

Environmental Stewardship Program FY13 Report



Contents

Executive Summary	2
Triple Bottom Line	3
Triple Aim	3
Environmental Stewardship Program	5
Definition of Sustainability	5
Vision	5
Reporting Categories & Achievements	6
Leadership & Infrastructure	7
Education & Communication	9
Energy Efficiency	11
Water Conservation	13
Waste Management & Reduction	15
Food Systems	17
Sustainable Site & Transportation	19
Chemical Management	21
Environmentally Preferable Purchasing	23
Collaboration with Environmental Services & Medical Device Reprocessing	23
Synergy	25
Synergy in Our Communication Groups	28
Annual Reporting Process	28
Synergy in the Organizations in Which We Participate	29
Summary & Future Plans	30
St. Vincent Fishers Inpatient Expansion Project	32
System Green Team Members	33
Sources	33

Photo on Cover: (bottom center) St. Vincent Fishers Inpatient Expansion Project (Fishers, Ind.)

Executive Summary

The Environmental Stewardship Program at Ascension Health is entering its third year with a continued challenge to demonstrate value, reduce costs, remain nimble and stay current with emerging trends. The footprint of Ascension Health continued to expand in 2013 with the addition of Via Christi Health, St. John Health System and Ministry Health Care. The new Health Ministries have a robust tradition of sustainable practices and are already adding valuable knowledge and accomplishments to the Environmental Stewardship Program.

Ascension Health's Mission states, "Rooted in the loving ministry of Jesus as healer, we commit ourselves to serving all persons with special attention to those who are poor and vulnerable. Our Catholic health ministry is dedicated to spiritually centered, holistic care, which sustains and improves the **health of individuals and communities**. We are advocates for a **compassionate and just society** through our actions and our words.

Ascension Health is the nation's largest Catholic and nonprofit health system, providing care in more than 1,500 locations across 23 states and the District of Columbia. Ascension Health is committed to serving all persons with special attention to those who are poor and vulnerable. In FY13, Ascension Health provided \$1.5 billion in care of persons living in poverty and community benefit programs.

The Environmental Stewardship Program was created to bring unity to the long history of sustainability efforts at individual Health Ministries and hospitals. This program aggregates those efforts in order to demonstrate value to Ascension Health via social, financial and environmental benefits. Best practices are shared across the organization and successes are celebrated. Ascension Health is developing a culture of sustainability with support at all levels. Decision-making with an eye to green practices infuses all departments.

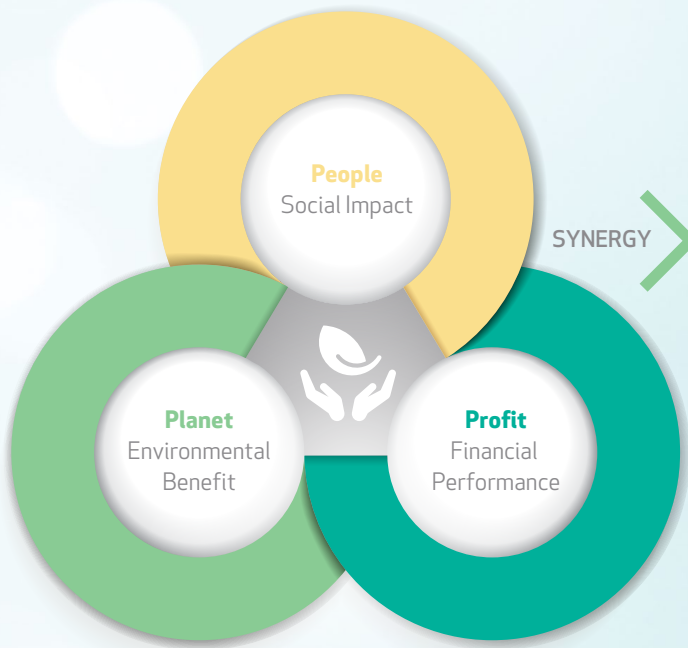
The Environmental Stewardship Program aligns with the Mission, Vision and Values of Ascension Health and themes from Catholic Social Teaching that speak to the Church's concern for the environment.

There is synergy between the **Triple Bottom Line** and the **Triple Aim**.

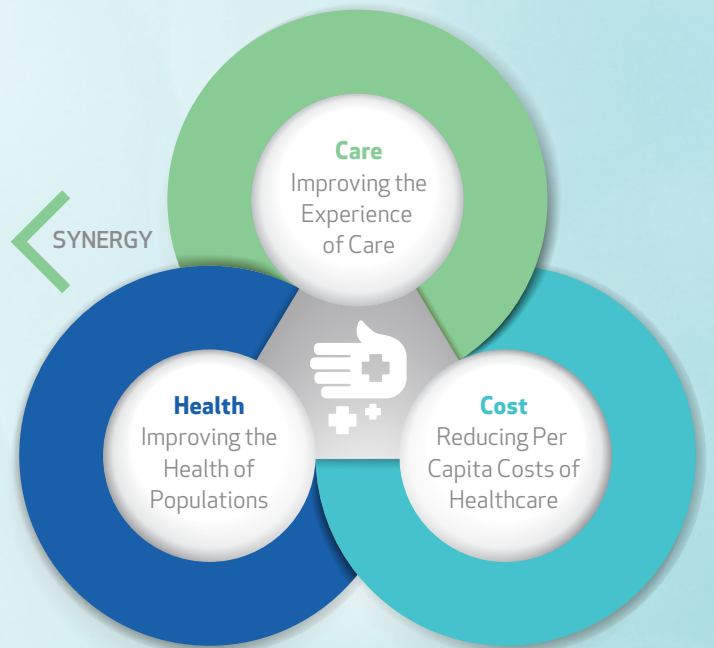
The Triple Aim of healthcare is to provide better patient care, improve population health and reduce per capita cost.

