

2012

ANNUAL REPORT

MONROE COUNTY  
ENVIRONMENTAL QUALITY &  
SUSTAINABILITY COMMISSION



MONROE COUNTY GOVERNMENT  
BOARD OF COMMISSIONERS  
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Bloomington, IN Bloomington 47404  
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# LETTER FROM THE CHAIR

2012 was the first full year for the **Monroe County Environmental Quality and Sustainability Commission**. It has been a great year with significant achievement and growth as we reached goals of creating structure within our commission, reaching out to the community, making recommendations regarding energy use upgrades to county facilities and agreeing to gather and analyze County consumption and use for building utilities and the County's fleet of over 200 vehicles.

During the first months of the year we adopted a mission statement based on the **Ordinance (2011-04), Establishment of the Monroe County Environmental Quality and Sustainability**, that established our commission, developed a meeting format that included reports from the members representing Monroe County Government, City of Bloomington, Soil and Water Conservation District and Indiana University.

## MISSION STATEMENT

The Monroe County Environmental Quality & Sustainability Commission will provide education, advice, and encouragement to residents, local businesses, organizations, and county government to adopt practices and develop policies that preserve and strengthen Monroe County's economy, ecology, social justice and health initiatives.

The start of the year the Commission had several highlights as a result of two grants the Board of Commissioners captured from the Indiana Office of Energy Development: **The Community Energy Plan and the Community Conservation Challenge (CCC)**. In late March, the Commission held a special meeting that was televised on Cable Access Television (CATS) for the public presentation of the Community Energy Plan, an energy audit and associated recommendations for Monroe County Government. This report's **Energy Conservation Opportunities** became the basis for recommendations we made to the County Commissioners for changes that would boost energy efficiency, reduce our carbon footprint, and save money over time.



The CCC grant gave Monroe County the distinction of having the **largest solar array in southern Indiana**. The Commission sponsored the first Monroe County Community Energy Fair, held at Showers Plaza, on Earth

Day. We showcased the kickoff for the Conservation Challenge between schools and County Government. Commission members helped organize, staff and engage the community, sharing our enthusiasm for conservation and sustainability. The fair was followed by a ribbon cutting ceremony, **"Cutting Our Dependency"**, to mark the installation of the **63.75 kWh** photovoltaic

solar array on the County's North Showers rooftop that was financed by the CCC grant. Nobel laureate and Indiana University professor, the late **Elinor Ostrom** was the key note speaker at the event. She said, **"When I show off Bloomington to visitors, the North Showers solar panels will be part of the tour and I will say- We did this. What are you doing in your community?"**

The grants helped finance energy dashboards that track energy use on three of our buildings: Courthouse, Showers and the Charlotte T. Zietlow Justice Center. This, combined with hours of gathering utility data, allowed us to include information on energy use for all Commissioner owned buildings and will be an ongoing feature of our annual reports and provide the Commissioners with the necessary data to continue their **energy efficient upgrades**. The Commission formed an Energy Conservation Working Group to assist in this important task.

Another example of our Commission listening to and engaging the citizens of Monroe County is the Commissioner owned **86 acre vacant lot** on the south side of town referred to as the **Thomson Property**. Several organizations and individuals have expressed some interesting and compelling ideas for the property that fall within our mission. The Commission responded by forming the **Thomson Property Work Group** to develop a **Request For Information (RFI)** for 2013 to present the best ideas to the Commissioners for development consideration.

Lastly, a very exciting policy note for **2012** was County Council's approval of the **Energy Conservation Non Reverting Fund (2012-09)** created by Commission member and Council member Rick Dietz. Truly an innovative and historic moment for our community, this fund was created to support further energy conservation initiatives.

This past year has been exciting and rewarding and in 2013 the Commission will focus our attention towards the **Thomson Property, Water Conservation and Energy Reduction**. The members of the Monroe County Environmental Quality and Sustainability Commission look forward to working with the Monroe County Commissioners as we continue to, collectively, strive towards enhancing, and protecting our community for future generations.



Dave Parsons, Chair  
Monroe County Environmental Quality and Sustainability Commission



<http://www.co.monroe.in.us/tsd/Government/Commissioners/MonroeCountyBoardsandCommissions/EnvironmentalQualitySustainabilityCommission.aspx>

# Monroe County Environmental Quality & Sustainability Commission

## 2012 Members

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Dave Parsons, Chair	Monroe County Commissioner Appointment
Megan Hutchison, Vice Chair	Monroe County Commissioner Appointment
Marie Fleming, Secretary	Monroe County Commissioner Appointment
Jacqueline Bauer	City of Bloomington Appointment
Barbara Lantz	Monroe County Council Appointment
Emilie Rex	Indiana University- Office of Sustainability Appointment
Susan Snider-Salmon	Monroe County Council Appointment
Ben Stidd	Monroe County Soil & Water Appointment
Terry Usrey	Monroe County Commissioner Appointment
Ashley Cranor	Monroe County Commissioners Office
Rick Dietz	Monroe County Council Representative
Mark Stoops	Monroe County Commissioner Representative
Ian Yarbrough, Commissioner Intern	Indiana University- School of Public & Environmental Affairs

# Monroe County Board of Commissioners & County Council

## 2012 Members

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### Board of Commissioners

Iris Kiesling

Patrick Stoffers

Mark Stoops

### County Council

Rick Dietz

Marty Hawk

Warren Henegar

Vic Kelson

Ryan Langley

Geoff McKim

Julie Thomas



# A YEAR IN REVIEW

## Projects Awards & Achievements

91

**PLATINUM ENERGY STAR RATING** The Curry Building was awarded a Platinum Energy Star rating for the second consecutive year, proving that a historical building and good practice can meet high conservation standards.

AIC

**ASSOCIATION OF INDIANA COUNTIES** Monroe County was awarded, for the second consecutive year, the Local Government Cooperation Award, for the Community Energy Conservation Project.

energy.IN.gov

**MONROE COUNTY COMMUNITY ENERGY PLAN** The Monroe County Environmental Quality & Sustainability Commission hosted a public meeting, March 29th, to hear the findings from an energy audit conducted in 2011. The audit was made possible through a grant from the Office of Energy Development and included all Commissioner owned buildings and fleet. Schmidt & Associates presented their findings to the Commission and 19 community members. The meeting was recorded by Community Access Television.

Curry Building

Platinum Energy Star

2012



ENERGY AUDIT  
COMMUNITY ENGAGEMENT MEETING  
March 29th, 2012



ASSOCIATION OF INDIANA COUNTIES  
2012 Local Government Cooperation Award  
Community Conservation Challenge

Erin Cerwinski, Ashley Cranor, Iris Kiesling, Commissioner  
Kevin Dogan, Jason Carnes



# Projects Awards & Achievements



## COMMUNITY CONSERVATION CHALLENGE (CCC)

The Monroe County Commissioners were awarded **\$359,105** from the Office of Energy Development for the Leaders of Today & Leaders of Tomorrow Energy Conservation Challenge. The project included:

**1** year energy conservation challenge between the County owned Courthouse, Showers Building and Charlotte T. Zietlow Justice Center and Monroe County Community Schools, Fairview and University Elementary and the Bloomington Project School. **4** Lucid energy monitoring dashboards. **63.75 kWh** Solar array on the historic Showers building. **1** Roof bay upgrade on the Showers building. **1** Education installation in the atrium of Showers.

**Community Energy Fair**, sponsored by the Monroe County Environmental Quality and Sustainability Commission, on March 23, Earth Day, ‘kicked off’ the energy challenge between the county and the schools. **19** vendors participated in the fair. ‘Cutting Our Dependency’ was the theme for the ribbon cutting ceremony with special guest **Elinor Ostrom**.

**Community Energy Fair Participants-** Monroe County Government Monroe County Environmental Quality and Sustainability Commission Monroe County Community School Corporation- University and Fairview Elementary and the Bloomington Project School SIREN (Southern Indiana Renewable Energy Network) Bloomingfoods Market and Deli Sierra Club City of Bloomington Commission on Sustainability Green Building Council Duke Energy REMC IU Office of Sustainability IU SPEA MPI Solar Stumpners Building Service Cartridge World Solar Systems of Indiana NuSun Solar Earth Care

**THOMSON PROPERTY, RFI** The Monroe County Commissioners own 86 acres off South Rogers Street within the City of Bloomington. The Commission spent 2012 learning about the property, taking site tours and speaking with the County Commissioners about potential use. The Commissioners approved a plan to generate public input and involvement in the property’s development that are in line with county’s sustainability goals. A Thomson Property Task Force was created and the group and dedicated stakeholders will begin the hard work of preparing a Request For Information proposal in 2013.

