

2009-2015
CAMPUS
GREEN
INITIATIVES

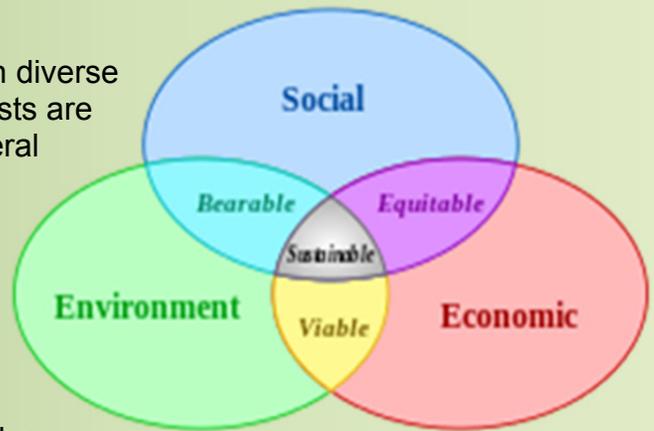

SAINT
MARY'S
COLLEGE
NOTRE DAME, IN


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Definition of Sustainability:

In ecology, sustainability is how biological systems remain diverse and productive. Long-lived and healthy wetlands and forests are examples of sustainable biological systems. In more general terms, sustainability is the endurance of systems and processes. The organizing principle for sustainability is sustainable development, which includes the four interconnected domains: ecology, economics, politics and culture.^[1] Sustainability science is the study of sustainable development and environmental science.



Healthy ecosystems and environments are necessary to the survival of humans and other organisms. Ways of reducing negative human impact are environmentally-friendly chemical engineering, environmental resources management and environmental protection. Information is gained from green chemistry, earth science, environmental science and conservation biology. Ecological economics studies the fields of academic research that aim to address human economies and natural ecosystems.

Moving towards sustainability is also a social challenge that entails international and national law, urban planning and transport, local and individual lifestyles and ethical consumerism. Ways of living more sustainably can take many forms from reorganizing living conditions (e.g., ecovillages, eco-municipalities and sustainable cities), reappraising economic sectors (permaculture, green building, sustainable agriculture), or work practices (sustainable architecture), using science to develop new technologies (green technologies, renewable energy and sustainable fission and fusion power), to adjustments in individual lifestyles that conserve natural resources.

Source: Wikipedia

What does Going Green mean?

Going green is a popular term used to describe the process of changing one's lifestyle for the safety and benefit of the environment. People who go green make decisions about their daily lives based on the impact their actions have on global warming, pollution, loss of animal habitats and other environmental concerns.



Go Green Initiatives?

GGI Mission:

The mission of the Go Green Initiative is to provide schools with the tools and training they need to create a "culture of conservation" within their community. Our goals are to conserve and protect natural resources for future generations, and to protect human health through environmental stewardship.

What does it mean to "Go G.R.E.E.N.?"

- G enerate less waste.
- R ecycle everything that can be reused.
- E ducate the community on eco-friendly options.
- E valuate the environmental impact of actions.
- N ourish discussions and activities that integrate environmental education into existing curriculum.

Source: gogreeninitiative.org

Introduction

About Saint Mary's College: Saint Mary's College, Notre Dame, Indiana, is a four-year, Catholic, residential, women's liberal arts college offering five bachelor's degrees and more than 30 major areas of study, such as business, nursing, art, chemistry and social work. The College's single-gender environment has been proven, in study after study, to foster confidence, ethical leadership and strong academic success. Saint Mary's College ranks among the top 100 Best National Liberal Arts Colleges for 2015 published by U.S. News & World Report. Founded in 1844 by the Sisters of the Holy Cross, Saint Mary's College's mission is to educate women and prepare them for postgraduate success whether it's a first job, graduate school or postgraduate service.

In the Saint Mary's College Strategic Plan, *Boldly Forward*, a new fundamental principle was introduced to the existing four principles that have long guided the college.

FIFTH PRINCIPLE:

Saint Mary's is committed to campus sustainability.

The word "sustainability" is most often used in conjunction with ecological concerns. We use the word "sustainability" here in a much broader sense, a sense that includes social, economic and cultural sustainability in addition to environmental protection.

-**BOLDLY FORWARD: A Strategic Plan for Saint Mary's College 2012-2017**

God's gift of creation is a precious resource. Its beauty is abundantly evident on our campus (Recommendation 23). Although this principle and science of sustainability may be new to Saint Mary's strategic plan, the college has been and continues to make knowledgeable and environmentally conscious efforts not only campus wide, but however far we can reach!

Saint Mary's College Mission Statement

Saint Mary's College is a Catholic, residential, women's college in the liberal arts tradition. A pioneer in the education of women, the College is an academic community where women develop their talents and prepare to make a difference in the world. Founded by the Sisters of the Holy Cross in 1844, Saint Mary's promotes a life of intellectual vigor, aesthetic appreciation, religious sensibility, and social responsibility. All members of the College remain faithful to this mission and continually assess their response to the complex needs and challenges of the contemporary world.



