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EPA
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Community Listening Sessions

for the Sustainable and Healthy Communities Research Program

U.S. Environmental Protection Agency
Office of Research and Development

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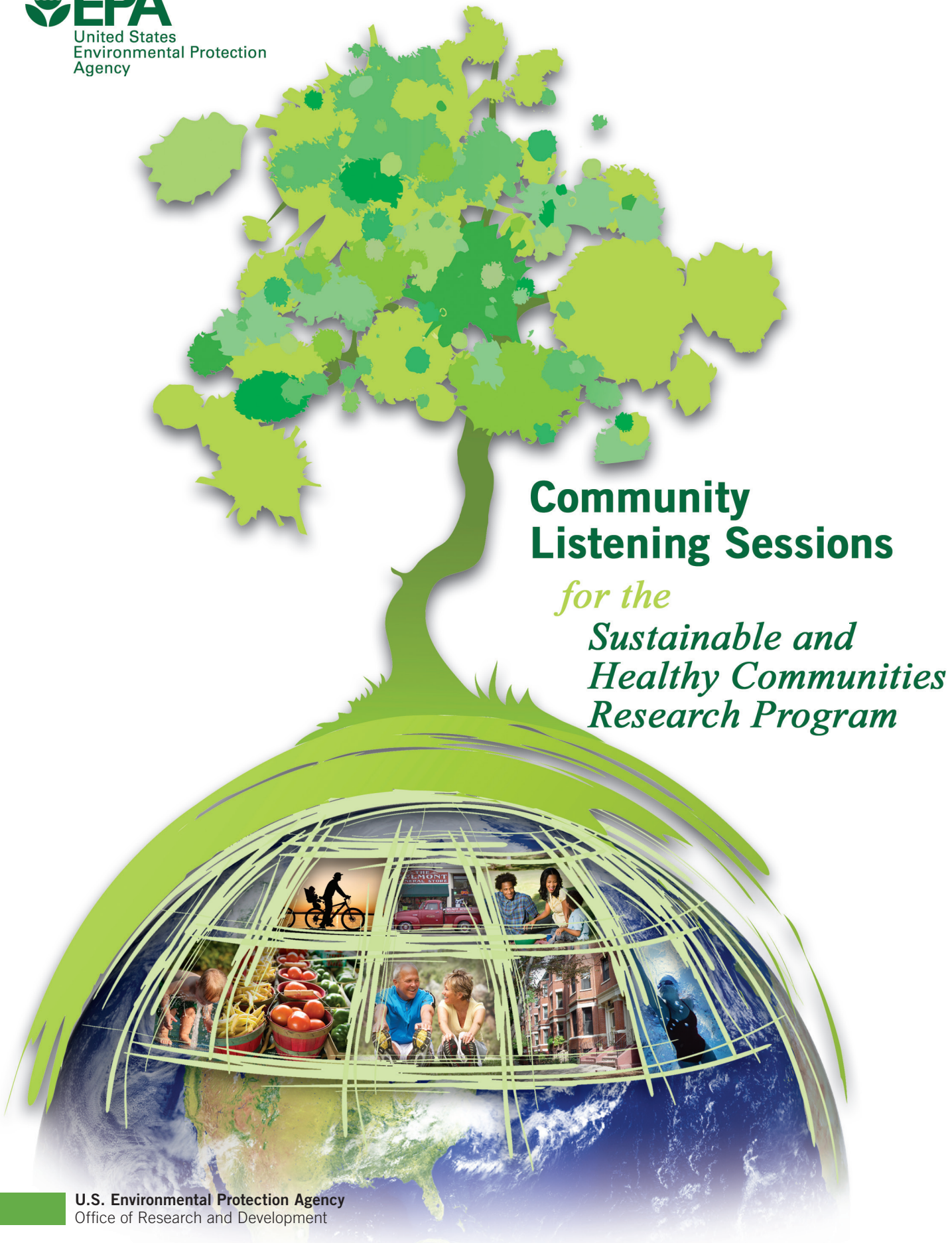

Community Listening Sessions

for the Sustainable and Healthy Communities Research Program

U.S. Environmental Protection Agency
Office of Research and Development

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Acknowledgments

The EPA Office of Research and Development (ORD) appreciates the participation of the community representatives in the Sustainable and Healthy Communities Research Program (SHCRP) Listening Sessions. This includes citizens representing the communities of Asheville, North Carolina; Boston, Massachusetts, and the surrounding municipalities of Cambridge, Medford and Providence; Milwaukee, Wisconsin; Ogden, Iowa; Spokane, Washington; Woodbine, Iowa; and Wyandanch, New York. Their input was invaluable in steering the SHCRP to future directions.

ORD acknowledges the following EPA staff for their participation in the SHCRP Community Listening Sessions, especially the Regional staff for arranging and facilitating the event in their Region and inviting the community participants:

Regional Representatives

Region 1: Dan Abrams, Jessica Dominguez, Rosemary Monahan, Sheryl Rosner, Joel Sonkin
Region 2: Rabi Kieber, Sabrina Pendse, Terry Wesley
Region 4: Thomas Baugh, Anne Keller
Region 5: Judy Beck, Carole Braverman, Marilou Martin, Jim Vanderkloot
Region 7: David Doyle
Region 10: Melanie Wood

ORD Representatives

Randy Bruins
John Darling
Herbert Frederickson
Laura Jackson
Abdel Kadry
Janet Keough
Jay Messer
David Olszyk
Ann Pitchford
Kathryn Saterson
Brad Schultz
Betsy Smith
Kevin Summers
Marilyn ten Brink
Claudia Walters
Robert Weber
Kurt Wolfe

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Executive Summary

The Sustainable and Healthy Communities Research Program (SHCRP) was established under the Office of Research and Development (ORD) to receive community input on sustainability and health concerns. EPA recognizes that communities want to be sustainable and are moving in this direction. SHCRP will work with communities to help them identify important issues (e.g., jobs) and provide tools that can help them make sustainability-based decisions.

Seven Community Listening Sessions were held starting in mid-March 2011, and ending in mid-April 2011, to gain insight into the issues that communities are facing as they implement sustainable practices. Sessions were held in Asheville, North Carolina; Boston, Massachusetts; Milwaukee, Wisconsin; Ogden, Iowa; Spokane, Washington; Woodbine, Iowa; and Wyandanch, New York. These communities are a mix of rural and urban communities with different economic livelihoods and local/regional issues. Meeting attendees included elected officials, local and state government personnel, nonprofit organizations, utilities, universities and other members of the community, as well as EPA staff from the Regions and ORD staff from laboratories and headquarters. Although the challenges they face and approaches to addressing these issues were vastly different, many issues emerged as common themes during these conversations. This document captures the context of these common themes listed in general order of priority from highest to lowest.

Although these themes have been presented separately, they are interconnected; for instance, the *performance measures* theme also relates to the *planning* theme along with *educating and communicating* to the public. Furthermore, many environmental and human health outcomes are impacted by many of these issues; therefore, the research developed to find solutions to these issues should be developed collectively.

1. **Economics** is the strongest driver for sustainability decisions in communities, yet communities do not have a good understanding of the linkages between jobs, economic development and sustainability. Sustainability must be measured and described in a way that makes good economic sense and connects to jobs and economic development.

2. **Communicating, Educating and Framing** the sustainability discussion with the public is essential for understanding and addressing local needs. Creative and culturally relevant ways to communicate sustainability issues that resonate with different audiences will be necessary to better understand sustainability issues and change behaviors.

3. **Performance Measures and Metrics** are key in measuring or predicting the economic, environmental and social effects of a sustainable action in a community. Communities must capture economic outcomes as well as others that are valued by the community (e.g., social, environmental, health).

4. **Planning** can allow communities to factor sustainability into their future development plans. Many planners lack knowledge about sustainable options and most communities have limited time and resources to devote to planning.

5. **Schools** are a core part of many communities' basic structure. In many small rural communities, schools are the social centers of the community. School consolidation with other nearby communities often leads to the gradual disappearance of rural community identity, in particular, their values and way of life.

6. **Housing** is a pivotal component of communities. Housing shortages have some communities focused on building and renovating homes, while rising energy costs have made energy efficiency a top priority for communities looking to cut costs.

7. **Resources** (financial, time, technical expertise) to support sustainable projects are limited in all communities. Sustainable projects often have high upfront costs for planning; grants are essential to financially support these projects.

8. **Practical Sustainable Practices** are lacking and/or hard to implement. Many communities are not aware of sustainable solutions to the issues they are facing. In instances where a well-defined sustainable

practice exists, often it is still difficult to implement because of the high upfront cost, lack of public demand, or other reasons.

9. **Climate Change** is a concern in many communities. Many are struggling with how to draw political attention to an impending threat that has no visible consequences at this time (e.g., compared with dirty air or polluted rivers).

10. **Transportation** in rural communities is used to connect residents with job centers and services, often located in nearby urban areas. Most rural communities have a very limited public transportation infrastructure.

11. **Local Food Systems** provide a sustainable way for communities to provide healthy food. Partnerships with nearby agricultural areas offer the opportunity for businesses to use local produce in their livelihoods, increasing economic wealth to the region as well as being sustainable.

12. **Stormwater Management** is recognized by communities as an important service, but often there is uncertainty about how to install or update sewer systems sustainably. These projects also are very expensive and may stretch beyond the jurisdiction of the community.

13. **Health and Healthy Lifestyles** are very important to communities and were often raised in the context of installing green spaces, trails and cleaning up the environment (air, water, land). Second to economics, health reaches across all facets of a community and is a strong driver for decisions.

14. **Natural Resources** and environmental issues (e.g., water quality, water quantity, biodiversity) are recognized as issues, but have not been the key motivators for most community sustainable actions. With limited resources, decision makers are focusing on meeting the basic needs of community members (e.g., housing, health, jobs) and tangentially addressing environmental issues.

The information gathered from these community Listening Sessions will guide future actions by ORD and help SHCRP develop a refined agenda of methods and practices to meet community requirements. The identification of common themes will be used to better address human health, socio-economic, environmental and ecological concerns to meet the economic, social and environmental needs of the future. Specific examples of potential actions for ORD include:

- Develop metrics to measure or predict the economic, environmental and other effects of a sustainable action on a community; economic outcomes are a strong driver of decisions. They also must capture the social sciences dimension of the activity.
- Link sustainability concepts directly to jobs (e.g., number, type, location).
- Maintain funding for sustainable projects (e.g., do not eliminate Community Development Block Grants or Main Street Challenge Grants).
- Federal agencies should make it easier for communities to apply for grants (e.g., standardized process across all agencies, dedicated staff to help applicants with the application).
- Federal, state and local agencies should align their goals and funding opportunities so that a community could obtain federal, state and local dollars for community improvements.
- Clearly communicate sustainability issues so that people understand the issue, which helps them change their way of thinking and behavior.
- Incorporate green practices into the mainstream way of doing things (e.g., engineering guidelines, housing valuation assessments, ordinances, permits).
- Develop case studies that can serve as models for sustainable practices.
- Conduct research that is needed in many areas, such as developing sustainable stormwater management options and technology.

Background

Science is the backbone of EPA's programs and is an integral part of EPA's actions. EPA's Office of Research and Development (ORD) is committed to scientifically identifying and evaluating the best practices for issues dealing with environmental sustainability concerns. ORD supports EPA's mission through: (1) research and development; (2) providing technical support; (3) partnering with academic institutions; and (4) exercising leadership in addressing emerging issues. ORD is reorganizing their research agenda and shifting from a risk-based approach to a long-term sustainability and more proactive approach. Although EPA has made great strides in the past few decades in implementing measures to protect the environment and human health, it is clear that future policies need to address long-term sustainability of human communities and their actions on the environment.

Sustainability, as defined by the Report of the Brundtland Commission, *Our Common Future,*[1] is "the ability to meet present needs without compromising the ability of society and the environment to meet the economic, social and environmental needs of future generations." On September 15, 2011, the National Academy of Sciences released a report to EPA titled, *Sustainability and the U.S. EPA,*[2] which recommends that "EPA should carry out its historical mission to protect human health and the environment in a manner that optimizes the social, environmental and economic benefits of its decisions" and provides a framework. Sustainability is the guiding principle for the six new ORD research programs (Air, Climate and Energy; Safe and Sustainable Water; Chemical Safety for Sustainability; Human Health Risk Assessment; Homeland Security; and Sustainable and Healthy Communities). The Sustainable and Healthy Communities Research Program (SHCRP) was established to address community issues of concern. Unique among the six program areas, SHCRP not only pursues its own agenda, but also integrates aspects of each of the five other programs in so doing to create a holistic, transdiciplinary approach. This synergy is effective in addressing today's complex, interconnected environmental problems.

The goal of the SHCRP is to conduct research that addresses sustainability and health from the perspective of the community. EPA recognizes that communities want to be sustainable and are moving in this direction. The primary aim of SHCRP is to inform and empower community leaders to equitably evaluate and integrate human health, socio-economic, environmental and ecological factors to facilitate decisions impacting community sustainability. SHCRP works with communities to help them identify important issues (e.g., jobs) and provide tools that can help them make sustainability-based decisions. To achieve the goal of helping communities make decisions that assist them towards a more sustainable status, SHCRP provides information, approaches and tools to assess current ecological, built and societal conditions within communities, evaluate implications of alternative policies and management actions, and develop indicators to measure results. During initial discussions, the Regions identified 76 sustainability challenges and issues that were commonly encountered by communities (e.g., urban sprawl, economics; see the Appendix). Although many environmental issues, such as climate change and water supply, are national or regional in nature, their impacts are experienced at a local level within communities. Furthermore, local governments are often more influential in implementing policies and influencing the behavior of the people within their communities.

To better understand individual community needs, SHCRP conducted Listening Sessions at various locations throughout the United States to gain input about the challenges communities are facing and how the Agency can support communities in their sustainability efforts. The purpose of the Listening Sessions was to provide a forum where communities could describe issues they are facing, express their needs and discuss ways that SHCRP might be able to help address their requests. SHCRP Listening Session sites were chosen by the Regions, in coordination with Regional Sustainable Community Coordinators, on the basis of current or past community actions and recognized thought on sustainability issues and development. One important aspect of the Listening Sessions is that the information

[1] Report of the World Commission on Environment and Development, World Commission on Environment and Development. 1987. Our Common Future. Published as Annex to General Assembly document A/42/427, Development and International Co-operation: Environment.

[2] Committee on Incorporating Sustainability in the U.S. EPA, National Research Council. 2011. Sustainability and the U.S. EPA Washington, DC: The National Academies Press.

generated must be widely applicable to communities of every size, location and economic status. Thus, the communities chosen by SHCRP as Listening Session sites represented a wide variety of population size, demographics, location and prosperity. Listening Sessions were conducted in seven communities, which were located in Asheville, North Carolina; Boston, Massachusetts; Milwaukee, Wisconsin; Ogden, Iowa; Spokane, Washington; Woodbine, Iowa; and Wyandanch, New York. This mix of rural and urban communities with different economic livelihoods and regional issues allowed SHCRP to gain insight into the various issues that communities are facing as they implement sustainable practices.

The Listening Sessions were planned in advance, with each community supplying background materials beforehand about their successful sustainability projects, collaborations, sustainability goals and any challenges they face in accomplishing future projects. Likewise, the communities were provided with information about the goals and functions of SHCRP. Each community chose diverse representatives for the Listening Session. The participants included town leadership, elected officials, local and state government staff, nonprofit organizations, universities, business leadership, active community representatives and any other key partners. EPA had representatives from the respective Region, lead-Region coordinator and ORD, who could hear the comments first hand, incorporate them into the developing research program and answer questions regarding ORD research. EPA Regional staff led each meeting.

Each Listening Session was conducted between mid-March and mid-April 2011. The format for each Listening Session was consistent. First, a community representative issued welcoming remarks and thanked EPA for seeking their input. This was followed by a brief presentation by ORD including: (1) the type of research and development historically conducted by ORD; (2) a description of SHCRP, justification for its formation, and program objectives and goals; and (3) a discussion regarding what sustainability means on individual, community and national levels. The communities presented information about their history and shared values, sustainability projects that they are working on or plan to work on, successful projects or partnerships that have accomplished sustainability goals in the past, pressing concerns and challenges being faced, science that has or could be beneficial, and ideas for activities that would help the community become more sustainable. The Listening Session was then opened for general discussion between EPA and community members regarding how EPA could develop knowledge and facilitate improvements to the community's condition of sustainability. Specific questions generated by EPA stemmed from the open-ended query, "What would your community like to know or be able to do more easily?":

- Assess your community's current human health and environmental conditions.
- Develop local sustainability goals and metrics of success for those goals.
- Evaluate the relative benefits of possible actions or consequences of inaction.
- Develop tailored strategies, plans and projects to achieve a healthy and sustainable community.
- What social equity and/or economic information would be helpful?
- What technical assistance or capacity building would be helpful?
- How would research or technical centers help your community in light of your existing partners and support?
- Would you be interested in having a person from ORD work with you to get to know the community better and possibly become a pilot project?

A summary report was prepared for each Listening Session, and each report is included as a separate chapter within this publication. The information acquired from these Listening Sessions will help SHCRP develop a refined agenda of methods and practices to better meet the needs of communities across the country. Fourteen common themes affecting most, if not all communities, emerged from the Listening Sessions and are discussed in detail in the following section, *Common Themes*. SHCRP will use this information to better address human health, socio-economic and ecological concerns to meet the economic, social and environmental needs of the future.

Common Themes

EPA representatives visited seven communities across the United States to conduct SHCRP Listening Sessions for the purpose of identifying issues facing communities as they implement sustainable practices. The communities of Asheville, North Carolina; Boston, Massachusetts, Milwaukee, Wisconsin, Ogden, Iowa, Spokane, Washington, Woodbine, Iowa; and Wyandanch, New York represented a wide range of local ecology, urban or rural settings, population size and economic livelihoods. Each community chosen had a demonstrated history of sustainability thoughts and actions. The Listening Sessions, which occurred between mid-March and mid-April 2011, included EPA staff from the Regions and ORD staff from laboratories and headquarters. Each community was represented by elected officials, nonprofit organizations, businesses, universities and other members of the community. Although the challenges experienced and approaches to addressing sustainability concerns varied among the communities, several topics emerged as collective issues affecting most of the locations. The 14 common themes obtained from the seven Listening Session discussions are described below, in order of priority from highest to lowest.

Although these community sustainability themes have been presented separately, they are interconnected; for example, the *performance measures* theme also relates to the *planning* theme along with *educating and communicating* to the public. Furthermore, many environmental and human health outcomes are impacted by many of these issues; therefore, the research developed to find solutions to these issues should be developed collectively.

1. **Economics** is the strongest driver for sustainability decisions in communities, yet communities do not have a good understanding of the linkages between jobs, economic development and sustainability. In some communities, people are wary of how sustainable practices will affect their livelihoods and are not willing to implement any green practices without understanding their link to an economic benefit (e.g., higher levels of employment, lower utility bills, increased tax revenue, health care savings, etc.). Sustainability must be described in a way that makes good economic sense and connects to jobs and economic development. Many communities are focusing on reducing energy bills by implementing energy efficiency improvements and promoting alternative energy sources that are expected to lower energy costs. These strategies are expected to attract more residents and businesses to the community, providing economic wealth. Example research questions include:

   - What are the economics of community revitalization?
   - Who benefits and who pays, especially in environmental justice communities?
   - How can the creation of (green) jobs help make environmental improvements?
   - What are the full, real costs of sustainable practices compared to other choices?
   - What are the long-term benefits?
   - What are the economic drivers for small town survival?

