

Draft
SD Strategy Team, Land Use Development Workgroup

Part 2. Sustainable Land Development Practices

Sustainable Practices: from Exploitation to Stewardship

The World Commission on Environment and Development - the Brundtland Commission - has defined sustainable development as use of the land and land-based resources that meets the needs of the present without compromising the ability of future generations to meet their own needs. However, as Part One described, the trends of current growth and development practices creating waste, destruction of and disregard for land based resources will not successfully see us through even this century. An increasing body of research is showing that are growth and development practices are not only hard on the environment but also increasingly hard on people – a core value of sustainable development has always included social equity and environmental justice for all sectors of our increasingly diverse population.

http://155.33.32.224/iuhr/pdf/submitted_abstract_panels_block2/sa_2.3_furumoto_dawson.pdf

The land and the places we are developing for human activities are increasingly being regarded as a stewardship responsibility for all as we face the challenges of the 21st century. The challenge at every level of government and with every type of private development is to put into practice widely supported principles of sustainable land use and development at a scale and on a schedule that will make a difference to the quality of the Great Lakes and its supporting land based resources and communities. Several overarching issues are particular challenges to the development of the Great Lakes Basin:

1. The global importance of the fresh waters of the Great Lakes
2. The geographic significance of the basin for its biodiversity where prairie and plains savannahs meet eastern deciduous forests and northern conifer forests
3. The land-based industrial legacy and community heritage shared by the metropolitan regions of the Great Lakes Basin
4. The national and international importance of regional centers within the basin as critical national and global transportation centers
5. The historic and continuing tradition as the American heartland center for multi-cultural diversity
6. The greater Chicago region, including Milwaukee, WI and Gary, IN is the largest non-sea coast metropolitan region in North American

Natural land-based (along with water and air) resources must remain sound if our lives are to be healthy and our land is to support our economic potential and social vitality. This document proposes that, if the goals of sustainable land development are to meet the needs and acknowledged challenges of the economy, the environment, and communities, a transformation will be needed from competition to collaboration between interests that plan for, development and manage the land. To do this, a path to development must be envisioned that emphasizes efficient, careful and integrated resource utilization, protection and reuse.

Agencies, coalitions and volunteers throughout the basin are at work to protect, restore and enhance the natural and historic assets of the region. A notable example is Chicago Wilderness, a coalition of over 180 organizations. Chicago Wilderness has focused on the mission of championing biodiversity in this highly developed region and thus defined biodiversity¹:

Biodiversity simply means biological diversity. It is the variety of natural communities, plant and animal species, and even genes that exist within a particular place. Biodiversity is essential to a healthy environment, to human health, and to the economy.

Healthy, diverse ecosystems provide us with clean air and water, and resources like food and ingredients for medicines. And as anyone who has spent some time outdoors can tell you, the great diversity of life on Earth is also a source of inspiration and wonder!

Chicago Wilderness' attention grabbing name is not the oxymoron some would imagine. As Illinois has been intensively developed from its Lake Michigan industrial corridor to its state wide agriculture economy, with mining in the south and more river industry on the Mississippi, 90% of the state's natural environment has been lost in the two centuries of European settlement. However, 75% of the remnants of the original prairie and savannah habitats that remain are in the metropolitan Chicago region. These are a stewardship responsibility, an asset legacy and development challenge shared throughout the Great Lakes Basin.

Principles and Practices for Sustainable Development of the Land

The promise offered from sustainable development seeks a balance between the values that drive land development from a range of individual desires and aspirations with those of community goals and shared interests. At the same time, the land itself is governed by its own set of natural laws. The challenge for sustainable development practice is to seek the balance between human values, community goals and natural systems.

Some issues of sustainability are negotiable in nature, and some are not. In general, human perspectives on sustainable places will be more within people's control, than with scientific realities. The field of sustainable practices has been burgeoning over the last decade and the research, planning, public policy and best practices information is growing rapidly. Our goal here is only to set out some guideposts relevant to sustainable development practices in general and create some markers specifically relevant to the Great Lakes Basin.

Much of this section draws directly from the institutional and research work of the broader field of sustainability that includes topical areas such as Green Buildings, Smart Growth, New Urbanism, Conservation Design, Neo-Traditional Design and Context Sensitive Design.