The Triple Aim has been widely adopted as a framework for public and private healthcare since its development by Don Berwick, Tom Nolan and John Whittington at the Institute for Healthcare Improvement (IHI) in 2008.¹

The Triple Bottom Line describes the environmental, social and financial benefits of sustainability. Bringing the Triple Aim and the Triple Bottom Line together in a healthcare sustainability program is a powerful alignment that draws on the goals of the two concepts.



**Triple Bottom Line—
Specific to Sustainability**



**Triple Aim—
Specific to Healthcare**



"I would like to ask all those who have positions of responsibility in economic, political and social life, and all men and women of goodwill: Let us be protectors of creation, protectors of God's plan inscribed in nature, protectors of one another and of the environment."

Pope Francis at his inauguration,
March 19, 2013

"We don't have to convince people to pursue sustainability. Everyone understands why. Even in today's rapidly changing healthcare field, when associates are asked constantly to adjust to change, we see instant support for new environmental initiatives. When people see what's happening at other Ascension Health facilities around the country, they get inspired. There is a collective spirit of acceptance because everyone is expending that extra effort and it just continues to build."

Lois Sechrist, Senior Analyst, Ascension Health Facilities Resource Group²

Environmental Stewardship Program

Definition of Sustainability

Sustainability is the ability to meet the needs of the present without compromising the ability of future generations to meet their own needs.

The U.S. Environmental Protection Agency defines environmental stewardship as *the responsibility for environmental quality shared by all those whose actions affect the environment.*

Or, more simply: Environmental stewardship is the pursuit of sustainability.

Vision

The Environmental Stewardship Program challenges us to act as stewards of God's creation and operate at our full potential by identifying and implementing practical solutions to minimize the organization's impact on the natural environment and the communities we serve.

"There is realization that safeguarding the environment and cocreating healthier communities by working together within the broader health ecosystem is how to strengthen their legacy for the future."

– Sister Bernice Coreil, Daughters of Charity, Senior Executive Advisor to the President of Ascension Health Alliance²



The
Ascension
Health
Environmental
Stewardship
Program is
Organized
in Nine
Categories

1

Leadership & Infrastructure

The System Green Team, made up of representatives from each Ministry Market as well as key departments from the System Office, provides leadership for the Environmental Stewardship Program. In addition, each Health Ministry will identify a leadership structure to implement the program at the local level. The Health Ministries may choose to create additional infrastructure in the form of local policies and procedures to define and support the program.

Ascension Health demonstrates leadership by national membership and board involvement in several organizations:

- + ASHE (American Society for Healthcare Engineering) of the American Hospital Association
- + Practice Greenhealth/Healthier Hospitals Initiative
- + U.S. Department of Energy's Better Buildings Challenge

- + U.S. Department of Energy's Hospital Energy Alliance
- + U.S. Environmental Protection Agency's Energy Star program
- + U.S. Green Building Council

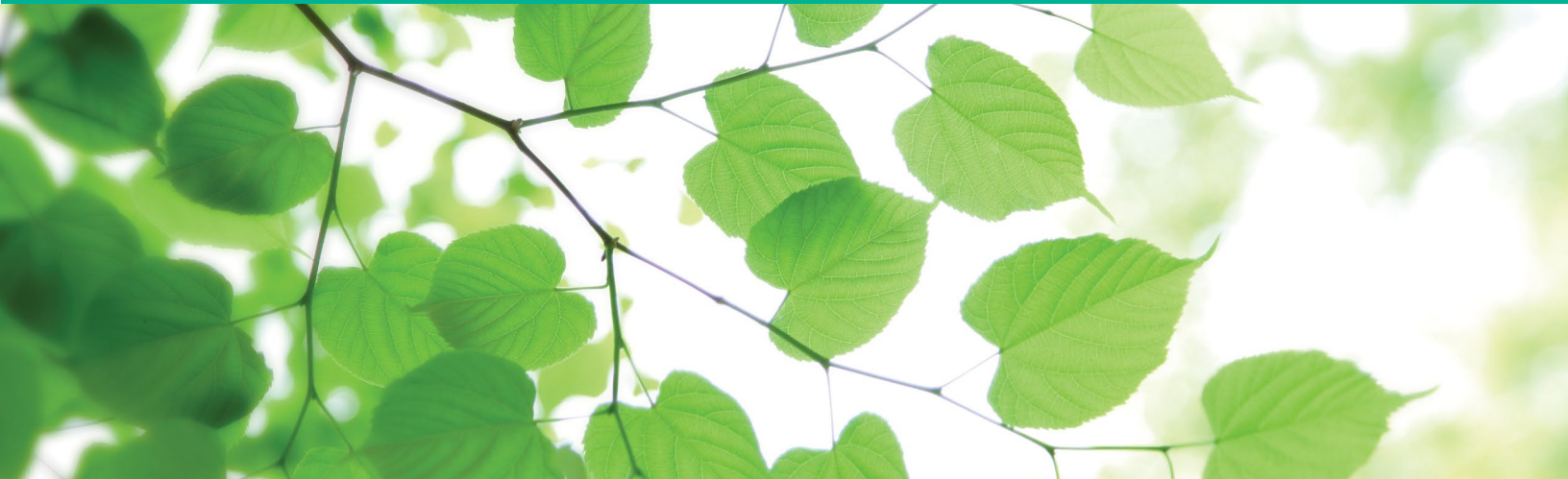
Ascension Health hospitals won several awards at the Practice Greenhealth CleanMed conference in 2013:

- + Borgess Medical Center (Kalamazoo, Mich.), Environmental Leadership Circle
- + Dell Children's Medical Center of Central Texas (Austin, Texas), Partner Recognition
- + Our Lady of Lourdes Memorial Hospital (Binghamton, N.Y.), Partner Recognition
- + St. John Hospital and Medical Center (Detroit), Partner for Change

