

Neighborhood Sustainability Indicators Guidebook

How To Create
Neighborhood Sustainability Indicators
in
Your Neighborhood

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Produced for the Urban Ecology Coalition (Minneapolis)

by Crossroads Resource Center
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Urban Ecology Coalition (Minneapolis)

Founded in 1994, the Urban Ecology Coalition offers educational forums and practical strategies that promote the long-term sustainability of our city.

Partners involved in this Neighborhood Sustainability Indicators Project include:

Seward Neighborhood Group
Longfellow Community Council
Lyndale Neighborhood Association
Minnesota Office of Environmental Assistance
The Green Institute - Environment and Transportation Committee
Neighborhood Revitalization Program
Minneapolis Center for Neighborhoods
Minneapolis City Planning
Sustainable Resources Center
Crossroads Resource Center

UEC selected Crossroads Resource Center to coordinate this project, which is funded by:

Minnesota Office of Environmental Assistance
Dayton Hudson Foundation
Neighborhood Revitalization Program

Crossroads Resource Center has worked with community-based groups since 1972, offering research, training and technical assistance promoting community self-determination. Crossroads originated groundbreaking analyses of local economies, the *Neighborhood Income Statement and Balance Sheet* studies.

Who is this guide designed for?

The purpose of this guidebook is to help build strong, self-determined, sustainable communities. We think this is best accomplished when local residents, public officials, community-based or academic researchers, funders, and other stakeholders work together in an inclusive, respectful, flexible and open process. This guidebook is written with all these stakeholders in mind.

*We invite comments and suggestions
about the
Neighborhood Sustainability Indicators Guidebook.
Please contact us if you need further information about the project*

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The Neighborhood Sustainability Indicators Guidebook

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Urban Ecology Coalition
Minneapolis, Minnesota

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Executive Summary

The Urban Ecology Coalition's Neighborhood Sustainability Indicators Project (UEC-NSIP) in Minneapolis is apparently the first U.S. effort to engage residents directly in defining indicators of neighborhood sustainability for their own communities. By defining linkages among issues that have previously been seen as independent, NSIP has built a more coherent understanding of the links between society, environment and economy in two locales that front the Mississippi River. At the same time, this integrative approach helped bring together more than 100 residents, technical experts and professional researchers to work in a collaborative, synergistic manner.

This Guidebook is a report on this project that offers practical tools to neighborhood organizations or research professionals who may wish to define sustainability indicators in other urban or rural locales. Basic concepts and approaches used in NSIP are defined, and first-hand stories identify important qualities of the project.

Four types of neighborhood sustainability indicators were developed:

- (1) **Data Poetry Indicators** are highly linked indicators that are most useful for local stakeholders. They have the quality of transforming the discussion of the neighborhood's future toward a more long-term view.
- (2) **Core Indicators** are linked indicators useful for local residents as well as for external investors, funders and researchers. These more readily allow for comparisons among diverse communities.
- (3) **Background Indicators** offer interesting background information that helps define the context in which sustainability initiatives take place. These are useful for both internal and external stakeholders.
- (4) **Deep Sustainability Indicators** assist local stakeholders to define a longer-term vision for life in their community. These are often very highly linked and look far to the future. Years of activity may be required to realize progress in such indicators.

In addition, two original indicators were defined:

- (1) **Friendly Spaces indicator** (Seward Data Poetry Indicator No. 1) measures through a periodic survey the gathering spaces in the neighborhood that invite people to meet each other or become better acquainted with the neighborhood.
- (2) **Affordable Housing Indicator** (Core Indicator No. 4) assesses whether local rental and ownership opportunities are affordable to residents of all income levels.

Getting Started

What this guide can offer you

If your neighborhood is exploring indicators, this book is for you. Getting started, you may imagine you are wading for the first time into an unknown lake. You may wonder where to take your first steps, and be uncertain where the deeper pools may lie, hidden by the surface waters. You may feel you are working in isolation. We hope this booklet offers a trusty guide at such a time.

Many groups across the country are turning their attention to indicators. Some groups want to build more solid partnerships by making clear agreements about what they hope to accomplish. Others want good ways of measuring what they have accomplished. Others are responding to pressure from funders to be prove that a dollar invested yields a suitable return. Still other groups want to convince future residents or investors that their neighborhood has a good quality of life.

This guide, useful for all of the above reasons, is focused upon one specific challenge: *how do neighborhood residents ensure that their neighborhood becomes more sustainable in the long term?* Developed for urban neighborhoods, we feel it is also useful for small towns, rural counties and suburbs -- any locale where grassroots people are active in defining a long-term future for their community. Useful for local residents as well as external investors, this is a guide, but not a recipe. Please adapt this freely to the conditions in your own locale.

As a summary of the experiences of residents and professionals in five neighborhoods in Minneapolis, Minnesota, this book is only an early answer to this question. All we can do is share what we have learned in our first steps into the rapids. In future years, with more practice, we will be able to offer even better information. Your experiences in developing neighborhood sustainability indicators will add to the storehouse of what we all know.

As far as we have been able to determine, we are the first project in the U.S. to engage neighborhood residents in defining their own indicators of sustainability. This puts us at a creative edge. Based on our experience we have adapted previous definitions of sustainability. Our approach to sustainability indicators tries to:

- Focus on neighborhood **assets** rather than deficiencies;
- **Engage local residents** in thoughtful planning;
- Express **values** that have been formally adopted by community residents;
- Identify the **linkages** among issues that are often seen as separate in neighborhood action (i.e., "housing," "economic development," "transportation," and "public safety.");
- Focus on the long-term **future** of the neighborhood; and
- Work toward equitable **distribution** of resources, opportunity and wealth for the current generation as well as for future generations.

In our experience, this approach has yielded results very different from other approaches, particularly those that impose indicators on communities from outside (those that are designed strictly by professional experts with no reference to the neighborhood's vision, or those that are imposed by funders or policy makers).

Welcome to the *Neighborhood Sustainability Indicators Guidebook*.

Sustainability Indicators:

- **Focus on assets**
- **Engage local residents**
- **Express community values**
- **Integrate across diverse issues**
- **Focus on the future**
- **Assess distribution of resources and opportunity**

Our steps towards neighborhood sustainability indicators

Seward Neighborhood Group (SNG)

One of the most established neighborhood organizations in the city of Minneapolis, Seward Neighborhood Group dove into the process of defining indicators with uncommon energy. Having completed three years of a five-year program funded by the city's Neighborhood Revitalization Program (NRP), Seward was beginning to look toward the next phases of activity. "We've made great progress in our first few years of NRP," recalled director Debbie Wolking, "But something was missing. We were so busy trying to get our plans off the ground, we never had time to step back to think about where we truly want to be over the long haul." Defining indicators seemed useful to SNG in measuring the progress they had made, but also in helping them build for the future. "Indicators are one way of building consensus around our long-term goals, and evaluating the impact of our local action," Wolking said.

At the very start, the Seward indicator group realized something so basic it caught them short. "For the past three years, we've had a housing program, an economic development program, and a public safety program," Wolking explained. "Each has been run by a separate committee with a separate budget. Each committee has accomplished a great deal, but we've been so busy getting things done we've never stopped to look at how these various efforts relate to each other. The committee members never meet together to identify ways in which the housing goals might reinforce our transportation goals."

"Indicators are one way of building consensus around our long-term goals, and evaluating the impact of our local action...."

The group seized the indicators process as a chance to take this time to reflect. As Wolking recalled, "We were so busy writing our plans and accomplishing our goals we lost track of how it all fits together, or where we were heading in 50 years. Nothing in the NRP planning process encouraged us to look at the linkages between issues. We can't afford to work in such a disconnected way in the future."

"We've been so busy getting things done we've never stopped to look at how these various efforts relate to each other."

For this group of residents, the indicator planning process was a time to assess 39 years of community organizing and development, and to begin to sketch a long-term vision. Participants expressed eagerness to have the opportunity to think at a deeper level, away from the pressure of implementation deadlines. During focused discussions that resembled a graduate field seminar, neighbors shared searching conversations and made tough decisions about what really mattered to the community. Other residents and businesspeople who could not meet with the group were also interviewed to bring in their perspectives.

"Even if we never use a single indicator the process has given us so much," concluded Diann Anders, a resident leader. But the group did in fact define ten carefully chosen indicators of sustainability, including two nationally innovative measures. Soon they will consider dozens of other indicators for use as supplementary data. Having completed a random survey of their community to learn what residents consider some of the sustainability issues of their neighborhood, SNG is now integrating indicators into their everyday work.

At Crossroads, we felt privileged to work with such a sophisticated group of residents who were willing to take time away from dogged volunteer demands to reflect, learn and dream together. The long history of SNG certainly helped, as did the fact that the organizational goals were clear.

"Even if we never use a single indicator the process has given us so much."

Our definitions of "sustainability"

One of the joys of the sustainability movement is to learn how many different definitions people use of the term *sustainability*. We have not spent much of our time trying to develop a firm definition, since our favorite ones seem to reflect strong common understandings.

Our basic definition of sustainability is taken from the World Commission on Environment and Development (WCED) document often called the Brundtland report after the name of its chair, Gro Harlem Brundtland.¹ This 1987 report essentially began the global discussion of sustainable development. Recognizing there are limits to the earth's ability to absorb the impacts of human activities, and addressing world poverty as one of the most significant problems in today's world, the Brundtland commission pointed out that *equity* is an essential ingredient of sustainability.

The Brundtland definition states that "sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs." Our colleague Patricia Love calls this, "Having your cake and sharing it, too."

Also central to most definitions of sustainability is the concept that in a sustainable world, our lives will be more integrated. Sustainable Seattle's working definition shows this linkage of three important spheres of life: "The long-term social, economic, and environmental health of our community." Other groups would add a fourth sphere, either "cultural," or "civic."

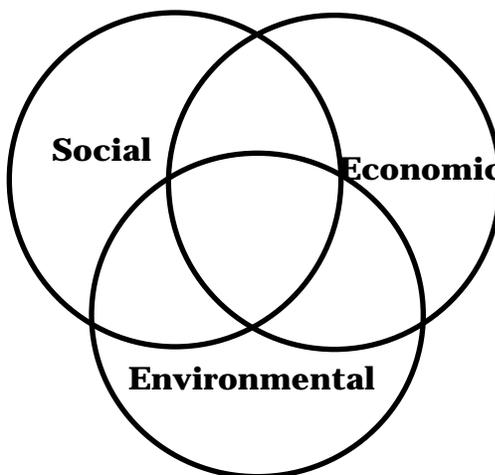
"Sustainability is the long-term social, economic, and environmental health of our community."

All told, we believe there are six defining characteristics of sustainability:

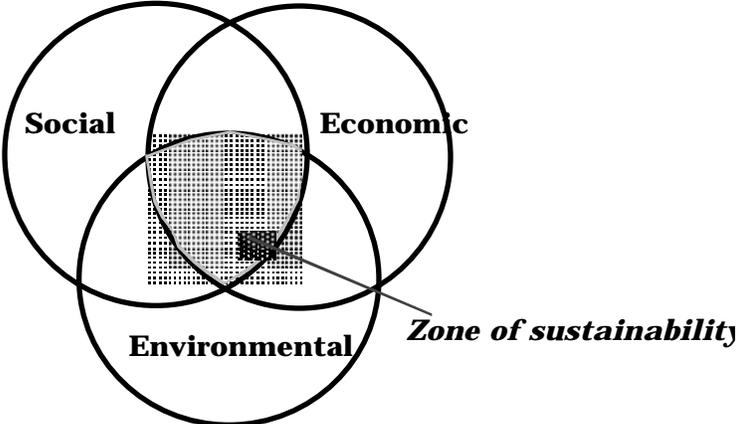
- (1) **Asset-based:** Begins by considering existing assets, then addresses deficiencies;
- (2) **Engages diverse stakeholders** in respectful, mutual, flexible and open decision making processes;
- (3) **Express values** that have been formally adopted by neighborhood residents;
- (4) **Integrating:** illuminates linkages among multiple issues;
- (5) **Forward-looking:** focuses on long-term future change, not evaluation of the past; and
- (6) **Distributional:** works toward equitable distribution of resources and wealth, not only for the current generation but also for future generations.

There are at least three ways of imagining the interdependence of the social, economic and environmental spheres. Each of these is useful, so we show all three.

