

Application for Green Sanctuary Candidacy

Congregation Information

Congregation Name	Unitarian Universalist Fellowship of Huntington
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Minister	Rev. Paul Ratzlaff

Congregation Profile

In the early 1900s Long Island's north shore, overlooking beautiful Long Island Sound, was dotted with many estates and mansions. The George McKesson-Brown estate, called West Neck Farm, comprising of 30 acres across from Huntington Harbor inlet, had been built between 1909 and 1912 in a French Gothic style. The "Gold Coast" occupants led an opulent but generous life style until the Great Depression began to dwindle their assets. In 1940 the McKesson-Brown mansion was sold to a Roman Catholic religious order and became Coindre Hall, a school for boys. After changing hands a few times, the remaining 4 acres of the estate, i.e. the garage-servants quarters, cottage and water tower were sold in 1962 to the North Shore Unitarian Fellowship.

This group, that had started in 1946 in the minister's study of the Northport Methodist Church, had asked for various status designations from the American Unitarian Association and had been denied. As their membership had expanded greatly throughout the 1950s, the lay leadership of strongly humanist members guided them to search for larger facilities and call a minister (who they would allow to speak only half the Sundays). In that way they retained their strong "lay" identification. After the national Unitarian Association joined with the Universalists, the group became the Unitarian Universalist Fellowship of Huntington.

In the years that followed, with the leadership of Rev. Ralph Stutzman, the UUFH became active in the human potential movement, the welcoming of gays and lesbians, investigation of the AIDS epidemic, and the welcoming of people of many backgrounds. This redemptive community has constantly refurbished the “castle” to suit its needs with the guidance of Rev. Bruce Marshall and Rev. Beth Graham. In the

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early ‘80s a larger sanctuary was built which can accommodate 230 people. For 32 years it hosted a Renaissance Fair, attracting the attention of the wider community and raising funds. Now it raises funds with a Saturday night Café and a services auction, where extraordinary bargains and a lot of socializing events are shared.

At present our pledging membership is around 250 with smaller gifts provided by about 60 friends. Our RE enrollment is 128 and we support the following staff: Minister, Director of Religious Exploration, Fellowship Administrator, part time
Affiliated Community Minister, part time Music Director, part time Bookkeeper, and Database Manager (and part time RE assistant).

We seem to be mostly college educated white folks of many ethnic backgrounds, with a strong interest in multiculturalism, artistic endeavors, social justice projects such as sheltering the homeless *, affordable housing, peace-making, green sanctuary endeavors, and the like. We have built a meandering memorial garden and have room for children’s gardens and play equipment as well. We have flowering trees that are lovingly tended by several members. One of our members is the landscaper who tends our grounds. He is a “Green Gorilla” and a member of the ecologically savvy Long Island Neighborhood Net Work using no pesticides and only organic fertilizers.

To give a flavor of our structure, we have a 9-member elected Board of Trustees and a Cluster Coordinating Council, headed by the Vice-president, with the following 8 jurisdictions: Administration and Facilities, Communications & Information Technology, Lifespan Religious Exploration, Member Services, Ministry, Outreach & Larger Community, Stewardship, and Sunday Services. Our current Vice-president has just completed his LEEDS-GA certification. He will be our President next year.

Therefore we are strategically positioned to accomplish Green Sanctuary Certification. As a congregation we have been profoundly involved in environmental issues. This will become clear as we describe the Congregational Assessments.

* (For example, we started the Huntington Interfaith Homeless Initiative which organizes 25 faith communities into a cohesive well-functioning program to house homeless men every night in winter months.)

Our Green Sanctuary Committee **(called the “Green Sanctuary Initiative”)**

The Sustainable Living Group of the Peace and Justice Council of the UUFH wishes to apply for Green Sanctuary Candidacy for our congregation in order to join with the larger UU denomination’s Green Sanctuary Program to confirm our love and respect for the interdependent web of all existence, and to promote stewardship of our earth. We want to inspire people to think about and act more in promoting sustainability of our earth.