Photo to right (pictured from left to right): Debra M. Brown, Interim Chief Operating Officer, Dell Children's Medical Center of Central Texas; Dr. Mark Shen, Interim Chief Executive Officer, Dell Children's Medical Center of Central Texas; Debbie Kimberly, Vice President of Distributed Services, Austin Energy; Liana Kallivoka, Project Manager and Sustainability Consultant, Austin Energy Green Building; Cassidy Ellis, Project Coordinator, Austin Energy Green Building; Robert Bonar, Jr., President and Chief Executive Officer, Seton Family of Hospitals & Chief Executive Officer, Dell Children's Medical Center of Central Texas; Peter Rieck, Vice President, Facilities & Support Services, Seton Healthcare Family



-
- + Via Christi Hospitals (Wichita, Kan.) won a Pollution Prevention Institute Award from Kansas State University for its efforts in energy conservation.
 - + 46 percent of Ascension Health hospitals have a local Green Team or environmental stewardship committee.
 - + 48 percent of respondents participate in a sustainability organization such as Practice Greenhealth, the U.S. Green Building Council and other local, regional and national groups.
 - + Saint Thomas Health (Nashville, Tenn.), Saint Agnes Hospital (Baltimore), Alexian Brothers Medical Center (Elk Grove Village, Ill.), St. John Providence Health System (Warren, Mich.) and Ministry Health Care (Stevens Point, Wis.) use social media such as Twitter and Facebook to communicate with associates and the communities in which they are located.
 - + Ministry St. Joseph's Hospital (Marshfield, Wis.) participates in the Garden of Giving. Associates volunteer time and materials to grow food in a garden on hospital property, which is donated to local food pantries.
 - + Several Health Ministries, including Our Lady of Lourdes Memorial Hospital (Binghamton, N.Y.), St. Vincent Health Care (Jacksonville, Fla.) and Via Christi Health (Wichita, Kan.) employ interns to conduct research and implement sustainability projects.



2

Education & Communication

A Ministry Health Care quarterly publication, including a green column, is sent to 125,000 residents in Wisconsin.

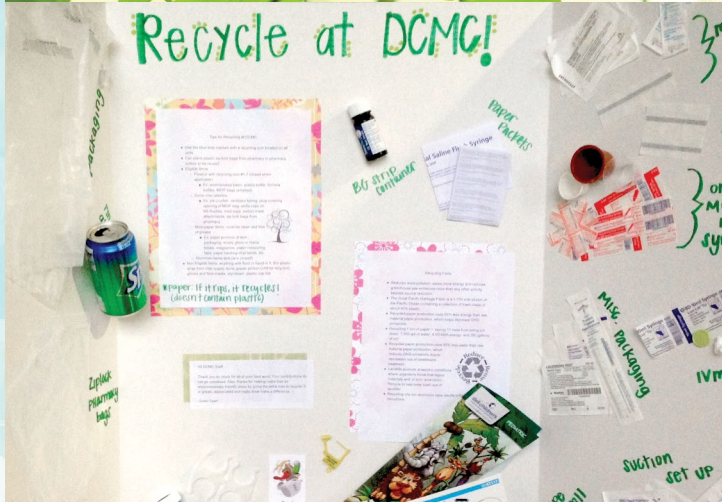
Education and communication are important tools to create awareness, improve adoption of practices and share success stories in the area of environmental stewardship with associates, patients, visitors and the communities we serve.

Through information sharing, Health Ministries can adopt existing programs with proven results. Once policies and programs are in place, new-associate training and annual training can help with behavior change and effective implementation of environmental stewardship best practices.

Data collection and calculating the social, environmental and financial outcomes of environmental stewardship practices are fundamental elements of the program. Programs are tracked for a set period of time with consistent criteria to set a benchmark, then monitored monthly, quarterly and yearly to evaluate progress. Metrics are also used to compare internally to other Ascension Health facilities and industry-wide against award-winning hospitals to measure success and set targets.

- + In 2013, 56 percent of Ascension Health hospitals documented Community Benefit activities incorporating sustainability in IRS Form 990.
- + Seton Healthcare Family (Austin, Texas) assigns Practice Greenhealth webinars to provide environmental stewardship training for associates.

Photos to right: Dell Children's Medical Center of Central Texas (Austin, Texas), Green Team Earth Day party on the hospital loading dock.
Front Row (pictured from left to right): Caitlin Marcellus, Christine Scheer, Shannon Reid - Nurses from 4
Central Back Row (pictured from left to right): Earl Green, Norberto Reyes - Plant Operations Staff



3

Energy Efficiency

The healthcare industry ranks second only to the food service industry in intensity of energy use (kBtus [thousand British thermal units] consumed per square foot per year). The high energy intensity of fossil fuel-generated power used in healthcare facilities is having the unintended consequence of causing additional illness and disease that must then be addressed.

Ascension Health established a formal energy efficiency program in order to manage electricity and natural gas consumption with initiatives around lighting and management of existing facility infrastructure. Energy efficiency is the backbone of the Environmental Stewardship Program and was the first area to demonstrate tracking environmental performance from a financial perspective. The System has achieved 9.1 percent energy use reduction from June 30, 2008, through June 30, 2013 across 35 million square feet of

space, for a total cost avoidance of more than \$30 million and 460,000 tons of carbon dioxide emissions reduction.

After tracking energy use with Energy Star Portfolio Manager since 2008, in 2012 Ascension Health became a founding partner in the Department of Energy's Better Buildings Challenge, setting an aggressive goal to reduce energy use across the entire acute care hospital portfolio 20 percent by 2020. A robust set of architectural, engineering and construction standards is used on both new construction and renovation projects to ensure the continued path of energy efficiency. Daylighting, lighting controls, fluorescents and LEDs have dramatically reduced energy use, as has the use of variable-speed motors on mechanical equipment. Facilities use Building Automation Systems and are commissioned and retro-commissioned in order to optimize operation of existing heating, ventilation and mechanical equipment.