EARTH DAY 2012  
Kick Off!  
Energy Fair & Energy  
Challenge

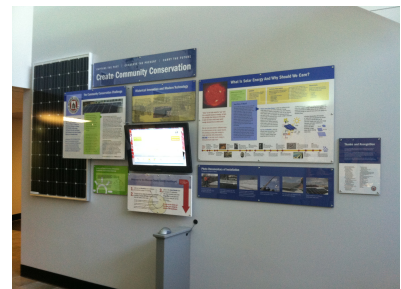
Ashley Cranor  
Daniel Baron  
Dave Parsons  
Bill Govia  
University Elementary-  
Ms. Cerwinski’s Class



SOLAR PANEL DELIVERY

Geoff McKim  
Council President

Mark Stoops  
Commissioner President



# 2012 MEETINGS

The Environmental Quality and Sustainability Commission met monthly in 2012. Officers were elected in February. Thirteen members are currently serving the commission, representing a breadth of expertise, including soil and water, solar energy, composting, and sustainable agriculture/farming. The Commission also includes two non-voting ex officio members, one a member of the County Commissioners and the other a member of the County Council.

The Commission invited speakers to present a report on issues that directly affect Monroe County.

Todd Stevenson of the County Highway Department presented on storm water issues, including a new storm water fee.

Stephen Hale and Keith Johnson presented on the Trillium Horticulture Park Project.

John Chambers from the Monroe County Highway Department presented on the state of the County's fleet and fuel challenges.

Martha Miller from the Soil and Water Conservation District reported on soil and water conservation efforts.

Tracey Cooksey reported on the insulation efforts of his company at the courthouse and the positive environmental improvements made in his industry.

Jason Eakin, Assistant Director of the Monroe County Planning Department, reported on the 5-year watershed study of urbanized areas to establish a baseline characterization of water quality. Many of our water bodies are designated "impaired".

Geoff McKim, Council President and Vincent Caristo, City Bike Coordinator, presented on the current and development plans for County and City trial ways.

Julie Thomas of the Monroe County Council requested the commission track and report on the fuel consumption of the county fleet. Schmidt and Associates conducted a community meeting on March 29, 2012, to report on the results of their energy audit of county government facilities. The Commission created an energy sub-committee to further study and implement energy conservation initiatives and a Thompson Property work group. The Commission presented the County Commissioners with a recommendation on energy conservation opportunities.

# FUNDING

## Sustainable Planning

### RENEWABLE ENERGY PRODUCTION

**In Ordinance 2012-09 the Monroe County Council established an “Energy Conservation Non-Reverting Fund”** in order to sustain and fund the county’s ongoing energy conservation efforts, Section 2 of Ordinance 2012-09 states, “that the Energy Conservation Non Reverting Fund shall be funded with savings accruing from conservation efforts and conservation programs instituted by the county.

The 63.75 kilowatt solar array located on the Monroe County Government Center, historic Showers building, is the largest photovoltaic system on any State or local municipality in Indiana. The system was brought on line May and has generated 71,342 kilowatt hours, which equates to \$5,251 in energy savings at a rate of \$0.0736/kWh or 110,970 pounds of Carbon Dioxide in 2012.

The Monroe County Environmental Quality and Sustainability Commission proposes the following annual process to fund the Energy Conservation Fund:

At the end of each calendar year, the MCEQSC will prepare an Annual Report to the County Commissioners. This report will include a building-by-building quantitative and qualitative assessment of total energy and water use, based on the metered energy and water use reported by the utility companies. For each building that was occupied for the entire year, a comparison will be made between the current reporting year and the average of the previous one to three years (depending on data availability). The amount of money saved will be calculated by multiplying the difference in amount used (therms of gas, kWh of electricity, kilo gallons of water\*) by the current year’s average rate.

The total cost differentials between the current reporting year and the previous year for all buildings that were occupied for the entire year will be combined, providing a single, all-inclusive energy cost savings for the current reporting year.

If the all-inclusive total of annual energy cost savings is greater than zero, then the cost savings may be directed into the Energy Conservation Fund.

### SOLAR RENEWABLE ENERGY CREDITS

Renewable energy credits (REC) are tradable commodities that represent the green attributes associated with energy generated from renewable energy resources. One REC is generated every time one megawatt-hour (MWh) of clean, renewable electricity is produced.

A renewable portfolio standard (RPS) requires that energy suppliers in a certain state produce a proportion of their energy from renewable energy. To meet these RPS requirements, energy suppliers can (1) develop their own renewable energy facilities such as solar plants or wind farms to produce RECS, or (2) purchase RECs from others that own renewable energy facilities.

No REC’s were sold in 2012.

Money from sales of Renewable Energy Credits (RECs) will be contributed to the non-reverting fund directly.

Renewable energy infrastructure (i.e. solar PV, solar water heating, etc) production will be converted directly to dollars at the average market rate of the year.

In subsequent annual reports the MCEQSC will provide recommendations to the County Commissioners on re-investing the Energy Conservation Fund where it can result in the most savings in the future.

*\* Water is not included in the 2012 formula due to inconsistent data.*

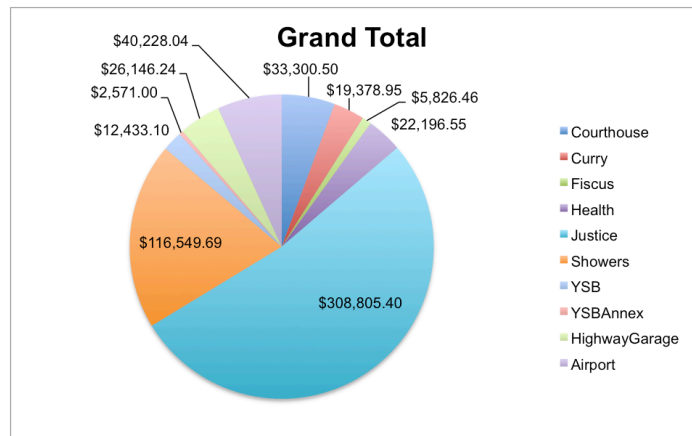
# ENERGY SAVINGS & COSTS

**\$15,948**

2012  
ENERGY  
SAVINGS

**\$5,251**      **\$10,697**  
SOLAR COST      ENERGY COST  
SAVINGS          SAVINGS

71,342 kWh  
SOLAR  
PRODUCTION



**\$589,395**

2012  
UTILITY  
COSTS

**\$427,274**      **\$55,420**  
TOTAL  
ELECTRICITY  
COST          TOTAL  
WATER  
COST

**\$106,701**  
TOTAL  
NATURAL GAS  
COST



# MONROE COUNTY GOVERNMENT

## Conservation Policies, Building Upgrades, & Initiatives

The leadership of **Monroe County Government** has articulated a vision that Monroe County lead the State of Indiana in demonstrating that a high-performing economy can co-exist with a low energy footprint. This vision has been translated into a number of policy initiatives and activities that have a demonstrable impact on the energy and water usage of our community and on the waste generated. This section of the report highlights several of the key initiatives from Monroe County Government over the past five years.

Several important initiatives are focused on ensuring the quality of the community's water supply for decades to come. In 2008, several critical amendments to the Monroe County code that established regulations over **stormwater management and landscaping practices**; the landscaping regulations were amended in 2012. Most importantly, 2012 also saw the startup of a Monroe County Stormwater Management Program, along with a dedicated funding mechanism – an impervious area-based stormwater fee on all property owners in the unincorporated areas of the county.

Numerous initiatives focused on energy conservation. 2008 and 2009 both saw resolutions committing to **energy conservation goals**. The County invested in many energy conservation **upgrades in county buildings**. The County also replaced all vending machines in county buildings with efficient **Energy-Star** machines.

Finally, the most exciting policy initiative in 2012 was the establishment of the **Energy Conservation Nonreverting Fund (Ordinance 2012-09)**. This fund was designed to capture some of the savings from energy conservation and production initiatives, in order that they can be reinvested in further energy conservation initiatives. The **Monroe County Environmental Quality and Sustainability Commission** is tasked with analyzing the savings over the past year and making recommendations to the Monroe County Commissioners for Council appropriations into the Energy Conservation Fund.