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Statement of Purposes and Objectives

Our goals are:

- . to build awareness of environmental issues (associated with global warming)
- . to motivate members and Fellowship committees to work individually and together on environmental causes
- . to strengthen the connection between spiritual practices and our environmental consciousness
- . to work on correcting environmental injustices.

The Core Green Sanctuary Initiative (GSI) members will seek to engage all members of the Fellowship in various tasks as we participate in environmental action plans enumerated in the Green Sanctuary Project in 4 areas:

- (1) education of children and adults
- (2) sustainable living
- (3) environmental justice and advocacy
- (4) worship and celebration

A brief overview of the GSI committee members

The GSI has a three-member team of leaders who have met weekly and who are assisted by consulting members of considerable experience and interest. The core team consists of a lawyer, a past president (twice), and a musician/nurse, all of whom have been involved in the Ethical Eating CSAI and other social justice projects for many years. The present consulting team (always expanding) includes a journalist, a retail businessman, a professor of biology at a nearby college, a retired teacher, a young adult active in national UUA affairs, and a specialist in early childhood education. Also in our congregation, we have had direct involvement of two environmental engineers, two people very concerned about hydrofracking, a multifaith union activist, and several people ready to take on the GMO labeling controversy.

Our Environmental Assessments

Starting at GA in year 2000, in which the Earth Charter was introduced as the beginning of the 7th Principle Project, we at the UUFH have engaged in environmental activities.

We included the following:

1. Analyzing our cleaning materials, moving toward ecologically sound products. This is our non-toxic initiative.
2. Hiring an organic grounds keeper.
3. Replacing incandescent lightbulbs with CFLs where feasible.
4. Installing automatic light fixtures where feasible.
- 4.
5. Setting up easily accessible recycling bins right outside the kitchen.
6. Creating a composting bin outside the kitchen.
7. Installing 2 energy star gas stoves.
8. Limiting the use of paper plates and cups.
9. Using 30% recycled paper in our office and doing recycling of waste paper.
10. Evaluating the replacement of two furnaces, thermostats, and the air-cooling system. Fall 2010
11. Installing a new front door with insulated glass. Dec 2010
12. Sending our weekly news letters (*The Beacon* and *The Flash*) by email and printing only limited numbers of hard copies.
13. Those weekly letters frequently contain “Green Tips” including: energy conservation tips; suggestions for home-made environmentally friendly household cleaners; and recipes for vegetarian meals.
14. Serving Fair Trade coffee on Sundays and at all our functions.
15. Revisiting all these areas to see that these systems are working properly.

Areas we need to look into:

1. Age and condition of our refrigerators and freezer.
2. We may soon need some new roofing.
3. We need to look at having work done on our parking lot.
4. We are about to participate in a free energy audit by Long Island Green (www.ligreen.com) to further engage with our environment, as many of our individual members have already done. We’re setting up an evaluation of our building for an energy audit wrap-up.
5. Our investment policy requires that one half of all investments be socially responsible.

Professional Energy Audits

A. An electric company (LIPA) building assessment was done in fall of 2007, i.e. an energy survey of the buildings and support equipment. The report was received April 2008. The results were summarized for us by Ben Testa:

The analysis found that the Fellowship's annual energy costs for the Main & Cottage buildings ran \$20,480 (\$8,683 electricity, \$11,797 natural gas).

The analysis indicated that energy efficiencies, and cost savings, could be realized by taking the following concrete steps:

1. Upgrade the lighting mechanisms throughout the facilities
2. Improve the building envelope in one specific area.

(See Addendum #1 at end of application.)

5.

B. Recently (November 2010), under the guidance of our Vice-President, an engineering report was summarized for us (the work having been done this September). Reevaluating our heating and cooling situation required us (on a limited budget) to add more zones with customized controls. New boilers and circulators were installed so that fuel savings (estimated 10-15%), temperature control and more flexibility were attained.

(See Addendum #2 at end of application.)

