EPA United States Environmental Protection Agency

CARE
LOCAL PARTNERSHIPS. HEALTHY COMMUNITIES.

Promising Practices to Improve Community Performance and Sustainability

Tips for Better CARE

Community Action for a Renewed Environment (CARE)
www.epa.gov/CARE

OVERVIEW

The U.S. Environmental Protection Agency's (EPA's) Community Action for a Renewed Environment (CARE) Program offers communities an innovative way to reduce the risks from pollution in their environment. The CARE process helps communities build capacity to reduce toxics through local collaboration. CARE provides on-the-ground technical assistance and funding to communities to help them understand, prioritize and address environmental health threats from all sources. A recent evaluation by the National Association of Public Administrators (NAPA) recognized CARE as a solid tested framework for engaging communities and other stakeholders. Currently, there are 68 CARE communities in 34 states and territories.

DOCUMENT PURPOSE

This publication shares promising practices and tips for communities seeking to reduce environmental health risks. Lessons learned and anecdotes from one CARE community can inspire and fuel ideas and action in another community. CARE seeks to promote peer-to-peer learning and this document is one way to promote that goal. This report describes 14 successful practices CARE communities have employed to reduce risks and improve environmental quality while creating sustainable programs. All of the examples illustrate the power of collaboration, inclusion and being willing to take risks and do things differently.

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THE CARE PROCESS

CARE grantees follow a series of four steps to successfully complete their CARE projects:

1. Join Together

A broad-based partnership is formed. Partners could be non-profit groups, community organizations, businesses, schools and state, Tribal and local government agencies, EPA and other federal agencies.

2. Identify Problems and Solutions

Working together, this stakeholder group assesses toxics problems in their community and considers options for reducing risks. Many of the emission and exposure reductions will result from the application of EPA partnership programs.

3. Implement Solutions/Reduce Risks

The partnership identifies the combination of programs that best meet the community's needs. EPA funding helps to implement these projects. The community begins improving its environment.

4. Become Self Sustaining

The community develops new ways to attract funding and partners into their broad-based collaborative to build on its success. New problem assessments are completed and new solutions identified. The result: the partnership becomes self-sustaining and continues working to improve their environment where community members live, work and play.

Tip 1: Foster Environmental Sustainability

NEW HAVEN CITY GOVERNMENT
NEW HAVEN, CONNECTICUT

Concerned about a mix of air quality, land use, and water quality issues, New Haven, Connecticut, a community with environmental justice concerns, was searching for ways to develop a comprehensive air, water, and land stewardship program. The city used its CARE grant to hire an environmental engineer to manage environmental initiatives and coordinate a broad range of projects that "greened" municipal operations and created the regulatory framework for a sustainable community. Now the city views environmental stewardship as one of its core missions.

A continuing thread in the project was to build in the concept of environmental sustainability into city projects and policies. These changes are expected to be systematic and last beyond the project's time frame, and they culminated in the city's recent establishment of an Office of Environmental Sustainability.

In the CARE priority-setting process, the city identified diesel emissions as a high-priority air toxic risk and was subsequently awarded an EPA Diesel Retrofit Grant. The city immediately retrofitted its school bus fleet and is in the process of retrofitting construction equipment used near schools and vulnerable communities as part of the $1.5 billion School Construction Program. It implemented the use of B50 biodiesel and introduced more hybrid vehicles into the city's fleet, including the mayor's car. The city also focused on its port area, created a no-idling program with outreach and signage to reduce harmful diesel emissions. Also, the city is constructing a 14-space electrified truck stop in the port district to provide waiting trucks with an alternative to idling.

Key Actions

- Hired an environmental engineer to move the city to environmental stewardship as a core mission
- Rewrote city policies, zoning, and standards to improve the environment
- Created an Office of Environmental Sustainability in the city government

To address additional air emission sources, the CARE project:

- Conducted a series of pollution prevention workshops and mentoring for New Haven manufacturing facilities
- Worked with a hospital to switch to low-sulfur fuel

This brownfields/river site was cleaned up and will be redeveloped

- Negotiated with the utility company to operate a new facility with a net zero increase in emissions
- Created an active Asthma Coalition to improve residential indoor air
- Worked with the New Haven school system to implement EPA's Tools for Schools, a program that promotes the voluntary adoption of sound indoor air quality management practices
- Trained and enlisted students in monitoring of ambient air
- Installed new bike trails and bike racks throughout the city and promoted the use of Zipcars

Finally, in partnership with the Yale Urban Resources Initiative, the city developed a quantitative estimate of the ecological system services derived from its 32,000 street trees and partnered to plant more than 200 trees per year. The program encouraged planting a tree in someone's honor and won the Mayor's Prize for green suggestions.

The city rewrote numerous zoning regulations and standards including those related to waste stream, stormwater, soil erosion, anti-heat islands, anti-light pollution, and bike parking. It changed its waste processing facility regulations to incorporate environmental standards and updated its Coastal Program to better reflect current best practices for protecting coastal resources, including enhanced review for construction projects within the defined coastal area management zone.

New Haven is one of three municipalities statewide to receive a small, 10-kilowatt wind turbine as part of a pilot project with the Connecticut Clean Energy Fund (CCEF), which plans to test the effectiveness of wind turbines in Connecticut. These turbines are expected to generate 6,000-7,000 kilowatt hours of power each year. The city also worked with a printing press facility to install a 100 kW wind turbine that will provide approximately half of the facility's energy.

As part of its commitment to implement 20 percent renewable energy by 2010, New Haven participated in the CT Clean Energy Options program also sponsored by CCEF. The city has signed up over 1,200 households and businesses (#1 in the state) and has earned 21 kW of solar arrays. The city also partnered with Yale University students to reach out to ethnic businesses and encourage them to sign up for utility efficiency programs. Over 50 businesses signed up through this program, delivering lasting energy savings.

The city created a green New Haven brochure and a New Haven green map to promote the sustainable activities of the New Haven CARE program. These are distributed to residents at public events, information kiosks, and through partner organizations. A "Lean and Green" workshop was also held for businesses throughout New Haven.

Project Results

- **Over 12,000 households made a renewable energy purchase commitment, 50 businesses signed up for an energy efficiency program, and the city purchased 20 percent in renewable energy**
- **Revitalized brownfield site and installed wind turbine**
- **No-idling zones reduced emissions from 1,000 trucks and hundreds of school buses. Retrofitted 150 vehicles and 300 school buses in city fleet to run on biodiesel fuel**
- **Reduced rate of asthma and lead poisoning from home/school visits programs**
- **Built bike paths, installed bike racks across the city and distributed 5,000 green maps of city**

Tip 2: Engage Local Associations and Faith-Based Organizations

EARTH KEEPERS
MARQUETTE, MICHIGAN

People living in Marquette, Michigan were faced with elevated levels of mercury entering Lake Superior, as well as other threats to water quality, including the improper disposal of pharmaceuticals and electronic waste (e-waste). The challenge for the community was identifying the sources of this contamination and engaging local businesses and residents to implement change.