2. **Communicating, Educating and Framing** the sustainability discussion with the public is essential for understanding and addressing local needs. The most successful sustainability initiatives have had substantial public buy-in. However, community engagement, social marketing of sustainability and the development of effective sustainability strategies is highly dependent on local demographics and culture. For example, the view of the "American Dream" (e.g., owning a car and a house in suburbia) may not immediately coalesce with the concept of sustainability (e.g., use of public transportation, higher density development) with residents whose low income necessitates that they ride the bus. Additionally, the values and priorities of people living in an urban environment often contrasts with those of rural residents. Creative and culturally relevant ways to communicate sustainability issues that resonate with different audiences will be necessary to better understand sustainability issues and change behaviors. Sustainability should not be pushed on a community, but rather incorporated into its social fabric as trustful relationships are established. Example research questions include:

   - How can communities become more sustainable while preserving privacy and personal property rights?

- How can people's personal behaviors be changed to practice sustainability?
- How can sustainable practices be applied in communities with different cultures?

3. **Performance Measures/Metrics** are key to measuring or predicting the economic, environmental and social effects of a sustainable action in a community. Many communities are implementing sustainable practices, but are uncertain of how they can measure the results of their efforts. For some communities, a lack of performance measures prevents them from choosing sustainable options. Performance measures would be helpful in showing people how an investment in a sustainable practice yields a tangible benefit. Typically, benefits are couched in terms of quality of health, air and water quality and so forth; however, there is often no way to effectively connect these benefits directly to the sustainable practice being applied. Communities must capture economic outcomes as well as others that are valued by the community (e.g., social, environmental, health). Example research questions include:

   - What is the effectiveness of the sustainability program?
   - If bike lanes are created or public transportation is made available, do people actually use them? If so, what impact does this use have on the sustainability of a community?
   - If a person builds an energy-efficient home, does the higher upfront expenditure result in long-term benefits to a community?

4. **Planning** can allow communities to factor sustainability into their future development plans. Many planners lack knowledge about sustainable practices and most communities have limited time and resources to devote to planning. Although communities are working hard to initiate various sustainability projects, little effort is made for collective decision-making by allowing for public dialogue and discourse. Many communities have developed sustainability plans, and most are largely driven by more traditional long-standing planning practices that have mixed results. Rural communities are especially interested in identifying ways to conduct planning that maintains their individual identities. Given their small size, they usually do not have the professional staff/technical capabilities to apply sustainability principles and techniques. In addition, planning often takes place without incorporating inclusive, well-informed discussions with community members and key stakeholders, including local businesses, neighborhood associations and others in decisionmaking. Example research questions and needs include:

   - How does one decision affect other decisions in a community?
   - What are the synergistic effects?
   - How can the environment be better integrated with housing and transportation decisions?
   - Provide information on the connection between urban sprawl and climate change on local and regional economies.
   - Communities need a good process and model for developing sustainability plans.

5. **Schools** are a core part of many communities' basic structure. In many small rural communities, schools are the social centers of the community. School consolidation with other nearby communities often leads to the gradual disappearance of rural community identity, in particular, their values and way of life. The poor quality of public schools in many urban areas forces families to live in suburban communities that offer a higher quality of education, thus contributing to urban sprawl. Schools are a venue for teaching students about sustainability concepts and firmly rooting it in the community. Many sustainability projects are piloted in schools (e.g., community gardens, recycling). Example research questions include:

   - What models for schools support sustainable community development?
   - What are the effects of deteriorating public schools on sustainability?
   - What impact does rural school consolidation have on the sustainability of such communities?

6. **Housing** is a fundamental component of communities. Housing shortages (e.g., middle- or low-income, accommodations for families of local employers) have some communities focused on building more homes to attract new members to the community and meet existing residents' needs. Other communities are driven by a desire to expand the tax base by renovating existing housing and commercial property. Rising energy costs have made energy efficiency a top priority both for communities looking to cut costs in their subsidized housing programs, and buyers looking to make their money go farther. An impediment is that the upfront cost of green homes usually is not competitive with the cost of standard homes. In addition, communities are making strides to revitalize their downtown areas but are challenged

to address the cost and impact of sprawl caused by urban developments. Example research questions include:

- How can low-income developments be replaced by communities that are safe and provide a quality of life that integrates cultural and health issues?
- How can the need for affordable housing be addressed without diminishing environmental issues?
- What are the best green building practices?
- What are the best green development practices?
- How can green homes be constructed and financed to be competitive with standard homes?

7. **Resources** (financial, time, technical expertise) to support sustainable projects are limited in all communities. Most of the sustainable actions implemented by communities have been in partnership with federal, state or local governments; nongovernmental organizations; utility companies; private industry; or others. However, sustainable projects often have high upfront costs for planning. Grants (e.g., Community Block Development Grants, Main Street Challenge Grants) are essential to financially support these projects. Smaller communities have a difficult time competing for grants both because of their size (meeting grant criteria needs or impact) and limited staff or time to devote to the application process, which can be particularly bureaucratic and cumbersome. Communities are also in need of individuals to manage the various sustainability efforts. Some of the larger communities have dedicated sustainability staff or have reorganized to integrate sustainability into their government structure. In addition, communities need access to technical expertise. Although states are providing some assistance, some higher education systems are taking a more active role in advancing sustainable practices in the community by revitalizing neglected or abandoned areas in the community with new campuses. These higher education systems are also addressing community issues by using students to conduct pilot projects and using the projects as a teaching tool for their students, leading to future job development. Although rural communities are especially vulnerable to a lack of resources, many communities are seeking to share resources through regional efforts for more cost-effective solutions. Example research questions include:

   - How can the grant application process be simplified and standardized across funding agencies to make it easier for communities to apply for grants?
   - What is the best way to share technical expertise between communities?

8. **Practical Sustainable Practices** are lacking and/or hard to implement. Many communities are not aware of sustainable solutions to the issues they are facing. In instances where a well-defined sustainable practice exists, often it is still difficult to implement because of the high upfront cost, lack of public demand or other reasons. For example, the technology to build permeable roads has existed for some time and the benefits of permeable versus impermeable surfaces are well known. Even so, few permeable roads are built unless there is an incentive (often a subsidy) or the green practice is incorporating into the mainstream actions (e.g., engineer guidelines, housing valuation assessments, ordinances, permits). This same concept applies to green building and other sustainable practices. Example research questions and needs include:

   - What tools can help communities identify the outcomes of specific actions?
   - Case studies that can serve as models for sustainable practices.
   - What are the costs and benefits of a particular sustainable action?
   - Land use and infrastructure planning/modeling tools.

9. **Climate Change** is a concern in many communities. Some communities in New England have used it as a common theme to pull organizations together, and other communities are asking basic questions about how environmental changes from climate change will affect them. Many are struggling with how to draw political attention to an impending threat that has no visible consequences at this time (e.g., compared with dirty air or polluted rivers). Most are struggling to address existing individual issues and, although they are aware, are wondering how to incorporate or adapt to potential impacts of climate change (e.g., sea level rise, changing rainfall patterns). Example research questions and needs include:

   - What are the potential impacts of climate change to communities?
   - Developing greenhouse gas emission inventories for communities.
   - Education/tools on planning and adapting to climate change.

10. **Transportation** in rural communities is used to connect residents with job centers and services, often located in nearby urban areas. Most rural

communities have a very limited public transportation infrastructure. Although they recognize the value of public transportation from a sustainability perspective, it is a lower priority for them because of its cost, limited ridership, complexity of setting up regional partnerships with neighboring counties/cities and car-centric preferences of community members. Socio-economic class also plays a role, as some communities (urban and rural) are observing that low-income residents are unwilling to use public transportation if they have other options because of the economic status associated with owning a car. Middle-income residents are more open to using public transit. Example research questions include:

- How can more environmental issues be considered when developing more complete or revitalized streets?
- What are the effects of vehicle miles traveled in rural communities?
- How does the trend of people moving from rural areas into cities impact the sustainability of both types of communities and what can be done to reduce any adverse impacts?
- What are the costs and benefits of telecommuting or other practices that reduce the need for transportation and strengthen the local community?

11. **Local Food Systems** provide a sustainable way for communities to provide healthy food. Many communities have various efforts to provide such local foods to their residents, including farmers markets, summer camps and schools. In urban areas, community gardens can provide healthy and easily accessible food options to local residents. They recognize the economic, environmental and health benefit of local foods by using less transportation and creating more jobs. Partnerships with nearby agricultural areas offer the opportunity for businesses to use local produce in their livelihoods, increasing economic wealth to the region as well as being sustainable. In one community, the city partnered with the local culinary institute, local food growers and restaurants to offer fresher, healthier meals. The challenge for most communities is how to develop a system to provide local foods throughout the community that invariably costs more and is more difficult to implement. Example research questions and needs include:

    - Assistance in establishing food systems involving local agriculture (urban or community gardens/Local Food Systems Help).
    - Can Brownfields sites be made safe for community gardening?

12. **Stormwater Management** is recognized by communities as an important service, but often there is uncertainty about how to install or update sewer systems sustainably. For example, one community has a very high water table and it is unclear how to safely and sustainably address stormwater. These projects also are very expensive and may stretch beyond the jurisdiction of the community. The use of green infrastructure practices is an unknown in most communities due to the perception that it is expensive to construct and maintain. Example research questions include:

    - What are affordable sustainable stormwater management options and technology?
    - What stormwater management activities can be integrated into other revitalization efforts?

13. **Health and Healthy Lifestyles** are very important to communities and were often raised in the context of installing green spaces, trails and cleaning up the environment (air, water, land). Second to economics, health reaches across all facets of a community and is a strong driver for decisions. Example research questions and needs include:

    - Identification of measureable public health outcomes from sustainable development.
    - How does unsustainable growth affect public health?

14. **Natural Resources** and environmental issues (e.g., water quality, water quantity, biodiversity) are recognized as issues, but have not been the key motivators for most community sustainable actions. Historically, some of the communities involved in the Listening Sessions made great efforts to correct polluted air and water. These are not the main drivers of their actions today, in part because there are not solid, direct links between environmental issues and health, economics or other benefits. With limited resources, decision makers are focusing on meeting the basic needs of community members (e.g., housing, health, jobs) and tangentially addressing environmental issues. Example research questions and needs include:

    - What are the best methods of land-use planning that minimize impacts on natural resources (e.g., to maintain biodiversity)?
    - Identify the best practices for conserving natural resources such as water.
    - Investigate ways to encourage urban redevelopment and limit suburban sprawl.

Asheville, North Carolina
Summaries of Listening Sessions

Asheville, North Carolina
Region 4
Tuesday, April 12, 2011
U.S. Forest Service Southern Research Station

Community Background

Asheville and its surrounding counties have been trying to achieve a balance between the tourist economy and a green economy. There is a lot of rural area, and people there need jobs. The relationship between the city and its surrounding rural areas is two-pronged. As in many regions, the city is the economic engine that draws people and capital. However, the resulting higher prices for houses, road construction and environmental changes are not always welcomed by those who live in the adjacent areas. Collectively, they are concerned about water resources and enough drinking water for the future, and are developing sustainable neighborhoods with mixed use/mixed income housing and facilities. There are other Western North Carolina groups focused on energy and a more natural environment. Over the past few years, a group of organizations have been working together to develop solutions that will address these challenges. Beginning in the fall of 2009, these organizations started working together with federal agencies, including EPA, the U.S. Department of Housing and Urban Development (HUD) and the Federal Highway Administration (FHWA), on sustainability efforts by exchanging information and looking for ways to collaborate. Asheville has received the following EPA grants over the past few years:

- Brownfields funding for several assessments and cleanups.
- Climate Showcase Grant to work with 54 Buncombe county/Asheville city schools to retrofit and develop "green teams" in each school.
- HUD Regional Planning Grant (five counties; Land of Sky Regional Council is the recipient).
- FTA Community Challenge Grant (River District Project along the French Broad River in Asheville).
- Funding to clean up a Superfund site.

Prior to the Listening Session, Asheville provided background materials to EPA that detailed its sustainability priorities. The community values renewable energy use to lessen dependence on imported fuel, and encourages energy conservation to reduce the municipal carbon footprint and its energy spending. Conservation of natural resources is another priority; Asheville plans to preserve drinking water quantity and quality, protect ecosystem diversity, improve air quality by reducing driving and clean Superfund sites. Asheville plans to improve transportation and infrastructure by developing passenger rail service and improving

Sources

1. Land-of-Sky Regional Council (http://www.landofsky.org/index.html)
2. Land-of-Sky Clean Vehicles Coalition (http://www.landofsky.org/planning/p_cvc_home.html)
3. Proposed solar energy state law
4. City of Ashville website, Projects and Initiatives (http://www.ashevillenc.gov/Departments/CommunityRelations/ProjectsandInitiativesInformation.aspx)
5. Western North Carolina Livable Communities Initiative (http://www.landofsky.org/planning/p_sustainable_grant.html)
6. Clean Energy WNC (http://www.cleanenergywnc.org/newsite/)
7. Renaissance Computing Institute, University of North Carolina at Asheville (RENCI; http://www.renci.org/)

technology access to surrounding rural areas. The community will encourage economic development by developing green technology, revitalizing the downtown community, redeveloping the riverfront, and reusing Brownfields. The growth and development will be managed by promoting infill development, increasing access to affordable and available housing to end homelessness, and preserving agricultural and forested land. Finally, Asheville seeks to preserve local culture and traditions while striving for a more sustainable future.

Listening Session Discussion

Asheville Community Participants

DeWayne Barton (Green Opportunities)
Paul Black (Land of Sky Regional Council)
Bill Eaker (Land of Sky Regional Council)
Dee Eggers (University of North Carolina at Asheville)
Leah Ferguson (Asheville City Schools Foundation)
Jim Fox (University of North Carolina at Asheville)
Susan Fox (U.S. Forest Service)
Linda Giltz (Land of Sky Regional Council)
Bill Hazell (U.S. Geological Survey)
Betty Hurst (Hand Made in America)
Pam Hysong (U.S. Department of Agriculture)
Bill Jackson (U.S. Forest Service)
Matt Jarvis (North Carolina Arboretum)
Russ Jordan (Waste Reduction Partners)
Chris Joyell (Asheville Design Center)
Terri March (Buncombe County Health Department)
Peter Marks (Appalachian Sustainable Agriculture Project)
Julie Mayfield (Western North Carolina Alliance)
Paul Muller (North Carolina Division of Air Quality)
Moorell Nesbitt (Green Opportunities)
Matt Raker (Advantage West)
Carrie Runser-Turner (Land of Sky Regional Council)
Jeff Staudinger (City of Asheville)
Mary Tiger (University of North Carolina at Chapel Hill)
Ron Townley (Land of Sky Regional Council)
Julie Vidotto (North Carolina Arboretum)
Susan Weatherford (University of North Carolina at Asheville)
Bill Yarborough (North Carolina Department of Agriculture)

EPA Participants

Thomas Baugh (EPA Region 4)
David Doyle (EPA Region 7)
Laura Jackson (EPA ORD)
Anne Keller (EPA Region 4)
Jay Messer (EPA ORD)
Meghan Radtke (The Scientific Consulting Group, Inc.)
Betsy Smith (EPA ORD)
Kevin Summers (EPA ORD)
Claudia Walters (EPA ORD)
Kurt Wolfe (EPA ORD)

Discussion

Anne Keller, the EPA Region 4 moderator, welcomed the attendees. The meeting presented an opportunity to share sustainability challenges that Asheville is facing with EPA's ORD. The attendees had a lot of experience with sustainability and represented diverse backgrounds. Susan Fox, the U.S. Forest Service host, added that in times of financial need, meetings like this are essential for solidifying partnerships and creating new ones.

Dee Eggers (University of North Carolina at Asheville) gave a presentation on the natural systems of North Carolina. The key areas of vulnerability are: (1) the loss of biodiversity through changes in land use and invasive species; (2) groundwater as a result of changes in land use; (3) food security; (4) energy security (e.g., electricity, fuel supply); and (5) landslides as a consequence of changes in land use. North Carolina has exceptional biodiversity (e.g., more than 100 tree species and a very high number of salamander species), but invasive species, land use changes, acid deposition, forest fires, severe weather and climate change are threatening it. Connective corridors among different habitats and ecological communities need to be a priority. Traditionally, people limited their developments to valleys, but now building is occurring on the side of the mountains, causing instability and increased landslide risk. North Carolina's groundwater supply is limited. Flooding is occurring in places that historically did not flood, and increased sedimentation and stream bank cutting are affecting trout and other local wildlife. Much of the surface water is of high enough quality to warrant more protection than is currently practiced. North Carolina's public land draws many tourists, but is simultaneously being "loved to death" by the visitors. Forest products, such as hard and soft woods, ginseng, galax and firewood, also are local resources. North Carolina imports almost all of its energy, but there is an enormous potential for alternative energy sources within the state. Climate change is causing more frequent and longer periods of weather extremes in the mountains. In addition, air quality is affected by high concentrations of ozone, particulates and acid deposition.

Jeff Staudinger (City of Asheville) gave an overview of social and economic conditions in the Asheville Region. One of the major dynamics of the region is its interface between urban and rural communities and the ensuing dispersed population pattern. About 430,000 people live in the area with about 80,000 residing in Asheville. Jobs are located throughout the region, especially in Asheville

and along the transportation corridors. Traditionally, jobs were mostly in the agriculture or forestry sectors, but this has shifted to jobs in the service, health, education and tourism industries. The economy is dominated by small businesses, and jobs in education and health care are the only sectors seeing an increase in employment opportunities. Many of the jobs are low paying (minimum wage or slightly higher), and the local poverty rate is high. There is a shortage of affordable housing, and many people cannot afford to rent a one-bedroom apartment. Public transportation is limited, and connectivity with other communities is low. The Asheville region is relatively healthy, compared with the rest of North Carolina, but obesity, heart disease, kidney disease and teen pregnancy are issues. Other environmental concerns include ozone and radon. The Land of Sky Regional Council and its collaborators are developing a sustainability plan for the community. The city also is taking actions to develop a low-income area east of the river (located between the river, downtown Asheville and Mission Hospital). Asheville is trying to create a niche with its green economy that will benefit the area and is focusing on creating a positive image of the river, which was historically used for sewage.

Claudia Walters, ORD, then gave an overview of EPA's ORD and outlined the purpose and goals of SHCRP and the Listening Sessions.