Congregational Assessments

POLL OF CONGREGATION MEMBERS

Spring 2011 - As part of the application process to become a candidate for Green Sanctuary certification, we have exerted a BIG EFFORT to include the whole congregation. Members, staff and friends of the UUFH have been polled to track their attitudes and awareness about issues of sustainability and the environment. We polled the adults, and with the help of the 3rd and 4th grade RE children polled even the youngest members.

Using the Survey tool "Constant Contact" (facilitated by our UUFH President Jennifer Sappell and Clarke Johnson) 80 adults responded. About 75% were female, 40% were over 65 years of age. Most people were aware of various ecological initiatives and programs at the Fellowship, but their own involvement was only about 25%. 66% had donated to environmentally-oriented organizations; even the littlest children were aware of recycling and reusing paper and other goods, and the need to take care of our earth.

We were pleased by the number of thoughtful responses to the survey and feel that most people were in tune with our environmental goals.

WORSHIP AND CELEBRATION

In our Sunday services there is an overlap of the four categories: Worship & Celebration, Religious Education, Environmental Justice, and Sustainability. Here is a list of some of these services. Clearly the UUFH has worked hard over the years to be responsible stewards of the earth.

- Fall 2002 *Voluntary Simplicity Service* Pat Testa
The story of Easter Island was included in this service.

- Fall 2007 *Global Warming Service* Linda Paul-
Elem

The guest speaker was Sister Jeanne Clark, the founder and director of “Homecoming,” an organization committed to the understanding that the human and natural world are one sacred community. Jeanne is an educator who has been instrumental in the creation of Sophia Garden, a community supported agricultural project, (CSA), producing vegetables without the use of chemicals. Sophia Learning

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Center offers programs to help children and adults understand that they are part of the “interdependent web” on Earth.

- Fall 2007 *The Water Service* Frances
Whittelsey

An expert in the field addressed the precarious condition of the Long Island Watershed and led a discussion after the service. Debussy’s “Reflections in the Water” was performed; a local artist and member showed her watercolor paintings in our gallery.

- Fall 2008 *The Sustainable Spirit Service* David
Sibek

Members of the congregation expressed how their life styles have evolved to support sustainability and demonstrated how these actions reflect their UU values.

- Spring 2009 *“Holy Cow” Service* Frances
Whittelsey

Our speakers gave detailed descriptions of the inhumane ways agribusiness produces beef, with overuse of corn feed and antibiotics to treat sick cows, and ended with an invitation to cut down our own consumption of beef.

- Spring 2010 *“A Sacred Resource” Service* Helen
Boxwill

We looked at the subject of water resources here on the Long Island Watershed and through the eyes of a congregant who has contributed much to Ethiopia.

She explained the connection between water scarcity and pollution, erosion and starvation. Her group worked to educate girls and with farmers on solar-oven cooking

to reduce cutting down trees. The song "Pollution" by Tom Lehrer was shared.

• Spring 2011 "Celebration of Shinnecock Indians" Helen Boxwill/Frances Whittelsey

A multimedia Sunday Service celebration and introduction to two Shinnecock Indians (young and old) who witnessed through original music and poetry, storytelling that the "Indians", who preceded us by centuries, were able to live in harmony with nature. It is their living religion to do so. We need to hold up their cultural wisdom and stand with them in their trials.

RELIGIOUS EDUCATION FOR ADULTS AND CHILDREN

Winter Solstice 2008, 2009, 2010 Richard Kopp, Bea Coryell, Royal Forest Each year a different group planned the evening service which included (each year) a period of experiencing the intensity of the cold in a circle on our patio, use of candles, fire, stories, poems, music and refreshments and reflection on the passing of the seasons.

ENVIRONMENTAL JUSTICE AND SUSTAINABLE LIVING

"The Hungry Basket"

Zoe

Taylor

Over many years, this is an ongoing collection of emergency non-perishable food goods for The Huntington Community Food Council .

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In addition, There is a new movement in the Fellowship to provide freshly grown local vegetables as well for the Pantry. Through the Huntington Community Gateway Garden Project, members of the Fellowship will be growing fresh vegetables to give away to hungry people. We will also join with a local group "Bread Not Bombs" to distribute fresh produce donated from local super-markets on Tuesday evenings.

