City of Ferguson
Environmental Impact Report

2010

Contents

Introduction

As required by Ordinance #2009-3382 (more commonly referred to as the "Environmental Ordinance", and attached to this report as Appendix A), the following pages contain the "annual report to the City Council reporting the energy consumption performance for [the] previous year and the plan of reduction or plan for continued maintenance." The report is divided into three primary areas: Energy Conservation, Recycling and Solid Waste, and Building Codes/Construction. Each area consists of a review of 2010 consumption data, followed by a look at the policies or initiatives that were accomplished in the past year, and concludes with a look ahead at the plans for 2011 to help reduce or maintain levels of consumption.

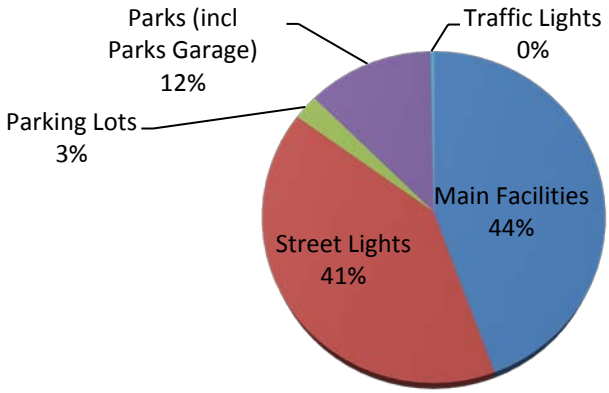
Energy Conservation for City Operations

Current Consumption Data

Electricity

Upon passage of the Environmental Ordinance, the City has set a goal of reducing energy consumption by 30% within five years from the date that the ordinance was passed in 2009. To measure our progress, base rate data from 2008 was gathered and used to calculate the target levels of electricity and natural gas reduction. For 2010, electricity consumption citywide (including electricity used at city facilities, for street lights, parking lots, parks, and traffic lights) was up 1% compared to 2009, and up 2.3% from base levels in 2008. The two largest consumers of electricity are the primary city facilities (identified as City Hall, the Municipal Garage, Fire House #1, Fire House #2, the Recreation Office, and the Police Department), which represents 44% of all electricity consumed, and street lighting, which represents 41% of all electricity consumed (see chart below).

Chart 1: Electricity Consumption Citywide, 2010



Two years ago, Ferguson and other municipalities approached AmerenMissouri about the possibility of retrofitting existing street lights with more energy-efficient bulbs to help reduce our street lighting bill; to date their studies have shown that retrofitting existing mast heads with LED or other energy-efficient bulbs will have a miniscule effect on consumption rates. While that claim is debatable, the portion of Ferguson's monthly street lighting bill that actually

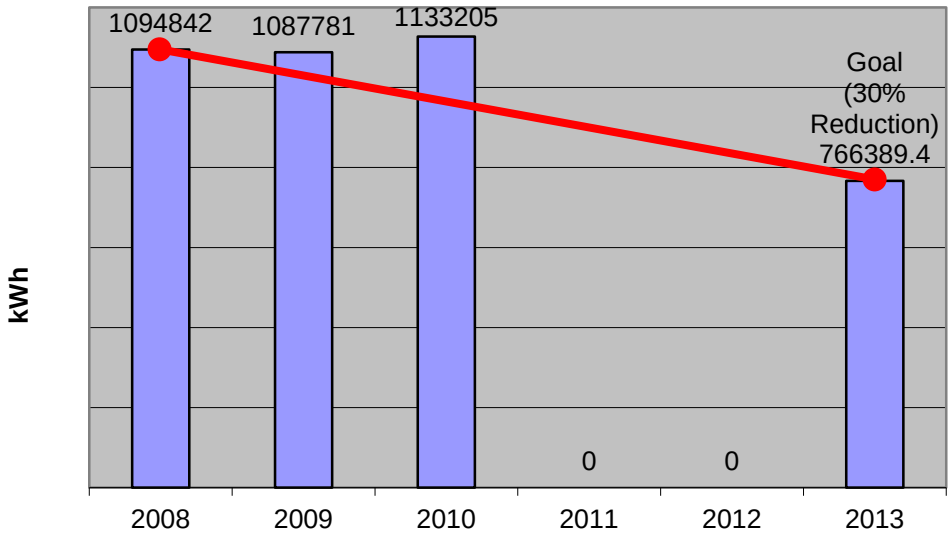
consists of energy usage is miniscule compared to the amount the City pays in monthly poll rental charges and for maintenance of the lights. So, outside of shutting off streetlights, which other cities in the region and across the country have done to reduce expenditures in their budgets (while not necessarily to reduce consumption), there is not much that the City can do to control the amount of electricity consumed by street lighting. The same can be said for lighting at parks, parking lots, or traffic signals. Thus, the main focus for the remainder of this report will be on the City's primary municipal facilities and what the City has done, or plans to do in the future, to reduce consumption levels.

Electricity Consumption at Primary City Facilities

Compared to the base rate data from 2008, 2010 saw a 3.5% increase in the amount of kilowatt hours used at our primary municipal facilities. All of these facilities are cooled during the spring/summer/fall months using electricity provided by AmerenMissouri. Year-round lighting of these facilities is also provided by AmerenMissouri.

