

# Supporting Community Based Environmental Education

## Discussion Paper Summary

**M**anaging the environment requires investment in the local community for two powerful reasons: 1) local activities affect the quality of the local environment and, 2) community members have a common interest in protecting and improving their community's quality of life.

This understanding has led both US EPA and USDA to promote environmental management via local decision making and voluntary compliance with regulations. It has also prompted these agencies to consider how they can better support these local processes and offer more effective environmental education to support them.

A 1996-98 project investigated ways to strengthen partnerships among USDA Cooperative Extension, US EPA, and communities in the service of these environmental management and education efforts. The project is summarized in *An EPA/USDA Partnership to Support Community-Based Education: Discussion Paper*. What follows is a brief overview of the project's results and recommendations.

### Community-Based Education

Community-based education is not a new idea. In the past it was applied more commonly to issues of community economic development, housing, youth, and health than to environmental concerns.

Community-based education means more than "education based in the community." It implies an education plan created as a result of community involvement and designed to match community interests.

While numerous environmental education activities use this approach, its principles are generally not well-understood by either trained environmental educators or natural resource professionals.

Federal and state agency environmental management goals cannot be accomplished until environmental and natural resources professionals can collaborate confidently and competently with community members and professionals from other agencies.

**The capacity of democratic institutions to solve problems and create a better future depends on the knowledge and involvement of citizens in a community decision-making process that encourages systemic thought and broad-based action... Broad-based action is needed because local government alone cannot accomplish long-term solutions to community problems. Nor can individuals, businesses, community groups, or state and federal agencies do so by working in isolation.**

—President's Council on Sustainable Development, 1996

The term community-based environmental education is used to draw attention to several needs:

- To ensure that environmental education has an obvious connection to the community.
- To emphasize the link between local activities and a quality environment.
- To ensure that environmental education is relevant to people's lives.

Recent research has revealed how community members work together to make change and how individuals make decisions about what they will do. This offers a foundation for a new understanding of how environmental education can affect decision-making.

### Project Focus

This project focused on two issues: how to support community involvement in decision-making about the environment, and how to most efficiently and effectively use the strengths of the sponsoring agencies, US EPA and USDA Cooperative Extension, when working with communities. Project findings are presented in terms of EPA and Cooperative Extension roles and partnership possibilities.

Many other agencies and groups also work on environmental topics and/or with communities. The project did not ignore their work or minimize its value. Rather,

it closely examined opportunities to improve partnership between the sponsoring organizations.

As EPA, Extension, and communities strive to understand and improve their partnerships, agency staffs will need to analyze how, where and when to become involved. In many cases, other organizations or agencies are better positioned to provide financial and technical support.

Consequently, EPA and Extension professionals need to appreciate their own strengths and understand which conditions make them uniquely positioned to instigate or facilitate an activity.

In pursuing the project goals, the steering committee reviewed research, written case studies, and EPA and USDA agency activities. It also investigated exemplary local programs. These were selected for having three crucial elements:

1) considering the whole community, 2) linking environmental education to management of local ecological units, and 3) linking environmental education to goals for community sustainability.

The project's findings are based on these resources and on comments from participants and experts. Specific observations and recommendations are reported in detailed tables in the report and are summarized in other pamphlets in this series (referenced by number, see page 4 for titles). These address:

- Elements of a good community-based education model. (6, 7, 8)
- Tools or resources needed to better facilitate community-based education about the environment. (6)
- EPA and Cooperative Extension roles and partnership issues. (2, 3, 4, 5)

The project report also includes a separate, lengthy appendix which has an annotated bibliography of research and published case studies, and detailed summaries of individual and group discussions.

### Report Results

The project described partnership goals and produced six major findings. These summarize key actions that US EPA and Extension professionals can take to strengthen partnerships and support local decision making.

### US EPA/Cooperative Extension Partnership Goals

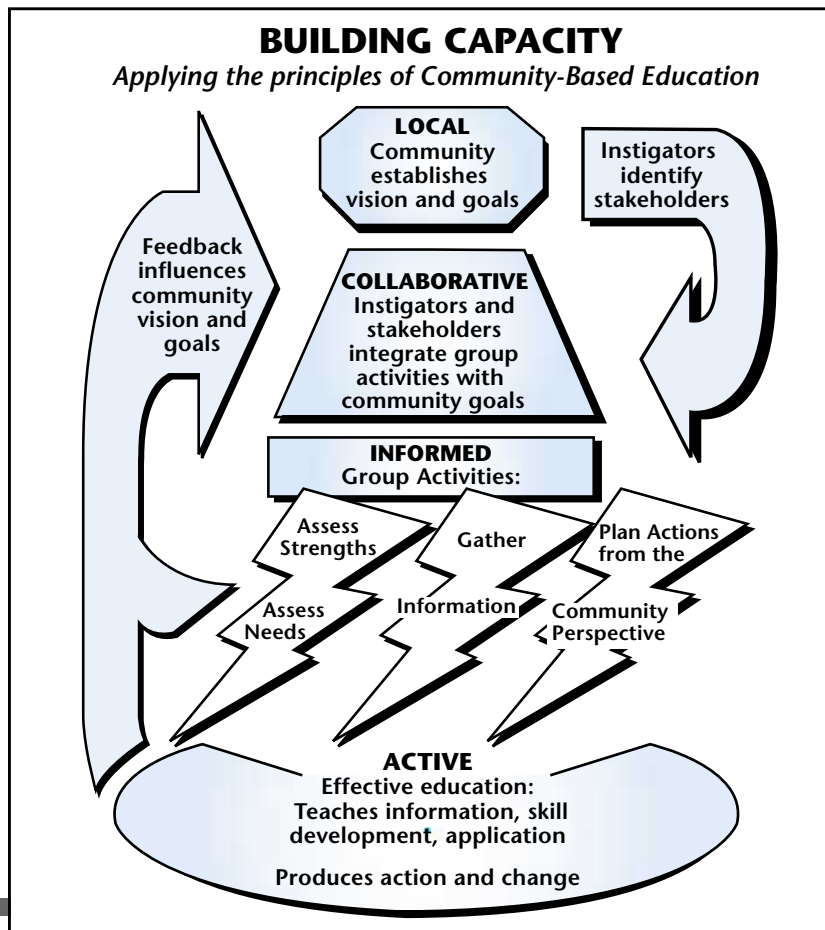
The goals of partnerships are to enhance community efforts that:

- Expand the community's capacity to improve environmental quality.

- Integrate environmental management goals with other community development activities.
- Lead to environmental improvement.
- Increase involvement of more community interests (both groups and points of view) in community environmental management activities.

The internal goals for partnerships are to:

- Ensure that staff understand the principles of community-based education and commit to using it in their work, as appropriate.
- Ensure that communities have access to the information they need and know how to use the information.
- Ensure that staff have opportunities to work collaboratively.



## Recommendations - Six Findings

To meet these partnership goals US EPA and Cooperative Extension professionals should work cooperatively to:

### **Finding 1 - Commit to *authentic efforts with communities.***

This means that participants' perspectives and contributions can, and often do, change the direction or focus of the effort. Goals are established through genuine collaboration, and all participants commit to them, even when they differ from the initial ideas, plans, or missions of some participants.

### **Finding 2 - Be ready to support community assumption of responsibility for environmental management.**

Professionals should find or create resources that enable communities to respond effectively.

### **Finding 3 - Become familiar with a community-based approach.**

Professionals should understand which members of a community are affected, how to use a community-based model for supporting local education, and how to assess where their expertise might fit.

### **Finding 4 - Make every effort to improve their own ability to facilitate community-based education and to support community educators with the information and skills they need to be effective.**

**Finding 5 - Understand their role in local initiatives.** EPA and Extension professionals should understand and be able to articulate their own organization's

general legislative mandate, how that applies to supporting community-based education, and what the organization is doing in the area. Then, they must investigate how personal professional development and collaborating with others could help them evolve in their own role, keeping in mind the missions of other involved groups.

### **Finding 6 - Work collaboratively to:**

- Coordinate their efforts with each other and officially support their partnership.
- Exercise flexibility in how they apply their resources and skills.
- Help describe environmental and socio-economic characteristics of communities or geographic regions.
- Make existing resources more readily available.
- Determine appropriate opportunities for input of their expertise with communities.
- Expand the role of communities and partners.
- Set priorities for how they will work with communities.
- Provide professional development opportunities for themselves.
- Celebrate successes and give credit to all organizations that participate.

## **An Opportunity**

US EPA and USDA Cooperative Extension each have proven strategies and resources for working with communities. The strengths of these agencies have been and can be powerful tools in supporting both the goals identi-

fied by EPA in the Community-Based Environmental Protection program and the goals of the President's Council on Sustainable Development.

Steps that bring agency professionals together will allow these talented and committed people to devise ways to expand use of their skills and resources.

Re-examining EPA's environmental goals, interests, and capabilities would highlight ways to encourage and support locally-based environmental education efforts. EPA's capabilities include information, assessment techniques, financial resources, shared approaches, agency coordination, and enforcement policy adjustment.

Similarly, state Extension services can exercise their considerable talents as experts, conveners, educators, and facilitators, applying these talents to environmental topics. Extension personnel can constructively engage the expertise and resources of public agencies, such as the US EPA, with community agencies and interest groups.

We face a challenging social, political, and fiscal climate. Since these organizations share similar objectives – linking resources and people – it is both necessary and proper that they become partners. Their combined strengths can help build capacity among local citizens and communities to identify and address their environmental challenges. Each organization believes that:

- Citizen-based efforts can make a difference.
- Linking the expertise of natural resource professionals with that of education professionals is a key to successful local efforts.

- Community and national partnerships are necessary to develop accurate information and disseminate it economically. What remains is to establish working partnerships in communities across the country.

A model for establishing working partnerships is described in the project report: *An EPA/USDA Partnership to Support Community-Based Education: Discussion Paper*. The call to action from that report urges collaboration to help citizens address community environmental concerns and offers benchmarks for success.

## A Call to Action

The Project Steering Committee expects that using project findings will help the sponsoring agencies establish collaborative relationships. These relationships will link local, regional, and national resources to provide accurate and cost-effective mechanisms that help citizens better identify and address environmental concerns in their communities.

EPA and Cooperative Extension will know they have been successful in adapting to a new way of

doing business when they find that communities are:

- Assessing their own environmental management needs.
- Devising strategies for managing and monitoring improvement.
- Expressing satisfaction in seeing improvement in local environmental quality and protection.

—*An EPA/USDA Partnership to Support Community-Based Education: Discussion Paper, 1998*

### For further information

*An EPA/USDA Partnership to Support Community-Based Education: Discussion Paper*, EPA 910-R-98-008, US Environmental Protection Agency, Region 10, August 1998, 31 pp. URL: <http://www.reeusda.gov/nre/gifs/usdaepa.pdf>

*Appendices to An EPA/USDA Partnership to Support Community-Based Education: Discussion Paper*, University of Wisconsin Cooperative Extension—Environmental Resources Center, August 1998, 130 pp. approx.

### Other pamphlets in this series

Leadership Roles for Cooperative Extension – Building Partnerships for Strong Communities, No. 2, 4 pp.

Linking to US EPA – A County Extension Guide to the EPA, Region 5, No. 3, 6 pp.

Leadership Roles for US EPA – Forging Solutions for Sustainable Communities, No. 4, 4 pp.

Linking to Cooperative Extension – A US EPA Guide to Cooperative Extension in Region 5 States, No. 5, 6 pp.

Building Capacity – Educating for Community Action, No. 6, 4 pp.

Building Capacity – From Transferring to Transforming, No. 7, 4 pp.

Building Capacity – Community-Based Environmental Education in Practice, No. 8, 4 pp.

Produced by Elaine Andrews, University of Wisconsin Cooperative Extension-Environmental Resources Center. Edited by Lynn Entine. Designed by Nellie Schmitz.



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Produced with funding from the US EPA Office of Environmental Education



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# Leadership Roles for Cooperative Extension

## Building Partnerships for Strong Communities

**F**orming partnerships with US EPA can help state Extension administrators address critical environmental management needs and deliver good programs to communities. Extension administrators are ideally positioned to encourage partnerships through positive leadership and administrative support.

Within their own organizations, Extension leaders can actively encourage local, district, state and regional staff to instigate programs and form liaisons. As these staff build and nurture interagency relationships leaders can help them with resources, program support, and mentoring.

Outside their organizations Extension leadership can:

- Advocate Extension’s education mission and its broad base.
- Help identify and support specific strategies for partnership involvement.
- Provide evidence of impacts and results from Extension’s involvement in the partnership.