Action Plan

WORSHIP AND CELEBRATION PROJECTS (2 required)

1. Project Title: *The Sustainable Spirit*

Project Description: Explore the underlying values and spirit concerning the issues of sustainability with an emphasis on the Seven Principals. In these

Sunday services, congregants will discuss how their interpretation of moral values and UU Principles, guides their inquiry into sustainability and preserving the planet for future generations.

Time-line for Completion: April 2011 and ongoing

Lead: David Sibek

2. Project Title: *Choir Sunday Honoring Earth*

Project Description: Raise the Congregation's appreciation of our Earth home and awareness of its application for Green Sanctuary Status. Use words and music celebrating the Earth as complex, healing and transient. Include musical selections from old and new masters, pop and Native American. This service was given in conjunction with a photography show we initiated for our gallery in which twelve members of our Fellowship contributed works "Celebrating Nature" during the month of May.

Completion date: May 22, 2011

Lead: Richard Hyman, Annabel Caner, Laurie Singer

RELIGIOUS EDUCATION PROJECTS (2 required)

1. Project Title (Adult Religious Education): *Book Discussion Series*

Project Description: The reading and subsequent discussion of books by a group meeting regularly either at the Fellowship or at a various group members homes. When possible, the group will integrate lessons from the readings into Beacon articles, Sunday services and other programs geared to educating the congregation. The group will focus on works based on sustainability, renewable energy, transportation issues, consumption, and related politics, economics and public health, etc.

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This project is an extension of the initiative of previous years where non-fiction materials such as David Korten's "The Great Turning" and Michael Pollen's "Omnivores Dilemma" and the Ethical Eating Study/Action Issues were read and discussed.

Regarding the Ethical Eating CSAI, we are sending delegates to GA to pass the Ethical Eating Study Action Statement June 2011

Time-line for Completion: CSAI June 2012 and ongoing

Lead: Cynthia Chaffee, Marilyn Kopp-Hecker

2. Project Title (Children's Religious Education): *The Pumpkin Project*

Project Description: This inter-generational program promotes a closer

connection to the Earth generally and encourages hands-on food production. The project is initiated by a Sunday service that teaches through song (including an original hymn “Mama Earth”) and by various members sharing what excites them about working for the environment. This service energizes the congregation with the prospects of the beauty and mechanics of planning, nurturing and harvesting a bounty of beautiful, nutritious pumpkins. Subsequently, over the course of eight months, the children plant, tend, and meditate on the garden and the program culminates in a congregational feast of soups, breads, pies and other delicacies prepared from the prosperity of the garden.

Time-line for Completion: Kick off- Sunday April 10, 2011; Harvest- Fall 2011

Lead: Susan Kenler, Cynthia Chaffee and the Ethical Eating Committee

ENVIRONMENTAL JUSTICE (2 required)

1. Project Title: *Gateway Gardens*

Project Description: To convert a junk-strewn abandoned lot to use as a community garden comprising 80 from 5’ x 20’ beds, allocated to community members on a first come, first served basis.

One of our members, and with the help of several volunteers, gardeners, educational consultants, and members of the Ethical Eating Group, pressured the town government to clean up a parcel of land and institute a community garden in a disadvantaged area of town.

In June 2010 using \$5,000 from our *Beyond Our Walls* funds, a joint project of the UUFH, and the Town of Huntington began work to reclaim the lot in Huntington Station. This project provides tools, raised garden plots, soil and compost, seeds, and instruction for participants to raise fresh vegetables by themselves and in community with others. This is an opportunity to build community, to intermingle people from different neighborhoods and backgrounds, to access the interdependent web of all existence, and to foster dignity and pride in providing one’s own healthy food. The program also distributes excess produce to those in need of food and to foodbanks.

Time-line for Completion: ongoing

Lead: Frances Whittelsey

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2. Project Title: *Collaborative Film Series*

Project Description: We will work with other progressive groups and organizations such as the Huntington Cinema Arts Centre to show documentary films for the general public. The focus of the films will be sustainability, energy issues, agriculture, pollution, etc. Whenever possible, the events will emulate The Cinema Arts Centre’s programs where filmmakers, academics and others with

interest in the subject appear and interact with the audience at the end of the film and a reception is provided.

