

B. OPPORTUNITY: The Cooperative Extension System and the Environmental Protection Agency – Background and Description, Collaboration Opportunities¹

INTRODUCTION

The EPA/USDA Partnership Steering Committee gathered information and ideas to help establish collaborative relationships between the two agencies. Collaborations can 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.

To improve the potential for making the partnership work, EPA and Extension employees need to understand and be able to articulate their organization's legislative mandate and how their organization already supports community-based education. They must also understand each other's role. This background paper provides details about how these two organizations work and how they might work together. A table on page 16 compares the two agencies according to twelve qualities. Key points are summarized in "An EPA/USDA Partnership to Support Community-based Education – Discussion Paper."

EXTENSION

Extension literally means reaching out or extending. Most public and private institutions need or want to reach out (or extend) to their customer, audience, or community where they are located. This is often accomplished by a marketing department, public relations staff or through a variety of outreach efforts. When the term Extension is used, it usually indicates the existence of an outreach office and/or field staff which relates to and assists the institution's customers. Information flow may or may not be two-way.

When educators use the term "Extension," it is usually associated with the systematic transfer, adoption and diffusion of technology and research-based information from a college or University to a targeted user audience.² Extension education can be referred to as non-formal education. That is, Extension education is voluntary and can take place anywhere. It is regulated only as it might apply to continuing education requirements, and is responsive to identified needs and interests of the client audience.

A concern for Extension educators is how to best tailor outreach approaches to the needs of a specific "community," which may be either place-based or interest-based. Determining the

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²For an excellent exploration of technology diffusion, see Everett M. Rogers, *Diffusion of Innovation*, 4th. edition, (New York, NY, 1994). The Cooperative Extension system is systematically explored in Roger's work as a model technology information diffusion network.

best context for information transfer provides a challenge. The client audience needs to be motivated in order to invest the time needed to find sources of information or training useful to their situation. Outreach strategies include: traditional classroom-based courses; television-based opportunities; radio and newspaper series, specials and pull-outs; demonstration studies; field days; newsletters; Internet or email courses and features; event displays; and one-on-one consulting.

Access to a locally-based educator is often desirable to assist the individual to diagnose a particular situation, to assist in defining a new vision, to identify options appropriate to that particular situation, or demonstrate how to use information resources. For many, such assistance is provided by paid consultants or from colleagues who are experiencing similar challenges. Public agency, college, or university outreach usually strives to meet needs not met through private relationships. Situations where this might occur could include:

- professional development or certification for professional licensing requirements - nurses, well-drillers, teachers, engineers, etc.
- expertise or data is needed for a public or policy issue
- topic is new or not widely understood and research-based information is only available from a public or education resource
- it is not cost-effective for a private organization to provide knowledge or training in this area
- a neutral source of information is a priority
- the topic requires an interdisciplinary approach
- the client is not knowledgeable enough to choose an appropriate consultant; or is not able or motivated to pay for a consultant
- the organization wants to support quality of life/life-long learning opportunities popular with local citizens - language instruction for travel, art history, understanding modern literature, interpreting important current events, computer literacy, how to start a business, etc.

COOPERATIVE EXTENSION

“Cooperative Extension” is generally understood as the institutional system of non-formal education created by the Smith-Lever Act of 1914.³ The intent of the Act was to formalize and cooperatively fund a University based system of practical educators who would transfer useful research-based information generated or interpreted by Land Grant institutions to farmers, ranchers, and rural residents. 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 provide a more diverse education resource in response to the increased diversity of these communities. In many states, Cooperative Extension programs now also address interests of urban communities, building on Extension’s strengths to provide support for such topics as urban forestry and gardening, community economic development, family nutrition and education, and youth leadership development. The objective of the system is to improve the economic and social welfare of collaborating communities.

³Smith-Lever Act of May 8, 1914 (38 Stat.372-374, as amended; 7 U.S.C. 349), and section 209 (b) of the Act of October 26, 1974 (88 Stat.1428, as amended; D.C. Code, sec.31-1719(b).

The term “cooperative” refers to the unique partnership of Federal, State, and County governments who fund the agricultural Extension enterprise. The system, established by Federal law and administered by the U. S. Department of Agriculture, provides for an annual appropriation which is distributed through a pre-established allocation formula to designated institutions. Federal formula funds, Smith-Lever section 3 (d) and 3 (c), must be at least equally matched by State and County funds. In FY 1994, the overall investment by federal, state, and county government for Cooperative Extension activities was almost \$1.4 billion.⁴ National funding and leadership for Cooperative Extension programs is coordinated by the USDA Office of Cooperative Research, Education, and Extension Service (CSREES).

