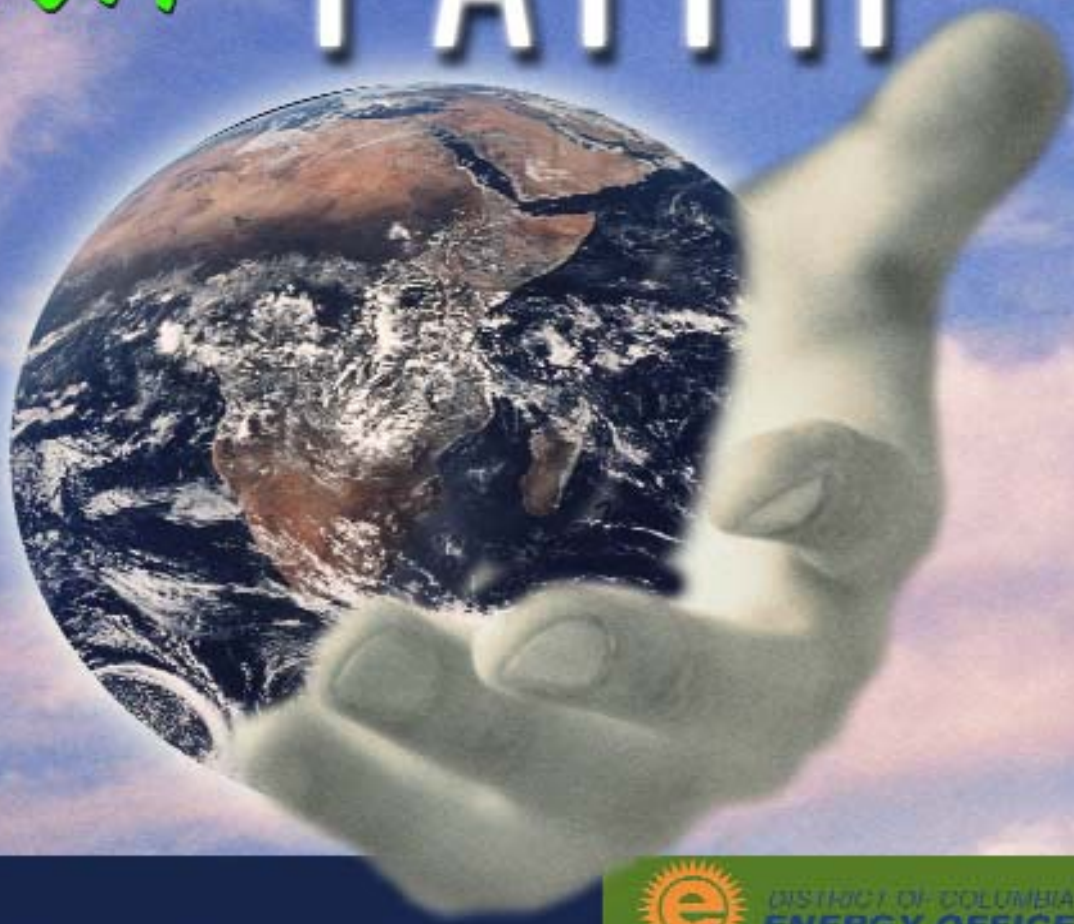


green FAITH



Working Together To Protect & Restore Our Environment



DISTRICT OF COLUMBIA
ENERGY OFFICE



GOVERNMENT OF THE
DISTRICT OF COLUMBIA
Anthony A. Williams, Mayor

Guide

Green Faith Guide

Working Together to Protect and Restore Our Environment



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ENERGY OFFICE



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DISTRICT OF COLUMBIA
Anthony A. Williams, Mayor

"Making D.C. Energy Efficient"

PUBLISHED 2004

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Mayor's Statement



More than 20 individuals, representing over 600 congregations across the Washington metropolitan area have come together to write this *Green Faith Guide: Working Together to Protect and Restore Our Environment*. They are members of Jewish, Muslim, Catholic, Protestant, Bahá'í, Unitarian Universalist, Buddhist, Sikh, and various other congregations. This guide highlights specific steps congregations can take to reduce their impact on our environment and to help others join in the spirit of environmental stewardship.

Many religions have long recognized the sacredness of the natural world. Both Western and Eastern traditions teach that we have a moral responsibility to care for the Earth and all living beings, which contemporary religious leaders from the Pope to the Dalai Lama have affirmed. We are becoming increasingly aware that our earth is fragile. We are also beginning to understand the grievous harm that nature suffers from so much of human activity. As faith leaders, you have the opportunity to highlight our community as a part of nature and our sacred duty to love and protect it.

As a society, people sometimes forget that we need to view our place as human beings in the larger natural world order. Pulitzer Prize winning author Edward O. Wilson, universally recognized as one of the world's greatest living scientists, noted: "If all mankind were to disappear, the world would regenerate back to the rich state of equilibrium that existed ten thousand years ago. If insects were to vanish, the environment would collapse into chaos."

If we take action, the D.C. government and the local faith community can make real strides in becoming an energy efficient and environmentally sustainable District. Working together, we can have a profound impact on our environment. I am committed to making the District "green" and believe that our partnership with the faith community will help achieve this goal. A Native American proverb put it well: "We do not inherit the earth from our ancestors, we borrow it from our children." I know we share a desire to leave a better earth for our children.

I commend the members of our faith community who worked with DC Energy Office to produce this *Green Faith Guide*, and I encourage you to use it to adopt more sustainable, environmentally friendly practices both in your places of worship and in your homes.

Sincerely,

Anthony A. Williams
Mayor

Director's Statement



The DC Energy Office (DCEO) has an ongoing relationship with the Washington, D.C., religious community. In the late 1980s, we brought houses of worship together in an initiative designed to educate them about auditing their energy use. This started a relationship that is still enjoyed today. We want to continue to help congregations become more energy efficient and environmentally healthy.

The DC Energy Office Comprehensive Energy Plan III (CEP III), recommendation IS-2, calls for the launching of a "Green Faith" initiative aimed at reducing energy usage in faith congregations in D.C. This *Green Faith Guide: Working Together to Protect and Restore Our Environment* represents the response to that call, and then some.

Leaders of various faith communities will find in this *Green Faith Guide* numerous practical suggestions for "greening" their congregations. We strongly commend it to you.

We also want to work with you in carrying out the energy efficient and environmentally healthy recommendations contained in this Guide. Toward that end, we invite you to contact us at the DC Energy Office at 202-673-6700.

Together we can, by implementing the strategies laid out in this Guide, bring the District of Columbia closer to being a "green" jurisdiction, i.e., one that is both energy efficient and environmentally healthy.

All the best,

Charles J. Clinton
Director

Why Go Green?

By Rabbi Fred Scherlinder Dobb, Adat Shalom Reconstructionist Congregation

Energy.

When sent through wires into our homes, schools, workplaces and civic institutions—and into our houses of worship—energy takes the form of electricity. Our area's electricity comes mostly from burning coal, and most of the rest comes from nuclear sources. Electric energy lights up our lives, but its ill effects can darken our skies at the same time.

When produced in a small engine that combusts its fuel internally, energy takes the form of mobility. The gasoline we pump into our vehicles gets us individually where we want to go, though our dependence on it keeps our world far from where it should be.

When produced biologically, energy takes the form of bodily movement. A calorie is a measure of energy, and our bodies burn those calories much more efficiently than any engine or generator can. Food equals motion, and motion equals life.

Energy, though, is more than the movement of electrons to create mechanical power. "Energy" is spirit, joy, life-force. Energy is what we bring to a relationship or to a community or to society, and what we get back from it. Energy is what flows through us, connects us, and makes us who we are.

Like all things, energy is a two-edged sword. When produced in a **sustainable** manner, it expands our possibilities beyond imagination. When produced with **pollution** or with waste, it limits those possibilities. It especially limits the possibilities for those who come after us. And like all things, energy must be consumed in moderation. A little bit is a virtue; a lot can be a vice.

- How we use energy, and what kind of energy we use, is a personal choice.
- How we use energy, and what kind of energy we use, is a social issue.
- How we use energy, and what kind of energy we use, is a spiritual and religious concern.

Religious institutions need light, heat and other forms of energy, just as all buildings do. And though their number is signifi-

cant—there are at least 600 houses of worship inside the District of Columbia alone, and scores more religiously-run hospitals, buildings and social service centers. That number pales compared to the number of homes, office buildings, shops and government buildings in Washington. Why, then, would the DC Energy Office begin its outreach with religious institutions? A few reasons:

1. Religious buildings are exemplars. People look to their houses of worship and their spiritual centers for guidance. What happens in these places can have a positive ripple effect across the region as homeowners, businesspeople, government workers and others help their own buildings to emulate the ethical example set by their church, mosque, synagogue or temple.
2. Religious buildings are prime for energy savings. Most sanctuaries are large spaces used only periodically throughout the week, where something as simple as a programmable thermostat can save hundreds of dollars a year in utility bills, and prevent literally "tons" of pollution. Most religious office areas are high-traffic, well-used areas where even small changes like weather-stripping, **Energy Star** appliances or compact fluorescent bulbs would make a huge difference.
3. Religious buildings are already connected to environmental concerns in many ways. Every Catholic, Mainline (NCC) Protestant, Jewish congregation and many Evangelical churches are joined under the umbrella of the National Religious Partnership for the Environment, whose partner institutions represent nearly half of America. Numerous other faith communities from Muslim to Hindu to Unitarian to Buddhist host their own active environmental efforts. The wide-ranging InterFaith Conference of Metropolitan Washington, with which most area houses of worship are connected, is ecologically committed as well.
4. Most importantly, religious buildings stand for something. These buildings were built to the glory of God, the service of humanity and the world, and/or the potential of the spirit. Inside these structures we celebrate creation and the Creator. We teach and embody ethics. We study and interpret our many sacred writings. We build community.

Each of these—creation, ethics, scripture, community and more—points us toward caring for creation, caring for the Earth and caring for one another. The environment is a matter of faith.

5. Finally, religious buildings are just a beginning. Together with existing efforts throughout the religious world, and with a group of area volunteers already invested in the intersection of spirit and ecology, the DC Energy Office began working on this Guide, and on the outreach campaign that goes with it. May it be the first of many.

Inside these pages you will find numerous resources to help you and your institution save money, help our air, water and world, and live out your values. We hope you avail yourself of these opportunities. We also hope that everything you need can be found here, presented in a clear and helpful way. The handbook you hold in front of you is one municipality's effort to help its citizens help each other. A fuller explanation of it can come through answering some of the basic who-what-when-where-why kinds of questions, after which the Green Faith Guide and its many resources begin.

WHO is this for?

Hopefully, it's for you, and everyone you know! We define "faith" in its broadest sense, and make no judgments about those who follow it. Right-left-and-center, traditional-and-modern, Western-Eastern-Northern-and-Southern, theist-deist-atheist-agnostic, should all be able to join in these efforts. Though the Guide focuses on what can be done in a religious institution or house of worship, much of what is contained here works just as well in a home, school, office or other structure. Please apply it as widely as appropriate.

WHO produced it?

In the fall of 2003, the DC Energy Office convened a gathering of area clergy, environmentalists and others to help formulate what would become this Guide. Volunteers through the Green Faith Advisory Group helped design and draft much of it, while staff goaded, edited and compiled.

WHAT do you hope it will accomplish?

One person or household, alone, can make a difference. Every light turned off or old appliance replaced with an Energy Star-approved one makes a real difference, and sends a direct message to the utilities to burn less coal, and keep more people healthy, and prevent that much more carbon from entering the atmosphere. One congregation, with a good-sized and well-used building can influence on hundreds of individuals and their

homes and offices. The impact is amazing! And a bunch of congregations across Washington? Staggering. We hope this will accomplish a real reduction in pollution, and an even greater increase in awareness.

WHERE should we start?

It's always best to start with the "low-hanging fruit," the easy-to-implement and quickly-cost-saving steps like replacing incandescent light bulbs with compact fluorescent lighting (CFL), aging appliances and furnaces with new Energy Star energy efficient ones, etc. You might also start with simple actions that will take a while to make a difference—like planting trees along the south and west sides of your building, which ultimately provides free air conditioning each summer. But if your congregation is building a new building, or expanding or remodeling your current one, then start with efficient design, materials selection, good windows and insulation, and so on.

WHEN should our efforts begin?

Now, if not sooner! As Rabbi Hillel wrote some two thousand years ago, "If not now, when?!" Give yourselves time to plan. Make sure you've lined up support within the vestry or board or among the elders; clergy support, as well as that of key lay leaders, is vital. And never overlook the maintenance staff and janitors, as well as regular volunteers—they're the ones who are actually around to implement plans, turn off lights, and so on.

WHEN will we begin to see a difference?

In terms of the atmosphere, far too late—our **emissions** are still only a small piece of a complex puzzle. In terms of the life of the spirit, however, the rewards of knowing you've done the right thing can be as instantaneous as they are uplifting. And in terms of cost to your congregation, see below; after a year or two to recoup your initial expenses, you'll begin to see a real savings difference in your monthly utility bill!

WHY is this a religious issue?

In short, because it's about caring for Creation: "God looked and saw that it was good," says Genesis 1; who are we to argue?! Every faith tradition prioritizes social justice; pollution and **global climate change** are justice issues. Every tradition is concerned about leaving a good world for our descendants; decisions we make about energy use are where we can channel concerns into constructive action. Every tradition acknowledges that Creation isn't just here for us to enjoy; we have to give something back, in solidarity with, and defense of, the rest of God's good world. One tangible way we can do this is through energy conservation, and green energy purchasing.

HOW MUCH will it cost us to make changes?

Some changes cost nothing. Educating members to turn off lights when leaving the room is an example. Others cost almost nothing compared to the quick repayment you'll have in the form of lower energy bills: CFL light bulbs, programmable thermostats, etc. Other changes cost a pretty penny, but you can still expect to recoup your upfront investments on new heating, ventilation and air conditioning (HVAC) systems, boilers, appliances, etc. in six to 24 months.

Savings from major retrofits including windows and insulation take somewhat longer to appear. And some changes (like purchasing renewable electricity) may be hard to justify according to the "bottom line" alone—but if we factor our contributions to reducing pollution and injustice and improving sustainability into the equation, the bottom line always gets much greener. Still, in most cases, after you reach the point where lower energy bills have offset your initial costs, every single month means more savings to your congregation.

HOW MUCH of a difference will our changes make?

A lot. A whole lot. Tons, even—literally. The average car releases a ton of **carbon dioxide** (CO₂) into the atmosphere every

7500 miles (nearly two tons every year; way more for sport-utility vehicles). So, setting up carpooling to worship and programs is one easy way to make a huge difference. But believe it or not, just leaving a 500-watt fixture burning all the time—which is sadly all too common—takes enough electricity that if it comes from coal, a ton of carbon is emitted in just 111 days. Ditto for inefficient refrigerators and computers, windows and window treatments, thermostats and insulation.

One survey showed that if every house of worship in the U.S. did a simple energy upgrade, we would prevent nearly 12 billion pounds of CO₂ from further warming the Earth! Small changes in your house of worship will quickly prevent *tons* of CO₂ and other pollutants from being released into our world.

HOW can we get more involved?

Read on! These pages are assembled just for you, for Washingtonians of faith who want to do their part to care for Creation. Please join us!

Green Checklist

As a way of beginning the energy efficiency process, we ask readers to consider the following “environmental checklist.” Check those that you have implemented already and review those that you haven’t. As you read through the Guide, determine which ones you can implement in the future so that your congregations can be energy efficient and get the most cost savings possible.

NO OR LOW COST ACTIVITIES:

- Incorporate ecology into your religious school curriculum, speeches and holiday celebrations.
- Evaluate the cleaning products and **pesticides** used for maintaining your buildings and grounds.
- Replace toxic substances with environmentally friendly products.
- Set up an energy audit.
- **Recycle** paper, plastic, cardboard, aluminum, glass and purchase recycled-content paper.
- Set up a compost pile on the premises for composting leaves and trimmings from your grounds and food waste from your kitchen.
- Turn off computers when not in use for significant periods.

SHORT TERM COST, LONG TERM SAVINGS:

- Encourage use of reusable ware instead of polystyrene, plastic, and paper cups, plates and utensils.
- Implement energy conservation measures, such as installing compact fluorescent lighting and occupancy sensors.
- Investigate use of alternative energy measures (solar or wind), or purchase green electricity from **renewable** sources.
- Install water conservation measures.

CONSERVATION MEASURES THAN CAN MAKE MONEY:

- Organize spring and fall “drop and swaps” or garage sales to recycle used goods. The money can be used to finance “green” improvements.
- Sell environmentally minded items, such as greeting cards made from recycled paper.

The Green Faith Guide is designed to be an effective tool for both novice and expert “green institutions.” The first step toward “greening” is getting organized about your concern.

Executive Summary

This Green Faith Guide has been produced in accordance with the District of Columbia **Comprehensive Energy Plan (CEP III)** 2-3-2007 (IS-2) and the **Reliable Energy Trust Fund (RETF)** Long-term Program Plan for the District of Columbia. The Green Faith Guide will assist in the development of an environmental outreach and education program targeting faith-based communities in District of Columbia. Green Faith is designed to help religious organizations better plan and implement building construction expansion, renovation, equipment replacement, maintenance and operation to reduce energy use and save money. The following is a description of each chapter enclosed in the Guide. As you read we encourage you to adapt as much as possible so that your congregations can become more energy efficient and gain the most cost savings possible.

Chapter 1: A Sense of Place: Living in Harmony with Your Environment

This chapter gives context to the location where energy saving and environmental protection activities takes place, and encourages us to care for our support system, the environment that surrounds us, provides us with gifts of life, and promotes our health and well-being.

Chapter 2: Green Buildings...Green Design

The design and construction of a building can teach and inspire its occupants to appreciate the harmony the building has with the indoor and outdoor environment. This chapter introduces the concept of "green building" through the **Leadership in Energy & Environmental Design (LEED)** program, local building codes and the experiences of a congregation that constructed its house of worship with our environment in mind.

Chapter 3: Energy Efficiency & Green Energy

With special attention to the Energy Star program of the U.S. Environmental Protection Agency (EPA), this chapter seeks to provide us with no-cost technical assistance to reduce energy costs, make environmentally sensitive decisions and make the **conservation** and/or production of energy affordable and sustainable. This includes upgrading lighting and **HVAC** (heating, ventilation, and air conditioning) systems and purchasing energy from **renewable** sources.

Chapter 4: Clean Air

Topics include carpools, public transportation, self-powered transport and the future of transportation fuels, emphasizing the promotion of these among organization members. Also addressed are motorized lawn and garden equipment, the **Clean Air Act** and the **Air Quality Index**. The importance of indoor air quality is also highlighted with facts and practices.

Chapter 5: Landscaping & Gardening

Landscape beautification and care, effective watering techniques and **permaculture** are among topics discussed in this chapter. To bring greenery to the "concrete wasteland," urban forestry initiatives are also discussed.

Chapter 6: Greening the Kitchen

Kitchens in faith-based community centers are subject to the same regulations for energy and water efficiency as those at home. This chapter focuses on those standards and includes suggestions relating to food purchasing and preparation. Also discussed, environmental and judicial effects of the American food production system, community supported agriculture opportunities and the role of regional farmers' markets on community health.