### Policy

ORDINANCE 2006-40  
Rainfall and Water Quality Research Fund

ORDINANCE 2007-18  
Need Determination for Solid Waste Facilities

RESOLUTION 2008-05  
Fuel Conservation

RESOLUTION 2008-09  
Energy Conservation Resolution

ORDINANCE 2008-10  
Amendment to the Monroe County Code by Adding Chapter 764- Storm Water Management Board

ORDINANCE 2008-26  
Amendment to the landscaping regulations set forth in Chapter 20 of the Monroe County Zoning Ordinance

RESOLUTION 2009-10  
2009 Energy Conservation Resolution

ORDINANCE 2009-46  
Paperless Initiative Non-reverting Fund

RESOLUTION 2011-04  
Environmental Quality & Sustainability Commission

ORDINANCE 2012-01  
Chapter 830, Landscaping General Revisions

ORDINANCE 2012-09  
Energy Conservation Non-Reverting Fund

# BUILDING IMPROVEMENTS

AIRPORT    CHARLOTTE T. ZIETLOW JUSTICE CENTER    COURTHOUSE  
CURRY    FISCUS    HEALTH    HIGHWAY    SHOWERS  
YOUTH SERVICES BUREAU/ANNEX BUILDING

Monroe County Government invested over 5 million in building upgrades in 2012

## AIRPORT

Lighting upgrades inside buildings and hangars  
LED lighting upgrade on outside lighting  
On demand water heaters

## CHARLOTTE T. ZIETLOW JUSTICE CENTER

Programmable Thermostats  
LED Outside Building Lighting  
Energy Dashboard

## COURTHOUSE BUILDING

LED and T-8 Lighting  
LED Exit Signs  
Energy Efficient HVAC System  
Energy Efficient Blower  
Attic Insulation  
Programable Thermostats  
Low Flow Toilets  
Light Switch Sensors  
Energy Dashboard

## HEALTH BUILDING

Programmable Thermostats  
LED Exit Signs

## FISCUS BUILDING

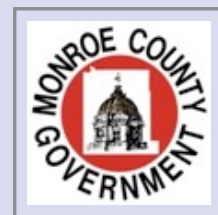
Improvements to Attic Insulation

## SHOWERS BUILDING

63.75 kWh Photovoltaic Array  
LED Exit Lighting  
T-12 to T-8 Lighting  
Energy Dashboard

## YOUTH SERVICE BUREAU

Insulation Walls and Attic  
Baffle Stops  
Pipe Insulation  
LED Exit lighting  
Low Flow Toilets





# DEPARTMENTAL INITIATIVES

Monroe County Departments have been instituting conservation and sustainability programming for many years. Whether it is internal department initiatives or acquiring grants to implement or expand programs, the leadership of Monroe strives to improve the environment for both employees and the community.

## AIRPORT

Energy Audit in 2010 & 2011  
Airport Conservation Strategy

## COUNTY COMMISSIONERS

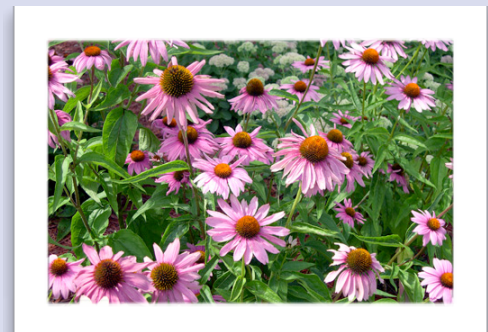
Office of Energy Development- Community Energy Plan Grant  
Office of Energy Development- Community Conservation Challenge Grant  
Renovation of Historic Monroe County Courthouse  
No Take Home County Owned Vehicles- Emergency Vehicles Exempt  
County-Wide Recycling Program- Paper, Cardboard, Glass, Plastic, and Batteries  
and Desk Side Recycling  
Upgraded Fleet of Vending Machines to Energy Star  
Courthouse- Native Garden & Reduction in Water Irrigation

## COUNTY COUNCIL

Paperless Meetings  
Energy Conservation Resolution  
(2008-09)  
Energy Conservation Non-Reverting  
Fund (2012-09)

## HEALTH DEPARTMENT

Paperless Initiatives- Computerized application processes,  
Electronic Annual Reports, On-Line Referrals  
Futures Health Clinic Electronic Medical Records  
Inspection Routes Analyzed- Car Pooling and Grouping of Sites





# DEPARTMENTAL INITIATIVES

## HIGHWAY DEPARTMENT

Stormwater Services & Quality Management  
Rain Gardens  
New Salt Barn  
Clean Community Challenge Initiative

## PARKS & RECREATION

206 Environmental Programs serving 4,674 people (To date)  
Karst Park- Motion Sensing Lights & Cameras at Splash Pad/  
Playscape  
Detmer Park- Grand Opening, Garden Project, Partnership  
with Hoosier Hills to Grow Food, Composting, Bioswale,  
Invasive Plant Removal (Bush Honeysuckle), Bike Repair  
Station, and Motion Sensing Lighting, Fans and Water  
Faucets in Restrooms  
Composting Leaves  
Reduced Fertilizer  
Pesticides Reduced on Athletic Fields

## PROBATION

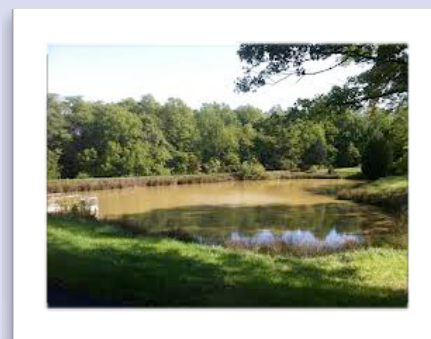
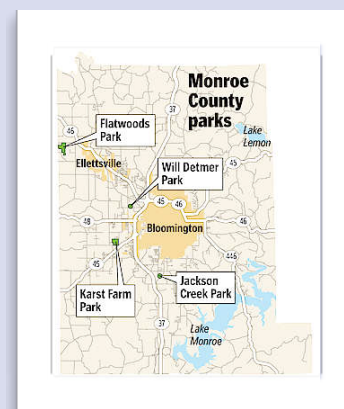
Paperless Business Solutions  
Quarterly Conservation Newsletter

## SOIL & WATER DISTRICT

Bean Blossom Watershed Grant

## YOUTH SERVICES BUREAU

Weatherization Grant  
Garden Project to Supplement Kitchen  
Refashioning Trash for Garden Projects





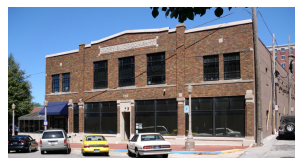
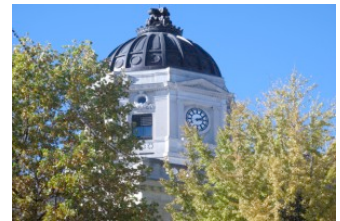
# BUILDING DATA OVERVIEW

The following pages will provide an in-depth building-by-building analysis of usage for each utility. The narrative of each building's utility costs will often discuss a net savings or loss compared to 2011. Buildings which experienced large fluctuations in population will not be counted in the calculations for the Energy Conservation Fund. The changes in energy use during the moving or construction process are too erratic to count as true savings or costs.

This final net savings or loss is calculated by comparing the change in usage (kWh or therm) from 2011 to 2012 and multiplying the difference by that building's average 2012 rate (\$/kWh or \$/therm). This is in contrast to the graphs that compare utility costs across multiple years, which are comparing the amount actually paid. This distinction is an important one. By comparing usage, rather than cost, we ensure (1) that reducing usage through conservation efforts still provides an incentive even in years of rising energy prices; and (2) the county is not credited with savings in years that utility prices go down, unless actual usage goes down.

As an illustration, electricity rates (\$/kWh) in 2012 were on average 6% higher vs. 2011, while natural gas prices were ~14% lower. With the methodology described above, the Energy Conservation Fund can capture savings from both situations fairly, without over counting the savings from gas prices dropping and without undercounting the savings from electricity prices rising.

Unfortunately, savings in water conservation cannot be accurately determined this year. Several county buildings were not billed for multiple months. In addition, the water utility changed billing software during this period, which has made comparisons challenging. For these reasons, water will not be considered this year for contributions to the Energy Conservation Fund. Water usage data will still be presented and discussed in this report, however, as analyzing current usage can help inform future conservation efforts.

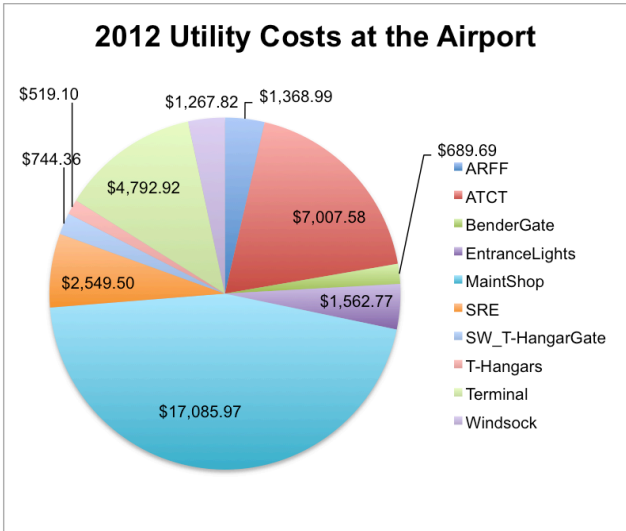
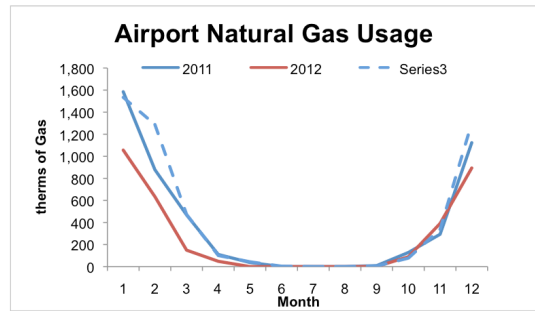
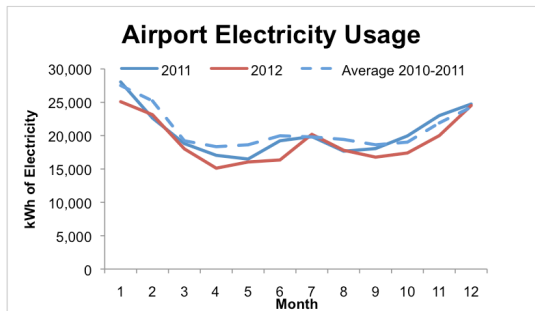


# MONROE COUNTY AIRPORT

The Monroe County Airport facility has gone through a lot of remodeling, but is also proactively pursuing more efficient technologies (lighting, electric water heaters, etc). Since the gas water heaters have been replaced with on-demand electric water heaters, gas usage has dropped more (29% drop) than electric (3%). The savings total to more that \$2,600.

