

Becoming Resourceful

The United States has long been criticized as a wasteful society. Consider the evidence: In 2000, the United States energy consumption was greater than that of Western Europe and Central and South America combined.¹

With only 6% of the world's population, the U.S. consumes almost 30% of the world's energy resources² and generates more than 230 million tons of trash per year.³ The United States' energy consumption per capita is more than double that of the nations of Japan, England, Germany, and France.⁴

"Resource and energy efficiency has not been a hallmark of household or business management in this country for more than 50 years," remarked Audubon International Director of Programs and Administration Kevin Fletcher. "The impact of wastefulness has both local and far-reaching social, political, and environmental consequences."

Indeed, current environmental issues, such as ozone depletion, global warming, energy production, habitat destruction, and waste disposal, are all linked to our daily use and misuse of the resources that sustain us. It's not so much a problem of *whether there is enough* oil or land or water to support the world's growing population, but rather a question of *what cost we are willing and able to afford* as a society—ecologically, financially, and politically—to extract, transport, and mitigate the impacts of our increasing consumption.

Part of the solution

Diverse and broad-based approaches are needed to tackle these pressing problems, yet disagreement on how to proceed too often delays or stymies effective solutions from being implemented. The silver lining in this dark cloud is that international and national politics don't prevent people from taking action themselves.

"People see energy consumption, resource use, and waste as problems that are too large for them to make an impact," says Fletcher. "That's simply not true. There's so much that people *can do* and those actions also make financial sense."

(continued on page 2)

1. *Total World Primary Energy Consumption 1991–2000*, Energy Information Administration, U.S. Department of Energy, Washington, D.C.

2. *Biodiversity and Your Energy Use*, Center for Biodiversity and Conservation, American Museum of Natural History, NY

3. U.S. EPA Office of Solid Waste, Washington, D.C.

4. *Total World Primary Energy Consumption 1991–2000*, Energy Information Administration, U.S. Department of Energy, Washington, D.C.

Case Study

By providing educational information, incentives, and technical assistance, Audubon International assists its members conserve resources and increase efficiency.

Kishwaukee College serves 4000-plus students on its 120 acre campus in Malta, Illinois. Spearheaded by Larry Marty, now retired instructor of the Horticulture Department, the community college achieved certification in the ACSP for Businesses in April 2002. To achieve this honor, the college documented its many efforts to conserve energy and water, reduce waste, and implement a landscape plan that encourages wildlife.

Among Kishwaukee's achievements is a 40% reduction in waste sent to the landfill. The school's recycling program encourages students and employees to recycle paper, cardboard, plastic, aluminum, and glass. The campus purchases restroom supplies and plastics with recycled content and composts greenhouse wastes.

Most important, by practicing good environmental stewardship, the college educates its students and sends them forth to implement best management practices in their future endeavors. "After graduating 30 classes, we know by personal follow-up that students are implementing good stewardship," says Larry Marty. "They also educate their workers and clientele and continue to carry the message forward."



Audubon International Vision

Fueling a More Sustainable Future

Of all the things that people do that impact the quality of the environment energy use is near the top of the list. Energy exploration, production, and transmission have far reaching impacts on people, wildlife and habitats, water, and air quality. Energy inefficiency wastes natural and financial resources and increases air and water pollution. And the negative political and social cost of our energy use and national energy policy has become increasingly apparent. Present energy use in the United States is simply unsustainable.

Energy conservation, through efficient use, switching to alternative fuel sources for heating and cooling of homes and offices, purchasing more efficient home and business appliances, and using more energy efficient modes of transportation are just a few of the things that you can do to move toward a more sustainable future.

While the media tend to focus public attention on the seemingly overwhelming nature of the environmental problems that we face today, simple steps, taken by each of us in our homes and in our businesses, do make a difference. Take some steps today to become more energy efficient. It will make a difference to all things living.



Ronald G. Dodson
President

Becoming Resourceful

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For example, lighting in a commercial building accounts for roughly 40% of the building's electricity costs. Simply substituting energy-efficient bulbs and using timers and motion switches can reduce that load by 90%, resulting in a 30–35% reduction in an electric bill, as well as less environmental impact.⁵

“If you're a business owner or a homeowner, you can appreciate a lower electric bill,” says Fletcher. “One way Audubon International helps people become part of the solution to

5. *Cool Companies: How the Best Businesses Boost Profits and Productivity by Cutting Greenhouse Gas Emissions* by Joseph J. Romm, Island Press, 1999

Did you know?

