Intermountain-West Data Warehouse - Western State Air Quality Study
Overview and Project Lead Roles
Current as of: March 8, 2016

OVERVIEW

Operations:
1. Monitoring: Ozone and Particulate Matter monitors
2. Modeling: emissions, meteorology, air quality modeling
3. Data Warehouse: Maintenance and operation
4. Funding/Budget
5. Communication/Coordination/Outreach
6. Implementation of MOU

Committees/Workgroups:
1. Governing Board:
   - Provides oversight assistance and advice in the long-term, on-going operations of the Data Warehouse and on any budget decisions.
   - Responsible for review and approval of recommendations from Oversight Committee.
   - Meeting annually or more frequently as necessary.
2. Oversight Committee:
   - Provides advisory and technical assistance to the Project Lead Agency concerning Data Warehouse and monitoring and modeling activities.
   - Communicates or elevates appropriate issues to the Governing Board. Facilitates the creation of sub-workgroups on an ad hoc basis to address technical and operational questions.
   - Meet bi-annually or more frequently as needed.
3. Technical Committee (If Approved by Oversight Committee):
   - Supports the Oversight Committee and is the main point of contact for the CIRA staff operating the data warehouse and the contractors conducting the air quality modeling and analyses.
   - Provides technical assistance and recommendations on the operations and work products to ensure that appropriate methodologies are implemented and that the work products are accurate (QA) and complete.
   - Meets after completion of major task or on an as-needed basis to review and discuss the operations and work products of the project.
   - Participants include MOU Cooperating Agencies, as well as other research and air quality groups (e.g., RAQC, CSU)
4. Data Stewards Committee (If Approved by Oversight Committee):
   - Supports the Oversight Committee and is the main point of contact for the CIRA staff operating the data warehouse and the contractors conducting the air quality modeling and analyses.
   - Act as technical liaisons for individual projects and data requests, tracks the results from the modeling studies applying IWDW data, and facilitates the return of modeling data resulting from the application of the data request data back to the IWDW upon completion of the modeling study.
   - Meets monthly to review and discuss data requests.
   - Participants include at least one representative from each MOU Cooperating Agency.
5. Ad-Hoc Workgroups (Active on as-needed basis):
   - Data Warehouse Tools: Active through Spring 2016
   - Request for Proposal Development/Review: No Notes
   - Communication and Outreach: No Notes
   - Monitoring Network Evaluation: No Notes

Meeting Schedule:

	Governing Board	Oversight Committee	Technical Committee	Active Workgroups		
				RFP Development	Data Warehouse Tools	Data Stewards
Last Meeting	Jan 2015	Oct 2015	Jan 2016	Not Scheduled	Jan 28, 2016	Dec 2015
Upcoming Meeting	May 2016	Mar 8, 2016	Not Scheduled	March 2016	March 10, 2016	March 2016

COMPLETED, CURRENT, AND UPCOMING ACTIVITIES:
1. Monitoring:
    a. Enhanced Ozone Network (Completed)
    b. Operate ozone monitoring (In progress – Funded through end of 2017). Decision made to operate two newest sites through end of 2017 with existing funding.
    c. Potentially conduct another network assessment during 2016 to determine long-term monitoring network needs and whether monitoring operations need to be reduced at end of 2016. (Upcoming - Unfunded)

2. Modeling:
    2008 Model Year
    - Emissions, Meteorology, and Air Quality Model Platform (Completed)
    2011 Model Year
    - 2011a Emissions, Meteorology, and Air Quality Model Platform (Completed)
    - Complete 2011b base year improvements (In progress – Funded)
    - Develop future year emissions projections and run models with 2011 meteorology (In progress – Funded)
    2014 Model Year
    - 2014 Meteorological Modeling (Completed)
    - 2014 Oil and Gas Emissions (Not Completed because re-allocated funds for 2011 Modeling)
    - Complete 2014 Modeling Platform (Upcoming – Unfunded)

3. Data Warehouse:
    a. Operational warehouse, receiving and distributing data (Completed)
    b. Develop and implement data warehouse tools (In progress – Funded)
    c. Update homepage/public-face to be project-specific and not university-specific (Upcoming – Funded)
    d. Secure location to manage records (Upcoming – Funded)
    e. Maintain and continue operation of data warehouse (Upcoming – Unfunded)

4. Funding/Budget:
    a. WESTAR-WRAP coordination funded through June 2016. WESTAR-WRAP moving to provide CSU-CIRA support for day-to-day IWDW-WAQS activities and WESTAR-WRAP staff will continue coordination and outreach activities below through WESTAR member funding.
    b. $700K obligated to WESTAR-WRAP to continue some initial 2014 modeling work but mostly reallocated to finish 2011 modeling work. $500K allocated to WESTAR to complete 2014 modeling work and next RFP. Funding carries through summer 2016 – Will need funding to support project after summer 2016.
    c. Data Warehouse funded until Spring 2017.
    d. Monitoring funded until end of 2017.