¹ Chicago Wilderness

GUIDES FOR LOCAL PLANNING

In the conflicts and debates that consistently emerge around land use issues, we often forget that land use plans are not regulations per se, but public articulations of a community's values that will guide decisions, and actions. Some of these actions do include the range of resulting regulations that guide development from zoning to subdivision ordinances and building codes. What follows are well reasoned sets of principles intended as guides to sustainable development practices. Each set has its own individual character with many shared underlying values.

Given the consideration, deliberation, vetting and crafting that went into the referenced sets, we have chosen to present them in their entirety and not attempt to combine, summarize and thereby create another set of principles. All of these are well documented and supported, and we present them as resources for private developers, planning agencies, public utilities and elected officials to use and apply as best fits their own vision, mission and responsibilities.

Included as appendices are the Hannover Principles developed by William McDonough and Michael Braungart, and the three part set of the Ahwahnee Principles also developed by a team of the leading practitioners of sustainable development. The Hannover Principles were among the first to comprehensively address the essential areas of land related sustainability, relating the interdependence of the built environment with nature and proposing a new responsibilities as stewards to protect it. The Principles are based on a set of values that encourage all of us – individuals, organizations, governments and businesses – to link long term sustainable considerations with ethical responsibility. Sustainable development will require a continuous working relationship between natural processes and human activity.

The Ahwahnee Principles are practice oriented and have been developed in three versions: one oriented toward sustainable economic development, another for community livability and a third aimed specifically at water resources, especially relevant for development in the Great Lakes Basin. Since land use and development has a special responsibility for the stewardship and quality of Great Lakes waters, the Ahwahnee Water Principles are also included in this report.

Included in the report are the Principles for Smart Growth developed by the Sustainable Communities Network with extensive supporting information on their web site: <http://www.sustainable.org>. In Addition, the Smart Growth Principles succinctly capture much of the intentions of the other sets and provides concise guidance for those responsible for land development decisions.

Smart Growth was an emergent strategy in the last decade to counter the unplanned, inefficient and consumptive patterns of land development generally termed "sprawl." In the last few years, Smart Growth has been accepted by organizations as diverse as the Urban Land Institute, the Sierra Club, and American Planning Association to the Urban League and League of Women Voters. Smart Growth and sustainable development go hand in hand.

The Smart Growth principles for sustainable development provide a framework to shape planning goals at the local and regional levels. Sustainability will not be achieved by depending on individual, well intentioned projects. Sustainable development must become

the norm for the Great Lakes basin and not an innovative exception to current practices and trends.

Smart Growth Principles²

Create Range of Housing Opportunities and Choices

Providing quality housing for people of all income levels is an integral component in any smart growth strategy. Housing is a critical part of the way communities grow, as it is constitutes a significant share of new construction and development. More importantly, however, is also a key factor in determining households' access to transportation, commuting patterns, access to services and education, and consumption of energy and other natural resources. By using smart growth approaches to create a wider range of housing choices, communities can mitigate the environmental costs of auto-dependent development, use their infrastructure resources more efficiently, ensure a better jobs-housing balance, and generate a strong foundation of support for neighborhood transit stops, commercial centers, and other services.

Create Walkable Neighborhoods

Walkable communities are desirable places to live, work, learn, worship and play, and therefore a key component of smart growth. Their desirability comes from two factors. First, walkable communities locate within an easy and safe walk goods (such as housing, offices, and retail) and services (such as transportation, schools, libraries) that a community resident or employee needs on a regular basis. Second, by definition, walkable communities make pedestrian activity possible, thus expanding transportation options, and creating a streetscape that better serves a range of users -- pedestrians, bicyclists, transit riders, and automobiles. To foster walkability, communities must mix land uses and build compactly, and ensure safe and inviting pedestrian corridors.

Encourage Community and Stakeholder Collaboration

Growth can create great places to live, work and play -- if it responds to a community's own sense of how and where it wants to grow. Communities have different needs and will emphasize some smart growth principles over others: those with robust economic growth may need to improve housing choices; others that have suffered from disinvestment may emphasize infill development; newer communities with separated uses may be looking for the sense of place provided by mixed-use town centers; and still others with poor air quality may seek relief by offering transportation choices. The common thread among all, however, is that the needs of every community and the programs to address them are best defined by the people who live and work there.