The amount of fuel consumed in family vehicles in the United States each year is enough to cover a regulation-size football field to a depth of about 40 miles.

today's environmental problems is by focusing on the simple, yet significant steps they can take to reduce energy and resource use.”

Imagine if energy efficiency and resource conservation were standard practice for all Americans. With so much at stake, why wait to get started?

Case Study



WCI Communities, a real estate development company based in Florida, is working hand in hand with Audubon International to bring sustainable design and development to its new residential communities and golf courses in Florida. The partnership we've forged is proving that innovation, common sense, and cooperation can go a long way toward improving the environment.

With the assistance of Audubon International and Forestry Resources Inc., WCI recently developed its own brand of high-quality, environmentally sensitive mulch to use in its residential landscapes. The mulch is produced from unwanted wood, including melaleuca, harvested from roadway and site clearing projects, and has several environmental benefits. First, it eliminates the use

of products made from wetland tree species, such as cypress, as well as products of lesser quality that needed frequent replacement. By using a locally-made product, WCI reduces transportation costs and energy consumption associated with bringing in mulches manufactured elsewhere. And according to Robert Olinger, WCI's Director of Landscape, “The mulch reinforces the high standards of landscaping we want in our communities and WCI's commitment to the environment.”

Landscape contractors are already using WCI Mulch for homes in Sun City Center Fort Myers, a residential community registered in Audubon International's Sustainable Development program. WCI hopes to expand use of the mulch to all its communities.

Carrying on a Tradition of Environmental Quality

By Monika Jorg

As part of its commitment to the environment, Spring Grove Cemetery & Arboretum has made a conscious effort to reduce the amount of waste generated by its employees and in its operations. Most of these have required only simple changes on the part of our staff, but they have resulted in major reductions in waste.

With over 400 developed acres in the cemetery/arboretum grounds, fallen leaves in the autumn used to result in truckloads of refuse hauled away each year. Several years ago, we implemented a mulching program whereby the turf clippings and leaf refuse are mulched directly back onto the grounds. In addition to practically eliminating lawn waste, mulching has led to additional environmental benefits by returning valuable nutrients to the soil and reducing the need for chemical fertilization.

Inside, our largest source of waste is paper. We recycle newspapers, used paper products, plastic, and batteries whenever possible and have made containers available to collect recyclable refuse in all areas used for office space, including the kitchen and mail and copy rooms.

Our receptionist purchases products made from recycled materials whenever possible and encourages the staff to make a concerted effort to use them at work and at

home. When ordering letterhead, envelopes, or printed materials, we request recycled paper. This “closes the loop” on recycling by generating a market for recyclables.

In addition, we encourage employees to practice simple waste reduction measures by using their own ceramic mugs and drinking glasses, rather than use paper cups for coffee or water. We use the back sides of pre-printed paper for note pads or scratch sheets and turn lights off in supply closets, kitchen areas, and rest rooms when not in use.

Our employees embrace and support these recycling efforts and contribute at a very positive rate.

We are stewards of the environment, and much like our founders who implemented the landscape lawn plan at Spring Grove we, too, want to preserve the precious natural resources which make our facility so unique.

Monika Jorg is Public Relations Manager at Spring Grove Cemetery & Arboretum



Spring Grove Cemetery & Arboretum, founded in 1845, consists of 733 tranquil acres situated within the otherwise industrialized Mill Creek Valley in Cincinnati, Ohio. The property serves as a valuable green space, maintaining 400 acres of cultivated landscape, 300-plus acres of managed woodland, a 10-acre woodland preserve of undisturbed climax forest, 10 acres of native bluestem areas, and 14 lakes. Nearly 200 species of birds have been sighted at Spring Grove, which add to its value as a place of refuge and beauty for visitors.

Spring Grove is well known for its educational, historical, and horticultural resources. It furthers its leadership in the cemetery industry by offering events and activities geared toward the protection and enhancement of the environment and supporting education and research efforts to protect the precious green space it provides. The cemetery joined the ACSP for Cemeteries in 2000 and achieved certification in 2001, in recognition of its extensive environmental management practices.

