

# Green Sanctuary Audit

September 2007

The Seventh Principle of Unitarian Universalism:

*“Respect for the interdependent web of all existence  
of which we are a part.”*

## Keene Unitarian Universalist Church

69 Washington Street  
Keene, New Hampshire  
(603) 352-1719  
kuuc@verizon.net  
www.KeeneUUChurch.org

## **MINISTER'S FORWARD**

In his introduction to the film, An Inconvenient Truth, Al Gore observes,

You look at that river gently flowing by. You notice the leaves rustling with the wind. You hear the birds; you hear the tree frogs.

In the distance you hear a cow. You feel the grass. The mud gives a little bit on the riverbank. It's quiet; it's peaceful.

And all of a sudden, it's a gear shift inside you. And it's like taking a deep breath and going, "Oh yeah, I forgot about this."

You, the members of this congregation, have not forgotten. You know that the interdependent web of existence is in our hands: we all have the power to destroy it or to heal it. You care, and you want to be healers, in the name of this faith we share.

So it is that you have joined the vanguard of Unitarian Universalist congregations making the commitment to become a Green Sanctuary, a great leap forward for our commitment to walk the talk of our caring for this planet we call home.

I am so proud of you. I am proud that you are taking this great leap for the earth, for yourselves, for this church and for our faith. And I am proud of you because this audit clearly shows that you have already begun to make a difference, to change the way we do things for the sake of the earth. You have begun to count the ways through which we can take the next step and the one after that.

Let me celebrate your work, our work, and the hope it speaks for the web of life with the words of Dolores La Chapelle.

We give away our thanks to the earth  
which gives us our home.  
We give away our thanks to the rivers and lakes  
which give away their water.  
We give away our thanks to the trees  
which give away fruits and nuts.  
We give away our thanks to the wind  
which brings rain to water the plants.  
We give away our thanks to the sun  
who gives away warmth and light...

We give away our promise to begin to learn  
how to stay in balance with all the earth.

Faithfully, Rev. Olivia Holmes

## **INTRODUCTION**

“Green Sanctuary” is a national UU Ministry for Earth program to help congregations put into practice our Seventh Principle: “Respect for the interdependent web of all existence of which we are a part.” A Green Sanctuary is a congregation that lives out its commitment to the Earth by creating a sustainable lifestyle for its members as individuals and as a faith community. The goals of the program are:

- To build awareness of societal environmental issues among UUs.
- To generate commitment for personal lifestyle changes.
- To motivate UUs to community action on environmental issues.
- To build a connection between spiritual practice and environmental consciousness.
- To build awareness of and rectify environmental injustices.

The first action step in becoming a Green Sanctuary congregation is to conduct an environmental audit, providing a snapshot of where the congregation stands with respect to environmental behaviors. This audit establishes the baseline or starting point for our program.

More information about the Green Sanctuary Program can be found at [uuministryforearth.org](http://uuministryforearth.org).

## **WORSHIP AND CELEBRATION**

KUUC’s sermons and other elements of our services have included environmentally-oriented topics, and we employ some environment-friendly practices during worship services. “Green” content in sermons and talks by speakers during services has included, over the past several years, celebrations of the earth, solstice services, earth day sermons, Seventh Principle services, and the annual water ceremony for our coming together each September after the summer break. The Social Action Council does one service per year, which has sometimes been devoted to an environmental topic. To complement these services, hymns and readings with ecological meanings and themes are incorporated as appropriate. The Worship Committee has used environment-friendly practices in carrying out worship services, recycling orders of service, handouts, vases, and candles. The temperature in the Sanctuary is kept as low as possible, and occasionally services with low attendance have been held in the Parish Hall rather than in the large Sanctuary.

## **RELIGIOUS EDUCATION**

The KUUC Religious Education program uses the curriculum Experiences With The Web of Life in third grade to engage students about the Seventh Principle and environmental stewardship.

In 2006, the RE program decided to use washable, reusable plastic cups and cloth napkins instead of paper. The program recycles juice and water bottles used during snack time.