This pamphlet is for Cooperative Extension leaders at all levels. It introduces the US EPA’s mission, goals, and programming areas and links them to those of Co-op Extension. It also offers action steps and partnership examples.

### Partnership Opportunities

Partnerships are responsive, task-oriented relationships. The people involved combine their varied, complementary skills and experiences to solve a defined problem. Partnerships emphasize collaboration, equity, investment, and reciprocity.

The most fertile areas for developing partnerships are those where Extension education priorities coincide with specific US EPA programming areas. In fact, EPA may prefer Extension as a partner for outreach activities. Although EPA’s primary relationship is usually with a state’s regulatory agency, it is reluctant to ask the agency to do more than carry out regulatory requirements.

EPA offices have specific program funds and initiatives (see Programming Areas list). Each program has its own expertise, information and other resources, data, technology, and funding. A specific Extension objective may fit the goals and funding priorities of more than one office.

Locating appropriate funding and resources within EPA can be difficult. However, Extension staff often have the bridge-building experience that makes them effective in finding opportunities and forging collaborative projects.

### US EPA Programming Areas

#### Environmental Topic Offices Each implements specific statutes

- Air and Radiation
- Pesticides, Prevention and Toxic Substances
- Solid Waste and Emergency Response
- Water

#### Offices operating administrative programs that cross assigned statutes:

- Administration and Resource Management
- Enforcement and Compliance Assistance
- American Indian Environmental Office
- Children’s Health Protection
- Environmental Education
- Environmental Justice
- International Affairs
- Inspector General
- Policy, Planning and Evaluation
- Research and Development

Cooperative projects with EPA have been most successful when designed and funded at the regional level.

## Environmental Management

Cooperative Extension and EPA share common community and environmental management goals. Extension's approach is to connect ecosystem management to community development activities.

Extension professionals work with communities to manage the resource more effectively, to make improvements, and to assure that decisions are based on appropriate science. Professionals find or create education resources that will support this community-based environmental management.

EPA has a statutory responsibility to focus on improving the quality of life in communities. Its various initiatives and programs are intended to help achieve this goal. It works extensively with state regulatory agencies but may also become directly involved in community activities.

Recently, EPA's attitude towards local decision-making has changed significantly. Its initiatives work to engage the community (or community of interest) in setting rules and in voluntary compliance. This includes the Community Based Environmental Protection program (CBEP).

Under current policy, EPA works directly with a community when:

- EPA is championing a national policy or violation (air or water violation, endangered species, superfund site).
- A major local environmental or policy issue attracts a lot of attention (empowerment zones, environmental justice, large-scale environmental risk in a community).
- The lead state agency or other resource cannot or will not help.

As new policies and initiatives develop, they may also drive community involvement. Examples include major national initiatives such as brownfields revitalization and estuary protection, and major program focuses such as children's health issues and environmental justice.

## Partnership Building Blocks

Partnerships can be initiated at every level of Extension—county to national. They should begin by focusing on EPA's four primary issues: air quality, pollution prevention, solid waste, and water quality.

EPA frequently forms partnerships with industries or businesses whose materials or processes are creating unwanted by-products. Extension can promote a relationship with EPA using this familiar model. Describing itself as a "program sponsor" would highlight Extension's capacity for working with interest groups and communities to provide and apply new information.

Cooperative Extension leaders and professionals at different levels of the organization have different roles in promoting partnerships with EPA.

**Directors and Program Leaders** can share Extension's vision of partnerships, its mission for education, and its ability to reach into communities in every county. They can also show the impact of Extension's involvement in communities.

**Directors** can promote partnership efforts and emphasize the need to formalize and stabilize financial support for effective programs.

## US EPA Strategic Mission

Protect human health and safeguard the natural environment — air, water and land — upon which life depends.

### US EPA Goals

- Clean air
- Clean and safe water
- Safe food
- Preventing pollution and reducing risk in communities, homes, work places, and ecosystems
- Better waste management, restoring contaminated waste sites, and emergency response
- Reducing global and cross-border environmental risks
- Expanding Americans' right to know about their environment
- Sound science, improved understanding of environmental risk, and greater innovation to address environmental problems
- A credible deterrent to pollution with greater compliance with the law
- Effective management (of EPA)

**Program Leaders** can give specialists the flexible time and program direction needed to make a partnership work.

**Extension Specialists** are attuned to emerging issues and develop their own expertise in relation to those issues. Specialists often become national leaders on a particular topic. They can actively participate in collaborative activities, such as the Great Lakes Pollution Prevention Roundtable, and can use their skills to bring together EPA, the state lead agency, and others to work on problems of mutual interest.

**County Educators** can advocate for Extension's role at the table when EPA works in a community to respond to a crisis or implement models for a major national initiative.

## Next Steps

To begin a partnership, Extension leaders can contact the head of an EPA program office or the team leader for a specific unit within the office. For example, for help with a wetlands issue, Extension might contact the head of the office of Ecosystems and Communities or the team leader for the wetlands unit.

The names of US EPA offices, divisions, units, and work groups vary from Region to Region. The best way to determine who to contact is to check the EPA web page [www.epa.gov](http://www.epa.gov), then link to information about the appropriate regional office.

Regional and national partnership work groups can work towards the following partnership goals using the following techniques:

## Goal 1: Legitimize Extension/EPA relationships in Washington, DC, and Regions

- Announce the partnership.
- Create EPA/Extension liaison positions at each EPA regional office.
- Explore opportunities for Memoranda of Understanding (MOU) and possible funding for mutual planning and management.
- Consider national liaison positions: EPA at the CSREES office, and Extension at EPA's office in Washington, DC

## Goal 2: Implement regional task forces in EPA and Extension

- Identify a contact at each Land Grant University who can assist the regional liaison with two-way communication.
- Work to set priorities for issues and the region by working with the EPA/Extension regional liaison, and representatives of each Land Grant University, state lead agency, and EPA administrator.
- Create newsletter and Web links. Share resources and tools on specific topics.
- Use the Performance Partnership Agreement (PPA) to incorporate work with other agencies.

## Goal 3: Support professional exchanges between EPA and Extension

Encourage and support professionals in trading positions and staff teams at local, state and federal levels.

## Goal 4: Conduct joint in-service training for Extension and EPA professionals

Provide professional development opportunities such as: national or regional meetings on specific topics; training on specific resources, their use and availability; and training based on education commonalities. Potential training links include:

- Estuary, wetlands protection
- Children's environmental health
- Small-scale waste water management, septic systems, mound systems
- Drinking water protection, sources, wells
- Surface water protection
- Environmental compliance by agriculture businesses and farmers
- Industry pollution prevention

## Cooperative Extension Strengths

### Mission

Extension's community development mission produces opportunities to serve the public and helps to shape project direction. Extension has demonstrated success in enhancing voluntary actions.

### Access to clients

Extension's neutral education role gives it access to clients.

### Regional accessibility

Successful partnerships depend on effective interpersonal relationships. Extension's strong state-level staffing makes it possible to partner successfully with EPA regional staff.

### Expertise

Extension state specialists and county educators have valuable knowledge

and expertise and act as links to other university expertise.

Extension professionals know how to gather and interpret data and resources, can advise on how to implement community-based education, and can offer an outsider's perspective on EPA project strategies.

### National-to-local network

Cooperative Extension has its own set of diverse partner networks integrating national, regional, state, and local organizations and interests.

Extension is known for its strengths as a partner and communicator, an organizer and manager, a change agent, and a promoter of results.

## Partnership Examples

Some successful partnerships between Extension and EPA are already in place. The examples which follow are at the national or regional level. Many others are operating around the country as local or single-issue partnerships.

**EPA/Extension joint appointments** Positions focusing mostly on nonpoint-source water pollution issues and water pollution prevention, joint between state extensions and the EPA Region office.

**NEMO (Nonpoint Source Education for Municipal Officials)** Funding to support multi-state involvement in an Extension outreach initiative.

**Western EPA/Extension** Rangeland and riparian monitoring; model for training people to deal with nonpoint source pollution.

## Pesticide Applicator Training

Collaborates with state Departments of Agriculture.

**Indoor Air Quality** Two partnerships evolved to develop materials and to conduct training for health and building professionals and for community education.

**Pollution Prevention** A variety of EPA/Extension partnerships: Farm\*A\*Syst, Manufacturing Extension, and Compliance Assistance.

**Forestry Issues** Forester education is provided in cooperation with EPA's nonpoint source program and includes logger training and Best Management Practices activities.

**US EPA CBEP program** Extension North Central Rural Development Center has formed a new partnership with national US EPA to develop social indicators of environmental protection.

## US EPA/Extension Partnership Models

### EPA Grants and Contracts

Specific to program, goals, mission, time lines, and product

### Legislative Mandate

Example: Pesticide Applicator Training

### Liaison/Joint Appointment

Example: EPA Region 10

### Interagency Personnel Agreement

Example: EPA liaison to Farm\*A\*Syst

### Cooperative Efforts

Example: national initiative to deliver indoor air education to homes

### Cooperative Agreements

Example: to coordinate the delivery of training and services to volunteer monitoring groups

### Pilot Programs

Example: to develop social indicators of environmental protection

Prepared by Elaine Andrews and Lynn Entine, University of Wisconsin Cooperative Extension-Environmental Resources Center. Edited by Lynn Entine. Designed by Nellie Schmitz



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# Linking to US EPA

## A County Extension Guide to US EPA Region 5

**B**oth US EPA and the Cooperative Extension Service offer successful strategies and resources for working with communities. The agencies also share similar objectives: linking resources and people.

EPA's environmental goals, interests, and capabilities provide sound tools to encourage and support local environmental education efforts. Extension personnel can work with community leaders to connect the expertise and resources of EPA with community agencies and interest groups.

Activities that bring these agencies' talented, committed professionals together expand their resources and skills. This helps them devise more and different ways to benefit communities.

Because of their shared objectives and complementary resources, it is appropriate that Extension and EPA become partners. Together they can more effectively build local capacity to identify and address community environmental challenges. Efforts are underway to foster and, in some cases, formalize these relationships.

This pamphlet for Cooperative Extension staff describes opportunities for program partnerships with US EPA in Region 5.

### What is the US EPA?

The US Environmental Protection Agency began operation in December 1970. It was created by consolidating all Federal environmental regulatory activities into a single agency. Its mission is protecting human health and safeguarding the environment in the United States.

The US EPA consists of headquarters program offices in Washington DC and 10 regional offices. Region 5 includes Minnesota, Wisconsin, Illinois, Indiana, Michigan, and Ohio.

### Why Partner with US EPA?

When environmental challenges appear, a community may find itself facing a far more complex – and even threatening – problem than it has ever encountered. Just trying to understand the problem and its possible consequences can be daunting. Leaders contend with technical jargon, regulatory verbosity, and potential internal community conflict.

The EPA has resources and information that can help local leaders maintain community environmental health. It has sources of technical information and expertise. It houses a vast array of technical skills. And it leverages its resources and grants on behalf of citizens.

As a federal agency, the EPA

### US EPA's Strategic Goals

- Clean air
- Clean and safe water
- Safe food
- Preventing pollution and reducing risk in communities, homes, workplaces, and ecosystems
- Better waste management, restoring contaminated waste sites, and emergency response
- Reducing global and cross-border environmental risks
- Expanding Americans' right to know about their environment
- Sound science, improved understanding of environmental risk, and greater innovation to address environmental problems
- A credible deterrent to pollution with greater compliance with the law
- Effective management (of EPA)

often encounters substantial barriers in connecting to and working with communities. Since county-based Cooperative Extension faculty have strong relationships with their communities, they can help connect communities with relevant and appropriate EPA resources.

## Programs in Common

One of EPA's goals is: "to ensure citizen access to environmental information and to improve environmental protection." If appropriate information is not available or accessible from a local or state agency, a community may turn directly to the EPA for technical help.

Communities might seek information about a particular pollutant or about the volume of pollution produced by industries and individual companies. They may need help with assessing contamination and with developing strategies to abate and clean up contamination.

Children's environmental health is a new EPA initiative. It addresses "preventing pollution and reducing risk in communities." EPA experts can help a community learn about environmental factors that can impact children's health, and about how to assess potential risk factors, such as lead.

Another EPA goal addresses "safe food." Its Offices of Pesticides and Water have resources on the topic.

Community development efforts can benefit from EPA experience with reclaiming brown-fields and with environmental justice programs that ensure development occurs equitably.

Many other US EPA programs are relevant to the issues that regularly affect communities. By partnering with the agency a community can leverage EPA's considerable resources, information and technical expertise in a way that is consistent with the community's situation, needs and values.

