

2011

Banks Sustainability Strategy



www.cityofbanks.org

(503)324-5112

Adopted by City Council on

February 8, 2011

Revisions adopted by City

Council October 11, 2011



Prepared by Stephanie Freeman-Montes, Community Development and Sustainability Analyst Intern, City of Banks 1/11/2011

Edited by Beth Lampert and Roberta Sommer, Community Development and Sustainability Analyst Interns, City of Banks 10/11/2011

Table of Contents

Table of Contents	ii
Figures, Tables, Appendices	iii
Acronyms	iv
EXECUTIVE SUMMARY	1
1. INTRODUCTION	2
2. BACKGROUND	3
<i>a. A Common Understanding of Sustainability</i>	5
<i>b. Vision</i>	8
<i>c. Guiding Principles</i>	8
3. THE STRATEGY	9
<i>a. Goals and Targets</i>	9
Energy	10
Transportation	10
Sustainable Purchasing	11
Water Conservation	11
Waste Reduction and Recycling	11
Greenhouse Gas Inventory	12
Community Outreach	12
<i>b. Implementation Plan</i>	13
Energy	13
Transportation	16
Sustainable Purchasing Policy	18
Water Conservation	19
Waste Reduction and Recycling	21
Greenhouse Gas Inventory	23
Community Outreach	24
<i>c. Measuring Success and Prioritizing Activities</i>	27
References	29

Figures

Figure 1: Why Address Climate Change	3
Figure 2: Sustainability Related Policies and Initiatives	4
Figure 3: Natural Step Four Systems Conditions for a Sustainable Society	5
Figure 4: Systems View of Sustainability	6
Figure 5: Sustainability's Three Pillars in Action	7
Figure 6: The Effort Impact Balance	9
Figure 7: Performance Based Model	9
Figure 8: PGE's Generated and Purchased Power Supply Mix	14
Figure 9: The Benefits of Green Building	15
Figure 10: Solid Waste Hierarchy	22
Figure 11: Scope 1, 2, and 3	23
Figure 12: Metro GHGI Results	24

Tables

Table 1: Example Transportation Tracking Sheet	18
Table 2: Curtailment Actions	21
Table 3: Solid Waste and Recycling Activity Table	22
Table 4: Community Outreach Activity Table	26

Appendices

Appendix A: Sustainable Purchasing Policy	
Appendix B: Water Bottle Policy	
Appendix C: Energy Working Section Additional Information	
Appendix D: Energy Working Sector Activity Table	
Appendix E: Transportation Working Sector Activity Table	
Appendix F: A Resolution Endorsing the U.S. Mayors Climate Protection Agreement	
Appendix G: Environmentally Preferable Product Resources	

Acronyms

ACES	American Clean Energy and Security Act
BSS	Banks Sustainability Strategy
CFL	Compact Fluorescent Lamp
COP	Community Outreach Plan
EPA	Environmental Protection Agency
EPP	Environmentally Preferable Purchasing
ESAB	Environmental Sensitivity Advisory Board
FCA	Full Cost Accounting
GHG	Greenhouse Gas
GHGI	Greenhouse Gas Inventory
HVAC	Heating, Ventilation, Air Conditioning
ICMA	International City Management Association
IPCC	Intergovernmental Panel on Climate Change
KWh	Kilowatt Hour
LED	Light Emitting Diode
LIDA	Low Impact Development Approaches
OSA	Oregon Sustainability Act
P&RMP	Parks & Recreation Master Plan
PGE	Portland General Electric
PSWCC	Partners for a Sustainable Washington County
SPP	Sustainable Purchasing Policy
TBD	To Be Determined
TNS	The Natural Step

EXECUTIVE SUMMARY

The City of Banks has a rich history in natural resource and agriculture industries, which has provided an underlying cultural value of sustainability among its citizens. The City seeks to build upon this foundation by introducing a holistic strategy that addresses actions of local government, households, and businesses. The goal of this strategy is to bring together various stakeholders to foster the concept of a sustainable city; one that values economic security, social equity, and environmental quality. With the creation of the Banks Sustainability Strategy (BSS), the City has, for the first time, a sustainability related vision and guiding principles to advise decisions. The BSS also outlines a shared understanding of sustainability and the concomitant environmental sensitivity in order to provide a clear understanding of the concepts for operational purposes. Next, the BSS utilizes the performance-based model and milestone process to assess seven working sections: energy, transportation, water conservation, sustainable purchasing, waste and recycling, community outreach, and a greenhouse gas inventory. For each section a goal, target and implementation plan is set or discussed in detail. With the limited resources of a small local government organization it is critical to prioritize activities based on an effort/impact analysis and to set achievable targets. The final section of the BSS discusses this challenge and recommends creating an environmental sensitivity advisory board (ESAB) to implement and monitor progress to report annually to the City Council and adapt the strategic goals, targets and implementation plan as needed.

