

Library Community Sustainability Plan

Introduction

The Brown County Library community consists of nine branches and a bookmobile to serve the 249,192 residents of Brown County. With a half million books and media in its collection and 2,900 program events annually, the Brown County Libraries are popular places. Over 1.4 million visits are made to a Brown County Library every year. In addition, 110,000 people attend one or more program events as part of the Library's educational mission. The 500,000 items owned by the Library are checked out 2.6 million times annually for a recycling rate of 5 uses per book, DVD, or CD. Since the first library in Brown County was founded in 1889, the Library may qualify as the first governmental unit in the county to 'recycle' materials.

Buildings

The Brown County Library has nine Library Buildings. Six of the Libraries are concentrated in the dense population in and around Green Bay. Three Libraries serve the parameter areas of Brown County – Denmark, Wrightstown, and Pulaski. These three Libraries, along with the East Green Bay Library, are rented spaces. Each has a slightly different purveyance. Denmark Library is a combination high school and public library, housed in the Denmark High School. Wrightstown Library is located in a strip mall and was expanded in 2007, with the assistance of a local fund-raising group. Pulaski is located in the old Pulaski Town Hall. East Library is located in a retail shopping center.

In 2009, General Energy Corporation (GEC), a firm specializing in energy conservation methods, conducted a study of the five Brown County Library buildings owned by the County Library:

- Central Library, 515 Pine Street, Green Bay
- Southwest Library, 974 Ninth Street, Green Bay
- Ashwaubenon Library, 1060 Orlando Drive, Ashwaubenon
- Kress Family Library, 333 N. Broadway, DePere
- Weyers-Hilliard Library, 2680 Riverview, Howard.

The firm reviewed ventilation systems, heating systems, cooling systems, control systems and water systems for each location. They charted plug loads and analyzed utility use and benchmarked. They measured temperature and humidity trends. Twenty-six Energy Conservation Methods (ECM) were suggested, with priorities, price range and possible return on investment provided. These are summarized below for each Library.

Central Library is the largest of the five buildings with 90,000 square feet and four floors. Built in 1972, the Library has major infrastructure and engineering issues that impact its energy efficiency. A separate engineering assessment performed in 2009 by Boldt Construction Company addresses those issues. GEC suggested five ECMs estimated at a total cost of \$260,000 and a sixth ECM with two options at estimated costs of \$90,000 or \$700,000. The ECMs are:

1. Replace skylight windows at a cost of \$45,000 with a payback of 14.5 years. **The Library has installed a completely new skylight – removing the t-beam structures that blocked natural lighting and adding new long lasting light fixtures to the area. The new skylight provides natural day-lighting, and has an automated system that measures the amount of footcandles which activates the lamps as needed. Lamps are estimated to last an average of 21 years before they need to be replaced. Funding was provided by a federal grant.**
2. Replace PAR 30 lamps with CFL at a cost of \$925 with a payback of six months.
3. Retrofit HO fluorescent fixtures for a cost of \$42,800 with a payback of 3.7 years.
4. Replace 32 W F32T8 to 25W F25T8 lamps at a cost of \$8,000 with a payback of 1.7 years.
5. Upgrade/tune-up air handler unit and recommission the HVAC at a cost of \$183,000 with a 13.5 year payback.
6. Upgrade windows
 - a. Option to replace at a cost of \$700,000 with a 52 year payback; or
 - b. Option to install solar film at a cost of \$90,000 with an 11.6 year payback.

The engineering assessment completed by Boldt provided a quote for window replacement at \$350,000. Given the substantial difference in the cost estimates, and the concern that solar film would not address the air gaps in the window frames and might also be vulnerable to customer misuse, this option needs more exploration. In addition, the extended payback time for the air handler unit tune-ups is a result of the age and condition of the air handlers and the units would probably not last the additional 13.5 years needed for the investment payback. Boldt has recommended that they be replaced, at a higher initial cost but also higher return of investment value. The change in lighting levels needs to be further explored to see if the suggested replacement lamps will provide the light level necessary for the higher needs of a public library building.

