#)

Please briefly describe your existing mechanisms for working with FLMs. If unsure or no mechanism is in place, please leave blank.

State/Locality	Mechanisms
Alaska	WRAP Meetings, Local Stakeholder Meetings
Arizona	-
Albuquerque	-
California	Air and Land Manager Meetings, Scheduled conference calls, As needed FLM briefings, 60 day review
Colorado	As needed calls or in-person meetings
Hawaii	-
Idaho	As needed calls
Montana	PSD Permitting, BLM O&G Development, SMPs
Nevada	WRAP Meetings, Formal correspondence
New Mexico	-
North Dakota	-
South Dakota	Email and Phone consultation
Utah	Certified letters, email
Washington	-
Wyoming	-

Question 8

Does your agency have a Smoke Management Program (SMP)? Is it considered an enhanced SMP? Is your SMP in your Regional Haze SIP (by description only or as an enforceable control measure)?

State/Locality	Yes	No	Enhanced SMP?	In your SIP?
Alaska	1		Yes	
Arizona	1		Yes	description
Albuquerque	1		Yes	enforceable
California	1		Not sure	description
Colorado	1		No	description
Hawaii	1		No	description
Idaho	1		No	enforceable
Montana	1		Not sure	only portion state submitted
Nevada	1		Yes	description
New Mexico	1		Yes	enforceable
North Dakota	1		No	enforceable
South Dakota		1	No	No
Utah	1		No	enforceable
Washington	1		No	Not for RHR
Wyoming	1		No	No
Total	14	1	5	
Percentage	93%	7%	33%	

[Question 10](#)

In the initial RH SIP, please identify whether your agency consulted with. Please comment if you think these will be the same states you will consult with in the upcoming SIPS or if there will be some changes.

State/Locality	No Other States	Only Adjacent States	Both Adj. & Further Removed	States not in WRAP	Same States?	Notes
Alaska	1				-	
Arizona			1		Yes	
Albuquerque		1			Yes	
California			1		Yes	
Colorado			1	Kansas, Nebraska, Texas, Southern Utes, and Ute Mountain	Yes	
Hawaii	1				-	Plan to consult with AK
Idaho		1			Yes	
Montana	-	-	-	-	-	
Nevada		1			Yes	
New Mexico			1	Texas	Yes	
North Dakota			1	Minnesota and LADCO states	No	Will probably only consult with Minnesota
South Dakota			1	Minnesota, Michigan, Nebraska	Yes	
Utah			1		Yes	
Washington			1		Yes	May include fewer WRAP states
Wyoming			1		-	
Total	2	3	9			
Percentage	13%	20%	60%			

[Question 14](#)

Does your RH SIP preparation agency have any expectations for WRAP in the regional process of SIP development? (e.g. regional modeling, inventory coordination, consultation facilitation, etc.)

State/Locality	Regional Modeling	Inventory Coordination	Consultation Facilitation	Additional
Alaska				No response
Arizona				No response
Albuquerque	1	1	1	
California	1	1	1	Baseline, TSS database, FETS and PFIRS, RP goals, Consultation with tribes
Colorado	1	1		Baseline, RP Goals
Hawaii	1			URP
Idaho	1	1	1	FLM Consultation
Montana	1	1	1	
Nevada	1	1	1	
New Mexico	1	1	1	
North Dakota	1	1	1	
South Dakota	1	1	1	
Utah	1	1	1	Progress report TSD for states
Washington	1	1	1	4 factor reviews for area and mobile, WRAP tools, TSS
Wyoming	1	1	1	
Total	13	12	11	
Percentage	87%	80%	73%	

Question 15

Are there other actions that can be taken to facilitate the Regional Haze SIP preparation process? (e.g. white papers, training, shared consultant support, external funding, prepared public education/outreach materials, facilitated meetings with interest groups or stakeholders, etc.)

	White papers	Training	TSS Training	Shared consultant support	External Funding	Prepared Public Education/ Outreach materials	Facilitated meetings with interest groups or stakeholders
# of States	5	12	5	5	12	9	12
Percentage	42%	80%	42%	42%	80%	60%	80%

Additional specific topics of interest:

Training:

- TSS Training
- Training new state staff on RH SIP preparation, including analyzing monitoring data and trends / same for emission inventories; Hysplit modeling; international impacts (international emissions impact modelling for proportional analysis) (CA)
- Modeling support for noncontiguous state (Hawaii)
- Regional Haze 101 training for new staff (ID)

External Funding:

- External funding to support SIP development: regional modeling, inventory coordination, consultation facilitation (CA)
- Additional funding from EPA is necessary to produce an analysis similar to the first 10-year planning period Regional Haze SIP (CO)

Prepared Public Education / Outreach materials:

- Outreach materials on success in improving visibility (CA)
- A shared website to inform the public (WA)

Facilitated meetings with interest groups or stakeholders:

- Face-to-face meetings (CA)
- Conference calls with EPA and FLMs
- have Tom Moore explain process to upper management and affected community - large point sources (ID)

Additional interests:

- Protocol for developing more accurate Natural Conditions estimate for 2064 (CA)
- Collectively develop informational tools similar to TSS. Having collective knowledge of what other states are doing helps those in the affected community understand that they aren't singled out. (ID)