- + 44 percent of Ascension Health hospitals have received utility rebates and incentives as well as local, state and federal grants to fund energy efficiency projects including fluorescent and LED lighting retrofits and installing variable-frequency drives (VFDs) on mechanical-equipment motors.
- + Ascension Health requires commissioning (for new construction) and retro-commissioning (for existing facilities), which is a quality-control process to optimize the operations and maintenance of heating, ventilation and mechanical systems.
- + St. Elizabeth Hospital (Appleton, Wis.) achieved 22 percent energy reduction since 2010 through a series of energy-conservation measures including a new central utility plant and new air-handling units with VFDs.



Photo to right: Borgess Medical Center (Kalamazoo, Mich.), Cooling Tower installation

4

Water Conservation

Ministry St. Joseph's Hospital (Marshfield, Wis.) has been commended as a Groundwater Guardian Green Site for four years, recognizing groundwater stewardship.

Hospitals are one of the top 10 consumers of water in the communities they serve. Most water is treated to potable water standards, which means water that is clean enough to drink. However, only about 20 percent of that water is actually used for drinking and other sanitary needs. Being mindful of how water is used in a healthcare facility will affect the Triple Bottom Line of environmental stewardship—environmental, financial and societal.

A practical example of water conservation is landscaping and irrigation. Low-water, native plants are used so less water is needed. The irrigation system can be weather-controlled so sprinklers are not run in the rain. Harvested rainwater can be used for irrigation and to wash vehicles. Water conservation practices will save money and water, which are environmental and financial benefits and reduce the amount of water that needs to be processed to potable standards, which is a community benefit.

The new St. Vincent Fishers Hospital near Indianapolis uses native and low-water landscaping and a drip irrigation system with climate-control sensors to reduce water use.

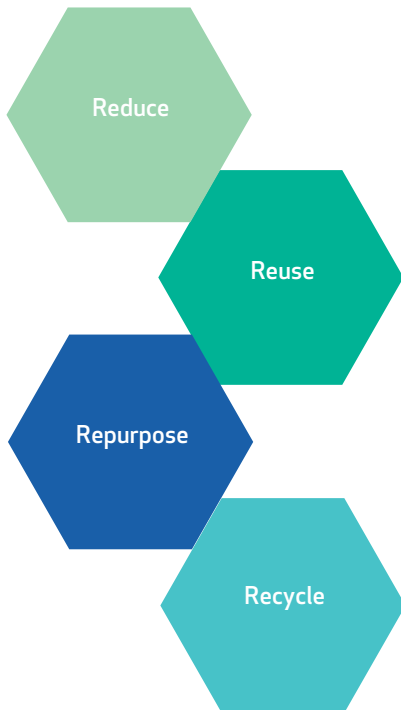
- + Water conservation projects employed at Ascension Health hospitals include:
- Hands-free water faucets and auto-flush toilets
 - Waterless cooling systems for medical equipment
 - Low-water and weather-controlled irrigation systems
 - Laundry-water reclamation systems
 - Municipal reclaimed water used for HVAC cooling towers
 - Rainwater harvesting
 - Non-potable water re-use
 - Microfiber mops, which require 95 percent less water and also less cleaning chemicals

Photo at top right: St. Vincent Fishers Inpatient Expansion Project (Fishers, Ind.)



5

Waste Management & Reduction



Waste Management and Reduction is one of the most vibrant categories in the Environmental Stewardship Program. There is tremendous opportunity within healthcare for waste management, reprocessing medical devices and recycling. Significant cost differences for handling different types of waste, environmental consequences and required behavior change guide us in this area. Reprocessing single-use medical devices following Food and Drug Administration guidelines significantly reduces a hospital's medical waste, thus driving down costs and sending less trash to area landfills. In addition, some materials such as cardboard and mixed metals, can be sold to create a revenue stream.

Waste is classified in four categories at Ascension Health—municipal solid waste, recycling, Regulated Medical Waste (RMW, also referred to as “red bag” waste) and Hazardous Waste (HW). When items are safely moved from the final two categories, which are very expensive to handle, to either recycling or solid waste, expenses can be reduced dramatically.

An innovative composting program was implemented at Our Lady of Lourdes Memorial Hospital (Binghamton, N.Y.). Food waste from the kitchen, cafeteria and patient trays are collected and picked up by a contractor to be turned into compost off-site. This, done at no cost to Lourdes, has reduced solid-waste costs and volume by almost 50 percent and is sending less trash to the local landfill. The compost is returned to Lourdes, where it is used for flood control on the nearby river, and used on landscaping and an organic garden.

Primary opportunities for Waste Management and Reduction are to **Reduce, Reuse, Repurpose** and then **Recycle**. Trash is sent to the landfill only as a last resort. This will reduce costs, significantly reduce environmental impact, and provide benefit to the community by creating recycling jobs and reducing the size of landfills needed.

+ In FY13, the 45 Ascension Health facilities completing the Waste Management category of the Environmental Stewardship Program Template disposed of:

- 20,700 tons of municipal solid waste at a cost of \$1.9 million

- 5,700 tons of recycling at a cost of \$500,000

- 1,540 tons of Regulated Medical Waste at a cost of \$700,000

+ Reporting in this category continues to be a challenge as some hospitals are not able to obtain accurate waste management data due to inconsistency in the ways local waste haulers measure and track the four categories of waste.

+ Saint Agnes Hospital (Baltimore) reduced Regulated Medical Waste ("red bag") from 53 percent of total waste

in FY12 to 22 percent in FY13; increased solid waste ("clear bag") from 27 percent to 56 percent; and increased recycling from 20 percent to 22 percent of total waste.

+ 52 percent of hospitals have a pharmaceutical waste management program and 56 percent donate to a beneficial donation program such as Dispensary of Hope.

+ 42 percent of hospitals have a "Greening the OR" or other innovative waste-management program in place.

+ Two hospitals (St. Mary's Medical Center, Evansville, Ind., and Ministry St. Clare's Hospital, Weston, Wis.) reported recycling revenue by selling cardboard and mixed metals.