1. INTRODUCTION

The City of Banks seeks to bring together various stakeholders, including local businesses and households, to foster the concept of a sustainable city - one that values economic vitality, social equity and environmental quality. The Banks Sustainability Strategy (BSS) creates a clear path by setting goals and targets to become a leader for semi-rural areas in environmental sensitivity. Traditionally, natural resources and agricultural industries have been the City's economic base, and therefore sustainability is a historic cultural value among citizens. The City desires to build upon this foundation and implement a progressive plan which addresses the operations of the City government and local neighborhoods and businesses. The BSS is envisioned as a living document, to be revisited often and adapted as needed, to be a starting point for a clear vision for Banks' sustainability approach, and to begin the discussion around sustainable activities, such as greenhouse gas reduction activities.

*"Sustainability is a journey,
not a destination"*

Environmental Sensitivity is an acknowledgement that the global, national, state, regional and local physical environments and ecosystems matter and that all the actions taken by the Banks City government will be contemplated in some appropriate and proactive form during decision making.

The City has endorsed the U.S. Mayor's Climate Protection Agreement; the City Manager has signed the International City Management Association's (ICMA) Sustainable Communities Commitment, and the City is an active member of Partners for a Sustainable Washington County Community (PSWCC). These collaborations illustrate the value that Banks places on protecting natural resources. As the City moves forward in planning and implementing projects, it has adopted an environmental sensitivity approach which recognizes the value of global and local ecosystems and pledges to contemplate effects on the physical environment before a decision is made on any given project. The Banks Sustainability Strategy (BSS) helps the City meet its previously adopted goal of being environmentally sensitive.

2. BACKGROUND

The City of Banks is a small, rural community located in western Washington County, situated just outside the Portland Metro Urban Growth Boundary. Banks' mission is to enrich the community by effectively managing resources, providing for sustainable growth and long term stability, to be environmentally responsible while offering an ample level of community services and maintaining a safe clean community where people want to live. The City is a rural community with a bucolic lifestyle, dedicated to living with one eye on the historic past and the other on maintaining the quality of life for ourselves and our future citizens.

As an environmentally sensitive city, Banks is protecting the quality of life for all citizens, both current and future, by making decisions and policies that protect natural resources. The BSS regards Banks as a city organization and also as a community of citizens and business owners. Local governments are in a prime position to reinvent how institutions function, to serve as a model for businesses, and to infuse a culture of sustainability in the community. The government will set an example for sustainability, also in addition to creating a plan to encourage citizens and businesses towards environmental sensitivity. The community is more likely to engage in sustainable choices if their local government is doing so.

The Intergovernmental Panel on Climate Change (IPCC) is the leading scientific body for the assessment of climate change. It is the climate division of the United Nations and is composed of thousands of scientists from over 113 countries. The IPCC strives to reflect a range of views and expertise and to ensure objective assessments through an extensive peer reviewed reporting procedure. The IPCC has stated that human-caused emissions must be reduced by as much as 50% globally if we are to avoid the worst potential climate impacts on human

- 65% of U.S. oil is gone
 - 67% of the world population has insufficient drinking water
 - 90% of world's fisheries projected to be lost by 2048
 - 40% decrease in arctic sea ice thickness
 - 4-8 in increased global sea level in 21st century
- (S. Solomon, 2007) (Sherrie Gruder, 2007)

Figure 1: Why Address Climate Change?

economies. Many non-profit organizations, government agencies, households, businesses and universities have voluntarily taken on the challenge of reducing greenhouse gas emissions.

A close examination of the goals and actions of sustainability related policies at different governmental levels (Figure 2) ensures the City of Banks is adding to larger sustainability objectives and provides sufficient background for Banks' operational strategy.