Water was not included in this year's analysis. Not only did the bills begin to reflect more than just usage, the meters, formerly on one account, now are separated into three separate accounts. A detailed look at these changes still needs to be done before an analysis can be done next year.

**\$42,188**  
**TOTAL UTILITY COST**



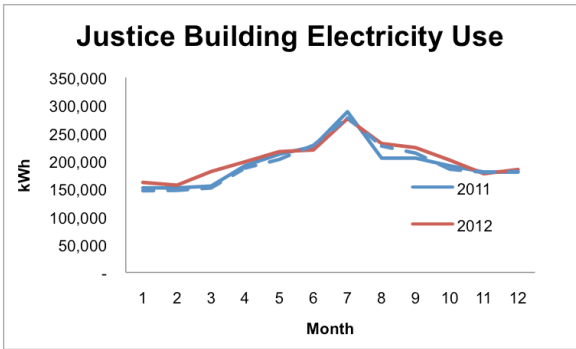
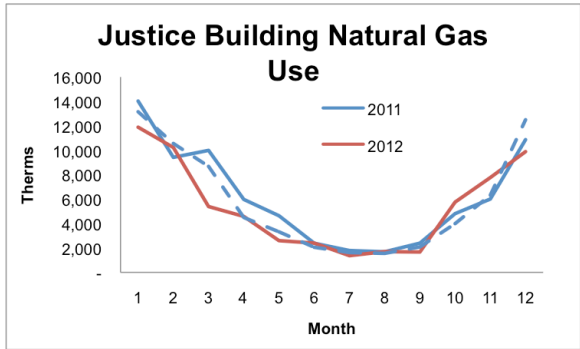
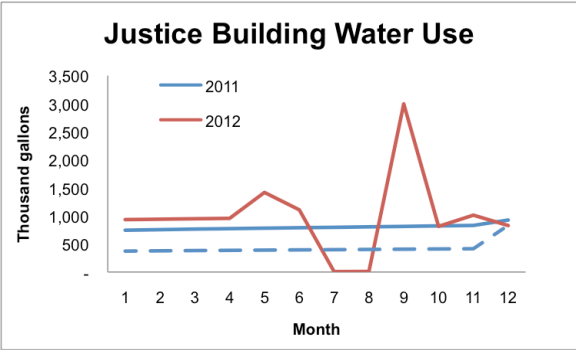
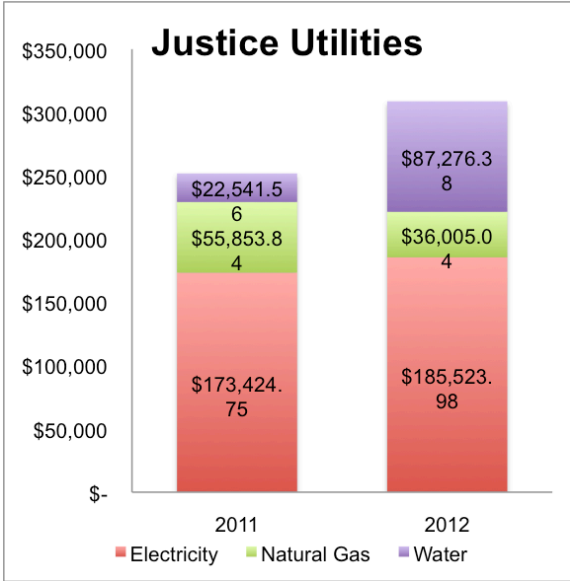
# CHARLOTTE T. ZIETLOW JUSTICE CENTER

The Justice building is by far the largest energy consumer in the county building fleet. It has not had a major renovation since it was built in the 80's. The building is a difficult case. There is constant traffic through the building, a large amount of offices, and a 24-hour jail facility. The Justice building holds the largest potential for "low-hanging fruit" -type conservation measures.

This year electricity use is up about 4% and gas use is down almost 12%. The savings and costs almost balance each other out with a \$7000 increase in electricity and a \$5000 decrease in gas, for a net of minus \$2090. It should be pointed out here, that if we went on bills alone, rather than usage, the gas price drop combined with the decrease in gas use caused Justice to save almost \$20,000 on gas alone.

Water use in the Justice building rose by 25% and cost soared 287% over 2011 (\$60,000 increase). The data in the usage graph is due to meter readings for 2 months and then retroactively billing for 3 months in September.

**\$308,805**  
**TOTAL UTILITY COSTS**



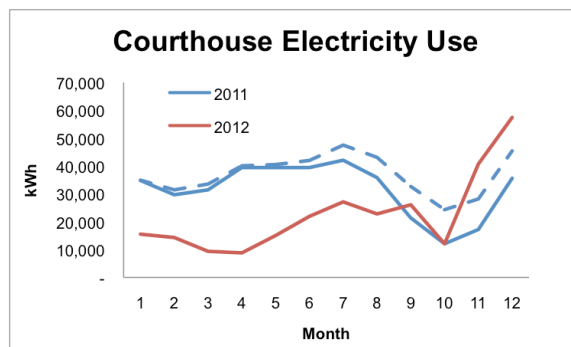
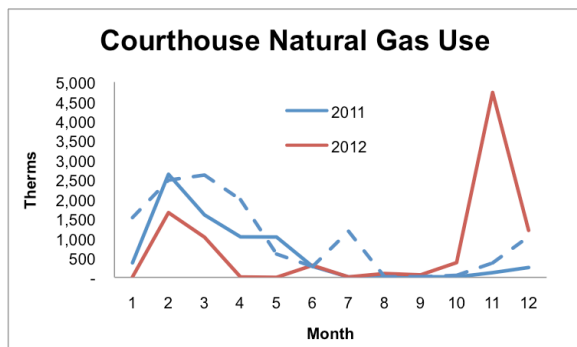
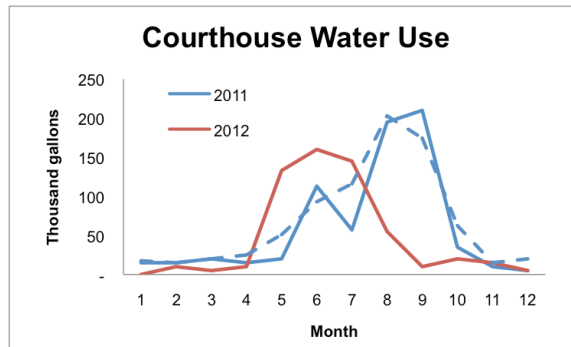
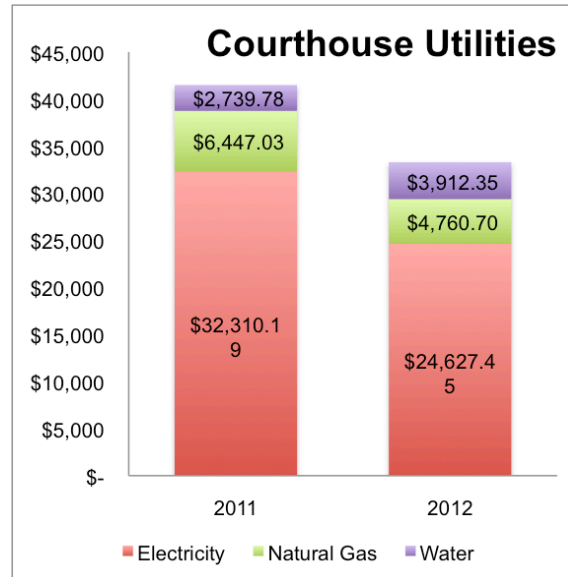
# COURTHOUSE BUILDING

The historic Courthouse was closed for renovations from July 2011-October 2012. This makes baseline data for 2011 inconsistent and current year data much lower than usual. For this reason, we will not be including the Courthouse data in our calculations for the non-reverting fund.