Chapter 7: Water: A Basic Right

Water, as a precious resource, must be given special care. Topics include conservation, recovery, reuse, recycling and treatment. The discussion also includes the **Clean Water Act** and related regulations.

Chapter 8: Reduce, Reuse, Recycle

There is an immense amount of garbage that is generated amongst Americans and on average the District of Columbia alone accrues over 800,000 tons a year. This chapter discusses how to conduct waste audits and how to reduce waste as a whole.

Chapter 9: Pesticides

We use thousands of chemicals to send pests and germs “away,” but they are hazardous both to our environment and our health. This chapter discusses alternative products, pest management practices which encourage good health, and how to approach toxic reduction.

Chapter 10: Youth Education & Programming

Education is a vital part of saving energy within our congregations. We must know how and what to do in order to get the most cost-savings. In addition, children are very persuasive and if we can get them to save energy in their everyday life they will be able to convince their parents to do the same.

Chapter 11: How to Pay for Improvements

The green building process need not cost more than five percent of the cost of a traditional building, if all systems are properly integrated. This chapter lists resources that can assist an organization in choosing the materials and technologies most appropriate to its building and community and helps the organization with paying for those systems and realizing future savings.

Chapter 12: Socially Responsible Investing: A Powerful Force For Change

Socially Responsible Investing (SRI) is merging personal values and social concerns with investment decisions. SRI considers both the investor’s financial needs and an investment’s impact on society, helping us build a better tomorrow while supporting the needs of today.

Chapter 13: Environmental Policy

This section empowers us to get involved in advocating policies that promote environmental protection and that encourage us and our government representatives to be stewards of our environment.

Chapter 14: Public Outreach

Here are a handful of tricks of the trade to get media attention. Learn how to expose your greening efforts and inspire members of your community to get involved.

Chapter 15: Worship & Celebration

Find here interfaith, non-faith and Earth-based songs and prayers, and people who speak on universal values.

Appendix & Extras

The appendix provides faith-based and secular organizations with tools to help initiate environmental protection and energy-saving actions. A glossary and a resource list (by chapter) and are also included.

Sense of Place: Living in Harmony with Your Environment

By Robinne Gray, Cornell University, Graduate Student &
Dr. Susan Newman, Office of the Mayor, Religious Advisor

Residents of Washington, D.C., live in such a magnetic District, pulled or pushed into its force field by desire, necessity, history or maybe happenstance. For over two centuries, Washington has served as the capital of the United States. That function continues to form the core of its identity and the perspective of governance reinforces those arbitrary boundaries imposed by human civilization.

But dig deeper into the history and you'll find that the land—the earth's surface, free of imposed political boundaries—is the reason the District exists at all. Cities and towns are born where there are abundant natural resources and grow when transportation networks connect human settlements to each other, enhancing access to other people and resources, and enabling trade.

The District of Columbia today has a population of around a half million, but the metropolitan area, which extends well into the neighboring states of Maryland and Virginia, is approaching five million residents. That's a lot of opportunity, a lot of people, a lot of land area—and a lot of human impact.

The early inhabitants of the Potomac River basin and the city of Washington were closely connected to the land, which in turn connected the people to each other. Today, it can be much harder to feel that connection to place: we may live in one area, work in another, attend worship services in yet another, vacation around the country or world, get our food shipped in from around the globe and spend some amount of time in the new geography of cyberspace.

We are from all races, ethnicities, nationalities, faiths and economic classes. On the surface, it may seem that we have little in common. But we are still connected by land in that we are neighbors, sharing residence in a particular place, whether we've been here two months, two years or two decades. Recognizing our continued connection to the land reminds us of our interdependence.

Toward the end of the twentieth century and into the new millennium, human societies became aware of another aspect of our interconnectedness. Scientific knowledge enables us to catalog and quantify the damage we are inflicting on the **environment**.

As societies grow, they consume the bountiful resources of the earth with every act, from drinking a cup of water to generating **energy** and manufacturing durable goods.

Human needs and desires are depleting resources at a rate faster than they can be renewed. (A forest takes decades to grow but only a day or two to cut down.) And consumption leaves behind a trail of waste and residue that nature can no longer absorb or break down. The pollutants in our soil, water, and air do not observe the political boundaries imposed on the land. Instead, they travel throughout the biological realm, permeating not only our borders, but often our bodies.

In health and biology classes many of us learned about the systems of the body: skeletal, circulatory, respiratory, digestive, reproductive and endocrine. The natural world has its systems as well. We may not know them by name and many are invisible to the untrained eye:

- the circulation of water between sea and sky and across land in rivers, lakes, aquifers and springs
- plants taking energy from the sun through photosynthesis, “inhaling” carbon dioxide and “exhaling” oxygen
- the nitrogen cycle that replaces soil nutrients so that plants, both wild and cultivated, can thrive.

The food chain ensures nutrients for all life forms. Fish and animals migrate and the people who once hunted them out of necessity now do so mainly for sport. Beyond the land, the tides, the seasons and the celestial calendar play out their cyclical rhythms.

Most of us have only the barest notions of these phenomena; we perceive them to be in the realm of scientists and other specialists. We go through our days largely oblivious to them, thinking them automatic and believing that we can participate in them or not, at will. Yet human action over time is affecting many of these natural systems, usually for the worse. When we tamper with one aspect of nature, we affect many others aspects as well.

The **fossil fuels** we burn for energy and transport are filling the air with pollutants and the scientific community is largely in

agreement that this is raising the temperature of the Earth's atmosphere. **Climate change** in turn is melting polar icecaps and glaciers, changing the growing seasons of plants and thus the migratory patterns of animals and living patterns of humans. These are only the grandest and most dramatic examples.

Communities of faith are increasingly coming together over shared concerns about the environment and the proper role of human civilization in relation to it. Though they have disparate belief systems, the world's religious traditions often share a respect for the natural world as the handiwork of a God or gods and many cherish all people as children of the Creator. As children of the Creator, people must realize that our communities are gifts and we need to take care of our environment as a sacred place. We are to be cherishers of this green earth. We are the trustees, the stewards and the caretakers of our communities.

In recent years, religious groups and environmental organizations have formed powerful allegiances to fight the tide of materialism, promote **environmental justice** and encourage all people to honor the natural world through a deeper awareness of ecological processes and lifestyle changes that are in line with a more **sustainable** society. We must continue that fight.

Nature isn't something "out there" to be experienced on weekends and vacations. We tend to equate nature with wilderness, but it's as near as your yard, as accessible as the sky. The natural world and the synthetic environment are not disparate, but deeply interwoven. Even the most ardent urbanites have an opportunity to become aware of their surroundings, from street trees to bird songs. When do the mulberries squish beneath our feet? When do the leaves fall? Which flowers bloom first in the parks and gardens? Which bird species come and go and which remain year-round? How soon until the next full moon?

We can all increase our "environmental literacy" by learning, for example, the route our drinking water travels from rainfall to faucet, where our garbage goes after it leaves our curb or where the nearest sewage treatment facility is located. What we believe about our God's or gods' concern for our environment and the quality of life should inform us as to how we put our faith in action in relationship to things that threaten a healthy environment.

Getting a new perspective on our surroundings can help change our consciousness. We can't go to the moon, but we can get a bird's eye view on our community. Becoming mindful

of our worship habits as they relate to the environment, we see the gifts that nature gives us and also notice what it costs her to give more and more of her resources without reciprocity and time for renewal.

Cities are not necessarily more wasteful than rural communities, but the concentration of so many people in one place makes the human impact on the environment more dramatically evident. To succeed at a sustainable future, people will need to work together cooperatively and in good faith. The best place to practice this is right where we live, on the ground we share and to which we belong.

When we commit to bring together science, economics, religious and moral perspectives to amplify a vision of environmental health, well-being and justice—we are making a sacred place for harmony in our communities. When we educate our communities to be concerned about new and creative ways to conserve electricity and be more efficient in the use of gas, heating and light—we are making a sacred place for harmony in our communities. When we educate others about the importance of clean air and transportation through walking, carpooling, biking and other ways of protecting ourselves from **carbon dioxide**, **carbon monoxide** and other harmful engine emissions - we are creating a sacred place for harmony in our communities.

This effort will take social and spiritual thought from diverse communities of faith to encourage efforts across racial, ethnic, gender, economic, political and cultural boundaries. In our various places of worship, we can begin to sing about it, write poems about it, pray about it, preach about it and celebrate this new sense of the sacredness of our places on God's green earth.

Through our religious social action groups, we can let our voices be heard to influence public policy agencies and networks to facilitate discussions of legislative and executive action. We can support educational institutions to instruct the young and adults, present and future clergy and lay leaders about the importance of our environment and why God cares about it.

Then, after we have worshipped inside our sacred buildings, on our holy days, we can come outside and praise our God or gods and celebrate life in the green grass, the fresh air and the wonderful neighborhoods where we live faithfully and joyfully with each other.

Green Buildings...Green Design

By Naomi Friedman, Center for a New American Dream, Director of Sustainable Markets & Howard Ebenstein, DC Energy Office, Energy Program Specialist

In non-agricultural societies, people spend the majority of their time indoors. Therefore, feelings of comfort, safety and health in our buildings are important to us. This charge is particularly relevant to religious institutions where large numbers of people gather, including children, elders and other vulnerable populations and where security and inspiration are valued.

In recent years, builders, facility managers, health professionals and environmentalists have become increasingly interested in creating healthy and high performing buildings. Known by many different names, including "The Green Building Movement," "Sustainable Buildings," "Healthy Buildings" and "High Performing Buildings" this effort aims to create physical spaces that are comfortable and use resources efficiently.

Congregations are finding great value in expanding the qualities they are looking for when building new facilities or undergoing renovations. Some of the new attributes they are considering include: energy efficiency, healthy building materials, daylighting and land conservation. In many cases, "green" building features create facilities that are more comfortable to be in while using natural resources more effectively.

USGBC – LEED Program Attributes

Sustainable Sites — Refers to a building's location such as being near public transportation or reusing an abandoned site

Water Efficiency — The amount of water used internally as well as for landscaping

Energy & Atmosphere — Energy efficiency and the use of cleaner, renewable energy

Materials & Resources — Using recovered materials for construction and renovation, having a recycling program, buying products made from recycled materials

Indoor Environmental Quality — Good indoor air quality by using products, such as carpets and paints, that each fewer irritating chemicals into the environment.

The **United States Green Building Council (USGBC)**, a non-profit organization, has developed the **Leadership in Energy and Environmental Design (LEED)** rating system that makes it easier to determine how to create a healthy and green building. The LEED system utilizes a list of 34 potential attributes, divided into categories listed below. Points are tallied to determine the appropriate level of LEED certification: silver, gold or platinum. Congregations can use information gained from the USGBC to improve the quality of their buildings and might even want to consider going for a LEED certification.

Adat Shalom Green Building Process, 1997-2001

Adat Shalom Reconstructionist Congregation is the second synagogue in the US to receive the EPA **ENERGY STAR** Congregation award. A minimal description is under "Lech Lecha" at its Web site, www.jrf.org/adatsmd; this might give you ideas. The Center for a New American Dream also briefly featured it in a video, "More Fun, Less Stuff."

In short, to get others thinking about how the Adat Shalom experience could prove instructive, a few of its major environmental "victories" were:

- passive solar heating through clerestory windows and a dark floor in social hall
- "ner tamid" (eternal light) hooked up to a photovoltaic (solar energy) cell on the roof
- a designated percentage of wood came from certified sustainable forestry operations
- good zone-by-zone heating and lighting system implemented, with multiple settings & options
- **Compact fluorescent lights, light-emitting diode (LED)** exit signs, and other low-energy fixtures installed throughout the building
- much material from the existing building saved or kept in place for new construction
- mostly local materials were used; limited Jerusalem stone shipped from Israel for symbolism
- maximum number of trees on-site before construction saved by careful planning

- low-water use (xeriscaping), low-maintenance, low-chemical, native landscaping
- low-impact cork flooring used in lobby areas; recycled carpet used in sanctuary & offices
- mostly-recycled or limestone composite “vinyl alternative” tile flooring (such as marmoleum) in social hall & classrooms
- permeable driveway and parking lot for groundwater recharge (gravel, then alternative paving)
- wide buy-in sought from congregation on environment as key priority during building process

Energy Conservation Codes

Congregations may first want to focus on upgrading one important aspect of their building, before they embark on a comprehensive sustainable building project. Energy efficiency improvements will give communities the biggest bang for the buck. Energy codes are proven to be one of the most cost-effective means by which to effect environmental savings in a building.

The International Energy Conservation Code (IECC) is one of a set of comprehensive and coordinated national model construction codes developed by the International Code Council (ICC), which establishes minimum prescriptive and performance regulations for the energy-efficient design of new and renovated commercial, educational, institutional, public assembly and storage buildings.

The District of Columbia Building Code Advisory Committee (BCAC) recently completed over a year's work on reviewing the 2000 ICC family of codes, including the 2000 IECC. On January 9, 2004, the 2000 IECC took effect. The BCAC is now gearing up to review and recommend for adoption the 2003 ICC codes, including the IECC. The 2003 IECC is expected to reduce energy use in new buildings by as much as 16 percent.

The significant new commercial provisions relevant to institutional buildings are as follows:

- Additional infiltration controls
- Equipment efficiency updates
- Economizers required at 65,000 BTU per hour
- Optimization of hydronic system controls
- Ground-source heat pumps
- Heat recovery for service water heating
- Additional light reduction and automatic lighting shutoff controls
- Reduced lighting power densities
- Simplified approach to mechanical requirements of small buildings
- Increased attention paid to existing buildings (additions and alterations)

Congregations could greatly benefit by improving their buildings to reflect the updates in the code or by constructing new buildings that exceed code requirements. The benefits would be seen in reduced energy costs, better land use, and a healthier environment. The changes to the facility may require a capital investment, however it is imperative to remember that the return on that investment goes far beyond the financial boundary. For more information on energy efficiency improvements, please see Chapter 3 in this guidebook. Chapter 11 describes ways to finance energy efficiency improvements.

Energy Efficiency & Green Energy

By Ben Rosenthal, DC Energy Office, Consultant,

Debra Jacobson, George Washington University, Adjunct Professor &

Gary Skulnik, Clean Energy Partnership

The United States' commercial sector, of which religious institutions are a part, accounts for 18 percent of the country's total energy consumption, according to 2002 figures. Eight percent of this energy is produced by renewable sources, such as sun and wind (Agricultural Marketing Resource Center). The rest contributes to air and water pollution from excess **carbon dioxide**, **sulfur dioxide** and **nitrogen oxides** that cause **climate change**, acid rain and smog, respectively.

There are many actions we can take to reduce our negative impact on our **environment**. In this chapter, you'll read about solutions that can save energy and thus save money, as well as means to purchase energy produced from **renewable, sustainable** sources.

Lighting

In addition to switching lights off when rooms are not in use and using daylight whenever possible, congregations can consider replacing all incandescent bulbs with **compact fluorescent light (CFL)** bulbs. They provide the same lighting, use up to 75 percent less energy, last four to 10 times longer. They don't flicker (as traditional tube fluorescent bulbs do) and serve most lighting needs, CFLs cost \$3 to \$10.

Installing occupancy sensors in rooms that receive less use, such as restrooms and storage spaces, can cut energy consumption in half for an investment of only \$25 per sensor.

Exit signs are often large energy users since they remain on all the time. Plus, incandescent lighting must be replaced about once a year. Signs containing **light-emitting diodes (LEDs)** will provide continuous light for 11 years at a fraction of the electricity usage. Most cost \$30 to \$50 and include a backup battery for use during power outages.

Heating, Ventilation and Air Conditioning

Heating and cooling account for at least half of building energy costs. Programmable thermostats allow customization of heating and cooling needs, cost \$40 to \$250 and can shave two percent off an energy bill for every degree the thermostat is adjusted closer to room temperature.

New air conditioners use 20 to 40 percent less energy than those manufactured 10 years ago. Improving insulation is another easy way to save energy and money.

In buildings that do not have a high demand for hot water, **tankless water heaters (NASA SETS)** are the most efficient and cost saving. They cut heating costs in half because they don't continually heat water; hot water is only produced when the faucet is turned on. If a new water heater is not in the budget or an immediately worthwhile investment, consider a \$15 water heater blanket to provide better insulation.

Office Equipment

Office equipment is the fastest growing electrical load in non-residential facilities. Unfortunately, computers, fax machines, printers and copiers waste energy when they remain on and idle. To reduce this waste of energy and the pollution associated with it, manufacturers of just about every major brand of office equipment have partnered with the EPA to introduce **ENERGY STAR** labeled machines that will automatically power down (to 15 watts or fewer) when not in use.

To optimize your computer, make sure that the power management or energy saver feature is enabled and that you have set it to the shortest acceptable time for your operation for display and system sleep/standby. You'll find that equipment will run cooler and last longer, and you may also realize additional savings on air conditioning and maintenance. Over its lifetime, ENERGY STAR qualified computing equipment in a single home office can save enough electricity to light an entire home for more than four years.

Green Energy

Faith institutions and their members can help protect the Earth by **generating** or purchasing pollution-free renewable energy (e.g., wind, solar, geothermal). Renewable energy is also known as **green energy** or green power.

Renewable energy generation is most cost-effective in new building construction or renovations (e.g., solar roofing shingles) because replacing an existing investment is not neces-

sary. For existing buildings, the religious community can support the expansion of renewable energy by purchasing “green power” or “green tags” (also known as “renewable energy certificates.”) There are several options available for either choice in our region, with more on the way.

For existing buildings, any premium for “green power” can be funded by **energy efficiency** savings or innovative financing approaches. In addition, religious institutions can increase savings by aggregating their electricity or “green tag” purchases through a large purchasing pool, which allows individual congregations to buy electricity at better rates than they can obtain on their own. Greater Washington Interfaith Power and Light is one pool specifically targeting the faith community. The Clean Energy Partnership is a group that is open to individual households and congregations in the area.

Green tags represent the unique and exclusive proof that one megawatt-hour of energy was generated from a renewable source and placed on the grid. The money for the “green tag” goes to the green tag sellers, who in turn pay money to the renewable energy generators, enabling the generators to produce more green power. The electrons from the renewable

energy source do not necessarily flow directly to your congregation, but you have made an important contribution to increasing production of renewable energy into the grid.

The website of the U.S. Department of Energy contains a list of providers of green tags (see resources). In purchasing green tags, it's important to make sure they are certified by a credible third party source that will verify the exact source of the tags and the truthfulness of the sellers' claims. Environmental Resources Trust and Green-e are two non-profit groups that certify green tags.

Bundled products include both green tags and electricity and such products are offered by electricity marketers, including PEPCO Energy Services and Washington Gas Energy Services. When you buy a bundled product, you are buying both actual electricity as well as the green tag. If religious institutions buy bundled products with long-term contracts, they may be able to increase savings in the long run because green energy prices remain stable while the prices of **fossil fuels** (particularly oil and natural gas) have a high degree of volatility. Think of it like buying a long-term fixed rate mortgage instead of a variable rate short-term mortgage.

Clean Air

By Ben Rosenthal, DC Energy Office, Consultant &
Sabrina Williams, DC Energy Office, Energy Program Specialist

The Washington Metropolitan Area suffers from high levels of air pollution, particularly on hot summer days. This air pollution is caused by various sources, including power plants and automobile and truck emissions. **Energy generation** from **fossil fuels**—coal, oil and natural gas—is a major contributor to air pollution through electrical generation as well as use in vehicles and buildings. As good stewards of the earth, the religious community can play a major role in addressing this problem. Religious school students and parents can be particularly active in these efforts.