For the 2006-2007 church year, children and youth voted to support Heifer International as a church-school-wide social action project. We held several multi-age group activities over the course of the year to educate the children in grades Pre-K through 6th about the issue of global hunger, resource allocation, and sustainable agriculture in age-appropriate ways. Classes sold Fair Trade “Jungle Chocolate” to raise money for Heifer, and they visited a working educational farm operated by Heifer to inspire people to take action to create a sustainable, socially just, economically viable and environmentally sound world. In addition, one class sold non-genetically-modified flower and vegetable seeds from Botanical Interests to raise money for the Free Wheel Chair Mission.

While the Social Action Council has held programs (see below), we have not had any adult RE environmental programs in the past few years. The RE Committee welcomes ideas for future programs (and who would do them).

## **ENVIRONMENTAL JUSTICE**

The Social Action Council was responsible for raising the idea of undertaking the Green Sanctuary process and bringing the idea to the Board and the wider congregation. They have already been involved in various environmental issues in the past. SAC has been active around community concerns about water, collaborating with local organizations involved in protecting water resources, mobilizing members of the congregation to voice concerns about water to the state legislature, and hosting two events at the church on water issues. They hosted two tabling events to support the building of a traffic round-about in town, which should reduce carbon dioxide emissions. According to members of the SAC, even when they work on social issues that are not directly focused on environmental problems, they try to weave ecological concerns into everything they do.

### **Church Investments**

Up to now, the investment committee has not examined our investment portfolio in light of our values or a green approach. Currently, we are tapping into our endowment rather than making new investments. The committee has begun a conversation about investing differently.

## **SUSTAINABLE LIVING**

### **Church Architecture**

Our church, then the Unitarian Congregational Society, was built 112 years ago, in 1895. Construction is of gray granite stone. It consists of the Sanctuary, chancel, vestibule, Parish Hall, the “Undercroft” (an equally large room under the Parish Hall), and the adjacent storage and furnace room, plus unfinished storage under the Sanctuary.

The Religious Education Wing was built 48 yrs ago, in 1959. The upper level houses the Alliance Room, a smaller meeting room, the Library, and offices for the Church Administrator, Minister, Director of Religious Education, and the Montessori School. The lower level houses classrooms used for RE classes and the Montessori School.

Floor space of the sanctuary, chancel and vestibule is approximately 5000 sq. ft. The Parish Hall, Undercroft and storage/furnace room are approximately 3500 sq. ft. Floor space of the two levels of the RE Wing is approximately 6500 sq. ft. The Lobby connecting the RE Wing to the Sanctuary and Parish Hall plus rest rooms adds additional floor space of about 1000 sq. ft.

Total floor space is approximately 16,000 sq. ft.

The church also owns two houses (one a duplex) on property adjoining the church, which are rented out. The duplex has some new energy efficient windows, but little insulation in the walls. Asbestos in the siding is apparently not a problem unless it is disturbed, but it makes access difficult for adding insulation. Renters have mentioned the high cost of heating. However, decisions about investments in the houses will need to be made in the context of decisions about future use of the properties to be made through KUUC's Strategic Planning process.

## **Oil**

Our heating system uses fuel oil and is baseboard hot water throughout except for the Sanctuary, which receives forced warm air via a heat exchanger. The building has no air conditioning.

Our oil burners are operating at 87% efficiency, which is very good. For the last three heating seasons the buildings used between 6500 and 7500 gallons of fuel oil. In 2006-2007, we budgeted \$13,000 for fuel oil and spent \$16,568, up from \$10,000 in 2004-2005. For some unexplained reason we used 15,125 gallons in 03-04.

There may be some opportunity to reduce fuel consumption by installing programmable thermostats or other controls. We have one such control in the Sanctuary. Other attempts to install programmable thermostats have met with as yet unsolved technological problems.

There is little or no insulation in the Sanctuary. This is difficult to remedy because of the dark wood ceiling and the slate roof. Installing a new roof over the slate or adding insulation and a white ceiling between the dark beams would yield substantial savings in heating costs. A white ceiling would also yield substantial savings in lighting. However, either of these would need to be carefully considered by the entire congregation, as it would require a significant investment and would alter the outside appearance or create a different, lighter interior ambiance.

