

Air Resources Laboratory Science Review  
May 3-5, 2011  
Silver Spring, Maryland

Evaluation Forms

**Evaluation Focus**  
(from “Charge to Reviewers” document)

1. **Quality:** Assess the quality of the laboratory’s research and development. Assess whether appropriate approaches are in place to ensure that high quality work will be performed in the future. Assess progress toward meeting OAR’s goal to conduct preeminent research as listed in the “Indicators of Preeminence.”

- How does the quality of the laboratory’s research and development rank among Research and Development (R&D) programs in other U.S. federal agencies? Other science agencies/institutions?
- Are appropriate approaches in place to ensure that high quality work will be done in the future?

Indicators of Preeminence: Types of Indicators can include the following; not all may be relevant to each laboratory.

- a. A laboratory’s total number of refereed publications per unit time and/or per scientific Full Time Equivalent staff (FTE).
- b. A list of technologies (e.g. observing systems, information technology, numerical modeling algorithms) transferred to operations/application and an assessment of their significance/impact on operations/applications.
- c. The number of citations for a lab’s scientific staff by individual or some aggregate.
- d. A list of awards won by groups and individuals for research, development, and/or application.
- e. Memberships and involvement in prestigious organizations (e.g., the National Academy of Sciences, National Academy of Engineering, or fellowship in the American Meteorological Society, American Geophysical Union or the American Association for the Advancement of Science etc.).
- f. Service of individuals in technical and scientific societies such as journal editorships, election to boards or executive level offices, service on U.S. interagency groups, service of individuals on boards and committees of international research-coordination organizations.
- g. A list of research products, information and services, models and model simulations, and an assessment of their impact by end users, including participation or leadership in national and international state-of-science assessments.
- h. Evidence of collaboration with other national and international research groups, both inside and outside of NOAA including Cooperative Institutes and universities, as well as reimbursable support from non-NOAA sponsors.
- i. Significance and impact of involvement with patents, Cooperative Research and Development Agreements (CRADAs) and other activities with industry, other sectors, etc.

- j. Other forms of recognition from NOAA information customers such as decision makers in government, private industry, the media, education communities, and the public.
- k. Contributions of data to national and Global Earth Observing System of Systems (GEOSS)-related data bases and programs, and involvement in international quality-control activities to ensure accuracy, precision, inter-comparability, and accessibility of global data sets.

2. **Relevance:** Assess the degree to which the research and development is relevant to NOAA's mission and of value to the Nation.

- Does the research address existing (or future) societally-relevant needs (national and international)?
- How well does it address issues identified in the NOAA research plans or other policy or guiding documents?
- Are customers engaged to ensure relevance of the research?
- Are there R&D topics relevant to national needs that the laboratory should be pursuing but is not? Are there R&D topics in NOAA and OAR plans that the laboratory should be pursuing but is not?

3. **Performance:** Assess the overall effectiveness with which the laboratory plans and conducts its research and development, given the resources provided, to meet NOAA Strategic Plan objectives and the needs of the nation. The evaluation will be conducted within the context of three sub-categories: research leadership and planning, effectiveness, and transition of research to applications.

3a. Research Leadership and Planning. Assess whether the laboratory has clearly defined objectives, scope, and methodologies for its key projects.

- Does the laboratory have clearly defined and documented scientific objectives, rationale and methodologies for key projects?
- Has the scope of key projects been identified including methods for determining when areas of investigation should end or be transitioned to operations or information services?

3b. Efficiency and Effectiveness. Assess the efficiency and effectiveness of the laboratory's research and development, given the laboratory's goals, resources, and constraints and how effective the laboratory is in obtaining needed resources through NOAA and other sources.

- Does the laboratory execute its research in an efficient and effective manner?
- Is the laboratory organized and managed to optimize the conduct and planning of research, including the support of creativity?
- How well integrated is the work with NOAA's planning and execution activities? Are there adequate inputs to NOAA's planning and budgeting processes?
- Is the proportion of the external funding appropriate relative to its NOAA funding?

- Are human resources adequate to meet current and future needs? Is the laboratory organized and managed to ensure diversity in its workforce?
- Are appropriate resources and support services available?

3c. Transition: How well has the laboratory delivered products? Assess laboratory's effectiveness in transitioning and/or disseminating its research into applications (operations and /or information services).

- How well is the transition of research to applications and/or dissemination of knowledge planned and executed?
- Are there appropriate interactions with stakeholders and customers? Are end users of the research and development involved in the planning and delivery of applications and/or information services?
- Are the research results communicated to stakeholders and the public?

**Evaluation Worksheet**  
**(Note in WORD the boxes below will expand to fit the text)**

**Research Area:** Atmospheric Dispersion and Boundary Layer

**Reviewer:**

**QUALITY** (Reference material provided at web site and in the binders provided.)  
**Comments and observations/findings:**

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**RELEVANCE** (Reference material provided during the briefings.)  
**Comments and observations/findings:**

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**PERFORMANCE** (Reference material provided during the briefings.)  
**Comments and observations/findings:**

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**Recommendations for Atmospheric Dispersion and Boundary Layer**  
Please provide specific, actionable recommendations based on your observations/findings

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## Evaluation Worksheet

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**Research Area:** Air Quality

**Reviewer:**

**QUALITY** (Reference material provided at web site.)  
**Comments and observations/findings:**

**RELEVANCE** (Reference material provided during the briefings.)  
**Comments and observations/findings:**

**PERFORMANCE** (Reference material provided during the briefings.)  
**Comments and observations/findings:**

**Recommendations for Air Quality**  
Please provide specific, actionable recommendations based on your observations/findings

## Evaluation Worksheet

**Research Area:** Climate

**Reviewer:**

**QUALITY** (Reference material provided at web site)  
**Comments and observations/findings:**

**RELEVANCE** (Reference material provided during the briefings.)  
**Comments and observations/findings:**

**PERFORMANCE** (Reference material provided during the briefings.)  
**Comments and observations/findings:**

**Recommendations for Climate**  
Please provide specific, actionable recommendations based on your observations/findings

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**Evaluation Worksheet – Additional Comments and Recommendations**

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**Reviewer:**

**Additional comments for OAR and laboratory management**

**Additional comments and suggestions on conduct of the review for use in future laboratory reviews**

**Recommendations**

**Please provide specific recommendations for your observations/findings**