## How to Connect With US EPA

When deciding who to call about an environmental concern, communities are encouraged to start with their state agencies. States have their own environmental regulations and information resources which may be most applicable to a community situation. Many state programs are also funded through a partnership agreement with the US EPA.

Communities should turn directly to the US EPA for help in these situations:

- If EPA is sponsoring a new initiative not available through state agencies.
- For specific funding opportunities directed at communities.
- If state resources are unavailable or inaccessible.
- If the problem crosses boundaries — state or international.

There are many ways to connect with the EPA depending on the issue and the kind of relationship or assistance desired.

Making a connection may be as simple as calling one of the agency's many toll-free information hotlines or visiting its extensive web pages. It may be as complex and involved as applying for grant money and/or entering into a more formal partnership on a water quality or pollution abatement issue.

If you are looking for a more involved connection than is possible through the website or a hotline, you should first identify which EPA Program, Team, or Division has jurisdiction over your issue of concern and then contact

the appropriate Region 5 office.

This pamphlet lists contact information and a description of 20 major interest areas and programs in EPA. You can also tap into EPA informational and technical resources directly by going to the EPA web sites listed below, or through staff. The last section of this guide lists contacts for software and funding, and lists more than 40 hotlines and phone numbers.

## Contacts in Region 5

The Experts List on Region 5's website names specific individuals who can provide information on topics of interest to communities.

[www.epa.gov/cgi-bin/r5experts.cgi](http://www.epa.gov/cgi-bin/r5experts.cgi)

Topics in the Experts List are followed by subtopics. Each is linked to specific names and phone numbers. The following table relates community interests to EPA's topics.

**Contacts in Region 5** [<www.epa.gov/cgi-bin/r5experts.cgi/>](http://www.epa.gov/cgi-bin/r5experts.cgi/)

To find an expert on a community concern, check names linked to EPA topics listed below.

Community Interest	Expert List topics US EPA Region 5
AFO/CAFO (animal feeding operations)	Land - agriculture Water - wastewater/ discharges
Agriculture	Land - agriculture, soils, legislation, pesticides, pollution prevention, storage tanks, wastes, water (subtopics listed on EPA website)
Air quality	Air - air pollutants, air quality emission, atmosphere, automobiles and other vehicles
Children's health and seniors' health	Human Health - children's health, seniors' health, health effects of substance
Community based environmental protection	Administrative Offices - geographic initiatives Clean Up Communities - community involvement, community outreach, community right-to-know, environmental justice, social science, technical assistance, toxic release inventory Ecosystems - ecological assessment, ecological restoration, people in ecosystems Information Resources
Drinking water and groundwater protection	Water - conservation, drinking water, ground water, underground injection wells, water quality
Economy and the environment	Sustainable Development - land use, sustainable development, urban sprawl Business and Industry - small businesses Clean Up - brownfields
Environmental justice	Communities, Human Health, Pesticides, Storage Tanks, Wastes, Water (subtopics listed on EPA website)
Environmental education	Environmental Education - outreach Communities - community involvement, community outreach, community right-to-know, environmental justice, social science Environmental Management - environmental indicators, state of the environment
Green communities	Sustainable Development - land use, sustainable development, urban sprawl

Community Interest	Expert List topics US EPA Region 5
Indoor air quality/radon	Air - air quality emission, indoor air pollution, radon
Land use/urban sprawl	Air, Business and Industry, Clean Up, Ecosystems, Information Resources, Sustainable Development, Water (subtopics listed on EPA website)
Lead programs	Clean Up, Contaminants, Human Health (subtopics listed on EPA website)
Pesticide use and reduction	Contaminants, Human Health Pesticides - application, child safety, spill prevention and protection, worker protection Pollution Prevention and Recycling
Pollution prevention and toxics	Air, Business and Industry, Clean Up, Communities, Contaminants, Emergencies, Great Lakes, Information Resources, Legislation, Pesticides, Pollution Prevention and Recycling, Storage Tanks, Waste, Water (subtopics listed on EPA website)
Recycling	Pollution Prevention and Recycling (see programs list on EPA website)
Small business and environment	EPA Administrative Offices - regional minority business Business and Industry - industries, small business Clean Up - asbestos, lead Pollution Prevention and Recycling (see programs list) Wastes - hazardous wastes generation, solid wastes (See also: small business hotline)
Solid and hazardous waste management	Pollution Prevention and Recycling, Wastes (subtopics listed on EPA website)
Understanding environmental regulations	Communities, Environmental Education, Legislation (subtopics listed on EPA website)
Volunteer monitoring and water quality	Communities, Environmental Education, Sustainable Development, Water
Wetlands protection	Ecosystems - ecological restoration

## Web Pages

The US EPA has an extensive and comprehensive web site containing a wealth of useful information. It includes contact information for various offices, program areas, and individuals. Here is a short list of some of the more relevant web addresses:

US EPA national home page  
[www.epa.gov](http://www.epa.gov)

Envirofacts (access point to selected environmental data)  
[www.epa.gov/enviro/](http://www.epa.gov/enviro/)

National Environmental Publications Internet Site (NEPIS)  
[www.epa.gov/ncepihom/nepishom/](http://www.epa.gov/ncepihom/nepishom/)

US EPA Region 5 home page  
[www.epa.gov/region5/](http://www.epa.gov/region5/)

US EPA Region 5 Experts List (contact information for over 1000 experts)  
[www.epa.gov/cgi-bin/r5experts.cgi](http://www.epa.gov/cgi-bin/r5experts.cgi)

## Software

US EPA, in cooperation with Purdue University, develops educational software programs. These tools help clarify complex environmental issues. Most are available on three CD-ROMs; more are planned.

- *Environmental Hypermedia Programs and Water Quality Models, 1996, 50+ programs*
- *Environmental Hypermedia Programs, Vol. II, 1998, 11 programs*
- *Environmental Hypermedia Programs, Vol. III, 1999*

The CD-ROMs cost \$15-\$25 each. Order from:

Carol M. Sikler  
 Farm Building Plan Service,  
 Purdue University  
 1146 ABE Building, Room 208  
 West Lafayette, IN 47907-1146  
 e-mail: [fbps@ecn.purdue.edu](mailto:fbps@ecn.purdue.edu)  
 Phone: 765/494-1174

Many programs are also available free by downloading from the Net. An index is available at [www.epa.gov/seahome/](http://www.epa.gov/seahome/) For example see:

TRILOGY: Environmental Planning for Small Communities  
[www.epa.gov/seahome/trilogy.html](http://www.epa.gov/seahome/trilogy.html)  
 EPA Grant Writing Tutorial  
[www.epa.gov/seahome/grants.html](http://www.epa.gov/seahome/grants.html)

## Publications

EPA makes available its many publications, research documentation, and other work. For example, the National Service Center for Environmental Publications, a central EPA documents repository, has over 5500 titles for free distribution on paper and/or electronic format.

For those with Internet access, a good place to start is the National Environmental Publications Internet Site (NEPIS), EPA's largest electronic documents site. It has documents that are no longer available in print.

You can search, view, and print (including full images of all original pages and full text) from over 7,000 archival and current documents. The address for this site is: <http://www.epa.gov/ncepihom/nepishom/srch.htm>

A National Publications Catalog can be browsed or searched online. Order publications:

US EPA/NSCEP  
 PO Box 42419  
 Cincinnati, OH, 45242-2419  
 Online: [www.epa.gov/ncepihom/](http://www.epa.gov/ncepihom/)  
 e-mail: [ncepimal@one.net](mailto:ncepimal@one.net)  
 Phone: 800/490-9198  
 Fax: 513/489-8695

## Funding

How to fund projects is a major concern to many people working with communities. EPA administers numerous grants and other funding opportunities. Tapping into its funding is an excellent way to connect with EPA and also to support development of a community's quality of life. EPA funding sources in Region 5 are too numerous to list here. You can access the information online at: [www.epa.gov/grtlakes/seahome/resources/](http://www.epa.gov/grtlakes/seahome/resources/)

If you lack Internet access, contact the Region 5 office in Chicago, 800/621-8431, and ask for a list of funding programs.

## Hotlines

For a quick answer to a question – yours or your client's – you can call one of the many (mostly) toll-free EPA information hotlines:

Acid Rain Hotline  
202/564-9620

Aerometric Information Retrieval System (AIRS) -  
Air Quality Subsystem (AQS) Hotline  
800/334-2405

Aerometric Information Retrieval System (AIRS) -  
AIRS Facility Subsystem (AFS) - Helpline  
800/367-1044

Air Risk Information Center Hotline (Air RISC)  
919/541-0888

Asbestos Abatement/Management Ombudsman  
800/368-5888

Center for Exposure Assessment Modeling (CEAM)  
Help Desk  
(706/355-8400)  
e-mail: [ceam@epa.gov](mailto:ceam@epa.gov)

Clean Air Technology Center (CATC) Infoline, formerly  
Control Technology Center  
919/541-0800 (English)  
919/541-1800 (Spanish)  
e-mail: [catcmail@epa.gov](mailto:catcmail@epa.gov)

Clearinghouse for Inventories and Emission Factors  
(CHIEF) Help Desk  
(919/541-5285)  
e-mail: [info.chief@epa.gov](mailto:info.chief@epa.gov)

Climate Wise Wise-Line  
800/459-WISE (800/459-9473)

Emergency Planning and Community Right-To-Know  
Act (EPCRA) Hotline  
800/424-9346

Energy Star Hotline  
888/STAR-YES (888/782-7937)

Environmental Financing Information Network (EFIN)  
202/564-4994  
e-mail: [efin@epamail.epa.gov](mailto:efin@epamail.epa.gov)

Environmental Justice Hotline  
800/962-6215  
e-mail: [environmental-justice-epa@epamail.epa.gov](mailto:environmental-justice-epa@epamail.epa.gov)

EPA Enforcement Economic Models Helpline  
888/ECONSPT (888/326-6778)

EPA Grants and Fellowships Hotline (NCERQA Hotline)  
800/490-9194

Federal Facilities Docket Hotline  
800/548-1016

Hazardous Waste Ombudsman  
800/262-7937

Indoor Air Quality Information Clearinghouse  
(IAQINFO)  
800/438-4318  
e-mail: [iaqinfo@aol.com](mailto:iaqinfo@aol.com)

Inspector General Hotline  
888/546-8740

Local Government Reimbursement Program Helpline  
800/431-9209

Methods Information Communication Exchange  
Service (MICE)  
703/821-4690

Mexico Border Hotline  
800/334-0741 (English/Spanish)  
e-mail: [border.team@epamail.epa.gov](mailto:border.team@epamail.epa.gov)

National Antimicrobial Information Network  
800/447-6349  
e-mail: [nain@ace.orst.edu](mailto:nain@ace.orst.edu)

National Service Center for Environmental  
Publications (NSCEP) formerly NCEPI  
800/490-9198  
e-mail: [ncepi.mail@epamail.epa.gov](mailto:ncepi.mail@epamail.epa.gov)

National Hispanic Indoor Air Quality Hotline  
800/SALUD-12 (800/725-8312) (Spanish/English)

National Lead Information Center Hotline  
800/424-LEAD (800/424-5323)  
e-mail: [leadctr@epamail.epa.gov](mailto:leadctr@epamail.epa.gov)

## US EPA/COOPERATIVE EXTENSION PARTNERSHIPS—No. 3

National Pesticide Telecommunications Network  
800/858-7378  
e-mail: [nptn@ace.orst.edu](mailto:nptn@ace.orst.edu)

National Radon Hotline  
800/SOS-RADON (800/767-7236)  
e-mail: [airqual@nsc.org](mailto:airqual@nsc.org)

National Response Center Hotline  
800/424-8802

National Small Flows Clearinghouse Hotline  
800/624-8301

Ozone Protection Hotline  
800/296-1996  
e-mail: [hotline@tidalwave.net](mailto:hotline@tidalwave.net)

Pay-As-You-Throw (PAYT) Helpline  
888/EPA-PAYT (888/372-7298)

Pollution Prevention Information Clearinghouse (PPIC)  
202/260-1023  
e-mail: [ppic@epamail.epa.gov](mailto:ppic@epamail.epa.gov)

RCRA, Superfund and EPCRA Hotline  
800/424-9346  
TDD 800/553-7672

Safe Drinking Water Hotline  
800/426-4791  
e-mail: [hotline-sdwa@epamail.epa.gov](mailto:hotline-sdwa@epamail.epa.gov)

Small Business Ombudsman Hotline  
800/368-5888

Storet Water Quality System Hotline  
800/424-9067  
e-mail: [storet@epamail.epa.gov](mailto:storet@epamail.epa.gov)

Toxic Release Inventory - User Support Service  
202/260-1531

Toxic Release Inventory - Community Right To Know -  
EPCRA Hotline  
800/535-0202  
e-mail: [tri.us@epamail.epa.gov](mailto:tri.us@epamail.epa.gov)

Toxic Substances Control Act (TSCA) Hotline  
202/554-1404  
e-mail: [tsc-hotline@epamail.epa.gov](mailto:tsc-hotline@epamail.epa.gov)

WasteWise Helpline  
800/EPA-WISE (800/372-9473)  
e-mail: [ww@cais.net](mailto:ww@cais.net)

Wetlands Information Hotline  
800/832-7828  
e-mail: [wetlands-hotline@epamail.epa.gov](mailto:wetlands-hotline@epamail.epa.gov)

*Prepared by Christopher Thoms and Elaine Andrews, University of Wisconsin Cooperative Extension-Environmental Resources Center. Sources: US EPA web site pages. Edited by Lynn Entine. Designed by Nellie Schmitz.*



Environmental Resources Center, University of Wisconsin Cooperative Extension, 1450 Linden Dr., 216 Agriculture Hall, Madison, WI 53706  
608/262-0020 <<http://www.uwex.edu/erc>>

Produced with funding from the US EPA Office of Environmental Education



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9/00

# Leadership Roles for US EPA

## Forging Solutions for Sustainable Communities

**U**nderstanding that the nation's environmental future will, for the most part, be determined locally, US EPA supports community efforts to become sustainable. Their goal is to encourage the use, protection, and restoration of natural resources in ways that will benefit ourselves and future generations. This EPA approach is called Community Based Environmental Protection (CBEP). Program initiatives using this approach include environmental justice, brownfields, volunteer monitoring, and sustainable development.