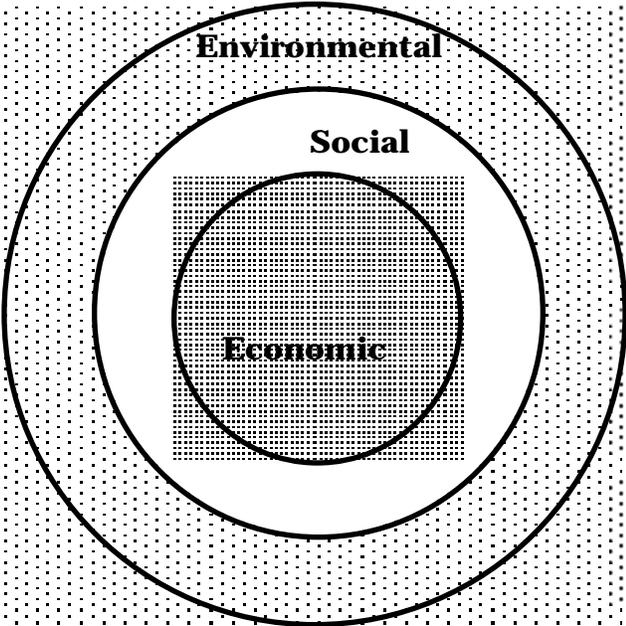
- (1) As three interlocking circles, representing the social, economic and environmental domains:²



(2) As the three circles below, showing "sustainable space" as the area where the three domains overlap. In this view, the further communities advance toward sustainability (i.e., bring the three domains into harmony with each other), the larger the "zone of sustainability" becomes:³



(3) As three concentric circles, showing that both the social and economic domains are (a) human creations and (b) dependent upon the natural environment:⁴



The final question is, how does all this work in the practical context of a neighborhood? Or, to put things in another way, why does it matter to define sustainability at all? Seward, once again, provides us with an illustration. As the Seward resident task force deliberated on the linkages among the issues they face, they began to understand that their efforts to improve public safety, conditions for youth, environmental health, housing and economics were all limited by how well neighbors knew and cared for each other. Neighbors who watched events on the street, reported suspicious activity to the police, and joined actively in block clubs often were more motivated to recycle, fix up their homes and to shop at local stores.

Building a cohesive neighborhood had long been one of SNG's goals, but task force members began to discover that these networks among local residents were vital tissue connecting hundreds of ongoing community improvement efforts. In short, by *measuring how cohesive* the neighborhood is, Seward could learn more about its success in reaching other goals. SNG decided to measure how close neighbors were to each other, and to measure the public and private spaces in the community that encouraged people to build positive connections with each other. Their assumption is that this measurement may prove to be more central to housing improvement than the number of dollars invested in homes, or the budget of the police department.

What are neighborhood indicators?

Indicators provide evidence of conditions or problems. Indicators may be *qualitative* (a canary suffocating in a mine shaft offers good evidence that toxic gases are near) or *quantitative* (having the average human's normal body temperature of 98.6 degrees suggests health).

There are also limits to how useful indicators may be. Indicators offer a snapshot or a glimpse of a larger situation, but don't offer absolute understanding. Measuring the temperature of the air at ground level does not tell you how cold it is at the nearby mountain top. Indicators can help measure change over time, but don't measure end objectives. For example, a speedometer can show that a car has accelerated from 35 mph to 55 mph, but cannot show the car's destination.

In a neighborhood context, indicators help evaluate whether local actions are having the effects desired. A neighborhood can use indicators to help determine what conditions exist and whether the direction the neighborhood is headed is consistent with community goals. Indicators can allow a group to hold itself, its public officials, its funders and supporting institutions accountable to neighborhood goals. Finally, indicators can also be used as a reporting tool that can help build consensus for an action strategy.

We like the concept of "nested" indicators that address issues requiring measurement at different scales. In a set of nested indicators, each indicator is appropriate to the scale of the questions being asked. For example, if the median income in the state of Minnesota is rising, that might indicate that statewide consumer spending will remain strong. But this number would not at all reflect the fact that half of the residents in a certain neighborhood may live below the poverty line.

What are neighborhood sustainability indicators?

Having defined these two terms, *sustainability* and *indicators*, we also needed to know what we mean by *sustainability indicators*. One of our lessons on this topic came from Henry Lickers, director of environmental affairs of the Mohawk Council Akwesasne, who spoke at a conference sponsored by the Minnesota Office of Environmental Assistance (OEA).⁵ Lickers recalled growing up in an indigenous community in Maine where the lives of local residents were closely connected to natural eco-systems. As tribal elders discussed the various balancing and interlocking forces that affected their survival, and as they reflected on the history of their locale, they concluded that their lives were closely tied to the local moose population. "If the moose population was in balance with the wolf population," Lickers explained, "we knew we'd be all right." If moose were healthy and plentiful, that meant the local soil, water, air and forests were probably in balance, and the people themselves would tend to be healthy. Local hunters would have adequate game, so no one would go hungry. Moose hides could be made into clothing, tallow into soap.

Another example that inspired us was the indicator selected by Sustainable Seattle:⁶ the number of wild salmon returning to spawn in the Puget Sound watershed. Following similar reasoning, local leaders concluded that if the count was adequate, then water quality was likely to be acceptable to humans as well as salmon. If enough salmon ran upstream, wildlife and

humans that depended on the fish for food would eat. Fishermen would get income, processors would stay in business, and poverty would be staved off. If water quality was good, that meant erosion from forest, farm and urban land in the watershed was within acceptable limits. Adequate water meant rainfall was more likely to be adequate. And so forth.

The two examples above are excellent examples of sustainability indicators since they express complex relationships in a concise way. Following the lead of Maureen Hart, we have called such indicators "data poetry," and invited our neighborhood partners to develop "data poetry" indicators for their own neighborhoods.⁷ These indicators transform our awareness by showing the interrelationships among issues that often are considered separate. They are defined by people who live within the community, tapping their experience and traditions, and meeting their needs for explaining the relationships they live among. Each indicator speaks about strengths before examining problems, and looks to the future rather than dwelling on the past.

Often indicators projects do not use sustainability as a central theme. We found the writing of Kate Besleme and Megan Mullin quite helpful in understanding different types of indicators. Besleme and Mullin identified three categories of indicators:⁸

- (1) **Local sustainability indicators** are centered on a vision for the community's long-term future, and address the linkages between various issues.
- (2) **Quality-of-life indicators** differ from sustainability indicators in addressing shorter-term goals and by not needing to show linkages between issue areas.
- (3) **Performance evaluation**, most often initiated by government [or other outside party] are intended to determine how efficiently a jurisdiction is delivering a particular set of goods or services.

Three categories of indicators:

- **Local Sustainability**
- **Quality of Life**
- **Performance Evaluation**

A more formal definition came from Virginia Maclaren of the University of Toronto:⁹ "Urban sustainability indicators can be distinguished from simple environmental, economic, and social indicators by the fact that they are: integrating, forward looking, distributional, and developed with input from multiple stakeholders in the community."

Some people, we have found, reject the idea of sustainability indicators because they fear their efforts will be judged as inadequate if results are measured. Indeed, we have seen indicators be used in a judgmental way, but do not feel this has to be so. In our experience, the most fruitful indicators build upon the strengths of the community and are defined with strong involvement by a diverse cross-section of residents and other stakeholders. Such indicators may be used to hold outside investors accountable to a neighborhood vision. Judgmental indicators are almost always those imposed from outside, are often backward looking, focused on problems rather than solutions, and frequently ask if neighborhoods will be accountable to investors, without addressing mutual accountability.

Thus, we have extended Maclaren's definition on the basis of our experience. To us, neighborhood sustainability indicators are:

- (1) **Asset-based:** Begin by analyzing existing assets, addresses deficiencies later;
- (2) **Engaging to residents and other diverse stakeholders:** Defined with strong involvement by a diverse cross-section of residents and other stakeholders, with the benefit of professional assistance as appropriate, in respectful, mutual, flexible and open decision-making processes;
- (3) **Express local values:** Measure progress toward neighborhood values adopted by local residents;
- (4) **Integrating:** Illuminate linkages among multiple issues and help define integrated responses;
- (5) **Forward-looking:** Focus on long-term future change, not evaluation of the past; and
- (6) **Distributional:** works toward equitable distribution of resources, opportunity and wealth, not only for the current generation but also for future generations.

Sustainability indicators do not just measure change. They also describe the direction the community is moving in a way people understand, and set in motion processes that help ensure that the goals of the community will not just be achieved but that progress will continue.

In our project, we defined four types of neighborhood sustainability indicators: Each of these indicators responds to different needs, and may be useful for different audiences:

- (1) **Data Poetry Indicators** are highly-linked indicators that are most useful for local stakeholders.
- (2) **Core Indicators** are linked indicators useful for local residents as well as for external investors, funders and researchers. These more readily allow for comparisons among diverse communities.
- (3) **Background Indicators** offer interesting background information that helps define the context in which sustainability initiatives take place. These are useful for both internal and external stakeholders.
- (4) **Deep Sustainability Indicators** assist local stakeholders define a longer-term vision for life in their community. These are often very highly linked and look far to the future. Years of activity may be required to realize progress in such indicators.

These will be explained in more detail below (*See pages 19-20, and Appendices A-G, pages 23-53*).

How the UEC neighborhoods defined indicators

"This is the future!"

The county official swept his hand over the draft list of indicators that had been developed in the Neighborhood Sustainability Indicators project by June, 1998. The list in his hands was cluttered with scribbled notes, the result of extensive critical comments he and a group of professional researchers had given us. Proudly raising his head, he proclaimed, "This is the future."

This official engages county employees in systematic efforts to connect more closely with residents and community organizations. Based on his experience, he felt the county was years away from being able to engage residents so thoroughly. He treasured the way that residents were involved in all phases of our initiative, from setting up the research approach to determining the long-term neighborhood vision to creating, reviewing and selecting indicators, and his infectious energy filled the room.

At this meeting of the Twin Cities Research Group, a network of professional researchers and statisticians who work for various public agencies, nonprofits and private firms, we collected a wealth of searching comments, and were asked some hard questions about the purpose and utility of our indicators. As a result of their comments, our list of proposed indicators improved a great deal. This kind of open cooperation marked the best moments of our effort. This section will describe some of the processes we followed to get to where we are today.

If you are embarking upon similar work in a different community, we hope our stories will be instructive, but not used as a recipe for your community. Each community has its own unique assets, context, issues, personalities and capacities. Local action must be tailored to these unique conditions. We are convinced there is no single formula for how a community should define sustainability indicators, and yet we also feel our experience raised several fundamental issues that would arise in any context.

The birth of our effort in Minneapolis

The Urban Ecology Coalition (UEC) of Minneapolis formed in 1994, the outgrowth of an environmental coalition that formed to build a more sustainable city. Desiring to move away from pure education efforts toward action, the UEC surveyed all the Twin Cities environmental groups and neighborhood organizations, to learn what issues loomed as most important to their work. UEC convened the respondents in a conference, "Creating a Sustainable City: Strategies for Environmental Action," which drew an unexpectedly large crowd of 180 people. In the ensuing discussions, UEC members concluded that framing indicators of sustainability would be a useful tool in strengthening local environmental action.

After many months of strategic planning and fundraising, support for an indicator project was obtained to accomplish two purposes:

- (1) To assist Minneapolis neighborhoods or communities that seek to become more sustainable to develop indicators to assess progress toward their own sustainability goals; and
- (2) To encourage the City of Minneapolis to adopt neighborhood-defined sustainability indicators as official indicators.

The group that obtained this funding was an informal coalition without a legal structure, representing a mixture of environmental organizations, neighborhood groups, and professionals. A social service agency had initially offered to house this project, but a change in organizational priorities made this impossible, so the group sought out an administrator for the project, selecting Crossroads Resource Center to direct the effort.

Selecting neighborhood partners

At this point, there was only one neighborhood directly involved with the UEC, and the coalition felt it would be useful to test the concept with other neighborhoods. A "Request for Partners" (RFP) was sent to all Minneapolis neighborhood organizations, inviting them to participate. Seven neighborhoods wrote back asking to be involved, and several others expressed interest, a much larger response than anticipated. After interviewing each of the applicant neighborhoods, we selected two communities as core neighborhood partners, and asked the other five neighborhoods to join us as "secondary" partners. Promising to work closely with our core partners to help them define a slate of neighborhood sustainability indicators for themselves, we also offered technical assistance to any secondary partners that wished to pursue their own project.

As part of this application process the UEC developed three criteria for selecting neighborhood partners. These criteria were:

- (1) **Capacity:** Does the potential neighborhood partner have *sufficient capacity* to both *serve as a partner* and *implement* the indicators that are to be selected? We decided this was a threshold criterion; that is, if there was insufficient capacity the application would go no further.
- (2) **Constituency building:** Does the potential neighborhood partner have the capacity to assist UEC in building a city-wide constituency to support the development and implementation of indicators on a city-wide level?
- (3) **Conflict of Interest:** The UEC Sustainability Indicators Working Group must ensure that the selection process does not suffer from conflicts of interest, nor appear to be limited by such conflicts of interest.

The two core partners selected were Seward Neighborhood Group (SNG) and the Longfellow Community Council (LCC), representing the Cooper, Howe, Hiawatha and Longfellow neighborhoods.

