



WOLFEBORO MASTER PLAN RECOMMENDATIONS

HELPING TO GUIDE AMERICA'S
OLDEST SUMMER RESORT TOWN
TOWARDS SUSTAINABILITY

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Wolfeboro Master Plan Recommendations

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EXECUTIVE SUMMARY OF RECOMMENDATIONS

SUSTAINABILITY COMMISSION

- Creation of a sustainability commission that will educate citizens about sustainability, provide research and advice for decision makers, and conduct a sustainability assessment that will result in a Wolfeboro Sustainability Progress Report released once every three years. The goals and strategies of a sustainability assessment will be consistently refined based on active community outreach similar to that of the "Porstmouth Listens" program.

VISION SECTION

- Revise Vision Statement to read as follows:

In the future, Wolfeboro is a community that is the premier quality destination in the Lakes Region as a place to live and visit. It is a community that is sensitive to, and protective of, the environment, particularly its abundant water resources; is visually appealing; preserves the qualities of its village and rural character; is safe; and provides quality, year-round economic and recreational opportunities for people of all ages.

In the future, Wolfeboro is a regional center for tourism, recreation, culture, retirement living, specialized health care, education, and also a desirable, year-round location for retirees, families, and households of varying income levels.

To realize these future aspirations, we will consider what impact the decisions we make will have on the overall health and well-being of our community. With this in mind, we will strive to make decisions that promote sustainability, will use an integrated systems approach to decision making, and will refer to American Planning Association and Natural Step objectives when making decisions.

Finally, we will continue to encourage and improve community participation in achieving the goals identified in this "living document."

COMMUNITY FACILITIES & SERVICES

- Revision of GOAL X.3 from:

"To continue to improve the Town's management of waste materials, including mixed solid waste, recyclable materials and hazardous waste"

to:

“To continue to *reduce and improve the management of* the Town’s waste materials, including mixed solid waste, recyclable materials and hazardous waste”

- Include the following objectives under GOAL X.3:
 - Objective: Reduce the amount of solid waste we are putting into the waste stream
 - Action: Utilize Wolfeboro’s membership with the Northeast Resource Recovery Association (NRRRA) by encouraging household composting through NRRRA’s program
 - Action: Encourage procurement policies that aim to reduce packaging
 - Objective: Reuse more of the materials we are putting into the waste stream
 - Action: Link town website to, or locally emulate, regional efforts that divert usable items from the waste stream. Such efforts include the “Ossipee Waste Not Yahoo Group”, and local chapters of “Freecycle” (Appendix 3)
 - Continue to support the Hospital Street Barn and Beach Pond Mall
 - Invite local non-profits to post a “wish-list” on town website to encourage and provide assistance for items to be reused
 - Explore feasibility of a local bio-diesel station that would re-use household and/or restaurant “waste” grease to create bio-fuel compatible for all diesel engines (see Portsmouth’s Sustainability Initiatives Appendix I)
 - Objective: Increase percentage of households that recycle
 - Action A: Provide every household with a chart of what is recyclable and what is not (i.e. what types of plastic, what types of paper, what types of glass, etc.).
 - Action B: Set aside 35% of the avoided costs to fund the development of a curbside recycling service like Tasker’s Recycling Service.
 - Action C: Educate the community about recycling benefits by promoting NRRRA’s conversion service on Wolfeboro’s Town Website, the Library, Town Office, and anywhere else the planning board feels is appropriate. (see Appendix I)
- Use LEED certification standards as a first priority goal for all business renovations and new construction of community facilities
- Retrofit all community facilities with energy efficient systems and appliances (such as Energy Star) and require that all new community facilities install energy efficient systems and appliances

- Require that all new construction of community facilities place priority on using brownfield and greenfield sites when available
- Require that all town and business renovations and new construction of community facilities are in compliance with the Americans with Disabilities Act (Appendix 5) as was suggested for the addition or new facility of the library

ECONOMIC BASE

- Further develop Wolfeboro’s “information infrastructure” to better connect those in the local economy with one another, citizens, and tourists
- Construct a centrally located kiosk in town that provides space for a calendar of events and flyers so that the community can be more aware of local events, businesses, promotions, etc..
- Foster ongoing citizen involvement and the development of public/private partnerships

FUTURE LAND USE

- Implement an upstream approach for reducing milfoil by reducing the use of fertilizers that make milfoil flourish and by eliminating the use of the toxic chemical 2-D
- Encourage the Milfoil Control Committee (mentioned in the Recreation chapter under the section “Threats to Water Resources – Aquatic Exotic Invasive Plant Species) to use “upstream approaches” when making decisions regarding the management of milfoil eradication
 - Action: Request Milfoil Control Committee to research the MiddFoil process
- Revision of second and third bulleted points under the fourth paragraph in the “Challenges” section of the chapter from:
 - “increased land development and associated runoff of nutrients and sediment during and after construction”
 - “invasive species like milfoil”
 to:
 - “increased land development and associated runoff of nutrients and sediment during and after construction *that make invasive species like milfoil flourish*”
- Revision of GOAL 1: Objective 1 to include Action Plan G that would state:
 - “Determine amount of space that should be reserved as wilderness, open space, and development to help guide future development growth”
- Revision of GOAL 1: Objective 3: Action C from:

“Advocate innovative land use techniques that promote protection of resources”

to:

“*Provide incentive for* innovative land use techniques that promote protection of resources”

- Revision of GOAL 1: Objective 3: Action F from:

“The Planning Board should endorse the principles of *Smart Growth*...”

to:

“The following *Smart Growth* principles should be used as strategies to make Wolfeboro a sustainable town...”

- Create an Agricultural Committee that would conduct a comprehensive cost assessment of land use, and would address the working landscapes identified in GOAL 1: Objective 1: Action F (farms, gravel pits, etc.)
- Revision of GOAL 2: Objective 1 to include a new Action Plan Q that would state:
“Promote Use of Brownfield sites where appropriate”
- Revision of GOAL 3: Objective 2 to include a new Action Plan C that would state:
“Promote dense urban development to reduce sprawl”
- Revision of GOAL 5: Objective 1: Action B to include:
“Host a *Discovering A Sense of Place* Study Circle (Appendix 5) to help area-residents better understand their local ecosystems”
- Revision of GOAL 5: Objective 1 to include a new Action Plan E:
“Start a water conservation program that serves to educate Wolfeboro residents about the importance of water conservation and ways they can conserve water”
- Revision of GOAL 5: Objective 1 to include a new Action Plan F:
“Provide incentives for water conservation measures such as installation of grey water catchments systems, composting toilets, efficient laundry and dishwasher appliances, etc.”
- Maintain a minimum 50’ buffer around roads to help filter runoff

PUBLIC UTILITIES & INFRASTRUCTURE

- Begin discussion about the feasibility and conduct a cost benefit analysis of creating a Living Machine that would address the wastewater problem by contacting Ocean Arks International
- Discussion of wastewater treatment should also include:
 - Ways to redesign sewage treatment approach, with the goal of preventing toxic and hazardous waste from reaching sewage treatment plants. This would be accomplished by:

- Requiring industries and business to remove all toxic and hazardous waste from water sent to municipal sewage treatment plants
 - Encouraging or requiring industries to reduce or eliminate toxic chemical use and waste through clean production
 - Encouraging the use of less harmful household chemicals, and providing households with a chart explaining how to dispose of common toxic materials.
- Ways to recycle the plant nutrients in sewage sludge to the soil on land not used to grow food crops (This could coincide with the Downtown Area beautification project)

TRANSPORTATION

- Revision of GOAL 1: Objective 3 to include Action 5 to state:
“Create a bike-share program”
- Revision of GOAL 1: Objective 3 to include Action 6 to state:
“Host semi-annual ‘Bike/Walk to Work Day’ (Fall & Spring)”
- Revision of Goal 1: Objective 3 to include Action 7 to state:
“Create a car-share program by developing local examples of the ZipCar program in Boston, Flexcar in Seattle, or City CarShare in San Francisco, in a way that meets Wolfeboro’s needs and transportation demands”
- Replace old town vehicles (such as police cars and ambulances) with fuel efficient vehicles
- Explore feasibility of developing a local bio-diesel station by consulting with bio-diesel stations in New Market, Dover, and Keene

Wolfeboro Master Plan Recommendations

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INTRODUCTION

The Wolfeboro Planning Board and Master Plan Committee have shown immense dedication over the last several months to improving the quality of life in this historic New England town. We understand that updating a Master Plan is no small task, and that the adoption of a revised plan in March will be the culmination of many long hours of research, public hearings, working groups, and the revision of draft, after draft, after draft. In addition to our gratitude, future generations years from now will be appreciative of your contributions to the effective long-term planning of Wolfeboro.

The G.A.L.A Co-op is a 100% volunteer-run, nonprofit organization that has been established to, “help Wolfeboro become a vibrant example of sustainable community.” Sustainable communities are those that satisfy people’s needs now and into the future. Sustainable community development is the process of working to meet and achieve balance between three community goals: economic vitality, community well-being, and environmental resource management. Similar to the aims of the Planning Board and other Town Departments, G.A.L.A volunteers work to ensure that future generations have the capacity to live healthy, meaningful, and productive lives. The G.A.L.A. Co-op membership includes teachers, business owners, artists, farmers, town officials and elected representatives, youth, parents, and grandparents.

SUSTAINABILITY AND SYSTEMS APPROACH

The word “sustainability” has recently become a catch phrase among teachers, corporate executives, governors, town planners, economists, international development advisors, farmers, business managers, and the youth. Why has this word become so popular over the last decade, and how does it relate to a small New England town like Wolfeboro?

A literal definition of “sustainability” is simple: *capable of being sustained; the ability to withstand or uphold some type of weight (or pressure)*. Language around sustainability has evolved as scientific advancements have allowed for greater understanding of the earth’s ability to withstand the pressure of human impact and carrying capacity. Models used to illustrate this relationship between human impact and the earth’s carrying capacity are grounded in a fundamental law of nature: natural systems have a limited capacity to assimilate waste and recover from the depletion of resources.