The chart below summarizes the total number of kilowatt hours used at Ferguson's primary facilities since 2008. The red line indicates the City's progress towards meeting the goal of reducing electricity consumption by 30% by the end of 2013. To keep pace with this goal, the City would hope to see a 6% reduction every year.

Chart 2: Electricity Consumption at Primary City Facilities



Cooling Degree Days

Despite the City's efforts and increased awareness, consumption went up in 2010 after a slight dip in 2009 (when we saw a 0.6% decrease in # of kilowatt hours used). To explain what may be happening, City Staff examined the number of degree days in the St. Louis area for each of the past three years. In laymen's terms, degree days are a measure of the outside air temperature that takes into account by how much (in degrees) and for how long (measured in days, half-days, hours, etc.) the outside temperature was above or below a specific base temperature. For an

explanation of how degree days are calculated, please visit http://knol.google.com/k/degree-days#.

Degree days are used to show the energy required to cool or heat a building if the temperature rises above or falls below the base temperature set for the building. The chart below shows the number of cooling degree days (CDDs) in the St. Louis Area from 2008-2010.

Chart 3: Total Cooling Degree Days (temperature was above 65 degrees)

Month	2008	2009	2010
January	6	0	0
February	3	6	0
March	6	32	19
April	40	65	120
May	92	154	190
June	365	397	472
July	452	342	551
August	374	372	542
September	207	189	239
October	60	14	107
November	14	16	20
December	1	0	0
Total Degree Days	**1620**	**1587**	**2260**

Source: www.degreedays.net, using data collected from the nearest weather station at Lambert Intl. Airport

65 degrees is a standard base temperature used by many organizations when calculating degree days, and that is the base temperature that is used for the figures shown above. There was a substantial increase in the number of CDDs (nearly a 40% increase) from 2008 to 2010, so it would follow that more energy would be required to cool the buildings during those periods with a high number of CDDs.

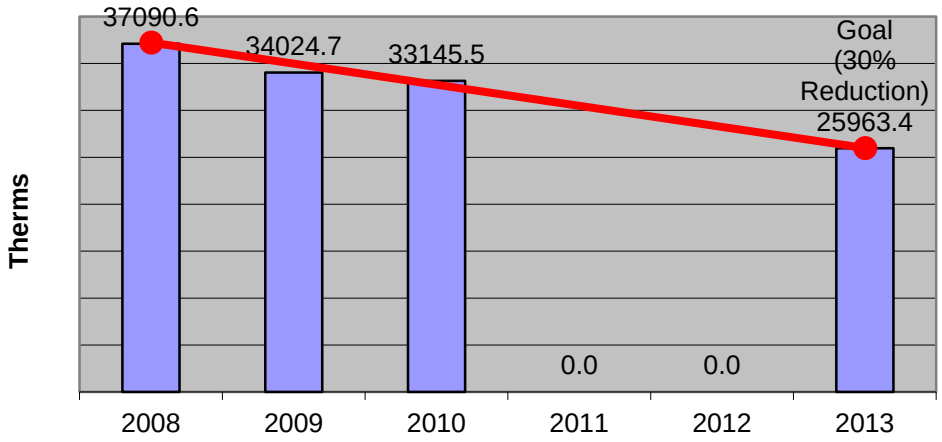
While 65 degrees is a good base rate to calculate the number of degree days, in reality, thermostats throughout the city's primary facilities are not always set to 65 degrees. Depending on the time of year and the comfort level of the employees working in each area controlled by a thermostat, the number of CDDs, and thus the amount of energy needed to cool the area, will vary from building to building. Regardless, this measure allows the City to more adequately and accurately compare and utilize year-over-year electrical consumption data for proper analysis.

Taking into consideration these degree days, the City has actually decreased consumption by 22%, since 2008. Dividing the total number of kilowatt hours used at the City's facilities by the number of peak CDDs during that year (April-September), reveals that in 2008 the City used 397.14 kWh/CDD. In 2009, that number went up to 404.80 kWh/CDD, but in 2010 the City used only 309.22 kWh/CDD.

Natural Gas

Compared to 2008, 2010 saw a reduction in natural gas consumption by 10.6%, which would indicate that we're making adequate progress towards the City's goal of reducing consumption by 30% by the end of 2013 (see chart below). Heating of city facilities is provided by Laclede Gas.

Chart 4: Natural Gas Consumption at Primary City Facilities



Heating Degree Days

As with electricity consumption, the explanation for the reduction in gas consumption can be provided by looking at the number of heating degree days (HDDs) from 2008-2010. Except in this case, 2010 saw a decrease in the number of HDDs compared to 2008, from 5,021 HDDs in 2008 to 4,686 HDDs in 2010. Particularly, the months of March through May and October through November 2010, were milder than compared to 2008 and 2009 numbers. Thus, less natural gas was needed to heat the buildings during these periods. The chart below provides a monthly breakdown of HDDs.