To address mercury contamination, Earth Keepers used its CARE grant to work with the Marquette Area Wastewater Treatment Facility to uncover a link between the high concentrations of mercury in wastewater to dental offices, specifically mercury amalgams used in dental fillings. Since the wastewater treatment facility is not capable of filtering the mercury, it was providing a direct source of mercury to the Carp River and Lake Superior.

Earth Keepers teamed up with the Superior District Dental Society to quickly develop a community-based mercury reduction program. The Superior Watershed Partnership attended a meeting of the Superior District Dental Society (consisting of 57 members) to inform area dentists of the extent of the problem and provide assistance to develop and implement a mercury reduction plan utilizing amalgam separators in their offices. This was a low cost solution ($500 - $1,000 to install) compared to the alternative, a costly retrofit of the wastewater treatment facility.

Dental Society members voted unanimously to pass a resolution to voluntarily install amalgam separators in their offices. The Superior Watershed Partnership provided technical assistance in identifying the appropriate mercury amalgam separator and facilitated a group discount through the manufacturer. The manufacturer that was chosen also provided a convenient method for recycling of the mercury amalgam.

Success of this program caught the attention of the Michigan Dental Association, which then recommended this as a best management practice for all their member dentists statewide. Subsequently, EPA's Office of

Key Actions

- Shared scientific data with local and state associations
- Provided cost-effective solutions to encourage business participation
- Involved 150 congregations/churches of various faiths in collection efforts

Over 320 tons of e-waste were collected by this CARE project

Water shared the success of the project with the American Dental Association (ADA) and facilitated a national Voluntary Dental Amalgam Discharge Reduction Program via a Memorandum of Understanding (MOU) between EPA and the ADA to have dental offices nationally install amalgam separators and recycle the collected amalgam waste.

To tackle the issues of the improper disposal of pharmaceuticals and electronic waste (e-waste), the project engaged Earth Keeper's unique coalition of faith communities working to improve the environment in Michigan's Upper Peninsula. This network includes 150 congregations/ churches and over 50 communities representing approximately 70 percent of the Upper Peninsula's total population including Catholic, Lutheran, Methodist, Episcopal, Jewish, Presbyterian, Buddhist, Unitarian, Quaker, and Baha'i faiths. This far-reaching network facilitates information being disseminated to a much broader range of individuals than traditional public outreach programs. Other partners, including representatives from the environmental sector, industry, government, human health, business, law enforcement, recreation, Tribes, and academia, further expanded the ability of the Earth Keepers to inform and involve the community.

In 2006, to reduce electronic waste in landfills by increasing recycling, Earth Keepers tapped its vast network by using church and temple parking lots as collection sites. Earth Keepers collected 320 tons of defunct computers and other electronic items that were then refurbished, recycled and properly disposed. Lead, mercury, cadmium and brominated flame retardants in electronics were properly managed. By reusing and recycling these materials, natural resources were conserved and air and water pollution and greenhouse gas emissions that are caused by manufacturing new products were avoided.

Then in 2007, the Earth Keepers Network expanded to include local pharmacists and law enforcement to facilitate the collection of unused pharmaceuticals and prevent improper disposal. Again, using church and temple parking lots, the collection effort collected, properly disposed of or provided for reuse of over one ton of pharmaceuticals. This responded to studies showing that pharmaceuticals are present in water bodies and may cause ecological harm.

Faith-based collection efforts get big results

Project Results

- **19 percent reduction in community's mercury effluent to Lake Superior**
- **State Dental Association recommended the installation of mercury amalgam separators as a best practice to all members**
- **EPA's Office of Water signed an MOU with the American Dental Association (ADA) and the National Association of Clean Water Agencies (NACWA) to establish a national program**
- **One ton of pharmaceuticals, including $500,000 in narcotics collected on annual Earth Day "Clean Sweep"**
- **Over 320 tons of e-waste collected and disposed of properly**

Tip 3: Focus Actions around Children's Health Protection

WEST MICHIGAN CHILDREN'S ENVIRONMENTAL HEALTH INITIATIVE KENT COUNTY/GRAND RAPIDS, MICHIGAN

In Grand Rapids, where 20 percent of children live below the poverty line, data showed high rates of childhood asthma (caused by tobacco smoke, pests, mold, and other air pollutants), lead poisoning, mercury exposure, and carbon monoxide poisoning caused by poorly functioning appliances. Focused on creating "healthier homes for healthier children" in Kent County, Michigan, the West Michigan Children's Environmental Health Initiative (CEHI), a collaboration of community-based and advocacy organizations, together with federal, state, and local government agencies, began to tackle these problems.

After prioritizing in-home environmental issues throughout the community, CEHI received a CARE grant and used children's health as a focal point and organizing principle to deal with children's environmental health issues. The goal of the program is to empower families to understand and take steps to reduce environmental hazards to children in their homes. The three components of the program are:

- *Use the existing network of social and health in-home service providers to assess environmental health problems and make referrals.* CEHI identified in-home social service and health providers (e.g., case managers for children with asthma or lead poisoning, high risk pregnancies) and created a joint, more comprehensive in-home assessment tool. Now, referrals for multiple community resources can be made on the basis of a common assessment. For example, if a case manager for lead poisoning sees cigarette butts in ashtrays and cockroach signs throughout the house, he/she can now make referrals for smoking cessation and for integrated pest management services available from CEHI partners.
- *Follow-up with direct services and Family-Centered Action Plans.* ClearCorps /Healthy Homes Coalition and Kent County Health Department now provide direct services for the comprehensive set of issues including lead hazard reduction, integrated pest management, provision of smoke and carbon monoxide detectors, and other services.

Key Actions

- Prioritized environmental health concerns based on their impact on children
- Piggy-backed on existing in-home social service providers network to include numerous children's environmental health issues
- Engaged same households to participate in broader community efforts to protect the environment

EPA and CDC together invest in children's environmental health

- *Empower these families to be community leaders for local projects.* Local community-driven projects have emerged to address: lead in community gardens; peer support for parents of lead poisoned children; trash and pest management; low recycling rates; and the community incinerator's impact on local air quality.

The program has been extremely successful. $435,000 in additional funding has been leveraged from CDC, an EPA vulnerable populations lead grant, and FEMA.