New and Existing Building Sustainability

Construction Recycling

In 2013 SMC, through the Facilities department, requires 50-75% of all demolished material to be recycled. Glass, copper, aluminum, steel, concrete, asphalt, wood, plastic and lighting are just a few examples of recyclable items. During the completion of a project, SMC requires a report on total weight of recyclable items. Most recently five projects met and exceed this requirement. Science Greenhouse Renovation, Regina Hall HVAC Renovation, Madeleva Window Replacement and McCandless HVAC Renovation.



Green Roof

SMC installed their first green roof on Spes Unica Hall in 2010. SMC utilized the *LiveRoof* system to give the look and function of a conventional green roof “membrane” system, with the turn-key benefit of a modular system.

What does a green roof provide?

1. A green roof can reduce cooling loads in the summer by 25%.
2. The green roof protects the building’s roof from ultraviolet radiation, large temperature fluctuations, drying winds and punctures. This extends the life of the building’s roof by 100-200 percent.
3. Green roofs store rainwater in the plants and growing mediums which, if unused, evaporate back into the atmosphere. A green roof can store 70-80% of rainfall.
4. Reduces carbon monoxide impact.
5. Neutralizes acid rain.
6. Provide a habitat for insects.

When replacing the roof at Science Hall, SMC decided to have a roofing membrane installed that would support a green roof. Wouldn’t it be ideal to have plants on the Science roof? Where students could study their growth and effect on the environment and maybe even study bee or bug activity within the plant medium.



White Roofs

SMC completed four major roofing replacements in the last 5 years with 3 of the 4 having a ballast type roof originally. A ballast roof is hot mopped asphalt with a river rock spread over the entire roof. River rock is traditionally used in landscaping. SMC salvaged and reused 100% of the ballast (river rock) on the roof throughout flowerbeds and building edges across campus. The new roofs have a white colored membrane to help reduce solar loads on the building and in turn, save cooling energy. Also, the new roofs have three times more insulation value than the old roof had.