What does it mean when these models show that current trends are *unsustainable*? It means that humans are extracting resources faster than the earth can replenish them, emitting waste faster than the earth can absorb it, and putting increased pressure on the earth’s life systems. The growing understanding of these trends has sparked an enormous amount of research on sustainability. For example, the *Millennium Ecosystem Assessment* is a comprehensive report published in March 2005 involving the work of more than 1,360 experts worldwide that explains the unsustainable relationship between humans and our surrounding living systems. Research like this provides us with a context for sustainability. The word “sustainable,” therefore, signifies a desired relationship between humans

and their surrounding ecosystems that, when honored, can *sustain* a healthy and desirable lifestyle indefinitely.

Sustainability is most commonly referred to when talking about development, hence the phrase “sustainable development.” This increasingly popular phrase has emerged in response to two converging trends:

- 1) natural systems of the earth (water, forests, wildlife, soil, etc.) are deteriorating, and;
- 2) population and consumption, and consequently the demand on these natural systems, is increasing

Because localities are simply subsystems within a larger biosphere, these converging trends are being experienced on all levels – planetary, nationally, and locally. As these natural systems deteriorate, their capacity to provide essential services to humans also diminishes. It is through the growing understanding of these circumstances that the phrase “sustainable development” was brought to the mainstream. In 1987 United Nations World Commission on Environment and Development released a report, *Our Common Future*, which defined sustainable development as, “meeting the needs of the present without compromising the ability of future generations to meet their own needs.” More recently, the city of Seattle defined sustainable development as, “improving the quality of life, within the mean of nature.” There is no consensus definition for sustainable development. There is, however, universal need for a phrase that addresses the challenge of meeting growing demand with finite resources.

Although the specific definition for sustainability or sustainable development may vary from one community, corporation, or government to the next, the underlying assumption remains the same: *humans live within ecosystems that are subject to fundamental laws of nature.* When discussing sustainability, it is crucial to understand the context of living within a complex *system*. Most of us were taught in school to perceive the world primarily in terms of objects that can be individually studied and understood. This approach assumes that in every complex system, the behavior of the whole can be understood by the properties of its parts. Today, however, we understand that a complex system is a collection of parts *and* their interrelationships that interact over some period of time and produce a behavior. That behavior is an *emergent property* of the system – a function of the system that could not and would not have been understood by simply studying the system’s parts and not the whole. Because of emergent properties, we now understand that in a complex system the *whole is greater than the sum of its parts.*

Consider this- “wellness” is an emergent property of the healthy relationships among the parts that make up the human body (a system in itself). Although the system cannot exist without its most vital parts – heart, lungs, liver, etc – an emergent property of the system, like wellness, cannot be found solely in its parts. In other words, one cannot understand or guess the behavior of a system based exclusively on an understanding of the properties of the individual parts. Likewise, sustainability is an emergent property of a nested hierarchy of socioeconomic and ecological systems, as wellness is an emergent property of a nested hierarchy of cells, organs, and subsystems within the physical body. A system’s emergent properties arise from the pattern of interactions and relationships among the parts, just like sustainability emerges from the interactions and interrelationships of multiple subsystems in the global socioeconomic-ecological system.

Now consider this - because sustainability is an emergent property of the highly complex and interwoven global system, it is inaccurate to suggest that we can create sustainable companies or communities if society is unsustainable at the global level. And while it may seem like the most

unintuitive timing, this is where the Wolfeboro Master Plan comes into play. Our sphere of influence resides in the subsystems: our households, organizations, communities, etc. If we want sustainability to be the emergent property of the larger socioeconomic-ecological system, we need to figure out what relationships among the parts are most likely to produce that outcome. With this context in mind, we can make decisions and take actions on the local level that increase the probability of a sustainable global society. Hence, Global Awareness, Local Action.

SUSTAINABILITY AND MASTER PLANS

In the spirit of the G.A.L.A Community Co-op's commitment to encourage civic engagement, G.A.L.A volunteers have spent the last several months following the Wolfeboro Master Plan public hearings and studying the specific chapters. We appreciate the Wolfeboro Planning Board's effort to provide multiple opportunities for public participation in the 2006-2007 Master Plan update. Although the Master Plan update adoption is scheduled for March 2007, it is our understanding this comprehensive plan serves as a "living document" to guide long-term community development in a way that improves quality of life and preserves the rural character of the "oldest summer resort in America." G.A.L.A is committed to help realize the goals of the Wolfeboro Master Plan by continuing to work with all sectors of the community, including the Town Government, to help ensure that future generations have the capacity to live healthy, meaningful, safe, and productive lives. With these shared goals in mind, we look forward to building our long-term relationship with the Wolfeboro Planning Board, and we begin that relationship here with our Wolfeboro Master Plan Recommendations.

Town Master Plans have become an effective tool to guide sustainable development in any given community. New Hampshire Law RSA 674:2 describes the purpose and structure of a municipal Master Plan as follows:

- Set down as clearly and practically as possible the best and most appropriate future development of the area under the jurisdiction of the Planning Board, to
- Aid the Board in designing ordinances that result in preserving and enhancing the unique quality of life and culture of New Hampshire, and to
- Guide the Board in the performance of its other duties in a manner that achieves the principles of smart growth, sound planning and wise resource protection.

These bullet points show that New Hampshire law echoes the concepts behind sustainable development in defining the purpose of a regional Master Plan. More succinctly described by the New Hampshire Strafford Regional Planning Commission, "The Master Plan is an important document . . . to improve decision-making and achieve sustainable development and an improved quality of life for all citizens in the Region." The Wolfeboro Master Plan Vision Statement also exemplifies how the Master Plan is meant to help decision makers achieve a desired outcome in the long-term. In fact, foresight is arguably the most important component of any Master Plan.

Futurist Peter Schwartz says that in order to understand the long view, it helps to have a "helicopter" in your head. Schwartz is referring to the ability to see the big picture *and* zoom in for a closer look at the details. Town government departments typically organize into networks and hierarchies so they can function with the ability Schwartz describes. Nevertheless, community actors everywhere continue to use single-issue or project-oriented approaches that may solve one problem, but create others. This traditional approach, often bringing unexpected outcomes, places

communities into expensive, exhausting, and reactionary cycles that, at best, allow the communities to stay afloat.

The Town of Wolfeboro, however, has clearly done more than “stay afloat.” Thanks to dedicated town officials, charitable business practices, and hardworking citizens at large, the “oldest summer resort in America” continues to be a regional beacon of economic and social vibrancy, while preserving its natural beauty and unique New England culture. Still, the 2006-07 Wolfeboro Master Plan Update shows that this small town is no exception to the emerging global dilemma: inadequate carrying capacity in the face of growing human demand. In some cases, the Wolfeboro infrastructure’s inability to accommodate growing demands has resulted in high regulatory fines, depleting important monetary capital. Consequently, town-planning departments are pressured to react with short-term, single-issue or project-oriented, solutions. Like so many other towns, we are stuck with solutions that *overcome problems*, rather than *achieve positive outcomes*.

The purpose of integrating sustainability into long-term planning projects like the Master Plan could be summarized by exactly that- to move from *overcoming problems*, to *achieving positive outcomes*. This can be done when specific chapters of a Master Plan are understood as subsystems within the whole. Like the human body example, one cannot predict the emergent properties of the whole by looking at the individual parts in isolation. The emergent property, and the characteristic of the community, therefore, will be defined not only by the goals and objectives of the specific chapters of a Master Plan, but also by the interrelationships between the chapters. It is clear that the crafters of Wolfeboro’s Master Plan understand the importance of using a systems approach from the “Relationships to Other Chapters” sub-section found at the end of several chapter updates and the common cross-referencing between chapters. Here again, the Wolfeboro Master plan is already on its way to mapping out a plan towards sustainability.

With any Master Plan, however, making sustainability a *guiding principal*, rather than an incidental emphasis in one chapter and not the next, will strengthen the overall document and as expressed in the Portsmouth, NH Master Plan, “gives us an opportunity to have a common language to talk across all disciplines, from business to education to civic society.” The Vision section is the most appropriate place in a Master Plan to explicitly identify sustainability as a guiding principal because it, as described in RSA 674:2,

... serves as the direction for the other sections of the plan. This section shall contain a set of statements, which articulates the desires of the public relative to the future. It shall contain a set of guiding principles and priorities to implement that vision, with special emphasis on maximizing the smart growth principles in RSA 9-B.(Appendix A)

Adopting sustainability as a guiding principal in the Vision section would allow the overall Vision to articulate the objectives that must be met to increase the likelihood of realizing a sustainable community. The American Planning Association (APA) (Appendix B) recently published a policy guide titled, *Planning for Sustainability*, that describes what they deem the most concise objectives to guide a comprehensive plan towards achieving sustainability. Their framework was developed by a group of scientists in Sweden and the United States combining knowledge of physics, biology, and other fundamental sciences with understanding of societal decision-making. The framework is also known as “The Natural Step” and has been implemented by hundreds of communities and corporations all around the world. The framework reads as follows:

Planning for sustainability requires a systematic, integrated approach that brings together environmental, economic, and social goals and actions directed toward the

following four objectives:

1. Reduce dependence upon fossil fuels, extracted underground metals and minerals.
2. Reduce dependence on chemicals and other manufactured substances that can accumulate in Nature.
3. Reduce dependence on activities that harm life-sustaining eco-systems.
4. Meet the hierarchy of present and future human needs fairly and efficiently.

By providing very clear objectives like these, a planning board reduces the risk of self-interested interpretation that might arise from a more vague Vision Section. These particular objectives also suggest priorities for planners when making action-oriented decisions.

According to the APA, when those four objectives are met, the planning outcomes include:

- Local and regional development patterns that expand choice and opportunity for all persons, recognizing a special responsibility to address the needs of those that are disadvantaged
- Resilient, diverse, and self-sufficient local economies that meet the needs of residents and build on the unique characteristics of the community to the greatest extent possible.
- Communities with a healthy economy, environment and social climate that function in harmony with natural ecosystems and other species and allow people to lead healthy, productive and enjoyable lives.

The APA explains, and the case studies behind it demonstrate, that using sustainability as a compass and guiding principal, accompanied with concrete objectives, will help all the municipal departments and town boards navigate their way towards a shared vision – sustainable community.

Once again, the Wolfeboro Master Plan already contains elements that will move Wolfeboro towards becoming a sustainable community. In addition, Wolfeboro is fortunate to have dedicated citizens who have made it possible for our Master Plan to go above and beyond the standard requirements of a Vision Section and Land Use chapter, to include the additional chapters of Transportation, Recreation, Greater Downtown, Economic Base, Arts & Culture, Public Infrastructure & Utilities, Community Facilities, Impact Fees, Population, and Housing.