Children's health was used as a focal point for this CARE project

Project Results

- **175 in-home assessments completed and referrals made**
- **100 families created Family Centered Action Plans. Over 200 homes received lead or radon testing. 187 homes installed with 72 Carbon Monoxide alarms and 311 smoke alarms**
- **67 service providers and community members trained on healthy homes principles and Integrated Pest Management (IPM)**
- **Over 5,000 community members reached through health fairs and community meetings**
- **Residents now engaged in community-led groups addressing lead in community gardens, trash and pests, recycling, and air quality impacts of incinerator**

Tip 4: Build the Trust of Local Businesses

BOSTON PUBLIC HEATH COMMISSION
BOSTON, MASSACHUSETTS

The Boston Public Health Commission had been struggling for years with how to tackle the health and safety problems associated with about 600 automotive shops disproportionately located in low income, minority neighborhoods. Case files painted an alarming picture of improperly stored chemicals and wastes, hazardous waste disposal, uncontrolled releases of hazardous chemicals into the air, and unsafe working conditions. These dangerous work practices were taking a toll on employee health through environmental hazards and direct physical injury. Unfortunately, the city could not shut down these shops without severe financial repercussions.

Through its Safe Shops Program, the Boston Public Health Commission – a CARE grantee - worked to reduce the environmental risks associated with automotive shops. This program helps businesses improve operations, reduce pollution, protect workers and neighbors, and comply with regulations.

Focus groups had previously identified worker and employer needs, including what should be included in a community safe shops educational project. A recurring concern that surfaced was that employees lacked health care. Auto shop workers work day-to-day with chemicals yet often have no access to health care for themselves or their families. To respond to these and other needs, shops would receive the following free services in exchange for participating in the program:

- Monthly visits from the Public Health Van to give on-site health screenings to shop employees
- On-site workplace safety and environmental health training at a time convenient for the business. The key component of this was EPA's Design for the Environment (DfE) workplace safety training.

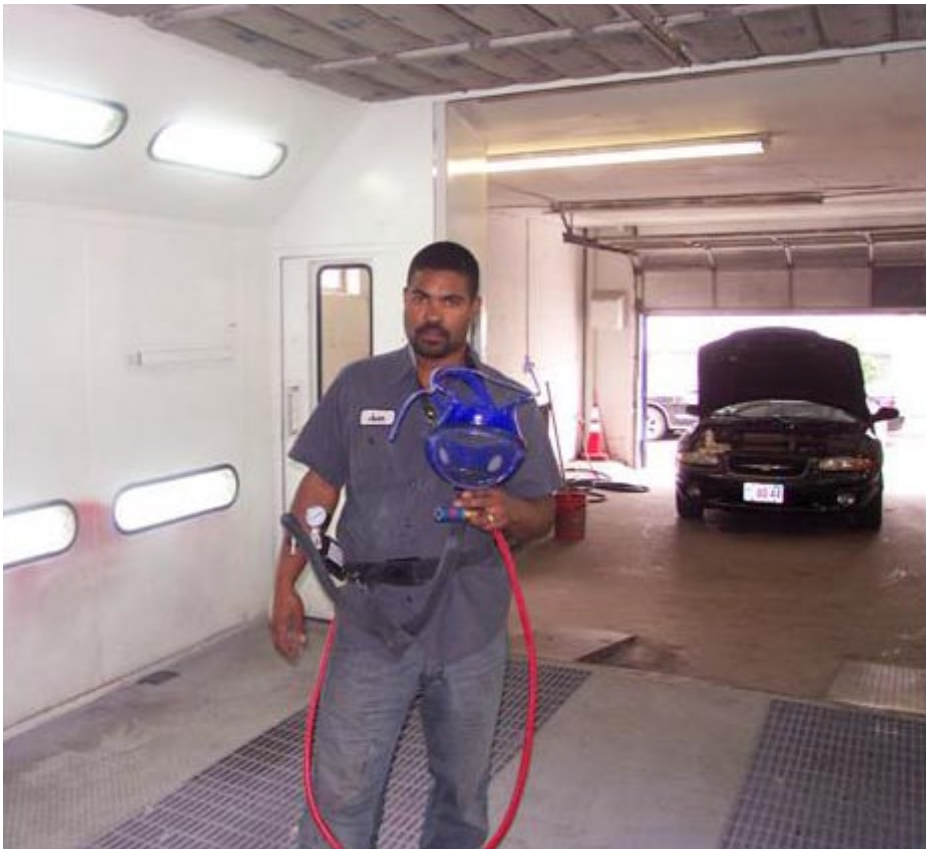
Key Actions

- Responded to needs expressed in focus groups
- Provided free services in exchange for participation in the program, including monthly on-site health screenings, EPA's Design for the Environment (DfE) health training, and business development assistance
- Required automotive shops to follow best practices as prerequisite to securing government contracts

Boston Public Health's Safe Shop Training completed at a local shop

- Technical assistance and other resources for business development and environmental compliance

The ability of the project to build trust and gain entry into auto shops and work in a highly collaborative fashion set the foundation for significant change in workplace practices. These practices include switching to aqueous brake cleaner, reducing perchloroethylene-containing aerosols, using hydrophic mop technology, oil and solvent recycling, waterborne coatings to eliminate volatile organic compounds (VOCs) as well as labeling waste containers, oil, anti-freeze, paints and solvents and improving sanitary conditions. Moreover, the project will be sustainable beyond the EPA grant period and replicated in other sectors.



Instruction on Personal Protective Equipment (PPE) was provided to workers

Project Results

- **Reduced outdoor and indoor air pollutants, hazardous waste, and improper disposal**
- **90 to 100 percent proper use of best work practices in 175 participating shops**
- **702 workers trained and 428 shops inspected**
- **Model now being replicated in hundreds of other local businesses including nail salons**
- **Model used to help develop an EPA campaign to achieve Clean Air Act regulations faster**

Tip 5: Leverage University Resources

WHEELING JESUIT UNIVERSITY
WHEELING, WEST VIRGINIA

Citizens in the Central Appalachians have often described themselves as "forgotten," as they watched aid and assistance come and go over the generations. When armed with scientific knowledge, however, they felt empowered to make informed environmental health decisions.

Wheeling Jesuit University recognized that the local area communities' primary need was a sustained effort to use scientific evidence to provide credibility for environmental decision-making. The university's partnership, which consists of seven rural West Virginia communities, used the CARE Roadmap to prioritize 140 environmental concerns voiced by citizens, the most pressing of which was drinking water quality.

The partnership established a working dialogue among citizens and researchers from regional universities to provide citizens access to the academic expertise necessary to plan remedial actions. Through public forums, citizens were able to ask researchers about their environmental and health concerns. University experts met with citizens in comfortable environments such as churches, colleges, and homes so they could speak freely about their concerns.

Wheeling researchers asked for and received funding from private foundations to test well water in communities where heavy metal pollution was suspected. Test results confirmed residents' suspicions of pollution and consequently attracted additional funding for more detailed studies. In light of the new data, the Agency for Toxic Substances and Disease Registry (ATSDR) then re-evaluated and changed their previous finding of "no public health concern" to "health concern."