Progress:

Through testing at other sites, it has been determined that the light level would be better with the replacement lamps, even though of lower wattage. However, the light fixtures are 40 years old and the Library has not been able to find a version of the suggested replacement lamp that will fit into the old light fixture. Many ECMs were deferred at Central Library based on the need to repair and renovate the building. Instead, the funds available were used at other locations.

Southwest Library was constructed in 1958 and is a one story building of 3,412 square feet. GEC suggested four ECMs estimated at a total cost of \$4,100; **the Library added a fifth ECM.** The ECMs are:

1. Implement night setback/set-up at an estimated cost of \$1,800 with a payback of 1.7 years. **Done.**
2. Improve the building envelope at a cost of \$1,400 with a payback of 2.3 years. **Done.**

3. Install occupancy sensors in bathrooms at a cost of \$400 with a payback of 3.7 years. **Done.**
4. Replace 32W F32T8 to 25W F25T8 lamps at a cost of \$450 with a payback 1.7 years. **Done.**
5. **Install low flow-toilets, urinals, and lavatories. This can reduce water consumption by up to 40%. Done. New restrooms were installed in November 2011 to meet ADA standards. Energy conservation fixtures were installed.**

Since many areas of the Library do not have enough light, the change in lighting levels needs to be further explored to see if the suggested replacement lamps will provide the light level necessary for the higher needs of a public library building.

Progress:

Light levels were tested with the replacement lamps, and even though of lower wattage, have been brighter, so the replacement lamps (#4) were installed. Thermostat night set-backs for the building and lighting occupancy sensors in bathrooms (#1 and #3) were implemented. The building envelope (#2) was sealed and additional insulation was added. **In addition, repairs and maintenance recommended by Boldt Engineering Analysis were also completed:**

- HVAC ductwork was cleaned, which improved the air quality and the efficiency of the airflow.
- Exterior doors were replaced with more energy efficient doors, glass, and framing.
- The exhaust system was replaced with efficiency units on occupancy sensors and exterior brick veneer tuck pointing was completed, which might also have helped the heating/air conditioning leaking in the building.

Ashwaubenon Library was constructed in 1976 and is a one story building of 8,000 square feet. GEC suggested five Energy Conservation Methods at an estimated cost of \$7,600 and a sixth ECM was added by the Library. The ECMs are:

1. Implement night setback/set-up at a cost of \$600 with a payback of three months. **Done.**
2. **Implement demand controlled ventilation at a cost of \$4,400 with a payback of 4.1 years. In process of trying new sequencing process that may be acceptable to building inspectors, as the original demand controlled ventilation recommended was not allowed under Wisconsin law.**
3. Seal duct leaks at a cost of \$200 with a payback of one year. **Done.**
4. Retrofit 34WT12-U-Tube fixtures at a cost of \$1,100 with a payback of 7.6 years. **Done.**
5. Replace 32W F32T8 to 25W F25T8 lamps at a cost of \$1,300 with a payback of 1.9 years. **Done.**
6. **Install low flow-toilets, urinals, and lavatories. This can reduce water consumption by up to 40%. Done. New restrooms were installed in**

November 2011 to meet ADA standards. Energy conservation fixtures were installed.

Since many areas of the Library do not have enough light, the change in lighting levels needs to be further explored to see if the suggested replacement lamps will provide the light level necessary for the higher needs of a public library building.

Progress:

Lamps were replaced with lower wattage but brighter lamps (#5) and the U-Tube fixtures were replaced (#4). Thermostat night set-backs (#1) were implemented. Duct leaks were sealed (#3), as well as other sealants and caulking applied. **In addition, recommendations made by GEC for other buildings or recommendations made by Boldt, were completed:**

- Occupancy sensors for lighting in bathrooms were installed.
- Ductwork was cleaned.
- Exhaust fans with occupancy sensors were installed.
- Exterior windows were replaced with more energy efficient ones.
- Energy efficient doors for the front entrance were installed in June 2011.
- A Direct Digital Control unit was also installed, with air and water balancing completed.
- New vapor barriers were installed on the ceiling in Summer 2011.