While it supports community efforts, EPA cannot be directly involved in every community. However, by working with partners it can offer communities access to environmental data, information, training, and grants. Partners can also help EPA work with organizations, community leaders, and educators to strengthen their capacity to address environmental problems effectively.

Cooperative Extension can help connect EPA to a diverse network of community leaders and groups. Cooperative Extension is the outreach and education arm of the US Department of Agriculture's Cooperative State Research, Education and Extension Service (CSREES).

Cooperative Extension's objective is to improve the economic, environmental and social well-being of collaborating communities by building their capacity to

address community problems. Extension professionals are university-based educators and researchers who work with community leaders and interest groups.

EPA and Cooperative Extension share the objective of linking resources and people, and both believe that:

- Citizen-based efforts make a difference.
- Local efforts are successful when aided by the expertise of both natural resource professionals and education professionals.
- Local, regional, and national partnerships are necessary to provide accurate information and ensure it is disseminated effectively and economically to support local action.

This pamphlet introduces US EPA leaders to Cooperative Extension, describes its capabilities and leadership structure, and outlines joint partnership opportunities.

### What is Cooperative Extension?

Cooperative Extension in the United States evolved from the State Land Grant University system which was established in 1862 by the Morrill Act. This Act created public institutions of higher learning to provide on-campus and off-campus education to the American public. They continue to do so to this day. Many of the nation's largest and most prestigious uni-

versities are Land Grant institutions.

Recognizing the enormous potential of science-based agriculture to America's economic future, the Hatch Act of 1887 established agricultural experiment stations at the 1862 institutions. In 1890, the second Morrill Act provided Land Grant status to a number of predominantly Black colleges.

There are usually three related, but often autonomous, Extension organizations at a Land Grant University: University Extension, Cooperative Extension, and Agriculture Experiment Stations. Cooperative Extension and Agriculture Experiment Stations are both part of USDA CSREES, but are funded through separate Legislative Acts.

### Extension at a Land Grant University

**University Extension** is a campus sponsored program which provides professional development and continuing education for the local community.

**Cooperative Extension** is the county-based outreach program which targets the unique local needs of each community and is supported by identified University specialists.

**Agriculture Experiment Stations** facilitate research programs focused on regional priorities.

Cooperative Extension is generally understood as the institutional system of non-formal education created by the Smith-Lever Act of 1914. The intent of the Act was to formalize and cooperatively fund a University-based system of practical educators. They would help farmers, ranchers, and rural residents by transferring to them useful research-based information that was generated or interpreted by their Land Grant institutions. Historically, the transferred information pertained to the needs of the rural public served by County Extension agents and emphasized agricultural practice and agriculture-based business.

Contemporary Cooperative Extension efforts continue to support rural communities, but they now offer a broader range of education resources in response to increased community diversity. In many states Cooperative Extension programs address the interests of urban communities in addition to rural ones. Building on Extension's strengths they cover such topics as urban forestry and gardening, community economic development, family nutrition and education, and youth leadership development.

The term "cooperative" refers to the unique partnership of Federal, State, and County governments who fund the Extension enterprise. The system was established by Federal law and is administered by the US Department of Agriculture. The law provides for an annual appropriation which is distributed to designated institutions through an established allocation formula. These Federal "formula" funds must be at least equally matched by State and County funds.

## Foundations of Cooperative Extension

### The Smith-Lever Act of 1914

The fundamental function of Smith-Lever extension education is the development of rural people themselves. This is accomplished by fostering attitudes of mind and capacities which will enable them to better meet the individual and civic problems with which they are confronted. Unless economic attainment and independence are regarded chiefly as means for advancing the social and cultural life of those living in the open country, the most important purpose of extension education will not be achieved.

— 1930, *Federal Office of Education*,  
cited by Scott J. Peters

### Mission

In cooperation with our partners and customers, CSREES provides the focus to advance a global system of research, extension and higher education in the food and agricultural sciences and related environmental and human sciences to benefit people, communities, and the Nation.

— "About CSREES" Web Page, 1999,  
<[www.reeusda.gov/new/about/csreesa2.htm](http://www.reeusda.gov/new/about/csreesa2.htm)>

## Cooperative Extension Model

When educators use the term "Extension" they generally mean: the systematic transfer, adoption, and diffusion of technology and research-based information from a college or university to a targeted user audience. Extension educa-

tion is also called non-formal education, meaning it is voluntary and can take place anywhere. These programs respond to identified needs and interests of the client audience. They are regulated only when they are designed to fulfill specific continuing education requirements (such as for nurses or teachers).

Cooperative Extension does such outreach programming through offices at several levels: national program leaders; state Extension directors, program leaders, and specialists; regional specialists and educators; and county educators. Every level of the Cooperative Extension structure (local to national) can partner with US EPA.

By definition, Co-op Extension involves two-way communication. County faculty (also called Extension Agents), impart research-based technical information to a user audience. The audience in turn communicates its practical needs, and its experiences in using the information, to university-based researchers, usually through the county faculty.

State Specialists, then, use that feedback to refine their investigations so the results are more useful to the client audience.

Specialists operate on the premise that research findings must be "demonstrated" to the ultimate user in practical field situations by professionals who have earned the target community's trust. Otherwise the results will not be widely used or credible. Community may be defined by geography, by interest orientation, or both.

Priorities for a county extension office are usually established by local advisory groups and by the County governing board which supplies an increasing portion of agents' funding. At the state level, Directors establish Extension priorities with input from state Extension advisory groups, the university, the state legislature, and formula and earmarked funding from the US Department of Agriculture.

## Cooperative Extension Strengths

- Respect and confidence of the community.
- Access to adult volunteers in the community who, with training, can further extend the educational message.
- The ability to reach many youth through 4-H programs, supplying experiential education in diverse subjects.
- Expertise in a great range of disciplines from the Land Grant University system.
- Experienced educators trained in one of the natural resource, agriculture, business, community planning, or human health sciences.
- Neutrality as an information source. Extension faculty and staff are not regulators. They are bound by the policies of their Universities not by legal policies and directives.
- Extension professionals are required by law to serve all people without regard to their ethnicity, sex, etc. They are accountable to their respective Deans of Extension for performance.

## Partnership Opportunities

US EPA and Cooperative Extension share the objective of linking resources and people, and they have complementary resources. Partnerships between them will significantly enrich programs that help communities build their capacity to identify and address local environmental challenges.

Cooperative Extension works directly with communities, defined by place or by interest, within seven program areas. Partnerships are most fruitful when the links between Extension education priorities and specific EPA programming areas are clear.

US EPA staff can benefit from Cooperative Extension strengths when they want to:

- Work in or with specific communities or link with community networks.
- Provide community access to information, data or data interpretation.
- Provide technical assistance for preventing pollution or identify opportunities for voluntary compliance.
- Provide training
- Identify new program emphases.

County Extension staff would likely use EPA resources if they knew about them and if the resources met perceived local needs. However, given their history, structure and mission, it is unlikely that County Extension offices would become a mandated delivery mechanism for EPA resources. Such a role is also inappropriate given what is known about how community members want to learn.

## Extension Program Areas

### Managed by Program Leaders

Agriculture  
 Community Resources, Economic, and Social Development  
 Family Development and Resource Management  
 4-H and Youth Development  
 Leadership and Volunteer Development  
 Natural Resources and Environmental Management  
 Nutrition, Diet and Health

Understanding how Cooperative Extension works will help US EPA staff identify opportunities for joint efforts.

## Coordination and Resources

US EPA is a complex organization which offers a wide variety of resources. Success in forming partnerships will benefit from attention to administrative relationships and active dissemination of specific resources.

EPA and Extension administrators can consider four opportunities to strengthen partnerships:

- Formally legitimize Extension/EPA relationships in Washington, DC, and in Regions.
- Implement joint EPA-Extension regional task forces.
- Support programs encouraging EPA and Extension professionals to trade positions or teams.
- Conduct joint in-service training.

US EPA can work to determine which positions in its agency should lead efforts to coordinate activities with Cooperative Extension. CBEP regional coordinators, Brownfields staff and

Superfund staff can likely help because they already work in communities and have many community contacts.

US EPA could also offer specific resources that help Extension staff recognize opportunities for collaboration. For example:

- Overview fact sheets (in print or on the Web) that describe EPA programs, funding mechanisms, and resources.
- “Who to contact” references which name staff positions that relate to specific Extension priorities, such as: forestry and silviculture, animal waste issues, wildlife and endangered species, private waste water treatment, wetlands, environmental health, etc.
- Summaries of environmental monitoring and of technical assistance resources, activities and data.
- Descriptions of steps required for ecosystem management profiling and environmental planning for small communities.

- Research and field testing needs.  
Establishing partnerships with Cooperative Extension at many

levels will make EPA’s efforts to build community capacity stronger and more effective.

For Help With	Contact
Statewide project crossing Extension Program Areas	State Extension Director
Research project	State Extension Director State Program Leader for appropriate Program Area (see pg 3) State Experiment Station Director
Program specific to an Extension Program Area	State Program Leader for appropriate Program Area (see pg 3)
County or community program	County educator/agent

**References:**

*Framework for Community-Based Environmental Protection* (EPA 237-K-99-001), URL: <http://www.epa.gov/ecocommunity/> has been quoted or paraphrased in several places in this document to represent EPA’s goals and perspective.

The Smith-Lever Act summary was presented at a University of Wisconsin Cooperative Extension Faculty-Staff Conference, 1999, by Scott J. Peters, Public Scholarship and Public Work Specialist, University of Minnesota and Cornell University Extension.

*Prepared by Elaine Andrews and Bill Dickinson, University of Wisconsin Cooperative Extension-Environmental Resources Center. Edited by Lynn Entine. Designed by Nellie Schmitz*



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608/262-0020 <http://www.uwex.edu/erc>

Produced with funding from the US EPA Office of Environmental Education



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# Linking to Cooperative Extension

## A US EPA Guide to Cooperative Extension in Region 5 States

**B**oth US EPA and USDA Cooperative Extension share a common goal—linking resources and people, and each has effective strategies for working with communities.

EPA has strong environmental management tools to encourage and support local environmental education and outreach.

Extension's ties with community leaders can forge connections between local agencies and interest groups, and EPA resources.

Activities that bring EPA and Extension professionals together will enhance their abilities to benefit communities. As they come to know each other, they can devise ways to expand use of their skills and resources. The result will be more focused, productive and efficient efforts on behalf of communities.

Efforts are currently underway to foster partnerships between US EPA and USDA Cooperative Extension Service (CES) at local, state and Region levels. This pamphlet is intended to help EPA staff in Region 5 understand Cooperative Extension and make contact with their CES counterparts. It describes benefits of partnering and lists names, contact

information and expertise/responsibility for CES programs in the Region.

### What is Cooperative Extension?

The USDA Cooperative State Research, Education and Extension Service (CSREES) partners with Land Grant Universities, Native American institutions, and historically Black colleges in each state and territory, and the District of Columbia.