The purpose of this document is to accept the invitation for community involvement with the 2006-2007 Master Plan update, by providing recommendations based on G.A.L.A volunteer participation in public hearings, independent research, and community outreach. Our aim is to compliment the existing Master Plan document and offer our assistance in the future implementation of these recommendations.

RECOMMENDATIONS

SUSTAINABILITY COMMISSION

Out of all the recommendations that G.A.L.A has drafted for the Master Plan, creation of a sustainability commission is the one we most strongly encourage the Planning Board to adopt. We believe that the creation of a sustainability commission would ensure that the decisions the Planning Board makes would promote sustainability, and, if they did not, sustainable alternatives could be sought. Ultimately, a sustainability commission would help guide Wolfeboro towards a path of sustainability.

There are numerous models of sustainability commissions, committees, and blue ribbon advisory panels from around the world. The Bloomington Commission on Sustainability (out of Indiana) was created on May 4, 2005. Their mission is to, “Promote economic development, environmental health, and social equity in our community for present and future generations. The commission gathers and disseminates information; promotes practical initiatives; and measures, monitors, and reports on our community’s progress toward sustainability.”

Closer to home is the Sustainable Practices Blue Ribbon Committee out of Portsmouth, New Hampshire. This committee was established when the city’s Master Plan was up for review in 2005. The Committee’s work focuses on three main areas:

1. Increasing awareness of the importance and value of sustainable practices among Portsmouth residents, business owners, non-resident employees of Portsmouth businesses, visitors to the City, municipal staff, and other stakeholders;
2. Advising the City Manager and City council on improving the sustainability of City operations including such aspects as the energy efficiency of city buildings and vehicles, purchasing guidelines, and alternative fuels; and,
3. Advising the City Council on a sustainable approach to the future growth and redevelopment of Portsmouth

A detailed example of a sustainability commission in Brighton and Hove City (UK) is given in Appendix C.

There are also many available tools such as ecological footprint analysis and sustainability indicators, which assist communities as they integrate sustainability into the long-term planning process. The Earth Charter Community Action Tool, otherwise known as “EarthCAT”, (Appendix J) is one such tool that is aimed specifically to help communities conduct a Sustainability Assessment.

Because G.A.L.A believes that the formation of a sustainability commission is the first step towards Wolfeboro becoming a sustainable town, we recommend:

- Creation of a sustainability commission that will educate citizens about sustainability, provide research and advice for decision makers, and conduct a sustainability assessment that will result in a Wolfeboro Sustainability Progress Report released once every three years. The goals and strategies of a sustainability assessment will be consistently refined based on active community outreach similar to that of the “Portsmouth Listens” program.

G.A.L.A participants realize that the creation of a Wolfeboro Sustainability Commission could be challenging, and would therefore like to offer our assistance if the Planning Board chooses to adopt this recommendation.

VISION STATEMENT

Currently, the Vision statement of the MP is as follows:

“In the future, Wolfeboro is a community that is the premier quality destination in the Lakes Region as a place to live and visit. It is a community that is sensitive to, and protective of, the environment, particularly its abundant water resources; is visually appealing; preserves the qualities of its village and rural character; is safe; and provides quality, year-round economic and recreational opportunities for people of all ages.

In the future, Wolfeboro is a regional center for tourism, recreation, culture, retirement living, specialized health care, education, and also a desirable, year-round location for retirees, families, and households of varying income levels.”

The Vision statement does a wonderful job describing what type of community we want Wolfeboro to be, but is unclear in the principles that will be used to guide us in that direction. We believe, since the Vision statement serves as a reference for all other sections of the MP that it is important for it to contain a statement about achieving the desired outcomes in a sustainable way. We also feel that this section offers a key opportunity to invite the broader community to help achieve the goals identified in this “living document.” Based on these ideas, we recommend the Vision statement be revised to read as follows:

“In the future, Wolfeboro is a community that is the premier quality destination in the Lakes Region as a place to live and visit. It is a community that is sensitive to, and protective of, the environment, particularly its abundant water resources; is visually appealing; preserves the qualities of its village and rural character; is safe; and provides quality, year-round economic and recreational opportunities for people of all ages.

In the future, Wolfeboro is a regional center for tourism, recreation, culture, retirement living, specialized health care, education, and also a desirable, year-round location for retirees, families, and households of varying income levels.

To realize these future aspirations, we will consider what impact the decisions we make will have on the overall health and well-being of our community. With this in mind, we will strive to make decisions that promote sustainability, will use an integrated systems approach to decision making, and will refer to American Planning Association and Natural Step objectives when making decisions.

Finally, we will continue to encourage and improve community participation in achieving the goals identified in this ‘living document’.”

COMMUNITY FACILITIES & SERVICES

The first goal G.A.L.A has for this chapter is to move Wolfeboro from simply managing waste towards reducing waste at the source, otherwise known as an upstream approach. The well-known slogan, “Reduce, Reuse, Recycle” places intentional emphasis on reducing the use of resources first, then reusing them, and lastly recycling them. G.A.L.A fully supports the first action under GOAL X.3 that the town should adopt a “pay as you throw” policy. To further promote the reduce, reuse, recycle concept, we believe that Wolfeboro should:

- Revise GOAL X.3 from:

“To continue to improve the Town’s management of waste materials, including mixed solid waste, recyclable materials and hazardous waste”

to:

“To continue to *reduce and improve the management of* the Town’s waste materials, including mixed solid waste, recyclable materials and hazardous waste”

- Include the following objectives under GOAL X.3:
 - Objective: Reduce the amount of solid waste we are putting into the waste stream
 - Action: Utilize Wolfeboro’s membership with the Northeast Resource Recovery Association (NRRRA) by encouraging household composting through NRRRA’s program
 - Action: Encourage procurement policies that aim to reduce packaging
 - Objective: Reuse more of the materials we are putting into the waste stream
 - Action: Link town website to, or locally emulate, regional efforts that divert usable items from the waste stream. Such efforts include the “Ossipee Waste Not Yahoo Group”, and local chapters of “Freecycle” (Appendix D)
 - Continue to support the Hospital Street Barn and Beach Pond Mall
 - Invite local non-profits to post a “wish-list” on town website to encourage and provide assistance for items to be reused
 - Explore feasibility of a local bio-diesel station that would re-use household and/or restaurant “waste” grease to create bio-fuel compatible for all diesel engines
 - Objective: Increase percentage of households that recycle
 - Action A: Provide every household with a chart of what is recyclable and what is not (i.e. what types of plastic, what types of paper, what types of glass, etc.)
 - Action B: Set aside 35% of the avoided costs to fund the development of a curbside recycling service like Tasker’s Recycling Service.
 - Action C: Educate the community about recycling benefits by promoting NRRRA’s conversion service on Wolfeboro’s Town Website, the Library, Town Office, and anywhere else the planning board feels is appropriate

Promoting building efficiency is a second goal G.A.L.A members believe will compliment the Community Facilities chapter. From installation of efficient lighting to rainwater capture systems, effective energy management creates a tremendous opportunity to reduce annual operation expenses.

For example, in Gentry, Arkansas implemented recommendations from an energy savings audit saved their community \$1,300,000 (www.arkansasrenewableenergy.org).

Building efficiency can be achieved in numerous ways, but G.A.L.A recommends the Wolfeboro Master Plan use Leadership in Engineering and Environmental Design (LEED) standards to promote efficiency (Appendix E). LEED certification is an internationally recognized standard for measuring building sustainability. LEED is crafted in a way that promotes design and construction practices that increase profitability, reduce the negative environmental impacts of buildings, and improves occupant health and well-being (www.nrd.org/buildinggreen/leed). The certification process includes a third-party commissioning procedure in which the building can be certified in one of four levels: Certified, Silver, Gold, and Platinum. The Natural Resources Defense Council office in Santa Monica, California was awarded the Platinum certification and saves, on average, \$8,200/year in utilities and has reduced its carbon dioxide pollution by 54 tons/year (www.nrdc.org/buildinggreen).

Switching from out-dated appliances to energy efficient ones can also increase building efficiency while saving thousands of dollars. Energy Star is a partnership between the US Environmental Protection Agency (EPA) and the US Department of Energy (DOE). The program promotes energy-efficient products through product labeling and consumer education. Products with the Energy Star labels use less energy and reduce both energy costs and environmental impacts, without compromising quality or performance. There are over 11,000 product models in more than 30 product categories that bear the Energy Star label. (www.energystar.gov).

Construction of new buildings on brownfields and greenfields would also help to reduce pollution and beautify Wolfeboro. Brownfields are areas that have been abandoned and pose threats to the surrounding community and environment because they have the presence, or potential presence, of a hazardous substance, pollutant, or contaminant. Greenfields are areas that have been abandoned but do not pose threats to the surrounding community and environment. Utilization of both these types of areas would reduce pollution, contain development in areas that have already been developed, help beautify Wolfeboro by reducing eye sores, and revitalize areas that might have fallen to the wayside.

To promote building efficiency, we recommend Wolfeboro:

- Use LEED certification standards as a first priority goal for all business renovations and new construction of community facilities
- Retrofit all community facilities with energy efficient systems and appliances (such as Energy Star) and require that all new community facilities install energy efficient systems and appliances
- Require that all new construction of community facilities place priority on using brownfield and greenfield sites when available
- Require that all town and business renovations and new construction of community facilities are in compliance with the Americans with Disabilities Act (Appendix F) as was suggested for the addition or new facility of the library

ECONOMIC BASE

Supporting a creative local economy is central to achieving sustainable community. It helps redefine progress, wealth, and value from traditional monetary achievements to an assortment of contributions like the sharing of local skills and knowledge, providing a venue for respectful debate on current events, empowering community members with media and communication skills, and building inter-generational support networks. These contributions help create a healthy economy and community.

G.A.L.A agrees with the Economic Base chapter's major finding that "Wolfeboro's fundamental economic strength is the complementary mix of recreation, small businesses, education, medical services and cultural activity enhanced by its natural resources." We believe this chapter is heading in the right direction by suggesting the formation of a local economic development committee and the importance that has been placed on the need to have robust local businesses.