Chart 5: Total Heating Degree Days (temperature was below 65 degrees)

Month	2008	2009	2010
January	989	1111	1164
February	944	730	960
March	651	515	510
April	356	330	146
May	145	91	90
June	6	11	0
July	2	4	2
August	6	13	2
September	43	43	44
October	262	357	200
November	614	402	499
December	1003	964	1069
Total Degree Days	**5021**	**4571**	**4686**

Source: www.degreedays.net, using data collected from the nearest weather station at Lambert Intl. Airport

Taking into consideration these degree days, the City has actually decreased natural gas consumption by 9% since 2008. Dividing the total number of therms used by the number of peak HDDs (January – March and October – November) yields the following results: 2008: 8.31 therms/HDD; 2009: 8.34 therms/HDD; 2010: 7.53/HDD.

Looking Back at 2010

A number of new initiatives were started in 2010 to facilitate stricter adherence to the Environmental Ordinance and assist management in collecting and analyzing appropriate data. The following examines those initiatives directly related to energy consumption.

Establishment of Ferguson Environmental Committee

In September, 2010, the Ferguson Environmental Committee convened for the first time. The Committee consists of Council Member Dwayne James, residents Molly Rockamann and Ken Hogshead, Mark Jorden from Emerson Electric, and representatives from Laclede Gas and AmerenMissouri. The purpose of the Committee is to help achieve the goals expressed in the Environmental Ordinance, by bringing new ideas to the table and recommending changes to the City Council and staff for consideration. The input provided by the Committee in 2010 has already proven invaluable, including the implementation of significant changes to the format and contents of this report.

Energy Efficiency and Conservation Block Grant

Through grant funding provided by the Energy Efficiency and Conservation Block Grant (EECBG), Ferguson and 14 other municipalities in St. Louis County applied as a group to secure funding to retrofit existing lighting and replace it with more energy-efficient, environmentally-friendly lighting and controls. Our joint application was accepted by the State of Missouri in the spring of 2010. A firm was selected to oversee the administration of the grant and work with the municipalities on going out for bid for the materials and installation. Ferguson initially used the lighting audit obtained by Graybar Electric in 2009 as the basis for the City's scope of work.

Bids were received in late summer from several material suppliers and contractors. Because of the expertise of in-house staff, the City elected to forego the option of having a contractor perform the installation, which proved to be a wise decision, as upon award of the bid, the selected contractor ran into several problems with the scopes provided during the bid process and ultimately dropped out of the project. To ensure that the City's scope was accurate, we engaged the material supplier that won the bid to perform another audit in December of 2010. This revised scope of work has been finalized and we are waiting on AmerenMissouri to provide the rebate incentive letters. Once we receive the letters, the City will be ready to issue the purchase order for materials, pending final approval of the out-of-pocket cost for the project after grant amounts and rebate incentives are calculated.

Information Technology Improvements

Over the past year the Information Technology division has been replacing outdated, electricity-consuming equipment with more energy-efficient equipment, such as small-form desktop personal computers and flat-panel monitors that consume less electricity than older pc's and monitors. To date, staff has converted approximately 95% of the monitors to flat-panel LCD monitors, which use about half as much power as older cathode ray tube (CRT) monitors. In

addition, IT staff has begun virtualizing servers using VMware software, which divides a single server into separate virtual private servers that can perform different tasks on the same machine. In several cases, the City has been able to replace two or more old servers with a single new server using this approach, which results in less energy consumption and cooler temperatures in the server room, because less physical hardware is now actually required to run and cool these systems.

Vehicle Idling

During the summer of 2010 management enacted a policy that requires all employees who drive vehicles to shut off their engines if they will be out of their vehicle for an extended period of time. While this policy has no direct effect on our electricity and natural gas energy consumption levels, it demonstrates that staff is more aware of our impact on the environment than before 2009, when the Environmental Ordinance was passed – as an additional goal is to reduce consumption of gasoline and oil as well.

2011 Goals and Initiatives

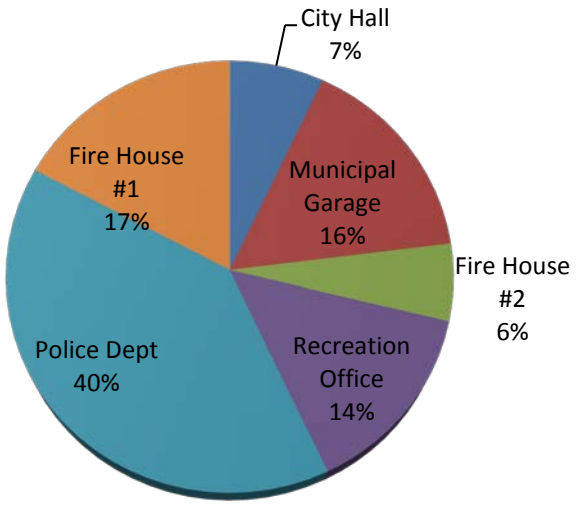
Lighting Retrofit

One of the main projects city staff will implement in 2011 is the afore-mentioned retrofit of existing lighting at several city-owned facilities, as well as the Ferguson Library. This project was described in detail in the prior section. Based on information submitted to the City by the grant administrator, Ferguson should look to save between $6,000-$9,000 per year as a result of this project.