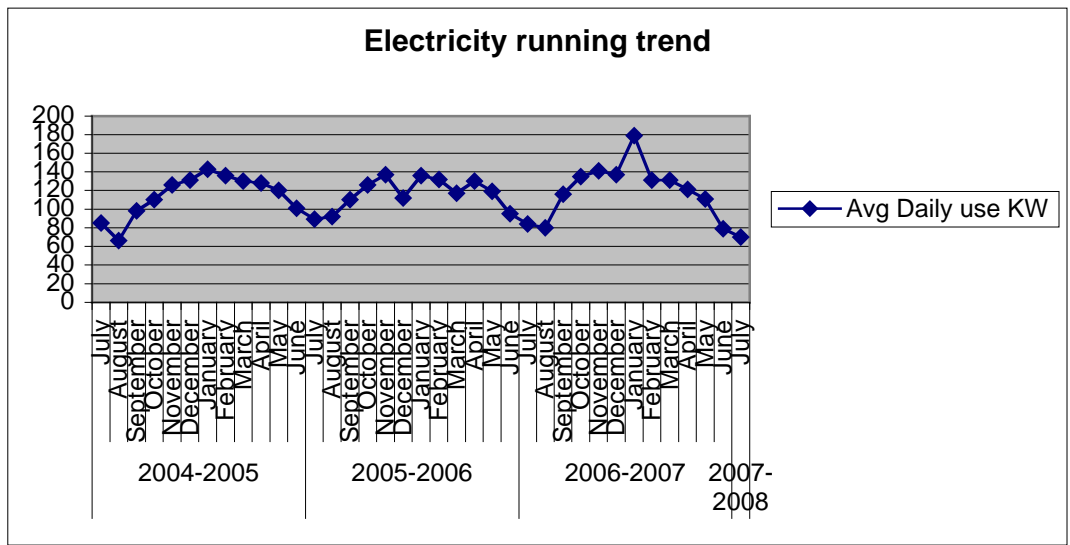
The South wall of the RE wing lets in so much solar energy during the winter that office occupants open windows to let heat out. The Montessori office at the top of the stairs also overheats. There may be a way to utilize the solar gain to save fuel oil.

A professional energy analysis could show where most heat is being lost. Depending on the depth of the analysis, the cost could be from \$400 to \$1,600, but may be worthwhile if we are considering undertaking major renovations, which will need to be considered in the context of other building needs, budgeting, and longer-term planning. Meanwhile, we can remedy visible loss points such as keyholes and doors that need weatherstripping.

**Electricity**

For 2006-2007, KUUC budgeted \$6,500 for utilities (electricity, gas and water) and spent over \$8,700, up from \$5,400 in 2004-2005.

Our use of electricity has been stable over the past three years, averaging about 115 KW daily (with seasonal variation), except for a spike to 179 average daily KW in January 2007 that was probably attributable to leaking hot water in the Alliance Room. However, the price per KW has gone up. Our annual cost for electricity was \$5,883.96 in 2004-2005; \$6,887.90 in 2005-2006; and \$6,444.29 in 2006-2007.



PSNH has conducted two inspections of the church building and attached facilities. We learned that much of our lighting is state of the art for energy efficiency. Some areas of the building could benefit from upgraded lighting fixtures.

A contractor who works with PSNH provided a proposal to upgrade lighting in the offices, the undercroft, a few other spaces, and exit signs. Our electric use would reduce by about 5.8%. The cost to KUUC would be \$828.49 after an \$828.50 PSNH rebate. Based on current usage and electric rates, we would save \$382.97 in annual electric bills resulting in an estimated payback of 2.2 years.

The upstairs classroom, library, restrooms, kitchen, and boiler room lights are not on enough hours per week to qualify for the PSNH rebate. We could realize some small saving of energy by upgrading those fixtures. It at least makes sense to upgrade rather than continue to replace old style lights as they burn out.

The Montessori School does not use the ceiling-mounted fluorescent fixtures, preferring instead to use 35 table lamps that now have incandescent bulbs. Compact fluorescents in those table lamps would save energy while maintaining the cozy atmosphere.

Dimmer switches control the Sanctuary lighting and there does not appear to be an energy efficient option if lights are to be dimmed for ambiance. We may want to explore how often the dimming feature is actually used.