Internal combustion engines emit **carbon dioxide, carbon monoxide, hydrocarbons, nitrogen oxides** and **benzene**.

Carbon dioxide emissions are a primary contributor to global climate change, and other emissions contribute to smog, acid rain and other health and **environmental** problems.

Currently, many private and government fleets are choosing to purchase cars that use cleaner alternative fuels. Because of the **Energy Policy Act of 1992**, major automakers now offer many cars that operate on compressed natural gas, electricity, ethanol, methanol, liquid natural gas, and propane. Many fleets currently use **alternative fuel vehicles** (AFV) to displace the use of gasoline, reducing dependence on foreign fuel, emitting fewer pollutants, and serving as first step in the widespread use of AFVs.

In a move to shift citizens to cleaner fuels, the U.S. Environmental Protection Agency also regulates seasonal additives that improve the fuel used during the summer and winter months. Likewise, the EPA urges automakers to improve the emissions of cars to guarantee all new vehicles on the road are low emission vehicles (LEV) and lists these “cleaner fuel vehicles” on its Web site.

Advocates of the “hydrogen future” believe that fuel cells, which are powered by hydrogen, will represent an increasing share of

automotive fuels over several decades. In the meantime, most efforts are focused on reducing oil use with more efficient technologies, such as hybrid vehicles and other conservation practices, such as those listed below.

Walking and Biking

Walking and biking improve the health of our environment as well as the individual. Installing bike racks and storage lockers can help reduce energy use. Be creative with funding by involving local bike shops and other small businesses. For example, a local bike shop donated the public bike racks in Princeton, New Jersey.

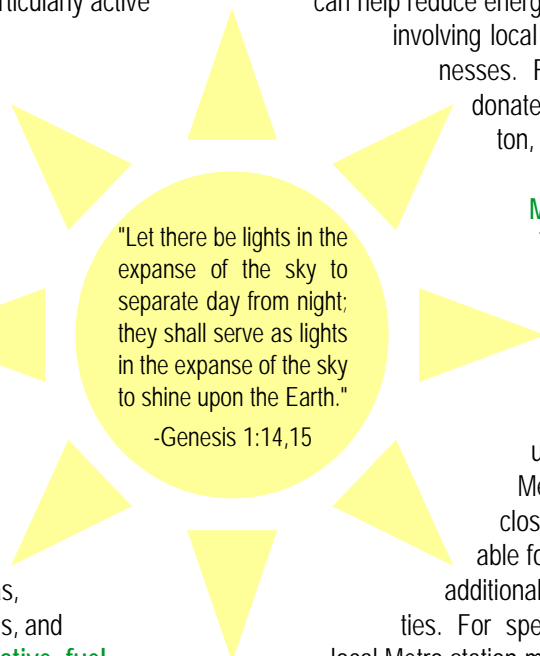
Mass Transit

The Washington Metropolitan Area has the benefit of both a well-developed light-rail system and an even broader based bus system. Our institutions can be a resource for people interested in using these systems. Know what Metro station and bus routes are closest and have bus schedules available for callers and visitors. Metro offers additional services for citizens with disabilities. For special arrangements, contact your local Metro station manager.

In various locations in the U.S., there are the **FlexCar** and **ZipCar** programs for short term (hourly use) driving needs. In the D.C. area, they are connected to the Metro system.

Carpooling

High Occupancy Vehicle (HOV) lanes were developed to encourage people to carpool, with employers adding other incentives such as reduced-rate parking and “up-front” spaces for carpool vehicles. Other benefits of carpooling include less driving (to work) per person, monetary savings from using less fuel, less damage to air quality and the joy of a more social experience and fellowship on the way to houses of worship, work or school.



"Let there be lights in the expanse of the sky to separate day from night; they shall serve as lights in the expanse of the sky to shine upon the Earth."
-Genesis 1:14,15

Vehicle Maintenance

First, read the owner's manual. It outlines recommended maintenance intervals, product specifications and operating procedures and also explains the emission control system's warranty. Contact the manufacturer or a local dealer to obtain a copy of the manual, if there isn't one. Some items need regular check-ups and periodic replacement: air filter, vacuum, coolant hoses, oil, oil filter, fluids, belts, etc. Keep tires inflated to the recommended pressure to minimize tire wear and maximize fuel economy.

Lawn and Garden Equipment

Lawn mowers, tractors, leaf and grass blowers, chainsaws, trimmers and other equipment with gasoline-operated engines are major contributors to air pollution during the summer. Small engines like these produce more emissions than larger ones, such as those in cars. The EPA has implemented regulations that establish emission standards for small spark-ignition engines of 25 horsepower (19 kilowatts) or less. The EPA estimated that these small engines produced five percent of all man-made hydrocarbons and newer engines will emit more than one third less pollution. As alternatives, you can consider corded and cordless-rechargeable electric models.

Learn about more effective landscaping practices in Chapter 5.

The religious community and its members can work together in several specific ways to reduce air pollution, including the following:

- *Increase energy efficiency* — When less fossil fuel is used, emissions are reduced and the religious community saves on its energy bills. So, better vehicle gas mileage or improved building insulation can reduce energy use and the resulting pollution.
- *Use alternate fuels* — Using ethanol, methanol, compressed natural gas or other alternative fuels in bus fleets or other vehicles not only reduces air pollution but also reduces the use of imported oil.
- *Drive fewer miles* — Vehicles contribute almost one-third of smog-forming emissions, nationally, and increasing vehicle miles traveled by local residents contributes to this continuing problem. Whenever possible, take public transportation, car pool, bike or combine activities into one trip. Also, consider using the programs that offer car access from the Metro system and other locations for short-term (hourly) driving needs. Religious institutions

can provide assistance in the formation of car pools and provide information about public transportation schedules.

- *Improve vehicle maintenance* — A poorly tuned vehicle can pollute significantly more and waste more money than one that's well-maintained. Keeping tires inflated properly is particularly important.
- *Limit polluting activities on Code Red or Orange days* — Lawn mowers, tractors, leaf and grass blowers, and other equipment with gasoline-powered engines contribute greatly to high levels of summer air pollution. Seek to limit these activities when the **Air Quality Index** is Code Red or Orange. For lawn care contracts, consider writing into the contract a provision limiting mowing on Code Red days. Seek to use mass transit on such days.

Indoor pollution sources that release gases or particles into the air are the primary cause of indoor air quality problems. Pollutants originated outside, pollutants that are released by things inside our worship space, and pollutants resulting from human metabolism and activities pollute indoor air. Inadequate ventilation can increase indoor pollutant levels by not bringing in enough outdoor air to dilute emissions from indoor sources and by not carrying indoor air pollutants out of the building. High temperature and humidity levels can also increase concentrations of some pollutants. However, there are a number of ways to decrease indoor pollution.

The relative importance of any single source depends on how much of a given pollutant it emits and how hazardous they are. In some cases, factors such as how old the source is and whether it is properly maintained are significant. For example, an improperly adjusted gas stove can emit significantly more carbon monoxide than one that is properly adjusted.

Pollutants that are originated outside the worship space include mold spores, pollen, automobile exhaust, lawn chemicals, etc. and can be prevented by building tighter structures, which would separate them from the worship space. Keep in mind that the air inside **HVAC** ducts will be breathed by the congregants. Therefore, a duct's interior can be considered worship space. Hence, included in the tight structure is tight ductwork to prevent pollutants from outside the ducts from entering them and ultimately affecting the worshippers.

Pollution caused by items inside our worship space includes particulates released from inside furnishings or building materi-

als directly exposed to the interior worship space. The best way to minimize pollution from these sources is to decrease the use of them. For example, choose furniture without long-term formaldehyde emissions and less-noxious cleaning products.

Mechanical ventilation is best used to reduce pollutants from human metabolism and from worship activities that generate moisture.

Although it's usually more effective to pick the right pollution-reduction method for the job, the principles of separation, elimination and ventilation to deal with pollutants originating from any source can be used. For example, to deal with formaldehyde outgassing from kitchen cabinets, the cabinets can be coated with a sealant. This would be a form of separating the source (the cabinets) from the worship space by placing a barrier (the sealant) between the congregants and the source.

Landscaping & Gardening

By Beverly Meeker, United Religions Initiative

Green landscaping is influenced by the biodiversity of our region. Green Faith Landscaping incorporates the wisdom, ethics and spiritual teachings on the role of nature in relation to humans of a faith tradition. Landscaping basics rest on a foundation of three values: beauty, order and safety. Green Faith Landscaping adds a fourth value: connection.

Beauty

Our appreciation of natural beauty and our response to it have a significant impact on the places where we spend time living and working. We tend to love and become bonded to the shape of the natural landscape and the native plants as they grow in our communities in the Washington, D.C., area. We often find repose in the wildness of nature in contrast to the ordered, domesticated lands we have placed under our control where we live and work. We sense the “cycle of life” as we see plants in their full maturity, in their untrimmed form and in diverse groupings. Landscaping based on natural beauty may be called the cycle of life model. When we have free time, we seek out local parks, preserves and river banks for recreation. We identify as belonging to this place: Washington, D.C.

Order

There is an innate security in order. The human hand brings control over a defined area. It is predictable. It follows certain rules. It is safe. It has clarity. Human hands have organized what was once wilderness. The basic ingredients of the land as wilderness are still there: the soil with its creatures and microorganisms, rocks, plants and creatures above the surface. Within the boundaries of our property we determine how these ingredients will best work for us. We design the space to fit our need and to make it attractive to our eyes.

Safety

When the human hand has created a design for the property, safety will surely be a factor. There is a basic human need to feel safe from predators, safe from slips and falls, safe from congestion, moving objects, things falling on them, protection from wind, rain and toxins. Lighting may be added for the evening, in addition to safe paths and stairs.

Connection

Through design we can connect to both a sense of place and to our spirituality. Our property in Washington, D.C., has many connections, through history, geography and geology, watershed, human settlement patterns and our faith traditions. Our land was once part of the Eastern woodlands, made up of oak and beech and tulip poplar. Today biodiversity has evolved as human population has greatly increased. The remaining biodiversity of our Chesapeake Bay watershed region is essential to the health of the whole ecosystem. Our District is located at the fall line between the rich alluvial soils of the coastal plain and the slowly rising land of the Piedmont Plateau. Washington, D.C. is a place of decision-making, power, culture, and pride. We know we can be a model to others.

When a faith congregation owns property, additional connections are made. It is usually affiliated with others of shared beliefs. It may be part of an interfaith organization with shared values. Values of faith traditions about the land derived from our religious texts and evolving commentaries and practices as theologians and laymen seek to incorporate the meaning of change, innovation and new discoveries of science. Each has inspiring values in relation to nature and treatment of the land which can add to landscape design, spiritual depth and rich meaning. Each has stories about creation, or travels over land or sacred places, or earth as mother.

My experience, everything within me,
is against an abstract approach to land and nature,
and for the *profound assets rooted in each site*
and buried in it like a treasurable wonder.
The ancients thought those vital assets spirits.
By listening intently, you can hear them
miraculously breathe in their slumber.
You may subtly awaken them
to startling values of design
truly assured of duration,
growth and never ending life.

— Richard Neutra

Green landscaping, as **permaculture**, can be described as green space that requires few material inputs while having a positive impact on the environment. Green landscaping has many positive impacts on the environment. The positive environmental impacts to air, water, land and biodiversity of traditional native plant landscaping can be quantified and documented. Green landscaping offers viable alternatives to using concrete and turf grasses to beautify District green spaces.

The landscaping concepts should maintain requirements to all green space maintained by the District for urban forestry:

1. *Native Naturalized Planting* — Indigenous trees and under-story with a natural ground plane. This priority planting type and has been effective in other jurisdictions in areas 30 feet wide or greater. It has reduced mowing and created a continuous mass of vegetation that will screen views.
2. *Predominant Species Planting* — Rows of trees and under-story have also been effective in other jurisdictions in areas between 15 and 30 feet wide. It has reduced mowing and created a continuous green edge.
3. *Hedge/Massed Shrub Planting* — Masses of indigenous shrubs have also been effective in other jurisdictions in areas between 5 and 15 feet wide.
4. *Understory Planting at Existing Trees* — Indigenous shrubs and mulched ground cover to replace turf grass at existing tree plantings.
5. *Grass Only Planting* — To be used in areas where safety sight lines preclude any other kinds of plantings. This is the only time that mowed, turf grass is recommended.

Some of the principles employed by green landscaping are:

- Natural Design
- Right Plant — Right Place
- Native Plants Hold Soil, Water
- Plant for the Long-Term
- Diversity and Biomass
- **Energy Conservation/Cooling**
- Storm Water Retention
- Ecological Value

Some of the benefits to using green landscaping are:

- Reduce/prevent pollution
- Conserve natural resources
- Maximize ecological function
- Conserve natural resources
- Improves attractiveness
- Reduce mowing

Integrated Pest Management (IPM) is another important aspect of green landscaping. Some of the practices employed when using IPM are:

- Monitor and assess pesticide use
- Employ cultural controls first
- Use least toxic chemicals
- Follow label directions carefully
- Spot treat rather than broadcast

Implementation of green landscaping includes:

- Preparation
- Planting
- Installation
- Construction

Maintenance of green landscaping includes:

- Integrated Pest Management
- Careful Application of Nutrients
- Water Conservation
- Energy Conservation
- Composting/Mulching

The goals of Green Faith Landscaping are to beautify our surroundings, save our congregations money, and minimize pollution. Green Faith Landscaping reflects the essence of our place, Washington, D.C., its soil, climate and seasons. It also reflects the integrity of the Chesapeake Bay watershed, its land and waters, its native and migrating species. And, it seeks to heal the imbalances we have created, to make it a healthier place to live for ourselves and for our children.

Our faith traditions teach us about connections with the Creator, with each other and all living things. Through Green Faith Landscaping, we can take action to create an expression of this spiritual connection to the natural world on our own properties and to satisfy the deepest parts of the human self, where we can experience a sense of awe and wonder...wholeness, healing and beauty.

Greening the Kitchen

By De Fischler Herman, Shomrei Adamah of Washington, D.C., Cofounder

Think of congregational life and what comes to mind? Praying, celebrating life-cycle events, observing holidays, attending meetings, socializing and of course, eating! From coffee and pastries at board and committee meetings to large catered weddings and other celebrations, food is at the heart of many community gatherings.

While the elders among us grew up during the Depression and World War II and remember rationing, saving, and making do with less, the middle generation experienced having, consuming and “throwing out” plenty: plenty of foods wrapped in plenty of packaging, often plastic. Post-war affluence gave us highly processed, sugared, salted and preserved foods in “super” markets. This same overabundance found its way into the kitchen in houses of worship.

The trend toward excess has left wreckage in its wake. A closer examination of our congregants will show that many suffer from diet-related diseases: obesity, high blood pressure, elevated cholesterol, diabetes, and heart disease. The children in our communities are prone to many of these health problems as a consequence of consuming large quantities of nutrient poor snacks and sodas and getting too little exercise. We owe it to our congregations to use the same tools for saving our **environment** when we are selecting, preparing and serving food in our houses of worship.

We also need to consider where and how to dispose of the waste products of our community’s celebrations. As costs have escalated for food products and trash collection services and as we begin to adopt a “reduce, reuse, **recycle**” philosophy in our home kitchens, it’s time we reevaluate the congregational kitchen from a health and environment perspective.

According to the Global Alliance for Incinerator Alternatives, recycling saves three to five times the amount of energy as incinerating these materials in a waste to energy facility. Recycling also keeps materials that can be reused out of landfills. In order to reduce the amount of waste we generate, we need to

take as many proactive steps as possible. The following section on best practices contains ways to reduce the impact of waste on our environment and our facilities.

Best Practices

Encourage reusable items

Washable, reusable plates, cups and utensils are more cost efficient and less polluting than disposable goods (see Chapter 8). If you’re currently using disposable ware, ask how much money is being spent purchasing it and estimate its disposal costs each year. If custodial staffs were to wash the dishes, include in the costs. (See sidebar about Ithaca College.) Consider using ceramic mugs for staff coffee and tea setups instead of styrofoam, paper, and plastic-coated single use cups, plates and plastic utensils. Also, choose reusable oilcloth, which is easily wiped clean, or if feasible, tablecloths that can be washed.

Consume fewer nutritionally barren soft drinks

such as sodas that are highly sugared and fruit punches that have little or no natural fruit juice. Even bottled water leaves unnecessary waste; plastic bottles cannot

be recycled into plastic bottles and require more water to manufacture than to fill them. Offer fruit juices and filtered tap water as alternatives.

Encourage caterers to purchase locally and/or organically grown seasonal produce.

These are available through the area’s co-ops, farmers markets and even supermarkets. As demand for organically grown foods increases, prices are beginning to fall in line with the costs of conventionally grown foods. Avoid imported fruits and vegetables that are not labeled “organically grown.” They may contain traces of pesticides that are banned in the U.S., but are still used elsewhere. Also select varieties that will increase biodiversity. For example, try unusual varieties of potatoes, such as blue potatoes, Yukon gold or yellow Finn.

*We are the earth, and belong to You.
O Mother Earth from whom we
receive our food, You care for our
growth as do our mothers. Every step
that we take upon You should be
done in a sacred manner; each step
should be as a prayer.*

— Black Elk
(*This Sacred Earth*, p.143)

Recycle food and beverage containers by contacting the trash collection service and setting up specially marked bins in the kitchen. [More info in Chapter 8.] Work with the custodial staff and educate the caterers, as well as anyone in the congregation who uses the kitchen, to properly dispose of recyclables in the bins.

Establish a composting area, if feasible, on the grounds of the building. Involve the religious school in filling and maintaining the pile. Gardening and home stores and catalogues sell a variety of composters that remain tidy and keep out unwanted critters.

Educate congregants, beginning with children, about the connections between farming, many religious festivals and giving the land a rest. By educating our children and ourselves, we will help foster the desire to choose and prepare foods with a greater sensitivity to our health and the Earth. Bring religious school students out to a working farm, particularly during religious agricultural festivals, to learn about growing food. Follow up with a trip to a food processing operation and supermarket. When organizing potluck luncheons and dinners, encourage participants to bring foods that are in keeping with the tradition of Earth stewardship.

Case Study: Ithaca College

The Dining Service department at Ithaca College took on the task of food planning for an event entitled "Exploring Positive Growth: The Summit on **Sustainability**" scheduled during the Jewish holiday of Passover. Event planners requested the Dining Service staff consider several goals when designing the menu: the menu offerings should have options for Passover celebrants, as well as vegetarians and vegans. It should also address the issue of **bioregional** food production and the food should be served using ecologically friendly plates and dinnerware.

The event organizers requested that bio-regional foods be served as much as possible, noting that the average food item travels 1,550 to 2,480 miles in the U.S. (Worldwatch Institute, "Homegrown.") Among many benefits, "purchasing food that was grown and harvested locally keeps . . . money circulating within [the] community, keeping wealth in [the] region. . . . Buying local food helps to reduce dependence on foreign oil needed to ship food thousands of miles, thus cutting back on greenhouse gas **emissions**" (Food Routes).