Focus on High Utilizers of Electricity and Natural Gas

Analysis of 2010 usage reports indicates that the Police Department and the Public Works Garage are the biggest consumers of electricity and natural gas, respectively. The following charts indicate the percentage of energy used at each facility compared to the overall total.

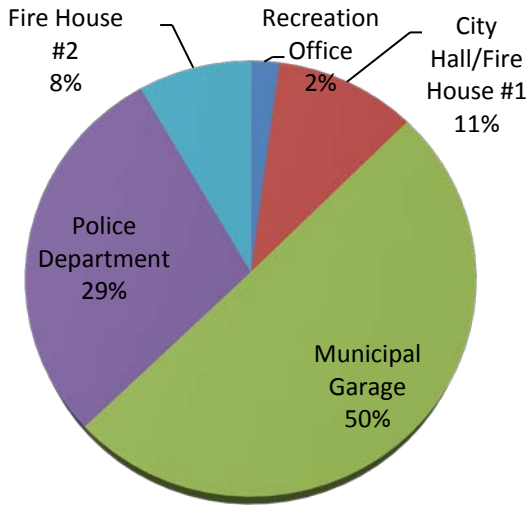
Chart 6: Electricity Consumption by Facility, 2010



The Police Department and both fire houses combined account for 63% of the electricity consumed among all facilities. Of course, police and fire are 24-hour operations that require constant temperatures and adequate lighting during all hours of the day, so it would be expected that they would be the City's largest consumers of electricity. However, because they are the largest consumers, they also present the biggest opportunity to reduce consumption levels. The lighting retrofit project will help, as it involves the purchase of motion-sensing detectors that will automatically turn off the lights after someone has left the room and it is unattended for a pre-determined amount of time.

Staff will also implement a policy that will set the thermostats within a pre-determined range for each building. Recognizing that every individual has different preference as to which temperature feels "comfortable" for him/her, large variances in temperature from one room to the next is simply inefficient and produces strain on our HVAC equipment, which in turn reduces the efficiency and usable life of existing equipment. A standard temperature policy will also allow the City to better measure the impact that future policy changes will have on consumption levels in its buildings.

Chart 7: Natural Gas Consumption by Facility, 2010



As evidenced from the chart above, the Public Works Garage is the single-largest consumer of natural gas throughout all of the facilities in the City. This 15,000 square-foot building has several garage door bays that open and close throughout the day as staff performs maintenance on city-owned vehicles and equipment. During winter months, this allows the heat to escape quickly, forcing the furnace to produce even more heat.

The City of Creve Coeur, one of the St. Louis County leaders in the environmental initiative, experienced similar findings when comparing natural gas consumption among their facilities, finding that their public works garage was also a high utilizer of natural gas. One solution they devised to lower heating costs at their garage was to install surface infrared heaters, that heat

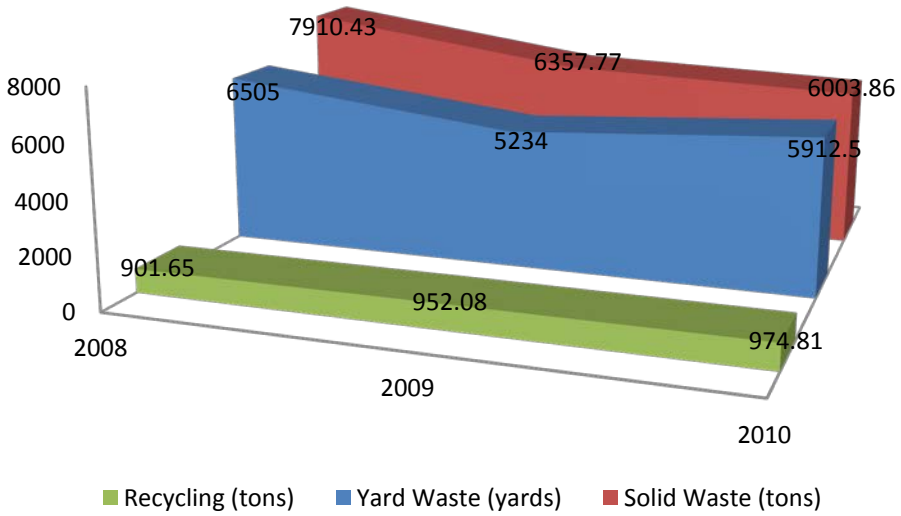
work surfaces and tools instead of the air around them. Looking forward to 2011, Ferguson will be researching this and other methods to help reduce natural gas consumption at the garage, including the use of air curtains and/or high-speed rolling doors.

Solid Waste and Recycling

The second area addressed in the Environmental Ordinance is solid waste and recycling. The Three R's of sustainability are Reduce, Reuse, and Recycle. Efforts have been positive citywide in this area, as the following chart illustrates.