Stewardship
IN ACTION

30 Ways to Save

Sorting trash, plugging in a compact florescent light bulb, or insulating windows may seem fairly dull even for the most committed environmental steward. But efficient daily practices, combined with the use of new technologies and a little old fashioned common sense, are good for the environment and your bottom line. Use this checklist to see how many energy conservation and waste management practices you've implemented. Then make a plan of action to expand your efforts.

Energy Conservation

- Make energy conservation a priority in the way you manage your business/school/golf course/cemetery/home.
- Measure energy use and set targets for reduction.
- Think before you drive. Combine trips, purchase fuel efficient vehicles, and take advantage of public transportation to reduce fuel consumption.
- Conduct an energy audit to identify drafts, poorly insulated areas, and lights and machines left on when not in use. Many state energy offices and utility companies have useful consumer information booklets and can refer you to local energy experts.
- Improve building insulation of exterior walls, wall joints, attic or roofing, outlet and switch plates, doors, windows, and floors.
- Insulate hot water pipes and tanks.
- Regularly maintain all ducts and the furnace to maximize energy efficiency.
- Install energy-efficient lighting, such as compact fluorescent bulbs, energy efficient fluorescent lamps, and task lighting, in at least 50% of lighting fixtures.
- Purchase *Energy Star* labeled central heating and cooling units and appliances, such as computers, air conditioners, and refrigerators. (Look for similar energy efficiency ratings outside the U.S.)
- Consistently turn off lights and equipment when not in use.
- Install LED exit signs.
- Adjust air and water thermostats to reduce energy usage during non-office hours.
- Use shades and blinds as appropriate to allow sunlight to enter in cool weather and reduce sunlight and the need for increased air conditioning in warm weather.
- Don't waste water, hot or cold, inside or outside.

Did you know?

If all the family vehicles in the United States were lined up bumper to bumper, they would reach from the Earth to the moon—and back.



An employee at Aspen Glen Club in Colorado pours waste oil into a containment system that enables the club to safely store and recycle waste oil. Such efforts helped the club achieve certification in 2001.

Waste Reduction and Recycling

- Make waste reduction a priority in the way you manage your business/school/golf course/cemetery/home.
- Measure the volume or weight of the garbage you generate and set measurable reduction targets.
- Evaluate the waste you generate to identify and reduce your greatest sources of waste.
- Reject wasteful consumption by carefully considering what you need and buying products that last.
- Purchase products with minimal packaging or packaging that can be recycled, or buy in bulk.
- Eliminate unnecessary paper consumption by posting office announcements in central locations, using e-mail, sharing and circulating documents, and using two-sided copies.
- Encourage the use of cloth napkins, cloth lunch bags, sponges/dish rags, reusable plates, and reusable coffee filters instead of paper alternatives.
- Reuse shipping and packing materials, draft paper, and interoffice envelopes that would normally be disposed of after one use.
- Repair or donate older or unwanted equipment and household goods to local charitable groups, rather than dispose of them.
- Purchase durable furniture and equipment or products made of recycled material to reduce waste from inferior products.
- Purchase recycled or refillable products instead of one-time use office supply products (e.g., refillable tape dispensers, laser cartridges, typewriter ribbons, pens, reusable coffee mugs).
- Purchase recycled paper products, such as copy paper, printed materials, bathroom tissue, etc.
- Choose recycled paper for printed materials, such as brochures, annual reports, and marketing materials.
- Set up a recycling program that includes collection and recycling of paper, glass, cardboard, aluminum, tin, and plastic.
- Set up recycling receptacles with well-written instructions in convenient locations to encourage employee and guest use. Actively encourage participation in recycling efforts and strive for at least 75% participation.
- Compost outdoor wastes, such as grass clippings, leaves, and tree limbs, on site or send them to local composting facilities.

More to Explore...For Schools

- The **Energy Information Administration (EIA)**, the statistical agency of the U.S. Department of Energy, has excellent online information and resources, including a wealth of good information for students and teachers. EIA's **Kid's Page** provides basic information about energy, an energy quiz, fun facts, classroom activities for teachers, and numerous links. Check it out at www.eia.doe.gov/kids.
- **Green Schools**, a program of the **Alliance to Save Energy**, is another excellent resource for schools. The Green Schools program helps schools use energy efficiently through building retrofits, changes in operational and maintenance routines, and changes in the behavior of building users. Students, teachers, custodians, administrators, and community partners all work together toward a common goal—saving energy and money. Visit www.ase.org/greenschools.
- **EnergySmart Schools**, an initiative of the U.S. Department of Energy **Office of Energy Efficiency and Renewable Energy**, assists schools reduce energy consumption and costs, improve the learning environment, and increase school-wide awareness of energy and related issues. Its website provides a clearinghouse of information for teachers, as well as direction for administrators seeking to make existing buildings or new facilities energy efficient. Visit www.eren.doe.gov/energysmartschools/.
- **Audubon International's** staff ecologists also can direct you to resources and school activities to help you achieve certification in Resource Conservation and Waste Management. Call our hotline at (518) 767-9051, extension 12.