We will sponsor a film about “going local” at the Cinema Arts Centre: “The Economics of Happiness,” featuring Vandana Shiva, David Korten, Samdhong Rinpoche, and others. The film will be followed by refreshments and discussion. The environmental leader Bill McKibben will speak to the audience via Skype.

Projected Date: Fall 2011 and ongoing

Lead: David Sibek, Annabel Caner

'Going local' is a powerful strategy to help repair our fractured world – our ecosystems, our societies and ourselves. Far from the old institutions of power, people are starting to forge a very different future. . .

SUSTAINABLE LIVING (4 required)

1. Project Title: *Conservation – The Low Hanging Fruit*

Project Description: Working from the premise that development of renewable energy technology is not sufficient to solve the planet's environmental problems, we must also include discussion of people's seemingly insatiable need for resources. This program educates the children on the need to conserve our precious resources. The Religious Education Committee will promote the children's awareness of the UUFH facilities' use of water, electricity, heat and cooling and other resources. The children will have direct observation and create arts works that encourage awareness, accountability, and the conservation of such resources. Developing an effective re-cycling program will also be part of this project.

Time-line for Completion: ongoing

Lead: David Sibek, Michael Amendola

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2. Project Title: *Introduction to Slow Food: “Slow Food/Slow Money”*

Project Description: Reconnecting with Mother Earth, will educate the congregation with the concepts of the international organization, *Slow Food*.

“Slow Food” promotes the idea that there is nothing more central to our lives than the food we eat and that fast food and industrial farming have disconnected our individual choices from the collective impact they have on farmers and the earth itself.

Co-founders of *Slow Food Huntington*, will lead the UUFH congregation in an exploration of the physical, ethical, and ultimately spiritual power of returning to the slow pleasures of the table. Guest speakers will be UUFH member Ann Rathkopf and guest Bhavani Jaroff, who co-founded **Slow Food Huntington**. Frances Whittelsey intends also to speak about the Huntington Community Garden Project and to discuss a new concept that she recently learned about, Slow Money, which has to do with investing locally in food/farming initiatives.

Time-line for Completion: May 15, 2011

Lead: Ann Rathkopf, Frances Whittelsey

3. Project Title: *Green Table Initiative*

Project Description: In an effort to explain Ethical Eating to the congregation, we created the *Green Table Initiative*. At every Fellowship event involving food, we advocate having healthy (ethical) alternatives. We developed a strategy of featuring pure wholegrain foods, usually organic (if possible), local, (if possible), with ingredients listed, these foods to be placed on a green tablecloth. We used rice syrup and maple syrup instead of refined sugar and highlighted the healthy alternative philosophy.

“Peace cookies” and “peace pancakes” were created this way. We went out of our way to provide cookies on Sunday mornings and to support many events in this healthy way. By February, the annual Pledge Drive Committee called to ask for an “ethical menu” for their Pledge Drive breakfast. The Ethical Eating committee created an artistic, healthy and luscious breakfast with healthy alternatives for all.

Time-line for Completion: ongoing

Lead: David Sibek, Susan Kenler, Cynthia Chaffee, Richard Kopp

4. Project Title: *Home Energy Audits*

Project Description: In October 2010 we introduced Chuck Schwartz to our congregation at a Peace Pancake Breakfast. His organization *Long Island Green* (ligreen.com) has received a grant through the Suffolk County Energy Alliance and the Renewable Energy Task Force EECO Homes.

Long Island Green is a tiered-delivery home energy program working through the town of Huntington to analyze 2000 homes in Suffolk County for free and share advice with the owners to help them be more energy efficient and to save money doing it. Their mission is to improve the energy efficiency of LI homes, to educate the consumer in

“green issues,” to train business persons in “green technologies,” and to bring together people with this common interest. All of which would result in improved economic and environmental conditions.