Current Data

Chart 8: Recycling, Yard Waste and Solid Waste Consumption, Citywide



As the chart shows, citywide, Ferguson is moving in the right direction with respect to both the amount of solid waste being generated in the City (down 24% from 2008) and the amount of materials being recycled (up 8% from 2008). Residents should be extremely proud of these efforts.

Looking Back at 2010

Recycling Efforts

Through cooperation with the Special School District of St. Louis County, the recycling program implemented last year with students continues to be successful. Originally started with students from Ferguson Middle School, despite a successful year the recycling program faced the possibility of being cut from the school's budget due to lack of transportation. However, after discussions with administrators about the success and popularity of the program among the students, the district decided to continue the recycling program for the 2010-2011 school year with SSD students from McCluer North High School.

Recycling Grant for Commercial Recycling

In 2009 and 2010 the City unsuccessfully applied for a grant that would pay for the construction of dumpster enclosures and the first year of recycling services for businesses located in Downtown Ferguson. Our Municipal Code requires all dumpsters be housed in an enclosure, and many small business owners find it challenging to come up with the money to build or pay for the enclosure that the Code requires, so the idea behind the program was to use grant money to cover that expense. It was planned that grant money would be used to seed the pilot program, with participating businesses agreeing to continue the program on their own after the first year. Unfortunately, Ferguson was not chosen as one of the 2009 or 2010 recipients for this grant.

2011 Goals & Initiatives

Staff efforts have focused on recycling in prior years, but 2011 will see a shift in focus towards finding ways to reduce the amount of solid waste and recyclables we produce. While the recycling program with the Special School District has been popular and successful, the ideal solution would be working in an environment that doesn't produce paper to begin with. On that note, the City will strive to make significant progress towards that goal in 2011.

Document Management System and HR Online

One way the City is looking to reduce the amount of paper we generate is through a new document management system that will result in no longer needing to print employee paycheck stubs or checks to vendors. In addition, employees will be able to go online to make changes to their health or dental benefits, instead of printing off and filling out a form(s) to be submitted to Human Resources or Finance. The information on vouchers and supporting documentation needed to issue vendor checks will also be captured and stored electronically, instead of in hard copy form, which will also result in less physical storage space required to hold these documents. The Finance Department is currently in the process of creating the RFP for the document management system. Implementation should begin by the end of this fiscal year, provided bids come in under budgeted amounts. It is estimated that within 2-3 years, the City could cut overall paper consumption by 50-75% using these tools.

Elimination of Bottled Water

This was a goal listed in last year's report, and implementing it proved more challenging than expected. Most of the bottled water is consumed and distributed to residents by our police and fire department personnel, and is donated to the City by Missouri American Water and Sam's Club. The duties and demands of police officers and firefighters make it impractical to completely replace bottled water with tap water, especially during the summer months. However, the refined goal will be to focus on providing office staff within City Hall and Parks and Recreation with the option to drink tap water or use refillable water containers.

Building Codes and Construction

Looking Back at 2010

2010 saw the grand opening of the Plaza @ 501, the City's first municipal construction project undertaken since the passage of the Environmental Ordinance in 2009. Designed by the

Lawrence Group and Austin Tao, the site features several environmentally-friendly elements, including:

- rain barrels at all downspouts used to collect water runoff, which is in turn used to water nearby vegetation
- one of the region's largest installations of pervious concrete parking, which reduces surface water runoff
- rain gardens and bio-retention areas
- unheated facility and water-efficient fixtures in restrooms, which reduce electricity and water consumption at the site
- energy-efficient lighting
- encourages use of alternative transportation modes as future trailhead for the Maline Creek Corridor greenway and trail
- underground water retention system reduces sheet surface drainage to stream
- hard surfaces designed to not encroach on stream banks

2011 Goals & Initiatives

In April, 2011, voters will decide whether or not to pass an $11 million bond issue to fund the construction of a new fire house and renovations to the current police facility, as well as the re-use of the existing Fire House #1. Several environmentally-friendly features have been incorporated into the design, including the following:

- using urban infill and/or renovation of existing sites as opposed to greenfield site development is a fundamentally eco-friendly practice - when a city chooses to redevelop in an existing urban area or renovate an existing structure, there are tremendous environmental and energy benefits because creating new vehicular roadways, new utilities and infrastructure and at the same time disturbing "green" sites are all avoided through redevelopment or renovation
- the police and fire buildings will have highly-efficient HVAC systems that will use less electricity/gas and cost less to operate
    - fresh air: the new HVAC systems will provide a higher ratio of fresh air return inside the building, creating a healthier indoor air environment
- the use of high efficiency light fixtures will reduce the amount of electricity needed and cost less to operate and maintain
- materials within the building will be green as specifications for these materials will require a high degree of recycled materials and low-VOC/toxicity in all interior finishes
- the new fire station and police station addition will be more effectively insulated and the glass will be high performance glazing, again reducing the overall energy consumption of the buildings
- using low flow water closets and urinals to reduce water consumption
- using native plantings for our landscape design to reduce their water dependence and maintenance issues
- using a masonry exterior for the fire house, which provides for longevity and low maintenance of the building over the long term

If voters approve the bond issue for these projects, this project would be the focus for most of the remainder of 2011 and into 2012.