Build It Right, Build It Green

Buildings, much like anything else in this world, have an environmental impact. The impact can be local and obvious, like the disturbance of a site or clearing trees to make way for new development, or displaced and less tangible, such as the air pollution caused by a fossil fuel power plant struggling to meet the energy demands of customers miles away. Either way, the built and interior environments have a clear and direct influence on the overall environmental quality of the places we live.

Green buildings in demand

A growing call for green buildings has led diverse agencies and organizations from around the world, including Audubon International, to work together to promote buildings that are environmentally responsible, economically viable, and healthy places to live, work, and play. At the forefront of this movement is the United States Green Building Council (USGBC), a coalition of more than 1,400 international organizations, including environmental organizations, federal and state agencies, product manufacturers, building owners, building professionals, utilities, city governments, research institutions, professional societies, and universities. Formed in 1993, the USGBC administers *Leadership in Energy and Environmental Design* (LEED), which has become the accepted national standard for what exactly constitutes a green building.

LEED is a voluntary program that evaluates environmental performance from a “whole building” perspective. The program is designed for new and existing commercial, institutional, and residential high-rise buildings, which must earn a minimum number of points to achieve different levels of certification (Silver, Gold, or Platinum). Points are attained through a combination of self-assessment, supporting documentation, and third-party verification.



Audubon International's role

Because of its extensive sustainable development work in Florida, Audubon International has begun working with the Florida Green Building Coalition. This state-based group has adapted USGBC's national standards and gone a step further by adding regionally and locally specific components, such as disaster mitigation for events like hurricanes and floods. Together, Audubon International and FGBC are developing a checklist for commercial buildings in Florida. In addition, FGBC has developed the *Green Home Designation Standard*, designed for the average homeowner. Projects completed as part of participation in an Audubon International program will count towards habitat, landscaping, and watershed management

What makes a building green?

LEED and other programs like it divide green building into several general categories, including sustainable site selection, water use efficiency, energy conservation, building materials and resource use, and indoor environmental quality/air quality/health. Each general category has required criteria, but is also flexible and rewards innovative solutions in green building design. Examples of requirements include:

- Installing energy-efficient lighting and appliances;
- Planting water efficient landscaping;
- Using water saving plumbing fixtures, such as low-flow toilets;
- Incorporating innovative water technology, such as rainwater capture and greywater reuse;
- Selecting building materials that reuse local resources, are made of recycled content, or made from renewable materials;
- Controlling heated and air conditioned interior space.

Green building components range from simple fixtures to elaborate innovations. This Living Machine (left) uses natural processes to treat campus wastewater at the Conserve School in Wisconsin, an Audubon Signature Program member. A rain barrel at Montessori Community School in Virginia collects water from the roof for the school's gardens.



requirements. Reciprocally, Audubon International has adopted the FGBC checklist as a minimum requirement for Sustainable Development Gold Signature projects.

The green building movement has momentum and support like never before, and the results are encouraging. By incorporating simple, effective elements of green building design into the construction and maintenance of buildings, real and significant gains are being made for the environment. With the work of Audubon International and groups like the Florida Green Building Coalition and the United States Green Building Council, we can further ensure that our homes and offices are environmentally responsible, healthy, and economically viable—sustainable—places to live, work, and play.

Green Building Conservation Facts and Tips

There is much you can do to make an existing home, school, or office *green*. Consider these tips compiled from the Florida Green Building Council *Green Home Designation Standard Reference Guide*.

Switch to compact fluorescent lights—Lighting can account for more than 15% of a home's annual electric bill. Lights not only use electricity themselves, but also generate heat that must be removed by the home's air conditioning system. The most common artificial light source is the incandescent bulb. Almost 90% of the power is wasted as heat and the bulbs usually burn out after 750 hours of use. Fluorescent lamps require only one-fourth the electricity and last 10–12 times longer. They also produce equivalent light with far less heat. Although more costly, such bulbs can pay for themselves in about three years.