Education and outreach are directed through campus and county-based Cooperative Extension offices. Each state Cooperative Extension is unique – designed to meet its citizens' needs – but those in EPA Region 5 have many common characteristics. Their program goals and administrative structures are similar and each has faculty in nearly every county and on many campuses in their State University systems.

Cooperative Extension program priorities are developed and funded in collaboration with state and county governments. State and county faculty provide practical educational programs, resources, and demonstration projects that respond to local needs. They also give citizens quick and convenient access to University research and knowledge. Cooperative Extension faculty are experienced and highly skilled in connecting university resources with community needs.

Although there is some variation, most state Cooperative Extensions program in the following areas:

### State Extension Program Areas

Agriculture – Plant and Animal Production, Protection, and Processing  
 Community Resources, Economic and Social Development  
 Family Development and Resource Management  
 4-H and Youth Development  
 Leadership and Volunteer Development  
 Natural Resources and Environmental Management  
 Nutrition, Diet and Health

Extension research efforts in EPA Region 5 are facilitated by the North Central Regional Association of Agricultural Experiment Station Directors. They are funded by a federal appropriation, the Hatch Act, and other sources. The research program focuses on regional priorities that are identified and developed jointly by Directors of State Agricultural Experiment Stations, University Department Chairs, and participating scientists.

Researchers are faculty on Land Grant campuses but are not required to have a Cooperative Extension appointment. While Cooperative Extension programs are founded on research, specific campus research projects may not be immediately applicable to community extension programs, depending on the project and the state's Extension structure. Linking CSREES research activities with community education and extension opportunities is an ongoing challenge.

### Land Grant Universities in US EPA Region 5 States

University of Illinois  
 Purdue University in Indiana  
 Michigan State University  
 University of Minnesota  
 Ohio State University  
 University of Wisconsin

## Why partner with Cooperative Extension?

When environmental challenges arise a community may face a far more complex, and even threatening, problem than it has ever encountered. Just trying to understand the problem and its possible consequences can be daunting. Leaders contend with technical jargon, regulatory verbosity, and potential internal community conflict.

EPA has resources and information that are vital to community health but may be overlooked by Extension faculty. Extension faculty may not know that EPA produces and has access to sources of technical information and expertise and that EPA makes its resources and grants available to citizens.

Being a federal agency, the EPA often encounters substantial barriers to connecting and working with communities. County-based Cooperative Extension faculty, however, have strong relationships with their communities. They can help connect communities with EPA's vitally needed resources.

Extension faculty can help inform EPA staff of local needs, issues and characteristics and tailor information and programs to a community.

Communities trust Extension faculty to be fair and impartial facilitators and educators in the face of complex issues. Partnering between the EPA and Cooperative Extension allows a community to leverage EPA's considerable resources, information and technical expertise in a way consistent with its local context, needs and values.

## How to connect to Cooperative Extension

This pamphlet lists contact information for State Extension directors, headquarters offices, and program area offices by state. State Extension titles include:

- Dean and Director of Extension
- Dean or Director of Experiment Station
- District Director – Supervises all CES personnel within a multiple county region
- Program Leader – Advises CES personnel in one or more Extension Program Areas
- Faculty – Faculty based in a county are Extension Agents or Extension Educators; those based at a university campus are Specialists.

Where to connect with a given state Cooperative Extension depends on your needs and what you hope to accomplish. The following table has suggestions.

The quickest and most direct way to contact a local Extension educator is to call the county

Extension office. To find the phone number, refer to the State Extension web pages or the county government section of local telephone directories. The director's or program area offices of any state Extension can always provide this information.

Each state Extension System has a web site (listed on pages 3-6 by state) which can help shed light on its unique structure and resources. Each also has a publications unit that produces support materials for agents to use in fulfilling community needs.

It may be prudent for EPA staff to examine Extension publications and web pages before embarking on any new community program. There may be materials and methods already produced for a given topic. Extension publications tend to be very practical, "how to" materials meant for communicating complex ideas in simple terms for the average citizen.

Web addresses (URLs) and publication office contact information for each Region 5 State Cooperative Extension Service are on the following pages. *All information is current as of publication date.*

For Help With	Contact
Statewide project crossing Extension Program Areas	State Extension Director
Research project	State Extension Director
	State Program Leader for appropriate Program Area (see pg 1)
	State Experiment Station Director
Program specific to an Extension Program Area	State Program Leader for appropriate Program Area (see pg 1)
County or community program	County educator/agent

## University of Illinois – Extension

<http://www.extension.uiuc.edu/>

### State Director: Dennis R. Campion, Associate Dean

214 Mumford Hall, MC-710  
1301 W. Gregory Dr.  
Urbana, IL 61801  
e-mail: [dcampion@uiuc.edu](mailto:dcampion@uiuc.edu)  
Phone: 217/333-5900  
Fax: 217/244-5403

### Program Areas

Illinois Extension has four program areas:

4-H/Youth Development  
Family and Consumer Sciences  
Community and Economic Development  
Agriculture and Natural Resources

There is a single program area coordinator who can direct you to information or contacts in any of the four program areas.

John van Es, Assistant Dean, Program Coordination  
216 Mumford Hall  
1301 W. Gregory Drive  
Urbana, IL 61801  
e-mail: [vanesj@mail.aces.uiuc.edu](mailto:vanesj@mail.aces.uiuc.edu)  
Phone: 217/333-9025

### Publications

<http://www.extension.uiuc.edu/pubs.html>

ITCS Instructional Materials  
1401 S. Maryland Drive  
Urbana, IL 61801 USA  
Phone: 217/244-3906,  
800/345-6087 (orders only)  
Fax: 217/333-0005

### Agricultural Experiment Station

Steven G. Pueppke, Associate Dean  
University of Illinois  
211 Mumford Hall  
1301 W. Gregory Drive  
Urbana, IL 61801  
e-mail: [pueppke@uiuc.edu](mailto:pueppke@uiuc.edu)  
Phone: 217/333-0240  
Fax: 217/333-5816

## Purdue University (Indiana)

<http://www.ces.purdue.edu/>

### State Director: David Petritz, Associate Dean, Director

Cooperative Extension Service  
1140 AGAD Building  
West Lafayette, IN 47907-1140  
e-mail: [david.petritz@ces.purdue.edu](mailto:david.petritz@ces.purdue.edu)  
Phone: 765/494-8489  
Fax: 765/494-5876

### Program Areas

Leadership & Community Development

Program Leader  
KRAN Building  
West Lafayette, IN 47907-1161  
e-mail: [ayres@agecon.purdue.edu](mailto:ayres@agecon.purdue.edu)  
Phone: 765/494-4215

4-H/Youth

Program Leader  
1161 AGAD Building  
West Lafayette, IN 47907-1161  
Phone: 765/494-8422  
Fax: 765/496-1152

Ag & Natural Resources

Program Leader  
AGAD Building  
West Lafayette, IN 47907-1161  
Phone: 765/494-8494

Consumer & Family Sciences

Program Leader  
1260 Stone Hall  
West Lafayette, IN 47907-1260  
Phone: 765/494-8252  
Fax: 765/496-1947

### Publications

<http://www.agcom.purdue.edu/AgCom/>

Media Distribution Center  
301 S. 2nd Street  
Lafayette, IN 47901-1232  
Phone: 888/398-4636

### Agricultural Experiment Station

William R. Woodson, Director  
Office of Agricultural Research Programs  
1140 AGAD Building  
Purdue University  
West Lafayette, IN 47907  
e-mail: [wrrw@aes.purdue.edu](mailto:wrrw@aes.purdue.edu)  
Phone: 765/494-8362  
Fax: 765/494-0808

## Michigan State University Extension

<http://www.msue.msu.edu/msue/>

### State Director: Arlen Leholm, Director

108 Agriculture Hall  
East Lansing, MI 48824-1039  
e-mail: [msue@msue.msu.edu](mailto:msue@msue.msu.edu)  
Phone: 517/355-2308  
Fax: 517/355-6473

### Area of Expertise Teams

Rather than Program Areas, Michigan State uses Area of Expertise Teams. These teams involve extension specialists, agents, researchers, and/or stakeholders organized around a particular commodity, interest area, and/or issue. They are charged with listening to stakeholders, identifying priorities, planning and providing educational programs, and evaluating program outcomes and impacts. Listed below are the various Area of Expertise Teams that may be of interest to EPA staff. The Director's office can direct you to a contact person for each Team:

Community development	Land use
Consumer horticulture	Leadnet
Dairy	Livestock-overall
Economic development	Manure
Family resource mgmt.	State, local government
Field crops	Tourism
Food safety	Turf
Food, nutrition, health	Vegetable
Forage, pasture, grazing	Volunteer development
Forestry	Water quality
Fruit	Youth development
Human development	

### Publications

<http://ceenet.msue.msu.edu/bulletin/ctlgmast.html>

Bulletin Office MSU Extension  
10 Agriculture Hall  
East Lansing, MI 48824-1039  
Phone: 517/355-0240

### Agricultural Experiment Station

J. Ian Gray, Director  
Agricultural Experiment Station  
Michigan State University  
109 Agriculture Hall  
East Lansing, MI 48824-1039  
e-mail: [maesdir@pilot.msu.edu](mailto:maesdir@pilot.msu.edu)  
Phone: 517/355-0123  
Fax: 517/353-5406

## University of Minnesota – Extension Service

<http://www.extension.umn.edu/>

### State Director: Charles Casey, Dean and Director

University of Minnesota Extension Service  
240 Coffey Hall  
1420 Eckles Avenue  
St. Paul, MN 55108-6070  
e-mail: [ccasey@extension.umn.edu](mailto:ccasey@extension.umn.edu)  
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Extension educators in the University of Minnesota Extension Service specialize in one of 10 areas and work in interdisciplinary teams to develop educational programs. Educational program emphasis in a cluster of counties is determined through local needs and resources available and is revised periodically. The 10 areas of expertise are below. Check with the Director's office or web site for contact names and phone numbers.

Environment and natural resources  
Livestock systems  
Crop systems  
Horticulture  
Community resource development  
Child and youth development  
Nutrition, food and health  
Family development  
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Leadership and citizenship education

### Publications

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Produced with funding from the US EPA Office of Environmental Education  **EPA** United States Environmental Protection Agency



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# Building Capacity

## Educating for Community Action

**T**he nation's environmental future will, for the most part, be determined locally. National forces may encourage action through regulation, money, or information but Hometown, USA, is most often where the "rubber" of decision and action meets the "road" of environmental impact.

How can Cooperative Extension and US EPA help steer communities toward actions that protect and enhance the environment? Developing and using an education plan designed to match community interests will help these professionals support community initiatives and enhance community capacity to manage the environment.

This pamphlet briefly introduces Community-Based Environmental Education (CBEE), describes how agency professionals can link their skills to CBEE, and identifies needed tools and resources.

Effective Community-Based Environmental Education is defined by results: it leads to positive actions. To be effective, CBEE must be:

- **Local**
- **Collaborative**
- **Informed**
- **Active**

Applying a community-based approach is both an art and a sci-

ence. The art is in the educator's ability to notice and take advantage of community links and opportunities. The science involves applying skills needed for working with a coalition or group. How the approach is applied depends on the characteristics of the community and of the groups or agencies involved.

### Local Base is Fundamental

*Address a locally identified issue and work toward a positive outcome.*

To address an issue or concern effectively, community members must recognize the link with their local interests and be able to find and use the resources they need to take action.

The most effective environmental education projects – those which lead to action and lasting change – are created in response to local concerns.

Sea Change in Philadelphia is an example. This non-profit group develops entrepreneurial solutions to local environmental problems. In one initiative neighborhood citizens sell trees for urban greening projects. The income supports community garden and nutrition education activities. Sea Change identified the need, audience, and education strategy, then sought help from Extension experts to provide horticulture training.

Being developed collaboratively with local community members helps community-based education programs :

- Identify and build on community strengths.
- Take advantage of timely events and opportunities.
- Collaborate with ALL interested groups including members of the target audience.
- Work toward a positive outcome.

### Collaboration is Powerful and Practical

*Work with a coalition or group, giving attention to techniques that support group effectiveness.*

When time and money are in short supply – a chronic condition for most programs – it seems obvious that being efficient and focused are important.

Paradoxically, in Community-Based Environmental Education making efficiency and focus a primary approach may delay, or even derail, the program. Long-term improvement of environmental quality ultimately depends on building community capacity to devise and meet environmental management goals. This takes time.

Effective CBEE relies on someone who acts as an instigator. This person works with a local group or coalition to get something started and takes responsibility to keep things going. Instigators are often based in an agency, though they may be community members.