Local suppliers and food producers included the Dining Services on-campus bakery, a cooperative market, a fish farm and a poultry farm that raises hormone-free, free-roaming chickens.

Regarding the choice of dinnerware, the conference planners said, "We want this event to be a 'Zero Waste' experiment. Either use fully reusable food service items (china, glass, silverware, cloth table covers and napkins), or, if disposable service items are used, any such products should be fully biodegradable and compostable." The college has a campus-wide food-composting program. Staff decided to use polylactic acid (PLA) utensils and plates, which are designed to be compostable.

The conference also supported using mugs from the Recycle Mug program, an ecologically friendly fund raising effort that both reduces waste and supports the work of the National Fish and Wildlife Foundation. The Recycle Mugs offer discounted prices for refills of beverages to encourage more frequent use and reduce waste.

Water: A Basic Right

By Ben Rosenthal, DC Energy Office, Consultant,

Leslie Fields, Friends of the Earth, Consultant &

Tomaysa Sterling, DC Energy Office, Chief of Environmental Sustainable Solutions

Water is needed in all aspects of life. The general objective is to make certain that adequate supplies of clean water are maintained for the entire population. Innovative technologies, including the improvement of existing water systems, are needed to fully utilize limited water resources and to safeguard those resources against **pollution**.

Water is especially important to the faith community. Religious customs and ceremonies often incorporate water. Because of this, it is important for congregations to conserve, prioritize water use and educate members of the congregation on how to use and **conserve** water.

Water use and conservation of water are also key to helping our communities become more **sustainable**. The faith community plays a vital role in initiating, implementing and supporting sustainability, because of its outreach, membership, and in-house activities.

We can separate our water needs into consumption, cleansing and landscaping. By doing this it helps us to prioritize our water use and thus allows us to better conserve water.

Water Consumption

There are several pollutants that affect water that can adversely affect public health. These pollutants include bacteria, viruses and particulates (lead, rust, debris, etc.). Water consumption manifests in several different ways, this can happen through the mouth or the skin. So, we must be very concerned about the quality of the water that we use for drinking and water that may be absorbed through the skin. Congregations can take several steps to insure that water that will be used for consumption is clean, such as installing a water filtration system. This could be done for all of the water used by the facility that will be used for drinking and water that will touch the skin. Congregations can also install filters on faucets that dispense water that will be used for drinking or in ceremonies where water will touch the skin.



Cleansing with Water

We use water to clean many different objects and in different ways. We use water to clean indoors, on dishes, floors, and laundry, for example. We also use water to clean outside, such as on driveways, walkways and vehicles. Our responsibility is to use the water responsibly. We should take measures to reduce the amount of water needed to accomplish our cleansing tasks. These methods can include installing aerators on faucets that will mix air with water to increase the water pressure, while reducing the amount of water used (flow rate). Another effective method of conserving water during cleansing is to invest in and use **ENERGY STAR** appliances, such as dishwashers, washing machines and water heaters.

Water and Landscaping

In order to have a beautiful and thriving landscape around facilities, many feel compelled to supplement the water that nature provides through rain with water from the facility ("watering the lawn"). This practice is successful in maintaining beautiful grounds, but can cause water bills to skyrocket and send water into soil that could be used for another purpose.

Because of the multiple functions that congregations use for water, there are several alternatives to "watering the lawn" that will give congregations better use from their water supplies.

One alternative is to use greywater on the lawn. Greywater is water that comes from sinks, showers, washing machines, dishwashers, cleaning the floor, etc. This water can be diverted from the sewer system and used to provide water to the landscape. There are two important factors to remember when using greywater: (1) greywater is not waste water (water from toilets) and (2) we must use environmentally friendly and biodegradable cleansing products when we divert our gray water for landscaping purposes. Another alternative to "watering the lawn" is using plants and grasses in your landscape that have low water requirements. This technique would offer beauty without water maintenance.

Conservation

Water conservation is also a big concern for congregations. Consider addressing the following issues:

Leaks

Leaky pipes and faucets are big water wasters. The easiest way to test for leaks is to turn off all taps and see if the water meter is still spinning. Fixing leaks is usually as easy as replacing a worn out washer, O-ring or other seal. Each costs about 15 cents.

Toilets

Toilets are flushed frequently throughout the day, resulting in many gallons of wasted water. Flushing liquids alone only requires less than a gallon of water in a toilet and no water at all in a urinal. Women's restrooms could be equipped with dual-flush toilets that selectively use three or six liters of water, depending on the type of waste in the bowl, and men's restrooms could contain water-free urinals that use gravity alone to flush and do not suffer from the odor problems in unflushed, water-filled units.

Another alternative to save water and money from flushing is to use the water displacement method by employing a toilet flow reduction device. The water displacement method incorporates the use of a solid object in the tank portion of the toilet, if it has one. It was common at one time to put a brick in the toilet tank, but a standard brick can only displace about $\frac{1}{3}$ of a gallon of water, and bricks decay during exposure to water in a toilet. Modern toilet flow reduction devices can displace about $\frac{2}{3}$ of a gallon of water, are immobile, and don't interfere with toilet operation. Another alternative is a plastic milk jug. Also, consider replacing flush valve assemblies with newer single-piece units that can be adjusted for tank height and water level.

Showers

Showerheads manufactured since 1994 must flow no more than 2.5 gallons of water per minute. Unfortunately, most use exactly that much, while heads containing fewer holes can increase pressure and use less water. About \$12 will buy a low flow showerhead that lets through two gallons or less per minute, depending on existing pressure and has a shut-off valve allowing the user to save additional water while soaping up.

Faucets

The average person uses faucets for about eight minutes each day, using 20 to 25 gallons of water, depending on the age of the faucet. Faucets are regulated the same as showers, limited to 2.5 gallons per minute since 1994. Older ones can be retrofitted with aerators, about \$2 a piece, that mix air with water to make an effective spray pattern and reduce flow to as little as half a gallon per minute.

Laundry

Conventional household clothes washers use 30 to 35 gallons of water per full load, while newer, high-efficiency machines use a third less and save significantly in energy use, too, instituting the front-loading design as of many commercial washers. Instead of agitating clothes covered with water, they rotate clothes through the water. They also require less detergent, and consequently save money. Additionally, a tax credit may be available for purchasing such a machine.

O Great Spirit of the West, spirit of the great waters,
or tides and rivers, lakes and springs;
O Grandmother Ocean, deepest matrix, womb of all life,
With you come the dissolving of boundaries and holdings,
the power to taste and to feel, to cleanse and to heal.
Great blissful darkness of peace,
we pray that we may be aligned with you,
so that your powers may flow through us,
and be expressed by us, for the good of this planet Earth
and all living beings upon it.

— *Four Elements Medicine Wheel Prayer*

Reduce, Reuse, Recycle

By Naomi Friedman, Center for a New American Dream, Director of Sustainable Markets & Natalie Randolph, D.C. Office of Recycling, Environmental Education Coordinator

Americans generate a tremendous amount of garbage. On average, District of Columbia residents accumulate over 800,000 tons of garbage each year, or nearly eight pounds per person per day. However, few are aware of the true cost of “throwing it away.” *Can you point to “away.”* Trash does not disappear; it is placed in landfills and incinerators that continue to burden society through high costs, pollution and public health concerns. Many discarded materials such as metals, plastics and paper products can be recycled and used again, saving the cost and energy needed to harvest new materials from the Earth. According to the Environmental Protection Agency, for example, if the United States recycled 35 percent of its waste, a very doable figure, it could reduce greenhouse gas emissions—linked to global warming—by about nine million metric tons per year.

If you use...	made from recycled material instead of virgin material,	the percentage of energy saved is...
Newsprint		34
Plastic		88
Glass		5
Aluminum		95
Cardboard		24

In Washington, D.C., garbage haulers pay \$46 per ton to deposit our solid waste. This “tipping fee” and the costs to transport waste are passed on to commercial refuse customers, such as religious institutions. Some communities across the nation reduce, recycle and compost over 40 percent of their municipal solid waste! Religious institutions can act as leaders in reducing waste, recycling and buying products made from recycled materials.

Conduct a Waste Audit

The first step toward effectively managing solid waste is to conduct a waste audit. A waste audit will determine how much and what kind of trash is generated in each area of your building. This information is key in determining what type of waste reduction and recycling program needs to be implemented. As part of the waste audit purchasing and management practices will be assessed. For example, how much money is spent on trash removal? Could recycling decrease this cost? From the waste

audit it can be determined where and how to reduce your building’s waste production.

Much of the waste will likely consist of white office paper. A survey of all departments will probably reveal that your building’s refuse also contains beverage containers, food and yard trimmings. Look for major contributors to the waste stream, items that are easy to recycle and items that are difficult to recycle. A waste survey can also be integrated into a religious school class activity and the input of students can be solicited.

A waste audit can be conducted in several steps:

1. Designate a Waste Management Coordinator or Team who will take on the responsibility of organizing your waste reduction efforts.
 - Set flexible short and long term audit goals for the reduction of waste at the facility.
 - Notify staff and congregants of the waste reduction program. They will also encourage employee and congregant participation as being essential to the success of the waste reduction program.
 - Continue to perform periodic audits to monitor waste reduction over time and implement modifications as needed.
2. Gather facility-specific information.
 - Examine facility records such as waste hauling records and purchasing records (what types of items are purchased and in what quantity).
 - Conduct a facility walk through. Observe the types and amounts of waste produced, identify waste-producing activities and equipment, detect inefficiencies in operations or the way waste moves through organization, and observe the layout and operations of various departments.
 - Perform a “waste sort inspection” in which each waste component is physically sorted and identified and calculate its percentage of the waste stream. Develop a survey for your facility, which should include, but not be limited to; the types of waste generated and waste generation information such as what type of collection containers are used and the number of collections.

3. Conduct a waste composition analysis. This information will be key in determining a waste reduction strategy. What types of waste compose your waste stream? Does waste composition differ in different areas of your facility? What is different? What is the percentage of materials that are recyclable? What percentage of your waste is toxic or hazardous? What percentage of your waste is food waste? How can each type of waste be reduced?

Now use this information to formulate a waste reduction strategy and recycling program. Always remember that reducing the amount of waste that your facility produces is equally if not more important than recycling. Recycling should be done after the total amount of waste has been reduced as much as possible through education and behavior changes.

Reduce Waste at the Source

The following section presents some tips for waste reduction in different operations. Additional waste reduction techniques are in the Purchasing Section.

- Food Service — [See Chapter 6]
- Offices — The primary waste produced by offices is, of course, paper. Efficient paper use is both economical and environmentally beneficial.

The following are some helpful hints and techniques to reducing waste across the board:

- Use bulletin boards and email for announcements
- Double-sided copying and printing. When purchasing a new printer, make sure that it is capable of duplex printing and that all office staff set their computers to default double-sided printing. Discuss with your staff making double-sided copying routine. Not only does this save paper, it can also save room in file cabinets and postage by lightening mailings. Also, changing document margins can be a paper saving measure. A reduction to half-inch page margins can result in a 17 percent increase in printable area over standard one-inch margins.
- Keep a reuse bin next to printers and copiers to collect paper only printed on one side.
- Use discarded paper for note taking.
- Set the fax machine to beep when the material is sent, rather than printing out a confirmation sheet.
- Share or give old books and magazines to colleagues or donate them to charities.
- Buy materials with as little packaging as possible or buy in bulk.

- Return used copier and toner cartridges and purchase remanufactured cartridges.
- Some institutions reuse manila envelopes and use a rubber stamped message that says, "Protect Creation, Reuse an Envelope."
- Use mugs or reusable cups for beverages and Tupperware or dishes for lunches.
- Sticking new folder labels on top of old ones can allow for reuse of old file folders.
- Keep an empty closet for used office and other supplies for reuse within your department or home
- Congregational "Drop and Swaps" — Religious institutions can offer their community the opportunity to reuse unwanted materials, through periodic drop and swap events, where congregants bring second hand books, clothing or furniture for resale or donation (proceeds can go to institution)

Recycle — What are Your Legal Obligations?

D.C. law requires recycling in all commercial establishments that do not receive D.C. Department of Public Works municipal solid waste collection services. Commercial establishments include: office buildings, churches, retailers, warehouses, apartment buildings (with four or more units), service companies, cooperatives, condominiums, bars and restaurants, as well as museums, associations, non-profit organizations, schools and universities. **Your facility is considered to be a commercial establishment.** Items required by law to be recycled are:

- Paper (newspaper, cardboard and office paper)
- Aluminum, steel and tin cans
- Brown, green and clear glass bottles and jars
- Plastic food containers and beverage bottles are optional, but we encourage you to recycle them.

The District Government requires that every commercial organization (all faith-based organizations are considered commercial) submit a Commercial Recycling Plan to the D.C. Office of Recycling and all Recycling Plans must be updated every two years. You can obtain a commercial recycling plan form from the D.C. Office of Recycling.

An effective recycling program includes a contract for recycling service, a recycling plan and employee and congregant education. The Department of Public Works Commercial Recycling Investigators regularly inspect commercial establishments to insure compliance and issue notices of violation for noncompliance. Commercial Recycling Investigators randomly inspect commercial recycling programs and investigate all complaints.

Fines for noncompliance with the D.C.'s Recycling Law range from \$50 - \$1,000.

All District of Columbia property managers and building owners must implement an effective recycling program and require all residents and tenants to participate. Your program must include source separation, which requires that recyclables be separated from trash before collection. All employees and congregants must be made aware of what can be recycled and how to prepare it for recycling.

Collection and Hauling

What are your Current Waste Collection and Hauling Arrangements? Where is your trash going and how much is it costing you to get in there? Some questions to investigate include:

- Who is your garbage hauler and are they registered as a recycler with the D.C. Office of Recycling?
- What is the duration of your garbage hauling contract and what are its basis (number of pulls, number of containers, number of pounds)?
- What is your monthly or yearly garbage bill?
- If you reduce the volume of waste generated, will you save money?, and/or will your hauler offer recycling services free of charge?
- What materials will your hauler pick up for recycling?

Please keep in mind that you must arrange for collection of your recyclable materials through licensed and registered private hauling firms or recycling companies. The D.C. Office of Recycling maintains a list of these registered haulers. Your recycling hauler must be registered with the D.C. Office of Recycling in order to legally collect your recycling.

Identify Recyclable Materials

Use the information gathered during your waste audit to determine what you would like to recycle. The items listed above are required by law to be recycled, however you are not limited to these items. Depending on your chosen recycling hauler's capability, you may recycle as many items as possible. Don't forget about non-traditional recyclables such as old clothing, white goods, kitchen appliances, old cars, cell phones, batteries, and tennis shoes. These items can usually either be reused or taken to various specialty recyclers such as scrap metal dealers and retail stores that will take items back to be recycled. You may want to consider enlisting the help of your congregants to help recycle items that cannot be picked up by your hauler.

Establish Pick-up or Drop-off Arrangements

It will be important to discuss with your current waste hauler what recycling services they offer and how much this will cost. Remember, if you are reducing the volume of waste, you are saving your hauler money in tipping fees and these savings should be passed on to you-so your waste hauler may consider offering you recycling services free of charge or at a reduced fee. If your hauler does not pick up recyclables, you will need to secure a separate recycling hauler. Your recycling hauler can earn money from the sale of white paper and some metal cans, which should be considered in your negotiations about price. There are also some drop-off centers where congregants can drop off recyclables.

Determine Equipment Needs

You will need to secure appropriate, well-labeled recycling bins, which can be left in a central place, near trash bins. Employees also can receive a small paper recycling bin to leave under their desk, right near their trashcan. Some recycling haulers will supply bins. (Students can help decorate labels for recycling bins)

Kick-off and Education

The success of your waste reduction program rests on the participation of employees, management, members and students. A well-publicized kick-off meeting which covers program needs, goals, collection and sorting methods will help get the program off to a good start. Posters, signs and articles in congregational newsletters can reinforce recycling procedures. You may want to time the launching of your waste reduction program to coincide with a holiday or event such as Earth Day (April 22), Mother's Day or an appropriate religious holiday to generate enthusiasm for the program.

Monitoring the recycling program is essential as overflowing containers can quickly dampen a congregation's enthusiasm for recycling. Recycling reports received from your hauler about tons of waste recycled can be reported in the congregation's newsletter to increase interest in the program.

Purchasing

Many believe that an item is not recycled until it is reprocessed into another usable material. To close the recycling loop, it is important to buy products made from recycled materials. In addition to looking for a recycling symbol, it is important to pay attention to the amount of recycled content in a particular product and what type of recycled material it contains.

White office paper with a minimum of 30% post-consumer recycled paper can be easily found in major retail outlets or through your vendor. ("Post-consumer" paper means the pulp and fiber used to make the paper comes from a paper product that was used and discarded by an individual or institutional consumer. This is different from "industrial" waste paper that a company already reuses within its production process.) It is also possible to order paper that has even larger amounts of post-consumer recycled paper, which is better for the environment.

To reduce the amount of chlorine in the environment, some institutions are requesting paper that is not bleached with chlorine. Chlorine combines easily with other chemicals in the environment, creating carcinogens and other problematic chemicals. In addition to buying paper with high post consumer content, and process-chlorine free, some institutions are requesting paper that is not made from old growth forests. The latter can be difficult to verify.

Recycled hygiene paper, such as toilet tissue and napkins, possess 90 to 100 percent recycled post consumer paper. Other items that include recycled material include rubber mats made from old tires and plastic desk accessories.

Conservation and Lifestyle

You will likely be surprised at how eager students and congregants are to participate in waste reduction and recycling programs once they are established. Youth can be particularly helpful in launching such efforts and in spreading the word among adults. There are many people you will want to involve in establishing a successful waste reduction program: facilities staff, office employees, students, purchasing agents and of course, your current garbage haulers. Below are suggestions for how to set up a successful program that will give your congregants a concrete and very visible way to be good environmental stewards.

Some Recycling Tidbits

- Aluminum can be recycled using less than five percent of the energy used to make the original product.
- Recycling one aluminum beverage can saves enough energy to run a 100-watt bulb for 20 hours, a computer for three hours or a television for two hours.
- Manufacturing one ton of office and computer paper with recycled paper stock can save between 3,000- and 4,000-kilowatt hours over the same ton of paper made with virgin wood products. (Preventing one ton of paper waste saves between 15 and 17 mature trees.

Pesticides

By Jay Feldman, *Beyond Pesticides*, Executive Director

Many **pesticides** present dangers to human health and our environment. They are associated with adverse health effects: cancer; nervous and immune system damage; reproductive disorders (including infertility) and birth defects; attention deficit disorder and learning disabilities in children; respiratory problems; rashes and headaches. Many pesticides are linked to disruption of the endocrine system, which controls the body's messages for development and normal functioning.

Over 25,000 different pesticide products, totaling over five billion pounds, are in the marketplace each year. Pesticide products contain ingredients (usually the majority of ingredients in the product, called inert ingredients) that are considered trade secret information and not disclosed to the public because of their proprietary status. And yet, we endure exposure to multiple pesticides in the air we breathe, the water we drink and the food we eat.

What is the law?

The law that regulates pesticides contains an assumption that toxic pesticides are necessary tools in pest management. In reality, there often are non-toxic ways to manage pests. The acceptable level of pesticides is set through a process called risk assessment. It is a process that has been roundly criticized for its limitations in calculating the real risks to people and the environment.