Adopting an approach similar to Portsmouth's may help further develop Wolfeboro's local economy (visit www.cityofportsmouth.com for more information). The Portsmouth community has worked hard to develop an "information infrastructure" that serves their economy. They have developed calendars, web sites, kiosks, well-developed databases, public events, and learning venues to connect their businesses, citizens and tourists to each other. As they state on their website, "Making Portsmouth 'the best place to live and work for everyone' is not solely a Government obligation, but must include contribution from committed residents. This is best demonstrated through their recommendations for ongoing citizen involvement and the development of public/private partnerships" (www.cityofportsmouth.com). G.A.L.A fully supports this statement and the approach Portsmouth has used to enhance their economy, thus we propose that Wolfeboro:

- Further develop Wolfeboro's "information infrastructure" to better connect those in the local economy with one another, citizens, and tourists
- Construct a centrally located kiosk in town that provides space for a calendar of events and flyers so that the community can be more aware of local events, businesses, promotions, etc.
- Foster ongoing citizen involvement and the development of public/private partnerships

FUTURE LAND USE

As this chapter states in the Master Plan, Wolfeboro has unfortunately experienced a "lack of adequate planning tools to determine where development should occur and where it should not." G.A.L.A fully supports the Master Plan's solution of adopting smart growth principles to remedy this problem.

The increased presence of Eurasian Watermilfoil (milfoil) has posed a serious challenge for the Wolfeboro community. G.A.L.A members know that milfoil must be managed, but believe that the use of chemicals, such as 2-4D, to manage the invasive species is detrimental to the health of Wolfeboro citizens and environment. As EnviroScience Inc. states, "Milfoil must be managed continuously to sustain the environmental and economic integrity of public and private water bodies. Current methods of milfoil control use physical, mechanical, and chemical disruption processes that neither eradicate milfoil nor provide long-term control. These methods are expensive, and at best,

stop-gap measures. Due to their damaging effects on the environment, some are banned in certain states and provinces” (www.enviroscienceinc.com).

EnviroScience Inc. has created a safe alternative to the chemical approach for milfoil eradication. Named the MiddFoil Process, this system utilizes an insect that specifically feeds on milfoil. The native milfoil weevil is intentionally introduced into the water-body where milfoil is a problem in order to establish a resident population to control milfoil on a long-term basis. EnviroScience Inc. states, “The beetle has proved to be a very effective control agent in extensive field trials. Depending on the initial density applied, the beetles take from two to four years to permanently stabilize milfoil below problematic levels. Most importantly, the MiddFoil process is environmentally safe: the weevil does not damage native plants or animals because it is native to our North American ecology. As milfoil decreases in the treated area, the weevil population gradually declines to a self-sustaining level” (www.enviroscienceinc.com). Therefore, G.A.L.A recommends that Wolfeboro:

- Implement an upstream approach for reducing milfoil by reducing the use of fertilizers that make milfoil flourish and by eliminating the use of the toxic chemical 2-4D
- Encourage the Milfoil Control Committee (mentioned in the Recreation chapter under the section “Threats to Water Resources – Aquatic Exotic Invasive Plant Species) to use “upstream approaches” when making decisions regarding the management of Eurasain milfoil
 - Action: Request Milfoil Control Committee to research the MiddFoil process
- Revision of second and third bulleted points under the fourth paragraph in the “Challenges” section of the chapter from:
 - “increased land development and associated runoff of nutrients and sediment during and after construction”
 - “invasive species like milfoil”

to:

- “increased land development and associated runoff of nutrients and sediment during and after construction *that make invasive species like milfoil flourish*”

Other recommendations for this chapter include:

- Revision of GOAL 1: Objective 1 to include Action Plan G that would state:
“Determine amount of space that should be reserved as wilderness, open space, and development to help guide future development growth”
- Revision of GOAL 1: Objective 3: Action C from:
“Advocate innovative land use techniques that promote protection of resources”

to:

- “*Provide incentive for* innovative land use techniques that promote protection of resources”

- Revision of GOAL 1: Objective 3: Action F from:

“The Planning Board should endorse the principles of *Smart Growth*...”

to:

“The following *Smart Growth* principles should be used as strategies to make Wolfeboro a sustainable town...”

- Create an Agricultural Committee that would conduct a comprehensive cost assessment of land use, and would address the working landscapes identified in GOAL 1: Objective 1: Action F (farms, gravel pits, etc.)
- Revision of GOAL 2: Objective 1 to include a new Action Plan Q that would state: “Promote Use of Brownfield sites where appropriate”
- Revision of GOAL 3: Objective 2 to include a new Action Plan C that would state: “Promote dense urban development to reduce sprawl”
- Revision of GOAL 5: Objective 1: Action B to include: “Host a *Discovering A Sense of Place* Study Circle (Appendix G) to help area-residents better understand their local ecosystems”

Water conservation and protection should be a main priority for Wolfeboro and its residents. As highlighted throughout the Master Plan, clean water resources are not only vital to our community, they also draw tourists in and subsequently supports our economy. Although it may be marginal in comparison to the water loss from pipe leakage, the manner in which residents consume water resources influences the overall goal of optimum efficiency. While savings from water conservation programs varies, research shows that the average community can expect to see anywhere from an 11% to a 30% reduction in water use after implementing a water conservation program (www.conservewatergeorgia.net). For example, in Corpus Christi, Texas it has been estimated that an average three-member household can reduce its water use by 54,000 gallons annually and can lower water bills by about \$60/year if water-efficient plumbing fixtures are used (www.epa.gov). (see Appendix H for a list of the most common water conservation practices).

It is equally important to make sure that Wolfeboro residents protect our water by keeping it clean. Runoff from roads, lawns, and industry greatly decrease the quality of our town’s water. Thus, G.A.L.A recommends that Wolfeboro:

- Revision of GOAL 5: Objective 1 to include a new Action Plan E: “Start a water conservation program that serves to educate Wolfeboro residents about the importance of water conservation and ways they can conserve water”
- Revision of GOAL 5: Objective 1 to include a new Action Plan F: “Provide incentives for water conservation measures such as installation of grey water catchments systems, composting toilets, efficient laundry and dishwasher appliances, etc.”
- Maintain a minimum 50’ buffer around roads to help filter runoff

PUBLIC UTILITIES & INFRASTRUCTURE

The Public Utilities & Infrastructure chapter makes it clear that Wolfeboro's infrastructure is in need of repair. G.A.L.A fully supports the proposal in this chapter that "needed repairs be made prior to any consideration of expanding infrastructure." We also believe that to solve Wolfeboro's water shortage and wastewater problems, Wolfeboro needs a long-term solution that looks beyond the quick 5-10 year fix.

G.A.L.A believes that wastewater treatment should be done in a way that protects the health and safety of Wolfeboro's citizens and the environment. Unfortunately, most treatment plants, effluent storage ponds, and spray systems do not protect either. G.A.L.A's intention is not to hinder the plans that are already underway to build more effluent storage. Instead, we would like to work on the long-term solution to the wastewater problem by suggesting the creation of a Living Machine.

Living Machines are ecologically sound water-treatment facilities. A Living Machine is a series of tanks teeming with live plants, trees, grasses and algae, koi and goldfish, tiny freshwater shrimp, snails, and a diversity of microorganisms and bacteria. Each tank is a different mini-ecosystem designed to eat or break down waste. The process takes about four days to turn mucky water crystal clear. It is chemical-free, odor-free, and, compared to conventional waste treatment, costs less financially and ecologically (www.rps.psu.edu). Towns, businesses, and schools around the world are using Living Machines with great success (including Ben and Jerry's Ice Cream plant, the Body Shop bottling facility, M&M/Mars candy factory, and the town of South Burlington, VT). Ocean Arks International is a Massachusetts-based not-for-profit organization that created the original Living Machine and has been in the business of designing them for over 15 years. They would be able to provide Wolfeboro with consultation services for this creation. With this in mind, G.A.L.A members recommend that Wolfeboro:

- Begin discussion about the feasibility and conduct a cost benefit analysis of creating a Living Machine that would address the wastewater problem by contacting Ocean Arks International
Phone: 508-548-8161 Email: info@oceanarks.org

The discussion of wastewater treatment should also include:

- Ways to redesign sewage treatment approach, with the goal of preventing toxic and hazardous waste from reaching sewage treatment plants. This would be accomplished by:
 - Requiring industries and business to remove all toxic and hazardous waste from water sent to municipal sewage treatment plants
 - Encouraging or requiring industries to reduce or eliminate toxic chemical use and waste through clean production
 - Encouraging the use of less harmful household chemicals, and providing households with a chart explaining how to dispose of common toxic materials.
- Ways to recycle the plant nutrients in sewage sludge to the soil on land not used to grow food crops (This could coincide with the Downtown Area beautification project)

TRANSPORTATION

The Transportation chapter already includes many recommendations that are in-line with making Wolfeboro more sustainable. These recommendations include encouraging use of alternative means of transportation, moving towards more efficient, lower impact transportation systems, the acceptance of congestion to motivate people to make better transportation decisions, and the suggestion of beginning a rideshare program. Therefore G.A.L.A's recommendations for this chapter shall be brief:

- Revision of GOAL 1: Objective 3 to include Action 5 to state:
“Create a bike-share program”
- Revision of GOAL 1: Objective 3 to include Action 6 to state:
“Host semi-annual ‘Bike/Walk to Work Day’ (Fall & Spring)”
- Revision of Goal 1: Objective 3 to include Action 7 to state:
“Create a car-share program by using the examples of the ZipCar program in Boston, Flexcar in Seattle, or City CarShare in San Francisco, and adjusting them to meet Wolfeboro’s needs and transportation demands”
- Replace old town vehicles (such as police cars and ambulances) with fuel efficient vehicles
- Explore feasibility of developing a local bio-diesel station by consulting with bio-diesel stations in New Market, Dover, and Keene

APPENDIX

A. RSA 9-B

CHAPTER 9-B
STATE ECONOMIC GROWTH, RESOURCE PROTECTION, AND PLANNING
POLICY

SECTION 9-B:1

9-B:1 Findings. – The general court finds that:

I. In addition to clean water and air, productive mountain, forest, and agricultural open space land is one of the state's most valuable assets, and is necessary for the economy and health and welfare of the citizens. The maintenance of this asset is vital if the state is to provide future generations with the same quality of life and environment that we have traditionally enjoyed.