Experts from regional universities shared test results and explained the water problems. Through this process, researchers gained the trust of individuals and citizens began to develop strategies for getting help. More knowledgeable and empowered, many of these same citizens

Key Actions

- Used the CARE Roadmap to prioritize environmental concerns
- Supported community concerns with scientific evidence
- Held forums where community members interacted with researchers

Coal sludge impoundment plant and nearby community, one CARE project focus area

provided testimony about their water issues before West Virginia legislative subcommittees. Citizens proclaimed, "CARE has given us a voice."

The work completed as part of the CARE project got the attention of the state legislature, which mandated a study of underground injection of coal slurry on groundwater and community health. Two outcomes of that study were a temporary moratorium on the underground injection of coal slurry and the extension of water lines into the three rural communities through funding from the state legislature and the West Virginia Department of Environmental Protection (WV DEP).

Collaborative negotiations are currently being held among community residents, the coal industry, and key legislators to find technology-based solutions for the problem of coal slurry production. The legislature is investigating the economic and technological feasibility of alternative coal processing methods that would protect human health and the environment. Through the work of the CARE project, the public and its elected officials have moved from a discussion on the potential impacts of coal slurry to discussing how the state can stop producing slurry and how much it will cost.

The grantee is now replicating the CARE model in neighboring communities, leveraging additional funding from three other foundations, working with MSHA, the U.S. Geological Survey, WV DEP, local organizations, and other universities. With additional access to data and additional state and local partners garnered during the CARE process, the Wheeling Jesuit University will continue to help the local communities address their environmental concerns.

Project Results

- **Three communities and 500 families were provided with temporary potable water supplies**
- **Municipal water lines were extended to hundreds of families**
- **State legislature mandated a study of the underground injection of coal slurry on groundwater and community health. A temporary moratorium was placed on underground injection of coal slurry. Additional testing has been initiated**
- **Model now being replicated to reach other West Virginia communities**

Tip 6: Broker Cooperation among Local Interests

GRACE HILL SETTLEMENT HOUSE
ST. LOUIS, MISSOURI

A number of low-income neighborhoods in St. Louis were impacted heavily by air pollutants, including diesel particulate matter. Grace Hill Settlement House, a nonprofit organization in St. Louis and a CARE grantee, engaged citizens in reducing a range of indoor and outdoor air toxics. Grace Hill successfully brokered among local interests to leverage community resources and build new relationships in the community.

Grace Hill was well-known and respected in the community for their previous work helping low-income residents. This served as an entre to its role as broker, convener, and catalyst for the CARE project, even though environmental protection was a new arena for it. It was able to leverage existing knowledge of the city's bureaucracy and decision-making processes, which helped the organization achieve real environmental changes. They brought in and engaged multiple stakeholders to remove obstacles by being open to different solutions, while acknowledging that the parties (e.g., school boards, chemical companies) had many other pressing issues.

Grace Hill involved the St. Louis school district, parents, principals, school bus drivers, and bus company managers to create an Anti-Idling School Campaign, which ultimately resulted in measurable air emissions. Businesses and governmental entities followed suit with bus and truck anti-idling practices. The St. Louis Equipment Services Division also implemented "no-idling" practices for its fleet of 2,500 diesel vehicles. Now St. Louis school children and other residents are exposed to considerably less air pollution each day.

Key Actions

- Served as a catalyst for change by brokering dialogue between numerous parties
- Established "no-idling" zones at all schools
- Achieved voluntary participation of businesses to reduce air pollution

To expand upon these successes, Grace Hill worked with local businesses, some of them significant contributors to point-source emissions on pollution prevention strategies. A local coal distributor, located near a school, reduced its fugitive air emissions by 75 percent and agreed to contain the coal piles drifting into the school buses. St. Louis Covidien

Efforts with local businesses included work with a local coal distributor to move coal piles away from school

Chemical Company, heavily dependent on truck transportation for the operation of its plant in north St. Louis, volunteered to post "no-idling" signage at its facility as well. A local pharmaceutical company installed a scrubber and new filters after collaborating with Grace Hill.

Additional work with other community representatives and local businesses resulted in further building the capacity of the community to address its environmental issues. Grace Hill took care to value these voluntary partnerships between the companies and the local neighborhood residents, serving as a broker of dialogue among the parties, and ultimately developing positive relationships where none previously existed.

Experience gained from the CARE project allowed the grantee to secure an additional $3 million dollars for diesel engine retrofits (including 520 school buses, 91 airport support vehicles, 50 fire department trucks, 33 refuge haulers, 35 commercial trucks, and a tugboat). An additional 929.8 tons of emissions and 98,430 gallons of fuel will be saved annually.

Anti-Idling poster contest

Project Results

- **Anti-idling zones reduced emissions of 1,102 tons of nitrogen oxide, 29 tons of particulate matter and 2,491 tons of carbon dioxide near schools**
- **Three school bus companies have saved an estimated 224,000 gallons of fuel, worth approximately $785,610**
- **The children of St. Louis are exposed to considerably less air pollution at school each day**
- **75 percent reduction in fugitive air emissions from a local coal distributor, located near a school**
- **Local pharmaceutical company installed new scrubber and new filters**

Tip 7: Emphasize a Bias for Action

CITIZENS FOR CLEAN AIR IN PUEBLO
PUEBLO, COLORADO

In Pueblo, Colorado, air emissions of mercury from the steel mills and a power plant comprised more than half of the mercury emissions in the state. A coal-fired power station was under construction, and a limestone strip mine and coal-fired cement kiln were in their first year of operation. In spite of or perhaps because of this legacy, Pueblo neighborhoods never came together to resolve air pollution issues.

A bias for action involves looking for and acting on opportunities to proactively engage in projects that make a community healthier and safer. This engagement can bring diverse neighbors together to improve the community and create an appreciation for the power of collective action. Citizens for Clean Air in Pueblo formed a coalition called PuebloCARES, which would use its CARE grant to help community members strengthen their capacity for environmental decision making.

PuebloCARES reached out a number of times to demonstrate its concern for the larger community. None of the projects initially tackled by Pueblo CARES were an expected part of their CARE Work Plan; however, together, these efforts worked to bring more neighbors and organizations onto the CARE team and, thereby, make the CARE project a more powerful and vital force in Pueblo.

Key Actions

- Empowered community members to believe they could make a difference in their community
- Engaged a variety of stakeholders in projects
- Responded to flooding as it happened

PuebloCARES assisted the Peppersauce Bottoms community in its efforts to remove a hazardous rail facility from this residential neighborhood. This small Latino community within Pueblo is located in an area subject to serious, periodic flooding and close to a rail facility with thousands of creosote-treated railroad ties. Ultimately, as a direct result of community action, the rail facility relocated.