5. Communication/Coordination/Outreach:
   a. Outreach materials have been approved, along with a list of contacts (Completed - Funded)
   b. Outreach began in January 2016 (In progress)
   c. Continue Outreach (Upcoming)

6. Implementation of MOU:
   a. Circulated for signatures (In progress)
   b. Anticipated completion date: March 2016

7. Sustainability of Project
   a. Administrative Plan has been developed and approved by Oversight Committee (details outlined below – Future Funding and Management Structure section)
   b. Approximately Costs:
      - $200K per year to keep Data Warehouse operational (see item c. for additional details)
      - $30K per site per year to keep existing monitoring network operational
      - $60K for setting up a new monitoring site
      - $900K per model platform to support all modeling activities (see item c. for additional details)
      - WESTAR coordinates organization of project, Cooperators review and decide completion of activities.
   c. Modeling and Data Warehouse activities occur on a 3-year cycle, where level of resources varies within the cycle.

Group	Typical Tasks	Level of Resources		
		Year 1	Year 2	Year 3
Data Warehouse	General operations	low	low	low
	Tracking and distribution of data	low	low	High
	Maintain monitoring data	low	low	low
	Maintain and upload modeling data	low	high	high
	Development of visualization and analysis tools	low	high	high
	Training and technical support	moderate	low	high
Air Quality Modeling	Review Request for Proposal	high	low	moderate
	Gather input information (e.g., emissions)	high	low	moderate
	Test and develop model capabilities and configurations	high	low	low
	Perform modeling	low	high	high
	Model performance evaluations	low	high	high
	Perform future year and source apportionment modeling	low	low	high
	Complete model documentation	low	moderate	high
	Package modeling files for Data Warehouse	low	low	low

PROJECT LEAD AGENCY ROLES AND RESPONSIBILITIES (Adapted from MOU):

- Coordinates, convenes, and facilitates meetings of the Governing Board, Oversight Committee, and other committees and workgroups.
- Facilitates communications between the Cooperators about key issues, and provides the opportunity for the Cooperators to participate in the Project activities.
- Facilitates accomplishments of Project activities in an efficient, timely and collaborative manner.
- Tracks all communications, and provide written notes within two weeks of Board and Oversight Committee meetings.
- The Cooperators should inform the Project Lead Agency of all cooperative agreements and funding obligations.
- The Project Lead Agency, in coordination with the Oversight Committee, leads the communication process by convening periodic Governing Board meetings with all members to discuss work plans, get updates, track developments, and address potential action items related to activities of the Data Warehouse.

Prior to each meeting, EPA plans to have an EPA representative assigned to each of the following key positions to assist in coordinating and tracking meeting activities:

1. Coordinator: Determines meeting dates, reserves facility, sends invites and agenda, consolidates and sends meeting materials.
2. Facilitator: Leads the meeting discussions and steps through agenda, and ensures topics are covered in a timely manner.
3. Note Keeper: Documents and tracks discussions, decisions/recommendations, and action items. Ensures that all meeting materials and documents are stored in project file. [Note: All notes will be stored electronically in a secured location on the Data Warehouse.]
4. Document Development: Prepares initial materials/documents for meetings for team to review. Consolidates comments from team and other agencies, if necessary, to develop final versions. Tom Moore/WESTAR-WRAP assists in developing these documents, in coordination with EPA, for the Technical Committee and workgroup meetings, while the EPA will develop these documents for Governing Board and Oversight Committee meetings, in coordination with Tom Moore.