### **Gas**

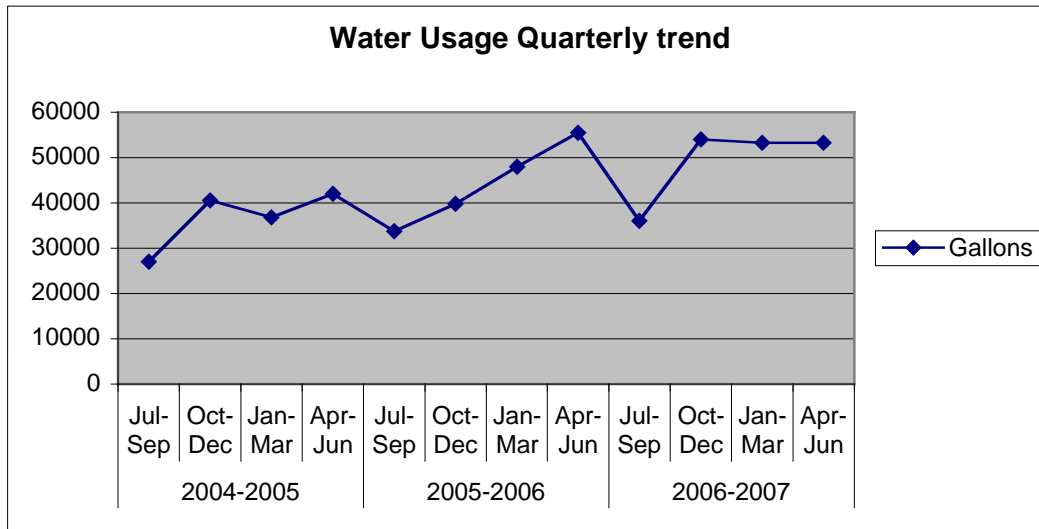
Our use of gas is generally low but has gone up by over 25%, both in therms and in cost. Our main use of gas is our old, inefficient range in the kitchen.

	Monthly Average therms	Annual Cost
2004-2005	6.04	\$301.26
2005-2006	5.7	325.84
2006-2007	7.7	395.19

### **Water and Sewer**

Our water/sewer usage has increased by about a third and the cost has nearly doubled:

	Monthly Average Gallons	Annual Cost
2004-2005	12,187	\$ 918.69
2005-2006	14,750	\$1,429.79
2006-2007	16,375	\$1,956.34



We had several problems with leaks during the year (RE Wing water heater, Alliance Room faucet, sink in Montessori bathroom). A point-of-use water heater was installed in the Alliance Room. Sinks in the Men’s Room and Montessori were recently replaced and two toilets resealed.

Low water use toilets and urinals and automatic shut off faucets could save water. We purchased a new low-water-use dishwasher in 2006. We do not water the lawns. We do water the new garden as it is getting established, and it may need some watering in dry times in the future, even though we are choosing native and naturalized plants.

**Church Grounds**

The church building is located on about 35,000 square feet (3/4 of an acre) of land on a main street near the center of Keene. About 10,000 sq. ft. is occupied by the building, about 5,000 sq. ft. by the playground, and about 20,000 sq. ft. by lawns and gardens. (See attached drawing.)

We have large Norway maples and white pines, rhododendrons, yews, and lilacs, which require little care other than pruning. A dozen or so church members participate in twice-yearly yardwork days, pruning shrubs and hand weeding flower and shrub beds. The lawns (a mixture of grasses, assorted weeds and mosses) are regularly mowed. In the past, leaves have been raked to the curb to be vacuumed by the city, which takes them for composting. We are now considering whether is it worthwhile to do our own composting or to continue to have the leaves go to the city's compost. (We can get free compost from the city when needed.)

We have only a two-car driveway for the church (plus driveways for the rental houses), no parking lot. Members and visitors use street parking and two small lots across the street that businesses kindly allow us to use evenings and weekends.

Over the past year, in cooperation with AIDS Services of the Monadnock Region, we have created the Starr Memorial Garden, approximately 1,000 sq. ft. with flowerbeds, memorial stones, and benches. In selecting plants among those offered, preference was given to native and naturalized plants, such as lupins columbine, sedum, rubeckia, daylilies, ferns and yarrow. A wheelchair-accessible hardpack path that begins near the front entrance and ends at the Starr Memorial Garden at the back of the church is planned. It will be lined with benches, shrubs, flowers and ground cover. We are also considering a labyrinth in this area.