Two skills are crucial to these collaborative efforts: facilitating group progress using goal setting and consensus decision-making; and building partnerships, networks and teams. Effective CBEE leaders attend as much to group “process” objectives as to successfully addressing a substantive issue.

Content experts, who often have years of training in independent thought and research, may be relatively inexperienced with this type of collaboration. Training can help them learn it. However, facilitating group process involves a state of mind and a communication style as much as a set of skills.

Experts can increase their impact by working jointly with local leaders and educators who are skilled in and comfortable with group process.

CBEE project leaders or managers are also more effective when they know and apply strategic planning tools. These tools can help: identify vision or purpose; generate, organize, analyze, and prioritize ideas or issues; identify tasks and assign responsibilities; define and solve problems; perform assessments; collect data; monitor and evaluate programs.

Successful CBEE projects also:

- Communicate broadly using varied methods such as newsletters, town meetings, TV, festivals.

- Provide recognition and rewards.
- Operate flexibly, adapting to and taking advantage of opportunities as they occur.

### **Informed Action is Empowering and Productive**

*Take action based on information, within the context of community goals.*

The product or outcome of an effective CBEE project has three parts: 1) informed action on a 2) substantive issue which leads to 3) lasting change. When one element is missing the effort can be wasted.

For example, some environmental education efforts produce lists of meetings attended, handouts distributed, and telephone contacts made. There’s been activity but no action. Alternatively, some actions produce no change because they lack appropriate local information needed for effective action.

A school stream improvement project, for example, may be a good field education activity but it may not improve riparian quality unless it is designed with help from natural resource professionals. Restoring a riparian area takes sophisticated understanding of local hydrodynamics and appropriate plant communities.

### **Information Needed for Effective Action**

- Community wants and needs.
- Environmental, socio-economic conditions.
- Local strengths, skills and resources.

- Data about the particular issue of concern.

One surprisingly powerful and effective tool is to involve citizens in collecting and analyzing data. By combining new information with their understanding of local people and local preferences, community members can help develop action plans that will effectively motivate citizens to make a change or to continue a successful management approach. The key is making a clear connection between the effort and citizen wants and needs.

These techniques work most effectively when agency professionals actively respect, encourage, and reward the efforts of citizens and local groups, and when group accomplishments are publicized.

Successful CBEE actions also:

- Relate to long-term community vision and goals.
- Consider the community as a whole (history, culture, and economic or socio-political influences).
- Build on community resources and skills.
- Match the scope and complexity of the action to the community’s resources.

Finally, action and information must address a substantive issue that community members see as relevant. Outsiders, like US EPA and Extension staff, with different information and experience may be concerned about substantive issues that are not yet apparent to community members.

These professionals must meet the challenge of translating and communicating their concerns in ways which evoke genuine local concern and commitment. Otherwise real change is unlikely.

## Effective Education is Active

*Engage the broader group by using tested education practices*

Community-based education implies an education plan created as a result of community involvement and designed to match community interests. Effective CBEE takes advantage of educational theory and research and uses tested techniques for promoting action and behavior change.

### Elements of Effective Education Strategy

- Presents all points of view.
- Relates to a specific audience, its needs, and learning styles.
- Presents behavior choices that are relatively low cost in time, energy, money, and materials.
- Gives the audience opportunities for self-assessment and applying new skills.
- Uses creative approaches.

Many US EPA and Extension staff are resource specialists who may have little training in education theory and tools. Also, each expert's discipline has its own mindset and techniques. For example, a university-based person may see a situation as an information or research problem while a community activist sees an organizing problem and agency staff see an enforcement problem.

Effective practitioners recognize these biases and use education theory and research, such as understanding the learning processes of adults and youth, for example, to help counteract them. Rather than develop

expertise in a new field, agency professionals can collaborate with a skilled practitioner to devise programs that are effective with the target audiences.

Social marketing and the study of how innovations diffuse into society also offer useful insights. Well-tested environmental education research from both fields shows that two conditions are necessary for learning and change to occur: the education experience 1) presents behaviors which are similar to what people already do, and 2) provides immediate, observable consequences.

Training, a mainstay of many Extension initiatives, is effective when provided to individuals who have decided to become involved and when it addresses specific skills needed for managing the local issue.

### CBEE Summary

- Effective CBEE is created in response to local concerns and builds on local strengths.
- CBEE programs are integrated into a community planning process and help strengthen citizens skills to plan with the environment in mind.
- CBEE programs are collaborative. Their leaders attend as much to "process" objectives as to outcomes.
- Collaboration requires active, consistent, continuing leadership.
- The desired outcome is informed action which leads to lasting change.
- CBEE uses tested theory, research and techniques to promote action and encourage new behaviors.

## Roles for Professionals

A full-scale CBEE program is a major undertaking which relatively few Extension and US EPA professionals can do alone. However, their skills may be helpful at any stage of community environmental education and planning.

Some actions which can promote community-based environmental education are:

**Demonstrate awareness** of community issues, needs and concerns in programs or materials. Lead by personal example.

**Link environmental issues to community issues** with relevant examples and localized activities.

Tailor a program to **meet specific community needs** (jobs for youth, improved recreation opportunities, unsightly lake weeds) with the environmental topic as a parallel theme. Involve citizens in gathering and interpreting data.

**Help citizens lead** in planning education on a local environmental issue. Use behavior change research or social marketing.

**Support local groups** already working with citizens on any locally identified topic. Use or make opportunities to relate key environmental topics or management activities to their work. Help them develop data gathering and interpretation skills.

**Encourage and facilitate activities** that identify community needs and assets, relate to a local vision, and provide action steps for quality of life and the environment.

## Developing Tools and Resources

Behind-the-scenes work can also help those who are working on environmental education in the community. Here are examples of some common needs:

### Information

- Information about the economic, social and environmental costs of development and the economic costs of environmental protection strategies.
- Indicators to measure results of environmental management decisions.
- Demographic information.
- Environmental justice and health resources.
- Environmental education materials and training for urban settings.
- Information on funding sources.

## Social Marketing

- Translate education goals into simple messages about easily accomplished actions.
- Develop packaged environmental education programs for specific audience needs/interests, such as basic boat maintenance linked to preventing pollution.
- Develop behavior preferences survey tools, sample behavior goals, potential barriers to preferred behaviors.

## Information gathering

- Tools to combine local mapping and information gathering with community development activities.
- Tools and training in capturing/assessing community social and environmental indicators.
- GIS access and assistance.

## Skills development

- Offer professional development for natural resource experts on: “localizing” public meetings, strategic planning, adapting knowledge/skills to community problem-solving, urban audience needs.
- Build capacity in local groups to continue programs themselves: organizing, assessing citizen needs/values, analyzing environmental trends/issues, getting technical assistance, preparing education programs, coordinating volunteers, working with media.
- Holistic approaches to issues needing integrated solutions; e.g. solving one farm problem may create other issues.

Prepared by Elaine Andrews and Lynn Entine, University of Wisconsin Cooperative Extension-Environmental Resource Center. Summarized from *An EPA/USDA Partnership to Support Community-Based Education: Discussion Paper*, EPA 910-98-008. URL: <http://www.reeusda.gov/nre/gifs/usdaepa.pdf>  
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# Building Capacity

## From Transferring to Transforming

**T**HE US EPA AND USDA Cooperative Extension are building partnerships that support community efforts to protect the environment. Their mutual goals are to help:

- Expand the community's capacity to improve environmental quality.
- Integrate environmental management goals with other community development activities.
- Lead to environmental improvement.
- Increase involvement of more community interests (both groups and points of view) in community environmental management activities.

How can environmental management professionals and educators choose the most effective ways to accomplish these goals? Should they disseminate information, organize conferences, or support grant activities? Is it better to emphasize outreach, technology transfer, or demonstration projects?

Each method can be effective when it is part of a planned effort based on established outreach education theory and practice. It will be most effective when chosen and implemented cooperatively with County based Extension educators and ongoing

outreach programs which use these techniques.

This pamphlet briefly introduces these useful theories and techniques.

### What is Outreach Education?

A first step is understanding the difference between providing information and engaging in education.

Information is not education, although education can't take place without information. Outreach education relies on the existence of a body of knowledge which is not only transferred to the individual but is instrumental in transforming the individual. In other words, the individual has to actively receive the knowledge and know how to use it.

Two research areas give some general guidance in accomplishing this transformation. Behavior Change research focuses on promoting action through teaching ideal behaviors and environmental practices. An *ideal behavior* is a single, observable action that a person must perform to reduce or help resolve a specific environmental problem. It should be determined by experts. An *environmental practice* is a series of several related behaviors that, together, could affect the environmental problem.

Diffusion of Innovation research looks at the processes involved in how and why people adopt technical innovations. It describes the roles of innovators (a US EPA environmental health researcher for example), diffusers (such as outreach educators or community leaders), and potential adopters (those who could benefit from the innovation). Together they must communicate to understand: 1) the innovation; 2) how and why it works; and 3) its advantages, disadvantages, and consequences in *specific situations*.

Research shows that innovations diffuse faster (are adopted more quickly) if they are perceived as having:

- A relative advantage over other methods in terms of economics, convenience, social prestige, or satisfaction.
- High compatibility with the existing values, past experiences, and needs of potential adopters.
- Low complexity.
- High "trial-ability" before commitment is required.
- High visibility to other potential adopters.

Successful outreach programs use this model and adapt their information and methods to meet the needs and perceptions of the potential adopters.

The innovation process includes several levels of commitment and action. Potential adopters may begin at any one and will move among them freely. These are:

- Knowing that the innovation exists and how it functions.
- Forming a favorable or unfavorable attitude toward the innovation.
- Engaging in activities that lead to a choice to adopt or reject the innovation.
- Putting the innovation into use and perhaps adapting it to specific needs.
- Seeking reinforcement of an innovation decision already made or reversing a former decision.

## Elements of Effective Education

If it is going to accomplish transformation, an education program must have three elements:

**Information and communication** This involves delivering general content, information updates, best practices, and results of research to target audiences. Delivery mechanisms vary: fact sheets, web sites, reports, news releases, displays, presentations, etc.

**Skill development** This covers a broad range of activities. However, successful educators must *first* learn: Who is the target audience? What are their skills, wants, and needs? How does my information build on their skills and meet their needs? How does the audience want to receive information or training? The educator then adapts the education program based on this information.

Clients become proficient in a skill through specialized instruction, modeling, practice, and coaching. Some skills may be specific applications, such as how to operate a piece of equipment or how to test soil pH. Other skills may be processes which enable clients to use information, such as critical thinking, problem-solving, decision-making, and communication.

**Application** is using new information, a skill, or a process to solve a practical problem. For the client, an important part of the education process is assessing the innovation's benefit, possibly modifying it to meet a specific need, and even rejecting it in favor of another, more effective strategy.

The program's goal determines your choice of education components. For example, the goal to transfer information may be met by mailing a pamphlet with factual information. However, if the goal is adoption of a target behavior, the education program must have all three components.

## Environmental Education

Environmental education (EE) focuses this general educational process on natural and socio-cultural environments.

EE has a well developed history and continues to evolve as educators gain experience and refine their theories. Early definitions of environmental education were developed at several international meetings sponsored by the United Nations. The most famous was the 1978 Tbilisi Intergovernmental Conference.

A 1982 UNESCO definition, for example, says: "The purpose of environmental education is to aid citizens in becoming environmentally knowledgeable and, above all, skilled and dedicated citizens who are willing to work, individually and collectively, toward achieving and/or maintaining a dynamic equilibrium between quality of life and quality of the environment." US EPA's definition is similar.

### US EPA Environmental Education definition:

Environmental education is a learning process that increases people's knowledge and awareness about the environment and associated challenges, develops the necessary skills and expertise to address these challenges, and fosters attitudes, motivations, and commitments to make informed decisions and take responsible actions.

Recently, environmental education literacy has been described in terms of four themes:

- Knowledge of environmental processes and systems.
- Questioning and analysis skills.
- Skills for understanding and addressing environmental issues.
- Personal and civic responsibility.

Note that environmental education applies to citizens of all ages. It has never been limited to school-age youth. It also encompasses all three educational elements: knowledge, skills, and action.

Education about the environment might address an environmental topic, problem, or issue.

**Environmental topics** are any subjects that can be taught and learned such as organisms, systems, events, phenomena, and processes.

**Environmental problems** are related to people, the environment, and their interaction. Education about a problem involves gathering and analyzing information about it then developing target behaviors for solving it.