Kress Family Library is the newest building, constructed in 2002-3. It has two stories including the walk out lower level and consists of 23,985 square feet. GEC suggested five Energy Conservation Methods at an estimated total cost of \$21,400. **The Library has since added more ECMs.** The ECMs are:

1. Recommission the heating and cooling in the building at a cost of \$9,600 with a payback of ten months. **Done, along with recommendations made.**
2. Implement demand controlled ventilation at a cost of \$8,400 with a payback of 3.9 years. **The Library has learned that demand controlled ventilation as recommended is not allowed under Wisconsin codes. An existing Energy Recovery Ventilator accomplishes the same thing. Demand controlled ventilation would be redundant at this location.**
3. Seal duct leaks and insulate supply duct at a cost of \$1,900 with a payback of 2.1 years. **Done.**
4. Replace PAR30 lamps with CFL at a cost of \$550 with a payback of ten months. The CFL recommended replacement lamps do not fit the light fixtures. Library staff continue to monitor new products for possibilities. **In 2012, the Library found the right sized lamps and the change has been made. DONE.**
5. Replace 32W F32T8 to 25W F25T8 lamps at a cost of \$1,300 with a payback of 2.1 years. **Done.**
6. **Consider the addition of solar collectors for supplemental electrical power and domestic hot water capacity. Library uses very little hot water; payback on this is very small. Will not pursue any further.**

- 7. Install photo-voltaic panels to generate solar energy for use at the library or re-sale. Done. A 20kw system was installed on the roof of the building in September 2011.**

Since many areas of the Library do not have enough light, the change in lighting levels needs to be further explored to see if the suggested replacement lamps will provide the light level necessary for the higher needs of a public library building.

Progress:

Lamps where possible were replaced with lower wattage but brighter lamps (#5). Duct leaks were sealed (#3), and insulation applied. Kress was re-commissioned (#1), with HVAC, air and water balancing, and reconfiguration of ERU which was never installed correctly and was actually wasting rather than recovering energy. **In addition, a recommendation from Boldt was completed:**

- The Direct Digital Control of the HVAC was fine-tuned for more efficient operation.

Weyers-Hilliard Library was constructed in 1999 and is a one story building with a partial basement. It is 23,600 square feet. General Energy Corporation suggested five Energy Conservation Methods at an estimated a total cost of \$47,300. The ECMs are:

1. Convert variable inlet vane to VFD at a cost of \$8,570 with a payback of 4.6 years. **Done.**
2. Repair windows at a cost of \$18,480 with a payback of 11.8 years. **It appears that windows were not installed correctly – this estimate is to remove and re-install. Because of the long payback, the Library has not investigated or reviewed this ECM in any detail. It may be time to do so in 2013.**
3. Recommission the heating and cooling in the building at a cost of \$9,500 with a payback of 3.1 years. **Done.**
4. Implement demand controlled ventilation at a cost of \$9,200 with a payback of 3.3 years. **The Library has learned that demand controlled ventilation as recommended is not allowed under Wisconsin codes. Waiting for results from variation being tried at Ashwaubenon Branch first before pursuing.**
5. Replace 32W F32T8 to 25W F25T8 lamps at a cost of \$1,600 with a payback of 2.1 years. **Done.**

In addition, GEC provided the data and details for a sixth ECM, but did not recommend its implementation unless grant funding was available because of the high payback time period. This ECM is:

6. Install geothermal heat pumps at a cost of \$155,900 with a payback of 23.9 years.

The Library has added the following ECMs:

- 7. Consider the addition of solar collectors for supplemental electrical power and domestic hot water capacity. Library uses very little hot water; payback on this is very small. Will not pursue any further.**

- 8. Install photo-voltaic panels to collect solar energy for library use or re-sale. DONE. Two free-standing pedestal tracking units were installed in the parking lot.**

As with the other library buildings, since many areas of the Library do not have enough light, the change in lighting levels needs to be further explored to see if the suggested replacement lamps will provide the light level necessary for the higher needs of a public library building.