6

Food Systems

Food systems are focused on providing sustainable food options within dietary, cafeteria and vending programs. Opportunities include the adoption of a sustainable food policy and plan, improving access to healthy food options, purchasing locally grown foods or sustainably produced food, using environmentally preferred food serving items, reducing food waste, and composting.

Purchasing local food requires less shipping, which saves fuel. Serving food on trays at meetings instead of in single-serving packages reduces waste. Eliminating plastic foam cups and boxes reduces a material that is almost impossible to recycle. These are just a few examples of how food fits into the Environmental Stewardship Program.

A Meeting Healthy brochure was produced in collaboration with seven departments at the System Office and is available on the home page of myAscensionHealth.org. The brochure provides guidance to meeting planners for events ranging from in-office lunches to multi-day conferences. Suggestions are given for planning and ordering food, incorporating activity into meetings, understanding nutrition for meals and breaks, as well as incorporating green practices during a meeting.



+ 75 percent of Ascension Health hospitals have a healthy-food initiative in place, including:

- Local produce and food vendors
- Reduced antibiotics in meat and seafood
- Cage-free eggs
- Balanced Choice menu options
- On-call dining for patients
- Reduced prices for healthy food options
- "Stealth Health" healthy ingredients
- Whole-wheat breads and pizza dough, fresh fruits and vegetables
- Reducing fried foods and sodium

+ FY14 participation in this category will increase to 100 percent with the TouchPoint food service contract implemented across Ascension Health.

+ Following the commitment of the Daughters of Charity to minimize the use of bottled water, 56 percent of Ascension Health hospitals have reduced the use of bottled beverages, including sugary drinks.

+ It is becoming common practice to use washable dishes, cups, cutlery and serving utensils in food service rather than disposable items. In addition, many Ascension Health hospitals are working to eliminate the use of plastic foam for carryout containers and drinks, since that material generally cannot be recycled.



Photo to left: "Meeting Healthy" brochure, Ascension Health System Office
<https://communities.mycensionhealth.org/cm/facilitiesprofessionals/es/Meeting%20Healthy%20Brochure/Forms/AllItems.aspx>;
photo to right: Sharon Ritchie, Executive Secretary, Borgess Medical Center (Kalamazoo, Mich.), presenting vegetables to Loaves and Fishes Director

7

Sustainable Site & Transportation

Sustainable Site and Transportation is a broad category that includes real estate selection, green construction, operations and maintenance of buildings, vehicles, landscaping and site water management including irrigation and green roofs. Transportation is included due to the impact of how the hospital location is accessed and experienced by associates, patients, visitors and the community at large.



Several examples that fall into this category include:

- + Green roofs are incorporated at Columbia St. Mary's (Milwaukee) and Dell Children's Medical Center of Central Texas (Austin, Texas).
- + Several facilities have installed electric-vehicle charging stations, including Borgess Medical Center (Kalamazoo, Mich.).
- + Landscape features at many hospitals include walking paths, healing gardens and organic vegetable gardens.
- + Sustainable facility management practices include green cleaning and reduced use of pesticides and herbicides.
- + 56 percent of Ascension Health hospitals use environmentally responsible practices

for the operations and maintenance of existing facilities, which include recycling batteries, lamps, motor oils, lead products and refrigerants.

- + Alternative transportation and fuel programs are implemented at several hospitals, including:
 - Bike to Work
 - Carpooling assistance
 - Preferred parking for fuel-efficient vehicles
 - Electric-vehicle charging stations
 - Alternative-fuel fleet vehicles
 - GPS fleet-management systems



Photo top left: Borgess Medical Center (Kalamazoo, Mich.), Sister Anastasia Healing Garden; photo to right: Borgess Medical Center (Kalamazoo, Mich.), Electrical Vehicle Charging Station Bobby Hopewell, (left) Director, Borgess Hospitality Services and Mayor of Kalamazoo; Paul Spaude, (center) President & CEO, Borgess Health; Daniel Doehrman, (right) Executive Director, Green Earth Michigan.

8

Chemical Management

Most Ascension Health hospitals have eliminated the use of mercury and EtO (ethylene oxide, used in sterile processing).

Healthcare uses a range of chemicals for everything from lifesaving medications to cleaning products to diagnostic testing in labs. Hazardous exposure to chemicals can seriously impact health, so an effort is being made to identify unnecessary chemicals and eliminate their use. A recent Green Hospitals conference in Michigan discussed the use of hydrogen peroxide and steam for cleaning to minimize the use of harsh and toxic chemicals. Alternatives to bisphenol A (BPA), used to make IV bags and tubes soft (but an endocrine disruptor), are being tested. Plastic materials are being studied to improve the ability to recycle and to keep harmful chemicals out of hospitals. Product and process designs are being analyzed at initial life-cycle stages in order to minimize the use of hazardous chemicals.

Chemicals have a direct impact on the indoor environment that is experienced by our associates, as well as patients who are already in a weakened physical state. Careful consideration of the benefits and risks associated with chemicals in construction materials, cleaning products and pesticides that release into the air are significant factors in creating a healing environment.

- + 60 percent of Ascension Health hospitals have reduced hazardous chemicals for cleaning, pesticides and herbicides and 67 percent have implemented non-chemical Integrated Pest Management programs.
- + Borgess Medical Center (Kalamazoo, Mich.) uses no-wax flooring to minimize the need for chemical stripping and waxing products. This also significantly reduces labor costs as these tasks are eliminated and replaced with simple mopping and buffing.
- + In conjunction with Environmentally Preferable Purchasing initiatives, alternatives to BPA (bisphenol A, used in polycarbonate plastics), phthalates (additives to make plastic more flexible) and PVC (vinyl plastic) are being sought.