Background

As a nation, we use over five billion pounds of pesticides annually, according to the EPA's most recent report, *Pesticide Industry Sales and Usage* (August 2002). Unfortunately, we live in an age where toxic substances have become a basic ingredient in our food production and pest control systems—pesticides are the only toxic chemicals (with the exception of chemical warfare agents), which are produced for *intentional* uncontrolled release into our environment.

In an indoor dust study, the EPA found the presence of pesticides, not used inside tested homes, entering via windows or tracked inside by people and animals. Similarly, pesticides have been shown to be transported in fog and rainwater, traveling long distances from one community to another, from one ecosystem to another.

Acute symptoms of pesticide poisoning include dizziness, nausea, headaches, rashes, sensitization and mental disorientation. In addition, low-level exposure over a period of time may result in chronic health effects. Pesticides are linked to a wide range of health problems including cancer, birth defects, genetic damage, neurological, psychological and behavioral effects, blood disorders, reproductive effects and abnormalities in liver, kidney and immune system function. Chronic poisoning, including multiple-chemical sensitivity, appears to be on the rise. Today, multiple-chemical sensitivity is becoming widely recognized as a chronic illness. It is obvious that the only way to minimize the harmful effects of pesticides is to reduce and, as much as possible, eliminate overall pesticide use.

Children are particularly susceptible to toxic effects due to pesticide exposure. Not only, do children receive higher doses of toxic materials, they have a decreased ability to eliminate toxins and their target organs are more sensitive to toxic effects, according to *Pesticides in the Diets of Infants and Children*, a 1993 report issued by the National Academy of Sciences National Research Council. A number of studies have confirmed elevated rates of adverse effects in children exposed to pesticides.

A study in the *American Journal of Public Health*, "Home pesticide use and childhood cancer: A case-control study," found elevated rates of childhood leukemia and soft tissue sarcomas associated with homes where pesticides are used. A study that appeared in the *Archives of Environmental Contamination and Toxicology* (1993), "Family Pesticide Use and Childhood Brain Cancer," has linked home pesticide use, such as flea collars, no-pest strips and chemical lice control to elevated cancer in children. Other studies have found similar links.

A study published in the *Journal of the National Cancer Institute* (1987) found a 6.5-fold increase in the risk of childhood leukemia for children whose parents use garden or household pesticides. Other studies have shown that infants and toddlers are particularly at risk from pesticide poisoning because there are higher pesticide concentrations closer to the floor. Moreover, ventilation has far less impact on decreasing infant breathing zone levels than adult breathing zone levels.

A 1991 National Cancer Institute epidemiological study showed that the rate of childhood malignancies climbed almost 11 percent from 1973 to 1988—and it was not a function of better reporting. A newborn today faces a one in 600 chance of contracting cancer by age 10. The EPA recently released data saying that children accumulate 50 percent of the lifetime cancer risk in the first two years of life. The National Cancer Institute is recording a one percent increase in childhood cancer a year.

Protecting public health and our environment from pesticide contamination is vital. There is no centralized national record-keeping that documents incidents of pesticide poisoning. Therefore, estimating the impact of pesticides on public health and our environment is impossible. Pesticide-related diseases, such as cancer, often do not appear until years after exposures or they are a result of repeated exposures making it impossible to pinpoint the exact cause of the disease. The same concerns are raised with the sub-lethal effects of pesticides that show up as birth defects or in the form of reproductive disorders and behavioral effects.

Safe Approaches

Because of the known and unknown hazards of toxic pesticide exposure and the deficiencies in the law and regulatory process governing their sale, it is prudent to adopt practices that seek to eliminate toxic pesticide use. In order to do this, **integrated pest management** (IPM) approaches are increasingly being adopted.

IPM is a pest management strategy that focuses on long-term prevention or suppression of pest problems through a combination of practices such as:

- regular pest population monitoring
- site or pest inspections
- evaluation of the need for pest control
- occupant education
- structural, mechanical, cultural and biological controls

Techniques include such methods as:

- sanitation
- pest-proofing waste disposal
- structural maintenance
- good soil health
- other non-chemical tactics

In IPM, least-hazardous pesticides should be selected only as a last resort, thus minimizing the toxicity of, and exposure, to any pesticide products that are used. As a rule IPM saves money compared to the long-term costs of chemical-intensive pest management. Because IPM focuses on prevention of pest problems and proper monitoring to determine their extent, school IPM programs can decrease the amount of money a school will spend on pest control in the long-term.

Youth Education & Programming

By Lindsey Paige Savoie, Shomrei Adamah, Jewish Environmental Educator

Tracy Fisher, Center for a New American Dream, Youth Campaign Director &

Dave Tilford, Center for a New American Dream, Senior Writer

Religion and faith play integral roles in defining how humans tend to the Earth and protect their **environment**. How to till a field, How to care for our livestock, How to protect natural resources—liturgies, ancient texts and traditions provide the answers to help preserve and protect our fragile environment. As modern concerns of water conservation, energy resources and air pollution permeate our everyday lives, we can turn to our interfaith community to provide us with commentary, insight and solutions to these challenges.

The educational process can be compared to a tree. The roots are the foundation, the basis for study. The trunk is the strength that is the stability like an educator. The branches are the students who need the roots and the trunk for sustenance and growth.

This metaphor leads to deeper discussion of the power of environmental education in our religious community. In general studies classes, environmental education is becoming more common and highly effective in grabbing the attention of students of all ages. It is a perfect venue for exploring moral issues and values, especially from a faith-based perspective. Students can make connections to the knowledge that they already have with the values of their religion.

**Teach your children
what we have taught
our children—that the
earth is our mother.
Whatever befalls the
earth befalls the sons
and daughters of the
earth...**

— Chief Seattle

As described in a Project Learning Tree study “. . . students have an extraordinary enthusiasm for environmental subjects, which, if nurtured, will naturally lead them to become effective environmental stewards in addition to better learners.” Humans exhibit multiple intelligences with which they learn. Every student has a capacity for learning; however teachers must recognize how each student learns best to provide an effective education.

The study of our environment from a religious perspective tends to serve the naturalistic and spiritual intelligences and can be

most effective when it combines all of the intelligences (the other seven are kinesthetic, musical, interpersonal, intrapersonal, linguistic, mathematical and spatial) so learners can participate in a safe and welcoming atmosphere.

Empowering Youth as Environmental Leaders

Young people have a great deal of influence over adult behaviors and can play a very important role in championing environmental improvements in your congregation. In marketing circles, some call this influence the “nag factor.” Despite the negative connotations of a moniker like the nag factor, the attention of youth to the behavior of their families, their schools and their congregations can yield positive results.

Sometimes young people serve as the conscience of the larger group (ask any family in which the youngest member has appointed him or herself the de facto “recycling police”). And while many a parent has been amused and exasperated by junior household do-gooders, it is empowering for kids to see that they are influential—especially in matters of social consciousness.

Consider the following example:

Harold Overmann, Iowa’s Spirit Lake schools superintendent, walked into a classroom on Earth Day 1991 to talk about environment. Instead of being the one asking questions, the students started questioning him.

“If the school is interested in preserving the environment,” they asked, “why do we use plastic cups in our lunch program?” “Why do we rely so much on electricity made from **fossil fuels**?” asked someone else.

The questions inspired Mr. Overmann to start looking for clean energy solutions. For Spirit Lake, sitting atop a high ridge above Iowa grasslands, wind power was the answer. A single wind turbine was installed two years later to feed electricity directly into the elementary school.

There was even some surplus electricity left over to sell. Since 1998, the district has made between \$20,000 to \$25,000 in revenues from selling electricity to the local utility, with the “windfall” funds going towards the school’s instructional program.

In the fall of 2001, a second, more powerful turbine came online and now powers all of the remaining buildings in the school district, including the high school, the middle school, the administration building, a technical building, the bus barn and the football stadium's lights.

One physics teacher calculated that the two turbines would prevent the **emission** of more than 5.2 million pounds of **carbon dioxide**, 8,000 pounds of **sulfur dioxide** and hundreds of tons of other pollutants.

At Spirit Lake, concerned youth served as a "**gadfly**," prompting action on the part of adults. Young people can also serve as the principal actors in energy conservation projects—for example, by directing an energy audit:

Of course, the first step in harnessing the power of youth is to get them to care in the first place. And that often involves providing them with an opportunity to explore—in a fun and creative way—connections between their behaviors and our environment. To this end, the Center for a New American Dream and World Wildlife Fund recently launched a "Be Different, Live Different, Buy Different—Make a Difference" campaign. The campaign aims to help kids explore the hidden connections between consumer behaviors and our environment, while learning what they can do to help create a more **sustainable** world. (Marketing experts estimate that children today influence over \$565 billion of their parents' purchases annually.)

A good informational tool is the Rocky Mountain Institute's "RMI for Kids" Web site. The site offers practical advice on why it is important to conserve energy and includes tips on how to do it.

On the lighter side, there is the Union of Concerned Scientists' "Great Green Web Game." This online tool helps youth make connections between consumer behavior and our environment. Kids answer questions and "shop green" while the "Envirometer" gauges the cumulative impact of their choices. The center point on the Envirometer represents the impact of an average American household at the end of the game participants can compare this average to their own impact on air quality, water quality, natural habitats and climate change.

An ancient Chinese proverb states: "Tell me and I will forget. Show me and I may remember. Involve me and I will understand." **Environmental education** is a hands-on, experiential field that empowers students to make life changes and commitments. Students who learn to respect our environment at young ages are more likely to engage in environmentally friendly behaviors as adults. "Environmental topics and projects hold a great deal of intrinsic interest for students, particularly when they are aimed close to home. They provide abundant opportunities for student-focused learning."

How to Pay for Improvements

By Jerry Lawson, ENERGY STAR for Congregations, Director

Energy efficiency improvements, unlike many other capital equipment improvements for a house of worship, can provide an immediate and predictable “positive cash flow” by lowering energy costs. The savings can be used to fund other needs, which are not capable of generating cash value.

Positive cash flow means that starting with the first month’s utility bill after the upgrade, the savings in utility costs will be higher than the monthly payment for the new equipment installation. However, an upgrade must be carefully designed and correctly installed, operated and maintained to achieve the potential savings.

It is important to note that a positive cash flow is not even necessary for the energy efficiency upgrade to be financially successful. The monthly energy savings need not necessarily equal or exceed the payment for the upgrade, as long as the savings are at a rate that is acceptable to congregational decision-makers. For example, comfort from adequate heating and cooling, better safety from improved lighting, improved security from new windows, the capabilities of new office equipment and the convenience of new appliances are all valuable, but are not part of the cash flow calculation.

Another consideration is that a high rate of savings for a lighting upgrade might “subsidize” or make more financially viable in an overall renovation, the installation of needed windows, which may also save money but at a lower rate of return than the lighting upgrade.

A situation that may seem contrary to saving money could be a refrigerator in the congregation’s kitchen that “still works just fine,” but if older than 10 years is most likely using so much electricity to run that buying a new efficient refrigerator would be a wise investment. Calculations can answer such questions.

With these facts in mind, here are some different ways your congregation might buy new equipment that will ultimately pay for itself with energy savings. The dollar savings cannot only help fund your mission, but in the bargain, the saved energy equals prevented pollution. So, as your congregation improves your financial resources with lower utility bills, you will also improve your stewardship of natural resources, or “stewardship of creation.”

Some Payment and Financing Options

- Purchasing equipment and services: cash and borrowing
- Leasing
- Performance contracting

Purchasing Equipment and Services

Cash

A cash purchase almost always makes the most sense if your congregation has or can raise the cash, and is financially healthy. A cash payment avoids the additional interest cost of borrowing money, so is usually the least expensive route. However, as tax-exempt organizations, congregations cannot depreciate equipment to achieve a tax deduction, unlike for-profit businesses.

The great advantage of cash payment for equipment is that all efficiency savings are directly available to the congregation. Prioritize upgrades to achieve the highest possible savings from the cash invested. Doing so will help avoid the “opportunity cost” of not having the cash available for other needs, because savings will be reinvested in them.

Generally, the congregation should use cash for relatively simple, less expensive improvements (programmable thermostat, occupancy sensors, compact fluorescent lamps, LED exit signs, new refrigerator or office equipment, etc.), and finance over time, borrowing if necessary for larger, more complex improvements (complete lighting upgrade, new heating/ventilation/air-conditioning (HVAC) system, boiler, windows, etc.).

Your cash will go further if you have willing congregational members with professional or highly competent amateur skills in electrical, carpentry, plumbing, etc., who can save on installation labor. Many energy saving jobs such as caulking, weather-stripping and insulation can be performed by unskilled volunteers under skilled supervision. Many congregations even provide teams of volunteers for community projects such as Habitat for Humanity, Christmas in April, neighborhood weatherization/rehab and other traditional “barn-raising” type programs, as part of the congregational mission.

Aggregated Purchasing

This is simply a “group purchase,” or joining with other congregations and/or with members of your house of worship to buy a higher volume of a product or piece of equipment to get a “price break” or “economy of scale.” Vendors generally charge less per unit if they are selling more units at once.

The congregation might need only 25 **compact fluorescent** lights (CFLs), but by joining with members to buy 100 CFLs, it could get a much lower price per bulb. Likewise, a congregation might need only four LED exit signs or one programmable thermostat, but get them for 50 percent less in a group purchase with other congregations or with the small business owners in the congregation. (The D.C. Energy Office, **ENERGY STAR** for Congregations, and Greater Washington Interfaith Power & Light have teamed up to help you with aggregated purchasing.)

Gift or Bequest

To a potential donor for a cash purchase, a new lighting or HVAC system probably lacks the symbolic attractiveness of a new stained glass window, pipe organ or pulpit. However, most faith traditions teach the “stewardship of creation,” or **conservation** of natural resources out of respect for all life, future generations and in gratitude for all nature provides us. There is a clear set of facts indicating that energy efficiency helps protect our **environment** in multiple ways. For example, actual pollution and greenhouse gases prevented by energy savings can be calculated over the life of the new equipment.

In addition to masses of **emissions**, these calculations can be expressed in equivalent acres of trees planted, cars removed from the road, human health/disease reduction, etc. An appropriate plaque or other recognition could be provided to acknowledge donations that support congregational energy stewardship.

Loans

Lenders may require up to a 40 percent down payment on energy efficiency projects, because it is often impractical to “repossess” installed equipment in the event of default on the loan. Your congregation’s borrowing ability, interest rate and length of the loan period will depend on current debt and “credit-worthiness” of the borrower—meaning past loan repayment record.

Depending on these facts, the monthly payments may be structured to be greater or lesser than the monthly savings.

The congregation depends on effective equipment, correctly installed, operated and maintained to generate savings that meet the loan payment.

Vendor, ESCOs, and General Finance

Many vendors of major energy efficient equipment offer terms of payment over time—a loan for their specific products and/or services. Major retailers, such as office supply, consumer electronics and home improvement/hardware stores, usually offer finance or credit to organizations. These retailers sell virtually all the products, equipment and installation services needed for comprehensive energy efficiency upgrades.

Additionally, the financial service companies that provide credit cards may do so for a congregation. Service and Product Providers (SPPs) or Energy Service Companies (ESCOs) exist to provide complete efficiency upgrades, including survey of needs, proposal submission, installation and maintenance, as well as finance. There is more on SPP/ESCOs under “Performance Contracting.” Finally, some religious denominations provide loans on a national or regional basis for congregational expansion or renovation, so you may want to inquire about this.

Leasing

Certain equipment may be available for lease and these payments are usually lower than loan payments. Depending on its terms, a lease may provide for the leasing organization to ultimately own the equipment, to simply end the lease and return the used equipment or to renew the lease for brand new equipment. However, a lease is basically a contract and laws and terms for leasing can be very complex and can change frequently.

So your congregation should get the assistance of a trusted financial executive, attorney or accountant before entering into a lease agreement. As with skilled technical labor, your congregation may have a member capable of advising you on leasing. For these reasons, this guide does not attempt to further explain leasing. If you have an experienced, knowledgeable congregation member’s free expertise in leasing, this may be a good financing alternative.

Performance Contracting

If your congregation lacks adequate cash, has a good credit history, but does not want to borrow, “performance contracting” may be a good option. This type of contract can be complicated, but it is an increasingly successful and popular form of ener-

gy efficiency financing. Performance contracting can be applied to a purchase or a lease situation. Performance contracting is sometimes called “shared savings” or “paid from savings” contracts. The savings must be significant to interest a contractor; so small congregations probably won’t have this option.

Under a performance contract there must be a “win-win” situation, in which the dollar savings from energy efficiency are used to repay the Service and Product Provider (SPP) or Energy Service Company (ESCO), which finances and oversees equipment installation/ operation, often at no “up front” cost to the congregation. The vendor and congregation both need the upgrade to generate saved energy dollars to pay for itself.

The SPP/ESCO assumes the risk that their installation will perform as planned, so they will be paid over an agreed time. The SPP/ESCO owns the installed equipment until it is repaid from the savings, so it can take the tax depreciation benefits, and the congregation has no debt.

The SPP/ESCO typically provides the initial energy audit/survey; designs the upgrade; obtains bids and manages installation or installs the equipment, itself; obtains or provides finance, and guarantees the savings by managing and maintaining the equipment. The contract may require certain actions by the congregation, such as leaving all operation and maintenance to the SPP/ESCO to insure optimal equipment performance and energy savings.

The SPP/ESCO typically takes over payment of the utility bill, and keeps the cash difference between the lower utility bill and the amount the congregation pays it for the utilities, as if there had been no savings. When the costs of the new equipment are paid off, the congregation resumes payment of the utility bills. Then, in addition to the improved lighting and comfort they’ve had all along, they begin to see the monthly utility savings, without having had to finance the upgrade.

The performance contract will address variables in savings. If there is an increase in energy usage that is not due to the new equipment performance, such as longer hours of operation, addition of office equipment or other energy using products not in the original facility survey, the congregation may have to pay the difference.

If the new equipment does not perform as expected, causing a higher bill, the congregation should not pay the difference. The contract should provide for who pays if the utility raises rates, through no fault of either congregation or the SPP/ESCO. If there are no cost savings, the congregation pays its normal, his-

toric utility bill for the month and owes nothing to the SPP/ESCO that month for the equipment. Factors such as these must be specified in writing in advance in the contract to prevent misunderstandings and a successful contract.

Performance or shared savings contracts usually specify detailed work for each individual facility, involve significant amounts of money, cover a wide range of contingencies and require expertise in law, engineering and finance. Consider that:

- Your congregation is entering a complex, long term partnership contract.
- The SPP/ESCO will have certain rights to data and to manage the upgrade for success.
- For an additional fee, you may be able to guarantee or insure the savings.
- Defining all the terms and conditions will take time and expertise.

Evaluating Your Finance Options

Finding the right financing for your congregation’s energy efficiency upgrade requires a serious, competent effort. Factors to consider include the congregational balance sheet, initial payment, payments, ownership and performance risk. Let’s look at each of these:

- *Balance sheet* — Depending on the level of debt and cash flow of the congregation, you may or may not be able to take on additional debt or be of interest to non-debt contractors.
- *Initial payment* — A large initial payment may be an obstacle to some congregations or if cash is available it may be the best way to proceed and avoid debt.
- *Payments* — If you must finance the upgrade, the goal is to set up minimum monthly costs.
- *Ownership* — Whether you purchase, lease or enter a performance contract will determine who owns, operates, maintains and takes the risk that the equipment will actually generate savings. Depending on terms, you may not initially own the equipment, but may eventually.
- *Performance risk* — There is risk with any purchase or investment that you will not be satisfied. However, well designed/installed/operated and maintained efficiency upgrades are typically low-risk, with a good financial return. Performance risk depends on the accuracy of the assumptions and calculations regarding future cost of energy, hours of operation, maintenance and other factors. Lighting upgrades are typically lower-risk, higher-return upgrades than HVAC upgrades because it is easier to predict lighting savings.