River rock being removed and salvaged off Madeleva Hall



Moreau Hall old ballast roof



Moreau Hall new white roof

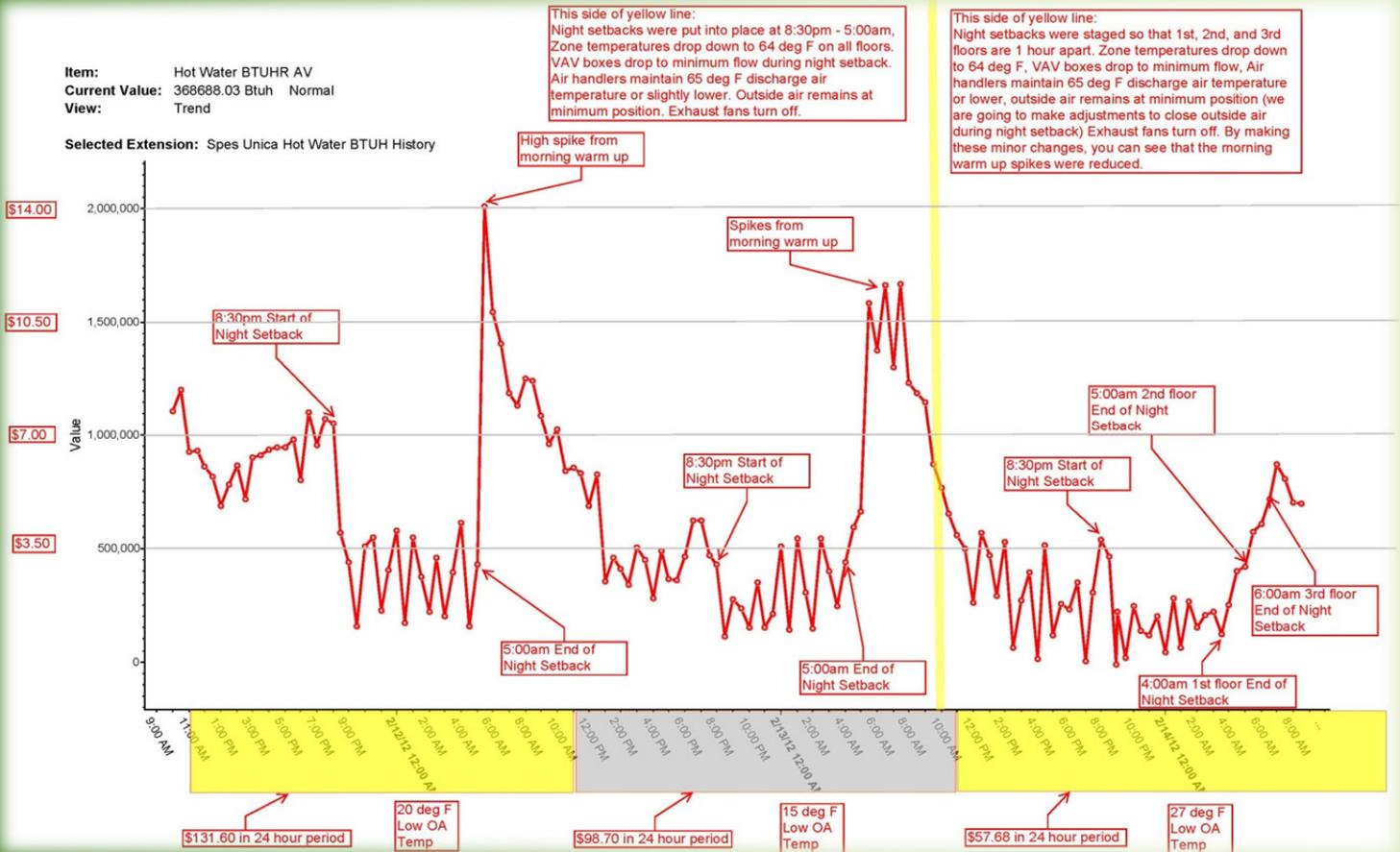


McCandless Hall HVAC & Motion Sensors

During the summer of 2012, the college renovated the heating and air conditioning system within McCandless Hall. The old system had units for each study room which involved a fan that would run continuously. A total of 130 electric fans were removed which resulted in large energy savings. The new system consists of 1 fan that supplies air to the entire building. The study rooms now have an occupancy sensor which controls the light and the air conditioning or heating within the room. When the rooms are not in use, the system will automatically go into a setback mode saving energy.

Night Setbacks

In 2012 Night setbacks were implemented in two buildings on campus through a Building Automation System (BAS). A BAS is a computerized system controlling mechanical, electrical and sometimes plumbing systems. This includes items like heating, air conditioning, lights, water usage and tracking energy usage. The BAS is utilized to turn back temperatures during the night when buildings are unoccupied to save on heating and cooling costs. Plans are in the process to integrate two additional buildings this summer.



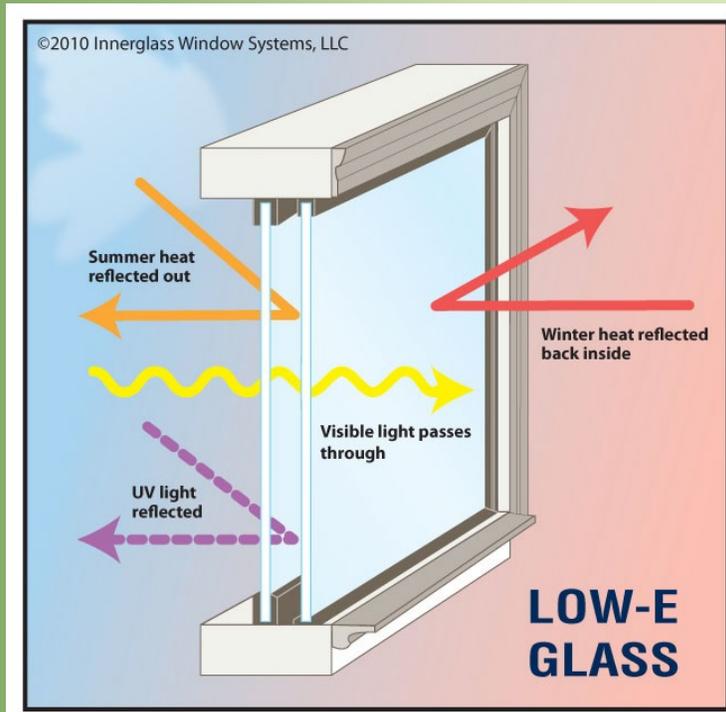
Regina Hall HVAC

In 2013 the heating and cooling system within Regina Hall was renovated. The existing mechanical equipment within the building was nearly 50 years old. That system was oversized for the current use of the building. The new system is much more energy efficient while allowing occupants to control the temperature within their space. To date all of the existing equipment has been removed and installation of new equipment is complete. A crane lowered the new air handling units into the lower level of the building. A total of 30 tons worth of steel and equipment was removed and recycled. 50% of the existing ductwork was utilized with the new system. Newer energy efficient equipment was installed. New direct digital controls were installed throughout to provide a more reliable means of control. Night setbacks are programmed to save energy during unoccupied times.