WESTAR-WRAP ROLES AND RESPONSIBILIES

- Coordinates activities with the Project Lead Agency.
- Coordinates and manages responses to individual Cooperator agencies and IWDW users.
- Manages work and coordinates timely task completion by both CSU-CIRA and modeling contractor teams.
- Coordinates, convenes, and facilitates technical committee and sub-workgroup meetings, in coordination with the Project Lead Agency.
- Reports activities across the IWDW-WAQS to Cooperators, Oversight Committee, and external user community.
- Provides point of contact outreach to potential outside funding groups and provides status and progress reports.
- Financial and summary work reports - WESTAR-WRAP provides quarterly reports on all grants, including NPS-WESTAR Cooperative Agreement tasks for the IWDW-WAQS project, for all spending and activities for each WESTAR-WRAP-supported project. http://www.westar.org/ActivityReports.html

FUTURE FUNDING AND MANAGEMENT STRUCTURE

This section outlines the possible future funding and project management options for the continued operation of the Intermountain West Data Warehouse (IWDW).

Current Approach for Funding and Management of the IWDW
- Governing Board has overall budget and resource allocation authority.
- Oversight Committee sets specific work priorities and funding levels for work tasks based on the most current approved work plan. This committee also periodically reviews and may make revisions to work plans to address cooperating agencies objectives.
- NPS provides financial management, including contracting and budget management.
- Federal funds are transferred to the NPS through interagency agreements. The NPS then awards task agreements to WESTAR-WRAP for coordination and to CSU for data warehouse development and operations. WESTAR-WRAP subcontracts for emission inventory and air quality modeling services as a part of its project coordination responsibilities.
- Since the creation, cooperating agencies have fully funded the study.

Options for Future Funding and Management of the IWDW
- Goal is to have future funding be provided by clients that use the data products.
- Two options have been considered for receiving and managing funding provided by clients:
    1. Clients provide grants to the Department of Interior. Grants are monies provided with no expectation of particular outcomes. These funds would then be managed using the current NPS budget and procurement approach described above.
    2. Clients directly fund WESTAR/WRAP for project management and specified contract technical work. WESTAR/WRAP may work with clients by potentially augmenting project funding.
- In either of these options, Department of the Interior agencies may make funding needs known to proponents of projects on federal lands.

Management of In-Kind Resources
- "In-kind" assistance may come from state or industry-funded emissions and modeling studies that provide leveraging opportunities. These "external non-IWDW-developed" datasets could be stored in the IWDW and available for distribution.
- Technical Committee will review all external non-IWDW-developed datasets for possible storage in the data warehouse and availability in air quality analysis projects.
- Oversight Committee will review opportunities to leverage non-IWDW cooperator projects and may approve the use of in-kind resources if no potential conflicts of interest are identified. If potential conflicts of interest do exist, then the Governing Board would be asked for its guidance.
- Staff from the cooperating agencies will continue to provide assistance (or in-kind resources) for project planning, financial management, data analysis and evaluation of work products. The time provided by the staff may need to increase if sufficient funding is not available to support IWDW activities.

Management of Other IWDW Resources
- Primarily includes monitoring equipment that was purchased with 3SAQS funds and the IWDW itself (i.e., computer hardware purchased with 3SAQS funds and intellectual property such as software code developed by IWDW staff).
- Oversight Committee will develop recommendation for ownership of monitoring equipment to be transferred to the cooperator agency that is functioning as the primary site operator.
- IWDW data quality, representativeness, and uses are under the direction of the cooperators through documented recommendations of the Technical Committee.

- Datasets currently held by the IWDW were developed with federal funding and are in the public domain, and as such, any organization may request the data. Management of data requests will be overseen by the IWDW Data Stewards Workgroup.
- Through the NPS-CSU task agreement, IWDW computer hardware purchased with 3SAQS funds is the property of CSU while the IWDW operations are physically located at CSU. The need to transfer these equipment will be decided if and when the IWDW were to be physically located elsewhere.
- The IWDW software is also in the public domain and can used by, or transferred to, the cooperating agencies or other users without restriction. CSU will track any requests for software copies and report those activities on a quarterly basis as needed.
- Procedures for data distribution may change in the future depending on how the IWDW is funded.

External Communication
- All outreach/communication products developed for advertising and promoting the IWDW will be approved by the Oversight Committee for distribution.
- WESTAR-WRAP coordination includes routine and as-needed communications for the IWDW.

Coordination and Collaboration
- The Lead Agency of the IWDW is responsible for coordinating the activities of the IWDW with the help of WESTAR-WRAP. This arrangement will continue as the IWDW evolves into the future.
- IWDW cooperator agencies and WESTAR-WRAP will be informed of all projects and external efforts, and all products will be readily available through the IWDW.
- WESTAR-WRAP is to continue its role in evaluating and arranging training and capacity building opportunities as appropriate, based on recommendations of the IWDW cooperating agencies.