Taking Action

PEPCO and Washington Gas do not currently offer financial incentives or rebates for energy efficient investments, but your congregation should always check with the utility for free information and any supporting data or assistance they may offer your upgrade project.

Technical assistance and information are available from the District of Columbia Energy Office at www.dcenergy.org and the national ENERGY STAR for Congregations. ENERGY STAR

can help with financial calculation and has online case studies of successful congregational upgrades, as well as product lists, retail store sources and performance specifications.

Socially Responsible Investing: A Powerful Force for Change

By Darrin Kafka, *Socially Responsible Investing Principle & Leslie Fields, Friends of the Earth, Consultant*

Socially Responsible Investing (SRI) is merging personal values and social concerns with investment decisions. SRI considers both the investor's financial needs and an investment's impact on society. With SRI, we can build a better tomorrow while supporting the needs of today.

SRI has brought about powerful changes worldwide. An example of this can be seen in the Interfaith Center on Corporate Responsibility (ICCR), one of the leaders of the anti-apartheid divestment movement against South Africa. ICCR directs shareholder environmental actions with about 100 corporations for over 200 Protestant, Catholic and Jewish institutional investors controlling \$150 billion in assets, foundation endowments and other pension funds, thus having a significant impact on the financial community.

Issues like **global warming** (or climate change) seem intractable, they affect every single living thing on Earth. As with many large, hard to grasp issues, if broken down in manageable parts—there is a part and role for everyone of all persuasions. This is where SRI comes into play. Making investments can have a significant impact on what products and processes enter the retail, wholesale, social and government markets. Including social concerns like global warming when making investments allows individuals and organizations to make a social change from more than one angle.

There are many different tracks a congregation can take when participating in SRI. However, no matter which track a congregation takes, there are certain items that must be considered before making the SRI. The first is creating or modifying the financial plan. The second is deciding on which social issues the congregation wants to focus on and prioritizing those issues. The third is identifying companies that implement and seek opportunities for making an SRI. The fourth is projecting how the investment will affect the congregation financially and socially. It may also benefit the congregation to determine which SRI's will have the largest social impact.

Global Warming Shareholder Resolutions

In 2003, for the tenth consecutive year, concerned shareholders are asking companies for information about their plans to address global warming and their assessment of risks and

opportunities posed by emerging government efforts to limit green house gas **emissions**. The shareholder campaign is one of the longest running since the South Africa divestment campaign of the 1970s and 1980s—and is fast becoming one of the most widely supported as well.

Properly submitted shareholder resolutions appear in company proxy statements, which are circulated to all shareowners in advance of a company's annual meeting. Though such resolutions are not binding, they prompt top executives and board members to draft and approve statements in response (and almost always in opposition) to these proposals. For some companies, such proxy statements provide the most detailed and current assessment from management on the global warming issue.

Shareholder proponents sometimes achieve their greatest victories by agreeing to withdraw their resolutions before they come to votes. In these instances, management agrees to pursue a course of action favored by the shareholder proponents or to carry on constructive dialogue. Shareholder proponents achieved a significant victory in 2000, when Ford Motor Company, then a new endorser of the CERES Principles (CERES is the Coalition for Environmentally Responsible Economies), agreed to their request that it pull out of the Global Climate Coalition. (The GCC was then the leading industry lobbying group opposed to the Kyoto Protocol and government controls on greenhouse gas emissions.)

After Ford's pullout, DaimlerChrysler and General Motors quickly withdrew their memberships from the GCC as well, as did Southern and Texaco. (Except for DaimlerChrysler, these companies also were facing global warming shareholder resolutions that were subsequently withdrawn.) Within three months of Ford's announcement, the GCC ended its corporate memberships program—and in 2002 the GCC disbanded altogether.

Actions Investors Can Take

- Study the financial implications of investments they make.
- Seek corporate disclosure of social impact either through the SEC or other financial institutions.
- Analyze portfolio, sector and company social investments and impacts.

- Exercise shareholder rights through proxy filing voting.
- Collaborate with other investors to seek action.
- Commit to, and reduce, emissions from your institution or its investments.
- Seek out new investment opportunities and invest in them.

There is a certain amount of power that is associated with money. As congregations, we can use this power to make a difference in our local and global communities by incorporating social responsibility into our financial plans.

Environmental Policy

By Tomaysa Sterling, DC Energy Office, Chief of Environmental Sustainable Solutions

Environmental policy is making concrete decisions on how a facility, organization or individual will operate to protect, improve and rehabilitate our internal, surrounding and extended natural **environment**. Environmental policy is necessary to establish which direction activities will follow and which boundaries should not be crossed. Some fundamentals of environmental policy are:

1. Protect public safety, health and welfare by protecting and improving the environment (energy, air, land and water).
2. Increase compliance with environmental laws (both voluntary and mandatory compliance) that meet state and federal mandates.
3. Operate in a manner that will maximize our returns on investment while conserving, protecting and restoring our indoor and outdoor environments.
4. Conduct environmental programs that are consistent with sound policy for employment and economic development.
5. Improve the education of our congregation and improve procurement practices.

Congregations have to determine what is important to them. The secret is to secure the needs and goals of the congregation without compromising the requirements of the environment. Congregations have to reflect on what level of commitment they want to give the requirements of the environment. Congregations also have to decide what they are willing to compromise and what they are not willing to compromise.

The objective of environmental policy should be to assist our congregations and facilities through comprehensive environmental programs and activities in order to promote and protect health and safety while connecting with sound policies that support employment and economic development.

Each congregation has the opportunity to tailor an environmental policy that addresses the needs of the congregation and to work in concert with other congregations to maximize the environmental benefits implemented as a result of new policies. Each congregation has a mission, goals and objectives; the

purpose of adding an environmental policy is to align these missions, goals and objectives so that they improve the quality of life for the general congregation, individual members of the congregation and the surrounding community.

Some helpful methods of developing an environmental policy are to establish a vision, mission and goals. The vision establishes the long-term overview of how the environmental objectives will be perceived. An example of a congregational environmental vision would be: "The religious community shall practice environmental stewardship and influence members of the religious and extended community."

The mission should be established in a manner that is similar to the vision. The mission should support the environmental vision and describe how the congregation will move toward supporting the vision. An example of an environmental mission is: "The congregation will become a premier example of environmental stewardship through education, program implementation and member participation."

The goals should support the mission. The goals are concrete actions that will bring the congregation closer to meeting the vision and mission. Examples of environmental goals may include:

- Establishing an **environmental education** resource for the congregation
- Purchasing Energy Star appliances and other energy-efficient products
- Purchasing reusable products
- **Recycling** all possible used and reused products
- Improving building quality to meet environmental standards

Establishing an environmental policy is the first step toward improving the environmental life of the congregation, the facility, the lives of individual members and the community of which they are a part.

While establishing the environmental policy for the congregation, the designers of the policy may want to consider environmental justice. **Environmental justice** is insuring that everyone,

regardless of race, culture, sex or income receives the same level of protection from environmental and health hazards and access to the process in which decisions are made that affect the environment in which they live and work. When implementing any policy it is important to consider those that may be affected by the activities that result from the policy.

When forming the environmental policy the decision makers should seek to include potentially affected community residents

to insure that everyone is aware and has the opportunity to respond to decisions that will affect their environment.

Using these basic instruments as a foundation can assist in building an environmental policy of which any organization can be proud.

Public Outreach

By Ben Rosenthal, DC Energy Office, Consultant

The “greening” of a house of worship is especially ripe for exposure. The idea of religious institutions extending their ethical and moral teachings to the care of our **environment** is no longer particularly new, but it’s still newsworthy. Good public relations is not just about blowing your own horn; it’s a way to inspire others to follow suit, thank colleagues for a job well done and encourage members of the community to become active in your institution or program.

Media List

Make a list of local media outlets that may be interested in your story. Consult your library or a friend in public relations for a good local media directory. Cull these directories for names of publications, names of assignment editors or reporters covering the appropriate beat (religion, environment, education).

Most communities have numerous local and special interest media, which are often more amenable to covering your event or reprinting your news release than the larger outlets. Religious organizations, community organizations and schools and universities fit this latter category.

Your list should include local television stations (both network and cable); local news or public radio stations; Web sites, blogs and listservs; the regional and subject-specific sections of a big-city newspaper; and calendar editors for events.

News Releases

Getting the word out to local media is relatively inexpensive, although it is often most effective if a volunteer or professional is willing to devote some time to this effort. Start with a list of newsworthy topics. Some reporters still appreciate a straightforward news release, written in a standard who-what-when-where-why-how format. However, since most are so pressed for time and overwhelmed with information, the best way to communicate your message is a brief, targeted email with the most important details.

Make sure the subject line of the message is newsworthy and enticing (*not* “Hot News” or “News Release – Read Now”). Do not enclose attachments. Compose a 30- to 50-word message that captures the recipient’s interest. Include your contact information. (If you are telling the reporter about an event that

occurs on Sunday, be sure to provide a phone number where you can be reached on Saturday and Sunday.)

When possible, develop relationships with reporters so you have a network of media on whom you can rely to cover your news in the future. Also, give ample lead-time. Last-minute releases are usually relegated to the round file. Most media representatives are good about providing deadline information over the phone. If not told, ask.

Be Confident but Realistic

Creativity is a top priority when trying to get your story in range of the public’s eyes and ears. A large metropolitan daily like *The Washington Post* is constantly bombarded with story ideas, so you must be creative enough to get your local environment or religion story published. Identify the right specialty section, like Home, Religion, Metro or Health. Also, consider other regional sections for local neighborhoods or counties. Send notices to editors of each of these sections. Make a coverage opportunity more attractive by offering an articulate, credible person to interview.

In general, try to put a face on the story. For example, write a story about one participant in the latest project, such as the 80 year-old member who’s been involved in environmental causes for 60 years. Be prepared to answer “So what?” Also, consider whether you could envision reading this story verbatim on a particular page/section of the local paper?

Reporters love superlatives: the first, the largest, the only, the 1,000th. If your church is the first in the area to create a green roof or switch to 100 percent renewable electricity, point it out. News people also love “trend” stories; if you can link your recycling program to an increase in environmental awareness among religious organizations, do it. Or, consider involving a celebrity or politician. Don’t just start digging a new organic garden—invite a local celebrity to turn the first spadeful of soil. Local politicians live for these kinds of events and will do some of the public relations legwork for you.

Finally don’t forget the calendar. Editors are always on the lookout for holiday stories. If you plan to mark a holiday in an unusual or particularly photogenic manner, let them know. Keep in

mind that there are often different editors for calendars in different sections of a major media source.

Follow Up by Phoning

Follow up all emails with a phone call. Be polite, be brief: "I'm

calling from Temple Aleph and just wanted you to know about the dedication ceremony for our new xeriscape landscaping project. I hope you or a member of your staff will be able to cover or mention the event. Thank you." Give the date, time and place, and your name and phone number. That's it.

Worship & Celebration

By Esther Siegel, Energy Programs Consortium, WRAP Project Coordinator

Faiths are rich in their celebration of the Earth through ritual and worship. While many of us are removed from direct contact with nature in our daily lives, our religious traditions continue to remind us we are stewards of the earth, entrusted with her care.

The Old Testament is replete with references to our obligations to care for the Earth, especially the concepts of rest, limits and renewal. The story of the Pharaoh in Exodus 7–12 is meant to teach us that we cannot, as human beings, completely control the natural world.

The beautiful passage that describes Rebekah's quickness in watering Eliezar's camels is a sign not only of her virtue, but is a teaching that we must take care of those, both people and animals, who cannot fully take care of themselves. Many religious institutions speak out against excessive celebrations and instead of wasting leftover food, bringing it to shelters or other facilities in the community.

Many of our rituals are connected to life cycle events embedded in nature, whose origins are long forgotten. Traditional women's new moon celebrations are organically connected with cycles in nature, celebrating and reestablishing the connection with the natural world.

Psalms 115:16 says, "Heaven is the heaven of the Lord, but the Earth, God gave to the sons of man." Rabbis interpret this statement to mean that before we have recited a blessing over something, it belongs to the Lord, but after the blessing, the acknowledgement of its true ownership, then it is made available to us. Any benefit we derive from the world without saying a blessing, it is as though we stole it from the Holy One.

In the Buddhist tradition, all forms of life are interdependent. This is professed through a mindful awareness of the universality of suffering that produces a compassion for all forms of life. The concepts of Karma and rebirth link all forms of life as expressed in the Buddhist prayer, "May all beings be free from suffering, may all beings be happy." The Thai monk Buddhadasa Bhikkhu said, "The entire cosmos is a cooperative." Thich Nhat Hanh offers a ritual he calls, "Touching the Earth" a ceremony that begins with the ringing of the bell that invites the Buddha's voice to be present. The worshipper then touches the Earth to awaken herself to its sacredness.

Islam is guided by the sacred text of the Qur'an that provides a moral basis for an **environmental** ethic. The Earth is mentioned 453 times instilling a profound sense of the value of nature forming the basis for the green movement in Islam. Sura 24:45 acknowledges that all on the Earth share an origin in the common substance of water, "and they will return to the earth from which they came."

In the Quaker tradition, stewardship of the Earth is one of its fundamental tenets of living. In their practice, Quakers use silence and the posing of questions, one of which is to invite worshipers to reflect on their connection to the Earth and their daily role in contributing to its care.

The use of a litany is an opportunity to offer a series of petitions to God on subjects of concern. In addition, it can serve to educate us and remind us of responsible relationships. The Episcopal Church often uses the following litany which is attributed to Chief Seattle. The structure of a litany provides for recitation by a leader followed by a group response.

A Litany of the Circle — Chief Seattle

Beloved God, known to your creation by a thousand different names, we thank you for giving us power through your spirit to reveal life to the world: strengthen, bless and guide all that we do.

Guide us by your grace.

We thank you for your creation, and pray for the earth that you have given us to cherish and protect; nourish us in your love for all you have made.

Guide us by your grace.

Every part of the earth is sacred.

Every shining pine needle, every sandy shore.

Every mist in the dark woods,

Every clearing and every humming insect is holy.

Rocky crest, the juices of the meadow,

the beasts, and all the people,

All belong to the same family.

Teach your children that the earth is our mother.

Whatever befalls the earth befalls the children of earth.

The earth's murmur is the voice of our father's father.

We are part of the earth and the earth is part of us.

The rivers are our brothers; they quench our thirst.

The perfumed flowers are our sisters.

The air is precious.

For we all share the same breath.

The wind that gave our grandparents breath

also receives their last sigh.

And gives our children the spirit of life.

This we know, all things are connected.

Like the blood that unites one family.

All things are connected.

Our God is the same God whose compassion is equal for all.

For we did not weave the web of life:

We are merely strands of it.

Whatever we do to the web,

We do to ourselves.

Let us give thanks for the web of life in the circle that connects us.

Thanks be to God, the God of all,

the God known by a thousand names.

Amen.

The great Creator of the world—whether called Wakantanka, Allah, Varuna, God, Great Spirit or by any other name—is present in every aspect of the created order. For Chief Seattle, every land was a holy land, every being a sacred treasure, woven together in the one cosmic web of life. Thus, we give “thanks for the web of life in the circle that connects us.”

Environmental preservation is central to the Shinto beliefs and attitudes. Time and space are sacred. As a mostly agrarian people, the positioning of their shrines in their groves are carefully planned to demarcate the sacred from the secular world. Loving offerings of the fruits of their production are brought to their shrines as part of the agrarian cycle and purification rituals are performed to restore order and balance in their lives and to the world around them.

In the Jewish tradition, most holidays have agrarian roots. Dietary restrictions were largely based on efforts to prevent the consumption of diseased animals and the management of, and conflict over, resources is reflected in numerous stories about wells and water rights. In life cycle events, for example in a marriage ceremony, the couple is blessed with finding the same contentment that the first humans found in the Garden of Eden. In one tradition, a Bar or Bat Mitzvah is asked to commit him or herself to the protection of endangered species by learning about that species and then giving a talk to the congregation about the care of the species.

During Passover, parsley or another green is dipped into salt water and the following is recited:

*This green represents Earth's bounty;
This salt water represents the tears we
Shed over humankind's abuse of our planet.*

*Praised are you, our God, Ruler of the Universe
Who brings forth the fruit of the Earth*

Through this guide, let us renew our commitment to be guardians of the earth with an environmental awareness that permeates all of our actions and that celebrates the gift we call our Earth.

Affirmation

(Spoken by religious leaders at the Summit on Environment, June 1991)

We believe a consensus now exists, at the highest level of leadership across a significant spectrum of religious traditions, that the cause of environmental integrity and justice must occupy a position of utmost priority for people of faith. Response to this issue can and must cross traditional religious and political lines. It has the potential to unify and renew religious life.

We pledge to take the initiative in interpreting and communicating theological foundations for the stewardship of Creation in which we find the principles for environmental actions. Here our seminaries have a critical role to play. There is a call for moral transformation, as we recognize that the roots of environmental

destruction lie in human pride, greed and selfishness, as well as the appeal of the short-term over the long-term.

We reaffirm here, in the strongest possible terms, the indivisibility of social justice and ecological integrity. An equitable international economic order is essential for preserving the global environment. Economic equity, racial justice, gender equality and environmental well-being are interconnected and all are essential to peace. To help ensure these, we pledge to mobilize public opinion and to appeal to elected officials and leaders in the private sector. In our congregations and corporate life, we will encourage and seek to exemplify habits of sound and sustainable householding—in land use, investment decisions, energy conservation, purchasing of products and waste disposal.

Glossary

A

Air Quality Index (AQI) — A scale developed by the government to measure how much air pollution is in the air. The AQI measures five criteria pollutants—ozone, particulate matter, carbon monoxide, sulfur dioxide, and nitrogen dioxide. AQI levels range from zero (Good air quality) to 500 (Hazardous air quality). The higher the index, the higher the level of pollutants and the greater the likelihood of health effects. The AQI also has another category—unhealthy for sensitive groups—that ranges from 101 to 150. The AQI is usually used in weather reports. When it is high, there are warnings for people not to do things like sports or hard work outside. People with asthma or other lung problems are urged to stay inside on days that the AQI is high.

Alternative fuel vehicles (AFV) — Vehicles that use “non-conventional” fuels derived from natural gas (propane, compressed natural gas, methanol, etc.) or biomass (ethanol, methanol).

B

Benzene — A cancer-causing hydrocarbon (C₆H₆) derived from petroleum. Benzene is a component of gasoline. Benzene emissions occur in exhaust as a byproduct of fuel combustion and also occur when gasoline evaporates.

Bioregion — A natural region defined by its ecological coherence. Each bioregion has a distinct geological formation, climatic conditions and ecology.

British Thermal Unit (BTU) — A non-metric unit of energy, used in the United States, that is equal to the amount of heat required to raise the temperature of one pound of water by one degree Fahrenheit.