Madeleva Hall Window Replacement

The two year project of replacing windows in Madaleva Hall was completed in the summer of 2013. A total of 452 single pane windows were replaced with double pane, insulated, “low-e” style windows which block 50% more heat/cold and results in a 30% minimum energy savings. Airflow within the building was slowed down to account for a tighter building envelope. Replacing the single pane windows with energy efficient, double pane windows and removing the zippered architecture design of Madeleva will protect the building from water and pest infiltration. “Low-e” style windows use a low emissivity glass coating that is extremely thin and transparent. This transparent material serves a variety of different purposes. There are three different types of solar energy that occupy the solar spectrum; ultraviolet, visible and infrared light. Each light is defined by a specific wavelength range. Ultraviolet light emitted from the sun will damage furniture, paint, etc. Infrared light, also known as heat energy, transfers heat to buildings. Visible light occupies the wavelengths between ultraviolet and infrared light. The low-e glass coating filters the unwanted wavelengths while allowing the visible light to pass through.



BEFORE

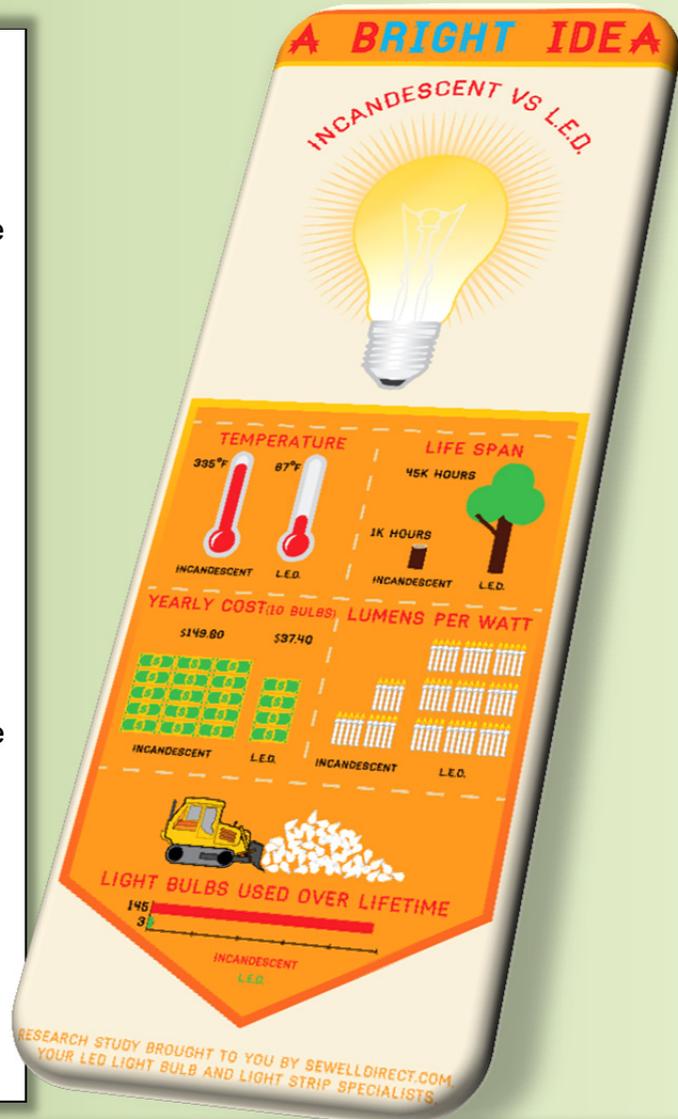


AFTER

Electrical Energy Conservation

Lighting via LED or Delamping

SMC is constantly investigating new methods for energy savings and sustainability. LED lighting is still a very new, constantly improving technology but the overall benefits are already outstanding. LED (Light emitting diodes) are quickly becoming the preferred option for lighting solutions. Significant improvements over traditional light bulbs include greater durability, longer life span, energy efficiency, less maintenance cost, increased safety and "green". For many lighting applications, replacing an older incandescent or fluorescent bulb with an LED equivalent will consume about 90% less energy. Another remarkable characteristic the LED has to offer is the life span. With an average life of 50,000 plus hours, LED's last around ten times longer than compact fluorescent lights and fifty times longer than incandescent light bulbs. Not only does switching to LED technology promote huge energy savings over the long life span, it also reduces the maintenance costs exponentially. All of the previously energy efficient lighting technologies such as fluorescent, metal halide and high pressure sodium require a ballast where LED's typically do not. A ballast is pertinent to these lights to either maintain electrical current or start and maintain arcs. This is an additional cost per light and something else to be maintained. Also, LED's do not emit heat in the form of IR radiation, causing extreme temperatures, which increases maintenance and building safety. Contrary to popular belief, LED's do produce heat which is why it is very important to have a properly designed driver with the appropriate heat dissipation to maximize the overall benefits. Lastly, LED's do not contain the harmful mercury that is found in the commonly used fluorescent lamps and use less energy making them environmentally friendly.