Foster Distinctive, Attractive Communities with a Strong Sense of Place

Smart growth encourages communities to craft a vision and set standards for development and construction which respond to community values of architectural beauty and distinctiveness, as well as expanded choices in housing and transportation. It seeks to create interesting, unique communities which reflect the values and cultures of the people who reside there, and foster the types of physical environments which support a more cohesive community fabric. Smart growth promotes development which uses natural and man-made boundaries and landmarks to create a sense of defined neighborhoods, towns, and regions. It encourages the construction and preservation of buildings which prove to be

² Smart Growth Principles, Smart Growth Network

assets to a community over time, not only because of the services provided within, but because of the unique contribution they make on the outside to the look and feel of a city.

Make Development Decisions Predictable, Fair and Cost Effective

For a community to be successful in implementing smart growth, it must be embraced by the private sector. Only private capital markets can supply the large amounts of money needed to meet the growing demand for smart growth developments. If investors, bankers, developers, builders and others do not earn a profit, few smart growth projects will be built. Fortunately, government can help make smart growth profitable to private investors and developers. Since the development industry is highly regulated, the value of property and the desirability of a place are largely affected by government investment in infrastructure and government regulation. Governments that make the right infrastructure and regulatory decisions will create fair, predictable and cost effective smart growth.

Mix Land Uses

Smart growth supports the integration of mixed land uses into communities as a critical component of achieving better places to live. By putting uses in close proximity to one another, alternatives to driving, such as walking or biking, once again become viable. Mixed land uses also provide a more diverse and sizable population and commercial base for supporting viable public transit. It can enhance the vitality and perceived security of an area by increasing the number and attitude of people on the street. It helps streets, public spaces and pedestrian-oriented retail again become places where people meet, attracting pedestrians back onto the street and helping to revitalize community life.

Preserve Open Space, Farmland, Natural Beauty and Critical Environmental Areas

Smart growth uses the term “open space” broadly to mean natural areas both in and surrounding localities that provide important community space, habitat for plants and animals, recreational opportunities, farm and ranch land (working lands), places of natural beauty and critical environmental areas (e.g. wetlands). Open space preservation supports smart growth goals by bolstering local economies, preserving critical environmental areas, improving our communities’ quality of life, and guiding new growth into existing communities.

Provide a Variety of Transportation Choices

Smart growth uses the term “open space” broadly to mean natural areas both in and surrounding localities that provide important community space, habitat for plants and animals, recreational opportunities, farm and ranch land (working lands), places of natural beauty and critical environmental areas (e.g. wetlands). Open space preservation supports smart growth goals by bolstering local economies, preserving critical environmental areas, improving our communities’ quality of life, and guiding new growth into existing communities.

Strengthen and Direct Development towards Existing Communities

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Take Advantage of Compact Building Design

Smart growth provides a means for communities to incorporate more compact building design as an alternative to conventional, land consumptive development. Compact building

design suggests that communities be designed in a way which permits more open space to be preserved, and that buildings can be constructed which make more efficient use of land and resources. By encouraging buildings to grow vertically rather than horizontally, and by incorporating structured rather than surface parking, for example, communities can reduce the footprint of new construction, and preserve more green space. Not only is this approach more efficient by requiring less land for construction. It also provides and protects more open, undeveloped land that would exist otherwise to absorb and filter rain water, reduce flooding and storm water drainage needs, and lower the amount of pollution washing into our streams, rivers and lakes.

The Ahwahnee Water Principles for Resource Efficient Land Use

Preamble

Cities and counties are facing major challenges with water contamination, storm water runoff, flood damage liability, and concerns about whether there will be enough reliable water for current residents as well as for new development. These issues impact city and county budgets and taxpayers. Fortunately there are a number of stewardship actions that cities and counties can take that reduce costs and improve the reliability and quality of our water resources.

The Water Principles below complement the Ahwahnee Principles for Resource-Efficient Communities that were developed in 1991 (see Appendix). Many cities and counties are already using them to improve the vitality and prosperity of their communities.

