

2017 and subsequent years - Deliverables by TSC and Work Groups - April 26, 2017

	Deliverable	Source	Funding	Timeline
TSC	Oversee finalization of the 2017 calendar year annual workplan and budget for Board approval. All WRAP Work Groups’ tasks and activities, as well as WRAP projects are to be documented in the annual workplan.	TSC 2017 Workplan Sub-group; approval by TSC.	In-kind	April 2017
	<p>Coordinate among and provide oversight for the activities conducted under grants, cooperative agreements, and other Board-authorized WRAP projects.</p> <p>Provide monthly status updates to WRAP Board during monthly WRAP meetings of Work Group progress and the activities conducted under grants, cooperative agreements and other Board-authorized WRAP projects.</p> <p>Provide coordination for the Work Groups and staff, and their projects and tasks.</p> <p>Ensuring periodic interaction with the Work Groups’ Chairs and members and with the contractors operating any projects</p>	<p>TSC, WRAP Staff</p> <p>TSC, WRAP Staff</p> <p>WRAP staff</p> <p>WRAP staff</p>	<p>TSC in-kind; WRAP staff budget</p>	<p>Ongoing</p> <p>Ongoing, Monthly WRAP Board Calls</p> <p>Ongoing</p> <p>Ongoing</p>
	<p>Workplan and Work Group oversight and direction</p> <ul style="list-style-type: none"> • Working with the Board-approved Work Group Co-Chairs to complete Work Group memberships • Working with the WRAP Work Groups on development and finalization of their individual Work Group Workplans • Establishing monthly status reports, with Work Groups and WRAP project leads reporting progress to the TSC during monthly TSC meeting 	TSC, WRAP Staff	TSC in-kind; WRAP staff budget	<p>March 1, 2017</p> <p>Regional Haze Planning: April 1, 2017; All others: February 15, 2017</p> <p>Monthly TSC Calls</p>
	<p>Spring TSC & Workgroup Co-Chairs Meeting</p> <p>Fall TSC & Workgroup Co-Chairs Meeting</p>	TSC & WRAP Staff, in coordination with WG Co-Chairs	<p>TSC & WG Co-Chair in-kind for April</p> <p>2017 Workplan funding request</p>	<p>April 2017 (virtual)</p> <p>Fall 2017</p>

	<p>Coordinate with WESTAR committees and work groups to ensure activities conducted in WRAP projects, under the auspices of the TSC and WRAP Work Groups, provide needed support.</p> <p>Maximize coordination within WRAP and leverage work of other related partner organizations through outreach, hosting and attending technical conferences and producing white papers to network with other organizations with common interests and needs.</p>	<p>WRAP Staff</p> <p>TSC & WRAP Staff, in coordination with WG Co-Chairs</p>	<p>WRAP staff budget</p> <p>TSC & WG Co-Chair in-kind; WRAP staff budget</p>	<p>Ongoing</p>
	<p>Developing the 2018 Annual WRAP Workplan and reviewing the associated annual Work Group Workplans, budgets, projects and deliverables</p> <p>Post WRAP Board-approved Annual WRAP Workplan and status reports of the WRAP Work Groups and WRAP projects to the WRAP website.</p>	<p>TSC & WRAP Staff, in coordination with WG Co-Chairs</p> <p>WRAP staff</p>	<p>TSC & WG Co-Chair in-kind;</p> <p>WRAP staff budget</p>	<p>October 1, 2017</p> <p>Ongoing</p>