Exterior LED Sidewalk & Street Lights

SMC is currently trying two LED site lighting fixtures on campus. Currently all site lighting is either high pressure sodium or metal halide. This type of lighting is very inefficient when compared to the new LED technology. Not only are LED's extremely energy efficient, they also emit a much whiter light allowing better recognition of colors opposed to the current yellowish orange hew. This brighter, whiter light tends to improve the overall comfort and safety to passersby. Two additional trial lights will be installed during the summer of 2015.

Exterior Lighting Control

All of the exterior lights on campus are now controlled by the Building Automation System (BAS) through one photocell. Some of the lights were on an old time clock type system which needed adjustment based on the length of daylight throughout the year and time zone changes. Utilizing a photocell to measure the amount of natural light outside, we save energy and electrical cost by reducing how long the lights remain on.

Spes Unica Lighting

Did you ever notice that Spes Unica building interior corridor lights were on all night long? Well SMC fixed that. The lights are scheduled to turn off in the evening and come back on in the morning. This equates to more than 200 lights and a yearly savings of \$7000 or more.

Campus Wide Sustainability

FUN FACT:

Rolls of toilet paper used on campus in 2013: 36,000 rolls



Compact Coreless Tissue System

In 2014, SMC installed compact coreless tissue dispensers all across campus. This system utilizes rolls of toilet paper without a cardboard core in the middle. Compact tissue has 95% less packaging waste per case than standard roll tissue. Three times more tissue can fit on one roll of the compact tissue (1,500 feet total). EPA compliant and contains 20% post-consumer recycled fiber.

SofPull Mechanical Towel Dispensers

In 2014, SMC installed new Sofpull towel dispensers campus wide. This system helps reduce waste by only allowing one at a time dispensing and auto cutting optimal sized 11 inch sheets. There are no buttons or hand cranks to touch which helps reduce cross contamination. The paper towel rolls are 100% recycled and contain a higher capacity than standard paper towels (800 feet total).



FUN FACT:

Lather with foam soap before turning on the water. This will further reduce the water usage



Hand Soap Dispensers

In 2014, SMC installed foam hand soap dispensers across campus replacing the liquid soap dispensers previously installed. Foaming hand soap is considered to be easy on the environment, cost effective, efficient, hygienic and all-around sustainable. Manufacturers benefit by producing less soap per sale. Consumers benefit from having to buy less soap, packaging and transportation per unit. Foaming hand soap is a diluted form of liquid soap which entrains air producing a better lather. Foaming hand soap can reduce water usage by up to 45%. The foam washes off easier and the need to wet your hands to produce the desired liquid soap effect is eliminated.

Bottle Fill Stations

Disposable water bottles consume important resources: petroleum and water. As calculated by the Pacific Institute, in 2006, Americans bought 30 billion plastic water bottles, made from 17 million barrels of petroleum; if transportation of bottles was added to the calculation, this number rises to 50 million barrels of oil annually. Further, to produce these bottles requires three times the volume in water, not counting the water inside each bottle. Finally, bottled water also requires energy throughout its life cycle: to capture, treat and send water to the bottling plant; to fill, package, transport and refrigerate the bottled water; and recycle or dispose of the empty containers. What have we done? Water Bottle Refilling Stations are an answer to the inefficiency of our current system of water distribution at Saint Mary's College. Through the strategic placement of these stations around the college in various buildings, students have access to clean, good-tasting water that quickly and easily will refill their reusable water bottles. It is a popular and sustainable alternative to expensive disposable plastic water bottles. Our first water bottle fill station or hydration station was installed in 2013 and initiated by the Resident Hall Association. A total of four stations are installed across campus mainly in resident halls. One additional station will be installed in the Angela Athletic Center.



Floor Scrubbers

Over the years, SMC slowly started replacing the traditional style of floor scrubbers used on campus. The floor scrubbers were replaced with a more eco-friendly and sustainable version. The newer floor scrubbers utilize less cleaning chemical, less water and require less runtime which reduces the amount of maintenance needed.

What is sustainable cleaning?

Sustainable cleaning not only reduces environmental and human-health impacts, but also increases energy efficiency, reduces laborious scrubbing and decreases equipment maintenance.

Green Seal Cleaning Products

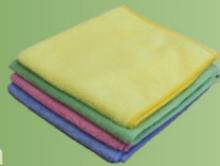
SMC used over 20 different cleaning products at one time. Today, that extensive amount of cleaning products is reduced down to 6 main products. The most commonly used products are considered green seal cleaning products. What are green seal products? Certified cleaning products that have passed performance tests and contain no carcinogens, reproductive toxins or mutagens, among other restricted compounds. Ingredients known to cause asthma are not allowed and there are limits on VOCs. The products are not toxic to aquatic life and are biodegradable. H2Orange2 is the primary cleaning product on campus and can be used for nearly 95% of all cleaning campus wide. This product is a concentrate that is diluted in water through a chemical dispensing device which measures the exact amount of cleaner needed. Also, H2Orange2 disinfects 99.99% of common bacteria and viruses.