II. Economic development is essential to the well-being and prosperity of our citizens. However, when haphazard development sprawls across the state's landscape, our collective well-being suffers. Fortunately, economic development can take place in a form that maximizes smart growth.

III. The state can encourage development in accordance with this chapter by regularly reviewing its operating procedures, granting policies, and regulatory framework.

IV. A coordinated and comprehensive planning effort by state agencies on future development in the state is needed, which will not only improve our economy, but also encourages smart growth by locating development in appropriate growth areas and thus retaining as much open space land as possible for the long-term.

Source. 2000, 292:6, eff. Aug. 20, 2000.

SECTION 9-B:2

9-B:2 Policy. – It shall be the policy of the state of New Hampshire that state agencies act in ways that encourage smart growth.

Source. 2000, 292:6, eff. Aug. 20, 2000.

SECTION 9-B:3

9-B:3 Definition. – In this chapter, "smart growth" means the control of haphazard and unplanned development and the use of land which results over time, in the inflation of the amount of land used per unit of human development, and of the degree of dispersal between such land areas. "Smart growth" also means the development and use of land in such a manner that its physical, visual, or audible consequences are appropriate to the traditional and historic New Hampshire landscape. Smart growth may include denser development of existing communities, encouragement of mixed uses in such communities, the protection of villages, and planning so as to create ease of movement within and among communities. Smart growth preserves the integrity of open space in agricultural, forested, and undeveloped areas. The results of smart growth may include, but shall not be limited to:

- I. Vibrant commercial activity within cities and towns.
- II. Strong sense of community identity.
- III. Adherence to traditional settlement patterns when siting municipal and public buildings and services.
- IV. Ample alternate transportation modes.
- V. Uncongested roads.

- VI. Decreased water and air pollution.
- VII. Clean aquifer recharge areas.
- VIII. Viable wildlife habitat.
- IX. Attractive views of the landscape.
- X. Preservation of historic village centers.

Source. 2000, 292:6, eff. Aug. 20, 2000.

SECTION 9-B:4

9-B:4 Expenditure of State or Federal Funds. – All state agencies shall give due consideration to the state's policy on smart growth under RSA 9-B:2 when providing advice or expending state or federal funds, for their own use or as pass-through grants, for public works, transportation, or major capital improvement projects, and for the construction, rental, or lease of facilities. The intent of this action is that new investments and grants for existing sites and buildings in existing community centers will be given preference over investments in outlying areas where that is a practical solution for the use and community in question.

Source. 2000, 292:6, eff. Aug. 20, 2000.

SECTION 9-B:5

9-B:5 Procedures for Review. – The governor shall review actions taken by state agencies relative to the provisions of RSA 9-B:4 to ensure compliance with this chapter. The governor shall establish procedures for review no later than December 1, 2000.

Source. 2000, 292:6, eff. Aug. 20, 2000.

SECTION 9-B:6

9-B:6 Report to the General Court and the Governor. – By October 1 of 2001, and every 4 years thereafter, the council on resources and development, established in RSA 162-C, shall report to the general court and the governor on the following:

- I. Progress by state agencies in complying with the expenditure requirements under RSA 9-B:4.
- II. Progress by the state agencies represented on the council in coordinating the activities to encourage smart growth.
- III. Efforts made to encourage development in accordance with this chapter by regular review of state operating procedures, granting policies, and regulatory framework.
- IV. Suggested policy changes or legislation that the council believes would strengthen the state's ability to achieve the smart growth goal of RSA 9-B:2.
- V. An assessment of how state agencies are complying with the goals and objectives established in the statewide development plan, under RSA 9-A, and an identification of any suggested changes.

Source. 2000, 292:6. 2002, 229:6, 7, eff. July 1, 2002.

B. American Planning Association: *Policy Guide on Planning for Sustainability*

Adopted by Chapter Delegate Assembly, April 16, 2000

Ratified by Board of Directors, April 17, 2000, New York, NY

I. FINDINGS

There is growing concern for the issue of sustainability – whether the Earth’s resources will be able to meet the demands of a growing human population that has rising aspirations for consumption and quality of life, while maintaining the rich diversity of the natural environment or biosphere.

Patterns of human development - physical, social, and economic - affect sustainability at the local and the global level. City and regional planning is integrally related to defining how, where, and when human development occurs, which affects resource use. Planners can therefore play a crucial role in improving the sustainability of communities and the resources that support them.

There are several dimensions to the "sustainability" issue:

- 1 - We want to sustain communities as good places to live, and that offer economic and other opportunities to their inhabitants.
- 2 – We want to sustain the values of our society – things like individual liberty and democracy.
- 3 – We want to sustain the biodiversity of the natural environment, both for the contribution that it makes to the quality of human life and for its own inherent value.
- 4 – We want to sustain the ability of natural systems to provide the life-supporting "services" that are rarely counted by economists, but which have recently been estimated to be worth nearly as much as total gross human economic product.

A sustainable community is one that is consistent with all of these dimensions of sustainability.

A range of indicators suggest that there is a growing gap between human consumption of resources and Earth’s capacity to supply those resources and reabsorb resulting wastes. Several of these are described below:

Global Indications of Unsustainability

Global Warming. Human activity, particularly the combustion of fossil fuels, adds gases like carbon dioxide and methane to the atmosphere. The world’s scientific community continues to document that this buildup of gases is altering global climatic patterns. Over the past century, the land surface temperature worldwide has risen an average of 0.8 -1.0 Fahrenheit degrees. Over the same period, average precipitation has increased about 1% while the worldwide sea level has risen about 6-8 inches.

Soil Degradation. For the past 50 years, agricultural mismanagement has resulted in severe degradation of the Earth’s soils, erosion being the most common type of degradation. Soil lost to wind and water erosion ranges from 5-10 tons per hectare annually in Africa, Europe, and Australia, 10-20 tons per hectare in North, Central, and South America, and 30 tons per hectare in Asia. Given that soil is created at roughly one ton per hectare per year, current rates of erosion are depleting the nutrient base of agriculture.

Deforestation. The world has lost 1.5 billion acres of forest in the last 200 years. Tropical rainforests, which support more than 60% of all known plant species are currently disappearing at a rate of 2.4 acres (two football fields) per second, 214,000 acres (larger than New York City) per day, and 78,000,000 acres (the size of New Mexico) per year.

Species Extinction. Human activity is creating a "biodiversity deficit" by destroying ecosystems faster than nature can create new ones. Rates of species extinction are currently estimated at one hundred to one thousand times higher than pre-human levels. In North America, an estimated 36% of fish, 35% of amphibians, 17% of mammals, and 11% of birds are either in jeopardy or are already extinct.

Declining Fisheries. After many years of continually increasing worldwide seafood catches, the tonnage of seafood harvested peaked in 1989 and has plateaued since. Harvests for many species

have declined. For example, the annual salmon catch in British Columbia fell by nearly 50% from 1985 to 1995.

Economic Inequity. The fifth of the world's people living in the highest-income countries controls 86 per cent of world gross domestic product (GDP), 82 per cent of world export markets, 68 per cent of foreign direct investments, and 74 per cent of world telephone lines.

In addition to these global indicators, a variety of local and regional indicators also show unsustainable trends. The reasons that our lifestyles are unsustainable are varied and complex. Here are a few of the key factors contributing to unsustainability.

What is Contributing to Unsustainability?

Overconsumption. Over the last 40 years, the increase in per capita energy and material consumption has increased even faster than the world's human population. Scientists estimate that our present consumption level is exceeding the Earth's carrying capacity by 30%. We are making up that difference by depleting "natural capital". The United States leads the world in material consumption and waste generation. The 'ecological footprint' (estimated amount of land to support consumption and waste generation patterns) of the typical U.S. resident per year is 25.5 acres, compared to 6.9 acres for the average world resident and 2 acres for the average resident in India.

Population Growth. The world's human population is growing at a rate of 385,000 per day. Almost all of this growth (98%) is occurring in developing nations. Many developing nations remain impoverished because economic development cannot keep pace. Even in the United States, where the growth rate is a relatively modest 1.1%, the nation's population will double in roughly 60 years.

Dependence upon Non-Renewable Resources. Modern economies rely on a host of substances that are not part of nature's cycle of growth and decay. Because these substances are not renewable, their supplies are constantly diminishing. This causes competition for limited resources, with societal repercussions and resulting damage to the environment.

Pollution. The use of substances that accumulate in the ecosphere and are not part of nature's cycle causes environmental pollution in various forms. Carbon dioxide has increased 30% over its natural occurrence in our atmosphere. Poisonous elements mined from below the Earth's crust, such as cadmium and lead, are found at five and eight times, respectively, their natural rates in the ecosphere. Over 70,000 chemical compounds are now present and accumulating in the ecosphere. Many of these may be toxic to humans or other species.

Environmentally and Socially Destructive Development Patterns. Historically, human development has not considered the natural processes upon which we depend, thereby damaging or destroying the systems that support us. The typical suburb paves over land that was once the habitat of other species. It also reduces opportunities for social interaction, once as easy as walking down the street to go to the corner store. Today, fewer than 10% of daily commute trips in the U.S. are by walking or bicycling.

Inequities in Resource Distribution. Between 1960 and 1994, the disparity in per capita income between the richest and poorest fifth of the world's nations rose from 30:1 to 78:1. The historic solution to poverty – economic growth -- has generally served to exacerbate inequities, while degrading the resources upon which all life depends.

Limited Public Participation. Problems arise when sectors of society are disenfranchised from political and economic decision-making, contributing to social and economic inequalities. Limited public participation and lack of equity undermine the ability to sustain the natural and community systems upon which all people depend.

One of the root causes of the problems described above is the failure to recognize the fundamental limits to Earth's ability to withstand alterations to its natural systems. As a result, most Americans consume wastefully, using our limited resources inefficiently and inequitably. People need to acknowledge that we are an interconnected part of nature. Policies and actions must reflect the important linkages among a healthy environment, a strong economy, and social well being. Indeed, it may be necessary to change some of the operational definitions of "strong economy" and "social well being."