Many people took advantage of this opportunity to learn about and improve their homes. We will continue to advocate for this forward thinking energy program by letting Community-Supported Agriculture (CSA) members join in, by advertising, etc.

Time-line for Completion: ongoing

Lead: David Sibek, Cynthia Chaffee

ADDITIONAL PROJECTS (2 required)

1. Project Title: *The Green Thumb CSA*

Project Description: Our congregation has hosted *The Green Thumb* CSA (Community Supported Agriculture) pick-up site for 13 years. Any one from the general community can pay farmer Bill of the Halsey’s Green Thumb Organic Farm (Montauk Highway, Watermill, NY) to be eligible to pick up vegetables on Thursday evenings during the growing season from April through December. Some needy individuals have been recipients of food donations from this CSA as well.

This commitment to healthy organic (certified by NOFA) food available at our Fellowship connects people to our denomination with all the right values. Suzanne Zoubeck, who runs the site is a wealth of information about the vegetables, recipes, area-wide governmental and non-governmental agencies that have expertise in various farming and health issues.

Time-line for Completion: ongoing

Lead: Suzanne Zoubeck

2. Project Title: *Carla’s “Garbage” Service*

Project Description: Garbage is an unavoidable result of living. Although we all recognize this fact, it is less evident that garbage cannot be made to vanish. We can bury it, dilute it, and combine it with other chemicals, but we cannot remove it from the earth. This service will address the Green Sanctuary committee’s efforts to help us become more friendly to our environment and reduce our production of garbage.

Our invited speaker is Kenneth E. Armellino, P.E. who is Director of Environmental Science & Community Affairs for *Covanta Energy for a Cleaner World*. His company converts garbage into energy and reduces the volume of waste to one tenth of its original size. Based in New Jersey, he has several plants on Long Island. Music will include Zen honkyoku played on the Japanese shakuhachi and songs by Pete Seeger.

Time-line for Completion: July 24, 2011

Lead: Carla and Rob Finkel

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EXTRA PROJECTS

Extra 3.

Concerns about hydrofracking for natural gas in New York State have been identified.

Lead: Jan Brenner

Extra 4.

Interest recently in the advances made by Germany's citizens, local and national governments working together to reduce their carbon footprint 20% and vowing to work toward another 20% reduction. We can learn about this "working together" paradigm.

Lead: Professor Birgit Volker

Extra 5.

Addressing ourselves to HUNGER in the wide world is also part of our mission.

Lead: Zoe Taylor

Extra 6. The Peacemaking Caucus will install a Peace Pole with some accompanying planting and stone work in May 2011. We are thinking about a solar light for it in the future. The Commitment to a Culture of Peace and Nonviolence (written by Nobel Peace Laureates) includes a commitment to protect the environment for future generations.

Lead: Richard Kopp

Extra 7. We need to face up to the GMO labeling crisis and the hegemony of Monsanto.

Lead: Marilyn Kopp-Hecker

Extra 8. Nuclear energy is not the answer to our energy needs.

Lead:

Extra 9. Photographers have been invited to chronicle the garden projects at the Gateway Gardens project as well as the organic Dunlop garden project by taking photos at various seasons and stages of growing.

Lead: Annabel Caner

Extra 10. In fact:

In fact, through our efforts to become a Green Sanctuary this year, in addition to the Earth Day in April, all the Sunday services in May were related to the earth.

May 1, 2011

Celebration of the Shinnecock Indians

May 8, 2011

Celebrating Nature art & photography show

May 15, 2011

Slow Food Sunday

May 22, 2011	Choir Sunday <i>An Earth Celebration</i>
May 29, 2011	UU Heritage Sunday: <i>UU Peacemaking</i> and installation of the Peace Pole – including environmental sensibility and responsibility as a prerequisite of peace.

13.

Our Communications Plan

Communication is integral to our Green Sanctuary Initiative.

Spring 2011 - As part of the application process to become a candidate for Green Sanctuary certification, we have exerted a BIG EFFORT to include the whole congregation. We started by setting up liaisons through the Cluster Coordinating Council.