1) Regional Haze Analysis / Planning Support

Regional Haze Planning Work Group – analysis steps	Regional Analysis Activity	Milestone
<p>Training Based on Guidance</p> <p>Support WRAP TSS functionalities (updates and maintenance)</p> <p>Assess Inventory Quality by sector & category</p> <p>Worst Days vs. Most Impaired Protocol</p> <p>Natural Conditions - Adding Smoke & International to 2064 (also consider dust and volcanoes)</p>	<p>Regional Haze monitoring and emissions analysis to support planning (118 visibility-protected Class I areas)</p> <ul style="list-style-type: none"> • Assess revised Regional Haze Program Requirements • IMPROVE Monitoring Data Analysis for revised metric • Regional Emissions Analysis – work covers list below <ol style="list-style-type: none"> a. Emissions Inventories b. Emission Inventory Method Changes c. Sector Methods d. Additional (critical) Emission Inventory Studies e. Emission Inventory Projections 	<p>Work to be completed Spring-Summer 2018</p> <p>Funding in hand by Summer 2017 to start work</p>
<p>Coordination on Regional Modeling</p> <p>Selecting a Metric - Regional Decision?</p> <p>Recreate the 2000-04 baseline with new metrics</p> <p>How Would States Work Together?</p> <p>Federal Land Managers Consultation (develop protocol)</p> <p>Discuss EPA Projection to 2028 from 2011v3 CSAPR Modeling</p> <p>Future Projection Inventories for Planning Analyses</p>	<p>Contiguous WESTAR-WRAP region (112 Class I areas)</p> <ul style="list-style-type: none"> • Regional Modeling <ol style="list-style-type: none"> a. Meteorological and Emissions Modeling b. Visibility Modeling - Reasonable Progress Goals for each Class I area c. Source Apportionment and Sensitivity Analyses <p>Alaska Analysis (4 Class I areas) – additional specific studies</p> <p>Hawaii Analysis (2 Class I areas) – additional specific studies</p>	<p>Final modeling done late 2019</p> <p>Funding available starting in Fall 2017 to start work</p> <p>Modeling continues for 2 years</p> <p>As identified by Alaska, no later than Fall 2018</p> <p>As identified by Hawaii, no later than Fall 2018</p>

<p>Identify resources and methods for modeling controls</p> <p>Compare Progress with Current Glide Path and What that Means</p> <p>Future Natural Conditions (convert current 2064 default to PM₁₀?)</p> <p>Progress in Visual Range – what are realistic expectations?</p>	<p>Assessing Emission Reduction Strategies and Reasonable Progress Goals (118 visibility-protected Class I areas)</p> <ul style="list-style-type: none"> • Four-Factor Analysis • Potential Visibility Effects of 4-factor controls • Setting each Class I area’s Reasonable Progress Goal following EPA guidance • other planning support as needed 	<p>Analyses completed late 2019</p> <p>Funding available starting by early Summer 2018 to start work</p>
<p>Co-Chairs attendance at Technical Steering Committee In-person Meeting, 2 meetings per year</p>	<p>2017 Workplan funding request</p>	<p>Fall 2017</p>
<p>Oil & Gas Work Group</p>	<p>Activity Type / Source of Effort</p>	<p>Milestone</p>
<p>Identify Oil and Gas Work Group action items that will require coordination with WRAP and WESTAR work groups and committees</p>	<p>In-kind work</p>	<p>2nd Quarter 2017</p>
<p>Oil and Gas Work Group Scope:</p> <ul style="list-style-type: none"> • Identify Oil and Gas sources for the entire upstream and midstream sectors • Identify WRAP member agencies dealing with oil and gas sources 	<p>In-kind work</p>	<p>2nd Quarter 2017</p>
<p>Review Oil and Gas-specific work products: review existing work products to identify and discuss relevance, strengths, areas for improvement, and gaps.</p>	<p>Initiate in-kind work and continue to explore if funding is necessary</p>	<p>Fall 2017</p>
<p>Identify regional and local air quality planning needs: Regional Haze, Ozone, Climate Change, Hazardous Air Pollutants, and Other Air Pollution Indicators</p>	<p>Workgroup will initiate and continue to explore if additional assistance is necessary</p>	<p>4th Quarter 2017</p>
<p>Fire & Smoke Work Group</p>	<p>Activity Type / Source of Effort</p>	<p>Milestone</p>
<p>Smoke Management Plans</p>	<p>Assess smoke management practices, programs, plans</p>	<p>Fall 2017</p>