Community Principles

1. Community design should be compact, mixed use, walkable and transit-oriented so that automobile-generated urban runoff pollutants are minimized and the open lands that absorb water are preserved to the maximum extent possible. (See the Ahwahnee Principles for Resource-Efficient Communities)
2. Natural resources such as wetlands, flood plains, recharge zones, riparian areas, open space, and native habitats should be identified, preserved and restored as valued assets for flood protection, water quality improvement, groundwater recharge, habitat, and overall long-term water resource sustainability.
3. Water holding areas such as creek beds, recessed athletic fields, ponds, cisterns, and other features that serve to recharge groundwater, reduce runoff, improve water quality and decrease flooding should be incorporated into the urban landscape.
4. All aspects of landscaping from the selection of plants to soil preparation and the installation of irrigation systems should be designed to reduce water demand, retain runoff, decrease flooding, and recharge groundwater.
5. Permeable surfaces should be used for hardscape. Impervious surfaces such as driveways, streets, and parking lots should be minimized so that land is available to absorb storm water, reduce polluted urban runoff, recharge groundwater and reduce flooding.
6. Dual plumbing that allows grey water from showers, sinks and washers to be reused for landscape irrigation should be included in the infrastructure of new development.
7. Community design should maximize the use of recycled water for appropriate applications including outdoor irrigation, toilet flushing, and commercial and industrial processes. Purple pipe should be installed in all new construction and remodeled buildings in anticipation of the future availability of recycled water.

8. Urban water conservation technologies such as low-flow toilets, efficient clothes washers, and more efficient water-using industrial equipment should be incorporated in all new construction and retrofitted in remodeled buildings.
9. Ground water treatment and brackish water desalination should be pursued when necessary to maximize locally available, drought-proof water supplies.

Implementation Principles

1. Water supply agencies should be consulted early in the land use decision-making process regarding technology, demographics and growth projections.
2. City and county officials, the watershed council, LAFCO, special districts and other stakeholders sharing watersheds should collaborate to take advantage of the benefits and synergies of water resource planning at a watershed level.
3. The best, multi-benefit and integrated strategies and projects should be identified and implemented before less integrated proposals, unless urgency demands otherwise.
4. From start to finish, projects and programs should involve the public, build relationships, and increase the sharing of and access to information. The participatory process should focus on ensuring that all residents have access to clean, reliable and affordable water for drinking and recreation.
5. Plans, programs, projects and policies should be monitored and evaluated to determine if the expected results are achieved and to improve future practices.

Practices for Context Sensitive Transportation Design Solutions

The development history of the Great Lakes Basin is as much a transportation story as an industrial story. The metropolitan corridor stretching from Rochester and Buffalo through eight states to Duluth is an economic corridor twice as long as either the Boston to Washington or San Francisco to San Diego corridors. The Great Lakes corridor also shares an economic interdependence from ore mines to steel mills to manufacturing plants to world-wide distribution is not matched in any other macro-metropolitan region.

This legacy provides a heritage of entrepreneurial drive, industrious work, extraordinary infrastructure and urban development unmatched in the 20th century. Now moving into the 21st century, we are challenged to renovate, recycle and often remediate the industrial residuals. But, most important for sustainable development, we must look to these facilities and their lands as critical development assets in the coming decades.

Transportation is the related legacy that continues in a role essential to the basin's economic future and transportation's own land based sustainability challenges. With Chicago at the hub of the nation's rail network, the interstate system followed and Chicago O'Hare now can claim to be the busiest airport in the world connected with some 12 other major international air hubs in the basin. Apart from the sustainability challenges facing transportation itself and its impacts on the natural systems of air and water, these systems of road, rail and runway themselves are major consumers of land.

"Context Sensitive Design³ is an inclusive approach to transportation development that integrates and balances community, aesthetic, and environmental values with traditional transportation safety and performance goals. Context sensitive design requires careful and imaginative planning to reflect community values, meet transportation goals, provide safety,

³ USDOT <http://www.fhwa.dot.gov/csd/>

and respect the natural and man-made environment within the established budgets and schedules. Context sensitive design requires early and continued input from both multidisciplinary professionals and stakeholders. It addresses both what can be done technologically to meet transportation demands and what may be done to enhance the design outcomes for transportation users, adjacent community residents, and the environment. This transportation planning approach is seen as adding lasting functional and aesthetic value for both the communities they traverse and serve and the users.”