However, the building did receive many efficiency upgrades including boiler, chiller and blower upgrades and LED and T-8 fluorescent lighting, so it will be important in the future to track use and resolve 2011-2012 baseline issues for the 2013 report. It might be necessary to use 2010 as a baseline for 2013, but this is not ideal considering the 3-year separation.

Water use at the Courthouse seems to be heavily dependent on irrigation of the grounds. Future years will hopefully show a decline in the landscaping irrigation with the native plant landscaping that Todd Stevenson, County Highway Engineer, has installed. More care should be paid to landscaping water use in coming years, if water scarcity in the summer months becomes a recurring issue.

**\$33,300**  
**TOTAL UTILITY COSTS**



# CURRY BUILDING

The historic Curry building is the only county building to hold an Energy Star designation, and it has held Platinum for both 2011 and 2012. No major building improvements or occupancy changes have occurred, so its energy use will be included in the accounting for the non-reverting fund.

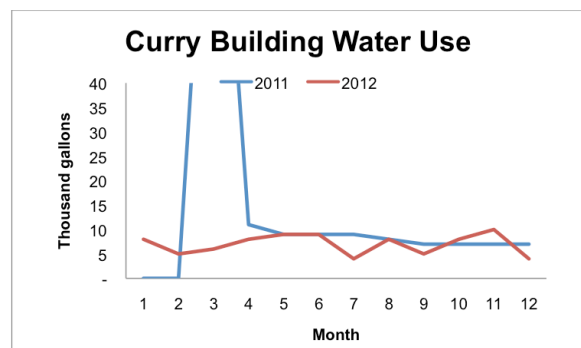
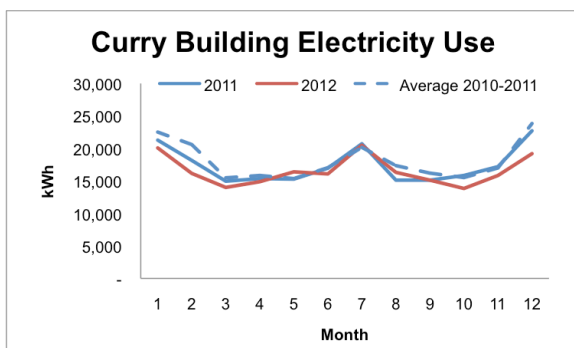
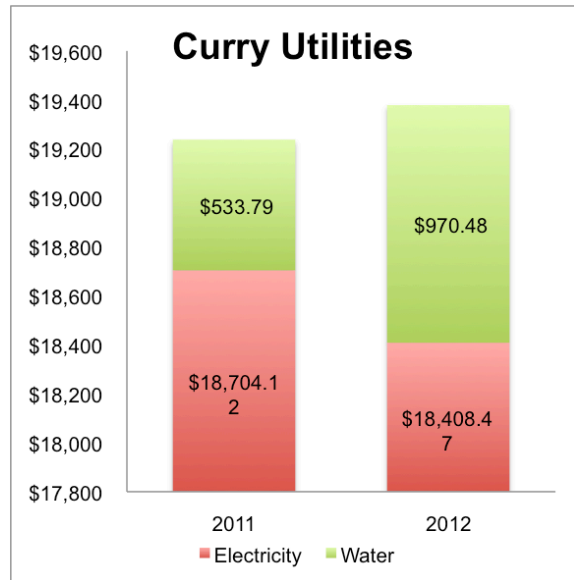
The Curry building's electricity-use increases with both high and low temperatures because of its all electric climate control system (no natural gas). The highest use months in 2012 are January, December, and July.

No major building improvements have been implemented this year, but electricity-use is down by nearly 5%, approximately \$1000. Some part of this is probably attributable to gradual transition to more efficient lighting, but the Curry building also has been fostering its own culture of conservation

through the efforts of the Probation Department's Jeff Hartman. A quarterly newsletter includes energy saving tips, encouraging co-workers to shut off lights and computers when not in use. The results we see at the Curry building is a major reason we recommend developing Green teams for all the county departments in 2013.

Water use at the Curry building is down 50% this year, but the billing history is sporadic. We have no billing history before March of 2011, and the first bill is for 111 kgal, probably retroactive billing for the previous year or more. If we ignore the anomalous bill, the water-usage of 2011 and 2012 across only April to December shows a 14% decrease in use. Next year will offer a better opportunity to measure water savings for the Curry building.

**\$19,378.87**  
**TOTAL UTILITY COSTS**



# FISCUS BUILDING

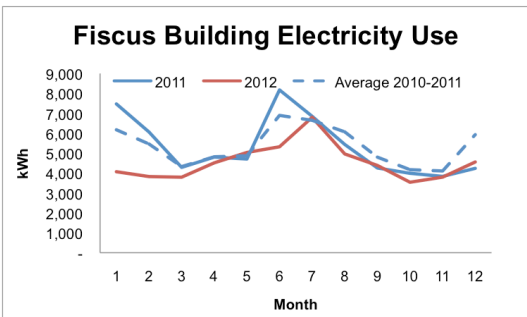
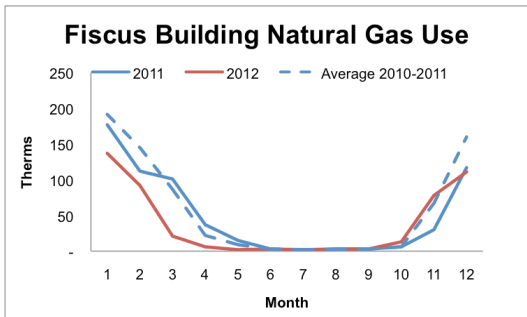
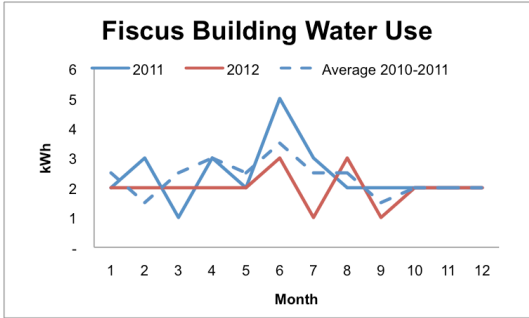
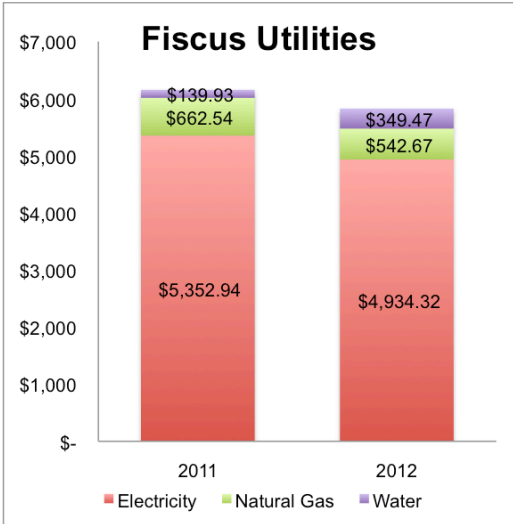
Electricity use in the Fiscus building was 15% lower this year. Nearly every month was lower than last year, but January, February, and June were the most drastic decreases. Gas use dropped by 22% lower, primarily in January through March.

The Energy Audit revealed that the insulation in the Fiscus attic was not distributed well. Simply redistributing the insulation seems to have resulted in \$1000 of savings in heating and cooling. This is a prime example of the simple and cheap possibilities that likely exist in many buildings. The Energy Audit recommended additional and/or replacement insulation in the attic and insulation for the water heater housing and pipes.

Unfortunately the square footage of Fiscus is below the minimum threshold to receive an Energy Star rating. Since Fiscus energy intensity is down in the range of the Curry building, it could be in the running for a rating if it were only larger.

Water use was down 17%, but cost rose 150%. The noise in the graph is a result of billing on whole units of 1,000 gallons. Fiscus probably uses an average of just under 2kGal a month, so some months they get 1kGal other months they get 3kGal.