**Environmental issues** are environmental problems where two or more parties cannot agree on solutions. Education involves working with stakeholders or a coalition and giving attention to techniques that support group effectiveness. The group works together to gather and analyze information and recommend policy changes.

## Community-Based Environmental Education

In a three-year project funded by the US EPA, environmental education experts evaluated a wide range of theory and practice. They developed a model for combining environmental education and community education to successfully produce positive actions. This model is called Community-Based Environmental Education (CBEE). They determined that effective CBEE has four critical elements, each of which is essential to the outreach process.

### Effective Community-Based Environmental Education is:

**Local** Addresses a locally identified issue and works toward a positive outcome.

**Collaborative** Works with a coalition or group, giving attention to techniques that support group effectiveness.

**Informed** Takes action based on information, within the context of community goals.

**Active** Engages the broader group by using quality education practices.

Community-Based Environmental Education is discussed more fully in another bulletin in this series: *Building Capacity – Educating for Community Action*, No. 6. The following information gathered as part of the CBEE research offers additional detail regarding the transformation process.

### People are more likely to change behavior when:

They are offered **behavior choices** which:

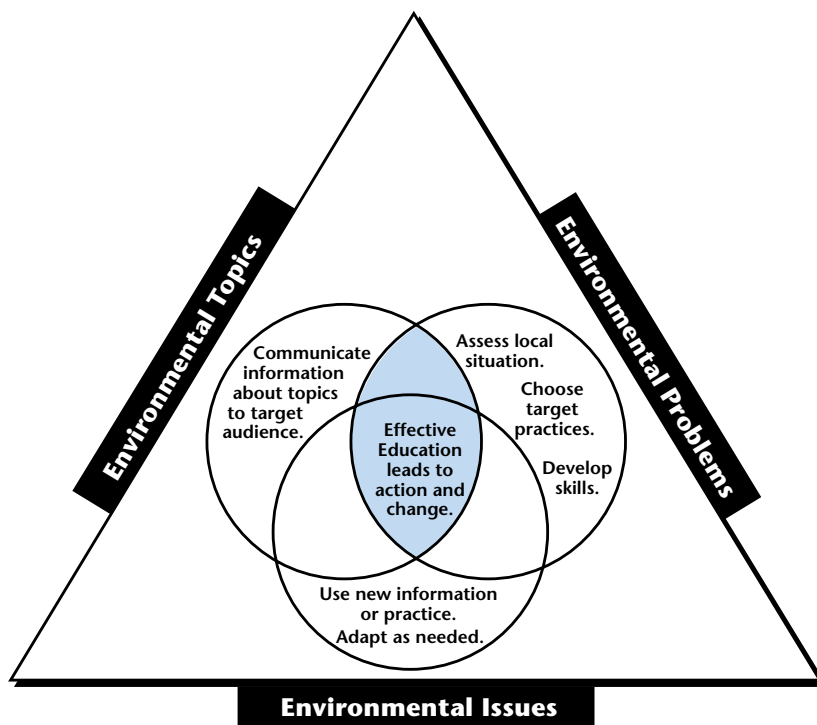
- Provide immediate, observable consequences.
- Are similar to what people already do.
- Do not require a lot of steps or training.
- Are relatively low cost in terms of time, energy, money, and materials.

They have had a **personal discussion** with someone about the new behavior. For example a neighbor may ask if they plan to wash their car on the lawn instead of the street.

There is **peer pressure**. Others are visibly using the new behavior, such as washing their cars on the lawn.

They get an opportunity to **verbalize** a commitment to change.

They can **practice** the new behavior in the educational setting.



**Education messages and programs are more likely to succeed if they:**

Emphasize the positive; help citizens understand how their **individual action will make a difference** rather than tell them how bad things will be if they don't change.

Take advantage of **existing social structures** to provide an avenue for new information.

Are designed to:

- Take place close to the targeted behavior.
- Relate to a specific product or topic (rather than multiple topics).
- Be eye catching, i.e. bright and humorous.
- Provide details on how to do the exact behavior required to meet objectives.
- Reach people in multiple ways: store posters, store shelf stickers, individual product information pamphlets, press releases, a speaker's bureau.

**Transforming Your Program**

With practice, environmental management professionals and educators can apply the CBEE educational techniques to their outreach goals. The following chart shows how CBEE would transform selected elements of an education program.

Example – Pond Management Clinic		
DIMENSION	AS TAUGHT	TRANSFORMED USING CBEE
Topic choice	Made by expert	Made by group or organization
Education goals	Determined by expert	Determined by group in cooperation with expert
Audience	Pond owners or managers	Pond owners, managers and others interested in the pond or surroundings
Discipline	Pond management	Aquatic ecosystem management
Source of information	Experts	Group gathers and/or analyzes with help of expert
Domains of learning	Knowledge	Knowledge, skills for making choices, practice integrating considerations
Methodology	Lecture	Sharing experiences, inquiry, problem solving, discussion
Location	Standing on the pond bank	Moving around the pond site, stopping at various locations


*Courtesy of Eric Norland, Leader, Natural Resources, Ohio State University, School of Natural Resources-Cooperative Extension*

**References:**

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# Building Capacity

## Community-Based Environmental Education in Practice

**A** community's quality of life, which depends directly on the health and quality of its local environment, is a common concern among its people. Yet communities often find themselves facing the consequences of poor environmental decisions, both their own and those of others.

Given the knowledge and skills – the “capacity” – communities will work to protect and improve their environment. Education designed to match community interests can increase that capacity.

Such community-based education has been widely used for community economic development, housing, youth, and health issues, and, less frequently, to address environmental concerns.

This pamphlet for US EPA and USDA Cooperative Extension staff reports on four programs. These effectively used community-based education to address: urban environmental health and public health, wetland resource management, county-wide groundwater quality, and youth involvement in lake water quality.

### Community-Based Environmental Education

Research shows that effective Community-Based Environmental Education (CBEE) is local, collaborative, informed, and active, and it leads to positive actions. Furthermore, it is based on well-tested theory and educational

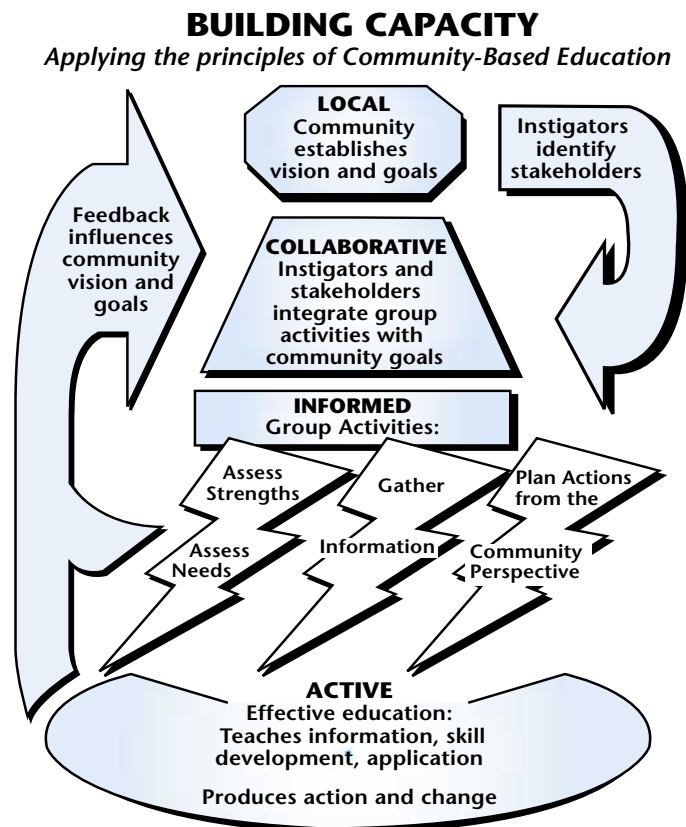
techniques. In specific:

- **Local:** Effective CBEE is created in response to local concerns and builds on local strengths.
- **Collaborative:** CBEE programs are collaborative, working with coalitions or groups. Leaders attend as much to process as to outcomes. Collaboration requires active, consistent, continuing leadership.
- **Informed:** CBEE programs promote action based on information, within the context of community goals. They are integrated into a community

planning process and help strengthen citizens' skills to plan with the environment in mind.

- **Active:** The desired outcome is informed action which leads to lasting change.
- **Proven:** CBEE uses tested theory, research, and educational techniques to promote action and encourage new behaviors.

Community-Based Environmental Education is discussed in greater detail in the pamphlet: *Building Capacity—Educating for Community Action*, No. 6.



## Case Study 1: The Urban Environmental Initiative

Although it may lack technical expertise, the local community knows its own needs and values. When the community determines environmental needs the result is local commitment to resolving issues rather than resistance.

Recognizing this, the US EPA Region 1 adopted a novel approach, unique in EPA, to address urban environmental and public health problems. It created the Urban Environmental Initiative (UEI) and launched it in 1995 as part of the agency's new Community Based Environmental Protection approach (CBEP). The program focuses on Boston, Mass., Providence, RI, and Hartford, Conn. The following description emphasizes the CBEE techniques it used.

**Local:** The UEI focuses on listening to community concerns and leveraging resources to address them with meaningful improvements. Its goal is to build a community infrastructure through which people can effectively work on environmental issues. In this bottom-up approach there is a community grants program. City Managers serve as liaisons to the community.

City Managers administer grants from a variety of EPA programs, provide technical advice to communities, and serve as resource brokers and advocates for a wide range of community stakeholders.

Community is broadly defined to ensure coalitions are as inclusive as possible. This produces such strong community support that the process of building a livable city becomes self-sustaining.

**Collaborative:** In Providence, the Initiative's efforts at collaboration revealed three important issues. A series of stakeholder panels held in 1995 attracted a wide range of community interests: residents, city government officials, small community groups organized around various issues, state government officials, and academics. This inclusive panel was a forum for people to discuss Providence's most pressing environmental issues. Clear priorities emerged – lead hazards, the rat population, and toxics in fish – as well as ideas about how to target resources.

**Informed:** Providence's large rat population is supported by approximately 4000 vacant lots. The city planned to sell the lots for improvement at \$1 each, but the public believed them to be contaminated. The city recognized that it did not know if the lots were contaminated and had no money to conduct testing.

US EPA asked the community to prioritize lots (89 were chosen), trained volunteers in soil sampling techniques, and then conducted and paid for soil sampling and testing. Test results were reported during a community forum.

After working together to determine what the numbers meant, UEI developed a bilingual education program to inform the community about the lots. This allowed for quick transfer of "clean" lots to residents.

**Active:** In another UEI example, an established coalition working on the Woonasquatucket River in Rhode Island asked EPA for help. EPA staff conducted "risk screening" and discovered high levels of dioxin in the fish, along with other findings. Results were

brought to the coalition for consideration and action.

Realizing that many city residents used the river for subsistence fishing, they immediately announced a fishing advisory and began work on what became a successful multi-lingual, volunteer-implemented education program about the river's hazards. Currently, coalition partners are conducting sediment testing on their own and taking responsibility for distributing information.

## Case Study 2: The Horicon Marsh Area Coalition

Broad involvement of all community interests can lead not to division and contention, as some may think, but to effective environmental action. Wisconsin's Horicon Marsh is the largest freshwater cattail marsh in the US and a designated wetland of international importance. Diverse interests rely on the marsh and its watershed. In addition to 263 species of birds, these include other wildlife, plants, farmers, outdoor sports enthusiasts, tourism-based businesses, environmentalists, landowners, county and local governments, the US Fish and Wildlife Service, and the Wisconsin Department of Natural Resources.

**Local:** Recognizing the diversity of potentially conflicting interests and the increasing demand on the Marsh and its surrounding areas, a local conservation group began thinking about how to protect the Marsh before any major conflicts arose. Eventually the group contacted University of Wisconsin Extension in Dodge County for assistance.

Together, they planned a day-long Horicon Marsh Forum, convened and facilitated by the Extension educator. This forum attracted 80 people representing 23 different interest groups. Using the Nominal Group Process, the group identified eight priority issues. Groups formed around each issue for follow-up work.

**Collaborative:** Forum organizers and a representative from each workgroup convened a steering committee, the Horicon Marsh Area Coalition (HMAC), with representatives from diverse stakeholders, local government, and agencies. This group agreed to a set of “Organizational Principles, Policies, and Guidelines” based on a collaborative approach introduced by the Extension educator.

HMAC uses consensus decision making and generates its authority through the involvement and consent of the individuals, groups, agencies, governments, and others in the Coalition. Actions and projects developed through the coalition are implemented through cooperative agreements.