Buy Energy Star appliances—You can find the EPA *Energy Star* rating on most major appliances, including refrigerators, washing machines, and computers. Energy Star clothes washers use nearly 50% less water and 30–40% less energy per load than conventional washing machines.

Choose gas over electricity, if possible—Conventional ovens must first heat up about 35 pounds of steel and a large amount of air before they heat up the food. Only about 6% of the energy output of a typical oven is actually absorbed by the

food. About 58% of American households cook with electricity, but gas is making a steady comeback. For gas ovens, new electronic pilot-less ignitions reduce gas usage by about 30% over a constantly burning pilot light.

Install low-flow toilets—Toilets represent the largest source of indoor water use in the home, accounting for up to 30–40% of water demand. Switch to low-flow toilets, which exceed the national standard of a maximum flow rate of 1.6 gallons per flush. In addition, fix leaks promptly in plumbing fixtures, hoses, or irrigation systems to avoid wasting water and electricity.

Capture rainwater—With a national average of 27 inches per year (up to 54 inches per year in Florida), rainwater harvesting is an excellent source of water for landscape irrigation. The equipment is readily available and low cost (rainwater harvesting is now mandated for new construction in Bermuda and the US Virgin Islands). Rainwater is generally harvested from a roof surface, and system components include properly designed gutters, piping, roof washers, screens, and a storage tank/cistern.

Audubon Society of New York State Awarded \$8,000 to Monitor Water Quality of the Onesquethaw-Coeymans Creek

The Audubon Society of New York State (ASNY), the New York State affiliate of Audubon International, has been awarded an \$8,000 grant from Selkirk Cogen for a two-year study of the water quality of the Onesquethaw-Coeymans Creek. The project was chosen because of the Onesquethaw's unique geological properties and sensitivity to pollutants. The stream monitoring education project will begin this fall and involve the Onesquethaw-Coeymans Watershed Council, Trout Unlimited, and local high school students.

"We're so grateful to Selkirk Cogen for assuming a leadership role in local environmental education and recognizing the vital role the Onesquethaw-Coeymans Creek plays in the quality of life our local communities," said Fredrik Realbuto, Director of ASNY. "The quality of water flowing in the Onesquethaw-Coeymans Creek is critical to keeping it viable for aquatic life and wildlife habitat, and as a resource for people to explore and enjoy. Stream monitoring will strengthen our ability to protect this significant natural resource."

Starting this fall, Applied Biology students will test water quality at seven sites along the Onesquethaw-Coeymans Creek. The variety of locations will reveal impacts from various land uses, including agriculture, residential areas, industry, and protected areas. The sites were selected primarily because of their potential environmental significance and accessibility.

"It's a significant part of our company culture to share



Spotlight Newspapers, NY

our environmental commitment with our community, and we continually strive to advance local educational programs as well," stated Lorraine Chirico Smith, Community Liaison for Selkirk Cogen. "In this partnership with The Audubon Society involving local high school students, we anticipate that this innovative project will not only provide new research data useful in our area, but will also help educate youth on the importance of our natural resources."

Mark your calendars!

National Water Monitoring Day, October 18, 2002

Members of the Audubon Cooperative Sanctuary and Audubon Signature Programs are encouraged to participate in National Water Monitoring Day on October 18th. 2002 has been declared the *Year of Clean Water* and the date commemorates the 30th anniversary of the signing of the Clean Water Act in 1972. Volunteer monitors, agency staff, and members of the public are invited to join the celebration by sampling water quality on

their properties or within their watersheds. A simple and inexpensive Clean Water Kit is available for sampling a core set of parameters, including temperature, pH, turbidity, and dissolved oxygen. Results of water testing may be included in ACSP certification in *Water Quality Management*. Updates on National Water Monitoring Day, including information and ordering the monitoring kit, are posted at www.yearofcleanwater.org.

Audubon International Joins Southwest Florida Watershed Council

Audubon International recently became a member of the Southwest Florida Watershed Council. The Watershed Council is a grass-roots, multi-county coalition of individuals, organizations, agencies, and businesses that have come together to address issues affecting the Caloosahatchee and Big Cypress watersheds. The pur-

pose of the Watershed Council is to ensure that long-term management strategies balance the needs of the region's growth and the natural systems upon which its economy and quality of life depend. Craig Marquis, Sustainable Communities Coordinator for Florida will serve as Audubon International's liaison to the council.