The community discussion began by focusing on challenges and barriers related to natural systems, climate change, energy and agriculture. Agriculture is recognized as an important asset to the community. The economic value of local agriculture is between 6 and 24 percent of the local economy. Local foods are grown and used in the Asheville area; this is a characteristic of resilient communities. Historically, local food production has brought industry into the area (e.g., Gerber), but many businesses have left the area as the agricultural focus has shifted to other industries. More opportunities with agriculture should be considered, including nontraditional crops like herbs (e.g., ginseng). An Appalachian Sustainable Agriculture Project participant pointed out that his organization helps communities to assess agriculture production as an economic strategy. The Census of agriculture data are difficult to work with because production, consumption and food security measurements are not co-located. The Land of Sky Regional Council is reviewing a report that defines critical mass thresholds for agriculture resources that takes into account a complex set of economic development issues in rural areas.

Gardening and local foods are sustainable and bring many health benefits to a community (e.g., nutrition, exercise, stress reduction). Gardening also reduces energy costs through green roofs and urban cooling effects. Gardens can be centered around food as well as other products (e.g., native plant nurseries, algae, worms), and alternative agricultural opportunities could be developed for Asheville. Extensive efforts have been initiated to integrate local foods into the diets of residents. In particular, restaurants are well known for menus that promote local agricultural efforts.

Asheville is located beyond the end of the regional gasoline pipeline and its fuel is transported into the city by truck. In 2008, the city experienced a gasoline shortage because it was at the end of the supply chain. Western North Carolina is vulnerable to gasoline shortages through its limited storage capacity, small local stations purchasing the fuel and small local governments buying from local stations. These circumstances have not been integrated into the emergency management planning process either. Resiliency comes from the diversification of fuel products and vehicles.

Most of Asheville's other energy comes from coal (mountaintop mining) and is brought in via rail. Currently, there are no other options for electricity, but there are enormous opportunities for the community to save energy through conservation. The Land of Sky Regional Council and Advantage West are in the midst of a regional analysis of current energy use and opportunities. In particular, options are needed for alternative fuel production in the short-, mid- and long-term timeframes. Production cost is a big issue with alternative fuels; local biodiesel costs more (in dollars and energy) to produce than its selling price. The U.S. Department of Agriculture also is interested in alternative energy/energy efficiency and offers grants to farmers and small businesses.

The city of Asheville raised some unique challenges in a rural/urban interface that included:

- Identifying the role of a rural county when its border is 15 minutes away from urban Asheville.
- Rising gasoline prices and the 40,000 people commuting to Asheville on a daily basis.
- The viability of rural livelihoods (e.g., scattered factories, interfaces with natural resources, and distribution and use centers focused in the urban areas).
- Using the existing urban rail infrastructure to benefit the community (e.g., import biofuels).
- Bringing other rural products into the area for processing.
- Creating density in urban areas while maintaining a high quality of life.

- Accepting that personal vehicles will be part of the transportation infrastructure while simultaneously trying to improve public transit.
- Considering nuclear energy (and its waste disposal) as an alternative energy source.

Asheville's transportation sector has many challenges. It has not diversified its energy sources, which makes it vulnerable to gasoline shortages. Biofuels are one component of creating a more robust system. Public transportation from the rural to urban areas is very limited. Successful transportation models from other areas of the country of similar size would help small businesses to develop new transportation or alternative work (e.g., telecommuting) options in the Asheville area.

The U.S. Department of Agriculture (USDA) pointed out that access to broadband for telecommuting was an important community issue. Many jobs can be done remotely and this reduces the amount of energy people use, wear on the roads and other cost-saving measures. From an ecological perspective, expanding broadband is one of the least detrimental actions that can be taken to improve access to the workplace. At the same time, physical barriers (Internet access) and negative views towards telecommuting have to be addressed.

A participant voiced that a lack of effective land-use planning coupled with transportation and land-use regulations is an issue. These concepts relate to all of the local issues—from food security to the aging population. Asheville would benefit from case studies of similar communities (e.g., geographical location, politics, urban/rural mixture) to help address these issues. The USDA and agricultural industry could assist rural communities in understanding land-use planning options. The Land of Sky Regional Council and its collaborators are developing a regional sustainability plan that brings people together to solve these issues. Additional data and tools could help with the decisions. Sustainability will be brought to Asheville through a host of actions (e.g., many local restaurants feature locally grown or produced foods).

EPA pointed out that about 30 percent of the city is composed of roads and asked for ideas about using that space to better benefit communities. Participants suggested placing solar panels and urban gardens along right of ways, and encouraging recreation (stick ball or other games) on local residential roads.

Incorporating economics into decision making is a challenge. Dollars speak to people and motivate them to make changes. For example, the cost of flood protection and other ecological services is lower when relying on natural systems than when using people to perform them. It can be easy to get lost in the economic benefits of selling more and developing more and miss the ecological costs associated with these actions. Public lands are susceptible to overuse and trails may need to be closed—causing a difficult decision to be made.

Simultaneously, finances are an important part of the economic equation and these can be difficult to acquire. Many upfront costs are associated with sustainable projects. Creative funding options (e.g., grants, partnerships, government subsidies) are required. Government funding can be particularly effective in implementing sustainable projects because of its easy access to capital and long timeline for the recovery of funds. Governments could even assist in the collection of energy use data, which could help with the incorporation of energy efficiency into home appraisals, thus firmly cementing the monetary value of sustainable practices into the housing market.

The city of Asheville emphasized the importance of the tourist industry in the region and the need to consider economic impacts. Approximately 1 million people visit the Biltmore Estate annually; energy and environmental effects from the visitors must be taken into account. Tourism brings money to the region, but also causes ecological degradation. Paradoxically, the region improved its air quality to attract tourists; however, tourists bring more cars to the area and that worsens the air quality. Regional scenarios need to consider tourism, jobs and the environment. Community members felt that good-quality data that could be used to develop multiple scenarios and solutions are missing.

Health is another important common theme across many disciplines. Health is affected by obvious factors (e.g., air quality, nutrition, disease), but economics, education and transportation have a combined influence on health outcomes of more than 50 percent. The public health industry collects good data; some is now geolocated. The recent changes to the Census data have changed the resolution of health data that are collected. The American Community Survey takes a small sample every year versus the Census Long Form that collects a large sample of data every 10 years. The change has made it more difficult to address questions at a local level. Health questions could be coupled with social, economic and education issues to permit analyses that enable development of solutions to larger societal problems. Health and many social justice issues are interconnected.

Climate change is of concern to the Asheville area. The region hosts the National Climactic Data Center,

a key asset to EPA and other agencies. Climate change adaptation in communities is an essential part of sustainability. Asheville may not be as vulnerable to the direct effects of climate change as other cities, but the region likely will receive migrants escaping coastal storms, sea level rises and rising temperatures. The community will need to apply systems thinking to connect the dots across the entire southeastern United States. The Asheville region already is reaching a tipping point for its water resources and land use. The local population is expected to increase, mostly through migration to the area, and these impacts on natural resources and the community must be part of the discussion.

The role of public education is usually absent in discussions of sustainability, but is of paramount importance to implementing it. Public schools are a venue for engaging students in discussions about sustainability and sustainable practices. If the public schools are lost in urban areas, so is the community; yet there is a big legislative push to eliminate public schools. There is some published research about schools being the heart of a sustainable community.

Some communities in the Asheville area have had negative experiences with governments, law enforcement and other "outsiders." Community redevelopments have been implemented without the input of residents and there is now mistrust of current sustainability projects. Community organizations have found that rebuilding trust over time is important for the success of projects; all voices need to be at the table. Furthermore, efforts should be focused on educating people about an issue, not making the decisions for them. Many people, if they understand the concept of sustainability, would endorse it. Especially in the rural areas, people place a high value on privacy and property rights. This needs to be a consideration in the actions taken by a community. Motivating people to be part of a movement that benefits everyone is challenging but necessary. One attendee pointed out that many people may not choose the sustainable option and that there is a role for government regulation to promote change (e.g., building code standards).

The consequences of regulations need to be carefully explored by government agencies because they can have disproportionate effects on small communities. For example, in the Asheville area, developers that build housing near farms automatically trigger regulations about where wells can be located and the minimum distance animal waste can be located from the wells. For small farmers, housing developments can render much of their agricultural land useless. Regulations also can impede some sustainable developments (e.g., banning clotheslines and windmill towers).

Community members indicated that metrics and different types of information are crucial for sustainability efforts, but need to be simplified for public consumption. One idea was to use the different local watersheds to show how an individual's activities connect to their watershed. A state organization emphasized the importance of linking individual people to research and data using the citizen science model. Interactions with the public should not necessarily focus on land-use planning or other technical concepts, but should promote using information to make better decisions for families. Asheville is an inquisitive community and many people might be motivated to run their own "sustainable" experiments, if they were excited about the concept. Many outreach and education issues relate to marketing information in a manner that taps into people's values. The North Carolina Arboretum could be a model for an approach to follow because of its efforts to educate people about energy efficiency and water conservation in fun and engaging ways.

Examples of efforts that Asheville has conducted to promote sustainability and current challenges include:

- Asheville is redeveloping the low-income area around Mission Hospital (the largest local employer) by adding low-income housing, building new commercial space, establishing urban agriculture and water management programs (e.g., trout, mushrooms, blueberries), and redeveloping Brownfields sites.
- Artists have been very active in renovating and transforming rundown neighborhoods into thriving art districts.
- The Asheville region united to significantly clean up the French Broad River, but during floods, the river remains at risk from contamination from the businesses along its banks (e.g., car salvage shops, oil storage, landfill).
- The regional landfill is installing a generator so that it can sell energy from landfill gas to the local power company; the site is a test case for using bioreactors (leachate from the landfill) to speed the degradation (and production of methane and other gases) of landfill refuse.
- Nearby rural Madison County faces transportation challenges (no public transportation to Asheville—a job hub), but many people would choose the independence of their personal vehicles even if public transportation options were available.
- Internet access is available to between 30 and

40 percent of the Madison County's population, illustrating the challenges of embracing alternative work options (e.g., telecommuting) in rural areas.

- Madison County's largest employer is the school district, but there is interest in developing the workforce so it can accommodate the technology industry.

EPA thanked everyone for coming. Common themes will be extracted from all seven Listening Sessions and used to develop ORD's Sustainable and Healthy Communities Research Plan.

Potential Actions for ORD

- Focus research on cities with populations under 100,000; often very rural or urban areas are the focus of projects.
- Rapidly develop tools and information.
- Create tools that consider privacy and property rights.
- Improve the communication of existing information and tools.
- Generate an education and outreach clearinghouse.
- Identify the core values that outreach can be based on to most effectively engage people and change their behavior.
- Format information so that communities can tailor it to their specific outreach needs.
- Identify case studies that demonstrate ways of involving people who have not historically been part of community redevelopments; develop metrics to measure success.
- Bring agricultural production, consumption and food security data together.
- Research alternative fuel production options for the short-, mid- and long-term timeframes.
- Develop advanced biofuels (e.g., microalgae) with lower production costs.
- Determine if harvesting some of the poplar trees in Asheville's young monoculture forests could be used for biofuels.
- Identify rural products that can enter Asheville's market (80,000 people).
- Elucidate the interdependencies among housing, energy, jobs and other disciplines.
- Examine the relationship between energy conservation and family health, behavior and the ability to afford food.
- Invent a new economic valuing system for land use (e.g., clear cutting, forests, agriculture, urban development) that shows the value of sustainability.
- Develop methods of taxing the ecological benefits that people use without restricting the ability of low- or middle-income residents to live in an area.
- Identify the economic effects of different land-use patterns and benefits of conservation.
- Use sophisticated economic models that account for the full cost or products and services.
- Formulate a regional finance structure that is focused on sustainability.
- Compile rural/urban transportation models that could be applicable to Asheville.
- Facilitate access to reliable scientific information about nuclear energy and waste disposal.
- Find case studies where regulations and "top down" approaches have been used to instill sustainable practices in communities.
- Supplement the American Community Survey with additional health data at a local scale.
- Compile research on gardening and its benefits (e.g., green roofs, nutrition) and link to other social issues (e.g., housing).
- Enhance the available information on industrial ecology.
- Consider a product's entire life cycle when developing green products and technologies.
- Assess the carrying capacity of the French Broad River.
- Develop standards that are applicable to the French Broad River to reduce its sedimentation load.
- Verify the performance of new waste-to-energy technologies and provide cost analyses.

Boston, Massachusetts
Summaries of Listening Sessions

Boston, Massachusetts
Region 1
Thursday, April 7, 2011
EPA Region 1 Building

Community Background

Boston is one of the oldest cities, having been established in 1822. As the capital of Massachusetts and the largest city in New England, Boston is poised as a leader in environmental awareness and action due to its economic and cultural impact on surrounding communities. At this Listening Session, Boston was joined by municipality representatives from Cambridge, Providence and Medford.

As an example of Boston's emphasis on sustainability, EPA Region 1 completed the renovation of the historic John W. McCormack Post Office and Courthouse in downtown Boston for use as its headquarters in 2009. EPA and the U.S. General Services Administration (GSA) worked together to retain 99 percent of the original structure while recycling 75 percent of the construction and demolition waste. The building achieved Leadership in Energy and Environmental Design for New Construction (LEED-NC) Gold certification status, and was awarded an Honorable Mention in the Workplace Innovation category of GSA's Real Property Awards. Additionally, the Region 1 Office Renovation Team won an FY2009 Sustainable Partner of the Year Award for its environmentally friendly renovation. Green renovations include a living roof, an improvement of 17 percent of total energy savings compared to similar structures and approximately 32 percent less water usage.

The mission of Boston's Environmental and Energy Services Cabinet is two-fold: to preserve and enhance the resources of our built and natural environment, and to promote affordable, efficient, reliable and safe energy systems for Boston residents. The Cabinet oversees the Inspectional Services Department, the Environment Department, serves as chair of the Mayor's Energy Management Board, and oversees programs and policies on green buildings, groundwater, park planning, recycling, renewable energy and certain transportation issues.

The Environmental and Energy Services addresses numerous issues in the city, including climate action, renewable energy, energy conservation, alternative transportation, green buildings, green jobs, waste reduction, ground water, harbor and home heating. They launched several initiatives to address the issues.

Sources

1. City of Boston's Environmental and Energy Services Web Page (http://www.cityofboston.gov/environmentalandenergy/)
2. City of Boston, Sustainability Accomplishments (http://www.cityofboston.gov/Images_Documents/sus_accom_tcm3-2768.pdf)
3. Green Boston E-Newsletter (http://www.cityofboston.gov/environmentalandenergy/newsletter/)

For example, Mayor Thomas M. Menino launched the Renew Boston Residential Program, which provides eligible Boston residents with free energy efficiency improvements such as air sealing and insulation upgrades to help conserve energy, save money and lower utility bills. The city of Boston also has worked with EPA to host the second symposium on the Greening of Government Center to update the public on the design process. The symposium featured a presentation by the design firm heading the project, Utile Inc., as well as commentary from prominent Boston design experts. In addition, Boston's Climate Action Leadership Committee presented Mayor Thomas M. Menino on Earth Day with a set of wide-ranging recommendations aimed at significantly reducing greenhouse gas emissions and preparing for the risks of climate change in Boston.

Prior to the Listening Session, Boston supplied EPA with background material describing the community's current sustainability priorities. Boston is placing an emphasis on encouraging energy conservation through green building and setting standards for energy efficiency, while at the same time promoting renewable energy use through alternative fuels and technologies. Conserving natural resources such as groundwater and the use of green space is also important, as is reducing greenhouse gas emissions to limit climate change. The community would like to improve modes of alternative transportation and reduce waste. A final priority is to encourage economic development by expanding the number of green jobs and by providing fuel and food assistance to the community.

Listening Session Discussion

Boston Community Participants

Leon Bethone (Boston Public Health Commission)
Carey Duques (City of Medford Environment and Energy)
Jim Hunt (Boston Environment and Energy)
Susanne Rosmusser (City of Cambridge)
Carl Spector (Boston Environment Department)
Matt Stark (City of Providence)

EPA Participants

Dan Abrams (EPA Region 1)
John Darling (EPA ORD)
Jessica Dominguez (EPA Region 1)
Rosemary Monahan (EPA Region 1)
Meghan Radtke (The Scientific Consulting Group, Inc.)
Sheryl Rosner (EPA Region 1)
Kathryn Saterson (EPA ORD)
Joel Sonkin (EPA Region 1)
Marilyn ten Brink (EPA ORD)
Claudia Walters (EPA ORD)

Discussion

Rosemary Monahan, the Region 1 moderator, opened the meeting by welcoming all of the attendees. EPA always has been interested in sustainability and is trying to increase its efforts to help communities. Recently, EPA entered into a partnership (Partnership for Sustainable Communities) with the Department of Housing and Urban Development and the Department of Transportation. There is a similar effort at the regional level that includes the Federal Emergency Management Agency, the U.S. Department of Agriculture and World Development. EPA Region 1 also has been assisting the regional Urban Sustainability Directors Network to identify potential collaborations and areas where the federal government could provide assistance. This session will help EPA's ORD to formulate their research direction for communities. Claudia Walters, ORD, then gave an overview of EPA's ORD and outlined the purpose and goals of SHCRP and the Listening Sessions.

The discussion began with each community representative describing some of the issues they are addressing in their municipality. Boston has been involved in a long-standing effort to make the city greener. The city government is organized around sustainability and is trying to be more systematic in addressing sustainability. Climate change has been a common concern that has brought people together to work on transportation, waste reduction and other issues. The city of Boston has engaged the community in a meaningful way by including top business and civic leaders in the development of sustainability strategies and leveraging community organizations. Currently, the city is developing an innovation strategy. Cities can implement innovative technologies and solutions faster than larger government organizations and can make mid-course corrections as they experience challenges. The goal of the innovation strategy is to help cities build capacity and integrate innovation and sustainability into municipal activities by: (1) helping with research and policy scans; (2) fostering innovation; and (3) stimulating replication. The strategy will create a "one-stop shop" for innovation and implementation support and has engaged other partners to perform assessments of government policies. Other priorities for Boston include green building, energy efficiency, building labeling, stormwater, the nexus of green homes and healthy communities, and Brownfields sites.

Cambridge began focusing on transportation issues 15 years ago because of air pollution and traffic congestion. The municipality has a lot of data documenting the success of the effort. Climate change has been a long-term focus of the community and the Climate Protection Act was enacted in 2002. Measurement issues make it difficult to understand how emissions have changed. In

parallel, the community has been focused on stormwater management because of an aged infrastructure, combined systems and combined sewer overflow events. The city is separating the system and trying to incorporate rain gardens and other green elements into the new design. Cambridge's vision is to be an incubator for new policies and programs that can be transferred elsewhere. The city's two main topics of interest are: (1) climate change adaptation; and (2) mitigating lead hazards in soil.

Cambridge is embarking on a climate change and adaptation vulnerability assessment. Beginning with an interdepartmental workshop, the group went through an exercise to understand the municipality's vulnerabilities and resilience. From this exercise, Cambridge realized the relevance of understanding at what point the effects of an environmental change (e.g., sea level rise, air pollution and heat) become serious issues for the community. Understanding the consequences of making certain decisions is also important. EPA pointed out that the Coast Model (developed by the EPA Environmental Finance Center at the University of Central Maine) is an online tool that generates property assessments for flooding scenarios related to climate change. The model could be refined to fit communities' needs.