### **Materials and Purchasing**

While we do not have a formal policy about green purchasing, KUUC members and staff making purchasing decisions take environmental considerations into account. For coffee hour, we purchase organic, fair trade coffee from a local roaster. In 2006 we purchased a new Hobart dishwasher that takes only about 3 minutes to run, saving water and electricity. Our gas range is old (mid-1930's?) and often in need of repair. It has been upgraded by the gas company twice to make it as efficient as possible, but it still very inefficient. The refrigerator is relatively new (5-6 years old?) and the seals are good.

We use about 8 reams of paper per month. Last fall, Church Administrator Molly Seavey began e-mailing KUUC's twice-monthly newsletter, the Messenger, to those who requested it, saving paper, toner and postage. 300 copies are mailed and 111 are e-mailed. We have just begun purchasing recycled paper and should consider unscented soy or beeswax candles.

Some of the janitorial chemicals we use are low hazard, according to the Materials Safety Data Sheets supplied by the manufacturer, but others are not. Janitorial chemicals are in an unlocked area.

We spend about \$3,000 a year on office supplies and about \$2,000 on postage.

### **Recycling & Waste**

We have large trash-barrel type containers in the kitchen for recycling bottles and cans. Once a month, Jim Smart empties the containers, often needing to go through the bins to remove other kinds of trash that get thrown in. He hauls the bottles and cans, as well as cardboard, to the Keene Recycling Center, about 6 miles away.

Yard waste is taken to the Keene Recycling Center for composting. Waste from special projects, such as junk left by tenants of the rental property, is also taken to the recycling center, with as much as possible recycled and the remainder put in the trash.

KUUC's administrative offices recycle paper and ink cartridges, and the Worship Committee recycles orders of service, handouts, vases, and candles, which Jim Smart also takes to the recycling center monthly.

The Montessori School office has a large amount of waste paper (especially catalogs). The administrator used to take paper home to take to her town recycling center, but the quantity became too large. She is receptive to recycling, but this will need to be arranged. At least some of the classroom teachers take waste paper home, and the quantity is not large. The school has asked parents to send lunches and drinks in reusable containers, which the children wipe out and take home.

Trash pick-up costs KUUC \$150-160 per month, about \$1,800 per year, including trash from the Montessori School. If we were to have Waste Management take the empty containers (bottles, etc.) to the recycling center, it would cost about \$380 per year, and cardboard would cost \$360 per year.

### **Transportation**

Keene is a small city (pop. 23,000) with limited public transportation. The City Express bus runs only 8:00-5:00 Monday-Friday, and there is no public transportation from outlying towns.

According to a June 2007 congregational survey,

65% (88 respondents) travel less than 15 minutes.

27% (37 respondents) travel 15-30 minutes.

7% (10 respondents) travel 30-45 minutes.

Several people noted that their reply reflects driving time but in fact they often walk to church. There is no organized carpooling, except some facilitation of shared rides to our annual weekend at Ferry Beach (about 150 miles from Keene) and events like the RE farm visit.

### **SUMMARY**

The Keene Unitarian Universalist Church congregation is composed, for the most part, of people concerned with making the world a better place, for both humans and for the Earth itself. This audit has shown that while we have many opportunities to make ourselves more “green-friendly,” we honor the Seventh Principle, are aware of the fragile nature of our environment and are already taking steps to help preserve it.

Our next step is to identify those areas upon which we can improve.

This report was compiled by members and staff of the Keene Unitarian Universalist Church:

Worship and Celebration: Sarah Harpster  
Religious Education: Karen Bellavance-Grace  
Environmental Justice: Sarah Harpster  
Church Investments: Mary Ellen Fortini  
Church Architecture, Energy and Water: Carl Jacobs, Frank Magill  
Water: Carolyn Jones, Frank Magill  
Church Grounds: Carol Packwood, Stella Scott, Suzanne Butcher  
Materials and Purchasing: Joan Roelofs, Suzanne Butcher  
Recycling and Waste: Jim Smart, Suzanne Butcher  
Transportation: Suzanne Butcher  
Graphs: Judy Anderson

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