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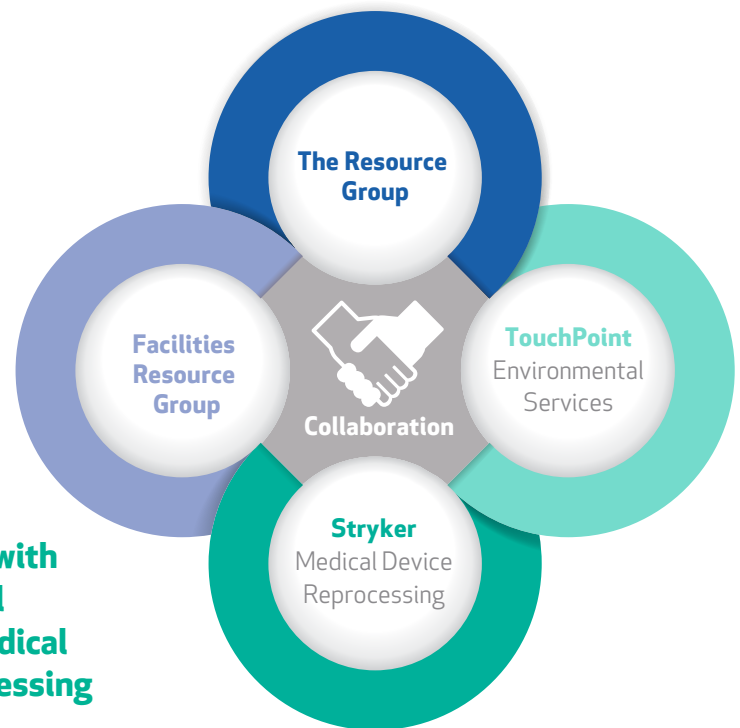
Environmentally Preferable Purchasing

Environmentally Preferable Purchasing (EPP) can improve the environmental performance and reduce the environmental impact of products and services in use across Ascension Health. EPP programs assess products, packaging and delivery with cost and performance criteria in mind.

EPP may have the most synergy of any of the categories. It is strongly connected to Food Systems as well as Waste Management and Reduction. The types of products purchased determine how they will be used and how they can be recycled or disposed of at the end of their useful life. Teamwork between departments is

required to select products carefully, write effective proposals and contracts, and manage the use and disposal of those products in order to keep trash out of landfills. Also, packaging and shipping methods are very important.

The Resource Group and systemwide vendors are important partners in the success of EPP. Healthcare purchasing, food systems and waste management are being transformed to become more sustainable. There are significant opportunities in healthcare to use purchasing power and customer demand in order to achieve environmental stewardship goals.



Collaboration with Environmental Services & Medical Device Reprocessing

+ 88 percent of Ascension Health hospitals use reusable and recyclable products in lieu of disposable products for items such as:

- Surgical drapes, gowns, scrubs, minor-procedure trays, basins
- Reprocessed Pulse Ox probes, stethoscopes, blood-pressure cuffs
- Totes for deliveries and shipping

+ Many hospitals give preference to purchasing Energy Star and EPEAT electrical and computer products.

+ An EPP Task Force has been established by the System Green Team to collaborate with The Resource Group and systemwide vendors to incorporate sustainability in product selection, contracts and purchasing agreements.

+ Ascension Health works with the following systemwide vendors to promote environmental stewardship.

Call2Recycle

Rechargeable batteries

Cintas

Confidential paper shredding and recycling

Cloud Blue

Computer-equipment recycling

Dell

Computer-equipment recycling

Dispensary of Hope

Unexpired medication take-back and distribution

Energy Star

Energy efficiency monitoring and reporting

Medxcel Facilities

Facility management

Ricoh

Managed print services

Schneider Electric

Energy purchases, utility-bill management, reporting

Staples

Office supplies

Steelcase

Furniture and furnishings

Stericycle

Reusable sharps containers, waste management

Stryker

Reprocessing program for medical devices

TouchPoint

Environmental Services, Food Services

TriMedx

Medical equipment

Synergy

In practice, there is a great deal of overlap among the nine categories of the Environmental Stewardship Program.

There is a strong connection between **Leadership and Infrastructure** and **Education and Communication**. Ascension Health is actively engaged in Community Benefit programs that improve community health through leadership, education and environmental improvements.

Three examples:

St. John Medical Center (Tulsa, Okla.), holds a “Green Fest” on October 4 each year to celebrate the Feast of St. Francis of Assisi (patron saint of the environment). The fair introduces community residents to conservation and recycling and encourages practices that reduce energy usage and waste to create a cleaner and safer community. The St. John Green Team hosts the event, which provides

education and offers a plant exchange and free tree saplings. The event annually draws 400-plus people.⁵

Columbia St. Mary’s (Milwaukee) and Saint Thomas Health (Nashville, Tenn.) work with the Dispensary of Hope to donate medication samples that are soon to be expired to clinics serving vulnerable populations. The project not only improves patient care but also diverts unused medications from landfills. The program has 29 clinics participating and more than \$40,000 worth of medication has been donated.⁵

Saint John Providence Health System (Warren, Mich.) and Ascension Holdings, a subsidiary of Ascension, are sponsors of Enterprising Health, a program in Detroit to help entrepreneurs build the skills necessary to develop and operate sustainable businesses, which must

Definition of Synergy:

The ability of individual organizations or groups to be more successful or productive as the result of a merger.³

The interaction of two or more agents or forces so that their combined effect is greater than the sum of their individual effects.⁴

Synonyms: Teamwork, alliance, coaction, harmony, symbiosis, synergism, union, unity, combined effort, team effort, teaming, working together, cooperation, aid, assistance, collaboration, concert, concurrence, help, participation, partnership, responsiveness, service, society, unanimity, unity, coalition, esprit de corps, harmony

be focused on improving the health of Detroit and the surrounding communities. A selected project named Healthy Dollar is a strategically located storefront and meeting space. It creates a hub for health in the city of Flint, Mich., by providing access to low-cost fresh fruits and vegetables and a setting for health education and community health events. Other supported projects have included a web-based grocery store that makes home deliveries of fresh food to make healthy eating more convenient for families, professionals and students.⁵