**\$5,826**  
**TOTAL UTILITY COSTS**

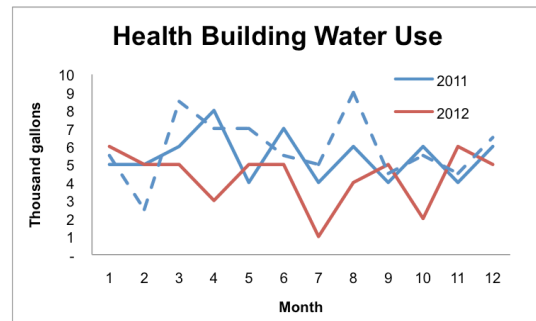
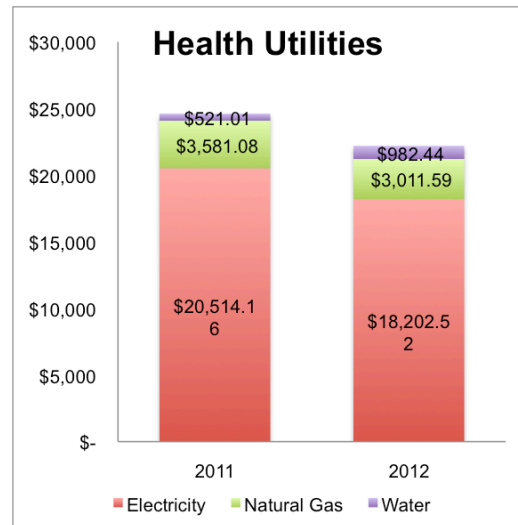


# HEALTH BUILDING

The historic Health building utilities were down across the board, saving 17%, 3%, and 20% in electric, gas, and water usage. Looking at the usage graph, electricity was lower most of the year, but really diverged from the previous years beginning in July. Overall, Health saved approximately \$3,800 compared to last year in gas and electric. Water use, despite usage dropping by 20%, rose 85% in cost.

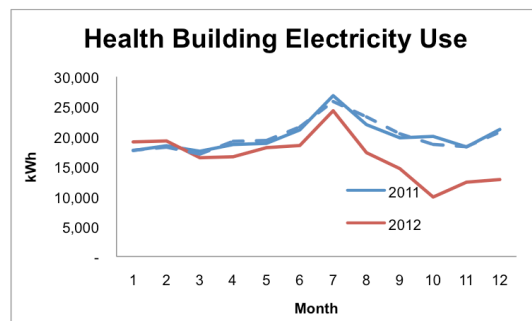
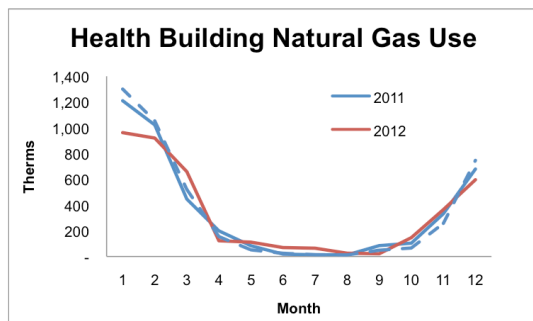
**\$22,196**  
**TOTAL UTILITY COSTS**

Lower occupancy may have contributed to the savings. In July, 2011 the Emergency Management Department moved to the Highway Garage with two employees. The Coroner and Technical Services Department moved out of the Health Building and into Showers in March of 2012 with ten employees. We have decided to keep the Health building in the calculations for contribution to the non-reverting fund because the moving does not seem to correlate exactly with energy drops. Also, a new clinic is beginning to operate in the building this year, so next year's usage might balance out this year's savings.



The Health building would be a good target for future improvements. Since its current Energy Star rating is 52 and the employees expressed interest through this year's survey, in saving energy through the survey. There is potential that we could reach the 75 rating necessary for an Energy Star designation in coming years. Some lighting upgrades and motion sensors for the Health building were included in the ECO request that the MCEQS committee proposed this year.

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# HIGHWAY GARAGE

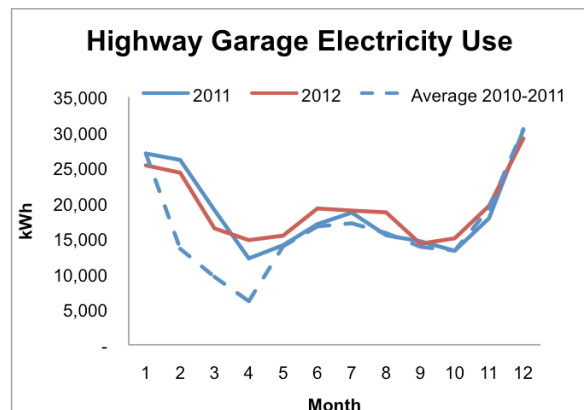
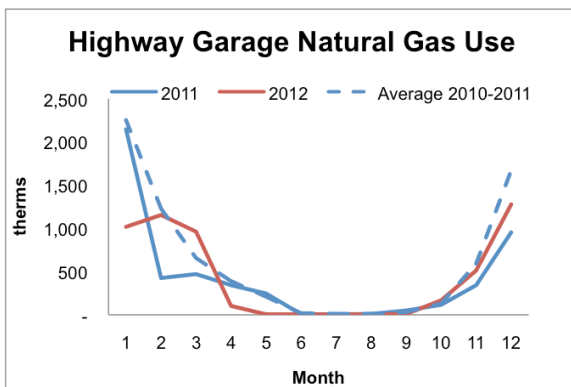
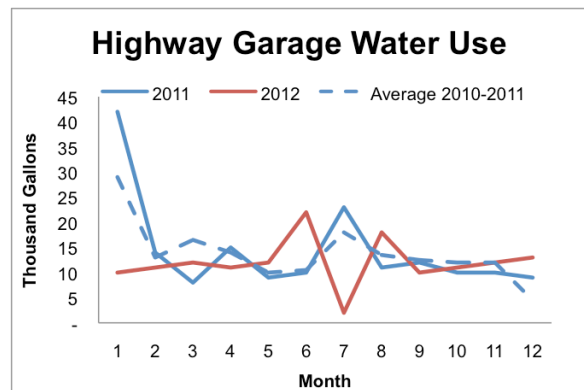
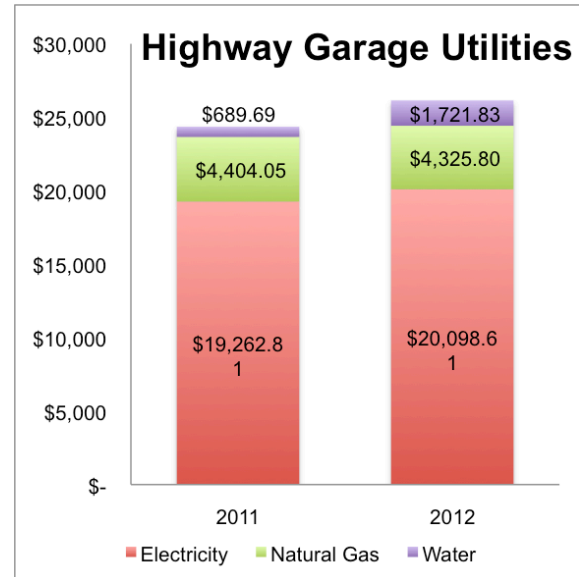
The Highway garage is an uninsulated building with a large garage area and a small office area. The Community Energy Plan mentioned insulating this building could offer large savings. Occupancy has varied with the highway department moving in this year during the Courthouse renovations. Energy-use was up in the Highway garage this year, resulting in a net loss of approximately \$600.

The electric usage in the Highway Garage peaks predominantly in the winter. The winter months high electric use could be due to electric space heaters being run to compensate for inadequate natural gas heating, distribution, and insulation. Usage was up 2% in 2012, resulting in a net loss of almost \$500.

Gas use depends solely on cold temperatures, thus summer usage is zero. Gas-use this year is also up 2% from last, netting a loss of \$100.

The Highway garage is not a major water user, netting less than 200kGal each of the last 3 years. Water-usage this year was down by 17%, but the changes in water billing resulted in increases in a 160% increase in in the cost (\$700 in 2011, \$1700 in 2012).

**\$26,146.24**  
**TOTAL UTILITY COSTS**



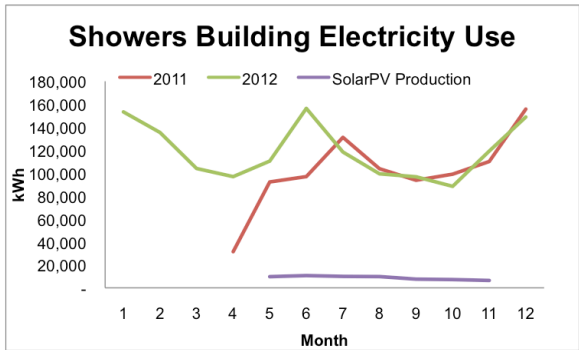


# SHOWERS BUILDING

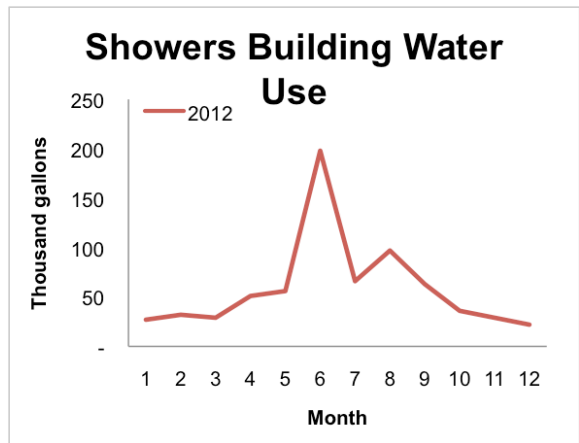
The county has only occupied the historic Showers building since May of 2011. During the 2011-2012 year, the building occupancy changed dramatically with several offices moving in and out of the building. A clear comparison cannot be made with previous years, so Showers will be left out of energy savings this year.