These global problems are reflected in -- and are affected by -- localized unsustainable activity in communities and regions throughout the United States and in other regions of the Earth. Many of these environmentally, economically and socially unsustainable practices are directly connected to local - including remotely influenced local - decision-making. Some examples are summarized as follows:

U.S. Indications of Community Unsustainability

Suburban Sprawl. Current growth in urban and suburban land use far exceeds the population growth in many major metropolitan centers in the U.S. Between 1970 and 1990, for example, metropolitan Chicago's population grew by 4% while the amount of land dedicated to housing grew by 46%. During that same period, metropolitan Cleveland's population fell by 11% but developed land still increased by 33%. This trend has resulted in increased costs for public services, the decline of central cities, increased vehicle miles traveled and emissions of carbon dioxide, the destruction of farmland and open space, and arguably a loss of community.

Segregation/Unequal Opportunity. Communities all over the United States continue to be largely divided along economic and racial lines, both physically and socially. Poverty is increasing among whites as well as minorities. Minority groups continue to have less access to economic opportunities, adequate food and shelter, and needed services. Nationwide, nearly 28% of people of color live below the poverty level, as compared to about 11% of whites.

Loss of Agricultural Land and Open Space. From 1970 to 1990, more than 19 million acres (30,000 square miles) of rural lands were developed. Every year, construction transforms 400,000 acres of high quality farmland. This amounts to 45.6 acres every hour of every day. Such development weakens the agricultural basis upon which people depend, as well as the natural resources upon which all life depends.

Depletion and Degradation of Water Resources. Groundwater over-pumping is occurring in many of the nation's regions. In California, groundwater overdraft averages 1.6 billion cubic meters per year, which amounts to 15% of the state's annual groundwater use. Depletion of the High Plains Aquifer System, which underlies nearly 20% of all irrigated land in the U.S., totals 325 billion cubic meters while current annual depletion is estimated at 12 billion cubic meters. Despite progress made under the Clean Water Act, carcinogens have been found in wells in fourteen different states throughout the Corn Belt and many of the nation's waterways remain badly polluted. In addition, the continuing increase in impermeable surfaces such as parking lots and buildings acts to prevent groundwater recharge, create destructive runoff patterns, and destroy the treatment capacity of natural systems.

Loss of Wetlands. Among the most productive ecosystems in the world, wetlands on non-federal lands in the U.S. are disappearing at a rate of 70,000 to 90,000 acres annually. In the 1600s, over 220 million acres of wetlands are thought to have existed in the lower 48 states. By the 1980s, only an estimated 103 million acres remained.

Traffic Congestion and Air Pollution. Vehicle-clogged roadways and deteriorating air quality diminish quality of life and health for millions of Americans in cities, suburbs, and outlying areas. Since 1970, vehicle miles traveled have increased by 121%, more than four times the population growth over that same period. Traffic congestion is estimated to cost the nation \$168 billion in lost productivity. Although air quality has improved in several metropolitan areas due to more stringent emission

standards, 46 million Americans continue to live in counties that do not meet federal air quality standards.

Disproportionate Exposure to Environmental Hazards. Low-income people and people of color continue to be disproportionately exposed to environmental hazards in urban and rural areas. In Los Angeles County, California, minorities are three times as likely as whites to live within half a mile of a large, hazardous waste treatment, storage, or disposal facility. Nationwide, Black children from poor families are five times as likely to have dangerous blood lead levels than wealthier White children. White children from households with annual incomes of under \$6,000 are three times as likely as White children from families with incomes over \$15,000 to have dangerous blood levels of lead.

II. FRAMING THE ISSUE

Sustainability is the capability to equitably meet the vital human needs of the present without compromising the ability of future generations to meet their own needs by preserving and protecting the area's ecosystems and natural resources. The concept of sustainability describes a condition in which human use of natural resources, required for the continuation of life, is in balance with Nature's ability to replenish them. However, humans are depleting and degrading many resources faster than Earth's natural systems can replenish them, and human consumption continues to grow every year. This is a far-reaching issue that extends well beyond the realm of today's urban and regional planner. Nevertheless, planners are in a position to protect the natural environment and its ability to support human life by working with communities to implement concepts of sustainability in their current and long range planning daily practices.

Planning for sustainability promotes responsible development - not anti-development. It requires a democratic process of planning to achieve the greatest common good for all segments of our population, protect the health of the environment and assure future generations of the resources they will need to survive and progress. Specifically, planning for sustainability includes the following *processes, practices* and *outcomes*.

Planning processes include:

- Making planning decisions in a holistic and fully-informed manner that involves all segments of the community and the public and private sectors.
- Educating all age groups to raise public understanding of and regard for the future consequences of current planning decisions and ultimately change human behavior.

Planning practices include:

- Developing a future-oriented vision, which look beyond current needs and recognizes environmental limits to human development.
- Fostering projects/activities that promote economic development by: efficiently and equitably distributing resources and goods; minimizing, reusing and recycling waste; and protecting natural ecosystems.
- Upholding a widely held ethic of stewardship that strongly encourages individuals and organizations to take full responsibility for the economic, environmental, and social consequences of their actions, balancing individual needs and wants with nature and the public good.
- Taking leadership in the drafting and implementation of local, regional and state policies that support sustainability, such as APA's Growing Smart statutes.

Planning outcomes include:

- Local and regional development patterns that expand choice and opportunity for all persons, recognizing a special responsibility to address the needs of those that are disadvantaged..
- Resilient, diverse, and self-sufficient local economies that meet the needs of residents and build on the unique characteristics of the community to the greatest extent possible.
- Communities with a healthy economy, environment and social climate that function in harmony with natural ecosystems and other species and allow people to lead healthy, productive and enjoyable lives.

III. POLICY POSITIONS

A. GENERAL POLICY OBJECTIVES

The American Planning Association and its Chapters have identified four basic objectives for planning toward greater sustainability that can be used as a framework for policy development at each level of decision-making – local, state, regional, and federal - in the broad range of matters with which planners are concerned – land use, housing, transportation, economic development – among others. The four objectives are based upon a framework developed by a group of scientists in Sweden and the U.S combining knowledge of physics, biology, and other fundamental sciences with understanding of societal decision-making.

Using these basic objectives as a guiding framework, planners and decision-makers can develop policies, legislation, and action plans toward sustainability that are appropriate to their particular circumstances and communities. For example, efforts to reduce the use of fossil fuels (*Objective 1*) may take very different form in an urban settlement compared to efforts in rural communities. Similarly, initiatives to improve the quality of life for disadvantaged residents may be very different in a bedroom suburb than in an inner-city neighborhood (*Objective 4*). The Specific Policies in the section that follows are guided by these objectives. The attached Appendix illustrates how these objectives can be used systematically to generate a comprehensive strategy of planning actions in the direction of sustainability. While any one of these objectives pursued separately is a worthy endeavor, it is the integrated, comprehensive application of all four objectives that is needed to move toward sustainability in planning and development; hence, no one objective is more important or of greater value than the others.

OBJECTIVES OF APA'S STRATEGY FOR PLANNING FOR SUSTAINABILITY

Planning for sustainability requires a systematic, integrated approach that brings together environmental, economic and social goals and actions directed toward the following four objectives:

1. Reduce dependence upon fossil fuels, extracted underground metals and minerals.

Reason: Unchecked, increases of such substances in natural systems will eventually cause concentrations to reach limits – as yet unknown – at which irreversible changes for human health and the environment will occur and life as we know it may not be possible.

2. Reduce dependence on chemicals and other manufactured substances that can accumulate in Nature.

Reason: Same as before.

3. Reduce dependence on activities that harm life-sustaining ecosystems.

Reason: The health and prosperity of humans, communities, and the Earth depend upon the capacity of Nature and its ecosystems to reconcentrate and restructure wastes into new resources.

4. Meet the hierarchy of present and future human needs fairly and efficiently.

Reason: Fair and efficient use of resources in meeting human needs is necessary to achieve social stability and achieve cooperation for achieving the goals of the first three guiding policies.

B. SPECIFIC POLICY POSITIONS

Planners have a leadership role in forming and implementing the strategies by which communities seek to use resources efficiently, to protect and enhance quality of life, and to create new businesses to strengthen their economies, and supporting infrastructures. The best practices of comprehensive community planning – the way we plan the physical layout, or land use, of our communities, is key to sustainable land use.

Two main features of our land use practices over the past several decades have converged to generate haphazard, inefficient, and unsustainable development sprawl – zoning regulations that separate housing, jobs, and shopping, and low density development that requires the use of the car. Our economic development and infrastructure planning practices present opportunities for us to encourage businesses and community facilities that offer creative, economically beneficial solutions to wasteful resource use and environmental degradation. Only through the best planning practices can we hope to create healthy communities that can sustain our generation and secure a promising and sustainable future for all children.

The listed order of specific policies follows the logic of the four objectives and does not reflect an implied priority of action or importance. As is the case with the four policy objectives, while each of the specific policies are of merit if followed separately, they need to be pursued as a whole in an integrated, comprehensive, *systems* approach in order to move toward sustainability in community planning and development. While certain policies may be of greater immediate relevance to particular regions, levels of government, and planning expertise, planners can contribute substantially to communities and to society through maintaining this perspective of the whole in our thinking and in our planning approaches.

1. The American Planning Association and its Chapters support planning policies and legislation that encourage alternatives to use of gas-powered vehicles. Such alternatives include public transit, alternatively-fueled vehicles, bicycle and pedestrian routes, and bicycle and pedestrian-friendly development design.

Reason: Use of privately-owned gas-powered vehicles significantly contributes to increasing carbon dioxide concentration and greenhouse gases in the atmosphere at the global level, and to air pollution, as well as nuisance and societal costs of traffic congestion at the local and regional levels. Planning and development actions that reduce the need to drive can in turn help to reduce carbon dioxide and other emissions, as well as help reduce traffic congestion and add system capacity.

2. The American Planning Association and its Chapters support planning policies and legislation that encourage all types of development to use alternative renewable energy sources and meaningful energy conservation measures.

Reason: Use of alternative renewable energy sources will contribute to reduced dependence upon fossil fuels for heat and power, also helping to reduce concentrations of carbon dioxide and other gases in the atmosphere. Increased use of alternative energy sources will also contribute to healthier, more stable local economies through reduced dependence on one or two energy sources whose own economic future is uncertain.

3. The American Planning Association and its Chapters support planning policies and legislation that encourage development, agriculture, and other land uses that minimize or eliminate the use of extracted underground substances such as mercury, cadmium, phosphorus.