Secondary partners included the Mississippi Corridor Neighborhood Coalition (a group of 19 neighborhoods bordering the Mississippi River as it flows through Minneapolis, who had already written an award-winning master plan for protection and development of the river corridor), the Green Institute's Environment and Transportation Committee (the institute is developing an environmentally-friendly industrial and office park in a low-income neighborhood and pursued their own indicator development effort), and the Lyndale Neighborhood Association (a pioneering neighborhood organization nationally, LNA has been involved with a national Success Measures Project that aims to expand the scope of community development activities).

Lessons learned

We learned some important lessons in this process:

- (1) We learned that it is difficult to create sustainability indicators without involving a neighborhood organization that fairly represents a broad cross-section of its community. If a local group does not have the capacity to engage a diverse and representative set of community stakeholders, it is quite difficult for "sustainability" to be addressed in a thorough way.
- (2) The neighborhood organization should have developed, or must be willing to develop, a long-term vision for its future. If the neighborhood has not yet set goals, it is impossible to relate indicators to those goals. In fact, in both Seward and Longfellow the indicator selection process challenged neighborhood goals.
- (3) There must be the capacity for data to be generated, stored and analyzed, either in the neighborhood organization itself, in city departmental offices, in a local data center, professional consulting firms, or academic institutions. Again, this capacity may be built as part of the indicator selection process, if funds are allotted for that purpose.
- (4) A neighborhood must be willing to address issues of long-term sustainability, and must be prepared to engage in these issues over the long haul. This is not a one-shot event.
- (5) Framing such a long-term vision is difficult unless sectarian or narrow self-interests cannot be subdued for the sake of a broader purpose.

- (6) This process works best if local residents are in command of the process, drawing upon professional expertise as appropriate. It is very difficult if professionals try to command this process, which can then become a hollow exercise to select indicators without reference to local experience. A balance between the two must be struck, one that recognizes and codifies neighborhood assets and local wisdom, and builds new capacities in the community itself, while meeting the test of following appropriate professional standards.

How Seward neighborhood structured its process

Seward Neighborhood Group has been organized for 39 years, and has a strong sister organization, Seward Redesign, that has been a leader in community development efforts. Such extensive experience offered a definite advantage to our indicator selection process. Residents feel closely connected to SNG, and the organization has sufficient capacity to launch such initiative with some comfort. Neighborhood goals are clearly spelled out, and express a relatively long-term view. SNG was in the third year of an NRP program, beginning to make plans for a hoped-for second five years of funding (*See page 6 above for an overview of issues in Seward*).

Seward formed a Sustainability Indicators Task Force that consisted of staff and resident leaders from the neighborhood's working committees. The assumption of this process was that participants would be able to reflect on the work of their committees, finding common threads that united them, and exploring ways to develop an even longer-term vision for the community, with implementation plans that would more closely link the work of the various committees (currently focused upon specific issues like housing, economic development, and so forth).

The Seward group first reflected on the assets their neighborhood holds, and how sustainability could enhance them. This was fairly easy since Seward's goals directly address strengthening the neighborhood's unique character and resources. Next, Seward examined their existing neighborhood goals, identifying ways they felt these goals were linked to each other. They also reflected on how they currently gauge whether their work is successful or not -- i.e., what "indicators" are currently in use, whether consciously so or not. Seward also examined one commonly used indicator (average home sale price) and learned that this indicator did not offer a complete picture of the housing needs of the neighborhood, and did not effectively relate to SNG goals. Each participant was asked to draw a picture of their image of what Seward would look like if it were more sustainable in the future. We also examined existing neighborhood assets and how to strengthen them.

Following these exercises, we brainstormed a list of specific indicators that we might consider is assessing neighborhood sustainability. Each proposed indicator was placed on a master list without judging whether it was useful or not, and over several meetings we developed a list of perhaps 100 indicators of our own inspiration. Honing in on selected indicators from this list, the group addressed whether each was adequate to express the complex issues at work in the community, and how well each corresponded to Seward's goals. Residents considered systems theory and asked themselves how to intervene in a system of interlocking forces to change that system in a positive way. The group also discussed which data sources would be most practical to use.

After our second meeting, resident leaders felt both stimulated by the discussion and conflicted about its outcomes. Here is a sample of comments made by participants in an evaluation session: (1) "We're thinking in a whole new way here. That is very exciting." (2) "I'm impressed with how smart you all are." (3) "I'm in a daze." (4) "This was difficult at first, but now I think I understand what we are doing and I think we're over the hump."

**"We're thinking in a whole new way here.
That is very exciting."**

At this point, the group met other neighborhood delegates and professionals at the UEC's first annual Neighborhood Sustainability Indicators Roundtable in February, 1998. This roundtable allowed neighborhoods to exchange insights, consider each others' proposed indicators, to learn about other indicator initiatives, and to address some of the difficult issues that arise when attempting to define indicators. This thoughtful conversation involved 65 people, representing a wonderfully wide variety of neighborhood groups, nonprofits, consultants, scholars and public officials, and generated critical information and cautions that framed the basic issues we were to approach. (Contact Crossroads for a copy of the minutes.)

Following the Roundtable, the Seward group returned to sift through the lists of proposed indicators, consider which ones were most highly linked to SNG goals, which ones would be most practical to implement, and which would be most useful in bringing people together.

SNG also discovered, as they were engaged in this conversation, that several important stakeholders were not at the table. As representative as the task force was, several key constituencies had not particular voice in the process. So, the decided to hold special meetings with several groups of neighbors who otherwise would not be heard. Nine community meetings were planned with businesses, high-rise residents, other renters, elders, churches, people of color, a growing immigrant African community, disabled residents and youth. Lack of staff time has prevented all of these meetings from being held, but several key indicators came from the special meetings that did occur.

Defining the links among issues

One of the tools we used interviewing proposed indicators was a simple linkage analysis that had been developed by a group in Alberta, Canada, and made available to us through Maureen Hart.¹⁰ This was performed by listing all of our indicators in one column, and then drawing seven more columns on the right side of the page (*See Seward's Data Poetry Indicators in Appendix A*), one column for each of SNG's goals. As we considered each proposed indicator, we checked off in the right hand columns whether this indicator linked with specific SNG goals. The more checks an indicator received, the more highly linked it is, and the more it seemed to express an integrating vision for the community.

Obviously, this is a fairly elementary analysis, one that worked well in our process. Although we can imagine that decades of future research may help us to identify more specific linkages among issues in Seward (for example: what is the link between home improvement loans and public safety efforts? How would reducing the number of cars free up money for community development?), this seemed like a good first step.

Another tool that may be useful in indicator selection, especially given resident interest in systems theory, is the "state-pressure-response" model. We did not actually use this approach in our work because the linkage analysis seemed more suited to our context, but this is a model used quite successfully in the environmental sciences. (*See Appendix H for a brief overview of this approach.*)

Referring to Maureen Hart's web site <<http://www.subjectmatters.com>> we also reviewed what is required to define an effective indicator. Using this information -- our linkage analysis, our personal experiences with neighborhood work, availability of data -- and common sense, and after hours of stimulating and sometimes difficult conversations, we whittled the list of indicators down to successively shorter lists we could all agree upon. In the end, Seward chose

10 "data poetry" indicators. We are not sure this is enough to adequately reflect the complex issues in the neighborhood, but it seemed like a long enough list to be meaningful and instructive, and a short enough list to be practical to implement.

Seward neighborhood decisions:

- **Defined 10 Data Poetry Indicators**
- **Developed original data**
- **Surveyed random sample of residents**

One of the key questions we faced in this selection process was the availability of data. Once again taking a cue from Maureen Hart, we decided not to limit ourselves to available data. Since neighborhood sustainability is a relatively new concept, it does not appear that existing data sources are adequate. Nor is sufficient data available at a neighborhood level, particularly between census years, to address local issues. We discovered we would have to generate original data, so we embarked upon a random survey of Seward residents.

At the writing of this guide, all data have been collected but not fully analyzed. The data certainly appear to be representative of the neighborhood, and cooperation from Seward residents was impressive. We sent out 600 surveys to a neighborhood of 3,000 households, receiving 200 returns immediately, prompted by a pre-survey announcement postcard and one reminder postcard. Obtaining another 100 responses took a great deal of telephoning effort on the part of student interns, volunteers and one paid assistant, to get us to a random sample of ten percent of all Seward households.

To collect the most complete list of households possible, we purchased several data sets with the financial assistance of the Neighborhood Revitalization Program. We purchased all postal addresses, all residential telephone listings, were donated a list of properties by the city, and cross-referenced these with existing address lists at SNG. Despite the thoroughness of our effort, it is clear we missed some important groups in our first survey. Many renters were omitted from these lists, especially recent immigrants, and many more have moved away. A surprisingly large number of residents do not have telephones, or have unlisted numbers. Our sample was not perfect, being biased toward homeowners and longer term residents, but we are confident the sample is more representative than those used by professional marketing firms.

Two pioneering indicators developed:

- **Friendly Spaces**
- **Affordable Housing**

Other original data sets will also be created. Seward will count the number of "Friendly Spaces" in the neighborhood each year, producing a point total that can encourage more businesses and residences to create neighborhood gathering spaces. An annual tally of bike traffic will help assess how rapidly residents are moving away from automobiles.

Seward is now assembling the data sets needed to make use of these indicators, and trying to create a permanent niche in the organization for the indicator project.

Useful tools for indicator selection:

- **Neighborhood asset analysis and visions of future (page 15)**
- **City-wide roundtable (page 16)**
- **Indicator linkage analysis (page 16)**
- **Generating original data (page 17)**
- **Systems analysis - State-Pressure-Response model (page 54)**

How Longfellow community structured its process

Each community must follow its own process and timetable, and Longfellow structured its work very differently than Seward. An organization that represents four separate neighborhoods (Cooper, Howe, Hiawatha and Longfellow), Longfellow Community Council has a more complex decision process. LCC is not as established as SNG, which poses different opportunities and challenges. While the basic outcomes were very similar in the two neighborhoods, Longfellow will require more time to more fully complete its work.

LCC created its indicators task force by selecting delegates from each of the LCC working committees already in existence (for example, the housing, public safety and economic development committees). Each delegate reported back to their own committee. This process was managed by the LCC board, with relatively less staff involvement than in Seward.

The Longfellow task force began by specifying specific linkages among their neighborhood goals. This turned out to be a far more systematic discussion than Seward devoted to the question of linkage. Potential indicators were then drafted to express these linkages, and evaluated according to their utility in addressing Longfellow's long-term sustainability.

As linkages and indicators were defined, they were taken back to the working committees by each delegate, so much of the actual conversation about the 50 proposed indicators took place in separate rooms, among separate committees. When the task force met it compared notes from these conversations and winnowed the list down to a core of indicators acceptable to most task force members.

As is common with neighborhood organizations, a combination of external events took its toll. Crises that command immediate attention, inadequate funding, pressures of work and family responsibility, and summer vacations all conspired to reduce the amount of time available to work on indicator definition. Nevertheless, the task force pressed ahead, developing a list of 27 indicators that were analyzed for their linkage to neighborhood goals. (*See Appendix B*).

**Longfellow developed 27 indicators,
all linked to local goals**

Although these draft indicators were well linked to neighborhood goals, the project lost momentum to further refine the list. In retrospect, after a break of several months, LCC staff

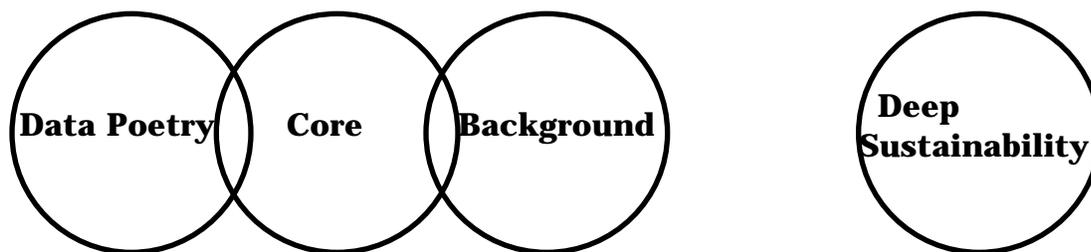
evaluated the process and decided that one reason the effort had floundered was that the indicators did not explain as much as participants had hoped. LCC staff felt the project had initiated a solid discussion that challenged the adequacy of LCC's own goals. Like Seward, Longfellow had seen the possibility of defining more comprehensive, longer-term goals. Developing this more integrated vision is a challenge that is now being considered.

Once LCC itself sets a more long-term course that more closely integrates the work of the various committees, it will perhaps be easier to identify more searching, more concise, and more useful indicators. Clearly, looking at indicators allowed substantial new issues to surface.