**Informed:** As HMAC continued to meet, the County Extension educator introduced new process skills based on what participants were interested in learning. Experts from the University and other agencies occasionally provided content information, as well as sharing analytical skills when asked to explain research findings.

**Active:** Of the original eight issues identified at the forum, only recreation and water quality have been significantly addressed. Based on a recreational opportunity supply/demand survey, a network of cross-country ski-trails was established and a bird watching festival was planned.

Water monitoring has begun, and three monitoring stations were installed. However, the vast quantity of water quality data has overwhelmed the abilities of HMAC and involved agencies to analyze, discuss and plan actions.

HMAC, according to the Dodge County Extension educator, is primarily about decision making and communication, providing a medium for a new way to make environmental decisions. It provides a neutral forum where diverse interests can discuss often-contentious issues, and where people can seek common ground rather than conflict.

### Case Study 3: Coalition for a Cleaner Environment

When a community is given educational opportunities based on the needs it has expressed, interest will be high and genuine learning can occur. Monroe County is Pennsylvania’s second fastest-growing county. Well and septic system maintenance were a new experience for many residents. As a result an assessment conducted by an educator from the Pennsylvania State University County Extension identified water quality issues as educational needs.

**Local:** The assessment used varied sources: personal experiences, review of existing data via face-to-face contacts, available census data, a county needs assessment survey, and advice from the Monroe County Coalition for a Cleaner Environment (MCCCE), a public/private partnership created to offer citizens education on water resources.

**Collaborative:** The Coalition included local and county government officials and staff, private citizens, environmental consultants, the Extension agent, and others. Meeting monthly, it identified existing town, county, and state water quality programming efforts, developed a programming needs survey, established priorities for water quality programming, identified potential workshop resources, and established an outreach/publicity plan.

**Informed:** Using needs assessment results, the coalition designed and planned several learning experiences. Simple efforts included preparing newspaper articles on water quality issues and distributing printed materials at workshops and through the County Extension office. More complex was a series of workshops. They offered a conference for government officials on actions to protect water quality, and workshops for the general public on: pond management, homeowner actions to protect water resources, and a three-part “water quality school” offered with continuing education credits from Penn State.

**Active:** MCCCE’s 1992 and 1993 workshops attracted over 200 attendees who committed to make environmental quality improvements in their water management. The Coalition also compiled and distributed an environmental directory for citizens needing help with environmental issues. It lists about 40 agencies and non-profit groups. The Coalition still meets and works to continue providing water quality education to Monroe County’s citizens.

## Case Study 4: Adopt-A-Lake

Given information, support and tools, a local community can and will act to improve its environment. Wisconsin's "Adopt-A-Lake" projects began in 1992, spurred by the Wisconsin Association of Lakes which wanted to involve youth in lake protection.

Grant funding from the Renewable Resources Extension Act underwrote a project by Cherry Towne, a University of Wisconsin-Stevens Point graduate student. She prepared a manual and a pilot program aimed at developing leaders, empowering youth to become active in lake issues, and increasing their awareness and understanding of lakes.

The Wisconsin Lakes Partnership, a coalition of University of Wisconsin-Extension, the Wisconsin Department of Natural Resources, and the Wisconsin Association of Lakes, successfully lobbied the Wisconsin Legislature to support and fund a

youth component to lakes education based on Cherry Towne's graduate work. The original pilot became today's Adopt-A-Lake program.

**Local:** Through this program local youth groups can adopt a lake for a service project. The group chooses an activity, such as researching lake history, surveying lake users and area residents, lake mapping, and, most frequently, water quality monitoring. Groups may be school classes or groups, 4-H groups, or another organized youth group.

**Collaborative:** Youth frequently work with adult community members such as lakefront property owners, local officials, local clubs, local businesses, and local lake association members, to implement their projects. Using the information collected, the youth participants educate those same adults through presentations, performances, or media productions.

**Informed:** Youth learn about lakes and lake communities, and

how to gather information on them, in workshops, conferences, peer training, and other educational programs sponsored by Adopt-A-Lake. Adopt-A-Lake also offers training to K-12 educators, who pass newly-acquired information and skills on to their students. Teachers are actively encouraged to bring students along to these workshops.

**Active:** Through these activities, youth learn how to think through issues and apply solutions, as well as learning lake ecology, water-monitoring skills, interview skills, and presentation skills. Then, youth have the opportunity to use these skills in a local project, thereby reinforcing their new abilities.

Working together, the Lakes Partnership hosts the annual Wisconsin Lakes Convention at which youth and other community groups present their lake related work or research. This partnership helps give youth a strong role in protecting Wisconsin's lakes.

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Produced with funding from the US EPA Office of Environmental Education



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# Comparing USDA Cooperative Extension and US EPA

## A Guide to Pamphlets in the Partnerships Series

**T**he following chart compares characteristics and strengths of USDA Cooperative Extension and US EPA.

The goal of the comparison is to foster mutual understanding and promote collaboration between the two agencies for the benefit of

communities. Pamphlets describing how Cooperative Extension and US EPA can collaborate are listed on the reverse.

Characteristic	Cooperative Extension	US EPA
<b>Mandate</b>	<ul style="list-style-type: none"> <li>• County and state advisory committees, national priorities, direction in federal farm legislation, county commissioners, state legislatures</li> </ul>	<ul style="list-style-type: none"> <li>• Various environmental laws, Office of Management and Budget and appropriation committee directives, Executive direction, court orders</li> </ul>
<b>Orientation</b>	<ul style="list-style-type: none"> <li>• Communities where agents are located</li> </ul>	<ul style="list-style-type: none"> <li>• National environmental conditions</li> </ul>
<b>Guiding Principles</b>	<ul style="list-style-type: none"> <li>• Technical accuracy</li> <li>• Peer review</li> <li>• Academic standards</li> </ul>	<ul style="list-style-type: none"> <li>• Laws, policy, and regulation as reflected in the <i>Federal Register</i> and <i>Code of Federal Regulations</i></li> </ul>
<b>Organization Values</b>	<ul style="list-style-type: none"> <li>• Responsiveness to clientele</li> <li>• Trust by local community</li> <li>• Academic standards, freedom, tenure</li> </ul>	<ul style="list-style-type: none"> <li>• Conformity to Congressional and Executive direction</li> </ul>
<b>Funding</b>	<ul style="list-style-type: none"> <li>• County, state, USDA appropriations</li> <li>• Special grants or contracts from federal and state agencies, Non-Governmental Organizations (NGOs), and businesses</li> </ul>	<ul style="list-style-type: none"> <li>• Annual federal appropriations</li> </ul>
<b>Structure</b>	<ul style="list-style-type: none"> <li>• Horizontal; decentralized, cooperative</li> </ul>	<ul style="list-style-type: none"> <li>• Hierarchical; centralized line agency with regional offices</li> </ul>
<b>Culture</b>	<ul style="list-style-type: none"> <li>• Academic, non-regulatory</li> </ul>	<ul style="list-style-type: none"> <li>• Regulatory, compliance focus</li> </ul>
<b>Accountability</b>	<ul style="list-style-type: none"> <li>• Primarily to client, communities</li> <li>• University Extension Director</li> </ul>	<ul style="list-style-type: none"> <li>• The President, Congress, and the Courts (when the agency is under a court decree)</li> </ul>
<b>Expertise of employees</b>	<ul style="list-style-type: none"> <li>• Agricultural and natural resources sciences, behavioral and social sciences, information specialists</li> </ul>	<ul style="list-style-type: none"> <li>• Environmental and supporting sciences, law, economics</li> </ul>
<b>Method of communication</b>	<ul style="list-style-type: none"> <li>• Various. Endeavors to communicate only research-based information</li> </ul>	<ul style="list-style-type: none"> <li>• <i>Federal Register</i>, electronic dissemination of information and data</li> </ul>
<b>Process</b>	<ul style="list-style-type: none"> <li>• Educate through local and electronic or media programs (called “distance education”)</li> <li>• Form advisory groups to establish program priorities</li> <li>• Work with the media</li> <li>• Train trainers</li> <li>• Develop and train volunteer “extenders”</li> <li>• Provide electronic and printed resources</li> </ul>	<ul style="list-style-type: none"> <li>• Establish regulations, standards</li> <li>• Comply with regulations and policies through information and other assistance</li> <li>• Partner with state environmental agencies, non-governmental organizations</li> <li>• Selective enforcement</li> <li>• Demonstrate new approaches and technologies</li> <li>• Financial and technical assistance</li> <li>• Encourage stakeholder participation in regulatory development and standard setting process</li> <li>• Environmental monitoring</li> </ul>
<b>Product</b>	<ul style="list-style-type: none"> <li>• Improvement in clients’ economic and social welfare through education</li> </ul>	<ul style="list-style-type: none"> <li>• Regulations, policies for requirements</li> <li>• Environmental improvements</li> </ul>

# Guide to Pamphlets

## US EPA/Cooperative Extension Partnerships Project Series

**T**he US EPA/Cooperative Extension Partnerships project was a three-year effort to investigate ways for strengthening relationships in environmental management and education between the two agencies. The agencies share the goal of promoting environmental management via local decision making and voluntary compliance with regulations. A detailed project report was published in August 1998. The following brief pamphlets extract and summarize some of the major findings of the report.

### Supporting Community-Based Environmental Education – Discussion Paper Summary, No. 1

Briefly summarizes the results of a 1996-98 investigation into strengthening locally-based environmental decision-making through partnerships among USDA Cooperative Extension, US EPA, and communities. Reports the project's six findings and encourages agency action on them. 4 pp.

### Leadership Roles for Cooperative Extension – Building Partnerships for Strong Communities, No. 2

An introduction to the US EPA for Cooperative Extension leaders at all levels. Describes EPA's mission, goals, and programming areas and links them to those of Cooperative Extension. Gives action steps, partnership examples and models. 4 pp.

### Linking to US EPA – A County Extension Guide to the EPA, Region 5, No. 3

A directory for Cooperative Extension Service (CES) staff of program partnership opportunities with US EPA in Region 5. Gives background on US EPA, notes programs in common, and explains how to connect with US EPA through its subject matter areas. Includes "hot-line" phone numbers, and Web addresses for experts, publications, funding, and software. 6 pp.

### Leadership Roles for US EPA – Forging Solutions for Sustainable Communities, No. 4

An introduction to the USDA Cooperative Extension Service (CES) for US EPA leaders. Identifies CES's capabilities and leadership structure, and outlines joint partnership opportunities. 4 pp.

### Linking to Cooperative Extension – A US EPA Guide to Cooperative Extension in Region 5 States, No. 5

A directory for US EPA staff of regional partnership opportunities with the USDA Cooperative Extension Service (CES) at Land Grant Universities in Region 5. Gives background on CES and describes benefits of partnering. Lists names, contact information, and expertise/responsibility for CES programs in the six Region 5 states. 6 pp.

### Building Capacity – Educating for Community Action, No. 6

An introduction to Community Based Environmental Education (CBEE) for US EPA and Cooperative Extension staff, emphasizing its four fundamentals: it is local, collaborative, informed, and active. Describes how agency professionals can link their skills to CBEE and identifies needed tools and resources. 4 pp.

### Building Capacity – From Transferring to Transforming, No. 7

This pamphlet discusses Community-Based Environmental Education (CBEE) as a tool to promote change. It briefly summarizes the elements of successful environmental education programs and shows how to apply CBEE to an existing program. 4 pp.

### Building Capacity – Community-Based Environmental Education in Practice, No. 8

Reports on four programs which effectively used Community-Based Environmental Education (CBEE) emphasizing how they employed the four critical CBEE components. Addresses programs on: urban environmental health and public health, wetland resource management, county-wide groundwater quality, and youth-oriented lake water quality. 4 pp.

### Comparing USDA Cooperative Extension and US EPA/Guide to Pamphlets, No. 9

A one-page chart comparing the two agencies which helps show how their strengths could support a collaboration that benefits communities. Page 2 briefly describes publications of the US EPA/Cooperative Extension Partnerships project. 2 pp.

## Previous reports:

### An EPA/USDA Partnership to Support Community-Based Education: Discussion Paper

EPA 910-R-98-008, US Environmental Protection Agency, Region 10, August 1998, 31 pp. URL: <http://www.reeusda.gov/nre/gifs/usdaepa.pdf>

### Appendices to: An EPA/USDA Partnership to Support Community-Based Education: Discussion Paper,

University of Wisconsin Cooperative Extension-Environmental Resources Center, August 1998, 130 pp. approx.

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Copies of these publications are available in print from University of Wisconsin Extension-Environmental Resources Center and electronically at: [www.uwex.edu/erc](http://www.uwex.edu/erc)



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Produced with funding from the US EPA Office of Environmental Education



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