In 2006, PuebloCARES responded to local flooding issues by providing labor and materials to clean up and rebuild flooded homes. PuebloCARES also used EPA Brownfields funding to assess the contamination of the largest lake in Pueblo and the area surrounding it. The assessment cleared the way for Pueblo to acquire and develop the property as a recreational area that will also help with flood control.

Railroad ties burning in Peppersauce Bottoms before CARE engaged with the community

This new park project is valued at approximately $20 million.

The grantee also worked with local school districts, the Pueblo City/County Health Department, a local energy company, the State of Colorado and statewide environmental groups to retrofit all of the publicly operated buses in Pueblo County to reduce inside particulate emissions by more than half. Subsequent to that, the grantee applied for and was granted two awards to allow for testing for radon across the county. Radon levels were found to be, on average, more than twice the EPA recommended Action level at which remedial action is recommended. The community now has an active radon testing and mitigation program underway. Finally, collaborative efforts led to the local steel mill agreeing to install a Continuous Emission Monitoring System (CEMS) on its stack to provide continuous data on mercury emissions.

Each of these efforts brought new partners to the table. In acting on each of these issues, residents began to develop confidence in their ability to cause change. This sense of community contributed to a robust engagement in the process of identifying and ranking the environmental issues of greatest risk and importance for the residents of Pueblo. A bias for action can help neighbors come together to better serve the entire community.

Creosote-treated railroad ties stored in the neighborhood prior to CARE engagement

Project Results

- **50 percent reduction in particulate emissions inside buses**
- **Reduced radon levels. Leveraged radon grants to test and initiate radon program**
- **Leveraged EPA Brownfields funding to revitalize land and transform it into a park**
- **Relocated rail facility, cleaned up or rebuilt flooded homes**
- **Agreement with steel mill to track mercury emissions data**

Tip 8: Create a Partnership Agreement

WEST OAKLAND ENVIRONMENTAL INDICATORS PROJECT (EIP)
WEST OAKLAND, CALIFORNIA

Entirely surrounded by freeways and located directly adjacent to the Port of Oakland, the fourth largest container port in the United States, West Oakland was the community most highly impacted for air toxics in the San Francisco Bay area. Using its CARE grant, the West Oakland Toxic Reduction Collaborative successfully broadened an existing set of stakeholders and established a structure in which to operate.

After concluding a small-scale study of the air quality impacts of diesel trucks including 13 recommendations, the West Oakland Toxic Reduction Collaborative brought together a broader set of stakeholders to address air quality and a broader set of toxics issues facing the community. To structure the CARE partnership, the Collaborative worked with EPA Region 9 to develop a formal, written partnering agreement providing for a neutrally facilitated, multi-stakeholder collaboration. The agreement defined the collaboration and its goals, as well as the roles of the co-leads (EIP and EPA), the steering committee, and member partners, and includes community co-chairs and neutral facilitation. Defining goals and roles helped to minimize conflict and increase partner understanding of the purpose of the collaboration.

Key Actions

- Developed written, formal partnering agreement for the CARE partnership
- Hired a neutral facilitator to be present at all partnership meetings
- Ensured that residents co-chaired each of eight action teams

Several key aspects contributed to the effectiveness of the agreement.

- Representatives of the impacted community co-chaired the collaboration at every level, including every workgroup and the steering committee.
- A paid neutral facilitator knowledgeable about the community's environmental issues attended meetings to ensure that all the key sectors were equally represented and heard.
- The collaborative was orchestrated so that all key sectors are effectively represented and heard.

Workgroup members meet to tackle issues and are guided by the partnering agreement

- A special emphasis was placed on actively engaging the impacted community, because low-income communities lack the resources and capacity in comparison with other sectors such as industry and government agencies. *This led to the first-time appointment of a "fenceline" community member to the port commission.*
- On-going evaluation was essential. Not all of the workgroups or all aspects of the project were seen by the community as productive. Evaluation of such less successful aspects of the program and incorporation of changes are ongoing.

The success of this collaborative structure has served as a model for other agencies that foster community engagement and multi-stakeholder involvement. Project partners have observed that collaborations often work best when it is generally understood that other less collaborative options, such as lawsuits and political action, remain available "in the wings" if progress is not made during the collaborative process.

Reducing port-related diesel pollutants is a priority for the CARE collaborative

Project Results

- **Adoption of 85 percent risk reduction goal for port-related diesel pollutants; significant progress underway**
- **Resident training on indoor air, clean truck pilot programs, land use siting**
- **Plans developed for reusing Army base and relocating industrial recyclers**
- **Established a truck information center to support the 2,000 truckers serving the port as their industry is converted to cleaner technologies**

Tip 9: Conduct Outreach through a Neighborhood Educator

CENTER FOR ENVIRONMENTAL INFORMATION ROCHESTER, NEW YORK

Residents living in Rochester were exposed to some of the highest levels of toxic emissions in the northeast. Lead, household hazardous materials, air pollution from mobile and stationary sources, water pollution, mercury, radon, pesticides, and indoor air pollutants, were among the issues that residents faced. Like many communities across the country, Rochester did not have the means to access information on toxic pollutants; much less access it in a form they could understand.

A neighborhood toxics educator, trusted by the community, can deliver information so that residents can take preventive measures to reduce exposure to pollution sources. The Center for Environmental Information (CEI) in Rochester successfully used this approach. Those most affected by toxics in the community are those least knowledgeable about toxics and their effects. After examining the needs of the city, CEI recognized that there was an urgent need for a "neighborhood toxics educator." A Neighborhood Toxics Education program was developed to disseminate information on selected toxics issues (e.g., lead, household hazardous materials, air pollution from mobile and stationary sources, water pollution, mercury, radon, pesticides, and indoor air pollutants).

Key Actions

- Hired a neighborhood toxics educator
- Developed a toxic education program to explain toxic issues in plain terms to residents
- Formed relationships with citizen leaders, block clubs and neighborhood groups

The neighborhood toxics educator delivered toxics information directly to urban neighborhoods by reaching out to the citizen leaders of each city sector, including the 39 resident-driven neighborhood associations and block clubs.

Through this mechanism, the educator reached approximately 2,000 residents with environmental health information.

Rochester's Healthy Home Learning Center

The program effort included presentations at health fairs, strategic door-to-door work, and outreach to the media to ensure the program and its information were disseminated widely. Eastman Kodak provided in–kind support to this neighborhood work through its Neighbor Information Center and its technical and outreach staff and programs. As a result of improved coordination with and referrals from the neighborhood educator, the Monroe County Department of Health improved their responses to health emergencies. For instance, one family was relocated due to the extremely poor indoor conditions.