Although many States and counties more than “match” the federal contribution (in FY 1994 the match was, in aggregate, about 65% of total Cooperative Extension funding), it is the Federal investment that binds the system together. Since the funds are non-competitive Federal grants, the recipient (typically the State director of Extension or Dean of Extension) is granted considerable flexibility on how formula funds are deployed. Pursuant to the Smith-Lever Act, the recipient is required to submit to the Secretary of Agriculture an annual plan indicating how the funds will be used. Federal formula funding provides for a base on which to build and maintain an infrastructure for delivery of outreach programs. Special funds (Family Nutrition Education Program, Water Quality, etc.) are distributed among the various Extension services based upon documented criteria or the need to demonstrate a particular approach to problem solving. Many Cooperative Extension Services receive additional support from competitive grants and contracts issued by USDA and other Federal agencies, State government, commodity groups and businesses.

Cooperative Extension education is delivered by state specialists from the Land Grant University and by county extension faculty, also known as county agents. By definition, Cooperative Extension involves two-way communication. County faculty impart research-based technical information to a user audience who, in turn, communicate their practical needs and experience in the use of that information back to university-based researchers, usually through the county faculty. State specialists then, where possible, refine the character of their investigations to make it more useful to the client audience. The premise is that research findings will not be widely used or credible to the ultimate user unless they are “demonstrated” in practical field situations by professionals who have established trust in the target community. Community may be defined geographically or by interest orientation or a combination of both.

Subject matter extension specialists are experts in a particular discipline and are faculty or staff of a Land Grant University. They may hold full time or part time Extension appointments. Their other appointments may be in campus degree programs and/or research. They provide support to the Extension field staff by developing curricula, information packets, and by providing on-campus or field training of agents, volunteers, and Extension clients. Many focus their research on a particular problem or issue identified by field staff. The disciplines of Extension subject matter specialists are diverse ranging from agronomy, entomology, hydrology, nutrition, to economics, communications and sociology.

⁴See GAO report, op. cit.

County faculty are employees of a Land Grant institution and typically also employees of the County government for the community which they serve. These Extension faculty can be found in virtually every County in the nation. They are assigned responsibility for a particular geographic area (usually a county). Their communities may be persons living in a particular watershed, town, township, or county. They may also primarily serve a particular interest audience such as growers of a particular agricultural commodity. In most cases, a County Extension office will endeavor to serve a variety of audiences in a particular geographical region. Increasingly, county faculty serve as conveners of the community to enable local citizens to be educated about areas of common concern.

County faculty typically have advanced degrees in their discipline. They are assisted in their work by the University-based specialists and trained volunteers from the local community. If a community priority is interdisciplinary or beyond the county faculty's disciplinary expertise or interest, he or she may organize education support from the University or other appropriate resource. They have access to and can derive support from subject matter extension specialists located at their respective State University or elsewhere from the national Extension and research complex. In many States, agents and supporting specialists are able to draw upon and involve other University based expertise (e.g. engineering, business), and the capabilities of other local, State and Federal agencies, business and non-governmental organizations. County faculty can be a catalyst, bringing together a wide variety of stakeholders to participate in local issue exploration and discussion forms.

USDA's Extension priorities are established by the Secretary of Agriculture and focus on seven base program areas: agriculture, natural resources and environmental management, community resources and economic development, family development and resource management, 4-H and youth development, leadership and volunteer development and nutrition, diet and health. The Secretary receives advice about the priorities from a variety of groups including the Extension Committee on Organization and Policy (ECOP) of the National Association of State Universities and Land Grant Colleges. ECOP is composed of persons selected by the Deans or Directors of Extension from all of the designated Land Grant institutions and who represent the collective interests of the Extension system. State or county priorities can emphasize youth development, family budget and care issues, small business support, recycling and waste management, water quality protection, fish and wildlife management, and community economic and leadership development.

Priorities for a county extension office are usually established by local advisory groups and by the County governing board from which agents derive an increasing portion of their funding.⁵ State Extension priorities are typically established by the Director of State

⁵For a useful analysis of funding for agricultural research and extension (Federal, State and County, and other), see *Agricultural Research; Information on Research System and USDA's Priority Setting*, US General Accounting Office, (GAO/RCED -96-92), March 1996. For example, to support Cooperative Extension and education activities in Fiscal Year (FY) 1994, the federal government provided about \$419 million for Extension activities with over 70% distributed by formula. The federal government's support constituted about 29% of all funding for Extension. In FY 1994, State and County government provided almost \$1 billion, or about 65% of total Extension funding. The percentage of state or local funding has grown significantly since FY 1975. See page 24 and 25 of the GAO report.

Extension who is strongly influenced by State Extension advisory groups, the University, the State legislature, and the formula and earmarked funding provided by the US Department of Agriculture(USDA).

The education approaches used by Cooperative Extension are varied based on user needs, staff availability and expertise and the availability of and experience with new information dissemination and education technologies. Increasingly, these include strategic use of the print and electronic media, electronic informational systems, and distance learning technologies. Creative relations between Extension and government, non-government organizations and business are becoming more frequent. An objective of Extension is to use its limited resources to leverage others to invest in programs which complement the communities strategic needs.