Progress:

The variable inlet vane was converted to variable frequency drive (#1) on the large motors; small motors would have much longer payback. Lamps were replaced with lower wattage but brighter lamps (#5). Weyers-Hilliard will be re-commissioned (#3), with HVAC balancing completed by June 2011. **In addition, a recommendation made by GEC for other buildings was completed:**

- A Direct Digital Control of the HVAC was installed.

Buildings Action Steps:

- 1. Investigate Demand Response program. Implement if feasible. No progress, but still plan to pursue.**
- 2. Consider having Focus on Energy assess the five buildings for additional energy conservation methods. Library waited until the recommended measures were complete before initiating a new assessment. This could begin in 2013.**
3. Review the ECMs suggested for viability in terms of the Library's mission and goals. Eliminate from consideration ECMs that would seriously compromise the Library's purpose. **ECMs were evaluated, with geothermal energy at Weyers-Hilliard and window replacement and other ECMs at Central Library not found to be cost effective. In addition, the Library discovered that demand controlled ventilation sequencing needs to be time tested and accepted in Wisconsin code before we make any significant changes. Other ECMs were implemented, as outlined in the sections for each building.**
4. Assess if any ECMs could be included in a grant application for funding purposes. Pursue grant opportunities and implement ECMs as funding becomes available. **Library worked closely with Focus on Energy and pursued grant opportunities there. In addition, funds from the State 25 by 25 grant were used. Library and County applied & were awarded a \$25,000 WPS grant in October 2012.**
5. Analyze remaining ECMs and place in priority to implement as Brown County funding becomes available. When possible, implement ECMs. **At this time, there are few recommended ECMs left to implement. In most cases, these have longer payback periods, or recommended lamps that do not fit into our fixtures, or ECMs changes that Wisconsin's codes or technology in general still need to modify or develop to fit the opportunities.**

Libraries must maintain specific environmental parameters of heat, cooling and humidity in order to sustain the physical condition of the books and the safety and comfort of the public and employees. This is particularly essential for the rare books in the Local History collection at Central Library, but it is also a factor for all the collections at each location.

Energy uses at the four rented Library building spaces have not been analyzed. Some of the Energy Conservation Methods (ECM) outlined by General Energy Corporation may be applicable.

Action Steps:

1. Review the ECMs outlined by GEC to see if can be applied to rented facilities. **Reviewed and implementing as practicable. See #3 below.**
2. **Consider having Focus on Energy assess the rented facilities to develop specific energy savings efforts. Library will wait until the current measures are complete before initiating a new assessment. With many ECMs completed, it may be appropriate to request an assessment in 2013.**
3. Whenever possible, implement ECMs. **Programmable thermostats for night set-back use were installed at Wrightstown and Pulaski rented buildings. Insulation in the ceiling area was installed at Pulaski. Occupancy sensors and efficient lamps were installed at Pulaski.**

Building Interiors

Cleaning The Library has started to purchase Green Cleaning materials when buying new supplies. Whenever possible, the Brown County Library will follow the Green Cleaning Procedures developed by the County Facilities Department. This includes adhering to the standards and the supplies suggested in the Procedure.

Action Steps:

1. Determine if un-opened supplies that do not meet the Green Cleaning standards can be returned for a refund. Proceed if possible. **Completed. A substantial amount was returned.**
2. Familiarize maintenance staff with the County's Green Cleaning Procedures. **No substantial progress on working with other County departments.**
3. Document exceptions in cleaning supplies and routines that do not respond to Green Cleaning Procedures. **No substantial progress in documenting.**
4. With County Facilities Department, continue to research new Green products that provide improved results. **Library staff have found a 'green' cleaning product that works well, eliminates multiple products with different dilutions, and kills many more viruses and bacteria than the others.**

Furniture replacement The Library has a variety of styles and ages in its furniture. Tables, chairs, desks, filing cabinets, display cases and study carrels are frequently moved from one location and re-used at another location. In recent years, solid wood

furniture has been refinished and restored to an attractive condition, then used in a Library.