C

Carbon Dioxide (CO₂) — A greenhouse gas whose atmospheric concentrations have been continually increasing from pre-industrial (1750–1800) levels of 280 parts per million (ppm). It is currently increasing at a rate of 1.3–1.6 ppm per year, with a concentration (1995) ranging from 356–360 ppm, depending on location. There is a natural seasonal cycle in carbon dioxide levels in the atmosphere; CO₂ decreases in summertime when plant productivity consumes CO₂, and an increase in winter when biota are less active and respiration exceeds photosynthesis. The main source of carbon dioxide increase in the atmosphere has been fossil fuel consumption, with biomass burning becoming more significant over the past few decades, currently contributing approximately 30 percent as much as fossil fuel emissions.

Carbon Monoxide — A colorless, odorless but poisonous combustible gas with the formula CO. Carbon monoxide is produced in the incomplete combustion of carbon and carbon compounds such as fossil fuels (i.e. coal, petroleum) and their products (e.g., liquefied petroleum gas, gasoline) and biomass.

Clean Air Act — Federal regulations that detail acceptable levels of airborne pollution and spell out the role of state and local governments in maintaining clean air.

Clean Water Act — The Act established the basic structure for regulating discharges of pollutants into the waters of the United States. It gave EPA the authority to implement pollution control programs such as setting wastewater standards for industry. The Clean Water Act also continued requirements to set water quality standards for all contaminants in surface waters. The Act made it unlawful for any person to discharge any pollutant from a point source into navigable waters, unless a permit was obtained under its provisions. It also funded the construction of sewage treatment plants under the construction grants program and recognized the need for planning to address the critical problems posed by nonpoint source pollution.

Climate Change — Changes in temperature, seasonal patterns, and other environmental norms as a result primarily of human behaviors.

Compact Fluorescent Lighting (CFL) — An efficient form of lighting; CFL bulbs use one-quarter to one-third as much electricity to give the same light output as a standard incandescent bulb while creating much less heat. They last up to 10 times as long as a standard incandescent light (10,000 hours vs. 1,000 hours).

Comprehensive Energy Plan III — Outlines steps the District of Columbia can take to improve energy efficiency.

Conservation — Reducing or avoiding the consumption of a resource or commodity.

E

Emissions — Flows of gases, liquid droplets or solid particles into the atmosphere. Gross emissions from a specific source are the total quantity released. Net emissions are gross emissions minus the flows back to the original source. The distinction is important where plants are concerned, since they both pull carbon from the atmosphere and store it as biomass when they grow; and release it when they burn or decompose.

Energy — The capability of doing work; different forms of energy can be converted to other forms, but the total amount of energy remains the same.

Energy Efficiency — A reduction in energy use for a given level of service or an increase in service for a given level of energy input.

Energy Policy Act of 1992 — A comprehensive legislative package that mandates and encourages energy efficiency standards, alternative fuel use, and the development of renewable energy technologies. Public law 102-486 also authorized the Federal Energy Regulatory Commission (FERC) to order the owner of the electric power transmission lines to transmit or “wheel” power for power generators including electric utilities, federal power marketing authorities, and exempt wholesale generators.

Energy Star — Energy Star is a set of voluntary energy efficiency programs, sponsored by the U.S. Environmental Protection Agency and the U.S. Department of Energy. Energy Star sets standards for, and labels, energy efficiency products and sets standards of energy efficiency for homes and businesses.

Environment — The sum of all external conditions affecting the life, development, and survival of an organism.

Environmental Education — A process that aims to develop an environmentally literate citizenry that can compete in our global economy; has the skills, knowledge, and inclinations to make well-informed choices; and exercises the rights and responsibilities of members of a community.

Environmental Justice — A movement started by people, primarily people of color, who felt the need to address issues of environmental protection for their communities and the communities around them. It was in the 60's that these people from all walks of life decided that they would emerge themselves in the environmental issues that faced the United States. These communities and its people became experts in these issues and made sure that everyone know of the public health dangers that they faced their families, themselves and the community.

EPA WasteWise Program — WasteWise is a free, voluntary, EPA program through which organizations eliminate costly municipal solid waste and select industrial wastes, benefiting their bottom line and the environment. WasteWise is a flexible program that allows partners to design their own waste reduction programs tailored to their needs.

F

Flex Car — A fleet of more than 125 cars and specialty vehicles (including pickups and hybrid vehicles) currently placed at or near almost 53 Metro stations, Flex car and Metro are changing the way we get around. Forget expensive parking, traffic headaches or the other hassles of car ownership. With Flex car, you have access to a vehicle when you need it, you pay for it only when you use it, and Flex car takes care of all the work.

Fossil Fuel — Fossil fuels such as coal, petroleum and natural gas are derived from plants and animals buried for so long and under such heat and pressure that they became minerals. The energy from fossil fuels comes from the high-energy bonds formed between one carbon atom and another, as well as those formed between carbon and hydrogen atoms. These fuels are limited in total quantity and are non-renewable.

G

Gadfly — A persistent, irritating critic, who acts as a provocative stimulus, and tries to upset the status quo.

Generation (electricity) — Generally implies large-scale production of electric power in stationary plants designed for that purpose. The generating units in these plants convert energy from falling water, coal, natural gas, oil, and nuclear fuels to electric energy. Most electric generators are driven either by hydraulic turbines, for conversion of fuel energy. Electric power generating plants are normally interconnected by a transmission and distribution system to serve the electric loads in a given area or region.

Global Warming — A term used to describe the increase in average global temperatures due to the greenhouse effect.

Green Building — A building that offers high performance in a variety of areas, functionality, energy and water efficiency, quality of the indoor environment (air quality, thermal comfort, lighting), waste management and air emissions, site disturbance and storm water management, transportation options for occupants, longevity (durability, adaptability to changing building user needs) without necessarily increasing capital costs.

Green Energy — Also known as Green Power, this term is used to describe electricity produced by sources that are less harmful to the environment than fossil fuels. While there is no strict definition of Green Energy, generally renewable sources such as solar, wind power, geothermal, biomass and small hydroelectric are considered Green Energy resources.

H

High Occupancy Vehicles (HOV) — Vehicles having more than one occupant, such as carpools, vanpools, buses and mini-buses. Transportation systems may encourage HOV use by having designated HOV lanes.

Heating, Ventilation, Air Conditioning Systems (HVAC) — The primary function of HVAC systems is to provide healthy and comfortable interior conditions for occupants; well-designed, efficient systems do this with minimal non-renewable energy and air and water pollutant emissions. Cooling equipment that avoids chlorofluorocarbons and hydrochlorofluorocarbons (CFCs and HCFCs) eliminates a major cause of damage to the ozone layer.

Hybrid Electric Vehicles (HEV) — Hybrid electric vehicles combine the internal combustion engine of a conventional vehicle with the battery and electric motor of an electric vehicle, resulting in twice the fuel economy of conventional vehicles. This combination offers the extended range and rapid refueling that consumers expect from a conventional vehicle, with a significant portion of the energy and environmental benefits of an electric vehicle. The practical benefits of HEVs include improved fuel economy and lower emissions compared to conventional vehicles. The inherent flexibility of HEVs will allow them to be used in a wide range of applications, from personal transportation to commercial hauling.

Hydrocarbons — Chemical compounds that contain hydrogen and carbon. Hydrocarbon-based fuels such as gasoline and diesel power most motor vehicles and engines. Hydrocarbon pollution results when unburned or partially burned fuel is emitted from the engine as exhaust, and also when fuel evaporates directly into the atmosphere. Hydrocarbons include many toxic compounds that cause cancer and other adverse health effects. Hydrocarbons also react with nitrogen oxides in the presence of sunlight to form ozone. Hydrocarbons, which may take the form of gases, tiny particles, or droplets, come from a great variety of industrial and natural processes. In typical urban areas, a very significant fraction comes from cars, buses, trucks and non-road mobile sources such as construction vehicles and boats.

I

Integrated Pest Management — A pest management strategy that focuses on long-term prevention or suppression of pest problems through a combination of practices. IPM minimizes the toxicity of, and exposure to, pesticide products by limiting use to least-hazardous pesticides only as a last resort.

K

Kilowatt — One thousand watts, where a watt is a unit of electrical power calculated as the rate of energy transfer equivalent to one ampere flowing under a pressure of one volt. A kilowatt-hour is the amount energy required to generate one kilowatt of electricity for one hour.

L

Leadership in Energy and Environment Design (LEED) — An encouragement-based benchmark rating system of the U.S. Green Building Council that promotes buildings that are environmentally responsible, profitable, and healthy places to live and work.

LED — Tiny light bulbs that emit light when connected to an electrical circuit. Unlike incandescent bulbs, they don't have a filament that will burn out, and they don't get especially hot. They are illuminated solely by the movement of electrons in a semiconductor material, such as silicon. The lifespan of LEDs you might use, as in a flashlight or light bulb, averages 100,000 hours, or about 11 years.

Low Hanging Fruit — Products, services and activities that are easily attainable (e.g. replacing incandescent bulbs with fluorescent light bulbs).

M

Megawatt — One million watts, where a watt is a unit of electrical power calculated as the rate of energy transfer equivalent to one ampere flowing under a pressure of one volt. A megawatt-hour is the amount energy required to generate one megawatt of electricity for one hour.

N

NASA Systems Electric Tankless (SETS) — SETS Systems Electric Tankless Water Heaters are the only electric tankless water heaters listed and/or certified by UL (Underwriters Laboratories, Inc.), CSA (Canadian Standards Assoc.), CEC (California Energy Commission) and HUD (US Dept. of Housing and Urban Development) for whole house use equipped with the patented, NASA-designed flow switch. On January 14, 2000, the SETS Whole House Electronic Tankless Water Heater became the first tankless water heater certified by HUD for installation in HUD approved housing.

Nitrogen Oxides — (NO, NO₂, and NO₃⁻; or NO_x for short) are exhaust products from factories and automobiles. NO_x are produced during the high temperature combustion of all fossil fuels. In addition to contributing to ozone formation, some nitrogen oxides, such as NO₂ (nitrogen dioxide), are corrosive by themselves and can cause respiratory problems.

P

Permaculture — A system of perennial agriculture emphasizing the use of renewable natural resources and the enrichment of local ecosystems.

Pesticides — Toxic chemicals that are used to kill insects, or rodents.

Pollution — Undesirable state of the natural environment being contaminated with harmful substances as a consequence of human activities

R

Recycle — System, which may be run by private enterprise or local government to gather recyclable materials and remake them into similar or dissimilar products for the market.

Recycled Hygiene Paper — Paper such as toilet tissue and napkins made from recycled papers.

Renewable Energy/Electricity — An energy source for generating that is not based on fuels with limited reserves. Included are solar power, hydropower, wind power, geothermal and tidal power.

Reliable Energy Trust Fund (RETF) — A public benefit fund developed through the electric utility restructuring process to assure continued support for low-income programs, energy efficiency initiatives and renewable energy resources, supported through a surcharge to all customers.

S

Sulfur Dioxide (SO₂) — A gas, irritant of the lungs, that is produced by burning coal and petroleum. It reacts with water and oxygen in the atmosphere to produce sulfurous acid, leading to acid rain.

Sustainable — Of, relating to, or being a method of harvesting or using a resource so that the resource is not depleted or permanently damaged. Concerning a human activity that can be sustained over the long term, without adversely affecting the environmental conditions (soil conditions, water quality, climate) necessary to support those same activities in the future.

U

United States Green Building Council (USGBC) — The U.S. Green Building Council is leading a national consensus for producing a new generation of buildings that deliver high performance inside and out. Council members work together to develop LEED™ products and resources, the Greenbuild annual International Conference and Expo, policy guidance and educational and marketing tools that support the adoption of sustainable building.

W

Water Efficiency — Efficient water use helps to reduce the need for costly water supply and wastewater treatment facilities, helps maintain stream flows and healthy aquatic habitats, and reduces the energy used to pump, heat and treat water.

Z

Zip Car — Offers self-service cars on-demand 24/7 for rent by the hour or the day. Rates include gas, insurance, maintenance and designated parking. Zip car gives you instant access to a variety of great new cars-near work, transit and home.

Appendix: Getting Started

State Your Goals

We recommend you begin by forming a Green Faith Committee within your institution. Attempting to implement energy-savings measures on your own will prove a daunting task to even the most highly motivated. Rather than risk burning yourself out, build a coalition and spread the enthusiasm. Once a core group has been established, you should write down your goals in the form of a policy statement.

- Form a committee
- Form goals
- Checklist (see front example)
- Action Plan
- Identify responsible parties
- Evaluate

Suggested ways to get started

1. Survey the cleaning products being used in the building; eliminate toxic cleaners and purchase environmentally-friendly products.
2. Recycle glass, cardboard and paper.
3. Phase out non-recycled paper products and purchase recycled paper for the office and religious schools.
4. Eliminate polystyrene cups and paper cups. Instead, use ceramic and/or melamine cups; use the commercial dishwasher for cleaning them.
5. Set up an energy audit with PEPCO's Community Development Department or other energy service companies. Work with the Building and Grounds Committee, including conservation recommendations as plans are formulated for building renovation.
6. Investigate the feasibility and cost of solar water heating. Incorporate into renovation plans, if the building is a good candidate for it.

Get organized

- a. Form a green committee
 - Plan the landscape: collect ideas and decide upon desirable design features
 - Maintain the property/facility
- b. Engage a designer
 - Save time and gain expertise in beauty, function, practicality and regulations
 - Request a simple plan for the committee to follow, or a full execution plan
- c. Educate ourselves
 - Read about environmentally friendly practices
 - Talk with experts
 - Visit gardens with native plants and "green" facilities
 - Attend seminars that focus on environmental practices
 - Take courses that teach fundamental techniques for the environment
 - Join supportive organizations, such as native plant societies

Take action

- a. Prepare
 - Create a list of items of importance
 - Research items, activities, and methods that are appropriate for your congregation
- b. Select action items
 - Prioritize items that have been selected (choosing quick low cost items to do first or in conjunction with time consuming items may improve motivation to continue)
 - Insure that all action items selected will have a positive affect on the environment
- c. Avoid items that may cause secondary problems
 - Financial hardship
 - Community discontent
 - Impede worship and social activities
- d. Develop and implement a definitive plan of action
 - Who
 - What
 - When
 - Where
 - Why
 - How
- e. Review and improve your plan
 - Compare your plan to the activities that have been completed
 - Improve/modify items that are not going as well as expected
 - Update activities to incorporate new environmental practices and technologies

Connect with spirituality

- a. Represent faith teachings and stories
 - Commission art-work, such as sculpture
 - Incorporate green practices into your faith teachings
 - Incorporate faith teachings into your environmental activities
 - Lay out spiritual tools, such as a labyrinth
 - Incorporate spaces for outdoor services
 - Include a garden to grow ritual foods, or to feed the poor
 - Make at least some of the landscape open to neighbors, the public
- b. Represent wholeness
 - Represent connection with the past, with history, both natural and human
 - Design in sustainability, the health of the whole bioregion
 - Design in connection to all living things, support of biodiversity
 - Design in visibility, form which follows function, as an educational tool
 - e.g. use design to demonstrate management of excess rainfall
 - Use nature's principles, methods of renewing itself, and economize them
 - e.g. optimize conditions for composting to produce it more rapidly
 - Design so that we are reminded of the whole, be it our faith tradition, the Chesapeake Bay bioregion, Earth, or the Universe

Resources

General Resources

Center for a New American Dream — Helps Americans consume responsibly to protect our environment, enhance quality of life, and promote social justice.

6930 Carroll Avenue, Suite 900, Takoma Park, MD 20912
301-891-3683
newdream@newdream.org
www.newdream.org

Center for Neighborhood Technology — Working at the cutting edge of sustainable development, CNT is dedicated to inventing and implementing new tools and methods that create livable urban communities for everyone.

2125 W North Avenue, Chicago, IL 60647-5415
773-278-4800
info@cnt.org
www.cnt.org

Chesapeake Bay Foundation, Anacostia River Initiative — Located in a small storefront office in the Capitol Hill neighborhood, midway between Congress and the Anacostia itself, the Initiative is reaching out to both Congress and local citizens. Staff and volunteers are working to encourage and assist local, state, and federal governments to take action and spend the money necessary to clean up the river.

725 8th Street, SE, Washington, DC 20003
202-544-2232
www.cbf.org/anacostia

Chesapeake Climate Action Network — A nonprofit, grassroots organization, serving the Chesapeake bay watershed region, whose mission is to make Maryland an international leader in proactive, comprehensive actions in response to the threat of climate chaos.

PO BOX 11138, Takoma Park, MD 20912
301-920-1644
www.chesapeakeclimate.org

Children's Defense Fund — Provides a strong, effective voice for all the children of America who cannot vote, lobby, or speak for themselves, paying particular attention to the needs of poor and minority children and those with disabilities. CDF educates the nation about the needs of children and encourages preventive investment before they get sick or into trouble, drop out of school, or suffer family breakdown.

25 E Street NW, Washington, DC 20001
202-628-8787
cdfinfo@childrensdefense.org
www.childrensdefense.org

Consumer Federation of America (CFA) — First and foremost an advocacy organization, working to advance pro-consumer policy on a variety of issues before Congress, the White House, federal and state regulatory agencies, and the courts. Its staff works with public officials to promote beneficial policies, to oppose harmful policies, and to ensure a balanced debate on important issues in which consumers have a stake. CFA focuses much of its advocacy in six general areas: financial services; utilities; product safety; transportation; health care; food safety.

1424 16th Street, NW, Suite 604, Washington, DC 20036
202-387-6121
www.consumerfederation.org

Crisis and the Renewal of Creation: World and Church in the Age of Ecology by Jeffrey Golliher & William Bryant Logan (Editors) — A collection of 23 homilies on environmental issues delivered over the past two decades at the Cathedral of St. John the Divine in New York City. Contributions range from theological and philosophical speculation to concrete and practical proposals; taken together they are a wonderful and timely resource for meditation in an era that the book optimistically calls “the age of ecology.”

Published by Continuum Pub Group, March 1996.

D.C. Environmental Network — A campaign of Friends of the Earth, the Network is working toward a vision of rebuilding Washington, D.C.’s neighborhoods and communities for long-term economic stability, accomplishing this by protecting and restoring the urban environment.

c/o Friends of the Earth

1717 Massachusetts Ave., NW, Suite 600, Washington, D.C. 20036-2002

202-222-0746

www.foe.org/camps/reg/dcen

ENERGY STAR for Congregations — Provides technical information and support to all interested congregations.

1200 Pennsylvania Avenue, NW (6202J), Washington DC 20460

www.energystar.gov/congregations

EPA Office of Environmental Justice — There have been significant efforts across EPA to integrate environmental justice into how the Agency conducts its day-to-day operations. Every Headquarters Office and Region has an environmental justice coordinator to serve as a focal point. This network of individuals plays a key role in outreach and education.

Mail Code 2201A, 1200 Pennsylvania Avenue, NW, Washington, DC 20460-0001

800-962-6215

www.epa.gov/compliance/environmentaljustice

EPA Enviro\$en\$e — A free, public environmental information system that provides users with pollution prevention/cleaner production solutions, compliance and enforcement assistance information, and innovative technology and policy options. It also provides access to funding, grants, and environmental research publications.