Establishment of the Land Grant University System and Cooperative Agricultural Extension

Extension in the United States evolves from the State Land Grant University system established in 1862 by the Morrill Act. This Act created public institutions of higher learning which to this day provide on-campus and off-campus education to the American public. Many of the nation's largest and most prestigious universities are Land Grant institutions.⁶ Recognizing the enormous potential of scientific agriculture to America's economic future, the Hatch Act of 1887 established agricultural experimentation stations at the 1862 institutions.⁷ In 1890, the second Morrill act was enacted providing land grant status to a number of predominately black colleges of higher learning.⁸

In spite of major advancements in the science of agriculture, dispersion and adoption of these technologies to the vast majority of farmers was slow. Family farming was at risk without widespread adoption of science based agricultural technologies. Many different approaches were used to disperse the new knowledge generated by the experiment stations but it was only in the early part of the 20th Century that a consensus emerged regarding the most effective approaches and the institutional arrangements necessary to deliver this knowledge to the field. In 1914 the Smith-Lever Act established Cooperative Extension and the system of shared funding and collaboration which is in place today.

The Extension System Today

With the addition of the McIntire-Stennis Act of 1962⁹ which provided annual formula funding for the schools of forestry, and later formalized addition of Extension at the historically black schools, Tuskegee Institution, the University of the District of Columbia, and a number of predominately Native American Institutions (referred to as the 1994's), this partnership of research and extension has grown into what is today a

⁶See Note #1 at the end of this report, for a list of schools which received Land Grant status in 1862.

⁷See Note #2 at the end of this report, for a list of schools with Agricultural Experiment Stations.

⁸See Note #3 at the end of this report, for a list of schools which received Land Grant status in 1890.

⁹The Act of October 10, 1962 (16 U.S.C. 582a et seq.) commonly known as the McIntire-Stennis Act of 1962.

network of 75 universities employing more than 9,500 scientists, 9,600 extension educators, and engaging nearly 3 million volunteers supporting a wide range of agricultural, natural resource, environmental, and community need based programs in the 50 states (3,150 counties), the District of Columbia, and six territories (Puerto Rico, the Virgin Islands, Guam, American Samoa, the Northern Marianas, and Micronesia). The programs of these institutions is further extended with the participation of scientists and educators from the 29 Native American land-grant institutions, non-land grant institutions, Federal research facilities, and the private sector. Special relationships are now being developed with many institutions of higher learning which serve the Hispanic community.^{10,11}

Extension's Capabilities

The Cooperative Extension Service is a unique, complex, durable and fascinating American educational complex. Throughout its history, Extension, as an institution, has demonstrated a remarkable adaptability and ability to change its priorities and the means by which education is delivered to target audiences. A venerable institution in rural areas, Extension has moved into suburban and urban areas delivering a wide range of social, youth services, and other self help education programs. In many cases, Extension, once established in a rural community, remained as an institution as the area became suburbanized and its education focus changed.

Extension's demonstration approach, dominant in the 1930's and 1940's, is now extensively supplemented by the use of satellite TV and electronic means for dissemination of educational programs. Extension, renowned for its helpful fact sheets and short courses developed for a wide variety of practical problems ranging from advice on pesticide usage and fertilizer rates to home cooking and sanitation, increasingly uses the Internet and collaborates with the media to extend its message to the public via radio, TV and the print media. Extension has also been instrumental in encouraging the establishment of private agricultural consulting services, pest management firms and soil testing laboratories.

Extension offers the following unique capabilities which should be of use in a partnership with the US Environmental Protection Agency: Respect and confidence of the community (ies) which it serves.

- Access to adult volunteers in the community who, with training, can further extend the educational message.
- The ability to reach, through its 4-H programs, many youth providing them with experiential educational experiences in a diversity of subject matter areas.
- Support from a great range of disciplinary expertise located at the institution from which Extension is appended and from other institutions located elsewhere in the nation which are part of the Cooperative Extension system.
- Experienced educators typically trained in one of the natural resource or human health sciences.

¹⁰Statement of B. H. Robinson, Administrator, Cooperative State Research, Education, and Extension Service, US Department of Agriculture before the US Senate Committee on Appropriations, Subcommittee on Agriculture, Rural Development, Food and Drug Administration, and Related Agencies, February 1998.

¹¹For a full listing of all the partners and access to their web sites, look at <http://www.reeusda.gov/>

- A neutral source of information. Unlike field personnel of Federal (e.g. the Natural Resource Conservation Service of USDA) and State government line agencies (the State Departments of Agriculture or Environmental Quality), Extension faculty and staff are not regulators and are not bounded by legal policies and directives but rather the policies of the Universities of which they are a part.
- Extension professionals are required by law to serve all people without regard to their ethnicity, sex, etc. and are accountable to their respective Deans of Extension for performance.