Birds, not Birdies, Count on North America's Golf Courses

On International Migratory Bird Day, May 11, 2002, volunteer birdwatchers turned up 295 different species of birds on golf courses participating in Audubon International's 2002 North American Birdwatching Open. During the 24-hour event, 48 golf courses that are participating in the Audubon Cooperative Sanctuary and Audubon Signature Programs recorded as many different bird species as they could to generate data about birds on golf courses.

Eagles Landing Golf Course in Berlin, Maryland sighted 92 different bird species during the day to record the highest number of species for the third year running. Birders at Lake Quivira Golf Course in Kansas sighted 78 species and Turning Stone Casino Resort in New York came away with 76 species, to place second and third respectively. Among this year's leading courses were prior top performers The Club at Seabrook Island in South Carolina (75 species) and Michigan's Gull Lake View Golf Club (71 species). Joining them for the first time this year was Oak Meadow Country Club in Missouri with 74 species.

"The results of the North American Birdwatching Open show that it's not just the size of the property that counts, but the variety of habitats present and the way natural areas are managed that make a difference," stated Jean Mackay, Director of Educational Services for Audubon



WCI Raptor Bay Golf Club, FL

International. The diversity of species overall and the number of birds recorded per site reflect both the geographical spread of golf courses across North America and the wide range of habitats found on and around these sites. Fifty-six percent of participants identified 50 or more species, while 14% counted less than 30.

Data from this year's event proved to be highly consistent with data gathered since the event was first held in 1998. The top twenty-five birds sighted remained nearly unchanged. Mourning Doves, Blue Jays, and Red-winged Blackbirds topped the list of birds sighted. From there, the inventory of birds gets more

interesting, with sightings of Great Blue Heron and Red-bellied Woodpecker on nearly 75% of participating courses and Eastern Bluebird and Green Heron on 52%.

In addition, seven federally threatened and endangered species were sighted. Fifteen courses spotted Loggerhead Shrikes, eight courses recorded Sandhill Cranes, and six courses identified American Bald Eagles. Other endangered/threatened species included Least Tern, Brown Pelican, Grasshopper Sparrow, and Clapper Rail.

"We really appreciate the contribution that participants made in providing a snapshot of bird activity on golf courses," shared Mackay. "The data they generated clearly shows that a properly managed golf course can make a valuable contribution to bird conservation in North America."

National Geographic Society's New Sustainable Tourism Resource Center Links with Audubon International

As one of the largest industries on Earth, tourism has great potential to build understanding, but tourism poorly managed can ruin the very places it seeks to showcase. The National Geographic Society has recently inaugurated a program to increase knowledge about sustainable tourism, beginning with a website devoted to tourism professionals, travelers, and residents of tourist

destinations. The new website includes links to Audubon International as a resource that can help resorts, golf courses, and residential communities preserve the best of what a destination has to offer, such as wildlife habitats, great scenery, and overall environmental quality. Visit the site at: www.nationalgeographic.com/travel/sustainable/.

membership NEWS

Audubon Cooperative Sanctuary Program

New Members

Golf Program

International

Country Club de Villa A.C., Lima 9, Peru
Lam Luk Ka Country Club, Patumthani, Thailand
Millbrook Country Club Ltd., Queenstown, New Zealand

Alabama

IGM—Arrowhead Country Club, Montgomery

Arizona

Saddlebrooke Homeowners Assoc. #1, Tucson

California

Cascades Golf Club, Sylmar
Gold Rush Golf, Dublin
Napa Golf Course, Napa

Connecticut

Willimantic Country Club, Willimantic

Florida

Crane Lakes Golf Course, Port Orange
Golf Club of the Everglades, Naples
Palm Cove Golf and Yacht Club, Palm City