**\$116,549**  
**TOTAL UTILITY COSTS**

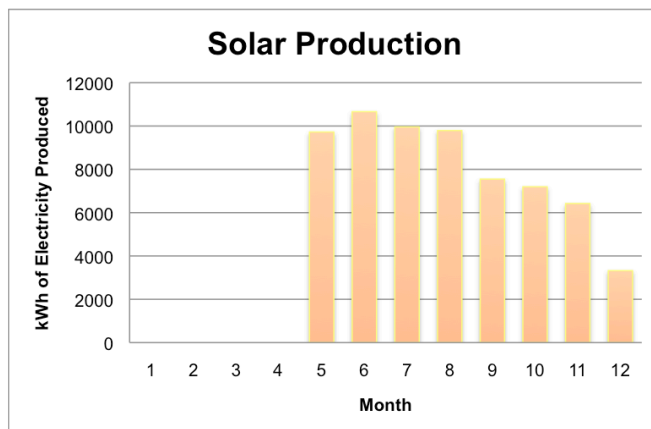
Electricity use in the Showers building spikes in both high and low temperature ranges, owing to its electric climate control (as opposed to a gas furnace).



A 63.75 kW solar array was installed and began producing electricity in May of 2012. From May to November, the solar array produced just over 8% of the Showers building's electricity needs. Productivity in the winter was lower, especially during times of snow and cloud cover. This year the panels produced 71,342 kWh to save approximately \$5,251 (at the Showers building's 2012 average rate of \$0.0736/kWh).

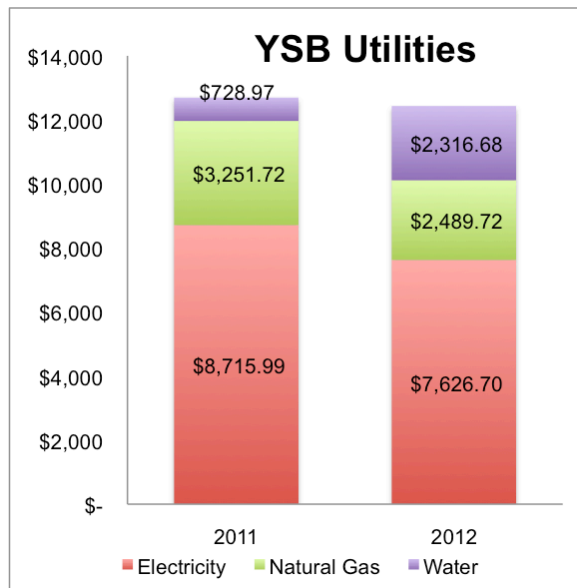


Water use at the Showers building peaks in the summer months, probably owing to landscaping uses. No historical water use data exists for 2011. There are no water intensive uses besides day-to-day drinking and lavatory operations.

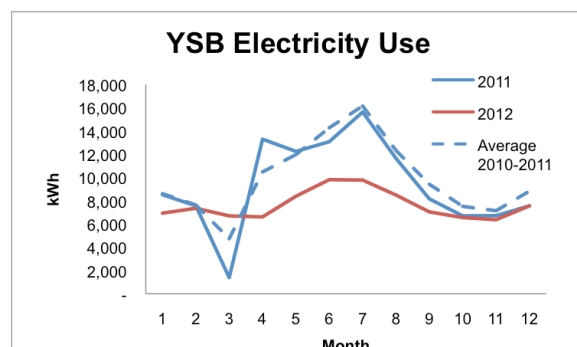
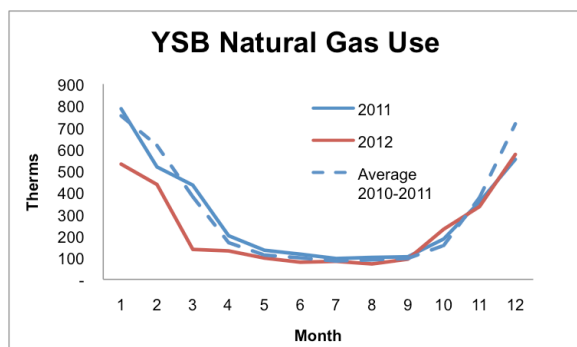
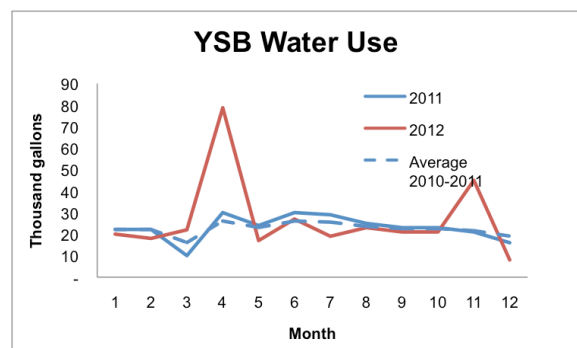


# YOUTH SERVICES BUREAU BUILDING

**\$12,433**  
TOTAL UTILITY COSTS



The YSB main building received a weatherization grant this year, which has dramatically decreased energy use. The Annex was not part of the grant but Kim Meyer, Director, made the decision to set the thermostat at its lowest setting due to low occupancy which resulted in low energy use and costs in 2012. Both buildings follow a more traditional usage pattern, with electric peaks in summer and gas peaks in winter. The graphs of usage show dramatic decreases in both summer electric and winter gas use, these decreases are clearly results of the weatherization work.

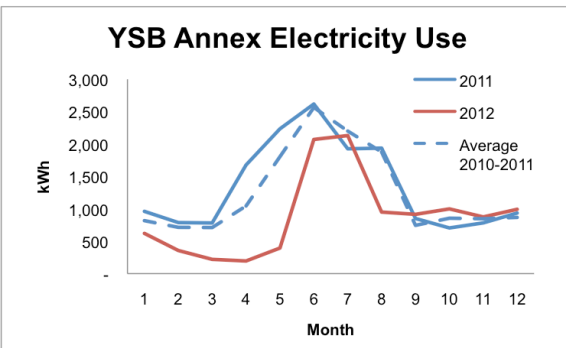
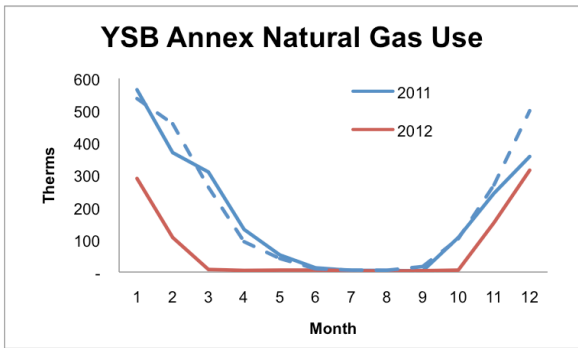
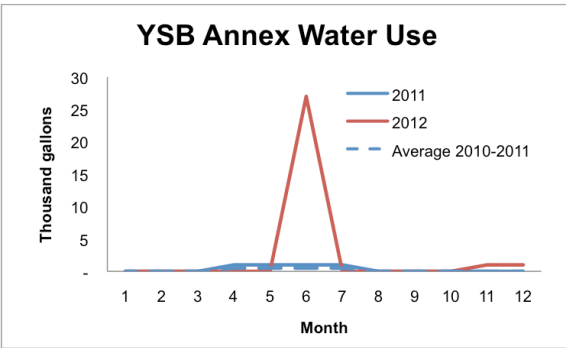
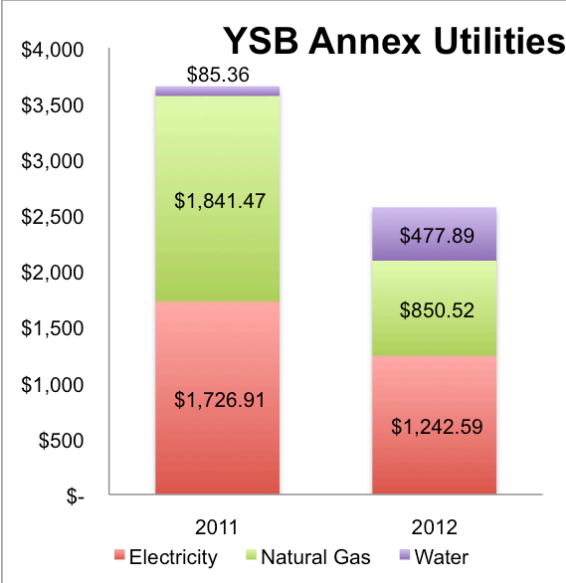


# YOUTH SERVICES ANNEX BUILDING

**\$2,569**  
**TOTAL UTILITY COSTS**

Both buildings likely only use gas for small functions besides heating, since gas use is nearly zero in the summers. Electricity for YSB and the Annex was down about 19 and 34% respectively, and gas was down 22 and 58%. The combined savings from these buildings account for about \$4,200.