US ENVIRONMENTAL PROTECTION

National Environment Policy and oversight

The National Environmental Policy Act (NEPA) of 1970 is the legislative foundation of modern US environmental protection policy.¹² This landmark legislation set forth environmental goals for all Federal agencies. Section 101 of NEPA declares that

*...Congress, recognizing the profound impact of man's activity on the interrelations of all components of the natural environment, particularly the profound influences of population growth, high-density urbanization, industrial expansion, resource expansion, and new and expanding technological advances and recognizing further the critical importance of restoring and maintaining environmental quality to the overall welfare and development of man, declares that it is the continuing policy of the federal government, in cooperation with State and local governments, and other concerned public and private organizations, to use all practical means and measures, including financial and technical assistance, in a manner calculated to foster and promote the general welfare, to create conditions under which man and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of present and future generations of Americans.*¹³

Among other things, NEPA established the Council on Environmental Quality in the Office of the President to oversee the federal government's compliance with the Act and to formulate and recommend national policies which promote the improvement of the quality of the environment. Many States enacted similar laws to the US NEPA and some have incorporated its principals into their constitutions.

In the succeeding years, Congress, through the passage of legislation and provision of appropriations, directed that environmental concerns be addressed in a variety of Federal programs and agencies. These include energy, transportation, agriculture, land management, forest management, water, health, education, commerce and foreign policy. Research programs which support Federal areas of concern increasingly are oriented to environmental issues.

¹² "Environment Quality - the twenty-fifth Anniversary Report of the Council on Environmental Quality," US Government Printing Office, 1997. Available at <http://www.whitehouse.gov/CEQ>

¹³ National Environmental Policy Act, 42 USC,) 4321 to 4370c

A succession of Presidents have accorded environmental issues priority in their annual legislative and budgetary proposals. In virtually every program and agency of the US government, there are now legal mandates and programs which address some facet of environmental concern. In Fiscal Year 1999, for example, it is proposed that over \$8 Billion be expended for pollution control and abatement, water resources, and research related to natural resources and the environment. In addition over \$4 Billion is proposed for States and local government primarily for drinking water and waste water treatment loans. These figures do not include Federal expenditures for activities such as agriculture, transportation, energy, community and regional development, all of which have a profound impact on achieving the environmental goals set forth by NEPA.¹⁴

The US Environmental Protection Agency

In 1970, The United States Environment Protection Agency (EPA) was established by a Presidential Reorganization plan¹⁵ placing in one independent agency most of the environmental regulatory responsibilities then scattered throughout the Federal establishment.¹⁶ No congressional act, similar to those of other Executive Agencies, has yet been provided for the EPA.

The initial intent was to establish in one Federal agency responsibility for administration of the nation's primary environmental laws leaving in place, in other Federal Department and Agencies, complementary environmental programs of financial and technical assistance, research and demonstrations, and integration of environmental concerns with other social needs and priorities. With additional Federal statutes, expansion in the law, and through administrative action, EPA is now the nation's largest regulatory agency with over 18,000 full time personnel and a FY 99 proposed budget of \$7.6B.¹⁷

EPA is organized with a mix of environmental topic and multi-issue offices.¹⁸ Special emphasis programs (e.g. environmental education, pollution prevention, and energy conservation) are located throughout the agency. Some offices are oriented to specific target audiences (e.g. environmental justice and Indian activities) while others are multi-media.

¹⁴ See the Budget of the U.S. Government, Fiscal Year 1999. Available at <http://whitehouse.gov/OMB>

¹⁵ Presidential Reorganization Plan number 3 of 1970 (5 USC app.), effective December 2, 1970.

¹⁶ These included the air and noise programs and the pesticides in food tolerance setting responsibilities assigned to the then Department of Health Education and Welfare, the Water pollution control and abatement responsibilities of the US Department of Interior, and the pesticide registration functions of the US Department of Agriculture.

¹⁷ Budget of the United States

¹⁸ Environmental topic offices are Air and Radiation; Prevention, Pesticides and Toxic Substances; Water; Solid Waste and Emergency Response. Each of these offices implement specific statutes. Administrative programs which cross the spectrum of assigned statutes for air, land, and water pollution have been established in a variety of offices: Research and Development; Enforcement and Compliance Assistance; American Indian Environmental Office; Children's Health Protection; Environmental Justice; Administration and Resource Management; Policy, Planning and Evaluation; International Affairs; and Inspector General.