For Providence to move forward with sustainability, it needs to develop greater capacity within city hall and the government. The city is working on a proposal for FY2012 that includes a sustainability office and director. Sustainability recommendations for Providence are covered in several documents (Greenprint Document, the city's comprehensive plan, the mayor's transition plan), and these are being compiled and prioritized. Top issues include: a system for composting food scraps; a conservation project for municipal buildings; community engagement around energy efficiency; housing issues (mold, lead, weatherization); increased recycling rates; and transportation. Providence is a pilot city for the Green and Healthy Housing Initiative as well as an Emerald Cities pilot. These programs focus on energy conservation, environment, and social equity. The city struggles with financing for sustainability projects.

Medford's mayor is a big proponent of energy and environmental issues. The city has an environmental action plan and has undertaken a number of sustainable activities, including: installing LEDs in traffic lights; building a 100 kWh wind turbine (which provides a nearby school with 10 percent of its energy); incorporating alternative energy lessons into school curricula (wind turbine, solar panels); implementing a single stream recycling program; and converting cemetery vehicles to run on biodiesel. Currently, Medford has a power purchase agreement to enable the municipality to install solar panels on six of its schools, which will provide 6 to 8 percent of the energy needed to operate the schools. They are also focusing on other improvements to the high school such as replacing hot water heaters, boilers and chillers. The city is separating its stormwater systems, but is having a difficult time convincing the Department of Public Works to use permeable pavement. Medford has used EPA's Portfolio Manager, Energy Star, Energy Efficiency, Conservation Block Grant Program, National Grid, Department of Energy and Resources, Green Communities, Mass Energy and other resources and partnerships to implement its projects. Some of the issues being faced by the municipality include a lack of money for research and implementation, and education and outreach about sustainability to residents. The municipality would like to create a renewable energy park that includes educational information about wind turbines and solar panels.

Collectively, communities identified other issues they were facing:

- Urban ecology, relevant to land-use planning, is becoming an issue as green infrastructure expands. The consequences of more wildlife in urban areas are unknown. The public's opinion varies greatly with some people encouraging wildlife corridors and others wanting to shoot coyotes.
- Light and noise will affect people more as campaigns are urging residents to open their windows rather than use air conditioning. Urban lighting choices must consider how higher levels of ambient light can affect breast cancer rates and other diseases.
- Nonpoint sources of pollution for water remain an environmental issue. Boston is negotiating their role in reducing phosphates in the Boston River with EPA and Massachusetts.
- Near-highway and near-traffic light vehicle emissions have a large effect on air quality in cities.
- Grey water reuse is not an immediate concern in Massachusetts because water is plentiful, but municipalities see it as a consideration for the future.
- Understanding the vehicle miles traveled in urban areas is applicable to creating an inventory of greenhouse gases and policies to reduce them.
- Quantifying the general ecological health of the Boston Harbor and Massachusetts Bay is important for environmental decisions.
- Invasive species removal is a primary concern in local rivers.
- Public health effects should be considered in a holistic manner and take into account policies for energy, environment, sustainability, food and others.
- Financing public transportation with pay-for-use fees or other mechanisms is essential for supporting transit infrastructure.

EPA asked about environmental justice issues and sustainability. The communities responded that environmental justice issues were seamlessly folded into the projects and actions they were taking to make their communities more sustainable. For example, the Emerald Cities pilot focuses on employment equity and the Green and Healthy Homes Initiative is improving living conditions, access to food and creating walkable neighborhoods. Renew Boston is a program that is designed to reach low-income communities and connect them with existing resources and programs. Medford will be looking at the proximity of environmental justice communities to parks and open spaces.

EPA asked about local partnerships with universities and other local organizations. The meeting participants work well with each other and other national and regional organizations (e.g., Massachusetts Municipal Association, International Council for Local Environmental Initiatives). Much of the work is still done on a municipality-by-municipality basis; it is only recently that the municipalities have become more regionalized. Municipalities have partnered with some of the nearby universities, but not all of them are interested in working on local issues, even though they may have the expertise to do so. In general, the public does not understand the link between ecology and health. They are focused on other more immediate issues such as food, bills and flooding.

EPA listed many of the topics that the municipalities identified as priority issues for their communities: climate change adaptation, energy, lead, stormwater, economics of sustainability, program evaluation and effectiveness, educational tools, benefits of biodiesel and alternative fuels, urban ecology, light and noise, nonpoint source water pollution, near-roadway and traffic light pollution, grey water reuse, vehicle miles traveled, ecological health of estuaries, invasive species and public health policies. EPA's ORD expects to identify common themes from the seven community meetings and use these as input for the design of a SHCRP plan. The research program is expected to begin in the fall and EPA may be looking for communities to pilot specific projects and research.

Potential Actions for ORD

- Perform case studies on policies (key issues on cost/benefit analysis, templates for implementation in other cities).
- Develop case studies where sustainability initiatives have been successful in New England.
- Assist in the economics of sustainability with real research (hard numbers), cost/benefit analyses and "time to payback" evaluations.
- Perform random controls on the social aspects of an issue to evaluate program success.
- Conduct research on climate change adaptation, such as measuring and mapping urban heat islands, predicting the effects of adaptation/mitigation strategies, and mapping and measuring urban forests.
- Study the effect of transit on economic development.
- Provide assistance in evaluating programs in a credible and publishable way (e.g., effects of the Green and Healthy Housing Initiative).
- Investigate the performance of biodiesels in freezing temperatures.
- Educate the public about environmental issues.
- Create interpretive panels that can be displayed near projects (e.g., wind turbines).
- Develop a model that predicts vehicle miles traveled in urban areas.
- Develop options for eradicating local invasive species.
- Determine what motivates (or impedes) people to use their sidewalks, parks and neighborhoods.
- Generate better data and tools on the consequences of adopting particular climate change strategies (e.g., Coast Model).
- Integrate ozone into climate change modeling efforts.
- Incorporate planning and zoning perspectives into creating a green development standard.
- Develop remediation options for lead as it is not practical to pave over or remove all the soil that has concentrations of lead greater than 5,000 ppm.
- Create a tool that quantifies the trade-offs for decisions among all of the different sectors (e.g., energy, health, agriculture, environment).
- Communicate clear messages about how to inform the public about environmental issues (e.g., focus on economics, children, energy).
- Explore models for community engagement and identify best practices from a community successfully engaging its members.
- Find creative ways to talk about sustainability that do not use the term "sustainability."

Milwaukee, Wisconsin

Region 5

Tuesday, March 8, 2011

Pilot House, Discovery World at Pier Wisconsin

Community Background

Milwaukee is Wisconsin's largest city. Once known as a brewing and manufacturing powerhouse, Milwaukee's image has changed with the decline of industry in the region. Milwaukee is facing not one major challenge but an aggregate of problems from its industrial past and its declining manufacturing base: Brownfields sites, old housing stock, loss of jobs, high unemployment, vacant lots, low educational attainment, and high asthma rates and high blood lead levels in children. Milwaukee is actively working to change its image. In 2005, Mayor Barrett brought together a group of Milwaukeeans to map a course for going "green." The objectives included: reduce stormwater runoff, develop smart energy policies and stimulate a green economy in Milwaukee. Complementing these efforts, the Milwaukee Water Council was formed to make the Milwaukee region the world water hub for freshwater research, economic development and education.

Region 5 has a long and productive history with the city and Wisconsin Department of Natural Resources (WDNR), especially in the area of Brownfields. As a result of this partnership, the Agency for Toxic Substances and Disease Registry conducted a baseline characterization of the 30th Street Industrial Corridor, a major Brownfields and redevelopment area in Milwaukee. There are 200 known Brownfield properties that threaten public health and the environment in a number of ways, including contaminants in the soil, air and water, as well as rodent infestations, trash dumping and unsafe buildings. In 2008, the city received $1.3 million from EPA to assess and remediate contaminated properties in the Corridor. WDNR, in partnership with the city of Milwaukee, has successfully competed for four Brownfields assessment grants, totaling $800,000 for the Corridor. WDNR also has targeted federal stimulus funds for leaking underground storage tanks to properties in the Corridor.

Milwaukee has benefited from the following EPA activities: Milwaukee Environmental Justice Showcase Community Project; Green Infrastructure; Lake Michigan Area of Concern, Milwaukee Estuary Remedial Action Plan, 1994; CARE Level 1 Project; 2 to 3 Environmental Justice Small Grants; 10 Great Lakes Restoration Initiative Grants; National Institute of Environmental Health Sciences (NIEHS) grant to the University of Wisconsin-Milwaukee School of Public Health. In addition, Milwaukee pursued the following activities in collaboration with ORD: Milwaukee was chosen as a Water Cluster, codified in the Memorandum of Understanding (MOU) the Administrator signed with the Great Lakes Freshwater Institute; and received an application of tools for cumulative exposure assessment, which was a collaboration between Region 5 and the ORD Communities Program.

Sources

1. Agency for Toxic Substances and Disease Registry (ATSDR)'s Brownfields/Land Revitalization Action Model (http://www.atsdr.cdc.gov/sites/brownfields/docs/ATSDRActionModel.pdf)
2. Environmental Justice Pilot; Showcase Communities Pilot Project (http://www.epa.gov/compliance/ej/grants/ej-showcase.html)
3. Brownsfields Showcase Community Fact Sheet (http://epa.gov/brownfields/success/showcase/sc_milwauke.htm)
4. Milwaukee, Wisconsin; EPA one-page document

Prior to the Listening Session, Milwaukee provided EPA with background materials detailing its sustainability priorities. The community seeks to manage growth and development by redeveloping the 30th Street Industrial Corridor, promoting green infrastructure, working on the Menomonee Valley Industrial Center and Community Park and participating in SmartGrowth. Milwaukee will prioritize public health by renovating old housing and developing a cumulative risk assessment paradigm. Conservation of natural resources will be accomplished by reusing Brownfields to develop parks, and improving stormwater runoff and water cleanliness. Finally, Milwaukee plans to develop smart energy policies and encourage economic development to foster a green economy, green workforce and improve environmental justice.

Listening Session Discussion

Milwaukee Community Participants

Rhandi Berth (Wisconsin Regional Training Partnership)
Paul Biedrzycki (Milwaukee City Health Department)
Christopher Boston (Milwaukee Local Initiatives Support Corporation)
Tom Brandstetter (Transition Milwaukee)
Marcia Caton Campbell (Center for Resilient Cities)
Chris DeSousa (University of Wisconsin-Milwaukee Geography and Urban Planning)
Tom Eggert (Wisconsin Department of Natural Resources)
Nancy Frank (University of Wisconsin-Milwaukee Urban Planning)
Grace Fuhr (City of Milwaukee)
Dennis Grzezinski (Midwest Environmental Advocates)
Matt Howard (City of Milwaukee)
Val Klump (University of Wisconsin-Milwaukee School of Freshwater Research)
Nik Kovac (City of Milwaukee)
Jeff Martinka (Sweet Water Trust)
Peter McAvoy (Sixteenth Street Community Health Center)
Dave Misky (Redevelopment Authority of the City of Milwaukee)
Karen Sands (Milwaukee Metropolitan Sewerage District)
Kevin Shafer (Milwaukee Metropolitan Sewerage District)
Christine Scott Thompson (University of Wisconsin Milwaukee)

EPA Participants

Judy Beck (EPA Great Lakes National Program Office)
Carole Braverman (EPA Region 5)
Herbert Fredrickson (EPA National Risk Management Research Laboratory)
Janet Keough (EPA National Risk Management Research Laboratory)
Marilou Martin (EPA Region 5)
Meghan Radtke (The Scientific Consulting Group, Inc.)
Brad Schultz (EPA National Exposure Research Laboratory)
Jim Vanderkloot (EPA Region 5)
Claudia Walters (EPA ORD)

Discussion

Joel Brennan, CEO of Discovery World, welcomed everyone on behalf of the Board of Directors. The conversation on sustainability offers an opportunity for EPA to hear from local people. Discovery World serves as an educational tool for the public by demonstrating solar panels, wind turbines, and other green building features. The Center promotes natural resources and represents Milwaukee's commitment to sustainability and innovation.

Jim Vanderkloot, the EPA moderator, introduced the session by explaining that he had received a request from EPA's ORD to meet with some communities to discuss their ideas for ORD's role and research agenda in sustainable development. Milwaukee was a natural choice because it has implemented a range of sustainable development practices. Claudia Walters, ORD, then gave an overview of EPA's ORD and outlined the purpose and goals of SHCRP and the Listening Sessions.

Several EPA participants explained that EPA has recently commissioned the National Academy of Sciences to develop a report ("Green Book") on how EPA can incorporate sustainability into its practices. EPA's current paradigm is based on risk; the goal of the Green Book is to restructure EPA around sustainability, not eliminate risk assessment. The report, along with input from meetings like this Listening Session, will help EPA determine the actions it should take to align its actions and partnerships to achieve sustainability.

A participant from academia commented on the challenges of sustainability research. Sustainability research relies heavily on the social sciences; the culture of social scientists is very different than that of natural scientists. EPA could improve its interactions with the social sciences academic research community by:

- Identifying specific questions.
- Supporting journal articles, books, book chapters and other academic deliverables.
- Co-authoring articles with academics.
- Creating journals focused on sustainability.
- Bringing together academics in integrated research centers.

- Providing or helping communities to provide data for research.

Several people identified the Milwaukee Inner Harbor Effort as an example of a current sustainability project. Much of Milwaukee's port has become fallow industrial land. The Inner Harbor Effort is bringing a range of key academic disciplines and government agencies together to revitalize the area. The Effort has a strong vision, is place-based (making it easy for people to understand it), and brings people together for a common purpose. Sustainable solutions will take some time to develop and implement, but participants felt this effort had all the right characteristics to succeed. ORD could specifically contribute to the Effort by supporting monitoring and assessment needs in the area.

The city of Milwaukee pointed out that sustainability is complex and often there are information gaps. Pulling one lever here may cause an unexpected result somewhere else. One of the best value-added actions a federal agency can take is to fill in information gaps. Milwaukee needs assistance in obtaining information to make good decisions.

The discussion moved toward research needs. A representative from the Wisconsin government stressed the need to think about research questions from a business perspective. Water, energy, biodiversity, crop pollination, climate adaptation, jobs, poverty reduction and education are topics of interest to the state. One organization expressed their agreement and reiterated the importance of food systems as an emerging field of study in sustainability. Most cities only have 3 days of food on their shelves. Redesigning food systems and studying urban agriculture are important for city resiliency and sustainability. A participant added that building architecture is an undervalued research need.

Equally important as addressing research needs is ensuring that agencies with overlapping or complementary jurisdictions work together. For example, a recent sustainability endeavor involved EPA, the U.S. Department of Housing and Urban Development (HUD), and the Department of Transportation (DOT), but excluded the U.S. Department of Agriculture (USDA). Through the Farm Bill and other food policies, USDA's connection to food security and sustainability is huge; it plays an integral role in any food security and sustainability issue. Another example is the Department of Energy's (DOE) Hirsch report, which addresses peak oil production and its societal ramifications. The findings in the report will affect EPA's ability to clean up and protect the environment; the DOE and EPA must share information. The same principle is applicable at a local level; key players are often missing from the table.

An organization pointed out that to achieve a sustainable society, people must learn how to do things sustainably and how not to do things unsustainably. For example, the technology to create permeable surfaces is available and demonstration projects exist, but the practice has not been widely adopted in the United States. People do not necessarily adopt new principles on their own and they need to understand that their decisions should address multiple problems (e.g., a new road should improve transportation and water permeability). Ordinances, permits and model design approaches could facilitate a transition to sustainable thinking and decisions.

The discussion shifted to ways that ORD could contribute to large, focused, interdisciplinary projects. The city of Milwaukee felt that ORD could help communities explore synergistic relationships. For example, in Milwaukee, stormwater management interests overlap with urban gardening, which overlaps with growing worms for food production, which overlaps with using food wastes for methane production.

An organization observed that Milwaukee's community of organizations is very strong. Involving them is essential because of their local insights and momentum to advance change. Successful initiatives depend on strong local community involvement, but funding for community organization is rare. It is important to frame environmental concerns in ways that resonate with communities; an impoverished community views the environment very differently than a middle-class community. It is vital that the public care about environmental issues as much as the "insiders" do. Are there actions that EPA can take to promote environmental actions at a local level? Citizens and local decision makers need to believe that sustainability makes sense for their community.

EPA wondered if the right information was available and how to share it with local communities. What data sharing practices are most accessible? Academics responded that research is most effective when practitioners identify specific questions and then partner with academia to package and distribute the final information. For example, is there a role for ORD in facilitating the incorporation of sustainability into guidance documents for engineers by engaging federal, state and engineering professional organizations? EPA responded that they are beginning to do this.

Economics play a big role in sustainable development. Before the recession, some developers in Milwaukee were adopting low-impact development practices because they cost less, yielded more units to sell and buyers were willing to pay higher prices. If sustainable practices make economic sense, people will adopt them. Some of the economic benefits are longer term (e.g., payback might

occur within the next 50 years); the future costs of an unsustainable action versus a sustainable action should be considered. Modern economics is not good at doing this. An organization described a situation where they had successfully engaged developers in sustainable practices, but they were not embraced by the community because they were "outsiders." A simple and sophisticated method is needed to engage local communities.

The city of Milwaukee introduced the "Whole of Community" concept, which involves the government, nongovernmental organizations (NGOs), corporations and other aspects of the community in decision-making. All aspects of the community must be considered when developing sustainable practices. For example, in the area of public health, Milwaukee's primary concerns are infant mortality, sexually transmitted diseases and lead poisoning. To resonate with the public health sector, sustainable strategies need to address the upstream factors in these problems, particularly race, income and education.

EPA acknowledged the shortage of economists and social scientists within the Agency. Social sciences are essential for studying and implementing sustainable practices. EPA is considering options (e.g., outsourcing, temporary jobs, creating new positions) for tapping into this expertise. Partnerships with communities and universities may be one solution.

It is important to factor in sustainability in future development plans. For example, the city of Milwaukee has set a goal to divert 40 percent of the city's waste streams by 2020 (e.g., by using recycling programs). A specific plan for organics has not been developed, but one option is energy production (e.g., methane). If this route is chosen, the city may need to buy or build its own organic digester, an expensive undertaking. Partnerships and grants can make these plans a reality.
Metrics are also an important consideration. They must be chosen wisely as they will determine the success or failure of the project. Capturing the social sciences dimension in the metrics is essential. Wisconsin's Menomonee Valley Benchmark Initiative is a good example of successful project with appropriate metrics. EPA cautioned against using metrics to define the future; adaptation also is necessary.

EPA observed that some communities are concerned that they will no longer receive funding or the attention of the federal government once environmental restoration has taken place. This is an indication of a larger paradigm shift that needs to occur—focusing on the future versus correcting the past.

EPA asked if its sustainability centers and environmental finance centers were helpful to communities. Participants responded that they were not familiar with these resources. They may be helpful, but groups were looking at other specific places for information, both government and nongovernment operated. EPA would like to understand the information channels better and play a more active role in managing them. Misinformation is a huge impediment to advancing sustainability.

Claudia Walters and Jim Vanderkloot closed the meeting by inviting participants to send them documents that might be useful for SHCRP and to continue the conversation in the future.