Branching out, we involved many congregational members in many tasks. Logo design was done in winter 2010 by Brigitte Zimmer and GSI congregational members. The Website was designed in spring 2011 by GSI congregational members and Sylvia Lipnick. Bulletin board signs were created by Judie Gardner.

Of course, we used our newsletters *The Beacon* and *The Flash*. We now have access and experience with *Constant Contact*, the survey computer program. As we constantly connect with the community outside our walls, we will automatically use widening modes of communication.

At some point we will plan a community environmental sharing event for the community beyond our walls.

Addendum:

No. 1 EXCERPT OF ENERGY EFFICIENCY STUDY

Ben Testa

If both recommendations were incorporated into the facilities, an annual savings of \$2,217 would be realized (\$1,902, electricity, \$315 natural gas), with a payback period for each improvement at 2.4 years and 2.5 years, respectively and an annual energy cost reduction of 9.3% and 1.5%, respectively.

The main reason LIPA concentrated on the lighting costs for the Fellowship, rather than other areas of energy use is because the analysis showed that 44.4% of the electrical energy cost for the Fellowship comes from lighting. The next highest percentage of energy electrical costs is heating equipment at 10.3%, and then office equipment at 9%, followed by the cooling equipment at 7.9%.

Hence, very detailed upgrades for each lighting fixture within the Main Building and Cottage were included in the report. The conclusion was that all the current fluorescent lighting fixtures needed to be replaced, i.e., those in place when the survey was done, using compact fluorescent lamps (CFL's) instead, upgrading the ballast mechanisms, and employing "specular reflectors" to ensure that the maximum light is derived from each fixture. In addition, where recommended, Halogen lamps, utilizing infrared coatings, should be installed, as well as replacing all exit signs with LED-based units.

Only one specific upgrade for the building's envelope was included in the report, namely the installation of ceiling fans for the Main Hall. The natural gas savings cited previously would be realized by taking this action. This particular upgrade was not done due to lack of funds and enthusiasm for such an ambitious task.

No. 2 EXCERPT OF ENGINEERING REPORT

Bill

Houck

The goals of the project were several:

Improve the very poor heating control, e.g. rooms heated to 90+ degrees during warm weather when heat shouldn't even be running;

Replace the 30 year old +/- boilers;

Retire the ancient air handler (located in closet by stairway and lavatory);

Add more heating zones for customized control; put each zone on its own circulator, rather than rely on the expensive and unreliable zone control valves; Provide air conditioning to the kitchen, social hall, front foyer, gallery and cry/family room; Accomplish the above on a fixed budget.

Details

Several of the goals dictated (at least in part) the design of the improvements.

Since we are going for air conditioning, we need a forced air system in areas where we now have partial radiators. Also, the complexity of the existing system with long piping and duct

15.

runs made it justifiable to split our system. One new boiler in the existing boiler room will serve the offices and RE wing. A second boiler in the utility room off the kitchen will serve the kitchen, social hall, gallery, family room and front foyer. The current system uses two boilers located in the basement existing boiler room.

The office/RE wing will have five zones - offices, first floor RE/Board, RE 5 & 6, second floor RE and apartment. The utility room boiler will serve three zones - restrooms (stay on radiators), kitchen/social hall and family room/gallery/foyer.

We anticipate fuel savings in three ways:

1. Increase in boiler efficiency from about 75% to 81%;
2. Improvement in control because we will only heat those areas with a demand (programmable thermostats);
3. Improvement in ambient temperature anticipation. This moderates the heating if outdoor temperature is warming. We had this feature before but it was sometime overridden because of belief that it made the area too cold.

I estimate a fuel reduction of 10% - 15%.

Air conditioning is based on manufacturer's standard product, i.e. an air-cooled condenser (AC unit) with an SEER (seasonal energy efficiency ratio) of 14 and an EER (peak energy efficiency ratio) of 12. Models with greater SEER were available, but would not save money or carbon under peak (design) conditions, i.e. hottest dog days weather, since all models shared the same EER. Under our limited use the calculated