If the bond issue fails to pass, the City will need to reexamine the feasibility of prior capital projects, including replacing the windows at City Hall with better energy-saving units, and looking at other facilities to determine what can be done to make our buildings operate more efficiently.

Conclusion

In conclusion, this report demonstrates that the City has made significant progress towards reaching the goals outlined in the Environmental Ordinance. Although Ferguson did not comparatively see a dramatic reduction in energy consumption in any one area, there was a great benefit from the creation of the Environmental Committee. By assembling a group of staff and elected officials, residents, and representatives from other area institutions and companies who are knowledgeable on such issues, the City has been able to expand and diversify our level of expertise and bring about a much more thorough review of City policies and practices. This group has been able to provide quality recommendations to not only reconstruct the report to provide more valuable and pertinent information, but will now act as the driving force behind any recommendations to the City Council.

With respect to our established goals for reducing the City's energy usage, we will soon be able to more adequately assess our potential once the lighting retrofits have been installed. Unfortunately, delays within the energy consortium prevented this from occurring during 2010, however, the improvements are set to be made early this year. This should allow the City to collect significant data during 2011, and determine how best to meet our objectives. In contrast, the City's waste reduction and recycling efforts are continuing to improve much more rapidly. In 2011, city staff will be looking to better track our consumption of paper goods, and expand our programs into the business community. Both of these efforts will entail new cooperative efforts with area schools and the Ferguson Special Business District.

The Ferguson City Council will recognize the improvement of this year's report and the data that was collected and analyzed. The City would to thank the members of the Environmental Committee for their assistance in improving the quality of the data included in this year's report. The City also extends its gratitude to members of the City Manager's Office, Planning and Development, and the Department of Public Works for their contributions to this report.

Appendix

Ordinance 2009-3382

(AMENDED) BILL NO. 6869 ORDINANCE NO. 2009-3382

INTRODUCED BY COUNCIL MEMBER DWAYNE T. JAMES

AN ORDINANCE OF THE CITY OF FERGUSON IMPOSING NEW ENERGY-CONSERVATION REQUIREMENTS ON CITY OPERATIONS; AMENDING CHAPTER 37 ("SOLID WASTE") OF THE MUNICIPAL CODE RELATING TO RECYCLING; AND AMENDING CHAPTER 7 ("BUILDING AND BUILDING REGULATIONS" RELATING TO DESIGN AND CONSTRUCTION OF NEW AND REMODELED HOMES AND BUILDINGS

*Whereas***,** the City of Ferguson (hereinafter referred to as the "City") has recognized the importance of implementing programs in the City that promote sustainable energy and environmental awareness; and

*Whereas***,** the City has been named Tree City USA for the past several years and is committed to the benefits and importance of our tree population from new trees being introduced into our City through the Tree Dedication program to the trees providing shade for our parks and streets to the City trimming and cutting down trees after they have served their life course only to be used as mulch and firewood for our neighbors; and

Whereas, the City promotes the use alternative modes of travel through its Jolly Trolley for Seniors and the lunch-time trolley service to neighboring employers and schools through its Ferguson Station Business District; and

Whereas, the City, in partnership with Trailnet, is currently engaged in a Live Well Ferguson initiative aimed at improving resident health through physical activity and healthy eating; and

Whereas, the City is seeking to further encourage the voluntary *diversion* of residential, commercial, and special event waste through recycling to decrease the amount of waste in landfills helping the environment and reducing the need for new landfills; and

Whereas, it is the intent of Council to ensure that buildings built or substantially renovated by the City are built in the most environmentally sound way; and

Whereas, the City shall encourage site planning, landscaping, and structure design which maximizes the potential for energy conservation by reducing the demand for artificial heating, cooling , ventilation and lighting, and facilitating the use of solar and other energy resources; and

Whereas, it is the intent of the Council to provide the citizens and employees of the City of Ferguson with new and renovated buildings which will give the optimum comfort, ensure the

durability of investments for the taxpayer, consider the health of building occupants and provide the greatest awareness possible of environmental impacts of what we do.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF FERGUSON, MISSOURI, AS FOLLOWS:

Section 1. Chapter 2 is hereby amended by the addition of a new Section 2-4 which shall read as follows:

CHAPTER 2 ADMINISTRATION

ARTICLE I IN GENERAL

SECTION 2-4 ENERGY CONSERVATION REQUIREMENTS FOR CITY OPERATIONS

In order to reduce paper usage and waste and increase efficiency, the City Manager shall develop, implement and maintain a plan to reduce at least 30% less energy of its 2008 usage and 20% of the 2008 waste generated *by* the City. Such reduction shall occur within the next five years. As part of the budget process, the City Manager shall include an annual report to the City Council reporting the energy consumption performance for that previous year and the plan of reduction or plan for continued maintenance. Possible environmental-friendly avenues and processes for the City to consider in its plan include:

1. Utilizing the Council Intranet site on the City website as web-based portal to house Council documents, such as meeting agendas, minutes, ordinances, supporting documents. Council and City staff will have access to these documents from any PC, home or office and can view all necessary documents online during Council meetings, eliminating the need for hard-copies in most circumstances;