The Neighborhood Educator program was just one of the CARE grantee's six mini-projects. The program also worked in concert with the City of Rochester's Neighbors Building Neighborhoods program to address local environmental concerns.

Residents learn how to reduce household environmental health risks

Project Results

- **More than 50 percent of those reached reported changing their behavior**
- **39 groups and over 2,000 residents reached with environmental health information**
- **Improved responses to health emergencies due to greater coordination with the Department of Health**

Tip 10: Empower Environmental Ambassadors

COMMUNITY ASSIST OF SOUTHERN ARIZONA PROGRAM OF THE SONORA ENVIRONMENTAL RESEARCH INSTITUTE, INC. TUCSON, ARIZONA

Southern metropolitan Tucson is a low-income, predominantly Latino community heavily impacted by air toxics emissions from commercial businesses in the residential areas as well as lead and asthma problems. For years the community unknowingly consumed drinking water from a contaminated aquifer and was affected physically and emotionally by the experience. The community felt disenfranchised by the minimal input they had in the groundwater remediation efforts underway, and people developed a distrust of the government.

The community sought a model for educating businesses and homes about tangible practices to improve their environmental health. As part of their CARE project, Sonora Environmental Research Institute, Inc. (SERI) partnered with neighborhoods that were under economic, environmental and health stress to help them determine the environmental risks and possible actions to reduce those risks.

SERI's Community Assist of Southern Arizona (CASA) program utilizes the promotora method of community outreach and provides services in a culturally appropriate manner and language. The promotora idea, which was developed in Mexico, is slowly being adopted in the United States. Promotora, the Spanish word meaning "expert" or "advocate," is used to describe a lay health advisor within the Latino community. The promotora, usually a woman, is accepted and trusted in the community where many times agency personnel are not. SERI, in collaboration with its partners, trained 105 individuals from the neighborhood in environmental health issues and then conducted community outreach and assistance.

Key Actions

- Used the promotora model to gain community trust and change practices
- Provided skills, training and opportunity for local college credit
- Visited homes, businesses and schools

These environmental ambassadors visited homes, schools and businesses to provide information and training that resulted in real changes in their neighborhoods. In a period of three years, they visited over 3,500 homes, conducted over 50 outreach events at schools, neighborhood centers and community fairs and distributed relevant outreach materials. They

Promotoras after completing their training

provided information through peer interactions by developing trust in the community where they spoke the same language, shared a similar cultural background, and shared some life experiences with the community members that they served. All educational materials were translated into Spanish.

Through their training and community achievements, promotoras developed a self-confidence that empowered them to become community leaders. Training topics included air and water quality, household hazardous waste, asthma triggers, lead analysis and prevention, and leadership and communications skills. In addition, for every visit that a promotora makes to a home or business, she may get credit toward the Community Health Advisor certificate at the local community college. This program gives residents access and entry to a college program, encouraging some to take additional courses and others to complete a four-year bachelor degree program.

Finally, the project has developed a broad-based partnership with 23 members from educational institutes, businesses, and local and state agencies. $734,000 in additional funding was leveraged from EPA's Pollution Prevention program, EPA's Indoor Air program, the Department of Housing and Urban Development (HUD) and the City of Tucson.

County Supervisor distributing certificates of training completion to promotoras

Project Results

- **Reduced over 30,000 pounds per year of volatile organic compounds from businesses; saved over 138,000 kWh in electricity per year**
- **105 promotoras trained in environmental health issues**
- **3,608 home visits and many revisits, referrals for lead testing and asthma care**
- **803 visits to auto, print and woodworking shops, hair and nail salons, drycleaners**
- **Provided access to colleges and increased employment opportunities**

Tip 11: Understand Local Risks by Engaging Residents

BAY POINT LATINO ENVIRONMENTAL ACTION PROJECT
BAY POINT, CALIFORNIA

The city of Bay Point, California, is an environmental justice area of concern that has been disproportionately impacted by toxic emissions from industrial facilities, refineries, railroad lines and a heavily used highway, as well by drinking water contamination. Although toxic health exposure had been documented, community residents had not been adequately engaged on these issues, and a plan for action needed to be developed.

Following the CARE Roadmap as a guide, the Bay Point Latino Environmental Action Project (LEAP) developed a 43-question survey of community perceptions of health risks using non-EPA funds. Bay Point community members, including Spanish- and English-speaking adults and students, took the survey door-to-door to 144 homes. After the results were tabulated, a town hall meeting was held to discuss the top health issues identified by the survey as well as the results from a 2006 study on toxic emissions. The meeting and a voting process identified six primary environmental concerns: outdoor air, accidental releases, indoor air, waste and illegal dumping, drinking water, and water availability.

To discuss these primary concerns, the CARE collaboration hosted 11 workshops for residents and students. These workshops provided in-depth information about the issues and associated health risks. Comparative risk training classes were also provided to residents as well as other members of the collaborative in order to identify which pollutants would be more harmful than others. These workshops were critical in engaging residents and empowering them to fully participate in prioritizing risks when the entire partnership was convened.

Once the community was educated about their various environmental concerns, the collaboration convened a meeting where small groups of citizens discussed the pollutants of greatest concern, based on their known risks. Each group was composed of four or five members of the partnership and one EPA or county leader. Then, through facilitated consensus they were able to rank the risks from more risky to less risky.

Key Actions

- Surveyed community perceptions of health risks using non-EPA funds
- Held in-depth workshops to educate residents on specific risks
- Engaged residents to be part of the process to prioritize risks

Residents meet at a public forum to share information on local health issues

To prioritize issues, a facilitated roundtable meeting was held in which the collaboration members brainstormed the feasibility of various projects to address each of the ranked risks. With the guidance of a skilled facilitator, members considered:

- Was the project addressing the issue feasible
- Was there political support for the issue or political pressure against the issue
- Was the project cost-effective
- Was funding available to support the project
- Could the project be completed in a timely manner
- Was there community and/or institutional support
- Was there a need for social change and regulatory change

A voting process ranked all issues and a consensus was reached on the order in which each issue would be addressed. As a result of this consensus building, LEAP developed a detailed action plan to reduce environmental toxics that community members plan to implement.

Residents prioritize environmental health issues

Project Results

- **144 homes surveyed on community perceptions of health risks**
- **11 workshops hosted for residents on specific issues**
- **Detailed action plan developed to address indoor and outdoor air, water quality, and illegal dumping**

Tip 12: Enlist Multiple Generations to Drive Change

INTERNATIONAL DISTRICT HOUSING ALLIANCE
SEATTLE, WASHINGTON

With more than 40 different ethnic groups, the International District of Seattle is one of the oldest and most ethnically diverse neighborhoods in Seattle, Washington. Addressing issues such as air toxics as well as lead paint, mold, and asthma within such a diverse community presented challenges, but also presented a wealth of resources to leverage the variety of backgrounds and perspectives. In this community, the majority of residents and business owners are immigrants with limited English proficiency, almost 50 percent of the population lives below the poverty level, and many are elderly.