Potential Actions for ORD

- Quantify green building information into a financial formula that is relevant to developers.
- Directly link sustainability concepts to jobs (e.g., number, type, location).
- Identify measureable public health outcomes (acute and chronic) from sustainable development that align with pressing public health issues.
- Bridge the gap between policy and economics; policies should ensure society pays enough now for today's decisions to cover their costs in the future.
- Form partnerships (e.g., federal and local governments, NGOs) to work at the innovation-jobs nexus.
- Bridge the gap between legal issues and sustainable development.
- Focus on economics as a driving force for sustainable development.
- Create a National Peak Oil Task Force to consider how limited energy and higher costs in the future will affect the federal government's work.
- Conduct studies and compile information about environmental concerns that are relevant for developing urban agriculture sites.
- Demonstrate the cost effectiveness of sustainability to taxpayers.
- Translate and teach sustainability concepts in elementary school and in the community.
- Identify and offer sustainability training for "middle skill jobs" (e.g., plumbers).
- Convince the public that the country can have a strong economy *and* a clean environment.
- Translate complex sustainability issues so that communities can understand them.
- Stimulate innovation by providing job opportunities in job-stressed communities.
- Identify ways that people can be sustainable on a personal level.
- Continue the development of community outreach programs.
- Assess sustainability through the environmental justice lens: who is paying the cost and who is reaping the benefits?
- Provide information on the effects of climate change on the economy and urban sprawl.
- Improve the connections between EPA scientists, social scientists and economists.
- Identify externalities that should be considered in sustainable systems (e.g., the role of diversity in the food system).
- Release information from EPA's urban agriculture and Brownfields workshop (fall 2010).
- Craft powerful and convincing sustainability messages for the public.
- Publically communicate the true cost of products and services to concretely show the cost of sustainability.

Ogden, Iowa
Summaries of Listening Sessions

Ogden, Iowa
Region 7
Thursday, March 10, 2011
Ogden City Hall

Community Background

EPA's Office of Brownfields and Land Revitalization offered the city of Ogden, Iowa, technical support to identify reuse strategies for the Brownfields within the downtown community. EPA, in partnership with the Iowa Department of Natural Resources (IDNR), is providing redevelopment planning support to city officials as they plan to revitalize the downtown community, including three parcels in the middle of downtown and the abandoned gas station that serves as the gateway to their community and a recreational destination park. Support from EPA is provided through staff and contractor support for Brownfields planning. IDNR is providing staff support and funding, as eligible, for assessment and cleanup work on each of the Brownfields properties. EPA will be supporting Ogden city officials to assess redevelopment opportunities and conduct initial redevelopment visioning with community members.

Prior to the Listening Session, Ogden provided EPA with background materials related to its sustainability priorities. This information emphasizes that Ogden is concerned with managing growth and development by revitalizing the downtown community and reusing Brownfields.

Listening Session Discussion

Ogden Community Participants

Keith Berg (Ogden Mayor)
Donovan Olson (Ogden City Administrator)

EPA Participants

David Doyle (EPA Region 7)
Randy Bruins (EPA Cincinnati)
Meghan Radtke (The Scientific Consulting Group, Inc.)
Claudia Walters (EPA ORD)
Robert Weber (EPA ORD)

Discussion

David Doyle thanked the Ogden city officials for their time and introduced SHCRP. Claudia Walters, ORD, then gave an overview of EPA's ORD and outlined the purpose and goals of SHCRP and the Listening Sessions.

Community members began the discussion by describing Ogden and their sustainability projects. Ogden is a small town that used to be surrounded by many small farms. Urbanization has caused people to move away to the city, and farm consolidation has created a few large farms where there once were many. Ogden's population is decreasing, and businesses are closing. Along Main Street, many of the business owners are near or past retirement age, putting businesses at risk for permanent closure. For example, the one restaurant in town has been closed for 6 weeks because the owner's wife is very sick. The town is hopeful that the restaurant will reopen, but the prospects are uncertain. At the same time, Ogden is important not only to city residents, but also the big farmers in the area who rely on its services (e.g., hardware store, doctor, pharmacy) and its school for their children. The community has a healthy and progressive school system as well as a foundation that was established by a former resident of the community. The foundation has supported initiatives such as improvements to the school, city hall and the fire station. However, the city lacks a business-foundation funding base, such as is found in other nearby communities. Recognizing these issues, Ogden's

Source

1. Ogden, Iowa Downtown Revitalization Planning Portal (http://www.localsynergy.net/ogden/)

priority is to work with the existing conditions, stabilize the population and businesses, and then try to build them up.

Ogden is working to revitalize its business district, especially Main Street. There are two projects underway: building a community health center and installing an agriculture aggregate business. Ogden's 85-year-old doctor is viewed as the anchor in the community health center project. He has a large patient base (when he retires, two people will be needed to fill his position), and the Boone County Hospital is highly dependent on his referrals to their facilities. They are supporting the community health center project because they hope it will maintain and draw in new patients who will be referred to them for services outside the purview of the local doctor. The doctor's patients economically support the town by filling prescriptions at the pharmacy, shopping at the grocery store and eating at local establishments when they come to town for their appointments. Ogden hopes that a new medical clinic will attract other doctors and medical services into the city, such as the physical therapist who recently located her clinic just outside the city boundaries because there was not a suitable location within the city. The city recently held a "meet and greet" with an engineer who had created some conceptual drawings for development along Main Street, including the medical clinic.

The other ongoing project is the installation of an agriculture aggregator business. Ogden is located near the Des Moines River Valley, which is the location of a number of camp programs during the summer. A couple from Ames is interested in supplying locally grown foods for the quarter-million meals that are served at these camps. They are planning to locate their business in Ogden, in part because of the goodwill that the town has extended to them. Ogden has been working with them to identify a suitable location within the city. The most likely candidate is a foreclosed gas station on the edge of town. It already has a kitchen facility and walk-in coolers onsite. The bank has agreed to remove the abandoned fuel tanks and clean up the property. The new business may create a few jobs, but its main advantage is creating a market for local produce that will allow locals to build wealth in their families. Many local people have farms, but work one or two extra jobs to make ends meet. With the agriculture aggregator business, this may allow some people to farm full time.

Ogden is working on other economic development issues through the Ogden Legacy—an economic development group. A recent report recommended a number of revitalization actions for the city. The recommendations have been parsed out to teams within the Ogden Legacy. Its Business Maintenance Team is performing an inventory of the businesses within Ogden. Specifically, they are trying to identify all of the businesses within the community, their actions/enterprises and the challenges they face. This information will be useful as plans to revitalize the city are formed. Ogden is focusing on sustainable goals and not taking on too many projects at once.

Ogden has faced a number of other challenges to its revitalization efforts. Planning has been difficult, but the city has found that when they do develop a plan, the community has made the effort to successfully implement it (e.g., successful fundraising and installation of a new track at the school). At the same time, efforts have to be focused because people's real jobs do not leave a lot of extra time for community initiatives. People also are risk adverse and not always willing to take the needed risks (e.g., borrowing money, asking for money) to implement a plan. Zoning also limits the city's ability to offer businesses a place to grow. Near-term plans include finding a use for the abandoned gas station lot on Main Street. Options include an ice cream seller and/or parking for nearby trails.

Potential Actions for ORD

- Maintain funding for community support grants that can be used for downtown revitalization projects.
- Provide support for community initiatives, such as building the community health center.
- Improve opportunities for communication between project partners and also with the broader community.
- Conduct a Community Asset Analysis to understand available markets and uses of the greater region around Ogden.
- Provide training on the Brownfields process.
- Conduct a market assessment of the greater region around Ogden to understand strengths and weaknesses of the community.
- Distribute a community survey to understand how the community uses Ogden or would like to use Ogden in the future.
- Develop reuse plan concepts for the Brownfields sites.
- Provide support for ultimate reuse and ownership options.

Spokane, Washington
Summaries of Listening Sessions

Spokane, Washington
EPA Region 10
Friday, April 1, 2011
Spokane Downtown Library

Community Background

The city of Spokane, Washington, is in the eastern portion of the state. The city itself has 200,000 residents and the metropolitan area has more than 418,000 residents. The area serves eastern Washington, eastern Oregon and northern Idaho. Spokane is the center of service, education and retail in eastern Washington. People earn 80 percent of the national wage rate, and the cost of living is 94 percent of the national rate. There is no immediate housing shortage; 75 percent of the homes constructed are built for local community members. The "Baby Boomers" are interested in active lifestyles, and many young people who leave for college return to the city to raise their families.

The Mayor of Spokane, Mary Verner, created her Sustainability Initiative almost immediately after assuming office. She sees this focus on sustainability as a framework to secure Spokane's future vitality. Spokane has been working to model their planning after Portland, Oregon, and Seattle, Washington, and in 2009 developed a community-based plan for action: "Sustainability Action Plan: Addressing Climate Mitigation, Climate Adaptation and Energy Security." The plan includes eight strategies to serve as the foundation for specific city policies currently being developed. The strategies include: emphasize renewable energy; promote clean mobility; enable optimal land use; conserve water everywhere; and maximize energy efficiency. The plan includes encouraging compact communities by eliminating barriers and incentivizes mixed use, natural landscaping, transit-oriented development, fuel and energy efficiency, community composting, and the preservation of the Spokane Valley-Rathdrum Prairie Aquifer and its watershed. Demand on the water source has grown as it has been called upon to serve needs from areas outside of Spokane where resources are in decline. Water conservation is the surest way to preserve the resource for future generations, enable the city to grow and prepare for possible climate-related changes to water availability.

The Spokane Tribe of Indians received a $1.5 million U.S. Department of Housing and Urban Development (HUD) Sustainable Communities Regional Planning Grant. The Spokane Tribe of Indians will develop a Sustainable Community Master Plan and Strategic Action Plan. The planning process will start with stakeholder meetings and the creation of economic and population analyses. The plan will identify areas for new affordable housing on the reservation that would not require expansion of infrastructure without concentrating "poverty" housing. The Tribe also wants to develop culturally relevant, energy-efficient design options for

Sources

1. City of Spokane Environmental Programs (www.greenspokane.org)
2. *Sustainability Action Plan*, Mayor's Task Force (http://198.1.35.94/wp-content/uploads/2011/05/Sustainability-Action-PlanB.pdf)
3. Spokane Tribe of Indians (http://www.spokanetribe.com/): Final Revised Water Quality Standards, Airway Heights Area Development, STEP Project, Spokane Tribal College, Moccasin Express
4. Partnership for Sustainable Communities (http://www.epa.gov/smartgrowth/partnership)
5. Oregon Sustainable Communities Dialogue Report (http://otrec.us/files/SCP_Oregon_Dialogue_Summary.pdf)
6. Washington State Sustainable Communities Dialogue Report (http://pcc.wsu.edu/projects/documents/RunstadCtr-SustainCommWADialogueReport_final.pdf)

housing units and produce a zoning code to prevent further sprawl. The plan expects to preserve open space, reduce greenhouse gas emissions from transit, and plan for more transportation options including transit and biking access. The city of Spokane is one of the partners on this grant.

Prior to the Listening Session, Spokane provided EPA with background materials detailing its sustainability priorities. The community emphasizes the use of renewable energy and energy conservation by reducing car use and developing optimal municipal operating practices. Spokane values natural resource conservation, including water conservation, ecosystem preservation, environmental cleanup and the creation of urban green spaces. Transportation infrastructure will be improved by promoting clean mobility, improving public transit (e.g., a local bus service) and placing multiways in cities. The community will manage growth and development by building affordable housing and using land optimally. Economic development will be encouraged through gaming, jobs, the Grand Coulee Dam settlement and other forms of economic stimulation. Finally, it is important to the community that local culture and traditions are preserved.

Listening Session Discussion

Spokane Community Participants

Michael Aldofae (City of Spokane Community Planning Department)
Jerrie Allard (City of Spokane Human Services)
Lloyd Brewer (City of Spokane Environmental Program)
Boris Borisov (Impact Capital)
Jenn Cerecedes (SNAP)
Dennis Dunham (Community Colleges of Spokane)
Judith Gilmore (Spokane Community Development Board)
Rob Higgins (Association of Spokane Realtors)
Shawn King (Eastern Washington University)
Kim McCollim (HUD)
Joel McCullough (Spokane Regional Health District)
Brian Pitcher (Washington State University)
Gary Schimmels (City of Spokane Valley)
Joe Shogan, Jr. (President of Spokane City Council)
Dale Strom (City Community Development Department)
Mike Taylor (City of Spokane)
Tom Towey (Mayor of Spokane Valley)
Wendy Van Orman (Mayor of Liberty Lake)
Mary Verner (Mayor of Spokane)
Dorothy Webster (City of Spokane)
Joel White (Spokane Home Builders Association)

EPA Participants

David Doyle (EPA Region 7)
Abdel Kadry (EPA ORD)
David Olszyk (EPA ORD)
Ann Pitchford (EPA ORD)
Meghan Radtke (The Scientific Consulting Group, Inc.)
Claudia Walters (EPA ORD)
Melanie Wood (EPA Region 10)

Discussion

The Mayor of Spokane, Mary Verner, introduced the session by welcoming the attendees and thanking them for coming. EPA recognizes that the Northwest is a leader in developing sustainable communities. At the federal level, the Obama Administration has begun breaking down silos, but government silos are built very sturdily. The federal government has adopted the admirable goal of working in an integrated way to support local communities. The city of Spokane is in the midst of implementing a sustainability plan that was adopted 3 years ago.

Melanie Wood, from EPA Region 10, also thanked the attendees for taking the time to attend this meeting. As part of the Partnership for Sustainable Communities, EPA, HUD and the U.S. Department of Transportation (DOT) held two Listening Sessions in Oregon and Washington last year to learn more about the challenges that communities face when developing sustainable projects. Federal agencies are learning how to work with each other to better support communities, and each agency (e.g., DOT, HUD) may fill certain niches. Paul Anastas, the Assistant Administrator of EPA's ORD, has developed a new strategic plan that includes a research program on sustainable communities. He realizes that implementing such a program requires input from actual communities. The purpose of this Listening Session is to find out how EPA can assist Spokane with sustainability. Claudia Walters, ORD, then gave an overview of EPA's ORD and outlined the purpose and goals of SHCRP and the Listening Sessions.

Spokane has had a sustainability action plan in place for 3 years. The primary challenge has been finding the funds to implement projects. Many sustainable options initially are more expensive than unsustainable options. They may require significant funding up front to research the issue and design a plan. For example, one community member serves on the Board of Directors for an alternative fuel project. Several times, the project has been nearly abandoned because of funding issues.

The project is close to completion and could make a significant difference with regard to providing energy to rural and farming communities.

Although people understand that sustainable solutions will save money over the long term, people still are very concerned about the uncertainties of the future (e.g., taxes; costs of biofuel, high octane gasoline and electric vehicles). For example, people in Spokane are very concerned about costs and they are not necessarily willing to pay more for green houses. Many developers lose money when they build green because green features are not incorporated into the appraised value of the home. Consequently, it is difficult for buyers to see a tangible benefit to buying a green home. Communities need to be educated about the long-term benefits of green building.

At the same time, many of the more successful modern buildings are promoting energy savings and are smaller. Greenstone Homes is a good example of a developer who has marketed green buildings. Sustainability messages (e.g., better gas mileage, energy savings, green building) need to keep being promoted. Spokane has done a good job of improving air and water quality over the long term (40 to 50 years), and the same can happen with sustainability.

City officials suggested that performance measures would be helpful in showing residents how an investment in a sustainable practice yields a tangible benefit. Benefits often are couched in terms of health, clean air, clean water and so forth, but there is little or no documentation connecting these benefits directly to the sustainable practice. If the city invests in a bike lane, do people actually use it? If the city invests in housing that is near public transportation to reduce greenhouse gases, do people actually move there and drive less? If a person buys a green home, does it save money in the long run? Another community organization agreed that if small businesses can see on paper that a sustainable action will benefit them, they are likely to implement it.

Paradoxically, middle-income people may be biking and using mass transportation more than people with low incomes. A community organization pointed out that people with low incomes usually are affected the most by environmental factors, yet they often are the group least concerned with them. Many view having their own car and not having to rely on public transportation as a key step in achieving economic success. It can be difficult to convince people of the merits of using public transportation; a good public relations campaign, similar to Super Bowl advertisements, is needed. Likewise, different marketing techniques will be needed for green housing. Low-income people make choices based on the direct benefits they will receive. They do not make green decisions because it makes them "feel good." Outreach should be focused on demonstrating that being green is saving money or improving their lives. For example, green living can affect health positively; in Spokane, many kids have asthma and many adults are diabetic. Generally, developers of low-income housing are required to use green building practices. The quality of the housing can be variable. One community member pointed out that the apartments built near North Central have very small backyards, which is not conducive to mental health. Another community member felt that the key issue was having a home versus being on the street. Over the past 3 to 4 years, Spokane has addressed its shortage of low-income housing by building more homes and renovating older housing. In the process, the city has improved the environment by removing lead paint, weatherizing and making homes energy efficient.

Community Development Block Grant funds have been important to supporting renovations in older homes. The housing stock in Spokane dates from the early 1900s and the 1950s. About 60 occupant rehabilitations are performed each year and include upgrading the heating system (e.g., replacing wood or oil stoves with efficient gas heat), weatherizing and removing lead paint. The owners of these houses usually are on fixed incomes and they pay back the loans with energy savings from the renovations. More than $2 million dollars per year have been spent on the program for the past 30 years. The program is one of the best managed in the country, but is in danger of losing its funding from Congress. The federal government needs to understand that programs like this integrate environment, health, transportation and housing; these are the types of programs that should be sustained.

In another successful effort, McKinstry Construction Corporation has funded improvements in buildings by allowing people to pay their utility bill at a fixed price for 10 years. The difference in energy savings covers the improvement costs. It would be incredibly beneficial to apply this concept at the neighborhood level and have low-interest revolving funds. This lets people manage their costs over time and also creates a local industry of energy improvement work.

Green spaces are beneficial to health. In Spokane, some areas are connected closely to green space; there are many parks. There is a desire to have children playing outside, but some low-income neighborhood parks are not safe. Many parks in inner-city neighborhoods have been kept alive through community development funds and programs to get children outdoors. Even for people who do not have transportation to nearby state parks, recreational opportunities can be found through the *ad hoc* and formal foot trails and bike paths in the

neighborhoods. The annual Blooms Day race speaks to the community's interest in running/walking and being outdoors, although this is not necessarily translated into daily activities (e.g., walking to the grocery store rather than driving). The Spokane Tribe received a HUD grant this year to install bike trails throughout the community; it would be useful to learn how the community convinced its citizens of the benefits of biking.

The nearby community of Liberty Lake has many open spaces, trail systems and affordable homes. Yards are small, but open areas are easily accessible (at most ¼ of a mile away). The community also has installed "purple piping" that transports treated wastewater to be used for irrigating parks, yards and agriculture. The next challenge is to build the public transportation system. When gasoline becomes $5 per gallon, people will be more willing to go green, and public transportation will be the norm.