UEC's Neighborhood Sustainability Indicators

As the diagram below shows, we have identified four types of neighborhood sustainability indicators.

Four types of sustainability indicators



Purpose	Deepen and transform; Focus ngbhd action	Express Sustainability across ngbhds	Useful background information	Evoke long-term visioning
Links issues Main use	Highly linked Internal	Highly linked Internal & External	Few linkages External	Highly linked Internal & External
Potential limitations	Do not allow comparisons across ngbhds; Focus more on action steps than on a complete picture of local sustainability concerns	It is difficult to define one set of indicators that apply to diverse ngbhds	Less integrating than Core and Data Poetry indicators	May be impractical to implement in short term
Number Defined by	10 Residents	25 Residents & Researchers	45 Researchers	24 Residents & Researchers

Data Poetry Indicators

Following Maureen Hart of Hart Environmental Data, we call interconnected, searching indicators such as the balance of moose and wolves or the salmon count, ***data poetry indicators***. Such indicators have the quality of being both measurable and transformative. Expressing complex relationships in a concise way, data poetry indicators suggest informed, balanced and integrative action. They transform policy discussions so more rooted, more central issues may be addressed.

This is not to say that we think all complex relationships can be, or even ought to be, distilled down to a single number. Many single indexes, like the Gross Domestic Product or the Dow-Jones average, can be misleading, or do very little to represent complexity. But genuine poetic indicators can focus effective action rather elegantly, and we found ourselves striving for them. One good example from our work was Seward's "Friendly Space" indicator (***See Appendix F***).

In our project, we invited our Seward and Longfellow neighborhood partners to develop 5-10 data poetry indicators for their own neighborhood. We hoped, of course, that these would be elegant, transformative indicators closely reflecting neighborhood priorities. Of the dozens of indicators we considered, we selected those that were the most highly linked with neighborhood goals. We sensed that the best use of these indicators was for internal use by residents; that is, they might work well in Seward and Longfellow, but have only limited application in different settings where local goals and opportunities were different. Although professional expertise assisted in the process, these were defined by residents themselves.

We also recognize that certain stakeholders outside the community have legitimate reasons to compare across different neighborhoods. Funders, for example, may want to know if poverty programs in several neighborhoods are adequate to local needs. An investor may want to know if a dollar invested in economic development in one neighborhood will be as rewarding as an investment elsewhere. Or, conversely, a group of neighborhoods may wonder if a certain foundation is favoring wealthier neighborhoods at the expense of low-income areas, or whether a youth program is actually serving the needs of low-income youth in several neighborhoods. A university researcher may wish to compare income equity across several neighborhoods at a time.

Core Indicators

To address such issues, we developed a second category of indicators, which we call ***core indicators***. These core indicators should also express linkages among neighborhood concerns if they are useful as sustainability indicators, but may be less focused on the specific goals of any single neighborhood. Such core indicators should lend themselves to cross-neighborhood comparisons, even if some of the neighborhoods have quite different demographics than others. These required more intense involvement by professional researchers, and were selected by consultants for review by the residents. We have developed an initial list of 25 core indicators.

Background Indicators

Still other useful data does not fit into either of these categories. Knowing the median income of local residents, or the percentage of owner occupancy, for example, may be important even if such numbers do not directly express linkages across several issues. Much of the easily available Census data fits into this mold. To address this need, we created a third category of ***background indicators***. These indicators do not always express linkage well, and may not be closely related to sustainability goals. But they may be essential in understanding the local context. In fact, we thought of these as if "sustainability" were a play on a stage. The central plot is closely tied to the data poetry indicators. Outside critics may make use of core indicators to compare this play with other plays. However, without taking in the design of the stage and the props (the background indicators) both the actors and the audience might be lost.

Deep Sustainability Indicators

Even with these three types of indicators defined, we found ourselves needing another reference point: the *deep sustainability indicators*. These express hopes that we entertain for the future of our communities, but they unlikely to be appropriate as indicators today, since we have not advanced toward sustainability as far as we hope to in the future. For example, one neighborhood, recognizing that a large gap in incomes from the highest to the lowest earners represents a source of instability and crime, may set a goal of reducing income inequality from a ratio of 100 to 1 to a ratio of 2 to 1 (that is, the highest earners would earn no more than twice any of their neighbors). Whether residents considered a laudable goal or not, it certainly will not be accomplished in a matter of a few years. To use "ratio of highest income to lowest income" as a neighborhood indicator in the next ten years may in fact be demoralizing, because residents would see little change. Yet to ignore this indicator when it seems central to neighborhood sustainability also seemed to waste an important opportunity. Therefore, recognizing that sustainability is a long-term commitment, we also developed a list of 24 indicators that keep a long-term vision alive, and may become more useful as a neighborhood moves toward sustainability. We call these *deep sustainability indicators*, aware of the reference to the deep ecology movement. Listing these indicators as an example of very long-term thinking helped us let go of the fact that we could not envision immediate progress toward these eventual goals. They are not meant to create an unrealistic expectation for the future - after all, it is possible that in 20 years the cluster of sustainability issues to be addressed will be so changed by our current sustainability initiatives that a brand new slate of issues will seem even more important. These deep indicators do seem useful in assisting a neighborhood to make a more long-term set of choices.

Refining indicators

Each of the indicators developed, whether by residents or consultants, was revised in a multi-stage process. First of all, as has been mentioned, the initial draft list of indicators was compared with existing lists of indicators (both Maureen Hart and the Urban Institute have developed lists of possible indicators, as have individual city projects) to ensure no major gaps were left uncovered. Comparing our draft list to these indicators, we also evaluated each indicator according to standard tests to ensure that it was clearly defined, that data could be obtained, that the indicator was in fact measurable, that the indicator measured something useful, and suggested local action.

We then asked how well each indicator linked the various goals of the neighborhood itself, as described above. In general, highly linked indicators were more likely to become "data poetry" or "core" indicators. Those that were less linked were not discarded; rather they were listed as "background" indicators and considered for that list.

Finally, we asked several outside experts to review our lists, including national and local consultants experienced with indicators, members of the Twin Cities Research Group, and other data professionals to refine the list as much as possible. Collecting these comments consumed a great deal of time, and was well worth the energy invested. Important new lessons were learned in each conversation. Finally, each neighborhood will review these revised lists, making final decisions about indicators for their locale.

One of the interesting dynamics in this phase was that each person found gaps in our list. "You don't have an indicator that lists [some issue]" was a common response, especially to the data poetry list. Over and over, we found ourselves explaining that we had chosen those indicators that linked the most with neighborhood goals, trusting that among those linkages, specific issues like environment, health, education, culture, and so forth, would be addressed. In this way, we found ourselves becoming more aware of the assumptions each neighborhood had made in the course of defining its own indicators. Further down the road, we may find ourselves reconsidering some of those assumptions with the benefit of future practical experience. We also discovered that the idea of linked indicators, so central to our definition of sustainability indicators, is a relatively new concept, and inspires some resistance or fear, against which we have stood our ground.

To review the lists of indicators we developed, see the following Appendix pages (that will have detailed information regarding each indicator):

<i>Data Poetry</i>	<i>Appendices A & B</i>	<i>Pages 23-26</i>
<i>Core</i>	<i>Appendix C</i>	<i>Page 27</i>
<i>Background</i>	<i>Appendix D</i>	<i>Page 36</i>
<i>Deep Sustainability</i>	<i>Appendix E</i>	<i>Page 42</i>

Conclusion

This guidebook outlines our initial steps toward resident-defined neighborhood sustainability indicators in five Minneapolis neighborhoods. For us, this was a process that raised powerful questions, offered central insights, and also brought a large number of participants into closer partnership. Our initial investment promises excellent returns, leading to more integrated neighborhood revitalization efforts, more sophisticated research into community issues, and of course, more sustainable communities.

Your own initiatives will teach us, in turn. Please keep us informed of your work!

Appendix A

Data Poetry Indicators (Seward Neighborhood)

developed by
Seward Neighborhood Group
in collaboration with
Crossroads Resource Center

[See next two pages]

These ten linked indicators were defined by Seward Neighborhood, and identify the key measures of long-term neighborhood sustainability.

1. "Friendly space." *(See Appendix F, page 49)*
2. Consumption by residents at independent local stores.
3. Purchases from local vendors by local businesses.
4. Number of residents who share skills or barter services with each other.
5. Number of residents who volunteer for church or community service work.
6. Number of residents who plan to stay in neighborhood for a specified number of years.
7. Number of bicycles traveling on key routes compared to number of cars.
8. Number of Seward home-based businesses and resident-managed studio/office spaces.
9. Percent of residents earning living wage.
10. Percent of workers working inside and outside of Seward.

Seward Data Poetry Indicators - Neighborhood Sustainability Indicators Guidebook, page 24
Showing linkages with neighborhood goals

Data Poetry indicator	How measured	Other concerns	All structures in decent condition	Steadily declining crime rate	Enhance positive attributes	Residential development	Social environment	Economic development	Natural environment	Transportation
<p>1. "Friendly space." (See Appendix F, page 49)</p>	<p>Annual visual survey of entire neighborhood, performed by a consistent group of resident volunteers, rating spaces (both private and public) that offer community gathering points or walking destinations. A point system has been developed to make a numeric assessment, and total neighborhood points will be reported to the annual meeting each year. Awards and a registry of public spaces are also being contemplated.</p> <p>Measured by each business or annual resident survey.</p>	<p>Examples of friendly spaces: (1) Park (2) Restaurant with outdoor seating (3) Public art or mural (4) Attractive art in a private yard (5) Bike path.</p>	X	X	X	X	X	X	X	X
<p>2. Consumption by residents at independent local stores.</p> <p>Seward Neighborhood Group / Crossroads Resource Center</p>	<p>Measured by each business or annual resident survey.</p>	<p>Requires dialogue with local businesses.</p>	X							X

Seward Data Poetry Indicators, continued - Seward Neighborhood Sustainability Indicators Guidebook, page 25
Showing linkages

Data Poetry indicator	How measured	Other concerns							
3. Purchases from local vendors by local businesses.	Measured by each business; reported in annual business survey.	Requires dialogue with local businesses.	X					X	X
4. Number of residents who share skills or barter services with each other.	Annual resident survey.	May be worth valuing in monetary terms.	X					X	X
5. Number of residents who volunteer for church or community service work.	Annual resident survey.	Break down by (1) Youth (2) Adults	X					X	
6. Number of residents who plan to stay in neighborhood for a specified number of years.	"How long do you plan to live in Seward?" question on annual resident survey.	Report: Less than one year 1-2 years 3-5 years 5-10 years 10-20 years 20 or more years As long as I live	X					X	
7. Number of bicycles traveling on key routes compared to number of cars.	Annual count of bike riders and cars during first week of May (or first warm weather). Count on the following routes: Franklin at 27th River Road/sidewalks at 22nd Mathews Park (all four streets) End of Midtown Greenway	Requires dedicated core of volunteers or paid staff. Report commuters, recreational cyclists and shoppers in separate categories. Report as value of vehicles and/or emissions?	X					X	X
8. Number of Seward home-based businesses and resident-managed studio/office spaces.	Annual business survey with information from business development staff at SR.	Importance is the link between home and work.	X					X	X
9. Percent of residents earning living wage.	Annual resident survey (Possibly Minnesota ES-202 data as it becomes more available), combined with Livable Wage definition by Twin City Jobs Now.	Survey will report household income, not individual; better sources to be developed.	X					X	X
10. Percent of workers working inside and outside of Seward.	Annual resident survey. Also data from local employers.	Suggests dialogue with local employers.	X					X	X

Seward Neighborhood Group / Crossroads Resource Center

Appendix B

DRAFT Data Poetry Indicators (Longfellow Community)

developed by
Longfellow Community Council
in collaboration with
Crossroads Resource Center

[See next two pages]

This initial set of linked indicators were defined by Longfellow Community residents to identify the key measures of long-term neighborhood sustainability.