Action Steps:

1. Consider Life Cycle Analysis when replacing furniture. LCA looks at the impact of a product through its entire life cycle, from cradle to grave, and generates a score to show a product's performance against a series of criteria.
 - When the Friends of the Library agreed to purchase new office furniture for the Southwest branch, a Green Bay firm – KI – was selected. Purchasing from a local company reduces transportation-related carbon footprint and energy waste. In addition, KI has won awards for its sustainability manufacturing principles. The discarded furniture was donated to ReStore, a local Habit for Humanity organization for re-use and recycling.
 - In addition, the library re-used shelving that was being discarded from the Elgin IL public library, saving it from a landfill.
 - Also, the Library minimized landfill by allowing governmental units to select old furniture that had been stored for decades and then donated the leftovers to charities that re-furbish, recycle or re-use, such as ReStore.
2. Contact Northeast Wisconsin Technical College (NWTC) or other to find interested volunteers to refinish and reupholster chairs owned by the Library. **No progress.**
3. Cooperate with the Friends of the Library for a 'card catalog recycling' fundraiser activity. **No progress.**

Flooring replacement EPA guidelines have ten criteria that make a floor "green":

- | | |
|--------------------------|----------------------------|
| 1. Social responsibility | 6. Manufacturing Processes |
| 2. Distribution Methods | 7. Renewable |
| 3. Recycling content | 8. Recyclability |
| 4. Toxicity | 9. Life Cycle |
| 5. Installation | 10. Maintenance |

Action steps:

1. Library administration and facility staff will familiarize themselves with the EPA and other guidelines when a carpet or flooring replacement is needed. **Staff have made a commitment to use low or no VOC products.**
2. Whenever possible, the Library will purchase EPA approved flooring or flooring approved by 'LEED' or other 'Green' standards. **Library staff worked closely with a local flooring vendor to restore the cork flooring at Kress and only replace the necessary portion.**

Interior and exterior painting

The Library has committed to using no or low VOC (volatile organic compounds) paint whenever possible.

In 2010, the interior of Weyers-Hilliard branch was re-painted (its first time since construction in 2000) using no-VOC paint. This allowed the library to remain open while painting was on-going. There were no complaints about smell and no employees reported headaches or other health-related problems as a result of the paint. In addition, painting the library while it was occupied during regular work-week hours cost less than painting on the weekend or after hours. With the success of the no-VOC paint at Weyers-Hilliard branch, the library used no-VOC paint at Kress (in 2011) and Southwest (in 2012) branches with the same successful results.

Landscaping and Parking Lots

The Library maintains landscaping and parking lots at five locations – Ashwaubenon, Central, Kress, SouthWest and Weyers-Hilliard. All are described as standard parking lots constructed of concrete and/or asphalt. Four of the five parking lots have issues with water runoff, heat buildup, air pollution, light glare, and poor aesthetics, in addition to Winter snow and ice buildup and removal damage. “Green Streets and Parking Lots” are defined as those that convey stormwater into landscaped areas (or areas of porous pavement) designed to mimic drainage patterns of the natural landscape. Pollutants are removed as runoff is captured, slowed and filtered before it either infiltrates into the soil or is discharged into the storm drain system and flows to local creeks or other water bodies. Only Weyers-Hilliard Branch Library’s parking lot meets this description.

Landscaping has been planted to help shade Library parking lots and keep the parking lot surfaces cooler in Summer. Much of the landscaping around the Libraries is overgrown. Maintenance is an ongoing problem, with the Library relying on a volunteer group to maintain landscaping at Kress Family Library. The Weyers-Hilliard Branch Library was landscaped in 2000 with native prairie flowers and grasses. Unfortunately, a lack of maintenance and the necessary ‘burn’ of the prairie allowed non-native species and weeds to over-run the landscaping. At Central Library, Ashwaubenon and Southwest, trees and bushes are aging and dying. A sustainable landscaping plan was designed by a NWTC student for the Central Library’s garden area, but has not been implemented. Plants at other locations have been replaced at the request of landscaping volunteers or on a haphazard basis to fill in landscaping gaps.