“Thinking Beyond the Pavement "Qualities and Characteristics"”

Qualities of Excellence in Transportation Design

- The project satisfies the purpose and needs as agreed to by a full range of stakeholders. This agreement is forged in the earliest phase of the project and amended as warranted as the project develops.
- The project is a safe facility for both the user and the community.
- The project is in harmony with the community, and it preserves environmental, scenic, aesthetic, historic, and natural resource values of the area, i.e., exhibits context sensitive design.
- The project exceeds the expectations of both designers and stakeholders and achieves a level of excellence in people's minds.
- The project involves efficient and effective use of the resources (time, budget, community) of all involved parties.
- The project is designed and built with minimal disruption to the community.
- The project is seen as having added lasting value to the community.

POLICIES SUPPORTING SUSTIANBLE LAND DEVELOPMENT

While sustainability is a total societal responsibility, every level of government must be proactively engaged if beneficial goals of a healthy, vital, livable Great Lakes basin are to be achieved.

As discussed earlier, the hundreds and thousands of local land use plans, development ordinances are all either contributing building blocks to basin-wide sustainability or they become detrimental factors that perpetuate land consumption, water and air degradation and loss of natural habitat and local legacies. Our challenge is to find acceptable ways to bring sustainable development practices to scale with enough participation from the local governments that control development that there will be an improvement in the environmental quality of the Great Lakes, in the quality of life for all people in the basin, in the global competitiveness and vitality of the economic forces that drive the future of the nine state region.

Regional agencies and county governments can all contribute to implementing sustainable development practices, but the states are key to provide reasonable, consistent guidelines, support and assistance to local governments in their planning activities. Local governments will need guidance and support to produce plans for development that achieve enough land

conservation, water resource management, community livability, sustainable economic practices and supporting transportation choices to see progress in the basin.

Within the last five years nearly every state in the basin has enacted some state level planning initiative that directly relates to sustainable development principles and practices. These state actions are summarized in the table below and further described in the Appendix. However, none approaches the thoroughness of model state planning acts such as Washington State’s Growth Management Act. At its simplest, the 15 year old act requires municipalities in urban areas to produce a local comprehensive plan. We want to emphasize that the municipality produces their own plan – not the state. However, the state act lays out guidelines for what topics the plan must address as Illinois has done in its Local Planning Technical Assistance Act.

The Washington program also specifies that local plans should be consistent with that community’s development regulations and ordinances, thus ensuring that the goals of the plan are implemented in public decision-making, funding and project follow through. Inter-jurisdictional coordination is support by the requirement that within the county all municipal plans are based on a set of official population and job forecast and that land development is planned to accommodate that grow with municipal boundaries and agreed on annexation agreements. The county acts as the coordinator of these growth agreements.

In the fifteen year the act has been in place, the state planning office, regional planning agencies and smart growth organization have provided the technical assistance to the municipalities that today ensures region-wide sustainable development patterns in major metropolitan regions.

In the Great Lakes Basin, all metropolitan areas as required to develop similar forecasts to guide regional transportations planning by the Metropolitan Planning Organizations (MPO) and sustainable development guidelines could reasonably be adopted as state requirements in coordination the federally funded Regional Transportation Plans (RTP).

This or some similar basin wide strategy is needed if the Great Lakes are to development in ways that are sustainable and utilize land resources in ways that compliment the assets of the Great Lakes and its communities.

State	Program/Initiative	Purpose
IL	Illinois Local Planning Technical Assistance Act http://law.wustl.edu/landuselaw/IllinoisTechAssist.txt Local Legacy Act' http://www.ilga.gov/legislation/94/hb/09400hb1052.htm	“Encourage local planning by a set of comprehensive land use categories” Encourages multi- jurisdictional planning to preserve the spectrum and historic, economic and social based resources
MI	Michigan Land Use Leadership Council http://www.michigan.gov/gov/0,1607,7-168-21975-62542--,00.html http://www.michiganlanduse.org/	“Make cities more attractive places to live and work; grow in a way that is sustainable; minimize the negative effects of land use patterns”
MN	Minnesota Smart Growth	“The application of the sustainable