FUN FACT:

More than 90 percent of the mopping in the United States uses a traditional string mop with a single compartment bucket. According to a study conducted by the American Institute for Cleaning Sciences, in a traditional mopping system, the water and mop head soil rapidly after the first few dips into the mop bucket. Potential contaminants and soil are redistributed to the floor and/or grout lines after the first 1,000 square feet of mopping.

SOURCE: www.cleanlink.com



Microfiber Cleaning System

SMC currently cleans 4 buildings with the total microfiber cleaning system and 15 other buildings with the microfiber cloths. SMC will continue to add buildings to this system as funds become available. Microfiber cloths and mops dislodge and grab fine particles and oils in surface crevices where regular cotton cloths, sponges and scrub pads typically cannot reach. By using microfiber products, SMC conserves water, significantly reduces the use of disposable products and requires fewer cleaning agents. Microfiber cloths and mops are washed and reused over and over. SMC utilizes a color coded cloth cleaning system to prevent cross contamination.

FUN FACT:

When used properly, microfiber systems can clean floors 45 percent better than traditional string mops, while reducing water and chemical consumption by up to 90 percent.

SOURCE: www.cleanlink.com

Low Flow Fixtures

Over the past 5 years, SMC has nearly replaced all 6 gallon flush toilets with 3 gallon or 1.6 gallon flush toilets! Also, SMC replaces sink aerators with 0.5 gpm (gallon per minute) aerators to reduce water flow from faucets. By implementing and utilizing low flow water fixtures, SMC has reduced water usage by 50% minimum across campus.



Sustainable Transportation

Bike Friendly Campus

SMC supports a bike friendly campus by providing bicycle racks, secure, dry storage during winter months, and allowing bicycle traffic to take advantage of all of our paved or concrete sidewalks and drives. SMC will continue to look at options for adding bicycle parking and connecting a bicycle path to the city's existing bicycle path at the edge of campus.



Participating members with smartphones, including iPhones and Android devices, may download the Zipcar mobile application to make reservations, lock and unlock the vehicles and honk the horn to help locate the vehicle. Reservations can also be made over the phone or on Zipcar's website.

Car Sharing

In 2014, SMC added two Zipcars to the campus experience. SMC brought Zipcar to campus in order to promote car sharing. Zipcar reports that for each Zipcar, 15 personally owned vehicles will be taken off the roads. This implemented program has the potential to reduce the amount of active vehicles, creating less road congestion. This also means a reduction in air pollution and harmful emissions, lesser dependence on oil, and cleaner, fresher air to breathe. Participation in this program will start to have an exponential impact on the community. An increase in car sharing will positively correlate to an increase in available green space.

City Bus

Saint Mary's College and the University of Notre Dame have contracted with TRANSCO allowing students, faculty and staff free public transportation to all routes all year round with a valid college ID!



FUN FACT:

Three routes to enhance the community experience:

Route #17 – The Sweep

Route #7 – Notre Dame/University Park Mall

Route #7a – Notre Dame Midnight Express

Reduce, Reuse, RECYCLE

Battery Recycling

SMC provides collection points and monthly pickup of old batteries for recycling. SMC's safety and compliance officer facilitates and monitors this effort. Both the lead and plastic in batteries are recycled and can be recycled many, many times.



Electronic Recycling

SMC promotes electronic recycling by providing a yearly collection point for faculty, staff and student electronic items that would normally be discarded in the trash. This also includes electronic items from faculty, staff and student homes. Currently, collection and pickup is free of charge to SMC and the college community.

Ink Cartridge Recycling

SMC provides designated collection points for monthly pickups of used or unused ink cartridges from printers and fax machines. Metal and plastic is saved from ink cartridges and reused. Gallons of oil are saved any time plastic can be reused. It takes more than 1,000 years for an ink cartridge to decompose in a landfill. SMC's safety and compliance officer facilitates this program.



Technology Trash Recycling

SMC provides designated collection points for monthly pickups of any old technology items. This includes items like USB drives, data drives and power cords that wouldn't normally fall under electronic trash. SMC's safety and compliance officer facilitates this program.

College Waste Recycle

SMC started separating its regular waste from recyclable waste in 2008. Previously, averages of 200 plus tons of waste were going to the landfill per year. As of 2014, the college had 120 tons of waste that went to the landfill while 100 tons went to recycling. Nearly a 50% reduction of landfill waste.

FUN FACT:

SMC eliminated trash removal on Tuesdays, Thursdays and Saturdays. This not only reduces the annual cost for service, but the carbon footprint as well!