Sustainable landscaping has been defined to include an attractive environment that is in balance with the local climate and requires minimal resources, such as fertilizer, pesticides and water. Sustainable landscaping begins with an appropriate design that includes functional, cost efficient, visually pleasing, environmentally friendly and maintainable areas. Specifically, water consumption, resources used while mowing and edging lawns, and chemicals in pest and weed control are elements to consider.

Lighting in Library parking lots should have minimal impact on the earth and night sky.

Action steps:

1. **Consider xeriscaping – landscaping with plants that are adapted to their environment without the need of much irrigation, pest control, or maintenance – whenever possible at all locations. No progress, as there has been no opportunity to upgrade landscaping. Considering use of no-mow grass at Central Library to see how well that withstands the weather conditions.**
2. Implement the landscaping plan developed for Central Library by NWTC student. This plan includes sustainability aspects. Consider impact of renovation /remodeling of Central Library when determining the timing of the implementation. **No progress, as the need for major repair and renovation at Central Library has put on hold any work that would have to be ‘re-done’ after the renovation.**
3. Purchase benches and other outdoor furniture from recycled materials such as recyclable plastic wood. **No progress as no additional seating materials have been requested.**
4. Consider using porous pavements in sections of parking lots whenever feasible. **Researched other Wisconsin sites, discussed with appropriate personnel at the City of Green Bay and Village of Ashwaubenon, in preparation for replacing parking lots at the Southwest and Ashwaubenon branches. Looked for grant opportunities, as well, but, limited experience of porous pavements in this geographic area and higher cost to implement, led library to replace Southwest parking lot with the same non-porous surfaces.**
5. Continue to research sustainable parking lot techniques and value of natural filtering runoff water. Implement changes in parking lot design whenever possible. **Considerable research, but sustainable parking lots are of recent development, so no track record of sturdiness, maintenance or replacement time frame.**
6. Assess the trees planted in or near parking lots for appropriateness. Avoid trees that drip sap or have large or messy fruit. **Trees and bushes have been professionally trimmed and pruned. It appears that all current trees are appropriate for their location.**
7. Consider environmentally friendly ice and snow removal supplies and techniques. **For a similar cost, the Library has used an ice melt product with a natural corn based additive that has a lower overall melting point than other similarly priced melters as well as less damaging to plant materials, concrete, and metals. Library continues to test and improve so there is less damage to environment.**
8. Consider occupant-sensing systems on the exterior of the Library and in parking lots. Such systems would illuminate people when they are present, provide safe paths and parking and alerts neighboring properties and security personnel. **No progress.**
9. Investigate how to reduce ground reflectance so as to decrease sky glow by indirect light. **No progress.**

The following action step has been added:

- 10. Harvest rainwater for the irrigation of landscaping and create retention ponds so rain run-off stays onsite and does not go into storm sewers, this can limit storm water run-off by up to 50%.Library has offered rain-barrel workshops at branches and plans to implement a rain barrel at the Kress or another branch.**

Vehicles

The Library has three vehicles – a bookmobile, a pickup truck and a van.

The bookmobile was built in 1994, uses diesel gas and has a 2004 Onan generator to provide light and heating/cooling in the bookmobile at its community stops. Stops vary in length from 2 to 4 hours. The bookmobile has a wheelchair lift, but does not have toilet or sink facilities. In 2007, the Friends of the Brown County Library funded major repairs to the body, including exterior paint, and an overhaul of the engine. In the past 15 years, thousands of dollars have been spent to keep the vehicle road ready, with repair or replacement of brakes, wheels, engine seals, radiator leaks, generator, etc.