2. Acquiring products and services that have a lesser or reduced effect on human health and the environment when compared with competing products or services that serve the same purpose in all purchases;

3. Incorporating energy efficient pulse type heating systems in City-owned buildings;

4. Using environmentally safe light bulbs to reduce energy waste;

5. Replacing a portion of City-owned vehicles with hybrids, or using bio-diesel in the fleet vehicles;

6. Requiring solicitors to include instructions asking bidders to identify any environmental benefits over the life cycle of their products and/or services in bid procurement services;

7. Adding information on to the City's Website that contains environment education on topics like landscaping, recycling and energy efficiency; and

8. Promoting the use of Neighborhood Gardens.

Section 2. Section 37-1 of Chapter 37 is hereby amended by the addition of the following definitions:

[all other definitions are not altered or amended and remain in full force and effect]

CHAPTER 37 SOLID WASTE

ARTICLE I IN GENERAL

SECTION 37-1 DEFINITIONS

Certified Recyclable Materials Collector means a Recyclable Materials Collector which has been issued a certificate by the City pursuant to this Division.

Collect or Collection shall mean to take physical possession of and remove solid waste or recyclable materials at the place of generation.

Commercial facilities means any facilities that are not residential facilities or mixed use facilities.

Disposal means the final deposition of waste at a permitted landfill or other permitted waste facility.

Diversion or Divert means the reduction or elimination of solid waste from landfill disposal.

Recycling facility means a recycling, composting, or materials recovery or reuse facility.

Self-haul means the process of personally, or through one's own full-time employees, collecting, transporting, and delivering one's own solid waste or recyclable materials.

Section 3. Chapter 37 of the Municipal Code is hereby amended by a new Section 37-5 which shall read as follows:

CHAPTER 37 SOLID WASTE

ARTICLE I IN GENERAL

SECTION 37-5 RECYCLING REQUIREMENTS

A. *Purpose.* The purpose of this Division is to establish requirements for recycling of recyclable materials generated from residential facilities (both single family and multi-family),

commercial facilities (including City buildings), and special events. These requirements are intended to increase the diversion of recyclable materials from landfill disposal, reduce greenhouse gas emissions, and defer potential financial obligations associated with waste to the City.

B. Service Requirements. Those who are provided with curbside recycling collection services (i.e., single-family residential) within the City of Ferguson shall be encouraged to utilize such services by separating recyclable materials from other solid waste and depositing the recyclable materials in the approved container. All owners of residential facilities containing more than three (3) separate dwelling units shall provide, in addition to typical trash hauling services, for removal of recyclable material from such property. The owners shall provide approved recyclable material containers that are clearly identified within two (2) years of the effective date of this ordinance. Furthermore, all owners of commercial facilities within the City of Ferguson shall be encouraged to utilize recycling collection services.

The recyclable material removal services required by this Section shall include, at a minimum, all of the following:

1. collection of recyclable materials as frequently as necessary to meet demand;
2. collection of plastic bottles and jars, paper, newspaper, metal containers, cardboard, and glass containers;
3. collection of other recyclable materials for which markets exist;
4. designated recycling collection and storage areas; and
5. signage on all recycling receptacles, containers, chutes, and/or enclosures.

C. *Recycling at Special Events Required.* For any community special event held after May 1, 2009, which requires any type of license or permit from the City of Ferguson, the person or entity responsible for such event shall provide recycling receptacles throughout the event venue.

1. The number of recycling receptacles shall equal the number of solid waste receptacles.

2. The solid waste and recycling receptacles shall be placed next to one another throughout the event venue.

3. The types of recyclable materials suitable for deposit into each recycling receptacle shall include, at a minimum, aluminum and metal cans, and glass and plastic bottles and jars.

4. Each recycling receptacle shall be clearly identified as a recycling receptacle and shall display a list of the types of recyclable materials which may be deposited into the recycling receptacle.

5. The responsible person shall ensure that the recyclable materials deposited into the recycling receptacles are as identified above.

D. *Exemptions.* Exemptions to some or all of the requirements of this Section may be granted at the discretion of the City Manager's designee. Applications for exemptions may be granted upon consideration of the following factors: available markets for recyclable materials, available space for recycling containers, alternative recycling efforts, and the amount and type of solid waste or recyclable materials generated. To be effective, an exemption must be in writing and signed by the City Manager. An exemption may be revoked at any time at the discretion of the City Manager if one or more of the factors justifying the exemption no longer exist, or other change in circumstances warrant revocation. Unless earlier revoked, an exemption shall be effective for a period of one year from the date it was granted. Subsequent applications for exemptions may be granted at the discretion of the City Manager's designee upon consideration of the factors listed in this section.

E. *Scavenging of Recyclable Materials Prohibited.* No person other than an appropriate waste hauler permitted by the City of Ferguson to collect the recyclable materials, shall remove or otherwise interfere with recyclable materials which have been placed at a designated recycling or recyclable materials collection location.