Neighborhood Sustainability Indicators Guidebook, page 27
Longfellow Community Council - Draft Data Poetry Indicators
Showing linkages with neighborhood goals

Proposed Indicator	Safety	Environment Transportation	Housing	Sense of Community	Youth/ Families	Sense of Well-Being	Know Neighbors	Improved Access	Stronger Relationships	Bus. Devel. Focused on Local Needs	Protect & Preserve Community History	Accountability
Quality of water leaving Longfellow through storm sewers		X			X	X						X
Number of birds (cluster of sensitive species)		X			X						X	X
Number of empty storefronts	X					X		X		X	X	
Number of professional and personal services		X		X		X		X		X		
Ratio of family-owned to franchise restaurants											X	
Ratio of locally-owned to non-locally owned restaurants	X			X			X		X			
Number of calls to local graffiti removal team and city	X	X				X					X	X
Number of books checked out at East Lake library	X	X		X	X		X	X				
Number of hours worked in a week	X			X	X		X		X			
Ethnicity of business owners				X				X			X	
Per-capita fossil fuel consumption		X	X									X
Number of houses not in good repair	X		X			X					X	X
Number of houses at risk for condemnation	X		X			X					X	X

Longfellow Community Council – Draft Data Poetry Indicators - Neighborhood Sustainability Indicators Guidebook, page 28
Showing linkages with neighborhood goals

Proposed Indicator	Safety	Environment Transportation	Housing	Sense of Community	Youth/ Families	Sense of Well-Being	Know Neighbors	Improved Access	Stronger Relationships	Bus. Devel. Focused on Local Needs	Protect & Preserve Community History	Accountability
Pct. of parents volunteering at their childrens' schools	X			X	X		X		X			X
Pct. of adults involved in youth activities affecting more than their own kids	X			X	X		X		X			
Pct. of children involved in organized community activities	X			X	X		X	X	X		X	
Number of domestic disturbance calls	X				X	X						X
Pct. of eligible children enrolled in Head Start					X	X		X				X
Number of residents involved in simple living activities		X	X			X						X
Pct. of residents consuming locally produced food		X				X						X
Pct. of families living in poverty	X		X		X	X		X				X
Number of people working out of their homes	X	X		X	X		X			X		
Hours of TV/videos/games during evening or weekends				X	X		X		X			X
Number or percent of families engaged in out-of-house recreation	X				X	X			X			
Family participation in organized leagues					X		X		X			
Recreational opportunities that meet diverse income levels and interests				X	X		X	X	X			
Number of hate crimes in community	X			X		X					X	X

Appendix C

Core indicators of sustainability

Based upon our experience in Seward and Longfellow, these indicators offer ways of assessing neighborhood sustainability both inside neighborhoods and across neighborhood boundaries.

1. Percentage of residents who feel safe in their neighborhood.

Although extensive crime data are publicly available in the Twin Cities, and are certainly useful in targeting public safety resources, Seward residents decided that a more central measure of sustainability would be how safe residents perceive themselves to be. Perceptions are often key to the choices residents make in securing their properties, and choosing lifestyle options. Moreover, asking this question creates a regular conversation between the neighborhood organization and the residents, leading to new understanding and action.

2. Percentage of block clubs with a scope of activity broader than crime prevention.

Our experience is that block clubs that limit themselves to crime prevention concerns miss opportunities to link their work to other important neighborhood issues. Without detracting from public safety, a broader view can help build new community cohesion.

3. Number of residents who share skills or barter services with each other.

As a community capacity building effort, formal barter exchange is well within the means of a low-income neighborhood. This also builds community cohesion, and can be accomplished during depressed economic times.

4. Profile of diverse and affordable housing opportunities. (Cost and availability of housing of diverse styles and price levels.)

This indicator was developed originally for this project after Seward and Crossroads Resource Center reflected together on the inadequacy of commonly used housing measures. *See Appendix G* for a more detailed description of this indicator. Its aim is to assure access to diverse styles of housing for people of all income levels -- especially seniors, local renters, people of color and local youth who wish to make permanent homes in the community.

5. Percentage of neighborhood children attending schools in neighborhood.

Clearly this indicator has a double edge. Our discussions concluded that building neighborhood cohesion in Minneapolis currently requires adults to work together to frame educational approaches for neighborhood youth. This seems more powerful if local elders work directly with local youth. We are well aware that this may be inappropriate in a highly segregated community, where "community control" (a different concept) has been used as a way to exclude people of color. Still, we are not convinced that busing schoolchildren is an appropriate way to address segregation, and we do feel the city has more effective tools to promote integration.

6. Percentage of students from neighborhood who changed schools at least once during school year.

With some schools in the Twin Cities facing turnover rates as high as 80 percent each year, student mobility has itself become an obstacle to building community, not to mention educational attainment. As a neighborhood gains greater stability, this rate should go down, leading to more effective citizen action toward long-term goals.

7. Percentage of babies born at adequate birth weight.

As an indicator of the health of mothers, their new children, as well as the future health of community residents, this measure reflects social, economic and environmental factors.

8. Number of modalities of alternative health care available within 20-minute ride on public transport.

Easy access to alternative health care, especially care that is culturally appropriate or performed by community healers, is essential if consumers are to have empowered health care choice. In some areas, access to a corporate clinic or hospital may be a more sensitive measure of health care, but in a highly developed medical system like the Twin Cities, this currently seems to be a better measure of access.

9. Percent of residents earning living wage.

If residents are not earning a living wage, then a number of other concerns loom, from health to nutrition to child care to recreation to public safety. We defined a living wage to be the amount of money needed to meet basic essentials, plus enough to save 4 percent of income, because building local wealth is important to building a strong community over the long term.

10. Percentage of neighborhood children eligible for free school lunch.

This data is kept by public school districts, and is readily available and can often be reported by race. It offers both a glimpse of student nutrition, stands in as a measure of adult income levels, useful between census years (Students whose families earn at less than 185 percent of the poverty level are eligible for free school lunches).

11. Number of residents receiving welfare benefits and estimated amount received.

Hennepin County compiles statistics on welfare benefits paid that can be reported as estimates by neighborhood. This offers useful information on the amount of public money flowing into communities, and also stands as an indicator of economic well-being. Such data also suggest to what extent neighborhoods could offer support services to poorer residents.

12. Percent of residents working inside and outside of neighborhood.

Building stronger linkages among local residents and businesses is a sound way of building community cohesion and also community capacity. Such links also may help reduce public safety concerns, and promote community wealth building.

13. Average time of travel to work by neighborhood residents.

Not only is this an indicator of resident commitment to the community, it also suggests fossil fuel energy use, when used in conjunction with other available data on modes of transportation to work.

14. Number of neighborhood home-based businesses and resident-managed studio/office spaces.

This is a measure of resident investment in the community, a measure of how many souls work in the neighborhood during the day (which can be both an economic and a public safety advantage), and will also suggest information about the connection of arts to community life.

15. Consumption by residents at independent local stores.

This indicator also assesses linkages built between residents and businesses, and begins to measure how well money cycles through the local economy. Local shopping may also reduce auto use, encourage bus or bicycle use, reduce public safety concerns, lower infrastructure costs, and build commitment to and stability in the community.

16. Purchases from local vendors by local businesses.

As well as encouraging purchases by local consumers important, it is important to build connections among local firms. Many of the most effective economic regions globally feature clusters of businesses that provide services and goods to each other, reinforcing local loyalties, offering many of the same benefits mentioned for indicator #15, above.

17. Average price at nearby stores for a "market basket" of basic foods.

This indicator offers a rough sense of how local prices change over time -- essentially a measure of the local cost of living. In low-income communities, this is also a way of tracking whether merchants engage in price gouging. In all neighborhoods, this is useful in tracking whether household incomes keep pace with inflation.

18. Skills and capacities sought in new hires by local businesses.

If local businesses are to hire local residents, especially local youth, that suggests the need for conversations among local schools, training firms, parents and students to identify which employee skills will be most useful for neighborhood businesses to flourish.

19. Capacities and skills built among local residents by local nonprofits.

Nonprofits can play a central role in building the capacity of local residents to manage local affairs, learn governance, and to build personal capacities. The better this is measured, the better will be the nonprofits' claim for funding. This could be reported as the number of dollars devoted to specific capacity building activities (for example, learning work skills, gaining managerial experience, or building individual savings accounts). Collecting such data also invites close conversations among neighborhood leaders and residents about the missions of local nonprofits and to what extent they are addressing resident concerns.

20. Number of lenders actively making home and/or commercial loans in neighborhood.

Home Mortgage Disclosure Act (HMDA) data, reported each year by census tract, offers a thorough listing of loans made for home purchases and rehabilitation, and commercial improvement. Measuring such reinvestment is key to assessing investment in the community, and participation by local lenders in community improvement. This plays a central role in building the local economy. This particular indicator tracks the *number of lenders* making loans. If an area is being disinvested, the number of lenders is likely to be reduced. In a more competitive lending market, more lenders should be present.

21. Amount of money residents and new buyers borrowed for home purchase and repair. (*Number of loans and amounts*)

HMDA data also tallies the *amount* of loans in dollars made by census tract. See indicator #20 above.

22. Toxins released by nearby industrial firms.

If there is one single measure that seems most central to environmental protection (and we are not sure there is!) we would say it is the amount of toxins released by local firms. Many neighborhoods have developed "good neighbor" agreements with local firms who agree to reduce toxin production or emissions.

23. Lead content in neighborhood soils.

This is another single measure that links the health of children, the possibilities for food production, pollution prevention and long-term sustainability. Due to effective citizen organizing, this data is increasingly available.

24. Annual utility consumption.

Measuring annual consumption of gas, electricity, water, waste disposal, and other essential utilities suggests conversations about reducing usage, developing alternate sources, and so forth.

25. Number of practicing artists living or working in neighborhood who either:

- **Earn at least 15% of income from art;**
- **Owner or part owner of neighborhood studio/sales outlet/gallery;**
- **Work actively with neighborhood youth in arts education; or**
- **Are active in community visioning/planning or art installations.**

This is a practical measurement that shows the active engagement of artists and creative energy with the life of the community.

Proposed Core indicator, page 6 (Guidebook, page 38)	How measured	A: Arts & Culture	B: Civic Capacity	C: Diversity	D: Economic Development	E: Education	F: Governance	G: Health	H: Housing	I: Human Capital	J: Natural Environment	K: Public Safety	L: Social Capital	M: Transportation	N: Public Works
<p>25. Number of practicing artists living or working in neighborhood who either:</p> <ul style="list-style-type: none"> • Earn at least 15% of income from art. • Owner or part owner of neighborhood studio/sales outlet/gallery. • Work actively with neighborhood youth in arts education. • Are active in community visioning/planning or art installations. 	<p>Annual survey of local artists plus review by neighborhood organization. Measure of community to creative process.</p>														

Appendix D

Background Indicators

(These indicators are less linked than the core indicators, but offer useful background information for interpreting sustainability indicators. They are not described in detail since each is fairly self-explanatory.)

- 1. Number of residents active in community organization.**
- 2. Number of active block clubs.**
- 3. Number of residents participating in National Night Out.**
- 4. Resident mobility rate.**
- 5. Ratio of Renter-occupied to Owner-occupied households.**
- 6. Ratio of homesteaded to non-homestead properties.**
- 7. Percentage of neighborhood residences that are vacant and/or boarded.**
- 8. Profile of household income levels.**
- 9. Hours of work required to meet basic needs at three prevailing wage rates.**
- 10. Employment.**
- 11. Unemployment rate.**
- 12. Estimated total consumption by all households in neighborhood.**
- 13. Children under 5 in poverty.**
- 14. Number of live births.**
- 15. Population by Gender.**
- 16. Population by Race.**
- 17. Population by Age.**
- 18. Number of households.**
- 19. Number of families.**
- 20. Number of households by head of household (married, male, female, non-family).**
- 21. Number of households by marital status with children under 18.**
- 22. Number of households by number of persons.**
- 23. Number of households by head of household and number of related children.**
- 24. Number of households by age of head of household.**
- 25. Aggregate household income.**
- 26. Aggregate household income by race.**
- 27. Aggregate household income by type of income.**
- 28. Number of households earning each type of income.**
- 29. Median income by Census tract.**
- 30. Occupation.**
- 31. Median monthly owner costs.**
- 32. Aggregate contract rent and median gross rent.**
- 33. Monthly owner costs.**
- 34. Year householder moved in.**
- 35. Estimated market value, tax capacity, and taxes payable for residential, apartments, and commercial properties in neighborhood.**
- 36. Blood lead levels among neighborhood children.**
- 37. Population of fragile species (or a cluster of common species).**
- 38. Number of environmentally remediated sites.**
- 39. Pounds (or volume) of waste hauled from community.**
- 40. Water quality in nearest major body of water.**
- 41. Air quality at nearest collection point.**
- 42. Water quality of tap water.**
- 43. Energy consumed.**
- 44. Price of crude oil (per gallon).**
- 45. Price of gasoline at local pumps (regular unleaded - per gallon).**

These are by no means the only possible lists of indicators, nor are they necessarily useful in any community unless local residents are involved in shaping and selecting indicators to address local goals. This list reflects both the opportunities and limitations of our neighborhood contexts, and the available resources. We encourage you to adapt these as needed to your locale.

Proposed Background indicator, page 5 (Guidebook, page 44)	How measured	A: Arts & Culture	B: Civic Capacity	C: Diversity	D: Economic Development	E: Education	F: Governance	G: Health	H: Housing	I: Human Capital	J: Natural Environment	K: Public Safety	L: Social Capital	M: Transportation	N: Public Works
43. Energy consumed.	Per household estimates available. BTUs consumed per person, for entire neighborhood (expressed as gallons of gasoline).														
44. Price of crude oil (per gallon).	Wall Street Journal. In US dollars at Bahrain.														
45. Price of gasoline at local pumps (regular unleaded - per gallon).	Annual review. Acts as gauge of cost of living as well as energy costs.														