	http://www.1000fom.org/principles_of_sg.htm	development concept to land use issues”
OH	Ohio Balanced Growth Initiative http://www.glc.org/landuse/ohroundtable/ohiobgi.html	“Protect and restore Lake Erie and its watersheds to assure long term competitiveness, ecological health and quality of life”
PA	Growing Smarter and Growing Greener http://www.growinggreener2.com/default.aspx?id=1	“To plan for the future health and vitality of our communities” “To protect and restore our natural resources so we can revitalize Pennsylvania’s economy and improve our quality of life”
WI	Comprehensive Planning & Smart Growth http://www.doa.state.wi.us/pagesubtext_detail.asp?linksubcatid=366&linkcatid=224&linkid=	“Asking how our communities' growth can be shaped. . . a proactive discussion of how and where new development should be accommodated”
WA	Washington State Growth Management Act http://www.mrsc.org/subjects/planning/compplan.aspx	A state planning act passed in 1990 that provides a recently enacted program of state guidance supporting sustainable local planning and development

PROGRAMS FOR FUNDING AND FINANCING

All forms of public and private financing (including tax structures) often become the determining factors when attempting to implement sustainable development projects on the ground – especially when they are being done as exceptions and variances to standing zoning, ordinances and regulations. This subject will require its own study and many of the problems of financing innovative projects that deviate from the market norm run into unresponsive financial institutions as described by the Brooking Institute (“Financing Progressive Development.” Christopher B. Leinberger, Founding Partner, Arcadia Land Company 2001).

A two decade old program, Community Reinvestment Act (CRA) has provided funding and financing for difficult neighborhood redevelopment and home financing as also described in another Booking Institute report (“Creating a Scorecard for the CRA Service Test: Strengthening Banking Services Under the Community Reinvestment Act: Policy Brief #96” by Michael Stegman, Kelly Cochran, Robert Faris 2003).

Other local tools being used for funding land conservation come from organization such as the Trust for Public Lands and the Nature Conservancy. Financial tools are funding easements for special uses such as aesthetics, agriculture and conservations. Historic properties federal tax credits are providing the incentive to save many existing buildings rather than former tax policies that gave incentives for demolition and new construction. Every state, county and municipality along with many local taxing authorities (schools,

libraries and parks for instance) will either provide incentives and impediments for sustainable development. For instance, one disincentive for family farms in urbanizing areas has the standard to assess property by its potential (zoned) use. Once an area has been rezoned, many small farmers or other large area land owners are forced to sell. Some areas have developed taxing policies to assess by use instead of potential use such as the Michigan "Use-value **property tax** assessments."

Public and private funding and financing should be studied at all levels from federal and national to the Great Lakes States to ensure that sustainable development is possible after every effort is made to plan, enact policy and design projects are guided by principles for smart growth.

PROJECTS: SUSTAINABLE DEVELOPMENT EXAMPLES

After planning, policy-making and site design, sustainable development becomes measured by the projects that are built on the land and with land based resources. The practices for "building green" has been rapidly advancing and major cities such as Chicago are adopting energy conservation practices into their building codes and requiring major new construction use increasing percentages of recycled building materials.

The US Green Building Council has developed an extensive program for green building design certification for several major construction categories such as commercial construction, renovation and residential building. The LEED (Leadership in Energy and Environmental Design) program⁴ is setting the standards for sustainable building design and construction. While certifications entail extensive and technical considerations, green building can be summarized to address several major concerns:

- Sustainable site design and building siting
- Energy efficient performance through natural and technical means
- Using renewable and recycled building materials
- Environmental healthiness of building interiors for users with considerations for natural lighting, air and material toxicity
- Resource consumption and impact on the environment (especially water)

BUILDING GREEN⁵

The buildings in which we live, work, and play protect us from Nature's extremes, yet they also affect our health and environment in countless ways. The design, construction, operation, maintenance, and removal of buildings takes enormous amounts of energy, water, and materials, and generates large quantities of waste, air and water pollution, as well as creating storm water runoff and heat islands. Buildings also develop their own indoor environments, which present an array of health challenges. Where and how they are built affects wildlife habitat and corridors and the hydrologic cycle, while influencing the overall quality of human life.