Since EPA's creation, the nation has moved aggressively against environmental pollution through the implementation of a variety of Federal and complementary State laws. The results of EPA's regulatory approaches coupled with environmental related programs of other Federal agencies, the activities of State, local governments, non-governmental organizations, and business have been impressive. These activities have been widely supported by the American public in the belief that economic activity and environmental improvements can go hand in hand.¹⁹

Sensing the public's impatience with delay in reaching environmental goals and frustrated with the inability or unwillingness of many States to aggressively address environmental issues, Congress pursued a get tough policy enacting stringent environmental laws with ambitious goals and timetables through the 1970's and 1980's. Command/control regulatory approaches were built into most of these statutes. The result was an impressive level of compliance but this was not without high social and economic costs. It is estimated, for example, that the cost to the American society of complying with environmental requirements in 1994 were about \$122 B.²⁰

Scholars, business and others have questioned whether the well meaning regulations emanating from the Federal environmental laws might be having counter-productive results. Reducing environmental pollution in one media (e.g. air or water) might be creating new environmental problems in another (e.g. land disposal of the pollutant). Because most Federal environmental laws were developed by different congressional sub-committees, responded to different environmental crises, and were often supported by different interests, it is no surprise that some environmental statutes are in conflict.

Increasingly the public and American business have questioned whether the regulatory and enforcement tools employed by EPA and designed to stem obvious sources of pollution (primarily air and water pollution generated by industry and municipal waste treatment plants) are appropriate to deal with a new generation of environmental issues. These include non-point water pollution, urban sprawl, destruction of habitats, contamination of groundwater aquifers, agricultural generated pollution, energy efficiency, and a wide range of commonly used products which may be discovered to pose unacceptable risks to man and the environment. New approaches including pollution prevention (i.e. avoiding pollution altogether by change in manufacturing process and product design), ISO 14000 Environmental Management System standards, and use of economic incentives are increasingly attractive to business and the public as ways to achieve an improved environment at lower costs.

¹⁹ An example of useful public surveys regarding the environment is the Roper Starch survey on Environmental Attitudes and Knowledge in America commissioned by the National Environmental Education and Training Foundation (NEETF). NEETF commissions such surveys each year. Contact NEETF at 202-628-8200.

²⁰ C.R. Vogan, "Pollution Abatement and Control Expenditures, 1972-94," Survey of Current Business (GPO, Washington, DC, September 1996). Found in table 10, "The Economy and the Environment," page 402, 25th. Anniversary Report, US Council on Environmental Quality, op. cit.

EPA is a Federal agency and thus constrained by law from involving itself into areas that historically and constitutionally are reserved to the States and local government or are within the province of another Federal agency. Land use, an important factor in the generation of environmental pollution (e.g. loss of habitat and urban sprawl), is an area of concern that historically has resided with the States. However, with notable exceptions, Federal environmental laws have presumed an active role in development and implementation of State specific plans to implement the various legal provisions and goals. The success of States in complying with the law and EPA directives has varied. Nevertheless many States have developed programs and policies which address environmental issues in new and creative ways.

There is increased recognition by EPA that achieving success in addressing many environmental issues (e.g. air emissions caused by motor vehicles and small business and non point source water pollution) will necessitate the involvement of local communities in defining their economic and social futures with appropriate consideration to protection of the environment. While throughout the nation there are many excellent examples of community based environmental improvement projects, national surveys²¹ indicate a low level of environmental literacy by the public. Information, motivation, and education are all needed to stimulate communities to address their sustainability issues in new and creative ways.

The EPA/USDA Partnership to Support Community-Based Education was conceived as a first step in understanding what role Cooperative Extension can play to support local community management of the environment. County offices and the State Land Grant institution are well positioned to convene local audiences, advise on local interests, and design education opportunities to help citizens weigh options and opportunities. The Partnership project "Discussion Paper" discusses potential links which are summarized in the Executive Summary, reprinted at the beginning of these Appendices.

EPA's Guiding Principles and Goals

EPA has defined its mission, "To protect health and safeguard the natural environment - air, water, and land ---upon which all life depends." It has primary responsibility for the implementation of 12 Federal statutes,²² collateral responsibility for the implementation of many other Federal laws (e.g. Endangered Species Act, Oil Pollution Control, National Environmental Protection Act), executive orders, treaties and international agreements and policy directives from the Administration of which they are a part. Further, each year Congress expresses its directions and desires in requests and directives.

²¹ See Starch Roper Survey conducted for the National Environmental Education and Training Foundation, 1997.

²² Clean Air Act; Clean Water Act; Safe Drinking Water Act; Toxic Substances Control Act (TSCA); Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA); Comprehensive Environmental Response, Compensation, and Liability Act; Pollution Prevention Act (CERCLA); Resource Conservation and Recovery Act (RCRA); Indian Environmental General Assistance Act; Emergency Planning and Community Right to Know Act (SARA Title III); Ocean Dumping Act; and shared responsibility with other federal agencies for implementation of a number of other Statutes.

Since its creation, EPA's Administrators have struggled with the difficulties created by a heritage of fragmented and sometimes conflicting statutes. In today's fast paced world of change, electronic information systems available to virtually everyone, highly competitive global markets, and the need to downsize government for reasons of efficiency and economy, EPA has confronted a series of difficult strategic questions. One of these issues is how to best encourage and support local community (geographic and interest) efforts to address environmental and economic sustainability issues. Lacking a field staff, EPA has creatively worked with their State partners, non-government organizations, other Federal agencies, and public institutions. By providing access to electronic information bases, financial assistance, training, and encouragement, EPA hopes to stimulate further progress throughout the nation toward environmental end-points.