This list is clearly not exhaustive, but does represent a set of indicators that may illuminate local and regional efforts to advance sustainability. For additional suggested indicators, see the Hart Environmental Indicators web site: <<http://www.subjectmatters.com>>, and other sustainability web sites as listed in Appendix K.

Appendix E

"Deep Sustainability" Indicators

As potential indicators, these may be impractical at the present time. Nevertheless, they offer glimpses of what a more sustainable neighborhood might look like in the future, and may inspire fruitful discussion of future visions. These are meant to be useful in evoking discussion, and are not intended to describe an "ideal" community nor "ideal" indicators.

1. Percent of residents who have regular contact with ten or more of their immediate neighbors.

This is a measure of social cohesion of the neighborhood.

2. Percent of residents who have ever been involved in neighborhood organizing and governance initiatives.

This indicator documents some of the neighborhood's capacity for self-governance.

3. Percent of residents involved lifelong in educational programs.

If the neighborhood is a learning community, this will help to show that fact.

4. Percent of housing built or remodeled following green construction principles (energy efficient, recyclable materials, longevity, flexible uses, minimal repair requirements, aesthetic integrity to place).

The purpose of this is to assess how thoroughly the community has worked to reduce the basic costs of living in the community.

5. Percent of neighborhood's physical surface area that is permeable.

A neighborhood with more green space or garden land, and less space devoted to roads, parking and transport, will better support life cycles and water drainage.

6. Ratio of annual income earned: highest-income household to lowest-income household.

Large gaps between the prosperous and less-prosperous in a community can threaten neighborhood cohesion and stability, and also serve as a public safety risk.

7. Percent of residents owning and operating businesses within neighborhood. (Separate count for cooperative memberships).

As an indicator of resident investment in the community, this will help document local commitment to place.

8. Percent of loans obtained by residents from local credit sources (including individual lenders, credit unions, and local lending institutions).

A community that has healthy internal sources of credit is likely to have more independence of action than one that depends solely on external sources.

9. Economic multiplier for locale: How much additional economic activity in the locale does one dollar generate?

Measuring this may require additional research by specialized experts; this is a measure of how well money recycles through the community.

10. Percent of energy consumed from renewable sources used renewably.

The more a community has developed renewable energy sources, the greater its long-term sustainability. Conversely, high reliance on non-renewable sources can pose a threat to independence.

11. Percent of new wealth produced in local industries using renewable resources and practices.

This is a measure of the ability of local producers to create wealth that stays in the community itself.

12. Percent of residents who walk to local stores to purchase most life essentials.

By reducing energy use, increasing healthy exercise, and building commitment between local residents and businesses, local shopping can help build a stronger community; this indicator measures social cohesion and reduced costs for commercial infrastructure.

13. Percent of local businesses consistently hiring local youth.

If local youth know where they are able to find work, and feel connected to local business owners, and if local businesses invest in building capacity among local youth, then the neighborhood is likely to be safer and more cohesive.

14. Percent of food consumed in neighborhood that is grown within 50 miles of neighborhood (with a separate reporting for food grown inside neighborhood).

Residents who know where their food comes from, and particularly if they know the grower, or even volunteer their labor to help the farm or garden, are less likely to take their nutrition for granted.

15. Percent of children who are aware from first-hand experience where and how their food is produced.

A companion indicator specifically focuses on whether neighborhood youth gain a realistic sense of the sources of their food. Knowledge of life cycles, and cultivating the patience required to produce in natural systems, are also useful sustainability skills.

16. Percent of value from locally-harvested natural resources that is reinvested in community.

Especially in rural areas, this is a useful measure of the extent to which local resource production actually benefits the local community, instead of primarily benefiting external players.

17. Ecological footprint of neighborhood population.

The "ecological footprint" is a new measure that has recently been developed by ecologists to measure the environmental impact of a dense urban center. This is essentially a measure of the number of acres of land required to support a person's lifestyle. In general, U.S. communities require far more land than Third World communities. A smaller footprint is likely to be more sustainable.

18. Percent of toxic materials produced locally that are safely handled, effectively preventing contamination.

The lower the production of toxic materials, the more sustainable is a community. That indicator shows up in our list of Core indicators of sustainability. A more complex issue, requiring long-term research and implementation, is how much of local toxin production can effectively be handled. A sophisticated approach to sustainability will foster such careful recovery and reuse.

19. Percent of households involved in international exchanges.

Although this may seem somewhat distant from neighborhood life, international exchanges play a critical role in fostering more open communication and more peaceful solutions to local and global concerns.

20. Percent of households in which at least member is fluent in one non-English language.

Related to the number of international exchanges is the ability of local residents to communicate with people of diverse backgrounds and cultures, and to have access to opinions formulated in other languages.

21. Number of local foundation dollars committed to partnership with neighborhood for long-term sustainability initiatives.

Foundation policies that focus on short-term solutions often work against stability, especially in lower-income and stressed communities. More stable, long-term commitments are essential in creating healthier, learning communities.

22. Percent of neighborhood organization budget spent for R&D.

Like other institutions, neighborhood organizations can benefit from sustained time and energy to reflect on previous efforts, to launch new explorations and create new solutions to persistent issues.

23. Percent of cultural productions staged locally created by neighborhood artists.

Artists who work in collaboration with community can be a vital source of inspiration, creativity, and integration of neighborhood energies.

24. Percent of residents who regularly celebrate their cultural heritage.

If the neighborhood is a place where ethnic and cultural groups flourish, there is likely to be a strong spirit of independence and accomplishment, which will help residents address sustainability challenges.

Proposed Deep Sustainability indicator, page 4 (Guidebook, page 51)	How measured	A: Arts & Culture	B: Civic Capacity	C: Diversity	D: Economic Development	E: Education	F: Governance	G: Health	H: Housing	I: Human Capital	J: Natural Environment	K: Public Safety	L: Social Capital	M: Transportation	N: Public Works
21. Number of local foundation dollars committed to partnership with neighborhood for long-term sustainability initiatives.	Local foundation partners.														
22. Percent of neighborhood organization budget spent for R&D.	Neighborhood organization data bases.														
23. Percent of cultural productions staged locally created by neighborhood artists.	Artists survey and performance spaces/publications.														
24. Percent of residents who regularly celebrate their cultural heritage.	Annual resident survey.														

Appendix F
Friendly Spaces Indicator
(Seward Data Poetry Indicator Number 1)
Created by Seward Neighborhood Group (Minneapolis),
in collaboration with Crossroads Resource Center, 1998

Friendly Spaces are places and objects that implicitly invite people to participate in the life of the neighborhood. Welcoming interaction or encouraging individuals to pause and appreciate the social and ecological landscape, Friendly Spaces are meant to both enhance the visual character of the neighborhood and to build community. They embody the values of the Seward neighborhood: friendliness, stewardship, diversity, creativity, playfulness and connection with the natural environment.

Friendly Spaces may be *Pockets* (destinations that people seek out) or *Pathways* (spaces that encourage personal reflection as people pass through). They may be found in residential or non-residential locations. Collectively they communicate the idea that Seward is a friendly and safe place for people of diverse ages, abilities, interests -- and is also a community that appreciates the importance of plants and animals to a humane environment.

The Friendly Spaces Indicator supports Seward's Neighborhood Revitalization Program (NRP) social and environmental goals of increasing physical attractiveness and by building community. By developing a neighborhood identity that could be useful in marketing and economic development, the indicator supports the NRP economic goals; by implicitly promoting stewardship of rental properties and improving/stabilizing housing stock, the indicator supports NRP housing goals. By implicitly encouraging pedestrian and bike exploration of the neighborhood, the indicator supports the NRP transportation goals.

Once a year on a weekend during the summer, volunteers will take a visual inventory of the entire neighborhood, walking every block and every alley. These inventory takers will use a checklist and a point system. To be included in the count, the friendly spaces must be visible from a public place (e.g. even though the counter knows there is a bird bath behind a privacy fence, it isn't scored if it isn't visible). In general, points are given to a property for the *presence* of convivial objects, not per object; that is, five bird baths counts no more than one, and separate points are not scored for the backyard and front yard. However, a yard with a boulevard garden, a backyard vegetable garden, and a fruit tree will score specific points for each.

Point System:

Friendly spaces	Points
Residential	
Community garden	60
Boulevard garden	10
Fruit trees	5
Yard garden (back or front)	5
Alley plantings	5
Destination yard art (e.g. the blue butterfly)	10
Decorative or devotional yard art (e.g. plastic Bambi)	2
Yard seating	5
Bench or other seating clearly for public use	10
Alley basketball hoop or other semi-public	5
Open (includes screened) porch or deck	5
McGruff sticker	5
Porch swing	2
Windsock	2
Flag	2

Bird bath	5
Bird house	5
Bat house	5
Bird feeder	5
Commercial	
Landscaped yard, boulevard or parking area	50
Cafe with outdoor seating	30
Garden	30
Windows encourage occupants to watch street activity	20
Parks	
Park with green space	200
With access to recreational body of water	100
Park pavilion with community meeting space	100
Aroma garden or fruit trees	60
Other park pavilion in good repair	50
Presence of permanent public art	50
Temporary public art during year	25
Benches or other seating	25
Picnic tables (<i>one or more</i>)	25
Athletic facilities	25
<i>(For presence of one or more of any type. For example, one basketball court counts the same as five courts; each type of athletic facility counts 25 points.)</i>	
Basketball courts	
Softball/baseball diamonds	
Volleyball courts	
Tennis courts	
Wading/swimming pool	
Playground	
Horseshoe pits	
Sledding hill	
Skating pond/rink	
Indoor sports courts	
Bike trails	
Dog exercise area	
Canoe racks, sailboat moorings, etc.	
Working rest rooms	25
Drinking water fountain	25
Decorative water fountain	25
Wetland / water holding / drainage pond	35
Thick grass cover where grass is supposed to be	10
Perennial plantings	10
Other Public Spaces	
Community garden	60
Cemetery	30
Non-residential garden	30
Outdoor mural	25
Historic statue or monument	20
Historic marker	20
Community bulletin board	8
Green chairs	5

Appendix G

Affordable Housing Indicator

(Core Indicator Number 4)

This indicator of neighborhood sustainability was developed by Crossroads Resource Center (Minneapolis), in collaboration with the Seward Neighborhood Group.

Working in close collaboration with Seward Neighborhood, Crossroads Resource Center developed a new measure for housing sustainability after residents concluded that existing indicators did not adequately address Seward's needs.

The most commonly used housing indicator, home sale prices, is clearly superficial. This simplistic measure is highly quoted, but does not speak well to sustainability issues. Falling home prices may not signify that the neighborhood has become less sustainable, and rising home values may create new tensions that undermine community. In a neighborhood like Seward that is half renters, some indicator of rental rates is also necessary. Nor is it clear that renters are necessarily helped if home sale prices increase.

Moreover, many important social concerns are overlooked by a narrow focus on home sale prices. Very high values may discourage young families and singles from moving in, may make it more difficult for people of color to buy in, may promote racial/ethnic discrimination, and may encourage youth to move elsewhere.

Seward's goal is to ensure diverse, affordable housing opportunities for people of all races and income levels, not simply to see home sale prices increase.

Specifically, Seward is full of dedicated residents who moved in when prices were low, worked hard to maintain the quality of the neighborhood, often at great personal sacrifice, and who committed themselves more to the strength of the community than to building personal wealth. Now some of these families find their investment in the community has helped fuel a rise in home prices to levels they cannot afford. Escalating home values may also place local renters at a disadvantage relative to outsiders with ready cash, making it difficult for the neighborhood to meet its own goals of ensuring that current residents who wish to settle in can do so, building a more stable neighborhood.

Since the market price of homes is determined by a large number of factors outside the control of local residents, Seward residents also asked themselves what was an appropriate measure. Seward may want to say there is an optimal value to home prices, but may have little power to actually keep prices within that limit. The best intervention, we decided, was for Seward to assess whether Seward had sufficient opportunities that were affordable for local residents. So the indicator we developed relates home values to local income levels, and also tracks rent levels in the neighborhood. This does not of course imply that Seward can dictate home sale prices.

Given the current rental market in the Twin Cities, where the vacancy rate is only one percent, renters are experiencing increasing rents as well as increasing competition in finding housing. But very little data is collected concerning rent levels at a local level, so Seward realized it would need to compile its own.

The "affordable housing indicator" is actually three separate measures, all of which are needed for gaining a complete picture of the housing situation and its relationship to local residents.