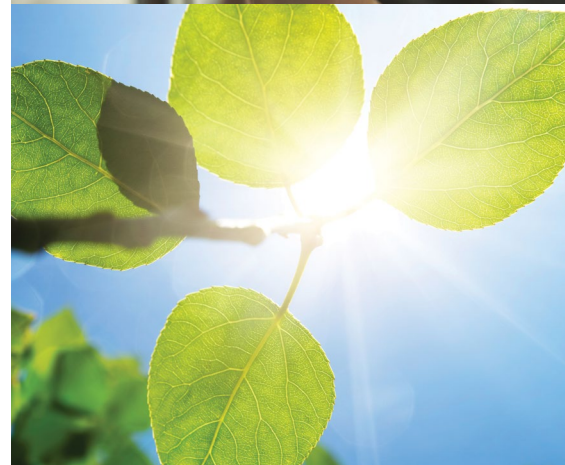
Water Conservation practices translate directly into **Energy Efficiency**. Using less potable water means water does not have to be cleaned, chemically treated, pumped, heated, cooled or managed through the sewage system.

The Energy–Water–Community Health Connection: Roughly 90 percent of the energy we use today comes from nuclear or fossil-fuel power plants, which require 190 billion gallons of water per day, or 39 percent of all U.S. freshwater withdrawals (water withdrawn from ground-level water sources). Energy production from coal requires more water and generates more greenhouse gas

emissions and other pollutants than any other energy source. Natural gas emits about half the carbon emissions of coal and requires less water than coal, but still needs an enormous amount of water for drilling activities and conversion to electricity. Thus, reducing energy use and using renewable energy sources instead of fossil-fuels will reduce both water use and pollutants.⁶

The practice of **Environmentally Preferable Purchasing** informs the types of products brought into facilities, influences how they are used, if they can be repaired or reprocessed and how they are disposed of at the end of their useful life. Disposal transitions the products into the **Waste Management and Reduction** category. In a similar fashion, food waste from kitchen preparation, cafeteria waste and non-infectious patient food can be composted, dramatically reducing a hospital's solid-waste volume and cost.

An over arching concept in sustainability is the **Triple Bottom Line**. Historically, business decisions have focused on financial impacts. In the 1970s, the first environmental movement blossomed with a primary focus on ecological





concerns only. The concept of **sustainability** considers three areas of focus: environmental, financial and social. For an initiative to be truly sustainable, all three elements should be in balance.

The idea of the **Triple Bottom Line** is fully integrated into the Environmental Stewardship Program. The Daughters of Charity have a page on their website devoted to Social Justice. They ask that we consider reducing the use of bottled water to only necessity and conserve as a means of solidarity with the world's poor. For the price of one bottle of water, 1,000 gallons of tap water can be purchased for home consumption. Thus, minimizing the use of bottled water is less expensive (a financial benefit), minimizes energy use, shipping and waste (three environmental benefits), and frees resources to help the poor (a social benefit). This is a useful illustration of how many sustainability activities can be evaluated through the lens of the Triple Bottom Line.



Another compelling example of synergy is the **Integrative Design Process** used on LEED (Leadership in Energy and Environmental Design) projects. Using the Integrative Design Process, the full project team is brought together early in the project to collaborate on major design and budget decisions. This engages the team to use all knowledge available, make informed decisions and understand the impact of those decisions on multiple aspects of the project.

Synergy in Our Communication Groups

System Green Team : Health Ministries : Hospitals

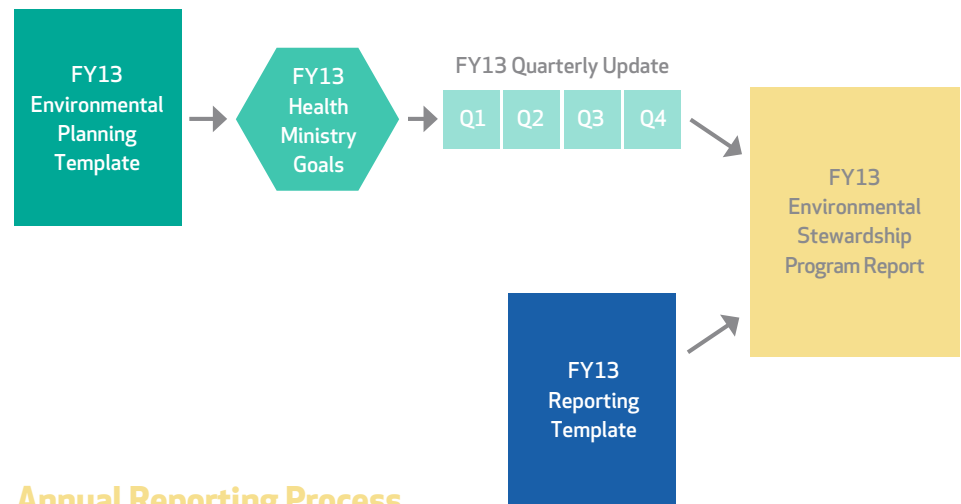
The Environmental Stewardship Program is both a top-down and a bottom-up initiative.

At the top of the organization, the program has executive endorsement and follows the Ascension Health Strategic Direction's Enabling Strength of Vital Presence. The System Office demonstrates leadership by providing a staff position to manage the program, as well as participating in several healthcare and sustainability organizations with national memberships and board participation.

At the grassroots level, several successful Greening the OR, single-stream recycling and energy-efficiency programs were started by teams at individual hospitals.

It has often been shown that programs are most successful when there are individuals with vision and commitment focused on the effort.