The life expectancy of a bookmobile is 20 years. In 2013, the Library will begin the process of determining the features necessary in a new bookmobile.

The Library van is a Chevrolet Express Cargo Van 2001 model. The van is used by Maintenance staff for deliveries of books, supplies, costumes and program materials to and from other branches. It averages 10,000 miles per year, a combination of highway and city miles. Gas mileage averages 17.11 miles per gallon.

The Library pickup truck is a 2009 Chevrolet Colorado. The pickup truck is used by Maintenance staff for deliveries of landscaping materials such as mulch, for large furniture items and for transportation of lawn mowers, snow removal equipment and similar items between Libraries. It averages 10,000 miles per year, also a combination of highway and city miles. Gas mileage is approximately 20 miles per gallon.

All of the vehicles are stored in the garage at Central Library overnight and thus experience less damage from snow, ice and freezing temperatures than unprotected vehicles. However, due to the limited space in the garage, the van and pickup truck must share a length of 38 feet, thus limiting the size of the two vehicles and the selection of vehicles when replacing.

Maintenance of the vehicles is performed every 90 days.

Action steps:

1. Consider use of biodiesel fuel in Bookmobile. What is initial investment? What would ongoing cost be? What are the impacts on the operation and life expectancy on the bookmobile? **After more research, it is very unlikely that the Library's current bookmobile engine (Cummins) could support using B-20 bio-fuel. That is the new bio-diesel fuel (20% non-diesel product)**

that will work with more currently contemporary engines with the proper filtration and, in the case of northern climates, fuel heaters to keep fuel from gelling (these heaters are not offered as aftermarket items by Cummins).

More information about bio-fuels and how they work with the Cummins engines is available at www.cummins.com. The dealer in this area is Cummins NPower in De Pere and their number is 920-336-9631 or 1-800-236-1191. They are available to discuss the retrofit options or explain how a new engine in the future would work. There will be new EPA regulations soon, so those will also affect the future situation.

2. Replace van with a new vehicle that gets better mileage and uses biodiesel fuel. **No progress as van has not been replaced.**
3. Review and improve bookmobile schedule stops based on geography to minimize mileage and fuel consumption and increase efficiency. **No progress.**
4. When replacing bookmobile, consider sustainability issues to purchase environmentally friendly vehicle. **No progress.**
5. **Reorganize maintenance staff work structure to minimize travel. May save more than 60% on fuel and wear of the maintenance truck. Done. Saves on truck time, as well as staff time, allowing for more productive use of staff.**

Employees

Sustainable practices offer opportunities for the Library to reduce maintenance and energy costs annually. “Money will also be saved by having higher morale, health and productivity from employees. The architectural firm Heschong Mahone conducted a study that indicated students perform 25% better on standardized tests when in classrooms lit naturally (Sands, 2002). High levels of CO2 can decrease performance as well (Lamis, 2003). “ – wikipedia.

Action steps:

1. Train employees to follow the Energy Conservation Methods outlined in the General Energy Corporation report.
2. **Reinforce to employees the importance of recycling paper; duplex printing; unplugging equipment; use of daylighting; and other small energy conservation methods that employees can take.**
3. Re-use materials for crafts and program events (egg cartons, toilet paper tubes, grocery bags, etc.). **Continues to be done.**
4. Make it easier to bicycle, walk, take bus or commute with others in getting to and from work. Consider providing facilities for bicyclists to store bicycles safely and out of the weather at each location.
5. Consider offering preferred parking or other benefit to those who carpool.
6. Recycle photocopier toner and printer cartridges and purchase refilled cartridges. **Ongoing.**
7. Recycle discarded library books to Friends of the Library for their book sale. **Donation of withdrawn materials to the Friends of the Library continues.**
8. Install automatic paper towel dispensers in public restrooms to decrease waste. **At Ashwaubenon and Southwest branches, high-speed high-efficient**

electric hand-dryers were installed to reduce paper waste and staff maintenance.