International	In December 2009, international governments met to negotiate the next climate agreement to follow the Kyoto Protocol, which is set to expire in 2012. The result was the Copenhagen Accord, which was drafted by the United States, China, Brazil, India and South Africa, and calls for nations to take action to keep increases in global temperatures below two degrees Celsius.
National	The American Clean Energy & Security Act (ACES) was passed by the U.S. House of Representatives in June 2009. The 'American Power Act' bill draft was presented to the Senate in May 2010. The US Environmental Protection Agency (EPA) has begun mandatory reporting for large emitters.
State	<ul style="list-style-type: none"> • By 2010: stop the growth of greenhouse gas (GHG) emissions. • By 2020: reduce emissions to 10% below 1990 levels. • By 2050: reduce emissions to 75% below 1990 levels. • By 2015: reduce energy consumption by 20% (based on energy consumption in 2000). • By 2010: obtain 100% of state government's total electricity needs from renewable energy sources. • By 2010: increase the use of biodiesel in state cars by 25% and ethanol by 10%.
Regional	<ul style="list-style-type: none"> • Reduce direct and indirect greenhouse gas emissions (CO₂) 80% below 2008 levels by 2050. • Recover all waste for recycling or composting, and reduce overall generation of waste. • Reduce water use 50% below 2008 levels.
County	<ul style="list-style-type: none"> • Reduce energy use in County buildings by at least 10% from 2008-2013. • Meet Energy Star standards for those buildings that are eligible. • Improve recycling rates and reduce waste stream in county facilities between 2008-2013. • Improve fuel efficiency and reduce emissions of County fleet vehicles. • Improve the proportion of paper purchases by the County that is 30% post-consumer waste or better. • Conduct GHG inventory and set benchmark for GHG reduction.

Figure 2: Sustainability Related Policies and Initiatives

a. A Common Understanding of Sustainability

As Banks begins to increase the presence of sustainability into operations and community outreach it is critical to adopt a clear and common understanding. Sustainability is more than an environmental principle. It also includes economic security and social equity issues. The most common definition of sustainability is from the “Brundtland Report” when the world communities first came together to discuss this important issue in 1987:

“Sustainable development is...development that meets the needs of the present without compromising the ability of future generations to meet their own needs”

-World Commission on Environment and Development

In a sustainable society, nature is not subject to systematically increasing...

1. Concentrations of substances extracted from the Earth’s crust;
2. Concentrations of substances produced by society;
3. Degradation by physical means;

And, in that society,

4. People are not subject to conditions that systematically undermine their capacity to meet their needs.

This definition is still relevant for the larger concept of sustainability but is difficult to use as a framework in a practical, local strategy. The Oregon Sustainability Act (OSA) utilizes a similar definition:

“Sustainability means using, developing and protecting resources in a manner that enables people to meet their current needs and provides that future generations can also meet future needs, from the joint perspective of environmental, economic and community objectives.” (Assembly, 2001)

Figure 3: The Natural Step Four Systems Conditions for a Sustainable Society

This definition includes the important incorporation of economic and community objectives in to the environmental perspective. Following are four sustainable development principles (Natural Step, Systems View, Three Pillars and Full Cost Accounting) that are important to review as Banks moves forward with a common understanding of what sustainability really means.

The Natural Step

A growing approach to sustainability that much of Oregon is utilizing is The Natural Step (TNS) framework which outlines four conditions of sustainability (Figure 3) that if violated illustrate an unsustainable activity. The four conditions are explained in lay terms in the following sentence. A sustainable society, organization, or entity:

1. Does not take more stuff out of the earth's crust (i.e., fossil fuels, metals, minerals, etc)
2. Does not make or use things that can't be reused or broken down (i.e., chemicals)
3. Keeps natural systems and cycles stable, and
4. Satisfies the needs of its citizens.

Systems View

One critical, yet recent, shift in the field of sustainable development is the recognition of environmental limits on economic and social growth. Historically, the environment was viewed as a resource to be exploited to meet our economic wants. Now, it is clear the environment has natural limits (i.e. a carrying capacity), which we must understand and include in to project decision-making. This idea is often referred to as the Systems View of sustainable development, where the economy and society are constrained by the limits of the natural environment as delineated in Figure Four.