⁴ LEED. <http://www.usgbc.org/DisplayPage.aspx?CategoryID=19>

⁵ USEPA. <http://www.epa.gov/greenbuilding/>

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As the environmental impact of buildings becomes more apparent, a new field called **green building** is gaining momentum. Green or sustainable building is the practice of creating healthier and more resource-efficient models of construction, renovation, operation, maintenance, and demolition. Research and experience increasingly demonstrate that when buildings are designed and operated with their lifecycle impacts in mind, they can provide great environmental, economic, and social benefits. *Elements of green building* include:

PROJECT EXPAMPLES OF SUSTIANBLE DEVELOPMENT PROJECTS

GREEN BUILDING

Chicago Green Building Center
Chicago City Hall Green Roof

SUSTIANBLE DEVELOPMENT

Conservation Design

Coffee Creek, IN
Prairie Crossing, IL

Neo-Traditional Communities

Bigalow Homes, Aurora, IL
North Town Center, Chicago

Transit Oriented Development

Arlington Heights, IL
Evanston, IL

Main Street Revitalization

Racine, WI
Sheboygan Falls, WI
Shelbyville, IN
Bowling Green, OH
Chagrin Falls, OH

Brownfield and Industrial Redevelopment

Rouge Rive Plant, MI
Waukegan Harbor, IL
Menomonee Valley Redevelopment, WI
Duluth Waterfront Redevelopment, MN

SMART GROWTH PLANNING

Chicago Wilderness Biodiversity Recovery Plan, IL, IN, WI
Schaumburg Biodiversity Plan, IL
Chicago Green City Principles, IL
Northeastern Illinois "Common Ground" Regional Framework Plan, IL
Neighbors Building Neighborhoods, Rochester, NY

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Tughill Commission Circuit Riders & Councils of Government Program, NY

CONTEXT SENSATIVE TRANSPORTATION SOLUTIONS & INFRASTRUCTURE

Paris Lexington Highway Reconstruction, KY

Duluth Urbanized Area Growth Impact Study, MN

PRIORITIES FOR SUSTAINABLE DEVELOPMENT IN THE GREAT LAKES BASIN (Place holder for Section 3)

- Treat water as an asset not a problem
- Take coordinated public and private, local and regional actions to improve the quality of Great Lakes waters
- Take actions to replenish clean ground and surface water
- Protect and restore Great Lakes coastal areas
- Reuse the industrial “Rust Belt” resources for sustainable uses
- Bring sustainable agriculture and other land based resource uses into sustainable best practices
- Protect and restore native species and landscapes

ACTIONS

- Build Green
- Develop smartly – Less is more when it comes to land use
- Plan sustainable with principles as goals for local planning and development
- Leverage integrated regional land use, land resource and transportation planning
- Incentivize regional, state and multi-state sustainable planning and development
- Support federal programs that support, assist and encourage sustainable practices
- Establish benchmarks to assess and measure progress towards sustainable development
- Support research and evaluation of sustainable development

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WEBSITES

Michigan land Use Institute: <http://www.mlui.org/>

Great Lakes Sustainable Land Use: <http://www.glc.org/bridges/>

Sustainable Dimensions Department – UN: http://www.fao.org/WAICENT/FAOINFO/SUSTDEV/index_en.htm

Growth Management Leadership Alliance: <http://www.liaa.org/default.asp>

DOT Planning, Environment & Realty: www.fhwa.dot.gov/planning

Smart Growth Online: www.smartgrowth.org

Land Information Access Network: <http://www.liaa.org/default.asp>

PlaceMatters: www.PlaceMatters.com

What-If Site: <http://www.what-if-pss.com/>

PLACE3S: <http://www.energy.ca.gov/places/>

Hanover Principles:

<http://repoint.tcc.virginia.edu/classes/tcc315/Resources/ALM/Environment/hannover.html>

Funders Network for Smart Growth: www.fundersnetwork.org

Ahwahnee Principles for Economic Development: http://www.lgc.org/ahwahnee/econ_principles.html

ULI Smart Growth Network: http://smartgrowth.net/Home/sg_Home_fst.html

Smart Communities Network: <http://www.sustainable.doe.gov/>

Chicago Wilderness Biodiversity Recovery Plan

Recycling America's Land: <http://www.usmayors.org/uscm/brownfields/descriptions.htm>

Pennsylvania

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4/7/2005

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