9. Clean and repair CDs and DVDs on a regular basis to reduce disposal by 50%. **Ongoing.**
10. Implement a self-service perpetual book sale area at Central using books donated to the Friends of the Library. This service already exists at five library locations (Kress, Weyers-Hilliard, Ashwaubenon, East and Southwest branches). **Due to tax laws, this has been evaluated and eliminated.**
11. Reuse poster board for new posters.
12. Encourage re-usable cups for library staff.
13. Use PC projector for staff meeting agendas to avoid printing copies. **This is occurring more often, and becoming status quo in meetings.**
14. Investigate changing professional journal publications to electronic copies instead of print. Whenever possible, do so.

Customers/Clients/Library Guests

Library visitors will vary from those who are very interested and committed to sustainability efforts to those who are unaware and skeptical of the need for environmental efforts. The Library should set a standard for sustainability practices without mandating Library guests to follow those standards.

Action steps:

1. Clearly label and place recycling containers in all Library facilities. Central Library has new recycling containers that are visible and well-labeled.
2. Provide expanded opportunities for recycling paper, bottles, plastic and cans. Added Christmas tree lights recycling option.
3. Provide instructions for print duplexing wherever it is available.
4. Provide more printers and photocopiers that can automatically duplex. Added a scanner at Central Library that can have copies emailed, instead of printed.
5. Provide opportunities to have information emailed or telephoned, rather than printed & mailed. New self-checks offer a checkout receipt option of emailing, or no receipt, in addition to printing the receipt.
6. Provide recycling information. Information is available at all sites, with broader variety at the Kress Branch.
7. Provide recycling points for some additional products, such as batteries, eye glasses, nail polish, cell phones, small electronics. Offered a two-day event at Kress Branch to recycle large electronics.
- 8. Provide lock-able bicycle racks with some cover from the rain. Bike rack at Southwest needs to be replaced, this would be an opportunity to review racks offered and encourage more use of bicycles.**

Educational Opportunities

Sustainable Library practices are an opportunity to educate county residents. Providing information about environmentally friendly materials, “green” procedures and efforts to reduce, reuse or recycle fits the Library’s mission.

Action steps:

1. **Whenever possible, highlight the Library's 'green' efforts.**
2. Make the library a location to observe solar or other ECM projects. **Kress has developed a Sustainability Learning Center, with a monitor showing the amount of solar energy created by the 20 kw PV system installed on the roof. Kress routinely offers program events and activities that educate about sustainability, including a Solar Car race, Urban chickens, prairie gardening, water-recycling bins.**
3. Provide resources online and with books, DVDs and CDs. **Many activities and information provided online at the Kress Branch.**
4. Provide storytimes, children's events and activities, and adult programs on sustainability and the environment. **Annual Earth Day activities are offered See list of programs offered at Kress.**
5. Provide portable energy meters to be checked out of the library. **Library provides at all locations.**
6. Co-sponsor programs on sustainability with local organizations. **Library works with SEEDs of DePere, UW-Extension, NWTC, local schools.**
7. Create large poster "advertising" sustainability efforts at the Library to be used at meetings throughout the year.
8. On regular basis, update Friends of the Library on the Library's sustainability practices through FOL newsletter. **Spring 2011 issue highlighted many 'green' initiatives at Library.**
9. Publish articles on the web and in the FOL newsletter promoting sustainability concepts, such as water quality and conservation, recycling, hazardous waste disposal, natural features project, and transportation alternatives.
10. Provide displays on sustainable practices and theory.
11. When appropriate, provide signage that explains the sustainability practice of the library. For example, signage that identifies natural water runoff in a parking lot, or furniture made of recycled materials.
12. Whenever possible, cooperate with other county and local government sustainability efforts. **Participation on the County Sustainable Taskforce, including Buildings and Education sub-committees. Participation with the SEEDs (Sustainable committee in DePere).**

This plan was approved by the Brown County Library Board on September 17, 2009. **Progress reports were made on April 15, 2011, February 15, 2012, and January 6, 2013.**