Emissions Inventories	<p>Activity Data to support Emissions Inventory</p> <ul style="list-style-type: none"> • Review of FETS / WRAP Fire Tools • Identify potential updates and restructuring of FETS / WRAP Fire Tools • Review current functions • Identify improvements to track activity and improve emissions estimates • Update state, tribal, and federal data streams • Add PFIRS tracking and SmartFire/Bluesky forecasting data streams 	Fall 2017
Regional Technical Operations Work Group – Description of Activity Type / Source of Effort		Milestone
<p>Modeling Platform:</p> <p>Intermountain West Data Warehouse as a data source (and/or other regional data sources) encompass contiguous WESTAR-WRAP region (Hawaii and Alaska modeling support TBD)</p> <ul style="list-style-type: none"> • IWDW – Western Air Quality (modeling) Study (WAQS) models the CONUS at 36 km grid cells with higher-resolution nested grids across the entire WESTAR-WRAP region. • Other regional modeling platforms / studies 		<p>“Next Base Year(s)” IWDW Platform in development – Summer 2017</p>
<p>Conduct base year regional modeling (2014, 15, or 16) to begin Regional Haze planning-related analyses.</p> <ul style="list-style-type: none"> • Apply NEI 2014 anthropogenic emissions estimates with review and updates as needed by WRAP members <ul style="list-style-type: none"> • Estimates for 2015 and 2016 base years’ anthropogenic emissions projected from 2014 NEI with WRAP members’ direction • Apply the best western regional estimates of fire and dust emissions as directed by the states and other WRAP members. • Include Canadian and Mexican emissions, including fire and dust emissions • Status Quo: Global air quality modeling inputs are ~hourly fluxes from a global model like GEOS-Chem or MOZART at 36km CONUS domain boundaries to integrate emissions from the rest of the world in base years’ run 		<p>Use IWDW platform (Fall 2017-Winter 2017-18)</p> <p>Potentially other regional modeling platforms / studies</p>

<p>Future year regional air quality projection modeling.</p> <ul style="list-style-type: none"> Project NEI 2014 anthropogenic emissions estimates to 2023 and 2028 accounting for growth and control “rules on the books” with review and updates as needed by WRAP members <ul style="list-style-type: none"> Project 2015 and 2016 base years’ anthropogenic emissions (as projected from 2014 NEI) will also be projected to 2023 and 2028 accounting for growth and control “rules on the books”, with review and updates as needed by WRAP membership Based on input from the OGWG and FSWG, consider how to develop and apply the best western regional estimates of future oil & gas and fire, as well as dust emissions as directed by the states and other WRAP members. Include available future year Canadian and Mexican emissions, including fire and dust emissions Move beyond Status Quo: Seek and apply future year well-documented global air quality modeling inputs from a global model like GEOS-Chem or MOZART at the 36km CONUS domain boundaries to integrate emissions from the rest of the world. 		<p>Use IWDW platform - Spring-Summer 2018</p> <p>Potentially other regional modeling platforms / studies</p>
Tribal Data Work Group	Activity Type / Source of Effort	Milestone
Assessment of the status of Tribal air quality monitoring, AQS, and emissions inventories	In-Kind - TDWG, WRAP Staff and IWDW	September 1, 2017
Determine the types of Tribal data needs for WRAP projects and deliverables	In-Kind - TDWG, WRAP Staff, RTOWG RHPWG, OGWG, and FSWG	September 1, 2017
2) General Regional Technical Analysis Needs		
Oil & Gas Work Group	Activity Type / Source of Effort	Milestone
Develop communication plan to distribute Oil and Gas Work Group work products	In-kind work	2nd Quarter 2017
Co-Chairs attendance at Technical Steering Committee In-person Meeting, 2 meetings per year	2017 Workplan funding request	Fall 2017
Fire & Smoke Work Group	Activity Type / Source of Effort	Milestone
Exceptional Events	Information gathering	2017
Communications	Information sharing	2017

Co-Chairs attendance at Technical Steering Committee In-person Meeting, 2 meetings per year	2017 Workplan funding request	Fall 2017
Regional Technical Operations Work Group	Activity Type / Source of Effort	Milestone
Exceptional Event regional data support	See table to be drafted for Board meeting	
Co-Chairs attendance at Technical Steering Committee In-person Meeting, 2 meetings per year	2017 Workplan funding request	Fall 2017
Tribal Data Work Group	Activity Type / Source of Effort	Milestone
Develop SharePoint website (or similar arrangement) to house TDWG documents and projects.	WRAP Budget	June 2017
Help Tribes understand the benefits of using WRAP and WESTAR products and services	In-Kind	July 1, 2017
Change Section F title to – Support Development of Tribal Air Quality Capacity and Capability and rewrite narrative	In-Kind	Completed
Solicit Tribal membership in WRAP and participation in the TDWG	In-Kind	September 1, 2017
Schedule TDWG meeting and provide activity reports	In-Kind	September 1, 2017
Co-Chairs attendance at Technical Steering Committee In-person Meeting, 2 meetings per year	2017 Workplan funding request	Fall 2017
Provide educational opportunities for WRAP member Tribes and Tribes within the area of interest.	In-Kind - TDWG and WRAP Staff	December 1, 2017