Paint Can Recycling

In 2010 SMC recycled over 100 cans of paint. This paint was obsolete and partial cans of paint that the college no longer used. The paint was given to the ReStore who will either mix lighter colors and resell it or resell as is. Also SMC punctures aerosol cans to depressurize them and remove any remaining paint so that the cans can be recycled.



Fluorescent Light Bulb Recycling

SMC recycles all fluorescent light bulbs. This includes compact fluorescent and tubular fluorescent bulbs. These bulbs are picked up twice a year and will be crushed so that the glass and metals can be recycled.



Free Store/Clothing Swap

SMC supports a free store which is managed by students through the office of Residence Life. The Free Store is a place for reusable items to be exchanged similar to a free thrift shop. The purpose of the Free Store is to promote an economy of shared resources and reduce the amount of waste that ends up in the landfill by giving items a second chance. SMC Free Store is located in the lower level of Le Mans Hall adjacent to the student lounge.



Free Store

Giving Back

SMC started donating to ReStore (Habitat for Humanity) in 2011. Items like furniture, cabinets, countertops, windows, lights, paint, doors and many other items are sold in ReStore locations. Money from sales is used to remodel and build new homes for people in need. Habitat for Humanity is a nonprofit, ecumenical Christian ministry that builds with people in need regardless of race or religion.



Groups and Events (What's happening around you!)

Real Food Challenge

Saint Mary's holds a historical place in the Food Day celebration. President Carol Ann Mooney became the first college or university president to sign the Real Food Commitment, a pledge for higher education institutions to purchase at least 20 percent "real food" (local, fair, humane or organic) by 2020. Food calculator was introduced and Saint Mary's purchased 18% "real food".



FUN FACT:
There are over 43 Green Initiatives listed in this report.

Joint Sustainability

The Joint Sustainability group meets twice a year to promote collaboration on sustainability topics. The purpose of the meeting is: The Joint Sustainability Committee exists so that representatives from the Sisters of the Holy Cross and Saint Mary's College can share best practices that promote ecological sustainability. Committee members will work collaboratively, sharing information, successes and challenges. The Joint Sustainability Committee will meet at least twice a year to share best practices that contribute to ecological sustainability.

Community Garden

Did you know SMC has a community garden? The garden is located on the South side of Havican Hall. Every year this garden has multiple vegetables available for the taking.

Go Green Committee

The go green committee was created and consists of faculty, staff and students led by the Vice President of Mission. This committee incorporates members from many departments allowing diversity and a broadened outlook for environmental success. The purpose of this committee is to collaborate and instill ideas for a more sustainable and intellectually green effort across campus and surrounding community.

Earth Week

SMC continues to support Earth Week through SMEAC (Saint Mary's Environmental Action Coalition). SMEAC took the traditional Earth Day/Earth Week and extended it throughout the entire year. Activities are planned through the week to promote Eco-awareness, service, and commitment to "greener" practices on campus. The main goal is to make the college community more environmentally conscious.

Environmental Studies Minor

SMC started offering a minor in environmental studies in 2011. This program would draw not only from the sciences, but also from literature, psychology, and political science...

Composting

Mulching Leaves & Grass

SMC mulches all grass clippings and some of the leaves on campus. When the amount of leaves exceeds our capabilities, SMC hauls the excess to a storage site so they can decompose. Plans are currently in process to allow access to the adjacent farm field so that leaves can be spread out on top of the field. Sisters of the Holy Cross own the farm field and are working with SMC on the plan's details. Mulching puts nutrients back into the soil reducing the amount of fertilizer needed.

FUN FACT:

Mulching grass clippings can account for up to one pound of lawns annual nitrogen requirements!

It takes up to four years to decompose annually for



Geo Bag from Lake Marion



Organic Material Remaining

Lake Marion Cleaning

In 2010 Lake Marion was cleaned. The lake has a concrete bottom and after many years of algae growth, leaves and other debris entering the lake it was time to clean it out. The extraction process was very green and sustainable. Divers utilized large suction pumps to suck the material off the bottom of the lake. This material was pumped into a large Geo Bag approximately 100'x25' in size. This bag would collect the solids while letting the water escape into the ground. Once the cleaning was complete, the material was left to dry for 40 days. The total volume of organic material (leaves and dirt) removed out of Lake Marion was approximately 21 cubic yards once dried. This dried material was removed from the bag and stored on site for use in flower beds across campus making the material 100% reusable by volume instead of hauling it off to the landfill.

COMPOSTING

test drive

THURSDAYS

April 2nd, 9th, 16th, 23rd



Fruits and
Vegetable peels &
scraps



Food Composting

In 2015 Students who are members of SMEAC have taken the lead to start composting on campus. With the help of Sodexo and the Grounds department, the students will collect, move and manage the composting. The Grounds department will then utilize the final product in gardens across campus.

FUN FACT:

Compost adds nutrients and micronutrients to the soil and boosts plant growth and yields. Nutrients are released at a rate related to the plant's needs, depending on the temperature and available moisture.