Reason: The increasing concentrations in natural systems of extracted underground metals and minerals – for example, mercury, cadmium, phosphorus - which do not readily disappear or get re-absorbed by the Earth - are increasing toxicity in natural systems. This in turn jeopardizes ecosystems, wildlife, water supplies, soil, food, and human health. Development and agriculture that reduces or eliminates the use of these substances can contribute to the increased long-term safety of human, animal and plant health, and ecosystems both for the near future and for generations to come.

4. The American Planning Association and its Chapters support planning policies and legislation that encourage development and businesses to reduce the use of chemicals and synthetic compounds in their construction and building materials, operations, products, and services.

Reason: Chemicals and synthetic substances that do not easily break down also are increasing in society, producing increased toxicity in ecosystems, water supplies, soil, food, the built environment, the working environment, and human health. Planning, economic development strategies, and policies that affect the built environment can help safeguard the natural and man-made environments through encouraging development that reduces or eliminates the use of these substances.

5. The American Planning Association and its Chapters support planning policies and legislation that encourage methods of landscape design, landscape and park maintenance, and agriculture that reduce or eliminate the use of pesticides, herbicides, and synthetic fertilizers as well as encouraging the use of compost and conserving water.

Reason: Pesticides, herbicides, and synthetic fertilizers accumulate in natural systems, water supplies, soil, food, animals, and humans. Landscape design, maintenance of parks and open space, and agricultural practices that use alternative approaches to pest control can help reduce toxicity in ecosystems, water, food, and human health.

6. The American Planning Association and its Chapters support planning policies and legislation that result in compact and mixed-use development that minimizes the need to drive, re-uses existing, infill, and brownfields sites that have been thoroughly reclaimed and remediated before using open land, and that avoids the extension of sprawl. ("Sprawl" refers to low-density, land-consumptive, center-less, auto-oriented development typically located on the outer suburban fringes). APA's "Growing Smart" Initiative is consistent with this Policy Position.

Reason: Scattered, land-consumptive development is bringing about the deterioration and loss of open lands, forests, ecosystems and species. These are essential elements of Nature's capacity to re-create the materials upon which all life – including ours – depends. Threatened also is the traditional and historic character of our communities and countrysides – a major source of community "quality of life", heritage and economic viability. Encouraging compact development and redevelopment of existing sites can avoid further encroachment upon diminishing land and other natural resources, helping to safeguard these for our well-being and those of future generations.

7. The American Planning Association and its Chapters support planning, development, and preservation policies and legislation that conserve undeveloped land, open space, agricultural land, protect water and soil quality, consciously restore ecosystems, and that minimize or eliminate the disruption of existing natural ecosystems and floodplains. Such policies and legislation include Growing Smart and other innovative planning approaches.

Reason: Safeguarding important lands, water, wetlands, soil, forests, coastal areas as natural ecosystems also helps to preserve the productivity and diversity of life upon which human life and well-being depends.. Efforts are needed to protect the critical land mass required to maintain the level of agricultural production needed to maintain viable agricultural operations and provide sufficient food supply for our population. These critical natural and open space resources contribute as well to " quality of life" as an essential part of local and regional community character.

8. The American Planning Association and its Chapters support planning policies and legislation that encourage forms of development, business, and agriculture that reduce the use of water, re-using wastewater on-site, and that employ innovative wastewater treatment that minimizes or eliminates the use of chemicals (example: using plants for sewage treatment).

Reason: Groundwater over-pumping is occurring in many of the nation's regions. Reducing use of and re-using water using alternatives to chemical treatment, can use this resource more efficiently, allowing for its renewal through groundwater recharge, and minimizing or eliminating increased concentrations of chemicals in natural systems.

9. The American Planning Association and its Chapters support planning policies and legislation at all levels of government that support and implement sustainable development policies that seek to equitably protect public health, safety and welfare, and which incorporate the needs of those currently disenfranchised in the process.

Reason: Certain planning decisions may improve the quality of life for some individuals at the expense of others for example, constructing a roadway, siting a bus depot or sewage treatment plant, or building housing near an industrial zone. This problem is acute in disadvantaged communities where equal consideration, fair siting decisions, and open planning processes are not always offered. Sustainable planning and development goals aim to provide equal protection and access to opportunities in all communities regardless of income status, race, gender, or ethnicity.

10. The American Planning Association and its Chapters support planning policies and legislation encouraging businesses, communities, institutions and development that pursue reduction and re-use of by-products and waste, especially approaches that also employ waste as a resource, such as eco-industrial development.

Reason: Reducing the amount of wastes and by-products reduces the likelihood of pollution while also reducing disposal problems and related costs for communities and businesses alike. Communities and businesses that make use of their own or each other's excess energy, water, and materials by-products can reduce or eliminate disposal and pollution problems and save, if not generate, significant revenues.

11. The American Planning Association and its Chapters support planning policies and legislation encouraging participatory and partnership approaches to planning, including planning for sustainability, integrally involving local community residents in setting the vision for and developing plans and actions for their communities and regions. Planning decisions that follow should be consistent with those community visions.

Reason: Plans that are citizen-based, reflecting citizen intents and visions for their communities' futures, have the highest probability of successful adoption and implementation. Citizen participation in planning helps ensure fair and efficient targeting of resources to community needs.

12. The American Planning Association and its Chapters support initiatives and partnerships with other organizations that: a) support research and development of technology promoting the four general policy objectives for sustainability; and b) provide best available economic, social, and environmental data and indicators on impacts, alternatives, costs, and benefits for integrated decision-making at all levels of government.

Reasons: Well-informed policy choices that take into consideration the fundamental links among the economy, the environment, and society will be more likely to result in actions that serve all three rather than one at the expense of the others. Most of the innovation or technology to achieve greater sustainability either does not exist, is in the early stages of development, or is not readily available. For example, the use of alternative fuels is growing. However, some private users or transit authorities are reluctant to purchase alternative fuel vehicles because the fueling stations are scarce and the technology is still new.

13. The American Planning Association and its Chapters support planning policies, programs, and state and federal legislation that support incentives and other economic tools to improve the sustainability of our natural environment, enhance natural resources, and improve community subdivision and building design standards.

Reason: Economic tools such as incentives hold promise for bringing about the implementation of sustainable development. Local, state, and federal legislation can support and strengthen the use of these approaches.

Source: www.planning.org

C. Brighton & Hove City Council's Sustainability Commission

1. PURPOSE

1.1: The purpose of the commission is to help the council develop and implement its sustainability policies as a mainstream part of its activities, including partnership work with other agencies and bodies.

2. OBJECTIVES AND SCOPE

2.1: To lead on the development, implementation, monitoring and review of the council's Sustainability Strategy and Action Plans; and the development of a Local Agenda 21 in partnership with local communities.

2.2: To promote innovative thinking, best practice and joint working in developing sustainable approaches to delivering the council's services and to advise the management team of the council on integrating sustainability into all aspects of their work.

2.3: To develop the capacity of the wider community to make informed, sustainable decisions and build on the work of the 'ninelives' campaign to promote greater understanding of the contribution that sustainable development can make to improving people's quality of life.

2.4: To work with the voluntary and community sector, business and others to promote sustainable development, emphasising the importance of integrating economic, social and environmental issues and advising on implementation within the context of the community strategy and the council's overall vision and priorities.

2.5: To work with the Local Strategic Partnership to ensure that Local Agenda 21 is an integral part of the community strategy; and to work with other groups and organisations to promote the council's participation in sustainability partnerships and networks.

3. REPORTING AND ACCOUNTABILITY

3.1: The Commission will report to, and be accountable to, the council's Policy and Resources Committee.

3.2: To reflect the significance of sustainability to 'economic, social and environmental well-being' the Commission will, in addition, be able to report to any of the council's other committees and the Local Strategic Partnership. (note the Commission will operate in an advisory capacity and will not have executive decision making powers).

4. REVIEW

4.1: The work of the Commission will be reviewed bi-annually.

Source: www.fosteringinbrightonandhove.org.uk

D. Free-Cycle



The Freecycle Network™ is made up of many individual groups across the globe. It's a grassroots and entirely nonprofit movement of people who are giving (& getting) stuff for free in their own towns. A local volunteer moderates each group. Membership is free.

The Freecycle mission is to build a worldwide gifting movement that reduces waste, saves precious resources & eases the burden on our landfills while enabling our members to benefit from the strength of a larger community.

The Freecycle Network was started in May 2003 to promote waste reduction in Tucson's downtown and help save desert landscape from being taken over by landfills. The Network provides individuals and non-profits an electronic forum to "recycle" unwanted items. One person's trash can truly be another's treasure!

New Hampshire FREECYCLE Groups. (www.freecycle.org)

Amherst-1326 members

Barrington-852 members

Claremont-708 members

Concord-3135 members

Derry-2092 members

Dover-1863 members

Exeter-2495 members

Franklin-333 members

Hampstead-350 members

Hampton-862 members

Hanover-378 members

Haverhill-223 members

Laconia-779 members

Manchester-4372 members

Mt. Washington-1056 members

Nashua-3079 members

New London-774 members

Newmarket-1190 members

Pelham-279 members

Peterborough-1295 members

Plymouth-662 members

Portsmouth-2483 members

Rochester-3347 members

Salem-1911 members

Somersworth-1067 members

Suncook Valley-93 members

Winchester-351 members

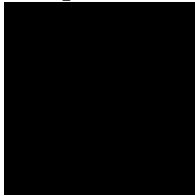
E. LEED Certification

The Leadership in Energy and Environmental Design (LEED) Green Building Rating System™ is the nationally accepted benchmark for the design, construction, and operation of high performance green buildings. LEED gives building owners and operators the tools they need to have an immediate and measurable impact on their buildings' performance. LEED promotes a whole-building approach to sustainability by recognizing performance in five key areas of human and environmental health: sustainable site development, water savings, energy efficiency, materials selection, and indoor environmental quality.

LEED provides a roadmap for measuring and documenting success for every building type and phase of a building lifecycle.