Spokane's aquifer is large (2,500 square miles of tributaries), is of high quality and provides drinking water for the local and surrounding communities. The aquifer recharges from the Spokane River annually, so it is important to handle wastewater in a manner that does not negatively affect the aquifer. The city recently installed rain gardens as part of some low-income development projects and is experimenting with permeable pavement. Community Development Block Grants have been used to remove septic tanks and replace them with sewage systems. One of the challenges is convincing neighboring communities that they need to take these actions as well; it is expensive, and funding is scarce. In addition, some parts of the water system are beyond the control of Spokane residents.

Many low-income people like to fish and swim in the Spokane River. Several years ago, there were programs to educate people about how to reduce their health risks from the river water. The river has been polluted by the mining industry upstream in Idaho; water should not be swallowed, and people should rinse off after swimming in the river. Some community members commented that when they were children, the river was so polluted that it was brown and contaminated with sewage. Today, despite the pollution from mining, the river is much cleaner.

Water quality and water allocation are local issues. Even though Spokane's aquifer produces abundant, high-quality water, the community is beginning to recognize that water rights are becoming more important. The city is working with Idaho on interstate issues involving water rights, quality and river flow. Idaho is cataloguing water rights for the whole state; Washington is very disorganized. As water rights issues are decided in court, Spokane may not be taken seriously because of the disorganization.

Although Spokane is a low-income area, it has been successful in addressing environmental issues. People value nature; this began with the traditional values of the Indians who first occupied the region. The community has had a "near nature, near perfect" theme for a long time, and people routinely participate in outdoor activities on the weekends. As demonstrated by the cleanup of the Spokane River, once people acknowledge a problem and decide to take action, they are successful. People frequently come together to solve problems; all sectors are active. Acknowledging issues can be difficult, though. It took brown air and increases in asthma cases for the community to take action on air quality. It will be even more challenging to address issues like global climate change where the scientific evidence does not get political traction because local effects are not visible.

One of the more recent developments in the city is a program that places university students and faculty in the field to work on community projects. Many communities need help, and using students keeps costs down and provides them with a learning opportunity. Innovative ideas are needed to revitalize the old manufacturing facilities that ring the downtown area. It will take decades to reinvigorate these facilities in a sustainable and livable way, but this is an exciting opportunity for the university and community. The Spokane Chamber of Commerce and other business associations strongly support development. Targeting certain areas in the community can help focus local business and community efforts. For example, Spokane residents decided that they wanted to have a 4-year medical school in the city. The Chamber of Commerce funded a study to scope out the issue, and the city is taking steps to bring a medical school to the community.

The Northwest is a center for the growth of clean energy technology; Spokane is distinguishing itself with its work in energy efficiency. Vista is the local electric company and provides most of its power hydroelectrically. The company is very active in the community—especially on environmental issues—and helps connect the private sector to the government. Politically, the State of Washington is not acknowledging hydroelectric power (and other sources such as burning vegetative wastes) as green energy. The result is higher energy costs, although Spokane's energy costs still are low at 4.5 cents per kWh.

Hydroelectric power and dams have stirred mixed debate. Salmon populations have declined, in part because of the barriers that dams create during the fishes' annual trip up the rivers to spawn. People are concerned about the salmon, but also about their electricity rates

if the dams are removed. The issues are in court. In Spokane, people valued the falls on the Spokane River and were upset that one of Vista's dams decreased the water flow, thus creating smaller falls. In response, Vista agreed to open the dam's floodgates a little more during the day and to close them at night when people were not around. The river has many uses (e.g., beauty, electricity, food) and belongs to many (e.g., community members, utilities, salmon).

Sustainability is an economic driver in the community. Spokane is trying to capitalize on energy efficiency and find incentives to motivate businesses to implement sustainable practices. New government regulations will stifle development. Placing some of the burden of sustainable development on local businesses is the way to make progress.

EPA staff members concluded by emphasizing the need for the community to use them as a conduit to communicate success stories and needs to decision makers at the Agency. Community members were invited to stay in touch with Claudia Walters or to submit ideas through the ORD IdeaScale website. Community members also were asked to send materials and websites related to the examples discussed during the meeting to Claudia Walters.

Potential Actions for ORD

- Develop methods to quantify the importance of low-income families to lead healthier lifestyles (access to green spaces, use of public transportation, walk or ride bikes).
- Create an advertising campaign (Super Bowl caliber) to "sell" green actions and products to communities, especially those with low incomes.
- Develop performance metrics that link a sustainable action with a beneficial tangible outcome.
- Maintain funding for sustainability projects at the community level (e.g., Community Development Block Grant funds).
- Create tools or incentives to help communities make sacrifices today (e.g., higher initial costs for green actions) for the benefit of tomorrow.
- Produce tools, models, and other assistance that is useful for the community's efforts to clean up the Spokane River.
- Perform a study on the correlation between economic level and support for sustainability; perhaps education and outreach should be targeted toward lower income individuals.

Woodbine, Iowa
EPA Region 7
Thursday, March 10, 2011
Woodbine Community Meeting Center

Community Background

In the summer of 2008, Woodbine was selected as one of two pilot green communities in Iowa by the Iowa Department of Economic Development. Since this recognition, the town has performed energy audits, renovated buildings in an energy-conscious fashion in its Main Street district, adopted green policies/projects for each of its committees, and worked on doing the "little things" to improve its appearance, atmosphere and environment while decreasing its carbon footprint. As of winter 2010, the Woodbine Green Pilot Committee has undertaken the primary responsibility of promoting sustainability in the town. The Woodbine Green Pilot Committee focused on three major projects in the spring of 2011: (1) an energy audit program/upgrade followups for the business district; (2) energy audits for residential units; and (3) curbside recycling.

Specific sustainability activities pursued by Woodbine include:

- Main Street business energy improvements.
- February 2010 Iowa Power Fund Grant for energy planning and implementation of improvements.
- Community Planting project implementation using native trees and wildflowers.
- October 2010 Municipal Light and Power raised awareness of energy efficiency through an open house featuring LED bulb giveaways and energy demonstrations.
- Woodbine Main Street conducted a residential interest survey for energy audits.
- Community Development Block Grant Main Street building façade revitalization through development of a Woodbine Façade Master Plan for a sustainable downtown through historic preservation of key buildings.
- Rain Garden grant from Keep Iowa Beautiful for creating a rain garden behind the Main Street Station to capture stormwater runoff on hillsides, incorporate labor from high school industrial arts students and potentially use the project for community education.

Prior to the Listening Session, Woodbine provided EPA with background materials related to its current sustainability priorities. The community will plan for sustainability by forming a Green Committee to implement sustainable practices and by employing a Vista Energy Corps member. Woodbine will manage growth and development by revitalizing the downtown business district, upgrading Main Street building facades, planning historic preservation of key buildings and planning a community planting project at the city gateway. Reduction of Woodbine's carbon footprint will be accomplished by offering an energy audit program for businesses and residences, offering grants (for businesses) and zero percent financing (for businesses and residences) for energy-saving renovations, implementing a curbside recycling program and planting a rain garden. Finally, Woodbine will sponsor environmental education community outreach by promoting environmental education in schools and holding an energy efficiency open house to raise sustainability awareness.

Source

1. Woodbine, Iowa Green and Sustainable Community Planning and Projects (http://www.simonsonassoc.com/woodbine/Woodbine_Final_Report.pdf)

Listening Session Discussion

Woodbine Community Participants

Dan Barry (Harrison County Landfill)
Theresa Corrin (Woodbine Municipal Lighting and Power)
Joe Gau (City of Woodbine)
Don Groff (Retired Teacher)
Paul Marshall (City of Woodbine, Utilities)
Eric Moores (Green Team)
Perry Schlinz (Midwest Quality Water)
Alana Smith (Woodbine AmeriCorps)
Darin Smith (Green Team)
Tony Smith (Green Team Farmer)
Deb Sprecker (Woodbine Main Street)

EPA Participants

Randy Bruins (EPA Cincinnati)
David Doyle (EPA Region 7)
Meghan Radtke (The Scientific Consulting Group, Inc.)
Claudia Walters (EPA ORD)
Robert Weber (EPA ORD)

Discussion

David Doyle from EPA thanked the community for their time and introduced SHCRP. Claudia Walters, ORD, then gave an overview of EPA's ORD and outlined the purpose and goals of SHCRP and the Listening Sessions.

Community members began by describing Woodbine and their sustainability projects. Urbanization is a threat to small towns in Middle America. If the structure of the Midwest disintegrates, the United States will see a change in the worker who goes out into the world; kids will no longer be "raised by a village." Woodbine appears to be an agrarian population, but most community members do not have a direct connection to the surrounding farms. Thirty years ago, the community was mostly composed of small farms, but these have become incorporated into large agricultural operations. The population in Woodbine and the surrounding county has been decreasing. Kids grow up in the community, leave for college and many do not come back. Woodbine is viewed by some as a "bedroom community" where people commute to Omaha, Nebraska, or other more urban areas for their jobs, shopping or services. The local poverty rate is 10 percent (below the state and county median); local jobs are plentiful (e.g., a pharmaceutical company, a school).

Woodbine is very proud of their school (preschool through 12th grade)—it is the only stand-alone school district in the county. The dropout rate is low and the school produces well-rounded students. Students who choose to leave the community often go out into the world and make a difference. The school has a strong student volunteer program and high parent participation in activities. The school that one attends is an important part of one's identity; the school gives the community strength and sustainability. There is a great fear that economic pressures will cause the school to be combined with others in the county. Some of the repercussions may be lower test scores, farther distance to school, greater peer pressure and loss of identity.

Woodbine's primary goal is to make their community sustainable; sustainability is defined as "community endurance." As a result, they are initiating projects to revitalize their community, support local businesses and the school district, and recruit new residents by standing out from the other communities in Harrison County. They want to curb the population decline and reverse the trend. During the next 10 months, the façade of every downtown building will be renovated (made possible through a Community Development Block Grant). The Green Pilot Community funding from the Iowa Department of Economic Development (IDED) has enabled the community to redevelop Brownfields sites (e.g., an old gas station, a meeting building), launch an energy audit/upgrade followup program for the business and residential districts, and pilot a curbside recycling program. They also have developed a sustainability plan that has been used to guide some of their actions.

Woodbine's largest environmental/resource problem is nitrate contamination in its drinking water. The Iowa Department of Natural Resources (IDNR) has implemented a well protection investigation to determine the source of the nitrates. A treatment plant may be needed, but this would cost $5 million that the community does not have. The community has not been successful at locating a new field that would yield enough water to support the town. An interceptor well has been constructed to intercept the plume of nitrates, but the community will not know until the spring runoff occurs whether this strategy has been successful.

Another challenge is the need for more housing in town. Local industry is looking for engineers and chemists; more rentals and single family homes need to be available. Other community facilities (e.g., a recreation center) also may attract new residents. The energy assessments and upgrades are being done, in part, to make old housing more attractive for new residents. In 1992, a similar initiative replaced all of the old oil furnaces in the community with gas furnaces or heat pumps. Energy consumption was reduced and it helped to maintain the community's population. Currently, Woodbine is known to have the cheapest utility costs in the county.

Woodbine's municipal operations are decentralized. The city recently acquired a City Administrator dedicated to the day-to-day operations of the city. The city also has a temporary AmeriCorps volunteer who is acting as Woodbine's Sustainability Coordinator. In this respect, Woodbine could be a model community for other small towns; it is piloting many new projects. At the same time, its size poses a challenge to initiating new projects because manpower is limited. The Woodbine Green Pilot Committee, which leads many of the city's green projects, is composed of volunteers and only meets once a month. Community members felt that in the future, they may have to start thinking more regionally in their approach. Other towns have appeared interested in some of the projects they are piloting. There is a strong drive for Woodbine to maintain its identity and take the lead if efforts are scaled up to a more regional level.

Some of the other initiatives Woodbine is pursing include: (1) forming a community garden; (2) installing a handicap-accessible trail system through the levee district; and (3) building a health and wellness center. However, Woodbine identified specific challenges to their sustainability pursuits:

- The city of Woodbine indicated that cost is a major impediment to green initiatives. Unfunded government mandates affect the funds available for the community's sustainability projects.
- The community has had frustrating interactions with IDNR and other government organizations.
- A business owner pointed out that regulations always seem to be "one size fits all." For example, landfill regulations are designed to accommodate very large facilities. Woodbine's landfill is small and some regulations do not make sense. Regulations need to be downsized for smaller operations.
- A farmer stated that many of the government-mandated solutions are cheaper to instigate at an individual level (e.g., reverse osmosis). EPA responded that a balance is needed between community regulations and individual mandates.
- The Green Team observed that being a rural community is an obstacle to being sustainable. With 1,500 people, Woodbine is often overlooked for grants/pilots because the impact of the program would not be as large as in a more urban setting.
- Young (school age) and old (golden age center) members of the community need to be involved in the projects.
- Many of the community improvements could not have been accomplished without Main Street Challenge Grants, IDED and other government contributions.
- The railroad tracks isolate Woodbine from Highway 30; community members view this as an advantage and disadvantage for sustaining the community.
- There is interest in establishing a rural research center to educate developers about rural communities and green practices. Woodbine has expertise in ethanol research and development.

Potential Actions for ORD

- Maintain funding for community improvement grants, such as the Main Street Challenge Grants. Ensure that government funds are regularly allocated to small, rural communities as well as the large, urban communities.
- Research the causes and identify cost-effective solutions to prevent high levels of nitrate in drinking water.
- Tailor environmental regulations to the size and needs of the community and the size of its facilities rather than applying a "one size fits all" approach. Before implementing a regulation, EPA should consider the consequences it will have on small communities.
- Clearly communicate the rationale behind government regulations to improve acceptance and adherence by the general public.

Wyandanch, New York
Summaries of Listening Sessions

Wyandanch, New York
EPA Region 2
Wednesday, April 6, 2011
Wyandanch Resource Center

Community Background

Wyandanch Rising is a major community revitalization initiative that seeks to transform an economically distressed downtown into a transit-oriented, pedestrian friendly, environmentally sustainable downtown. Wyandanch is centrally located on Long Island, in the town of Babylon, New York. It is less than 1 hour away from New York City's Penn Station on the main line of the Long Island Rail Road (LIRR), and has easy access to all major arterial roadways and a commuter airport. The town of Babylon has assembled the acreage necessary to redevelop around the Wyandanch LIRR station.

To advance the Wyandanch Rising initiative, the town has already undertaken a number of actions that include the installation of a sanitary sewer system, the beautification and realignment of Straight Path (already underway and paid for with public funds), and the adoption of a form-based zoning code that will allow appropriate Transit Oriented Density (TOD). Looking ahead, the town will seek a master developer to implement a transformational mixed-use project with a range of housing types, commercial uses and public spaces. Wyandanch recieved an EPA Brownfields grant in 2009 to redevelop an under-utilized property into a Community Health Center.

Prior to the Listening Session, Wyandanch supplied EPA with background material regarding its current sustainability priorities. First and foremost, Wyandanch wants to encourage economic development by revitalizing the downtown community, building an Intermodal Transit Facility (ITF), promoting local businesses and encouraging tourism. The ITF will help with the goal of improving transportation and infrastructure; other ideas include installing a sanitary sewer system, improving street lighting, beautifying the Straight Path as described above, and promoting non-car transit options such as buses, walking and biking. Wyandanch also wants to manage growth and development by promoting infill development, increasing housing diversity, zoning for TOD development and planning a future mixed-use development project. Finally, the community prioritizes ways to conserve natural resources through preserving drinking water quality and quantity, protecting ecosystems and developing parks.

Sources

1. Wyandanch Rising Community Revitalization Initiative (http://wyandanchrising.squarespace.com)
2. The Wyandanch Hamlet Plan (http://www.townofbabylon.com/uploads/pdffiles/Wyandanch%20Hamlet%20Plan.pdf)
3. Brownfields Grant 2009 Fact Sheet. EPA 560-F-10-223, July 2010 (http://www.epa.gov/brownfields/success/babylon_ny.pdf)

Listening Session Discussion

Wyandanch Community Participants

Peter Barneh (Wyandanch Homes and Property Development Corporation)
Steve Bellone (Town of Babylon)
Denise Bonilla (Newsday)
Donna Boyce (Sustainable Long Island)
Duwayne Gregory (Legislator)
Sandra Cochran (Wyandanch Community Development Corporation)
Timur A. Davis, Sr. (Wyandanch Public Library)
Trevor Cross (Martin Luther King Community Health Center)
John Paul DiMartino (Legislator, Wayne Horsley's Office)
Janet Grenli (Department of Health)
Phyllis Henry (Martin Luther King Community Health Center)
Amy Juchatz (Suffolk County)
Gerry Petrella (U.S. Senator Charles Schumer's Office)
Dewey Smalls (Town of Babylon)
Anne Stewart (Economic Opportunity Council Weed and Seed)
Vanessa Pugh (Town of Babylon)

EPA Participants

David Doyle (EPA Region 7)
Rabi Kieber (EPA Region 2)
Sabrina Pendse (EPA Region 2)
Meghan Radtke (The Scientific Consulting Group, Inc.)
Marilyn ten Brink (EPA ORD)
Claudia Walters (EPA ORD)
Terry Wesley (EPA Region 2)

Discussion

Steve Bellone, from the city of Babylon, welcomed the attendees. The meeting participants were especially honored at having the opportunity to showcase their community to EPA because it demonstrates that EPA is serious about understanding the issues and needs of communities. Wyandanch is an example of a place where "if you can do it here, you can do it anywhere." The community hopes that the accomplishments in Wyandanch will seed similar efforts in communities across America. Rabi Kieber, the EPA moderator, added that sometimes a small push on EPA research is all that is needed to make great strides in communities. Claudia Walters, ORD, then gave an overview of EPA's ORD and outlined the purpose and goals of SHCRP and the Listening Sessions.

Community members began by indicating that Wyandanch has never had a personal visit from a federal agency, even though they have received federal funding for projects. EPA agreed that this is a systematic change in how the Agency does business and it is recognized that a key way to advance EPA's mission is to offer on-the-ground support to communities.

Wyandanch has implemented a comprehensive, community-based revitalization project. Wyandanch is the most economically distressed community on Long Island and has dozens of Brownfields sites. The high water table, no sewer infrastructure, four-lane highway through the downtown, high crime and poverty rates, boarded-up buildings and dilapidated storefronts are some of the major challenges being faced by the community. In 2002, the community decided to address these problems by creating a comprehensive plan to substantially redevelop the community. The process has involved constant outreach to seek input from the community, finding creative ways to obtain funding (e.g., New York State Brownfield Opportunity Areas, EPA Grant for Sewers, EPA Brownfields Grant), hiring a world-class urban planner to redesign the downtown area, acquiring blighted properties, and developing a job training program for local residents (i.e., anticipating the needs of the developer). Community plans include a new transit facility; a walkable, pedestrian-friendly downtown that is attractive to businesses; bike and walking trails that connect the community to Geiger Memorial Park; a botanical garden/conservatory; a new health center; and the reduction of the four-lane highway to three lanes with a planted median and parking on both sides of the street. A strict planning code is being adopted and will include a mandate that developers hire local people to do the work. The community has invited three developers from a pool of 15 to submit full proposals for the downtown work. Wyandanch has been nationally recognized for its urban renewal efforts.