Compost binds with soil improving its texture and structure. Healthy soil organically sustains your plants, providing better moisture, oxygen for root growth and improved drainage. It increases the soil's capacity to hold 200 percent of its dry weight in water.

Composting attracts nature's soil builders in the form of earthworms and friendly insects that rejuvenate the soil and increase plant growth. It also helps balance the pH in the soil and acts like a buffer making plants more resilient and less dependent on specific pH levels.

YOUR HANDY DANDY GUIDE TO COMPOSTING

YES! / NO!



RULES OF THUMB

- KEEP YOUR COMPOST COVERED TO KEEP ANIMALS AND FLYING BUGS AWAY
- KEEP YOUR COMPOST MOIST AND WARM TO KEEP IT DECOMPOSING
- A LAYER OF GRASS, LEAVES, OR PAPER ON TOP WILL CUT DOWN ON SMELLS
- THE SMALLER THE PIECES, THE QUICKER IT WILL BECOME COMPOST

Awareness

Library Paper Use Awareness

The Library Staff have spearheaded an effort to make students aware of how much paper is used at the student printer location in the Library. Empty boxes of paper are stacked up within the library to provide a visual awareness of how much paper is used.

FUN FACTS:

- The average office worker uses 10,000 sheets of copy paper each year.
- Over 40% of wood pulp goes toward the production of paper.
- A recent Minnesota study estimates that associated paper costs could be as much as 31 times the purchasing costs (not including labor). So, that ream of paper that cost \$5 really could cost up to \$155 by the time you purchase, store, copy or print and recycle it not including the amount of energy, carbon dioxide emission or labor cost.
- It takes more than 1 ½ cups of water to produce one sheet of paper.
- 400 reams of paper is equivalent to 1.25 acres of standing pine forest absorbing carbon for a year.

Source: Minnesota Waste Wise, Minnesota Retiree Environmental Technical Assistance Program, County solid waste offices.



Cushwa-Leighton Library

Dedicated Tree Program

Did you know that over 580 trees on campus are dedicated trees? Saint Mary's College maintains a dedicated tree program where individuals can dedicate a new tree, have it documented and revisit the tree in memory of someone or a graduating class. Alumnae Relations and the Grounds Department work together at maintaining the recordkeeping and map that documents where every tree is located. So, if you have children that are working on a leaf collection for school, bring them to Saint Mary's College to collect leaves from over 60 different types of trees. Every dedicated tree is labeled with a hanging tag indicating the dedication and the type of tree.



FUN FACTS:

- Approximately 273 full-sized trees are needed to absorb the carbon dioxide produced by a typical car driven 20,000 miles per year (Source: Tree Canada Foundation).
- \$500 estimated dollars of environmental benefits one tree can provide for a year (Source: American Forest Organization).
- \$62,000 worth of air pollution control one tree produces in 50 years (Source: USDA Forest Service).
- 4 tons of oxygen produced by just one acre of forest – enough to sustain eighteen people for one year (Source: U.S. Department of Agriculture).
- \$100-\$250 saved annually in energy costs when an average U.S. household properly plants just three trees in strategic locations on their property (Source: U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy).

Water Wasters

What is a water waster? We consider water wasters as any piece of equipment that utilizes well water (drinking water) to provide cooling through mechanical equipment into a space. Water cooled air conditioners, for example. Water, from the water tower, passes through an air conditioning unit and then into the storm sewer system. The primary purpose of this water is to cool the compressor in the air conditioner. While this type of system was common in the past, it is frowned on today because of the way it wastes the drinking water. Currently only four areas on campus still have these types of units. Many others were eliminated during renovation projects. In 2014, Le Mans Chapel had water cooled air conditioning units that were replaced with more efficient direct expansion type cooling system. It was estimated that a minimum of 120,000 gallons per month of drinking water was going down the storm sewer system during the summer months. Plans are in place to remove the remaining four units once funds are available.



Lights Out! Sticker Awareness

- a. Awareness occurs when a person understands that there is information being presented. Nothing happens until awareness occurs, causing people to pay attention.
- b. Interest occurs when a person acknowledges that there is information presented that may be valuable to them and they decide to pay attention and look for benefits.
- c. Benefits occur when a person sees that there is a viable solution available to meet their needs.
- d. Desire occurs when a person imagines being better off. Based on the benefits, they are ready for the next step.
- e. Action occurs when a person takes steps to follow through with the suggested solution that will lead them to their reward
- f. Rewards occur for a person and others involved when a good solution has resulted and they feel acknowledged for making a good choice. These steps start over again with the next project.

SMC has signage located within residence halls at light switches asking students to participate and turn off lights!

The green initiatives recognized and reported in this document were compiled in our best effort to showcase the college's sustainability over the past five years.

-Saint Mary's College Facilities Department