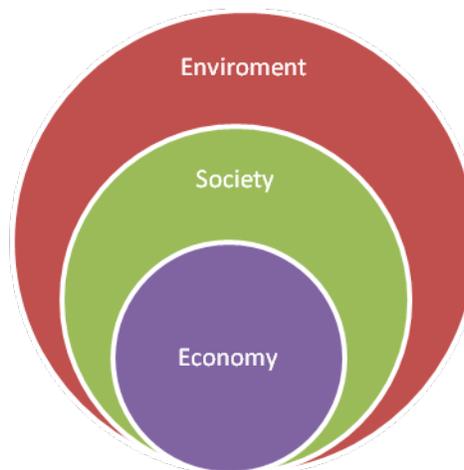


Figure 4: Systems View of Sustainability

Three Pillars

An additional common sustainable development concept is often referred to as Sustainability's Three Pillars. In this concept communities need three foundations to be truly sustainable: economic security, ecological integrity, and democracy (citizen participation in community decision making). These three pillars can also be referred to as the economic, environmental, and social needs of sustainable development. Under this concept, Banks must strive to address all three needs simultaneously. Weighing economic security without recognition of the impact on the environment or the political system would ultimately create an unsustainable situation. Banks has included this concept in its mission by stating that it will enrich the community by providing for long term stability (economic opportunities); being environmentally responsible (i.e., having ecological integrity); and offering ample community services and a safe, clean community (i.e., meeting community needs).



Figure 5: Sustainability's Three Pillars in Action

Full Cost Accounting

One last tool utilized in sustainability strategies is the concept of Full Cost Accounting (FCA). FCA is the breakdown of all the costs and benefits of alternative purchases and the presentation of those findings to decision makers. In FCA, the social and environmental costs are calculated in addition to the monetary costs. This process can be especially useful when deciding how to allocate public funds. Organizations that have utilized FCA have experienced budget savings. As large purchases arise, Banks could use FCA in the decision making process.

The transformation of how households and business owners operate is equally important to transforming city operations. A major component of the BSS is the Community Outreach Plan (COP), which aims to educate citizens about working

towards the same goals as the City government. The goals are the same for households, businesses and government, but the actions taken by each are slightly different. With this common understanding of sustainable development the City of Banks is better prepared to implement a strong strategy with bold targets. Following are the vision and guiding principles to frame the direction of Banks' sustainability approach.

b. The Banks Sustainability Vision

The Banks City government will be a leader of semi-rural areas in environmental sensitivity through enriching the lives of community members by effectively managing resources and considering local ecosystems, local economies, and citizens as every decision is made.

c. The Banks Sustainability Guiding Principles

Below is a compilation of important concepts and values to guide the BSS and operations within the City of Banks.

1. **Environmental Sensitivity** - An acknowledgement that the global, national, state, regional, and local physical environments and ecosystems matter and that all the actions taken by the Banks City government will be contemplated in some appropriate and proactive form during decision making.
2. **Systems View** - The recognition that there are natural environmental limits to economic and social growth.
3. **Triple Protection for Banks** - To maintain and improve the economic security, environmental quality, and social equity of the citizens of Banks.
4. **Awareness** - An attempt to incorporate community recognition into program objectives at all levels.
5. **Sustainable Culture** - Promoting attitudes and behaviors among staff and community members that foster environmental sensitivity in daily activities and operations.

- 6. **Collaboration** - Striving for full collaboration of City staff, community members, business owners and local government in sustainability endeavors.

As Banks embarks on a robust sustainability strategy it is important to keep in mind the need to prioritize activities due to limited staff and resources. A helpful framework to guide Banks in ranking activities is the Effort/Impact matrix below developed by Good Company. City operations should strive first for low effort, high impact projects. This process will help first create a list of prioritized projects, and then guide the City in obtaining estimates and analyzing the budget for feasibility.

Effort / Impact	Low Effort	High Effort
Low Impact	Small projects, easy to carry out	Small projects, difficult to carry out
High Impact	Large or important projects, easy to carry out	Large and important projects, difficult to carry out

Figure 6: The Effort Impact Balance

Source: Good Company

The following section outlines the BSS and will be the portion of this document that can operate independently and be monitored regularly.

3. THE STRATEGY

This section addresses the goals, targets, and implementation plans for each working section of City government operations. A fundamental component of the BSS is the performance-based model and milestone process. Each section works to establish a baseline, set a target, develop a local action plan, implement the local action plan, and measure results. Results will then be used to adapt the BSS as needed. This is a critical foundation and the importance of obtaining a sound baseline should be a top priority.



Figure 7: Performance Based Mode

a. Goals and Targets

Energy

The BSS seeks to adopt the following **energy goal**:

To decrease Banks' dependence on fossil fuels through implementing projects that decrease energy consumption, improve energy efficiency and encourage purchasing renewable energy in order to support a strong local economy and a healthy community.

This goal better prepares the City and community for fluctuations in oil and natural gas prices and for the possibility of extra jurisdictional taxes on greenhouse gas emissions. Such a decrease in fossil fuel usage can also decrease the City's overall carbon footprint, which improves the quality of life for local, regional and global communities now and in the future.