The buildings did use more water this year, but the billing at the Annex especially was sporadic (one large bill in 2012 may have been use for half of 2011 and half of 2012). YSB increased use by 16%, possibly due to an increase in food gardening. The bills overall were 200% higher in 2012, but the highest use months were not the highest bills. This issue will need to be investigated further when water is accounted for in the future.



# MONROE COUNTY FLEET

**2012**


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**2011**

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SAVINGS

**\$446,867**  
Annual Cost

 0.2%


**\$445,864**  
Annual Cost

**132,537**  
Gallons

 -6.6%

**141,969**  
Gallons

**\$3.33**  
Average Rate  
Per Gallon

 7%

**\$3.11**  
Avg Rate  
Per Gallon

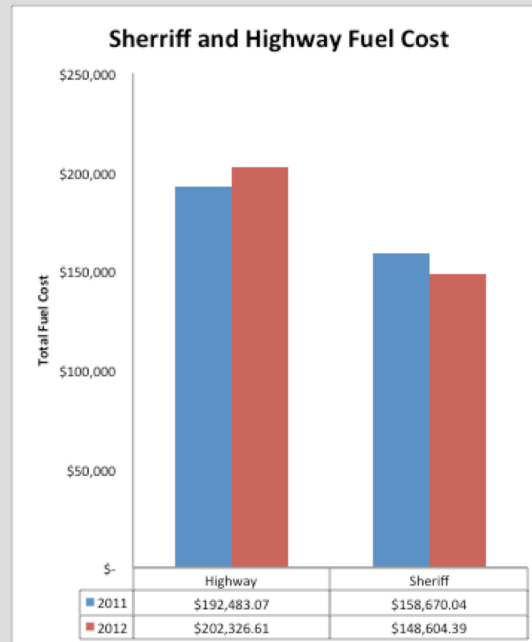
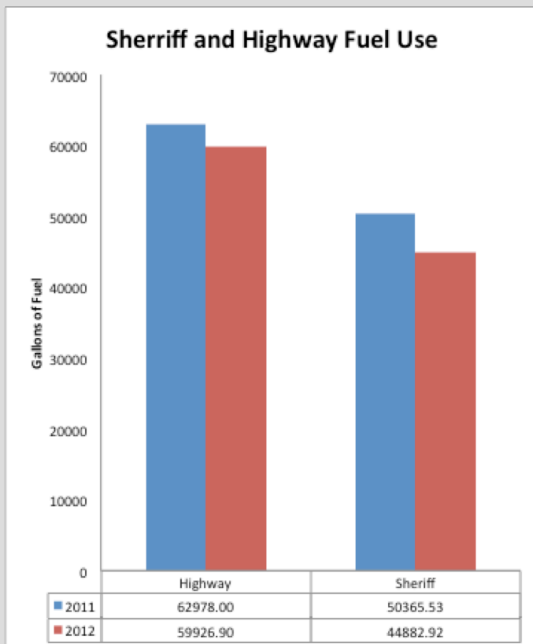
**229**  
Fleet  
Count

 12

**251**  
Fleet  
Count

# HIGHWAY AND SHERIFF FUEL USAGE & COSTS

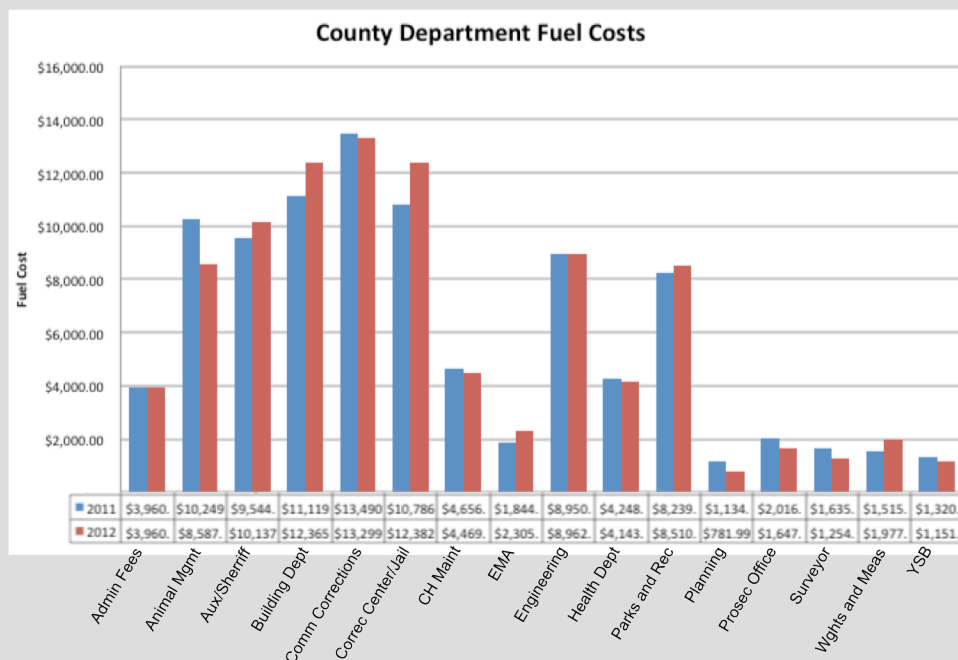
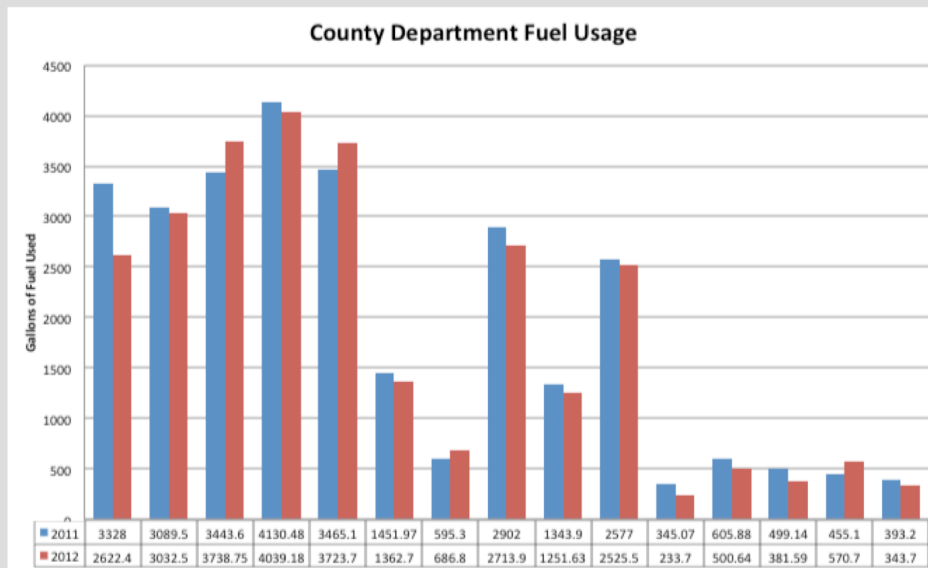
In 2012, Monroe County decreased fuel use by 6.6%, saving over 9,000 gallons of fuel and \$30,000. The average cost per gallon is based on the actual 'at the pump' transactions and do not include the service fee of \$330 a month the City of Bloomington charges. This is due to a combination of factors. The County has been transitioning to more fuel efficient vehicles; the Commissioners passed a resolution that only Emergency vehicles may be driven to employee homes; several departments have implemented better trip planning and car pooling; and County vehicles have begun refueling at the City facilities to save mileage. Due to these efforts, the County fuel expenditures have only risen 0.2% despite an average 7% increase in fuel rates.



The Sheriff and Highway numbers have been separated from the other departments for clarity. Since their use is so much higher, the graph of smaller-use departments is uninterpretable with Sherriff and Highway included. Both departments showed a marked decrease in use, (10% and 5%). Since the Sherriff's department decrease fuel by more than the fuel rate increase, total fuel costs decreased.

# DEPARTMENTAL FUEL USAGE & COSTS

Planning, Surveyor, and Animal Management had the largest decreases in use. Some increases are large due to other factors (e.g. Weights and Measures was not operating all of last year). Overall, the smaller use departments decreased use by 3.1%.



2013

# GOALS AND RECOMMENDATIONS

Monroe County Environmental Quality & Sustainability  
Commission

## Goals

Provide education, advice and encouragement to all citizens & visitors

Promote & adopt practices and policies that preserve and strengthen the overall quality of life for all

Create Monroe County Green Teams

Thomson Property RFI completed by end of year  
Water Conservation

## Funding Recommendations

Lighting Upgrades

Energy Audit for Johnson Building

LED Holiday lights

Energy Dashboard Upgrades

Water Audit for Justice Building

Energy Conservation Opportunities  
(2 years and under payback)