Indiana

Kokomo Country Club, Kokomo

Iowa

Coldwater Golf Course, Ames

Louisiana

Calvert Crossing Golf Club, Calhoun

Massachusetts

Golf Club at South Port, Mashpee

Michigan

Homestead Golf, Glen Arbor

New Jersey

Hidden Creek Golf Club, Egg Harbor

New York

Van Cortlandt Golf Course, Bronx

North Carolina

Jacksonville Country Club, Jacksonville

Texas

Hidden Creek Golf Course, Burleson
Northwood Club, Dallas

Virginia

Cavalier and Yacht Club, Virginia Beach

Business Program

Florida

WCI—Sun City Center, Sun City Center

Missouri

The Grand Village, Branson

School Program

Florida

Bonita Springs Elementary, Bonita Springs
Village School, Naples

Illinois

Montessori Magnet, Rockford

New York

Corcoran High School, Syracuse
George Ryan—M.S. 216, Fresh Meadows

Ohio

South Lebanon Elementary, Maineville

Rhode Island

Lincoln School, Providence

Backyard Program

Alabama

Patricia P. Cobb, Ph.D., Opelika

Florida

Bart and Sheila Lund, The Villages
Ronald and Bonnie Manford, Ocala

Illinois

Joan Lancaster, Lake Forest

New York

Todd and Tonya Condon, Ticonderoga
Chris Wolfe, Keene

North Carolina

Marty Gentry, Charlotte
Marti Svoboda-Sidelnick, Asheville

Recently Certified Audubon Cooperative Sanctuaries

Golf

Biltmore Country Club, North Barrington, IL
Black Lake Golf Club, Onaway, MI
Brier Creek Country Club, Raleigh, NC

Cherry Creek Golf Club, Youngwood, PA
Classic Golf Club, Spanaway, WA
Columbia Golf & Country Club, Claverack, NY
IGM—Arrowhead Golf Course at Heritage Greens, Naples, FL
Lakelands Golf Club, Gold Coast, Queensland, Australia
Laurel Creek Country Club, Mt. Laurel, NJ
Mangilao Golf Club, G.M.F., Guam
Mizner Country Club, Delray Beach, FL
Park Hills Golf Course, Freeport, IL
Prairie Landing Golf Club, West Chicago, IL
Prairie West Golf Course, Mandan, ND
Theodore Wirth Golf Course, Minneapolis, MN

Backyard

Todd and Tonya Condon, Ticonderoga, NY,

Recertified Audubon Cooperative Sanctuaries

Golf

Ballyowen Golf Course c/o Go Wild!, Hamburg, NJ, *certified since 1999*
Barton Creek Club—Crenshaw & Fazio Courses, Austin, TX, *certified since 1999*
Barton Creek Lakeside-Palmer Course, Spicewood, TX, *certified since 1999*
Beaver Hills Country Club, Cedar Falls, IA, *certified since 1999*
Bonita Bay Island Course, Bonita Springs, FL, *certified since 1995*
Bonita Bay: Creekside, Bonita Springs, FL, *certified since 1995*
Bonita Bay: Marsh, Bonita Springs, FL, *certified since 1995*
Country Club of Florida, Village of Golf, FL, *certified since 1999*
Country Club of Wisconsin, Grafton, WI, *certified since 1995*
Flossmoor Country Club, Flossmoor, IL, *certified since 1997*
Forest Highlands Golf Club, Flagstaff, AZ, *certified since 1995*
Glynn's Creek Golf Course, Long Grove, IA, *certified since 1995*
Hyatt Regency: Hill Country Resort, San Antonio, TX, *certified since 1998*
Ivanhoe Club, Ivanhoe, IL, *certified since 1995*

Monroe Country Club, Monroe, WI, *certified since 1998*
North Shore Country Club, Glenview, IL, *certified since 1998*
Olde Florida Golf Club, Naples, FL, *certified since 1995*
Olympia Fields Country Club, Olympia Fields, IL, *certified since 1996*
Palmetto Hall Plantation, Hilton Head, SC, *certified since 1997*
Plymouth Country Club, Plymouth, MA, *certified since 1999*

Business

O.J. Noer Turfgrass Facility, Verona, WI, *certified since 1997*
Silver Dollar City, Branson, MO, *certified since 1999*

Audubon Signature Program

New Signature Members

Old Greenwood, Truckee, CA
WCI Hammock Bay Golf Course, Marco, FL
Yale Farm Golf Club, Norfolk, CT

Recently Certified Signature Sanctuaries

WCI Raptor Bay Golf Club, Bonita Springs, FL

Recertified Signature Sanctuaries

The Club at Mediterra—South Course, Naples, FL, *certified since 2001*
Cypress Ridge Golf Course, Arroyo Grande, CA, *certified since 1999*
Red Hawk Golf Club—Lakes Course, Sparks, NV, *certified since 2000*
Sand Ridge Golf Club, Chardon, Ohio, *certified since 1998*
Sanctuary Golf Course at WestWorld, Scottsdale, AZ, *certified since 2000*

Landscaping for Energy Conservation

By Scott Martin, Director

The fall landscaping season is underway—and what a good time it is to take advantage of warm days, cool nights, and end-of-season plant sales. As you make additions or changes to your landscape, consider that the choices you make play a role not only in conserving wildlife habitat, but also in saving energy and resources. These are just a few of the many easy ways to save—all have proven effective at cooperative sanctuary properties just like yours.