Many people have given up on the Wyandanch community because of its poverty and problems. For example, the initial plans for the U.S. Postal Service to replace the existing old post office building called for a new building set way back from the street and surrounded by a barbed wire fence. The post office is in a prominent location along the main street and its design was unacceptable to the community. After initial efforts to work with the U.S. Postal Service to change the design, Wyandanch banded together, filed suit and won. Now the community has a very nice post office that heralds the beginning of the revitalization to the downtown area. The community has a great desire to improve Wyandanch. A community organization emphasized that Wyandanch's success is because of: (1) authentic community engagement from the beginning and throughout the process; (2) commitment from

community leadership; (3) the focus on implementation from the beginning; and (4) the will to persevere despite great odds.

To make sure that as many people as possible benefit from the improvements to the community, Wyandanch is encouraging home ownership; property values are expected to rise. All residents would benefit from an expanded tax base, new local jobs, a new downtown center and a safer main road. Many land parcels are underdeveloped and this creates a burden on the whole community; redevelopment is expected to reduce the burden by bringing in new residents and businesses. Current housing costs range from $66,000 to $300,000. One of the biggest challenges so far has been credit. Efforts to offer down payment assistance are underway. Legislation is being considered that would encourage home ownership. Some people are not interested in buying a home here because the community's school is not as good as schools in neighboring communities. The developed tax parcels are expected to bring new money to the school district and other tax entities.

Senator Charles Schumer (D-NY) has been intimately involved in Wyandanch's redevelopment efforts. In particular, the Senator has been interested in the connection between sewage infrastructure and revitalization projects. Often, funding is awarded to the biggest polluters, yet these same funds are important for community efforts, such as those being made in Wyandanch. Many variables must be considered when building sewers on Long Island—climate change, sea level rise, storm surges. Wyandanch is a community of springs and many people in the surrounding areas still use cesspools and groundwater for drinking water. Developing the sewer system is a catalyst for other developments within the community. The Suffolk County legislature waived the sewer connection fees for downtown Wyandanch. This is an $11 million savings and creates an incentive for a developer to risk their capital on Wyandanch.

Transportation is a critical element of Wyandanch's revitalization. The downtown area will be organized around the train station. The railroad has been a tremendous supporter in the effort and has given the community a letter of intent to convey some of the train station property to the community. The railroad is critical to the redevelopment concept because it allows people to access Manhattan (50-minute train ride). There are plans to open the next train station down the line, which would connect Wyandanch with the main employers in the area. The Wyandanch bus routes will be altered slightly to fit the new design of the downtown area and will be seamlessly coordinated with the Suffolk County bus system to provide better regional transportation.

The outdoor improvements (e.g., garden, conservatory, trails) are expected to have a positive effect on many aspects of the community. Parks and trails encourage exercise and that could reduce the rates of obesity and diabetes in the community. The botanical garden will be a destination for school field trips and can help teach children about better ways to live (e.g., healthier eating, outdoor activities). A curriculum is being developed for the local schools and internships also will be available for older students. Suffolk County is the largest agricultural county in the State of New York. A 21- to 24-week farmers market also is being established in Wyandanch.

Community members raised some other environmental issues that they are facing:

- Dust from the wooden pallet factory becomes so thick in the summer that it settles on cars.
- Older trucks and buses on the main road through town produce a lot of exhaust.
- Wastewater and sewage produce bad odors because the community does not have a sewer system.
- Energy costs are high on Long Island (21 cents per kWh); the community is looking at ways to deliver heating and cooling to residents using geothermal or other alternative energy options.
- Wastewater runs into the Great South Bay.

One community organization pointed out that it can be difficult to make residents understand the connections between certain actions and improvements to their community. For example, the planning codes that are being developed for Wyandanch's revitalization are somewhat removed from the tangible outcomes that are expected to occur. It is important to help residents make the link between changes in the code and the expected community improvements. Wyandanch has had a lot of community involvement throughout the process, so community members felt that many local residents understood the proposed changes to the codes.

A community member asked how EPA could help Wyandanch with its gang problems. EPA responded by pointing out that planning tools (designing streetscapes, pedestrian-friendly environments and associated issues) exist. One of the challenges at EPA is to frame environmental tools in terms of the economic and social issues that are affecting a community. EPA needs to look at their work through the lens of communities and consider the community's priorities and how environmental issues can be integrated into them. For

example, connecting trails to Geiger Memorial Park may increase outdoor recreation, but it also could provide a place for gang activity.

Wyandanch sees itself as a roadmap for community revitalization across the United States. The community is in the middle of Long Island—50 minutes from Manhattan, 90 minutes from skiing and 40 minutes from the seashores and wineries. As it is developed, people will stop and shop in the community as they are on their way to other destinations. It is expected that people will want to move to the community because of its rebirth. The community is trying to create something for everyone: Geiger Park and active recreation options, the botanical garden and conservatory, its proximity to Manhattan, a thriving downtown area and an attractive community design. The transit plaza may be used for ice skating in the winter and concerts in the summer. It is not one thing that would attract people from other parts of the region but 20 things that would re-brand Wyandanch. The affordable housing and other income-based incentives also will be a driver.

EPA concluded by announcing that Region 2 is hosting a National Environmental Justice Advisory Committee (NEJAC) meeting and would like to showcase Wyandanch's community revitalization efforts. Between 800 and 1,000 attendees are expected for the event.

Potential Actions for ORD

- Adapt the methods used on ocean liners for waste and water disposal to affordable systems for communities.
- Develop metrics that link sustainable actions with tangible outcomes (e.g., environmental and economic impact of sewer installations; health and economic benefits of trails that link parks; effects of relocating the Department of Public Works storage pad on people moving into the area).
- Perform work demonstrating how environmental amenities (e.g., parks, gardens) correlate with children choosing alternative careers.
- Examine the correlations between access to green spaces and incarceration rates.
- Research sustainable methods and develop technologies for stormwater management in urban areas with high water tables.
- Perform analyses that show the link between New York's Smart Growth regulations and Wyandanch's efforts.
- Publish information and tools on alternative energy options (e.g., geothermal, wind).
- Develop case studies with roadmaps and outcomes that communities can use as models for their revitalization efforts.
- Create toolkits (full range from card games to Web-based decision support tools) that help communities understand the consequences of decisions.
- Identify city designs that make it easy for people to meet their needs (e.g., healthy food, medical needs, school and work).
- Develop analyses that examine how governments can motivate communities to move in certain policy directions; it may be possible for state and federal agencies to align their incentives (e.g., funding).

Conclusions

The environmental challenges present in the 21st century to improve human health and environmental well-being are complex. Limited natural resources, increasingly severe natural disasters, and air and water pollution are examples of regional, national or global problems that are experienced and must be confronted on a community level to achieve social, environmental and economic sustainability of current and future generations. EPA, along with state and local governments, develops policies to protect human health and the environment, but it is the responsibility of each community and each individual within the community to implement the policies and comply with the regulations. Indeed, the needs, decisions, social norms and lifestyles of individuals within a community often contribute to environmental and health problems, underscoring the need to address sustainability concerns on a local scale. Collectively, the culture, behavior and perspectives of diverse groups, unique environmental issues, and impacts from regional impacts are best addressed at the local, community level.

EPA's Office of Research and Development (ORD) created the Sustainable and Healthy Communities Research Program (SHCRP) to address sustainability needs and resolve problems at the community level. Research conducted by SHCRP will provide information, methods and tools to help decision makers assess current conditions in the community and its environment, evaluate the implications of alternative policies and develop methods to objectively measure the impact of sustainable practices on the community. This will enable community leaders to create programs and encourage behavioral changes in pursuit of community sustainability. Sustainable solutions need to be practical, effective and apply principles of environmental justice to protect disproportionately impacted low-income, minority and tribal communities.

Between March 9 and April 7, 2011, ORD conducted seven Listening Sessions to gain insight from regional stakeholders into how diverse communities are implementing sustainable practices and the challenges that they are facing. The SHCRP Community Listening Sessions were successful in engaging in dialogue with numerous community representatives, assessing the needs of those communities and identifying specific actions that ORD can pursue to help communities select and implement sustainable practices. SHCRP solicited ideas about barriers that influence current community sustainability actions and research needs that would be relevant to advancing their efforts.

Although the Listening Sessions were conducted with a few communities, they represent a wide range of diverse issues and perspectives in varying geographical locations across the country. These communities represent a mix of rural and urban communities with different economic livelihoods and local/regional issues. Meeting attendees included key stakeholders from each community, including elected officials, local and state government personnel, nonprofit organizations, utilities, universities and other members of the community. Although the challenges that communities face and their approaches to addressing the problems were vastly different, many issues emerged as common themes during these conversations. Here, the 14 common themes are listed in general order of priority from highest to lowest.

1. **Economics** is the strongest driver for sustainability decisions in communities, yet communities do not have a good understanding of the linkages between jobs, economic development and sustainability. Sustainability must be measured and described in a way that makes good economic sense and connects to jobs and economic development.

2. **Communicating, Educating and Framing** the sustainability discussion with the public is essential for understanding and addressing local needs. Creative and culturally relevant ways to communicate sustainability issues that resonate with different audiences will be necessary to better understand sustainability issues and change behaviors.

3. **Performance Measures and Metrics** are key in measuring or predicting the economic, environmental and social effects of a sustainable action in a community. Communities must capture economic outcomes as well as others that are valued by the community (e.g., social, environmental, health).

4. **Planning** can allow communities to factor sustainability into their future development plans. Many planners lack knowledge about sustainable options and most communities have limited time and resources to devote to planning.

5. **Schools** are a core part of many communities' basic structure. In many small rural communities, schools are the social centers of the community. School consolidation with other nearby communities often leads to the gradual disappearance of rural community identity, in particular, their values and way of life.

6. **Housing** is a pivotal component of communities. Housing shortages have some communities focused on building and renovating homes, while rising energy costs have made energy efficiency a top priority for communities looking to cut costs.

7. **Resources** (financial, time, technical expertise) to support sustainable projects are limited in all communities. Sustainable projects often have high upfront costs for planning; grants are essential to financially support these projects.

8. **Practical Sustainable Practices** are lacking and/or hard to implement. Many communities are not aware of sustainable solutions to the issues they are facing. In instances where a well-defined sustainable practice exists, often it is still difficult to implement because of the high upfront cost, lack of public demand, or other reasons.

9. **Climate Change** is a concern in many communities. Many are struggling with how to draw political attention to an impending threat that has no visible consequences at this time (e.g., compared with dirty air or polluted rivers).

10. **Transportation** in rural communities is used to connect residents with job centers and services, often located in nearby urban areas. Most rural communities have a very limited public transportation infrastructure.

11. **Local Food Systems** provide a sustainable way for communities to provide healthy food. Partnerships with nearby agricultural areas offer the opportunity for businesses to use local produce in their livelihoods, increasing economic wealth to the region as well as being sustainable.

12. **Stormwater Management** is recognized by communities as an important service, but often there is uncertainty about how to install or update sewer systems sustainably. These projects also are very expensive and may stretch beyond the jurisdiction of the community.

13. **Health and Healthy Lifestyles** are very important to communities and were often raised in the context of installing green spaces, trails and cleaning up the environment (air, water, land). Second to economics, health reaches across all facets of a community and is a strong driver for decisions.

14. **Natural Resources** and environmental issues (e.g., water quality, water quantity, biodiversity) are recognized as issues, but have not been the key motivators for most community sustainable actions. With limited resources, decision makers are focusing on meeting the basic needs of community members (e.g., housing, health, jobs) and tangentially addressing environmental issues.

Overall, economics is a driver in their decisions for all facets of their activities. Communities are first and foremost concerned with addressing the basics of life—housing, schools, transportation and jobs. Environmental and health issues are woven throughout many of their activities. Local communities are pressed by scarce resources, which challenge them in implementing the solutions. With limited time and resources, they need practical sustainable practices and performance measures and metrics to evaluate and demonstrate the effectiveness of their decisions. Finally and importantly, communities need help in communicating, educating and framing their discussions and decisions with all interests and perspectives represented throughout the community.

In addition, each Listening Session identified numerous specific actions that could be performed by ORD to help accomplish some of the communities' sustainability goals. In total, there were 102 potential actions outlined by the seven communities. A few potential actions that were common to more than one community include:

- Develop metrics to measure or predict the economic, environmental and other effects of a sustainable action on a community; economic outcomes are a strong driver of decisions. They also must capture the social sciences dimension of the activity.
- Link sustainability concepts directly to jobs (e.g., number, type, location).
- Maintain funding for sustainable projects (e.g., do not eliminate Community Development Block Grants or Main Street Challenge Grants).
- Federal agencies should make it easier for communities to apply for grants (e.g., standardized process across all agencies, dedicated staff to help applicants with the application).
- Federal, state and local agencies should align their

goals and funding opportunities so that a community could obtain federal, state and local dollars for community improvements.
- Clearly communicate sustainability issues so that people understand the issue, which help them change their way of thinking and behavior.
- Incorporate green practices into the mainstream way of doing things (e.g., engineering guidelines, housing valuation assessments, ordinances, permits).
- Develop case studies that can serve as models for sustainable practices.
- Conduct research that is needed in many areas, such as developing sustainable stormwater management options and technology.

Addressing these common themes and actions will require a transdiciplinary, whole-systems approach by SHCRP. In the past, decisions to improve human health have been made in isolation from decisions to protect the environment, which can lead to unintended consequences and counterproductive outcomes. ORD recognizes the interconnectedness of sustainability issues and understands that looking at one problem at a time is often economically inefficient and inadequate to solve the problem. It is clear that the current single-purpose approaches to environmental protection and resource management are insufficient. Communities will need to go well beyond a regulatory approach to better conserve resources and meet sustainability challenges.

The Listening Session communities represented a broad range of size, geography, economy and issues, including environmental justice. Thus, the common themes that emerged will be adaptable to communities across the United States, independent of the population density, total size or economic trends. The most important theme expressed by all communities was the need to develop tools to evaluate the short-term and long-term costs and benefits of alternative policies and actions, thus facilitating better decisions. The methods developed will take into account direct and indirect social, economic and environmental consequences, including the effect on human health, job creation and greenhouse gas emissions.

ORD will draw on its strengths in research areas such as assessment and decision science, environmental engineering, and the health and environmental effects of chemicals and materials to develop research products that are relevant and actionable for decision-makers. To better address the social science aspect of sustainability, ORD also will conduct research into human behavior and effective communication and decision making. In addition, ORD will collaborate with other federal agencies that address issues of concern by communities, for example, housing, transportation and other nongovernmental ogranizations. Importantly, ORD will continue the dialogue they started with the Listening Sessions communities to engage them throughout the research process to develop and distribute products that are more useful to communities.

The specific actions and common themes resulting from these Listening Sessions will help SHCRP develop research goals that will ultimately provide information, methods and tools to help community decision makers evaluate and implement the best sustainable practices depending on the environmental, social and economic issues they are facing. SHCRP will implement an integrated, systems approach to protect ecosystem integrity, limit health risks, decrease costs and avoid unintended consequences of new policies. Ultimately, the information, approaches and tools developed by SHCRP will empower communities to make strategic decisions that move them towards a more sustainable future.

Appendix
List of Barriers Preventing Communities From Becoming or Remaining Sustainable

On January 7, 2011, EPA regional representatives met to discuss current sustainability challenges facing communities across the United States. A total of 76 barriers to achieving widespread community health and sustainability were documented.

1. Communities do not have the capacity to plan for a sustainable future. They do not have the staff resources (people or necessary knowledge) to provide leadership for sustainable community planning. Community staff are already overworked just keeping essential services in place.

2. Communities lack the capacity to transform traditional community operations. Many small rural communities in the Plains are not sustainable—they are losing population as young people are leaving for larger population centers and older people have less financial capacity to support community services. These communities have reached or will eventually reach a point where they cannot support their water and power utilities, and they have not identified viable options for community renewal. Climate change, declining water tables, and surface and groundwater contamination all remain challenges in rural areas, where new technologies are needed.

3. Knowledge and the capacity to collaborate with other communities at a regional level is lacking. Most communities believe that they have to be able to manage all of their own challenges. However, there may be advantages, especially with small- and mid-sized communities, to collaborate on a regional level.

4. Regional EPA drinking water branch chiefs, focused on implementing an approach for equitable consideration for small systems, identified three top priorities or actions on which the national drinking water program should focus its efforts: (1) Improve managerial and financial assessments and measurements. EPA needs to develop a good, consistent tool to measure how small communities have improved managerial or financial capacity. In other words, adequate measures to define sustainability do not exist. The main tool that is used is whether systems are in compliance. Typically, that is only a symptom of the larger problem. (2) Educate potential and existing Public Water System owners on the roles and responsibilities of owning a system. Ongoing problems and changeovers happen frequently. (3) Increase collaboration across funding streams and programs.

5. More than 50 percent of the certified water treatment plant operators nationally will be eligible to retire in the next 5 years, and there are not enough certified operators available to take their place. Within the past few years, some states have begun to address this concern and implement programs, but the majority of systems will have difficulty hiring an operator certified at or above the level of the system, because there are none to hire.

6. Ecosystem function does not have a big influence on local land use decision making. In the arid southwest, communities are growing at such high rates, knowing that they do not have sufficient water supplies to support the growth that they project. Despite wanting to do the right thing, county commissioners in places such as Montana cannot do so given the political barriers to implementing smart growth policies. Suitable land use planning questions should be framed with regard to fiscal responsibility and how choosing the most effective and efficient alternative growth option can be the more fiscally responsible choice. Most communities do not know that growth decisions will directly commit current residents and taxpayers to pay in support of growth that is not well planned. Most communities lack the tools to make these informed growth decisions. Although more common on the East and West coasts, fiscal impacts analyses are a rarity in the interwest regions.

7. A big question is how to get the economics of smart growth development correct on a metro scale; in other words, to make it cheaper to do the "right" thing than to sprawl. All cities are doing everything that they can to attract economic development, but the fact is that cities on the fringe often have more resources and momentum than older/land-locked/smaller inner-ring suburbs, and therefore can offer more attractive incentives to developers. There

exists a situation on a metro scale in which cities are competing with one another, and the winner is almost always the city with the Greenfields, lax zoning and resources, thus encouraging sprawl.

8. Big box development appears to be the standard of development for the foreseeable future—what could be done to get those retailers into urban cores? There are vacant or nearly vacant city blocks in many locations. Could big box retailers find an urban form that would work? This may be a question of economics, architecture, perception or something else entirely; regardless, it is imperative to find a way that those retailers could fit into the urban fabric.

9. The number one reason why people move out of urban cores is the schools. What school models support sustainable communities?

10. In general, Native American reservations across America are communities that do not have a sustainable and healthy lifestyle as experienced by the predominant society. One tribe in Region 7 is experiencing severe economic conditions to the point where they can no longer provide government services. A multitude of reasons can be identified as contributing to these hardship conditions:

    - The nationwide economic recession resulting in no jobs outside of the reservation.
    - No jobs on the reservation.
    - The unemployment rate on the reservation is reported by the Chairman to be approximately 67 percent. The current national unemployment rate is about 10 percent.
    - There is an unskilled labor force on the reservation.
    - The educational level on the reservation is below state standards (the state public high school graduation rate was 90 percent in 2006 to 2009; the local city public high school graduation rate ranged from a low of 23 percent in 2006-2007 to a high of 57 percent in 2008-2009).
    - The rate of alcoholism is above the national average.
    - Diabetes incidence is above the national average.