Section 4. Chapter 7 of the Municipal Code is hereby amended by the addition of a new Section 7-44 which shall read as follows:

CHAPTER 7 BUILDING AND BUILDING REGULATIONS

ARTICLE III BUILDING CODE

SECTION 7-44 ADDITIONAL REQUIREMENTS FOR THE DESIGN AND CONSTRUCTION OF NEW AND REMODELED HOMES AND BUILDINGS

A. *Purpose.* The purpose of the requirements set forth herein is to provide for the enhancement of sustainable energy and environmentally friendly efforts during building construction. It is further the intent of the City Council to ensure that the development of public buildings is done in an environmentally friendly manner as well as to encourage environmentally conscious private commercial, industrial and residential development. The Program shall be mandatory for the development of all City-Owned construction projects, and is encouraged for all private commercial, industrial and residential development projects.

B. *Definitions.* For purposes of this Section, the following terms shall mean:

Construction means any project associated with the creation, development, or erection of any building or facility that is 5,000 square feet of floor area or greater.

Green building means generally the resource efficient design, construction, and operation of buildings by employing environmentally sensible construction practices, systems, and materials.

LEED means the Leadership in Energy and Environmental Design Rating System of the U.S. Green Building Council.

LEED for Existing Buildings means the USGBC rating system that applies to existing buildings and addresses whole-building cleaning and maintenance issues (including chemical use), recycling programs, exterior maintenance programs, and systems upgrades.

Project means any construction associated with the creation, development, or erection of any building or facility.

Remodeling means any renovation or remodeling project (commercial or residential) that includes a total cost greater than fifty-one percent (51%) of the appraised value of the property.

USGBC means the U.S. Green Building Council.

C. *City-Owned Construction Projects***.**

1. Any buildings built or remodeled with City funds shall be developed in accordance with, at a minimum, the LEED "silver" certification designation or another nationally-recognized certification program., as long as the estimated energy savings exceed the marginal cost of the energy saving features over the expected life of the building and subject to fiscal constraints established by the City Manager. On a project-by-project basis, the City Manager may determine that the costs or requirements associated with participating in the Program substantially outweigh the benefits of such participation. Such a determination shall amount to a waiver of the requirement that City comply with the provisions of this Chapter. In order to avoid increased cost of operation, care shall be taken to avoid complex systems that would require extensive technical training of personnel.

2. Design documents shall include an explanation of how the features listed below are incorporated into the design or, for those features not incorporated, an explanation of the financial or operational reasons why the feature was omitted from the design. Energy saving features, including but not limited to the following:

(a) Solar orientation, with the long axis facing south

(b) Use of daylighting

(c) Use of appropriate glass for minimizing heating and cooling loads

(d) Insulation beyond minimum standards

(e) Use of renewable energy for heating and cooling

(f) Use of renewable energy for heating and swimming pools

(g) Use of water conservation measures including dual water systems if available

(h) Landscaping for summer cooling effect and for blocking winter winds

(i) Use of energy efficient motors

(j) Use of energy efficient lighting

(k) Use of energy management systems

(l) Parking areas designed to limit heat absorption

(m) Use of building materials and color to decrease cooling load

D. *Private Construction Projects.*

1. New Residentially Permitted Projects: The permit applicant for new residential construction, shall be encouraged to satisfy the requirements associated with the current USGBC LEED for Homes program, as may be amended from time to time; or a nationally-recognized equivalent ratings system.

2. Remodeling of Existing Homes: The permit applicant for remodeling of existing homes shall be encouraged to satisfy the requirements of remodeling certification for the current LEED for Homes program, as may be amended from time to time; or a nationally-recognized equivalent ratings system.

3. New Commercial or Industrial Buildings: The permit applicant for new commercial or industrial buildings construction shall be encouraged to satisfy the requirements associated with the current LEED for New Construction or derived USGBC LEED rating system (e.g., LEED for Schools, LEED for Health Care) program, as may be amended from time to time; or a nationally-recognized equivalent ratings system.

4. Remodeling of Existing Commercial and Industrial Buildings: The permit applicant for the remodeling of existing commercial and industrial buildings shall be encouraged to satisfy the requirements associated with the current LEED for existing buildings or derived USGBC LEED rating system (e.g., LEED for Schools, LEED for Health Care) program, as may be amended from time to time; or a nationally-recognized equivalent ratings system.

5. Incentives: Permit applications submitted pursuant to this Section shall be given priority over other permit applications. The City shall use its best efforts to ensure that building permit applications for residential and commercial green buildings shall be processed within 30 business days. All such applications shall be accompanied by an appropriate green building program application form.

6. Certification: The verification of the green building designation shall be subject to certification by a qualified third party who has been trained and certified as a green

building certifying agent. Applicants shall be responsible for all costs associated with certification.

Section 5. This Ordinance shall be in full force and effect from and after the date of its passage by the City Council.

FIRST READING: February 10, 2009 SECOND READING: February 24, 2009

PASSED AND APPROVED BY THE CITY COUNCIL OF THE CITY OF FERGUSON, MISSOURI, THIS 24th DAY OF FEBRUARY 2009.

_____
Brian P. Fletcher, Mayor

ATTEST:

_____
City Clerk