System Procedure OL-14 articulates Ascension Health's operational approach to environmental stewardship. Each Health Ministry participates in the program by setting goals, with flexibility in selecting which of the nine reporting categories to emphasize. Goals in Energy Efficiency, Water Conservation, and Education and Communication categories are required, as well as a fourth goal from any category. Each hospital completes an annual report documenting sustainability practices from the previous year. The annual reporting process is illustrated below:



Annual Reporting Process

Synergy in the Organizations in Which We Participate



The Ascension Health System Office has been a longstanding partner with **Practice Greenhealth**, an organization dedicated to sustainability in healthcare. Five Ascension Health hospitals have won 18 awards, including Borgess Medical Center (Kalamazoo, Mich.), which has been named to the Environmental Leadership Circle (the highest award) seven times.

The **Healthier Hospitals Initiative** is a program built upon the success of the 100,000 Lives campaign that uses data to demonstrate the critical role sustainability plays in quality healthcare in the 21st century. The program is composed of six Challenges. All Ascension Health hospitals are enrolled in the Leaner Energy Challenge. Several hospitals are participating individually in the other five Challenges—Smarter Purchasing, Safer Chemicals, Healthier Food, Engaged Leadership and Less Waste. The Challenges closely align with the nine categories established in the Ascension Health Environmental Stewardship Program.

Health Care Without Harm is an international organization primarily focused on safer chemicals and healthy food systems. Ascension Health's food service vendor, TouchPoint, is a national signatory of the **Healthy Food in Healthcare Pledge** via its parent company, Morrison. In addition, four Ascension Health hospitals signed the Pledge individually.

The **U.S. Green Building Council** is an independent, third-party rating

system for green construction and major renovation projects, as well as operations and maintenance of existing buildings. Two Ascension Health projects are using the **LEED for Healthcare** rating system. Dell Children's Medical Center of Central Texas (Austin, Texas) has achieved LEED Platinum (the highest rating) twice. St. Vincent Fishers Hospital (Fishers, Ind.) expansion project is registered and is awaiting certification.

The **American Society of Healthcare Engineering** is an organization that provides strong guidance to Ascension Health in the areas of energy efficiency, engineering standards and best practices for healthcare. The **ASHE E2C** award is given to hospitals that reduce energy use by at least 10 percent over a 12-month period and has included Saint Thomas Rutherford Hospital (Murfreesboro, Tenn.), Saint Thomas West Hospital (Nashville, Tenn.), Saint Thomas Midtown Hospital (Nashville, Tenn.), four times, Alexian Brothers Medical Center (Elk Grove Village, Ill.), Providence Hospital (Mobile, Al.) and Dell Children's Medical Center of Central Texas (Austin, Texas).

Energy Star Portfolio Manager has been the basis of Ascension Health Energy Efficiency reporting since June 2008. The data collected in Portfolio Manager is used as a basis for several other programs, including the **Better Buildings Challenge, Practice Greenhealth** and **ASHE** awards submittals.

Summary & Future Plans

There are several challenges and opportunities in the continued development and effectiveness of the Environmental Stewardship Program at Ascension Health:

1. Staff resources to focus on environmental stewardship

The Vision Statement directly connects to ideas in Catholic Social Teaching that we are obligated to care for the Earth and minimize our impact in our hospitals and in the communities where we are located. This ties in directly with the Ascension Health Mission, Vision and Values. Currently, Ascension Health has eight staff across the System focused on environmental stewardship. Others participate in the program in addition to their primary roles. While there is strong support for the Environmental Stewardship Program, creativity is required to fit this work into other full-time responsibilities.

2. Access to financial and environmental data to demonstrate value

Partnerships with systemwide vendors create the opportunity to collect environmental-stewardship metrics directly rather than individually from each hospital. This will streamline reporting, ensure consistency, and allow environmental, financial and social statistics to be tracked by hospital, by Health Ministry and collectively for all of Ascension Health and to be measured year over year against baselines and goals.

3. Elevating the Environmental Stewardship Program from the operational to the strategic level

Organizations equate sustainability with competitiveness and differentiation. Sustainability is a key driver to attract and retain the best associates. In addition, when green practices are viewed strategically, they can transform an organization.⁷

4. Driving sustainability into the supply chain

Ten years ago the construction industry was transformed; it is now common to build and operate green buildings. Healthcare is in the process of transformation with Waste Management and Reduction, Environmentally Preferable Purchasing and Healthy Food practices being implemented on a large scale. Involvement of The Resource Group is critical to success in this area. Sustainability is becoming integrated within healthcare's business practices, thus demonstrating environmental, social and financial benefits.⁷



Photo bottom center: St. Vincent Fishers Inpatient Expansion Project (Fishers, Ind.)



In FY13, communication was a primary goal for the Environmental Stewardship Program. An intranet web page and a quarterly newsletter were established. Ascension Health demonstrated leadership in the field of healthcare sustainability by sharing the program at regional and national forums, including:

- + Seminars at the 2013 Practice Greenhealth CleanMed Conference
- + Presentation at the 2013 American Society for Healthcare Engineering Conference
- + Feature articles in the American Health Association *Trustee* and *Building Operating Management* magazines
- + Webinar on the energy efficiency program for the Healthier Hospitals Initiative
- + Presentations at regional conferences including the U.S. Green Building Council "Greening the Heartland" Conference and the Michigan Green Health Care Annual Conference

Moving forward, the focus for the next 12 to 18 months will be Waste Management and Reduction, Environmentally Preferable Purchasing, and Food Systems. The three areas present prime opportunities to reduce environmental impact, save significant operating expense and provide community-wide social benefit as the Ascension Health Environmental Stewardship Program supports the Mission to "sustain and improve the health of individuals and communities."

St. Vincent Fishers Inpatient Expansion Project

Education and Communication
Information Displayed
in Building

Energy Efficiency
Efficient HVAC Systems
Commissioning

Sustainable Site
Site Management During
Construction
LEED for Healthcare



Waste Management and Reduction
Construction Waste Recycling

Leadership and Infrastructure
U.S. Green Building Council
Greening the Heartland

Water Conservation
Efficient HVAC Systems
Commissioning

Food Systems
Cafeteria Design
Menu Planning

Photo center: St. Vincent Fishers Inpatient Expansion Project
(Fishers, Ind.)

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