At the request of the Congressional Committees on Appropriations, in 1995 the National Academy of Public Administration (NAPA) began a process of examining the nation's environmental protection system (of which EPA is a critical element). Recommendations were made by NAPA regarding EPA's use of risk analysis, and improving relationship with their state partners, communities and business.²³ Many of these recommendations are manifest in new EPA initiatives.

In September 1997, the EPA Administrator issued a strategic plan which set forth the environmental goals for the nation and the pivotal role that EPA will play in their execution.²⁴ For the FY 99 budget, EPA has arrayed their resource requests against those goals.²⁵ This is a major advancement enabling the public to better understand the agencies priorities, how to link regulatory requirements with appropriated resources, environmental objectives, and other EPA programs. It also enables the public to determine what financial and technical assistance is available from the agency.

EPA's Guiding Principles, from the 1998-99 Strategic Plan ²⁶

GUIDING PRINCIPLE	EPA ROLE
1. Reduce Environmental and Health Risks	Employment of cost-effective risk reduction strategies balancing ecological risks with efforts to reduce risks to humans
2. Emphasize Pollution Prevention	Create incentives for preventing pollution and the transfer of pollution among air, water and land. This includes performance standards, economic incentives and voluntary pollution reductions
3. Emphasize Children's Health	All standards set by EPA will ensure that children's unique vulnerability are protected

²³ For access to NAPA's observations of and recommendations to EPA, contact <http://.napawash.org>

²⁴ EPA Strategic Plan, Office of the Chief Financial Officer, Government Printing Office, September 1997. May be obtained at <<http://www.epa.gov>>.

²⁵ EPA's FY 99 Budget request may be found at <<http://www.epa.gov/cfo>>

²⁶ EPA's Guiding principles may be found on page 20-21 in EPA's 9/97 Strategic Plan

4. Strengthen Partnerships

EPA recognizes that it cannot act alone or accomplish all that is desired by the public with its available resources. EPA will enhance its partnership with federal, tribal, state, and local agencies, Congress, private business, public interest groups and citizens to achieve the nation's environmental goals.

5. Increase Public Participation and Community Right to Know

EPA collects and has access to an extraordinary amount of information regarding environmental conditions throughout the nation and unique data for certain substances in the environment. Release of this information to the public enables people to make informed decisions and participate in setting local and national priorities

6. Utilize Comprehensive Regional and Community-Based Solutions

Regional, ecosystem, and local approaches to environmental problems are in many cases preferable to a one size fits all approach. EPA will structure its approaches to address all forms of pollution simultaneously (air, land, and water) in a manner that accommodate local solution approaches.

7. Place Emphasis on Indian Country

EPA recognizes that Indian Tribes should be dealt with on a government to government basis to ensure protection of human health and the environment on Indian lands.

8. Employ Common Sense, cost-effective Solutions

EPA seeks to encourage and embrace common sense approaches that consider costs and benefits and seek to improve environmental quality with those aimed at economic growth.

EPA's Goals and Approach

The following represent EPA's statutory goals which are supported by a variety of initiatives and programs to achieve them.

GOAL

1. Clean air
2. Clean and safe water
3. Safe food
4. Preventing pollution and reducing risk in communities, homes, workplaces, and ecosystems
5. Better waste management, restoration of contaminated waste sites, and emergency response
6. Reduction of global and cross-border environmental risks
7. Expansion of American's right to know about their environment
8. Sound science, improved understanding of environmental risk, and greater innovation to address environmental problems
9. A credible deterrent to pollution with greater compliance with the law
10. Effective management (of EPA)

EPA Headquarters

EPA's headquarters, located in Washington DC, is responsible for development of national policies, development of standards required to implement various statutes (air,

water, etc.), pre-market clearance of substances deliberately introduced into the environment (pesticides, and toxic substances), guidance for implementation of EPA grants and programs, associated support functions (contracting, grants administration, budget and strategic planning, and program evaluation), and interfacing with other Federal agencies.

Like all Federal agencies, EPA is a hierarchical organization with responsibilities, functions, authorities and resources delegated downward within the organization's structure from the Administrator. EPA is now in the midst of organizational redesign and experimentation in an effort, absent new Congressional directives, to create a more efficient, responsive, and performance based agency. However much of EPA's structure is defined by legislation and thus total restructuring is not possible without Congressional directive and approval.

EPA's Field Structure

EPA does not possess a field staff similar to that of the Farm Service Agency or Natural Resource Conservation Service of the US Department of Agriculture. EPA's outreach capabilities are structured upon their cooperative relations with State environmental agencies, their ten regional offices and EPA laboratories. Other agency support is provided by cooperative agreements with a variety of groups and organizations, by contractors, and by other Federal agencies.