The International District Housing Alliance (IDHA), a CARE grantee, crafted a unique program in which youth and elders (residents are called "elders" in this community) collaborate to tackle community environmental concerns. By working together on community projects, IDHA's Wilderness Inner-City Leadership Development (WILD) program's youth gained a greater commitment to their community while improving their leadership capabilities, cultural understanding, and language skills. IDHA and its partners would first train the youth to be local environmental leaders. The youth would then reach out to the elders through workshops and home visits to raise awareness about the issues and encourage them to actively participate in and help the CARE project.

Key Actions

- Empowered local youth to become environmental leaders
- Engaged youth and elders to identify and investigate hot spots
- Performed outreach campaign on environmental issues

Working together, youth and elders used a survey system called ComNet. Hand-held computers were used to identify issues and investigate 'hot spots' or areas of concern for specific toxics within the community. ComNET surveys served as a useful monitoring tool for observing change over time in a manner that was easy for community members to use and understand. This information was key in helping CARE project partners identify and then prioritize issues.

A massive outreach campaign was launched by youth and elders to

Elders and youth meet to identify local risks

address the priorities. Multilingual issue-specific information was provided to over 1,000 individuals and 160 businesses on indoor air quality, recycling, composting, pesticide use, energy conservation, water quality and conservation, seafood safety, household hazardous waste, and outdoor air quality. Resources were produced in five languages and interpreted in nine languages/dialects. Business owners were trained on green business practices in the owner's or manager's native language. One-on-one outreach was given to restaurant owners and/or staff on alternatives to styrofoam, recycling waste oil and grease, and composting food waste. The youth created a hands-on Eco-Village for the annual International District Summer Festival in which 700 people visited. They also held a conference on environmental justice providing training for local residents, businesses and local organizations.

CARE work continues through the Community Advisory Board comprised of elders and the WILD's youth. Youth have become community leaders and a high percentage have sought and been accepted into college and local government internships. Finally, the intergenerational cooperation that took place during the project educated and engaged youth and elders about pressing problems in their community, and promoted a sense of community essential for tackling future environmental issues.

Diesel trucks drive through the international district's downtown

Project Results

- **250 neighborhood surveys documented environmental toxics and land-use patterns**
- **90 in-house assessments and guidance to improve indoor environmental health**
- **Over 1,000 individuals and 160 businesses provided with targeted multilingual information to reduce risks**
- **180 residents trained on recycling and food waste composting and 88 households educated through door-to-door outreach**
- **2,267 gallons of food waste diverted from landfill; 145 kitchen food scrap containers distributed**

Tip 13: Utilize Resources in Indian Country

MONTANA INDIAN COUNTRY CARE PROJECT
BILLINGS, MONTANA

The American Indian communities of Fort Peck, Fort Belknap, Northern Cheyenne, and Crow shared similar environmental challenges including emissions from coal-fired power plants; close proximity to mining activities, cement plants, and abandoned mines; leaking underground storage tanks; hazardous and non-hazardous waste; water quality and indoor air problems. Located in remote areas and with few services and little environmental protection infrastructure, the tribes felt isolated. They knew they could benefit from a collaborative process and structure such as CARE to address their environmental issues.

The Montana Indian Country CARE Project (MICCP) found that bridging tribal environmental departments with tribal colleges in all four communities created new synergies and new successes. Tribal environmental departments served an important purpose because they can utilize regulatory measures and promote environmental stewardship and environmental best practices. Tribal colleges served as neutral forums where tribal members could discuss local issues and solutions. The colleges provided labs, computer applications, meeting places and held classes for 88 community members on GIS/GPS and 21 members on remote sensing.

MICCP collaborated with Montana State University to train tribal members on health, housing, environmental threats, including asthma, and convened environmental professionals from 11 different tribes to learn about solid waste compliance and enforcement. The project gained momentum and was able to leverage over $100,000 in additional resources.

Because CARE focuses on community-based identification of environmental priorities to facilitate change, many organizations came together through MICCP because they shared a common interest in improving the health of their community and the environment.

Key Actions

- Connected tribal colleges with tribal environmental departments in four communities
- Accommodated a large number of participants with flexible project timelines

CARE project residents learning about green cleaners

The MICCP facilitated partnerships that bridged many organizations and documented the following lessons learned which may be useful to other tribal recipients or multi-community recipients:

- Flexibility in time. The continuum of time proved both beneficial and challenging. Community based projects took longer than expected, and in general, the greater number of people involved, the more time taken.
- Monetary support. Partnership members felt it was important to pay project staff for their time. Unemployment and poverty levels are high.
- Education to see change. Bringing community members into a tribal college to learn a new skill relating to toxic reduction pays off. This was extremely effective in growing the partnership and the knowledge of communities.
- Change as the community changes. There were a number of partners who left the project and some new partners that joined. The project changed over time and modified the work plan accordingly.
- If a community does not show commitment to a specific project, then stop. There were a number of times when original activities were cancelled because the project did not have adequate commitment from the community.
- Services to community. It was important that CARE be visible to community members, not a brochure. Communities want action and results through service and opportunities for service.
- One size does not fit all. When there is not a brochure or resource available on a certain topic (i.e., junk vehicles in Indian Country), then make one. It is important to share pertinent resources with a community that will enable them to address their needs.

University students sample for water contaminants

Project Results

- **Over 7,000 pounds of hazardous chemicals removed from 13 schools, protecting 1,233 students**
- **295,460 pounds of metal from cars, 34 tires, 780 pounds of toxic fluids, 12 truckloads of scrap metal, tons of cardboard, rubber carpets, plastic PCB components,102 mercury switches from cars, 19.2 pounds of mercury from school labs, 57 car transmissions and oil, and 102 car batteries recycled and/or disposed of**
- **93 homes reached with healthy homes visits on indoor air quality and asthma**
- **3,500 people contacted about illegal dumping, signs posted at 8 sites. Overall Project touched the lives of 21,910 people.**

Tip 14: Access EPA Brownfields Funding to Revitalize Abandoned Properties

PACOIMA BEAUTIFUL
LOS ANGELES, CALIFORNIA

Pacoima, a low-income community in Los Angeles, California, was heavily impacted by air and land pollution. Abandoned, contaminated properties located near residential areas were a particular cause of concern. Cleaning up these sites was essential in order to reinvest in them, increase the local tax base, facilitate job growth, and create a healthier, safer community.