(1) Home sale prices as a percent of local income

- (a) Using MLS data provided by local realtors, a complete list of home sales in Seward will be compiled including location, sale price, number of days on market, and number of bedrooms.

- (b) Homes sold will be divided into three categories based on sale prices: high, medium and low, each containing one third of the homes sold.
- (c) The median sale price in each category will then be compared to neighborhood income levels as measured by the Seward Neighborhood Survey.
- (d) Factoring in costs of interest, closing costs, and other transaction costs, and assuming that a given household would on average spend one-third of its income on housing, median home sale prices in each category will be expressed as a percentage of the median household income of low, medium, and high income residents.
- (e) Home sale data may also be mapped with computers to show local hot spots or trouble spots in the housing market.

(Note that income data from the most recent Census could also be used as a backup if a local survey is not performed in a given year.)

(2) Rental values as a percent of local household income

- (a) Seward Neighborhood Group housing staff will select 20 rental units in the neighborhood that reflect a diversity of housing styles (*See below*). This will become the standard sample of renters. As individual renters move, the properties will stay on the list, although Seward may alter the list if needed to ensure the most representative sample.
- (b) Each rental household will be interviewed by telephone once a year, and the following questions asked:
 - What monthly rent do you pay?
 - Does this figure include utilities or not?
 - When did you move into your current apartment (month, year)?
 - How much has your rent payment increased/decreased since you moved in?
 - Were you charged an application fee?
- (c) This data will be compiled into a profile of the Seward rental market, showing rent values (median value of the 20 units interviewed) as a percent of renter household income (from the Seward Survey).

(3) Rental property owner survey

- (a) Seward Neighborhood Group will also select a list of 20 property owners with apartment buildings in the neighborhood. This list may of course be modified as property owners change.
- (b) Each property owner on the list will be interviewed annually by telephone, with the following questions asked:
 - What rents do you charge in your building (by number of bedrooms, if applicable)?
 - Do you charge application fees?
 - If so, how much is the fee?
 - What is the average number of applications you receive for each open unit?
- (c) This data will be compiled into a profile of rental issues from the property owners' perspectives, and correlated to the renter survey.

In selecting individuals to interview it is important that there is variety in:

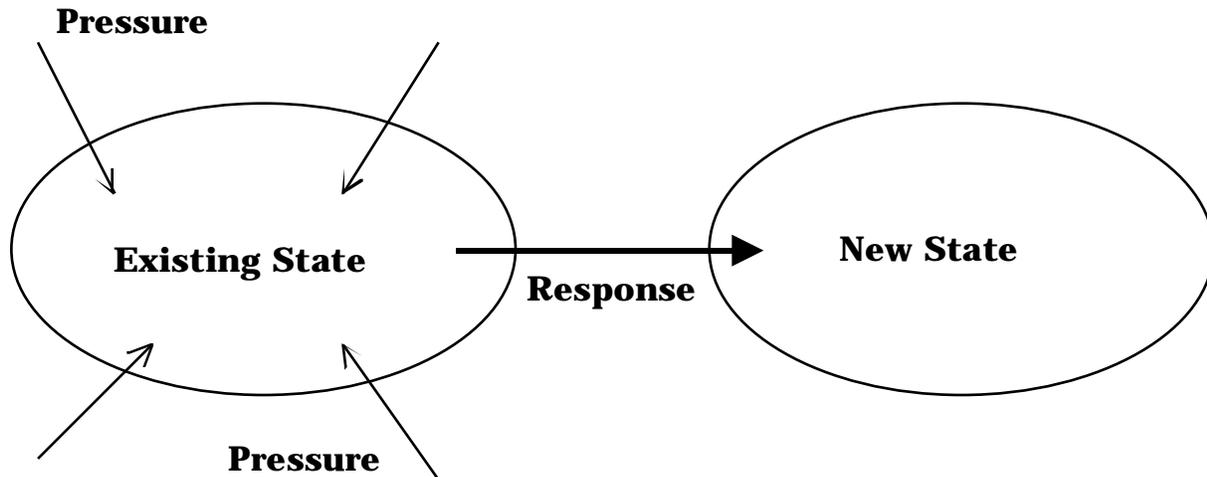
- (a) number of bedrooms (studios to 3 bedroom units or larger).
- (b) number of units per building (private homes to larger multi-unit buildings).
- (c) location of the units within the neighborhood.
- (d) coverage for special populations (new immigrants, single mothers, seniors, etc.)

The purpose of this sampling is not to collect a random sample, but to provide a simple, relatively inexpensive snapshot of the rental housing market that would indicate changes in the rental market over time. Of course, the better the neighborhood does at creating a representative sample, the more useful the data will be.

Appendix H A Systems approach

(1) One "State-Pressure-Response" Model:

A system responds to external pressures



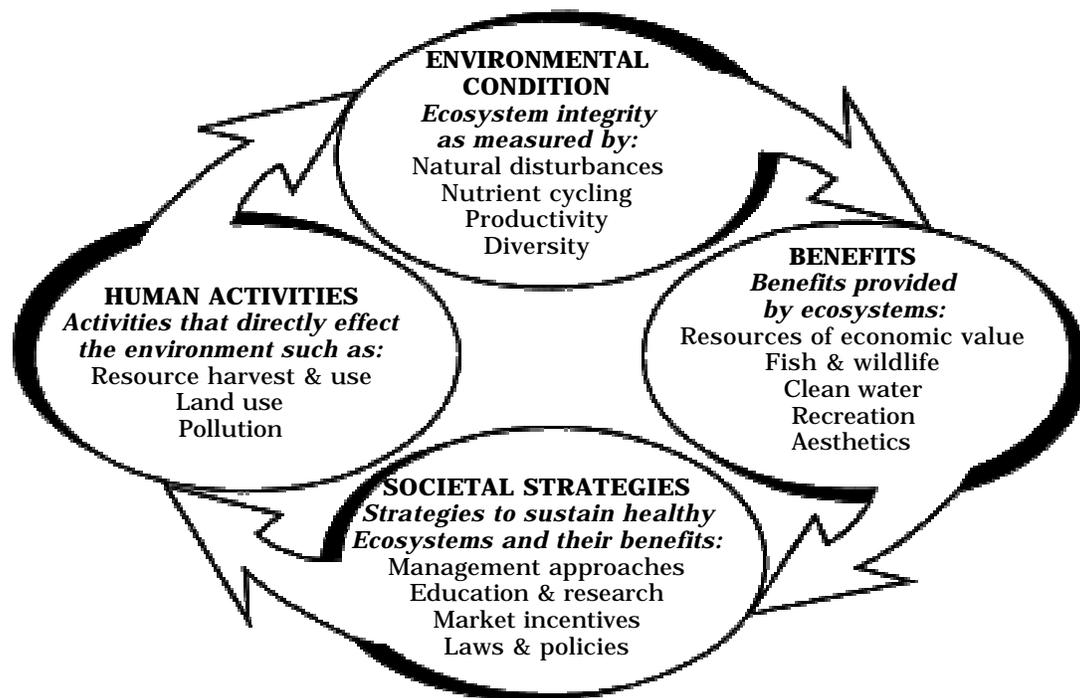
To take a simple example: A cube of ice (a system of water in a solid *state*) is heated by sunlight (*pressure*) until it responds by becoming water in a liquid *state*.

A more complex example: A neighborhood with scattered substandard houses (*existing state*) implements a housing program (*pressure*), committing itself to hiring local residents to perform home renovations through a revolving loan program, keeping more money in the community, resulting in (*new state*) more purchases at neighborhood stores by local residents, and building greater community cohesion

(2) Cyclical "State-Pressure-Response" Model

(Source: Developed by Minnesota Department of Natural Resources):

This model recognizes that the "new" state is in turn affected by new pressures, that may in fact be created by the system change, leading to cycles of new states and responses. Developed for environmental systems, this may also be useful in looking at the "ecology" of neighborhood issues.



Faith Balch of DNR <faith.balch@dnr.state.mn.us> reports on a couple of learnings achieved by working with the framework: "Obviously a group can start with any of the four components. We find that groups tend to want to focus on the strategies before they have an understanding of the issues or the system involved (the complexity of a watershed, etc.). While the framework flows clockwise we have been successful working counter-clockwise through the framework starting with benefits/outcomes. What does a community value? What do they want to sustain, and so forth. Then we evaluate what the health/condition of the environment needs to be to deliver these benefits in a sustainable way. Next we look at how human activities are affecting the ecological conditions in their watershed and reducing the benefits. Finally, once we are clearer on the outcomes/benefits and the ecological conditions required to provide these and the impacts/human activities, then we look at strategies. The indicators for monitoring the strategies need to link to the human activities, ecological conditions and the hoped-for benefits."

Appendix I

Acknowledgments

Our sustainability indicator project has benefited from the assistance of so many people that listing specific names risks excluding important contributors. In particular we are indebted to a vibrant community indicators movement that has freely shared their experiences with us. Often the tools we use today depend on diligent efforts by predecessors we cannot name. We apologize to any contributor we may have unintentionally neglected to identify below:

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 Environmental Protection Agency (Chicago)
 Megan Lewis, American Planning Association (Chicago)
 Jim Schwab, American Planning Association (Chicago)
 Tom Kingsley, Urban Institute (Washington, DC)

Appendix J
Annotated Bibliography
Sustainable development and sustainability indicators

Developed by Carissa A. Schively
City Planner

for the Urban Ecology Coalition's
Neighborhood Sustainability Indicators Project
Minneapolis, Minnesota
February, 1998

Besleme, Kate and Megan Mullin. "Community Indicators and Healthy Communities." *National Civic Review* 86 (Spring 1997): 43-53.

This article focuses on the relationship between community indicators and citizen mobilization in efforts toward sustainability. The authors contend that the process of indicator development enables participants in that process to recognize shared goals and visions. Three basic conceptual frameworks, which characterize many of the current community indicator projects occurring around the world, are described.

(1) The first framework focuses on measuring local sustainability. Centered on a vision for the community's long-term future, sustainability indicators address the linkages between various issues. (2) Quality-of-life indicators differ from sustainability indicators in addressing shorter-term goals and the lack of need to show linkages between indicator areas. (3) Finally, performance evaluation is the third conceptual framework identified by the authors. Indicators focused on performance evaluation, most often initiated by government, are intended to determine how efficiently a jurisdiction is delivering a particular set of public services.

Utilizing performance indicators is intended to produce information that can be used to measure program effectiveness and efficiency. Regardless of the conceptual framework under which community indicators are developed, the process of indicator development has the potential to incite communities, with their varied interest groups, to action toward a set of common goals.

The information contained in this article would likely be helpful to communities which are in the process of developing a framework within which indicators will be selected. Frameworks discussed in the article serve as means to focus efforts and discussions related to types of indicators to use.

Campbell, Scott. "Green Cities, Growing Cities, Just Cities?" *Journal of the American Planning Association* 62 (Summer 1996): 296-312.

Campbell provides a good description of the three-part relationship that is considered by many to characterize sustainable development. The "Planner's Triangle," as Campbell calls it, shows the interaction between *economic*, *environmental*, and *social* sustainability or equity. Between each of these three goals of planning, represented as the corners of the triangle, are conflicts.

According to the author, the *property conflict* occurs between economic growth and equity, as competing claims arise over the use of property between private interests and the public good. The *resource conflict* arises between environmental protection and economic growth. There is an ongoing conflict over scarce resources, which are often seen as either a means of promoting economic growth or contributing to ecological value. Finally, between environmental protection and equity, the

development conflict occurs. These competing goals, Campbell claims, cannot be reconciled due to scarce resources which are necessarily directed toward one of the goals at the expense of the other.

Campbell considers the center of the "Planner's Triangle" to represent sustainable development, a point which can only be reached when the goals of economic growth, environmental protection, and social equity are balanced. Though Campbell does not lay out specific directions for reaching sustainable development, he suggests a two-part procedural strategy intended to make the path toward the "center of the triangle" somewhat easier. First he suggests that conflict should be resolved efficiently and effectively as it arises. Secondly, he notes that it is necessary to resolve the differences between the vocabularies used in the different fields of economics, environmentalism, and social justice. These differences hinder the ability to measure improvement and change across these disciplines - a major hindrance to accomplishing sustainable development.

This article provides excellent background information on the concept of sustainable development, particularly related to the relationship between environmental, economic, and social sustainability.

Maclaren, Virginia W. "Urban Sustainability Reporting." *Journal of the American Planning Association* 62 (Spring 1996): 184-202.

In this article, Maclaren sets forth a methodology which can be utilized to report on a community's progress toward sustainability. The author also considers some of the characteristics of urban sustainability indicators.