Many of EPA's statutory responsibilities are delegated to EPA's regions. Each of the ten regional offices are headed by an Administrator who is responsible for implementation of Federal laws assigned to EPA and oversee the states' implementation of them. Regional administrators are appointed by the President and confirmed by the US Senate. In the last several years, EPA's regions have been allowed considerable discretion in organizing themselves to better interface with their client states, relate to a variety of regional interests and concerns, and execute various new initiatives of the agency. They also have responsibility to implement the Federal responsibilities such as Superfund cleanup, and enforce Federal law when necessary or when States are unable or unwilling to exercise delegated enforcement responsibilities. About one half of EPA's total personnel are divided among the ten regional offices. Personnel are also located at special emphasis offices such as the Chesapeake Bay program offices and at EPA laboratories.

EPA's regions, programs, and informational systems are linked together through the internet. By entering EPA main web site, you can obtain access to all their regions, laboratories and various program information sites. EPA's main web site is <<http://www.epa.gov>>

New and useful websites²⁷ providing access to EPA's policies, regulations, information bases, and guidance on best control practices or avoidance techniques are coming on line with increasing frequency.

COMPARING USDA EXTENSION AND EPA

²⁷ See "Environmental Connections," a resource brochure developed by the US Department of Defense

The following matrix summarizes key features of each agency. The comparison should help develop an understanding of how the strengths of the two agencies could support a collaboration that benefits communities.

Quality	Cooperative Extension	US EPA
Value	<ul style="list-style-type: none"> o Responsive to clientele o Trust by local community o Academic standards, freedom, and tenure 	Conformance to Congressional and Executive direction
Guiding Principles	<ul style="list-style-type: none"> o Technical accuracy o Peer review o Academic standards 	Laws, Policy, and Regulation as reflected in the Federal Register and Code of Federal Regulations
Process	<ul style="list-style-type: none"> o Educate o Convene and plan o Advisory groups to establish program priorities o Work with the media o Training of trainers o Development and training of volunteer “extensors” 	<ul style="list-style-type: none"> o Establishment of standards o Compliance with regulations and policies through information and other assistance systems o Partnerships with state environmental agencies and non-governmental organizations o Regulations o Selective enforcement o Demonstration of new approaches and technologies o Financial and technical assistance o Encouragement of stakeholder participation in regulatory development and standard setting process o Environmental monitoring
Orientation	<ul style="list-style-type: none"> o The communities where agents are located 	<ul style="list-style-type: none"> o National environmental conditions
Funding	<ul style="list-style-type: none"> o County, State, and USDA appropriations. USDA funds are allocated to Smith-Lever Act institutions based on an administrative formula which requires at least equal (State and local) matching o Special grants or contracts from Federal and State agencies, NGO’s, and business 	<ul style="list-style-type: none"> o Annual Federal appropriations to the USEPA
Accountability	<ul style="list-style-type: none"> o Primarily to client and designated communities 	<ul style="list-style-type: none"> o The President, Congress, and the Courts (when the agency is under a court decree)
Expertise of employees	<ul style="list-style-type: none"> o Agricultural and natural resources sciences, behavioral and social sciences, information specialists 	<ul style="list-style-type: none"> o Environmental and supporting sciences, law, and economics
Structure	Horizontal; decentralized, cooperative	Line agency, regional offices, hierarchical and centralized

Mandate	County and State advisory committees, national priorities, direction in federal farm legislation, county commissioners, and state legislatures	Various environmental laws, OMB and appropriation committee directives, executive direction, court orders
Product	o Improvement in clients economic and social welfare through education	o Regulations and policies to clarify legal requirements o Environmental improvements
Culture	o Academic, non-regulatory	o Regulatory, compliance orientation, bureaucratic
Method of communication	o Various. Individual, small group, demonstration site, classroom, electronic (distance education), print, media o Endeavors to communicate only research based information	o Federal register o Electronic dispersion of information and data o Publications

NOTES:

1. The institutions with 1914 Smith-Lever Extension programs and now referred to as 1862 Institutions include: University of Alaska Fairbanks (AK); Auburn University (AL); University of Arkansas (AR); American Samoa Community College (AS); University of Arizona (AZ); Kearney Agricultural Center (CA); University of California - Oakland, Davis, and Riverside (CA); Northern Marianas College (CM); Colorado State University (CO); University of Connecticut (CT); University of the District of Columbia (DC); University of Delaware (DE); University of Florida (FL); University of Georgia (GA); University of Hawaii (HI); Iowa State University (IA); University of Idaho (ID); University of Illinois (IL); Purdue University (IN); Kansas State University (KS); University of Kentucky (KY); Louisiana State University (LA); University of Massachusetts (MA); University of Maryland (MD); University of Maine (ME); Michigan State University (MI); University of Minnesota (MN); University of Missouri (MO); Mississippi State University (MS); Montana State University (MT); North Carolina State University (NC); North Dakota State University (ND); University of Nebraska (NE); University of New Hampshire (NH); Rutgers University - Cook College (NJ); New Mexico State University (NM); University of Nevada (NV); Cornell University (NY); Ohio State University (OH); Oklahoma State University (OK); Oregon State University (OR); Pennsylvania State University (PA); University of Puerto Rico-Mayaguez (PR); University of Rhode Island (RI); Clemson University (SC); South Dakota State University (SD); University of Tennessee (TN); Texas A&M University (TX); University of the Virgin Islands (VI); Utah State University (UT); Virginia Polytechnic Institute and State University (VA); University of Vermont (VT); Washington State University (WA); University of Wisconsin (WI); West Virginia State University (WV); and University of Wyoming (WY). Source: J. Rude, CSREES/USDA. April, 1998.
1. Schools with Agricultural Research Stations include: the Palmer Research Center, Agricultural & Forestry Experiment Station (AK); Auburn University (AL); School of Forest Resources, University of Arkansas at Monticello (AR); University of Arkansas Agricultural Experiment Station (AR); University of Arizona Agricultural Experiment Station (AZ); School of Forestry, Northern Arizona University (AZ); College of Natural Resources, Humboldt State University (CA); Agricultural Experiment Station, University of California (CA); College of Agriculture, California Polytechnic State University (CA), College of Natural Resources, Colorado State University (CO); Connecticut Agricultural Experiment Station State, Yale University (CT), Agricultural Experiment Station, University of Delaware (DE), Agricultural Experiment Station, University of Florida (FL); School of Forest Resources, University of Georgia (GA); Agricultural Experiment Station, University of Guam (Guam); College of Tropical Agriculture and Human Resources, University of Hawaii (HI); College of Tropical Agriculture and Human Resources, University of Hawaii at Manoa (HI); Agricultural and Home Economics Experiment Station, Iowa State University (IA); College of Forestry, Wildlife and Range Science, University of Idaho (ID); Agricultural Experiment Station, University of Illinois (IL); Department of Forestry, Southern Illinois University (IL); Purdue University (IN); Kansas State University (KS); University of Kentucky (KY); Louisiana State University and A&M College (LA); Louisiana Tech University (LA); University of Massachusetts (MA); University of Maryland (MD); University of Maine (ME); University of Michigan (MI); Michigan Technological University (MI); Michigan State University (MI); University of Minnesota (MN); University of Missouri (MO); Mississippi State University (MS); University of Montana (MT); Montana State University (MT); North Carolina State University (NC); North Dakota State University (ND); University of Nebraska (NE); University of New Hampshire (NH); Rutgers University (NJ); University of Nevada (NV); Cornell University (NY); Ohio State University (OH); Oklahoma State University (OK); Oregon State University (OR); Pennsylvania State University (PA); University of Puerto Rico (PR); University of Rhode Island (RI); South Dakota State University (SD); University of Tennessee (TN); Stephen F. Austin State University (TX); Texas A&M University (TX); University of the Virgin Islands (USVI); Utah State University (UT); Virginia Polytechnic

and State University (VA); University of Vermont (VT); Washington State University (WA); University of Washington (WA); University of Wisconsin (WI); and West Virginia University (WV). Source: J. Rude, CSREES/USDA - April, 1998.

1. The institutions currently designated as the 1890 schools: Tuskegee University, Alabama A&M University, University of Arkansas at Pine Bluff, Delaware State College, Florida A&M University, Fort Valley University, Kentucky State University, Southern University, University of Maryland Eastern Shore, Lincoln University, Alcorn State University, North Carolina A&T State University, Langston University, South Carolina State University, Tennessee State University, Prairie View A&M University, and Virginia State University.

1. Native American Institutions identified to receive Cooperative Extension funds in 1994 are: Dine College (AZ), D-Q University (CA), Haskell Indian nations University (KS), Bay Mills Community College (MI), Leech Lake Tribal College (MN), Fond du Lac Tribal and Community College (MN), Stone Child College (MT), Salish Kootenai College (MT), Blackfeet Community College (MT), Little Big Horn College (MT), Fort Peck Community College (MT), Fort Belknap College (MT), Dull Knife Memorial College (MO), United Tribes Technical College (ND), Cankdeska Cikana Community College (ND), Sitting Bull College (ND), Turtle Mountain Community College (ND), Fort Berthold Community College (ND), Nebraska Indian Community College (NE), southwestern Indian Polytechnic Institute (NM), Crownpoint Institute of Technology (NM), Institute of American Indian Arts (NM), Sinte Gleska University (SD), Sisseton Wahpeton Community College (SD), Oglala Lakota College (SD), Cheyenne River Community College (SD), Northwest Indian College (WA), College of the Menominee Nation (WI), and Lac Courte Oreilles Ojibwa Community College (WI). Source: J. Rude, CSREES/USDA, 4/98.