11. The lack of training and education to conduct life cycle analysis comparisons of activities precludes the ability to know which of the available options have the lower carbon footprint and are truly sustainable.

12. There lacks an understanding of the dependence humans have on soil and plants, and an underappreciation for the services they provide for cleaner water and cleaner air. Landscaping is "hired out," so communities let the contractor "take care of it." In reality, these land management activities should be supervised by the community, and only sustainable practices should be authorized.

13. Communities do not utilize a Materials Management approach—waste is a resource.

14. One barrier to developing local sustainability goals or metrics of success is that cities do not have access to regularly updated greenhouse gas emissions inventories. Every city in the United States needs to have access to this information on a regular basis.

15. One problem facing cities and regions is the difficulty in undertaking climate change adaptation analysis and planning. In particular, cities and regions do not have access to assessments of climate change impacts on key sectors within the region (e.g., infrastructure, ecosystems, human health). Another problem is that cities and regions lack information about the benefits of action versus the costs of inaction.

16. A challenge to developing integrated urban heat island reduction strategies is that cities need help in connecting environmental and public health experts and community-based organizations. An integrated strategy would measurably reduce energy consumption and public health risks (e.g., heat stress, asthma, respiratory ailments).

17. Communities lack resources to pay for trash/removal services, thus ending up with litter and illegal dumping because they may not have resources themselves to deal with trash pickup or recycling. This trash then impacts water quality and causes other environmental problems (e.g., pests).

18. Illegal fish harvesting/taking small juveniles or protected species is a problem. A lack of knowledge on local fish regulations or harvesting guidelines, or a lack of enforcement, contributes to this issue.

19. There is high turnover in employment in Tribal Water programs.

20. At ORD, there seems to be a lack of broad-based citizen participation in both project development and implementation. Many of the citizens knew that ORD was in their backyards sampling the stream

and gave permission to do so, but they were never fully educated on the results or importance of that work. These pilot projects are somewhat worrisome mainly due to the fact that ORD continues to go into areas for short periods of time and then leave. Some of the projects do not have measurable goals and have no early visible results. There are no institutional measures within EPA for staff to be evaluated on the sustainability of a project, or whether the community sees or has early visible results that directly impact the community. Small grants may be given to communities, but then the grant is over and some of the projects stop existing. The presence and absence of federal agencies in and out of the community makes building partnerships impossible in some cases.

21. Education is a huge barrier to sustainability. Federal regulations are complicated and not explained well to the public. Public hearings are held and people are notified, but they are not given the skill set to review changes to regulations or even know how or on what they should be commenting. Some community members in Region 7 mentioned at the Environmental Justice Showcase that they are dealing with multimedia problems that are addressed only one media at a time. They may have water that is unsuitable for recreation or fishing, air quality problems, and the effects of sprawl (highways, energy infrastructure) that have the biggest impacts on the urban core. If the community is not connected to the environment in positive ways, there are no reasons to find a way out. Trash is still dumped, urban gardens are vandalized and so on.

22. There is a lack of town planning that incorporates inclusive, well-informed discussion followed by collaborative decision making. This scenario can lead to land use codes, ordinances and comprehensive plans that incorporate sustainable development requirements but lack full support and are not enforced as well as in those communities that had inclusive, well-informed, collaborative decision making.

23. Lack of funding (both at the government level and the median household income level) is a sustainability challenge.

24. There is a lack of political support and awareness on the part of governmental decision makers (and the general public) of the tangible, measurable benefits of sustainable communities (e.g., better water quality).

25. There is inherently a weak link when a lot of the sustainability efforts are championed by a local leader who will unavoidably cease to lead at some point. Whether through death, a career move, retirement, or personal difficulty, many efforts lose their sustainability when they lose their champion. Do codes successfully keep projects alive past the leader's departure? Do they limit creativity or further efforts to grow in sustainable practices (i.e., putting in concrete today's best practice prevents tomorrow's best practice from being considered)?

26. Sustainable practices need to be as easy as the ones that EPA would like to limit. It is easy to change to compact fluorescent lights, so more people do it voluntarily. Sustainability is about people voluntarily choosing the better practice. So how easy is it to do the sustainable thing? Compare the choices and approaches that real communities make. How quickly was a town able to build the new fire station on the old abandoned gas station plot versus how quickly was a town able to build the new fire station on the Greenfield at the edge of development?

27. There is a lack of knowledge or understanding of an issue (i.e., it is not on citizens' radar, such as water quality beyond drinking water or landscape ecology).

28. Issues are communicated in ways that lack relevance to community members and do not meet their values.

29. There is a lack of structure to support doing something different (i.e., most "good behaviors" can really only be executed by those who show extraordinary commitment, sacrifice and determination—early adopters are great, but sustainable means bringing something into common access).

30. Poverty/lack of resources is an obvious barrier.

31. There are standards of affluence that dictate aesthetics and design (e.g., impenetrable lawns and huge parking lots).

32. Poor public transportation services are used only by those who have to.

33. Lack of safety is a barrier.

34. There is a lack of time, governance structure and leadership on the neighborhood level.

35. Lack of connection to nature is a sustainability barrier.

36. There is a lack of governance to define and communicate community values—most people operate on what is good for "me and mine."

37. With local economies suffering and sales/property taxes reduced, many governments are scaling back on services heretofore considered "necessary" (e.g., libraries, pools, full city government employment). Some government leaders are concerned that planning to spend on "sustainable measures" in such an economic environment will be considered frivolous by many citizens. For example, cities have deleted sustainability coordinator positions and merged environmental protection offices with those of other functions.

38. Communities are very stressed financially and even though payback periods for many "sustainable measures" may be relatively short, there is insufficient public capital to invest initially. Stimulus funding has relieved that stress somewhat, but many municipalities are delayed in spending those funds or are having to divert funding to cover other financial commitments.

39. Energy service contractors (ESCOs) have been widely employed as a way to realize energy and cost savings. However, many communities are still uncomfortable with the ESCO arrangement. Ironically, some local communities are opting to forego very low-interest loan programs for energy efficiency because they are hoping to receive more federal grant money. A few examples include: (1) The State of Texas Loan Star Fund for low-cost loans to municipalities has reportedly registered a drop in applicants, even though the available money in the fund has doubled in size; (2) The Fort Worth City Council recently voted not to accept $24 million in Department of Transportation (Tiger) funding for a downtown street car system, ostensibly because the Council was not confident of securing additional funding to finish the project and to support operating costs.

40. There are inefficiencies in any organization. However, in many cities, there are many different departments with overlapping and confusing mandates. Departments of Housing, Streets, Water and Environment may compete with one another for funding for sustainability measures without much, or any, city-wide planning. Under such circumstances, funded projects tend to be isolated and unconnected with long-term goals. These ideas may reflect local elected officials' individual district concerns, rather than a sustained economic and environmental benefit to the city as a whole.

41. Although many Metropolitan Planning Organizations (MPOs) and Councils of Governments (COGs) can and do provide effective leadership, often external leadership is useful in helping focus local entities. Federal and state agencies can serve as "conveners of stature" to help communities initiate and implement sustainability projects, with assistance from the private sector. Some EPA examples of this concept working well include: Dallas Sustainable Skylines Initiative (Region 6); Blue Skyways Collaborative (Region 7, Region 6); New England Community Energy Challenge (Region 1); Green Team (Region 2); and Rocky Mountain Green Venues Partnership (Region 8).

42. There is a lack of will—although a community leader in Corpus Christi, Texas, dedicates his time to assisting colonia residents in Nueces County, the colonias are unable to obtain assistance with clean drinking water or adequate septic systems and drainage because there is no will at the county level. The County claims that they cannot afford to assist the colonias because residents in colonias bring in so few county tax dollars.

43. A large portion of working-age residents experience high levels of unemployment/under-employment and widespread job skill deficiencies. Current data indicate that the unemployment rate in the City of Port Arthur, Texas, is 14.4 percent, exceeding the national level. In the city's Westside neighborhood, the unemployment level is approximately 25 percent.

44. There is a high incidence of poverty. In Port Arthur's Westside neighborhood, poverty may be as much as one-third of the community's population.

45. Deteriorated housing conditions are a challenge. The declining conditions in the existing housing stock in Port Arthur's Westside neighborhood has occurred during the last 2 decades and were accelerated by Hurricanes Rita and Ike.

46. There is a declining trend of public/private investments. It has been difficult to stop and reverse this declining trend in Port Arthur's Westside neighborhood and Central Business District.

47. Port Arthur's Westside neighborhood residents have raised concerns as to whether they are being subjected to environmental hazards because of the

proximity of their homes, churches and schools to industrial facilities. Also, data and sometimes conflicting claims from community organizations and industry add to concerns.

48. There is a lack of overall knowledge. Many communities do not have the ability to dedicate an individual(s) knowledgeable in and capable of gaining support from citizens, city councils, community leaders and so forth to initiate and maintain a sustainable, healthy community program. Many communities do not have the technical and financial means to conduct outreach, gather and synthesize data, utilize data to update or create new ordinances/policies and generate competitive grant applications.

49. At the state and local levels, the health folks do not talk to the air planning/policy folks. There can be a great deal of divergence between the people who plan for better air quality and those who are either implementing policies through permits/inspections or through treatment/remediation (e.g., indoor air quality assessments, health assessments). Ultimately, this disconnect leads to unsustainable communities and programs.

50. Region 7 Community Action for a Renewed Environment (CARE) Program grant recipient issues include:

    - Outdoor air quality (point source, burn barrels, mobile sources)
    - Diesel emissions
    - Stormwater (flooding, infestations; human health issues: viruses)
    - Area source pollution
    - Point source emissions
    - Area source emissions
    - Storing, working with and exposures to pesticides
    - The protection of drinking water
    - Mobile sources
    - Blight/sprawl
    - Secondhand smoke
    - Indoor air quality
    - Derelict/dilapidated properties (solid waste haven, safety concerns, rodent infestations, abandoned/unused, underutilized, in disrepair, inadequate home maintenance)
    - Lack of trash collection/waste management (trash/waste, lack of recycling, hazardous waste)
    - Lead (poisoning)
    - Brownfields
    - Excess trash and its disposal; stray animals
    - Household hazardous waste (and its disposal, or lack thereof)
    - Arkansas River water quality
    - Children's health/healthy housing
    - Lack of residential compostable waste
    - Electronic waste
    - Exposures to toxins (air quality, pesticides)
    - Fire protection (lack of accessible water)
    - Flooding
    - A lack of local organic food sources
    - Lack of green space: lack of outdoor recreational space, habitat, walking/hiking access
    - Groundwater
    - Mold
    - Pharmaceuticals and personal care
    - Lack of public awareness and investment in environmental health
    - Outdoor recreation: loss of green space, habitat, walking/hiking access
    - Radon
    - Stormwater
    - Unintentional home injuries
    - Vapor intrusion
    - How to improve waste reduction
    - Wastewater (lack of infrastructure for, human exposure to)
    - Water scarcity
    - Water quality/quantity (includes Pharmwaste contamination)

51. One challenge for creating nationwide sustainability is that too often the focus is on urban sustainability. It is achievable, it is where the resources are and it is where more people can be affected by using less. The American people want the government to do more with less. Therefore, the focus becomes urban environments where goals are attainable. It is not that EPA should steer away from urban initiatives; however, the biggest challenge lies in rural America. Job loss and creating new jobs is often talked about, but what if it is no longer possible to create jobs in some rural communities? Jobs cannot be created where there are none. When jobs disappear, so do people, and left behind are dilapidated ghost towns that dot the country, filled with collapsing and deteriorating buildings and infrastructure that have little to no chance of ever becoming revived, not to mention sustainable. This affects not only the environment, but also curb appeal, and interspersed throughout these towns remain impoverished families who are left without the option to leave. What then

exists is a town that: (1) most people have abandoned to find work elsewhere; (2) no longer has appeal due to deterioration; (3) does not have a realistic chance of job creation; and (4) the surrounding environment suffers through neglect. How are these types of communities sustained, or should they be? Can they be ignored, or are they part of the overarching issue?

52. The United States is addicted to oil. This country is a very "disposable society" and has a very strong "consumption appetite."

53. Urban sprawl is hurting America. Since World War II, housing, land use and transportation policies have all contributed to environmentally unsustainable growth patterns and inequitable urban development. In addition, this has created health issues for many. Obesity and diabetes are both chronic diseases that are impacting most Americans because of the way the country has developed. Asthma and other respiratory diseases cause significant health issues for many, along with children, who now suffer from a nature deficiency.

54. Citizens need to look forward and envision more Environmental Sustainability, Opportunity and Inclusion within their communities.

55. Overall, many pressing socioeconomic problems need to be addressed at the local level, which include good schools, economic opportunity, environmental quality/quantity, crime, poverty, affordable housing, foreclosures and the lack of resources to address these issues. Communities need to be healthy and safe (e.g., reduce poverty); have good services (e.g., police, fire, hospitals, schools, water, trash, energy, communications, prisons); offer residents job opportunities, learning opportunities, and respect or create a "sense of place;" and be animal-friendly in both housing and public spaces.

56. Communities need to preserve/conserve natural spaces and historic places; have multi-modal transportation options (e.g., walk, bike, transit); be inclusive for all people of all races and ages; become less car-dependent; construct buildings that are more energy efficient and more environmentally friendly; and preserve and protect natural resources. Communities need parks and recreational areas, as well as good infrastructure (e.g., transportation, communications, municipal services, fresh food access, clean drinking water).

57. Consumer demand for more environmentally-friendly options (e.g., energy efficiency) needs to increase. Buildings and neighborhoods need to meet the Leadership in Energy and Environmental Design (LEED) or Energy Star standards. Hospitals that are practicing green health care are needed, as are businesses and industries that have a small environmental footprint, farms and access to fresh food.

58. Gross domestic product (GDP) needs to be replaced with an index that reflects "quality of life," not quantity of material items.

59. Communities need to "take responsibility for their actions" and they have to "own the New American Dream." Current buildings and infrastructure need to be repaired and retrofitted. Communities need to get to zero waste and be prepared for climate change.

60. Lack of town planning that incorporates inclusive, well-informed discussion followed by collaborative decision making is a barrier to sustainability. This scenario can lead to land use codes, ordinances and comprehensive plans that incorporate sustainable development requirements but lack full support and are not enforced as well as in communities that have inclusive, well-informed, collaborative decision making.

61. Often, members of the community do not understand what sustainability means, or what actions might result from a community initiative to promote sustainability. Sustainability, for many, is some kind of "tree hugging" environmental term that has no impact on their lives. It is a vast topic in which it is easy to get lost. Misconceptions include the idea that business interests and sustainability are at odds with one another. For local governments and the community to work towards sustainability, they must engage key stakeholders to define agreed-upon goals and articulate those goals to increase understanding to a broader audience. Educating all stakeholders to break down the boundaries of narrow focus takes time, which is daunting to some, but necessary to create a shared vision to move forward collaboratively to recognize the economic, environmental and societal value for sustainability.

62. Local governments face the challenge of turnover in their governing bodies. As elected officials move in and out of the organization, political momentum can be altered or lost all together. This momentum is critical for getting community buy-in to create changes towards environmental sustainability. Political leadership is a required element to realize sustainability, and the community must be

able to weather political turnover and maintain momentum. Local governments must take the lead on sustainability issues for real community change to be successful, which includes taking risks.

63. In the past, some local governments, especially smaller communities, have worked predominantly in a crisis management cycle, where resources, if available, are used to respond to crisis situations. A sustainable approach requires more upfront time to plan ahead, such as with infrastructure asset management. Breaking the crisis management cycle by implementing a proactive approach without a pending crisis is not easy. Communities must be encouraged to start small and implement proactive initiatives over time to make lasting changes.

64. Local governments struggle to find startup funds for sustainable projects that might require a larger upfront investment to realize long-term cost savings. Often, community leaders do not see the long-term benefits of a short-term investment. Community leaders need to have access to practical examples of similar projects and resulting outcomes to aid in the decision-making process. Staff also may not have knowledge of the variety of financial options available, such as performance contracts, which are outside of the normal methods they use and another barrier to implementing sustainable projects.

65. Community decision makers (mostly local and state officials) need the "business argument" data to convince themselves and others that sustainable decisions can be economically possible in the short and/or long term. Infrastructure cost information is particularly minimal. Land use and infrastructure scenario planning/modeling is a really important tool.

66. Communities have a difficult time considering environmental impacts (e.g., air quality, wetlands, water quality) within the same process as land use, transportation and housing planning.

67. Communities would often like to "do the right thing" with respect to sustainability, but there are some major gaps to actually adopting these practices. Two major gaps are: (1) costs (both initial costs and long-term cost); and (2) performance information.

    On costs: In an effort to save money, many communities often opt for the initial low-cost option because that is what is familiar and what shows up on their budgets, while ignoring what the longer term maintenance costs might be (assuming that longer term costs should be lower for sustainable solutions). Of course, initial costs should be lower once knowledge improves and adoption increases, but laying this out would help communities make smarter, long-term decisions.

    On performance: Fair or not, sustainable development practices are held to a "prove it first" standard before adoption (whereas conventional practices are accepted as the standard). Having information on performance for these types of practices (e.g., effectiveness, longevity and geographical differences) will help inform communities to make better choices.

    There are many declining cities that are starting to realize that their economic and population base will not be what it was at its peak and that the costs and support required to maintain the infrastructure of their communities are bankrupting the cities. "Shrinking" a city is obviously difficult, but moving whole communities and consolidating resources is complicated, especially when there are historical, emotional and economic ties. Even if from a sustainable (re)development standpoint, is this necessary to survive a changed economic base?

68. Sustainable approaches are sometimes seen as too costly to implement.

69. Many communities struggle with community ordinances that preclude the use of practices that are more environmentally beneficial or that promote healthier communities.

70. Planning for new roadways most often does not include considerations of the need to install water, waste, electricity, cable, IT and other appurtenances, and their long-term maintenance costs for a community. This is inefficient and often underestimates impacts to communities and the environment.

71. It is often difficult for low-income communities to garner investment dollars because they may not be seen as safe, viable options for vendors or businesses, are less accessible and so forth.

72. Many low-income or minority communities are not well educated in environmental science and therefore may be less aware of or concerned about environmental issues and health challenges that they could overcome.

73. There has been concern about the reuse of Brownfields for urban gardens, which might expose the public to contamination via the harvested food. This may limit the movement toward urban gardening.

74. Many communities also have siting, permit or ordinance-related barriers to the establishment of urban gardens.

75. Another barrier related to urban gardens is the lack of understanding among the public and political leaders/decision makers of the health benefits of urban gardens.

76. There is increasing interest in creating sustainable communities and in funding projects that appear promising vis-à-vis achieving the stated goals. EPA needs to determine the fundamental elements that need to be in place for a community to effectively move toward sustainability.

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