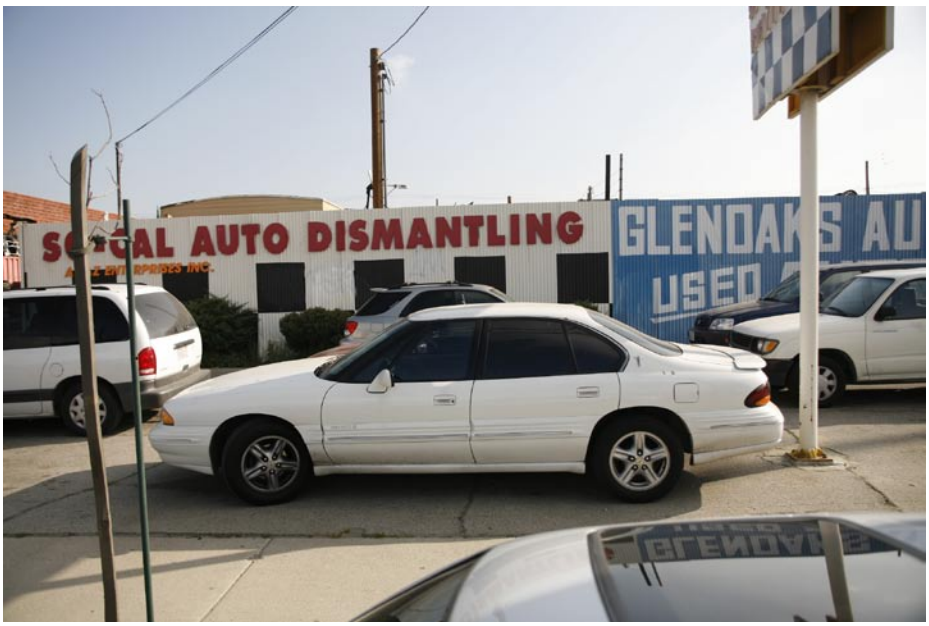
Key Actions

- Worked with EPA to determine opportunities for additional federal funding to address issues
- Prioritized areas close to residential neighborhoods
- Used results of assessment to establish a dialogue with local businesses

Numerous brownfields were uncovered during Pacoima's CARE process of identifying and understanding environmental health issues from all sources in the community. The community applied for and received $50,000 in EPA Targeted Brownfields Assessment funding to conduct environmental site assessments and assist with community redevelopment of these sites.[1]

Pacoima Beautiful staff worked with EPA contractors to identify an area with 230 parcels that was littered with auto dismantlers, plating facilities, construction yards and granite cutters. All of these were suspected of posing potential health and environmental risks in the community. The area was targeted because of its close proximity to residents. Phase I environmental site assessments were conducted on the 25 properties. The report found that many of the 17 auto dismantlers were storing chemicals, waste and car parts in unprotected areas; allowing liquid waste to empty into stormwater drains without permits; and storing solvents and other chemicals improperly. Similar hazards were uncovered at plating shops, construction yards and granite-cutting operations.

EPA and state environmental regulatory staff met with Pacoima Beautiful to discuss the results of the site assessments, hazards from local industries and potential next steps. Pacoima Beautiful's staff, health educators from the community and others then shared the results with businesses and obtained agreement on instituting more environmentally-friendly practices. Pacoima is continuing to expand outreach to additional businesses.



Seventeen auto dismantlers agreed to engage in environmentally sound practices

Project Results

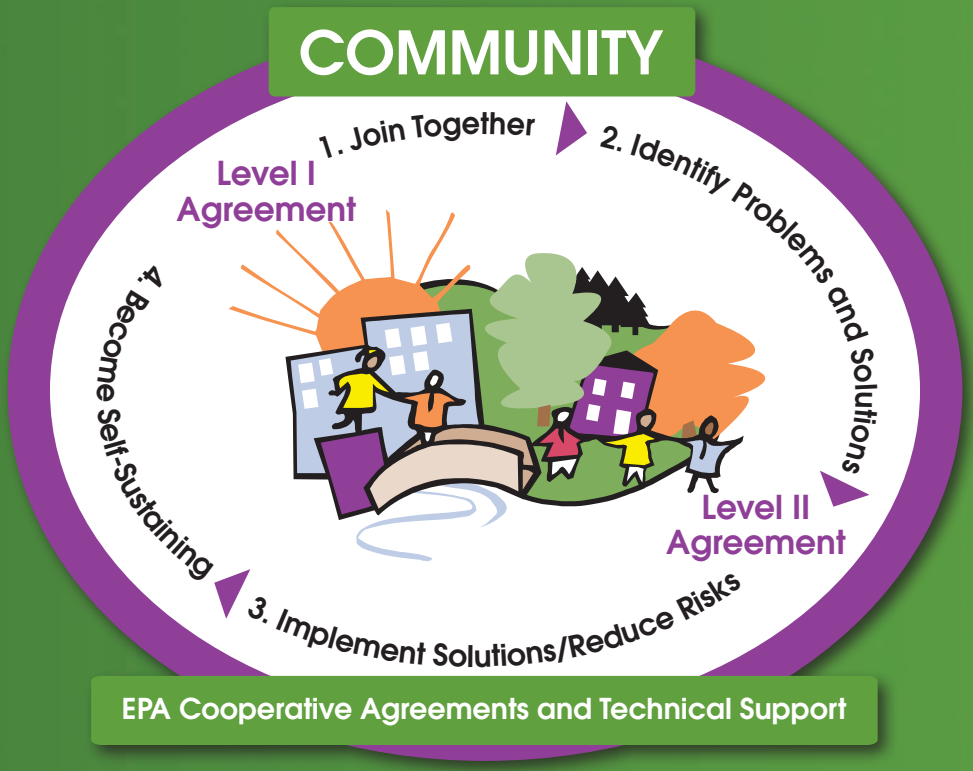
- 25 properties assessed, including sites of auto dismantlers, plating facilities, lumber yards, and granite cutters
- Agreements with 17 auto dismantlers to engage in environmentally-sound practices
- Conference for auto dismantlers to reduce environmental degradation in cooperation with regulatory agencies, CA Auto-Dismantlers' Association, local officials
- 34 of 47 unregulated granite-cutting operations trained on practices to reduce air pollution and worker exposure

[1]Note: All CARE grantees with brownfields contamination or suspected contamination are eligible for Targeted Brownfields Assessment funding. See http://epa.gov/brownfields/mmatters.htm to find out about brownfields funding and the types of support provided.

Conclusion

EPA will continue to collect promising practices and lessons learned from CARE communities and to provide forums for exchanging this type of information between communities. CARE communities can provide valuable information on what works and what does not in addressing environmental health challenges. If you would like to learn more about EPA's CARE program, please see the CARE Web site (www.epa.gov/CARE) or www.epa.gov/care/comments.htm for an updated list of EPA CARE Regional Coordinators in the 10 EPA Regional Offices.

The CARE Process



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