(202) 564-6827

www.epa.gov/envirosense

Friends of the Earth — The U.S. voice of an influential, international network of grassroots groups in 70 countries, FOE has for decades been at the forefront of high-profile efforts to create a more healthy, just world.

1717 Massachusetts Avenue, NW, Suite 600, Washington, DC 20036-2002

877-843-8687

foe@foe.org

www.foe.org

Greater Washington Interfaith Power & Light — A project of the Churches’ Center for Theology and Public Policy, a national ecumenical center applying faith perspectives to critical issues in public policy. GWIPL is encouraging and enabling congregations and religious institutions in the Washington, D.C., metropolitan area to take concrete steps to reduce the effects of climate change.

www.gwipl.org

Healthy Building Network — A national network of green building professionals, environmental and health activists, socially responsible investment advocates and others who are interested in promoting healthier building materials as a means of improving public health and preserving our global environment.

927 15th Street, NW, 4th Floor, Washington, DC 20005

202-898-1610

www.healthybuilding.net

Institute for Local Self-Reliance (ILSR) — A nonprofit research and educational organization that provides technical assistance and information on environmentally sound economic development strategies. Since 1974, ILSR has worked with citizen groups, governments, and private businesses in developing policies that extract the maximum value from local resources.

927 15th Street, NW, 4th Floor, Washington, DC 20005
202-898-1610
www.ilsr.org

InterFaith Conference of Metropolitan Washington — This comprehensive, interreligious organization works both for a deepening understanding and building a just community. IFC has brought together multiple faith traditions for the purposes of dialogue and social action.

1426 9th Street, NW, 2nd Floor, Washington DC 20001-3344
202-234-6300
ifc@ifcmw.org
www.ifcmw.org

Life Abundant: Rethinking Theology and Economy for a Planet in Peril by Sallie McFague — North American middle-class Christians need to live differently in order to love nature, and to live differently, we need to think differently—especially about ourselves and who we are in the scheme of things. And by “think differently,” I do not mean our conscious, “for publication,” thoughts about ourselves, but the largely unconscious picture of who we are that is the silent partner in all our behavior and decisions. These world-pictures or worldviews are formed by many factors, one of which is the religious assumptions about human beings that operate implicitly in a culture.

Published by Fortress Press, October 2000.

National Association of Environmental Professionals — The multidisciplinary association dedicated to the advancement of the environmental professions in the U.S. and abroad, and a forum for state-of-the-art information on environmental planning, research, and management.

P.O. Box 2086, Bowie, MD 20718
888-251-9902
office@naep.org
www.naep.org

National Association of Local Government Environmental Professionals — The premier national association representing local government professionals responsible for environmental compliance and the development and implementation of local environmental policy.

1333 New Hampshire Avenue, NW, Washington, DC 20036
202-638-6254
nalgep@spiegelmc.com
www.nalgep.org

National Center for Smart Growth Research & Education — A non-partisan center for research and leadership training on Smart Growth and related land use issues nationally and internationally. The mission of the Center is to bring the diverse resources of the University of Maryland and a network of national experts to bear on issues in land development, resource preservation and urban growth—the nature of our communities, our landscape and our quality of life—through interdisciplinary research, outreach and education, thereby establishing the University as the national leader in this field.

Preinkert Field House, Suite 1112, College Park, MD 20742
301-405-6788
www.smartgrowth.umd.edu

The Religious Partnership for the Anacostia River — This project is uniting people of faith across the Washington, D.C., region. The Partnership intends to effectively contribute to the restoration of the Anacostia River and to tangibly assist the residents of the neighborhoods around it.

725 8th Street, SE, Washington, DC 20003

202-544-2232

info@religiouspartnership.org

www.religiouspartnership.org

Smart Growth Network — Formed in response to increasing community concerns about the need for new ways to grow that boost the economy, protect the environment, and enhance community vitality, the Network's partners include environmental groups, historic preservation organizations, professional organizations, developers, real estate interests, and local and state government entities.

c/o International City/County Management Association

777 North Capitol Street, NE, Suite 500, Washington DC 20002

202-962-3623

smartgrowth@icma.org

www.smartgrowth.org

Spirit of the Environment: Religion, Value and Environmental Concern by David Edward Cooper & Joy A. Palmer (Editors) — Brings spiritual and religious concerns to environmental issues, providing a much needed alternative and fresh perspective to exploring human beings' relationship to the natural world through the restrictive lenses of science, ecology, or even morality.

Published by Routledge, March 1998.

This Sacred Earth: Religion, Nature, Environment by Roger S. Gottlieb (Editor) — Begins with spiritual reflections by naturalists, after which contributors focus on religion in the age of environmental crisis. They survey traditional religious myths, creation stories, and conceptions of nature, with extensive selections from Jewish, Christian, Native American, Indian, African, Chinese, and indigenous texts and commentators. The second edition remains the unparalleled resource for the study of religion's complex relationship to environment.

Published by Routledge, October 2003.

Chapter 2: Green Design and Building Codes

U.S. Green Building Council - Leadership in Energy and Environmental Design (LEED) - A voluntary, consensus-based national standard for developing high-performance, sustainable buildings. Members of the Council representing all segments of the building industry developed LEED and continue to contribute to its evolution. LEED standards are currently available or under development for New commercial construction and major renovation projects (LEED-NC); Existing building operations (LEED-EB); Commercial interiors projects (LEED-CI); Core and shell projects (LEED-CS); and Homes (LEED-H).

1015 18th Street, NW, Suite 508, Washington, DC 20036

202-82-USGBC

leedinfo@usgbc.org

www.usgbc.org/leed/leed_main.asp

Chapter 3: Energy Efficiency & Green Energy

Center for Resource Solutions - Green-e - A voluntary certification program for renewable electricity products, the Green-e Program sets consumer protection and environmental standards for electricity products, and verifies that Green-e certified products meet these standards.

PO BOX 29512, Presidio Building 97, Arguello Boulevard, San Francisco, CA 94129-9512

888-63-GREEN

www.green-e.org

The Clean Energy Partnership — A non-partisan, not-for-profit group dedicated to promoting clean energy and helping businesses to implement clean energy and energy efficiency solutions, it was founded in December, 2003, by Gary Skulnik, a veteran clean energy activist who has worked for Greenpeace and the Sierra Club. Its goal is to bring businesses and people together to work for positive social change.

PO BOX 2804, Silver Spring, MD 20915-2804
301-754-0430
www.cleanenergypartnership.org

Environmental Resources Trust — A non-profit organization that pioneers the use of market forces to protect and improve the global environment, ERT is harnessing the power of markets to address the challenges of tempering climate change, securing clean and reliable power, and encouraging environmentally beneficial land use.

1612 K Street, NW, Suite 1400, Washington, DC 20006
202-785-8577
info@ert.net
www.ert.net

Putting Energy Into Stewardship: ENERGY STAR® for Congregations Guide

Published by EPA ENERGY STAR, October 2000.
www.energystar.gov/ia/business/small_business/congregations.pdf
www.energystar.gov/congregations

Chapter 4: Clean Air

DOT National Highway Traffic Safety Administration — Information clearinghouse about vehicles and equipment.
www.nhtsa.dot.gov/cars

EPA/DOT Best Workplaces for Commuters — Offering recognition for innovative solutions to commuting challenges faced by employers and employees, Best Workplaces for Commuters is a public-private sector voluntary program advocating employee commuter benefits. The program highlights the efforts of many top employers to help get employees to work safely, on time, and free of commute-related stress.

www.commuterchoice.gov

EPA Green Vehicles Guide — Find the most fuel efficient vehicle to meet your needs.
www.epa.gov/greenvehicles

EPA Small Engine Emission Standards — Consumer information, regulation and guidance, compliance fee, and certification data for ten categories of non-road spark-ignition engines, ranging from lawn and garden equipment through airport service equipment.

www.epa.gov/otaq/equip-ld.htm

EPA Transportation and Fuels — Links to information about air pollution from motor vehicles, boats and ships, trains, aircrafts, and the fuels that they use, plus travel choices that minimize emissions.

www.epa.gov/air/transport

Fuel Cost Calculator — Estimate annual fuel cost for your vehicle.
www.fueleconomy.gov/feg/savemoney.shtml

Improving Indoor Air Quality by John Bower — Article about residential indoor air quality.
www.hhinst.com/Arteeba.html

The Inside Story: A Guide to Indoor Air Quality — EPA's most popular and comprehensive publication on the subject, it describes sources of air pollution in the home and office, corrective strategies, and specific measures for reducing pollutant levels.

www.epa.gov/iaq/pubs/insidest.html

National Transit Database — The Federal Transit Administration collects and disseminates data on the state of mass transportation via the National Transit Database program. Over 600 of the nation's transportation providers submit data to the NTD annually. Both the public and private sectors use this data to assess the current state of mass transit and plan for the future.

www.ntdprogram.com

Texas Transportation Institute Urban Mobility Study — Data on the performance of some elements of the transportation system in 85 urban areas.

<http://mobility.tamu.edu/ums>

Chapter 5: Landscaping and Gardening

D.C. Department of Health – Watershed Protection Division

51 N Street, NE, 5th floor, Washington, DC 20002

D.C. Department of Parks & Recreation — Presents leisure services to residents and visitors of the District of Columbia. The agency supervises and maintains area parks, community facilities and neighborhood recreation centers, and provides adaptive programs and facilities for challenged customers. DPR also coordinates a wide variety of recreational and educational programs. Art classes, child care services, sport leagues, swim lessons, and senior citizen activities challenge citizens to remain active in their community.

3149 16th Street NW, Washington, DC 20010

202-673-7647

www.dpr.dc.gov

D.C. Water and Sewer Authority — Call to find out if your site is in a combined sewer overflow district.

202-561-5878

EcoStewards Alliance — Promotes personal transformation through environmental awareness. Discovery circles and other programs teach voluntary simplicity, deep ecology, sustainable living choices, knowledge of our bioregion and mindful, conscious living to restore and preserve the environment and enrich our quality of life.

5765-F Burke Centre Parkway, #321, Burke, VA 22015-2233

703-766-1724

esa@ecostewardsalliance.org

www.ecostewardsalliance.org

EPA – Office of Water — EPA's strategic plan includes a Clean and Safe Water goal: "Ensure drinking water is safe. Restore and maintain oceans, watersheds, and their aquatic ecosystems to protect human health, support economic and recreational activities, and provide healthy habitat for fish, plants, and wildlife." This includes specific objectives for protecting human health and protecting water quality, plus some key water programs that are addressed in the Healthy Communities and Ecosystems goal.

Mail Code 4101M, 1200 Pennsylvania Avenue, NW, Washington, DC 20460

OW-GENERAL@epa.gov

<http://www.epa.gov/water>

Garden Resources of Washington (GROW) — Encourages neighborhood revitalization, environmental stewardship, youth development, and local organic food production through community and youth gardens.

1419 V Street, NW, Washington, DC 20009
202-234-0591
www.growdc.org

Low Impact Development Center — Established to develop and provide information to individuals and organizations dedicated to protecting the environment and our water resources through proper site design techniques that replicate pre-existing hydrologic site conditions.

5010 Sunnyside Avenue, Suite 200, Beltsville, MD 20705
301-982-5559
www.lowimpactdevelopment.org

National Fish & Wildlife Foundation — Conserves healthy populations of fish, wildlife, and plants, on land and in the sea, through creative and respectful partnerships, sustainable solutions, and better education. The Foundation meets these goals by awarding matching grants to projects benefiting conservation education, habitat protection and restoration, and natural resource management.

1120 Connecticut Avenue, NW, #900, Washington, DC 20036
202-857-0166
www.nfwf.org

National Oceanic & Atmospheric Administration – Anacostia Watershed Toxics Alliance — Formed under the premise that a voluntary partnership, focused on the task of addressing toxic sediment contamination of the tidal Anacostia, would offer a more efficient and appropriate alternative to address contamination issues.

www.response.restoration.noaa.gov/cpr/watershed/anacostia/start.html

Potomac Riverkeeper — Formed by citizens and conservation leaders out of concern for the need to respond to multiple threats with a single independent advocate dedicated to protecting the Potomac River and its tributaries.

301-602-4300
www.potomacriverkeeper.org

Rain Gardens of West Michigan — Learn how to build a rain garden.

www.raingardens.org

U.S. Department of Agriculture – U.S. National Arboretum – Lahr Native Plant Symposium

3501 New York Avenue, NE, Washington, DC 20002-1958
202-245-2726
www.usna.usda.gov

Chapter 6: Greening the Kitchen

Refer to the following resource list for help in designing healthful menus from nursery school snacks to holiday meals and life cycle events or whenever food is going to be served. The Washington, D.C., area in particular is a gold mine of resources, organizations, and publications on the subjects of food and ecology. Consider organizing a speaker series as part of an effort to improve the health and nutritional well-being of your congregation.

The Brenmar Company — Sells compostable food containers and wares produced by Gargill Dow under the Mature Works™ BLA brand name.

www.cdpoly.com

www.brenmarco.com/natureworkspla

Center for Science in the Public Interest — A non-profit education and advocacy organization that focuses on improving the safety and nutritional quality of the food supply. It publishes Nutrition Action Healthletter.

1875 Connecticut Avenue, NW, Washington, DC 20009

202-232-9110

www.cspinet.org

for children - www.saveharry.com/cspi.html

Food Research and Action Center — Works to improve public policies to eradicate hunger and under-nutrition in the U.S.

1875 Connecticut Avenue, NW, Suite 540, Washington, DC 20009

202-986-2200

www.frac.org

Greener Earth Marketing – Sinless Buying.com — Sells and markets green products and environmental concepts to promote a sustainable, balanced eco-environment with affordable prices. “We believe a Greener Earth is possible by Greener consumer habits.”

414 Lesser St, Oakland, CA 94601

415-279-3221

info@sinlessbuying.com

www.sinlessbuying.com

Organic Consumers Association — For information about safe food, genetically engineered food, mad pig, mad cow, and Crueutzfeld-Jacob diseases, bovine growth hormone (rBGH or rBST), and other food safety topics.

www.organicconsumers.org

Weimar Institute — NEWSTART (nutrition, exercise, water, sunlight, temperance, air, rest, and trust in God) - A Seventh Day Adventist-based program that has been working effectively to reduce diabetes, obesity, and many other health problems.

NEWSTART® Lifestyle Center

P.O. Box 486, 20601 West Paoli Lane, Weimar, CA 95736

800-525-9192

info@newstarthealth.com

www.newstart.com

Chapter 7: Water

U.S. Environmental Protection Agency, Mid-Atlantic Region – Lead in Washington, D.C., Drinking Water — Information for residents of the District of Columbia to address their concerns about elevated levels of lead in drinking water.

www.epa.gov/dclead/

Chapter 8: Reduce, Reuse, Recycle

Center for a New American Dream – Environmentally Preferable Paper

<http://www.newdream.org/procure/products/paper.php>

D.C. Department of Public Works – Office of Recycling — For more information on your recycling obligations.

202-645-8245
2000 14th Street, NW, 6th Floor, Washington, DC 20009
www.dpw.dc.gov

Direct Marketing Association – Mail Preference Service — Remove yourself from junk mail lists both to reduce waste and the amount of time needed to sort mail each day.

P.O. BOX 9008, Farmingdale, NY 11735-9008
www.dmaconsumers.org/consumerassistance.html

Earth 911 — Dedicated to empowering the public with community-specific resources to improve quality of life, by investing in a public-private sector partnership to effect prevention ideals. Through this partnership, economies of scale and scope are achieved, promoting this public service across the nation and centralizing environmental resources into one user-friendly network. A great resource for finding types of specialty recyclers.

7301 E. Helm, Building D, Scottsdale, AZ 85260
800-CLEAN-UP
www.earth911.com

Chapter 9: Pesticides

Beyond Pesticides — Works with allies to protect public health and our environment, leading the transition to a world free of toxic pesticides. The organization helps identify the risks of conventional pest management practices and promotes non-chemical and least-hazardous management alternatives. It effects change through local action and individual and organizational assistance, stimulating discussion about toxic hazards and safer approaches.

701 E Street, SE, Suite 200, Washington DC 20003
202-543-5450
www.beyondpesticides.org

Chapter 10: Education and Youth Programming

EE-Works.org — A Web-based service of the National Environmental Education and Training Foundation containing information for educators, community leaders, business executives, and public officials to explain the reliable results from environmental education to friends and skeptics alike.

blodgett@neetf.org
www.theeeworks.org
Understanding Environmental Literacy in America - <http://www.neetf.org/roper/ELR.pdf>

I Buy Different — Part of Be, Live, Buy Different—Make a Difference, a national campaign from World Wildlife Fund and the Center for a New American Dream, the goal is to help young people learn how they can make a difference by buying differently.

www.ibuydifferent.org

North American Association for Environmental Education — A network of professionals, students, and volunteers working in the field of environmental education throughout North America and in over 55 countries around the world, promoting environmental education and supporting the work of environmental educators.

2000 P Street, NW, Suite 540, Washington, DC 20036
202-419-0412
email@naaee.org
www.naaee.org

National Education Association — The nation's leading organization committed to advancing the cause of public education, the NEA elevates the character and advances the interests of the profession of teaching, promoting the cause of popular education in the United States.

1201 16th Street, NW, Washington, DC 20036

202-833-4000

www.nea.org

Interview with Howard Gardner - <http://www.nea.org/neatoday/9903/gardner.html>

National Environmental Education and Training Foundation — A private non-profit organization dedicated to advancing environmental education in its many forms, and a leader in the development of new policies, grant-making approaches, and direct programming to advance environmental literacy in America.

1707 H Street, NW, Ste 900, Washington, DC 20006-3915

202-833-2933

www.neetf.org

Using Environment-Based Education to Advance Learning Skills and Character Development:

www.neetf.org/pubs/EnviroEdReport.pdf

Rocky Mountain Institute — An entrepreneurial nonprofit organization that fosters the efficient and restorative use of natural, human, and other capital to make the world more secure, just, prosperous, and life-sustaining. We do this by inspiring business, civil society, and government to design integrative solutions that create true wealth.

1739 Snowmass Creek Road, Snowmass, CO 81654-9199

970.927.3851

www.rmi.org

To find out what energy is and how it is used - www.rmi.org/sitepages/pid473.php

Chapter 12: Socially Responsible Investing

Coalition for Environmentally Responsible Economies (CERES) — In response to a growing need for corporations, activists and socially responsible investors to have honest, meaningful dialogue on corporations' environmental and social practices, CERES provides an innovative forum for this kind of exchange and a unique opportunity for real accountability and real results.

99 Chauncy Street, 6th Floor, Boston, MA 02111
617-247-0700
www.ceres.org

Interfaith Center on Corporate Responsibility — A leader of the corporate social responsibility movement, ICCR's membership is an association of 275 faith-based institutional investors, including national denominations, religious communities, pension funds, endowments, hospital corporations, economic development funds and publishing companies. ICCR and its members press companies to be socially and environmentally responsible.

475 Riverside Drive, Room 550, New York, NY 10115
212-870-2295
www.iccr.org

Chapter 13: Environmental Policy

DC Energy Office — The office of the D.C. Government that is dedicated to finding environmental solutions and making the District of Columbia energy efficient.

2000 14th Street, Suite 300 East, Washington, DC 20009
202-673-6700
www.energy.dc.gov

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GOVERNMENT OF THE
DISTRICT OF COLUMBIA
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