A single shade tree can avert as much heat as five residential size air conditioners.

Reduce wind with a shelterbelt

Proper placement of a shelterbelt can reduce home heating costs by as much as 30%. A shelterbelt may be comprised of trees, shrubs, fencing, or other landscape materials that block and redirect wind so it does not strip as much heat away from house walls and windows. Wind velocity is cut by 80% directly downwind of a dense shelterbelt, and by 40% by a loose one. A mature cedar hedgerow at the home of ACSP Backyard cooperator **Theresa Henderson** of Azilda, Ontario, blocks cold north winds and provides shelter for chickadees, sparrows, mourning doves, and squirrels.

Plant shade trees

Planting deciduous trees in front of windows that face due east or due west greatly reduces the intensity of summer sun that enters a house and lessens the need for fans and air conditioners. In the winter, when the leaves have fallen, deciduous trees allow sunlight to enter windows, which helps to warm a house and reduce energy consumption. Several studies have shown that trees can increase the value of a home anywhere from 5–20%.

The Town of Collingwood, Ontario implemented a shade tree program, where homeowners could purchase large shade trees to help reduce the need for home cooling in summer. Shade tree program participants and ACSP Backyard

cooperators **Ralph and Erleen Martin** of Collingwood, Ontario, are already starting to see a reduction in their energy bills. An average, full-sized deciduous tree evaporates approximately 100 gallons (450 litres) of water on a sunny summer day. This uses up about 660,000 BTU's of energy and cools outside a home as well as five average (10,000 BTU) air conditioners. The tree needs no energy to “operate,” it cleans our air instead of polluting it, and it provides habitat for wildlife, too.

Cut back on mowing

Using a mulching mower instead of bagging your grass clippings saves about seven hours of mowing time per season. The mulched grass is quickly broken down into nutrients that can be re-used by your lawn, thereby reducing the need for synthetic fertilizers and the energy necessary to produce them. Mowing for half-hour typically produces equivalent emissions to driving for 250 km. These emissions, caused by the burning of non-renewable petroleum products, pollute our atmosphere. For smaller lawns, try using a human-propelled, reel-type push mower.

Naturalize larger lawn areas

ACSP cooperators all across Canada are reducing their lawns. **Gwen Petreman** of Barrie, Ontario is taking every opportunity to replace her lawn with gardens of native plants. The

birds, butterflies, squirrels and other wildlife of her neighbourhood certainly appreciate her efforts, and with less time spent mowing, Gwen has more time to appreciate the wildlife, too.

Researchers estimate a four-year payback period for the full cost of a contractor-installed energy-conserving landscape. This falls to only a one-year payback if you do the work yourself. A strategically placed tree or fence, an inexpensive push mower, or a native plant garden can all help the environment...so with just a few short weeks until winter, *get out there and dig in!*

Membership News

New Members

Backyard Program

Ontario
Mike and Donna House, Sudbury

Golf Program

Alberta
Lancaster Park Golf and Curling Club, Lancaster Park

British Columbia
Glacier Greens Golf Club, Lazo
Olympic View Golf Course, Victoria

Prince Edward Island
Glasgow Hills Resort and Golf Club, Hunter River

Quebec
Club de Golf Val-Morin, Val-Morin

in this
ISSUE

Get Smart about Energy and Resource Conservation



The Bridges at Casino Magic, MS

By providing educational information, incentives, and technical assistance, Audubon International assists people, organizations, and communities conserve resources and increase efficiency. With such a high price to pay for wasteful energy and resource use, why wait to get started?

STEWARDSHIP news

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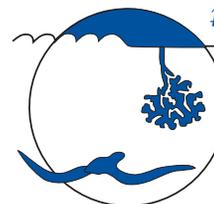
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