Advancing Environmental Education at the U.S. Environmental Protection Agency: An Analysis of Program Characteristics, Workforce, Needs, and Obstacles

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A. Acknowledgements

Executive Summary

Environmental Education (EE) programs are scattered throughout the Environmental Protection Agency (EPA) Headquarters (HQ) offices. While many are finding success - despite the constraints of the Agency - it is clear that now is a critical time to advance the EE approach and create more visibility for this innovative tool which supports EPA's mission in numerous ways. This report describes the results of an analysis of EPA HQ EE programs that sought to inventory the current programs, assess the staff needs, and provide recommendations for how EE can be advanced at the Agency. Information was gathered on important program aspects, common obstacles and needs, staff characteristics, and staff perceptions of EE.

Data was collected on each program through a mixed methods approach, primarily consisting of interviews with 52 EPA staff members most directly involved in EE programs, followed by a focus group that clarified emergent themes from the interviews. In addition, we analyzed several EPA documents including the *2003-2008 EPA Strategic Plan*, and used participant observation during a number of key meetings related to EE at the EPA. Finally, we analyzed the results of a free list exercise in which interviewees listed all the words they felt were associated with EE - to further explain how staff members understand EE and view its role at the EPA.

EE is not a commonly used term to describe programs at EPA that utilize educational approaches, however 51 programs were identified at the Agency that can be encompassed by a broad definition of EE and they include the following program types:

- Internships/Fellowships
- K-12 programs
- Community Education and Outreach programs
- Training programs
- Voluntary programs

The most commonly targeted audiences of the identified EE programs include communities, businesses and industry, and local/state/tribal professionals. Other audiences include K-12 schools, higher education, and underserved populations.

The EPA HQ staff members working on EE programs are highly educated, with 61% holding advanced degrees in discipline categories such as policy/administration, environmental sciences/studies, and the social sciences. However, most staff members lack expertise in education and programs could benefit from further training of staff in this field and related evaluation techniques.

All staff participants agreed that education supports EPA's mission in a variety of ways, including by:

- Transferring environmental knowledge to a variety of audiences.
- Preventing human health risks and pollution by teaching choices and encouraging good stewardship.
- Improving EPA efforts and services (including adherence to regulations).
- Raising environmentally literate youth and the next generation of environmental scientists.

- Generating public support for environmental policy.

Although the 52 EPA staff members interviewed tend to associate the term EE more often with formal schools, they agree that education does have a role at the Agency. It appears that those involved in EPA EE programs believe that the EPA has a large role in outreach and education for adults, the general public, and regulated communities, which includes using programs to build awareness, train, and change behavior.

Several important topics related to common obstacles and needs were identified during the analyses which help to describe the current state of the EPA EE programs. These include:

- **Limited Resources (funding, time, and staff):** Although budgets varied tremendously across the programs, many staff indicated that in general, budgets have been in decline for several years. Nearly half of the EE programs are currently assigned only one staff member who typically spends only a fraction of his/her time on the program. Adequate resources are a necessary component of a successful program and are linked to the major themes discussed below.

- **Program Evaluation and Strategic Planning:** While evaluation efforts are becoming more important for these programs, a formalized evaluation effort is not a central component of EE programs, nor is strategic planning for the future that is linked to program goals. Many programs incorporate feedback and other formative evaluation efforts, while very few have conducted comprehensive program evaluations. Respondents recognize the difficulty in demonstrating meaningful results especially in terms of how EE leads to environmental improvement. Staff described the challenges of competing with other EPA efforts which can more easily demonstrate results.

- **Collaboration, Communication, and Competition at the EPA:** A lack of collaboration and communication among EE programs was identified as an obstacle which tended to be attributed to EPA culture, competition, lack of resources, management priorities, and lack of knowledge regarding other EE programs. Several participants expressed a desire and/or a need to have some sort of facilitated communication for EE programs that may help to overcome these obstacles and ultimately improve EE efforts.

- **Materials/Product Review:** EPA EE programs develop a significant amount of materials and products for their programs. Most of these products must go through a system of review to determine if they are duplicative, appropriate, and meet certain standards. EPA's product review system was deemed inefficient by some of the interviewees most of whom also felt that the current system generally provides unconstructive feedback which limits the effectiveness of EE programs.

- **Management/Administration/Agency Support:** While some participants described a lack of support at various levels in the Agency, and others felt they were well supported, the data indicate that support for EE programs tends to fluctuate and in general there is a lack of support for the EE approach. This may be due to relatively common political changes in upper-level management, as well

as the tendency for EE to be verbally supported, but not actively with resources, recognition, and/or encouragement. The EPA's current strategic plan also contributes to the lack of support for EE by never identifying education as a strategy.

There are no easy solutions to the challenges that EE programs face. It is clear that to advance the educational approach at EPA, its visibility and accountability within the Agency must be increased. To aid in this effort we offer the following recommendations:

1. **Facilitated Communication by the Office of Environmental Education:** We encourage OEE - with its unique position in the Agency – to put more effort into facilitating communication among EPA EE programs. We encourage them to use their resources and their connection to the professional field of EE to foster collaboration among educational efforts at the Agency.

2. **Professional Development for EE Staff and Strategic Hiring of Future Staff:** We encourage EPA EE staff to seek out training and professional development related to education, evaluation, and other key topics. We believe that the Agency should encourage and provide such training whenever possible, and again encourage OEE to aid in this effort. We also recommend developing a strategy for the hiring of future staff including emphasizing strong backgrounds in communication and education.

3. **Emphasize Evaluation:** In order to gain more support and create effective programs, the existing programs must couple evaluation methods that seek to measure outcomes with strategic planning for the future based on program goals.

4. **Improve Product Review System:** In order to advance the EE approach it would be helpful to revamp the product review system to become more efficient, user-friendly, and helpful. We also encourage the staff members that are involved in reviewing EE products to make efforts to educate the users of the system on how to gain the most benefit from it and to provide more useful feedback specific to the education approach.

5. **Active Management Support for EE Programs:** In order for the EE approach to succeed at the EPA, there must be more active support at all management levels in the form of necessary resources, recognition, and encouragement.

6. **Include the EE Approach in EPA's Future Strategic Plans:** We encourage those involved in future strategic planning to explicitly include education as a recognized and encouraged approach to achieving the Agency's mission.