The first step to LEED certification is to register your project. A project is a viable candidate for LEED certification if it can meet all prerequisites and achieve the minimum number of points to earn the Certified level of LEED project certification. To earn certification, a building project must meet certain prerequisites and performance benchmarks ("credits") within each category. Projects are awarded Certified, Silver, Gold, or Platinum certification depending on the number of credits they achieve. This comprehensive approach is the reason LEED-certified buildings have reduced operating costs, healthier and more productive occupants, and conserve our natural resources.

Example Checklist for LEED Certification of New Construction Project



LEED for New Construction v2.2 Registered Project Checklist

Project Name:
Project Address:

Yes	?	No	Sustainable Sites		14 Points
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Prereq 1	Construction Activity Pollution Prevention	Required
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 1	Site Selection	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 2	Development Density & Community Connectivity	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 3	Brownfield Redevelopment	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 4.1	Alternative Transportation , Public Transportation Access	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 4.2	Alternative Transportation , Bicycle Storage & Changing Rooms	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 4.3	Alternative Transportation , Low-Emitting & Fuel-Efficient Vehicles	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 4.4	Alternative Transportation , Parking Capacity	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 5.1	Site Development , Protect or Restore Habitat	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 5.2	Site Development , Maximize Open Space	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 6.1	Stormwater Design , Quantity Control	1

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 6.2	Stormwater Design, Quality Control	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 7.1	Heat Island Effect, Non-Roof	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 7.2	Heat Island Effect, Roof	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 8	Light Pollution Reduction	1

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Water Efficiency	5 Points
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<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 1.1	Water Efficient Landscaping, Reduce by 50%	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 1.2	Water Efficient Landscaping, No Potable Use or No Irrigation	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 2	Innovative Wastewater Technologies	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 3.1	Water Use Reduction, 20% Reduction	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 3.2	Water Use Reduction, 30% Reduction	1

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Energy & Atmosphere	17 Points
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<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Prereq 1	Fundamental Commissioning of the Building Energy Systems	Required
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Prereq 2	Minimum Energy Performance	Required
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Prereq 3	Fundamental Refrigerant Management	Required
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 1	Optimize Energy Performance	1 to 10
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/> 10.5% New Buildings or 3.5% Existing Building Renovations	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/> 14% New Buildings or 7% Existing Building Renovations	2
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/> 17.5% New Buildings or 10.5% Existing Building Renovations	3
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/> 21% New Buildings or 14% Existing Building Renovations	4
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/> 24.5% New Buildings or 17.5% Existing Building Renovations	5
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/> 28% New Buildings or 21% Existing Building Renovations	6
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/> 31.5% New Buildings or 24.5% Existing Building Renovations	7
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/> 35% New Buildings or 28% Existing Building Renovations	8
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/> 38.5% New Buildings or 31.5% Existing Building Renovations	9
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/> 42% New Buildings or 35% Existing Building Renovations	10
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 2	On-Site Renewable Energy	1 to 3
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/> 2.5% Renewable Energy	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/> 7.5% Renewable Energy	2
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/> 12.5% Renewable Energy	3
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 3	Enhanced Commissioning	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 4	Enhanced Refrigerant Management	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 5	Measurement & Verification	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 6	Green Power	1

continued...

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Materials & Resources	13 Points
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<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Prereq 1	Storage & Collection of Recyclables	Required
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 1.1	Building Reuse, Maintain 75% of Existing Walls, Floors & Roof	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 1.2	Building Reuse, Maintain 100% of Existing Walls, Floors & Roof	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 1.3	Building Reuse, Maintain 50% of Interior Non-Structural Elements	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 2.1	Construction Waste Management, Divert 50% from Disposal	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 2.2	Construction Waste Management, Divert 75% from Disposal	1

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 3.1	Materials Reuse, 5%	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 3.2	Materials Reuse, 10%	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 4.1	Recycled Content, 10% (post-consumer + ½ pre-consumer)	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 4.2	Recycled Content, 20% (post-consumer + ½ pre-consumer)	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 5.1	Regional Materials, 10% Extracted, Processed & Manufactured Regionally	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 5.2	Regional Materials, 20% Extracted, Processed & Manufactured Regionally	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 6	Rapidly Renewable Materials	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 7	Certified Wood	1
Yes	?	No			

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Indoor Environmental Quality	15 Points
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<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Prereq 1	Minimum IAQ Performance	Required
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Prereq 2	Environmental Tobacco Smoke (ETS) Control	Required
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 1	Outdoor Air Delivery Monitoring	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 2	Increased Ventilation	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 3.1	Construction IAQ Management Plan, During Construction	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 3.2	Construction IAQ Management Plan, Before Occupancy	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 4.1	Low-Emitting Materials, Adhesives & Sealants	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 4.2	Low-Emitting Materials, Paints & Coatings	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 4.3	Low-Emitting Materials, Carpet Systems	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 4.4	Low-Emitting Materials, Composite Wood & Agrifiber Products	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 5	Indoor Chemical & Pollutant Source Control	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 6.1	Controllability of Systems, Lighting	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 6.2	Controllability of Systems, Thermal Comfort	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 7.1	Thermal Comfort, Design	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 7.2	Thermal Comfort, Verification	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 8.1	Daylight & Views, Daylight 75% of Spaces	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 8.2	Daylight & Views, Views for 90% of Spaces	1
Yes	?	No			

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Innovation & Design Process	5 Points
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<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 1.1	Innovation in Design: Provide Specific Title	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 1.2	Innovation in Design: Provide Specific Title	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 1.3	Innovation in Design: Provide Specific Title	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 1.4	Innovation in Design: Provide Specific Title	1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Credit 2	LEED® Accredited Professional	1
Yes	?	No			

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Project Totals (pre-certification estimates)	69 Points
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Certified: 26-32 points, **Silver:** 33-38 points, **Gold:** 39-51 points, **Platinum:** 52-69 points

Source: www.usgbc.org

F. American Disabilities Act

Title I of the Americans with Disabilities Act of 1990, which took effect July 26, 1992, prohibits private employers, state and local governments, employment agencies and labor unions from discriminating against qualified individuals with disabilities in job application procedures, hiring, firing, advancement, compensation, job training, and other terms, conditions and privileges of employment. An individual with a disability is a person who:

- Has a physical or mental impairment that substantially limits one or more major life activities;
- Has a record of such an impairment; or
- Is regarded as having such an impairment.

A qualified employee or applicant with a disability is an individual who, with or without reasonable accommodation, can perform the essential functions of the job in question. Reasonable accommodation may include, but is not limited to:

- Making existing facilities used by employees readily accessible to and usable by persons with disabilities.
- Job restructuring, modifying work schedules, reassignment to a vacant position;
- Acquiring or modifying equipment or devices, adjusting modifying examinations, training materials, or policies, and providing qualified readers or interpreters.

An employer is required to make an accommodation to the known disability of a qualified applicant or employee if it would not impose an "undue hardship" on the operation of the employer's business. Undue hardship is defined as an action requiring significant difficulty or expense when considered in light of factors such as an employer's size, financial resources and the nature and structure of its operation.

An employer is not required to lower quality or production standards to make an accommodation, nor is an employer obligated to provide personal use items such as glasses or hearing aids.

MEDICAL EXAMINATIONS AND INQUIRIES:

Employers may not ask job applicants about the existence, nature or severity of a disability. Applicants may be asked about their ability to perform specific job functions. A job offer may be conditioned on the results of a medical examination, but only if the examination is required for all entering employees in similar jobs. Medical examinations of employees must be job related and consistent with the employer's business needs.

DRUG AND ALCOHOL ABUSE:

Employees and applicants currently engaging in the illegal use of drugs are not covered by the ADA, when an employer acts on the basis of such use. Tests for illegal drugs are not subject to the ADA's restrictions on medical examinations. Employers may hold illegal drug users and alcoholics to the same performance standards as other employees.

EEOC ENFORCEMENT OF THE ADA

The U.S. Equal Employment Opportunity Commission issued regulations to enforce the provisions of Title I of the ADA on July 26, 1991. The provisions originally took effect on July 26, 1992, and covered employers with 25 or more employees. On July 26, 1994, the threshold dropped to include employers with 15 or more employees.

Source: www.eeoc.gov

G. Granite Earth Institute Study Circles:

Operation of GEI Study Groups

So you are interested in a discussion course organized by the Granite Earth Institute (GEI). Here is a brief description of how our courses work.

A course group normally consists of seven to twelve people who meet for eight or nine sessions of one to two hours each. The course uses a workbook of readings and discussion questions published by the Northwest Earth Institute (NWEI). Each group chooses one of five workbooks for its subject area:

- Voluntary Simplicity (8 sessions)
- Deep Ecology and Related Topics (9 sessions)
- Discovering a Sense of Place (8 sessions)
- Choices for Sustainable Living (9 sessions)
- Globalization and Its Critics (9 sessions)

Each course has:

- an organizer, such as a church group, adult education program, business, or GEI itself,
- a mentor (or volunteer), who has been trained by GEI, and
- a coordinator, who is a group member.

The mentor is present only at the first and last meetings of the course, serves as the link between GEI and the course group, and facilitates the first meeting. The coordinator oversees the nitty-gritty of meeting place and course.

Each meeting has a facilitator; this position rotates among the membership of the course group. The facilitator keeps the group from getting bogged down and monitors group dynamics.

Course groups normally meet weekly, preferably in a public space, but at one or more members homes if necessary. The time and place of meeting may have been decided by the course organizers or may be arranged by the coordinator to meet the needs of the members.

Ideally all members will attend all sessions. This helps build group cohesion. Members are strongly discouraged from missing more than two sessions.

Each participant should obtain a workbook for the course topic from the mentor or organizer prior to the first meeting. Workbooks are provided by GEI; we hope that those who are able will

donate \$20. Please make checks payable to Granite Earth Institute. There is no required fee to participate in a course except for possible charges by the host organization.

Prior to each meeting, each participant reads the materials for that meeting in the workbook. This provides a common ground for discussion. The facilitator chooses from a number of discussion questions to get the meeting started, but discussion may move in any direction.

The last meeting for every subject is called Celebration and does not have any preliminary readings. Most course groups choose to share food. The mentor is invited and obtains feedback from the group.

Source: www.graniteearth.org

H. Common Water Conservation Practices

- Low-flush toilets
- Toilet displacement devices
- Low-flow showerheads
- Faucet aerators
- Pressure reduction
- Gray water use
- Landscape irrigation
- Xeriscape landscapes

Source: www.epa.gov