Maclaren identifies four types/characteristics of urban sustainability indicators which she recognizes as going beyond basic environmental, economic, and social indicators. (1) First, integrating indicators attempt to portray linkages among the economic, environmental, and social dimensions of sustainability. (2) Forward-looking indicators are those which measure progress toward achieving intergenerational equity, such as trend indicators which, based on historical trends, provide information about future sustainability. (3) Thirdly, distributional indicators are intended to show sustainability within an entire population or across geographic regions. Generally these are able to measure the extent to which a local community contributes to environmental degradation or sustainability in general in other communities, regions, or the world. (4) Fourth, sustainability indicators incorporate input from numerous stakeholders, primarily by involving stakeholders in the process of indicator development.

Maclaren's methodology for reporting on urban sustainability includes eight steps: (1) First is to define sustainability goals for which indicators are needed. One means of accomplishing this is through a community visioning exercise. (2) The second step is **scoping**, in which the target audience, the purpose for developing the indicators, and the number of indicators necessary, is determined. (3) Thirdly, Maclaren suggests that a framework be selected within which indicators are selected. This essentially involves selecting those categories of indicators that are most relevant to the community's sustainability goals. The next two steps involve (4) identifying criteria for selecting indicators and then (5) compiling a set of potential indicators. (6) The sixth step in Maclaren's methodology requires that a final set of indicators be selected based on the previously determined criteria. Step seven involves (7) collecting and analyzing indicator data. (8) The final step is to prepare the urban sustainability report.

This article provides excellent general information about selecting sustainability indicators. The information contained in the article would be relevant to all communities considering developing an indicators project.

Hart, Maureen. "Evaluating Indicators: A Checklist for Communities." *Wingspread Journal* 19 (Spring 1997): 19-21.

The primary focus of this article is to set forth a rating system which can be used by communities to evaluate indicators during the initial indicator selection process. The checklist which Hart proposes includes a list of questions to ask for each indicator. The most important question, considering that Hart gives it the most points, is whether the indicator is able to link different areas of the community such as economy, health, politics, public safety, environment, and recreation.

Other questions to be asked of proposed indicators include: (1) is the indicator relevant to the community's definition of sustainability, (2) is the indicator understandable to the community at large, (3) is the indicator developed, accepted, and used by the community, and (4) does the indicator provide a long-term view of the community? More technical questions that relate to the feasibility of gathering information useful for selected indicators are the questions of reliability, accessibility, timeliness, and accuracy. A final question to be asked of each proposed indicator is whether the indicator focuses on local sustainability at the expense of global sustainability. Hart suggests that if the answer to this question is yes, then the indicator should not be used.

Information contained in this article would likely be useful for communities which have prepared a preliminary list of indicators that may need to be narrowed down. The indicators checklist could be used as systematic method by which the list could be reduced.

Wackernagel, Mathis and William Rees. *Our Ecological Footprint*. Gabriola Island, BC: New Society Publishers, 1996.

This book introduces a tool for measuring human impact on the earth, based in part on the concept of carrying capacity. Though not directly related to the use of sustainability indicators, the concept is valuable to the discussion.

A community's "ecological footprint" is considered to be the amount of land and water area needed to sustain life within that community. This includes both the resources required for survival and also resources that may be consumed in handling waste products. Locales that require more resources than they produce have a larger "ecological footprint" - creating competition with other regions locally or globally.

The concept of measuring a community's "ecological footprint" is based on a technique intended to measure the flows of energy and matter to and from any defined economy. These flows are then converted into the corresponding water/land area necessary to support these flows.

This article provides excellent explanation of some of the concepts which are inherent in sustainable development. It provides good background information for those just beginning their efforts in sustainability or for those who would like to more information about those concepts which led us to where we are today.

World Commission on Environment and Development (WCED). *Our Common Future*. Oxford University Press, 1987. [Also called the Brundtland report.]

By setting forth the most commonly used definition of sustainable development, the Brundtland Report has become the basis for the current understanding of the concept of sustainability. This definition states that "sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs," and is based on the recognition that sustainable development recognizes limitations on the earth's ability to absorb all the impacts of human activities.

The Brundtland Report's focus on world poverty as one of the most significant problems in today's world conveys the importance that is given to equity as an essential aspect of sustainability. Growth is seen as the primary means by which poverty can be relieved. Growth, however, must be based on sustainable capital stock that is not vulnerable to crises. The strategy for sustainable development set forth by the Brundtland Report promotes harmony among all people and between humans and nature. Institutional and political changes are seen as very important aspects of this strategy. International cooperation on sustainability issues and accountability for environmental damage are recognized as two of the most important changes that must be made in order to create sustainable development.

This book essentially began the current discussion of the concept of sustainable development. The information within it is important for all who work in this area to understand.

Zachary, Jill. *Sustainable Community Indicators: Guideposts for Local Planning*. Santa Barbara, CA: Community Environmental Council, Inc. and Gildea Resource Center, 1995.

This paper is intended to provide background information on three well-known local-level sustainability projects: Sustainable Seattle, the Santa Monica Sustainable City Program, and the Cambridge Civic Forum. It also discusses issues related to these projects and indicators in general.

The paper begins by listing four functions of sustainable community indicators: (1) enabling a community to identify what it values and to prioritize those values; (2) holding individuals and a larger group accountable for achieving the results they want; (3) democracy building - through collaboration people engage in a community-building process; and (4) allowing people to measure what is important and make decisions based on those results.

For each of the three cities, Zachary provides information related to indicator development and implementation. The use of guiding principles, public participation, and indicator measurement processes are also discussed. Other issues which are raised in this paper relate to indicator identification. The author has included a set of criteria for good community indicators including the requirement that indicators be useful as a test for long-term sustainability. Secondly, indicators should be flexible in order to reflect changing conditions. By selecting indicators that build on existing programs and impact the development of new programs, specific community action is more likely to result. A third criteria suggested here is that a community-wide approach be taken since many indicators measure multiple things which cross the boundaries of the economic, social, and environmental disciplines. The fourth criteria suggested in this paper is that indicators be selected based on their measurability. It is necessary for indicators to be statistically measurable, fact-based, and based, ideally, on data which has already been collected by other sources.

This paper includes a useful set of general guidelines for creating action from indicators. The guidelines are as follows: (1) indicators must be accessible and presented in a clear, concise format; (2) indicators can be used by policy-makers to identify where more information is needed before making decisions; (3) by applying indicators to a specific project, policy-makers can see how indicators can be implemented at a practical planning level; (4) information from other indicators projects should be utilized; (5) policy statements with goals and targets should be adopted; and (6) indicators should be connected to vested programs so they can be monitored more efficiently.

This paper provides excellent background information related to developing an indicators program as well as selecting indicators. Particularly considering its straightforward format, the information contained in the paper would be useful to all involved in sustainability indicators work at the local level.

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Appendix K

Selected resource groups

Hart Environmental Indicators

Sustainable Community Indicators Trainers' Workshop

Contact: Maureen Hart
P.O. Box 361
North Andover, Massachusetts 01845
(508) 975-1988
<mhart@tiac.net>
<<http://www.subjectmatters.com>>

An excellent list of sustainability indicators can be found at this web site

Sustainability Indicators training course:

<<http://www.subjectmatters.com/indicators/htmlsrc/training/indicators/index.html>>

Guide to Sustainable Community Indicators (Maureen Hart)

1999 Edition forthcoming

Contact: QLF/Atlantic Center for the Environment
55 Main Street
Ipswich, Massachusetts 01938
(508) 356-0038
<atlantictr@igc.apc.org>

Redefining Progress

Community Indicators Handbook (with Tyler Norris Associates & Sustainable Seattle)

Community Indicators Network

Contact: Kate Besleme
One Kearny St., 4th floor
San Francisco, California 94108
(415) 781-1191 - ext. 312
<besleme@rprogress.org>
<<http://www.rprogress.org>>

Sustainable Seattle

Contact: Lee Hatcher
514 Minor Avenue North
Seattle, Washington 98109
(206) 622-3522
<sustsea@halcyon.com>
<<http://www.scn.org/sustainable/susthome.html>>

Crossroads Resource Center

Urban Ecology Coalition / Neighborhood Sustainability Indicators Program

Neighborhood Income Statement and Balance Sheet studies (local economic studies)

Contact: Ken Meter
P.O. Box 7423
Minneapolis, Minnesota 55407
(612) 869-8664
<xrc@igc.apc.org>

Urban Quality Indicators newsletter

Contact: Cy Yoakam
1756 Plymouth Rd. - Suite 239
Ann Arbor, Michigan 48105
(734) 996-8610
<Cyokam578@aol.com>

**The Urban Institute
National Neighborhood Indicators Program**

Contact: Tom Kingsley
2100 M Street, NW - Fifth floor
Washington, DC 20037
(202) 857-8687
<paffairs@ui.urban.org>
<<http://www.urban.org>>

**American Planning Association
Using Indicators to Advance Collaborative Planning in Neighborhoods**

Contact: Megan S. Lewis AICP
122 South Michigan Avenue- suite 1600
Chicago, Illinois 6063
(312) 786-6363
<mlewis@planning.org>
<<http://www.planning.org/plnginfo/1998casey.html>>

Selected Minnesota Resource Groups

**Minnesota Office of Environmental Assistance
Sustainable Communities Network**

Contact: Philipp Muessig
520 Lafayette Road N. - second floor
St. Paul, Minnesota 55155
(651) 215-0204
<philipp.muessig@moea.state.mn.us>

**Minnesota Department of Natural Resources
Environmental Indicators Initiative**

Contact: Clarence Turner
500 Lafayette Road N.
St. Paul, Minnesota 55155
(651) 297-3357
<clarence.turner@dnr.state.mn.us>

**Minnesota Planning
Minnesota Milestones**

Contact: Ann Schluter
658 Cedar St.
St. Paul, Minnesota 55155
(651) 296-3985
<mary.leier@mnplan.state.mn.us>
<<http://www.mnplan.mn.us>>

**Metropolitan Council
Maintaining Our Competitive Edge for the 21st Century**

230 East Fifth Street
St. Paul, Minnesota
(651) 602-1140
<data.center@metc.state.mn.us>
<<http://www.metrocouncil.org>>

**Hennepin County Office of Planning and Development &
United Way of Minneapolis Area
1998 Hennepin County Indicators: Update on Families and Children**

Contact: Hennepin County Office of Planning and Development
Government Center A-2308
300 South Sixth Street
Minneapolis, Minnesota 55487
(612) 348-4466

In addition there are a number of city, regional, state and national sustainability indicator efforts, which cannot be listed here due to space limitations. Follow links from the web sites listed above and below to access these indicator projects.

Other sustainability web sites (selected):

*Sustainable Communities Network <<http://www.sustainable.org>>
Center for Excellence for Sustainable Development <<http://www.sustainable.doe.gov>>
Center for Sustainable Communities, University of Washington
<<http://weber.u.washington.edu/~common/>>
Jacksonville Community Council <<http://unf.edu/~clifford/jcci/index.html>>
International Institute for Sustainable Development <<http://iisd1.iisd.ca>>
Urbanism, cities and sustainability related links <<http://www.pik-potsdam.de/~kropp/eco.html>>*

Endnotes

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- ¹ World Commission on Environment and Development (WCED). *Our Common Future*. Oxford University Press, 1987. [Also called the Brundtland report.]
- ² We are unaware of the original source for this diagram, which is frequently used. One such diagram may be found in Hart, Maureen, "Sustainable Community Indicators Trainers' Workshop," page 164. Available from Hart Environmental Data, P.O. Box 361, North Andover, Massachusetts 01845, <mhart@tiac.net>.
- ³ Trevor Hancock, "Healthy Sustainable Communities." This diagram may also be found in Hart, Maureen, "Sustainable Community Indicators Trainers' Workshop," page 166.
- ⁴ This can also be found in Hart, Maureen, "Sustainable Community Indicators Trainers' Workshop," page 168.
- ⁵ Comments at Minnesota Office of Environmental Assistance Sustainable Communities Conference, Minneapolis, October, 1996.
- ⁶ Sustainable Seattle, 514 Minor Avenue North, Seattle, Washington 98109, (206) 622-3522, <sustsea@halcyon.com>, <<http://www.scn.org/sustainable/susthome.html>>
- ⁷ Comments at EPA Sustainable Community Indicators training workshop, Chicago, October, 1998, with a credit to Jim Gage for suggesting the poetry found in sustainability indicators.
- ⁸ Besleme, Kate and Megan Mullin. "Community Indicators and Healthy Communities." *National Civic Review* 86 (Spring 1997): 43-53.
- ⁹ Maclaren, Virginia. "Urban Sustainability Reporting." *Journal of the American Planning Association* 62 (Spring 1996): 184-202.
- ¹⁰ "Alberta Vision-Indicators Matrix" from Alberta Round Table on Environment and Economy Secretariat, *Creating Alberta's Sustainable Development Indicators*. Edmonton, Alberta, Canada: Environment Council of Alberta, 1994.