The BSS seeks to adopt the following **energy targets**:

1. Purchase ___% renewable energy by 2015 and 100% by ____ (blanks to be determined in collaboration with PGEs Green Power Community Program).
2. Reduce energy use in government buildings 10% by 2012 and 20% by 2015 as compared to 2009 usage.
3. Adopt green building standards for development by 2012.
(Baseline determined, target needed)

Transportation

The BSS seeks to adopt the following **transportation goal**:

To support a strong local economy and healthy community by promoting transportation practices that minimize greenhouse gas emissions, fossil fuel use, associated health hazards and costs through the use of renewable energy sources and through decreasing the total number of miles traveled.

The BSS seeks to adopt the following **transportation target**:

1. Reduce fossil fuel use in city vehicles by ___% as compared to 2009 usage.
(Baseline and target needed)

Banks Sustainable Purchasing Policy

Banks has previously adopted the **sustainable purchasing goal**:

To purchase, to the extent possible, equipment or materials that are recyclable, made of recycled content, and that reduce waste as part of an ongoing effort to make Banks a healthier place to live, work and do business. In addition, it is important to consider purchasing materials that are reusable whenever possible.

The BSS seeks to adopt the following **sustainable purchasing target**:

1. To increase the amount of purchased goods that are recyclable, made from recycled content, from local vendors, and/or that reduce waste by ___% as compared to 2009.

(Baseline and target needed)

Water Conservation

The BSS seeks to adopt the following **water conservation goals**:

1. To ensure a sustainable supply of high quality drinking water for the City of Banks.
2. To encourage the conservation of water by community members.

The BSS seeks to adopt the following **water conservation target**:

1. To improve water conservation techniques within city operations by 10% when compared to 2007.

(Baseline needed, target set)

Waste Reduction and Recycling

The BSS seeks to adopt the following **waste reduction and recycling goal**:

To identify and implement projects that reduce waste sent to the landfill and that increase recycling within city operations, households and businesses.

The BSS seeks to adopt the following **waste reduction and recycling target**:

1. Reduce the amount of solid waste sent to the landfill by ___% by 2012 compared to 2009 data. (% to be determined by baseline)
2. Increase the amount of recycled material by ___% by 2012 compared to 2009 data. (% to be determined by baseline)

3. Make garbage and recycling collection mandatory within the City of Banks.

(Baseline and target needed)

The monitoring of waste reduction and recycling initiatives can be measured in tons or cubic yards of solid waste and recycling contents reported by the solid waste hauler, Swatco. The first action under this section would be to establish a baseline and then work to improve recycling, decrease solid waste, and possibly implement a composting program in the future.

Greenhouse Gas Inventory

The BSS seeks to adopt the following **greenhouse gas inventory goal**:

To measure emissions from the City of Banks operations in order to manage risk and decrease greenhouse gases, further moving the City towards environmental sensitivity.

The BSS aims to adopt the following **greenhouse gas reduction target**:

Decrease greenhouse gas emissions ___% by 2009 baseline.
(Baseline and target needed)

A GreenHouse Gas Inventory (GHGI) identifies the sources and measures the amount of greenhouse gases an entity emits into the atmosphere and is often referred to as a carbon footprint. A GHGI provides the necessary baseline for each working section of the BSS. Since this is a living document, to be revisited and changed as new developments occur, it is in the best interest of the City to establish a sound carbon baseline as soon as possible. A GHGI provides a comprehensive GHG emissions total that includes all the working sections in the BSS.

Community Outreach Plan

The BSS seeks to adopt the following **community outreach goals**:

1. To decrease the community's dependence on fossil fuels through:
 - i) consuming less energy
 - ii) implementing projects to improve energy efficiency
 - iii) purchasing renewable energy
2. To promote transportation practices that minimize greenhouse gas emissions, fossil fuel use, associated health hazards, and costs

- through the use of renewable energy sources and through decreasing the total distance traveled in a motor vehicle.
3. To minimize negative impacts on human and social health and the environment by making environmentally sensitive procurement decisions.
 4. To reduce water consumption and spread awareness on water conservation.
 5. To reduce waste sent to the landfill and increase recycling from homes and businesses.

The BSS aims to adopt the following **community outreach targets**:

1. Increase the number of households and businesses purchasing renewable energy by ____ %. (To be determined with PGE Green Communities Program)
2. ____ households and businesses receive a free energy audit from Energy Trust of Oregon.
(More to be determined)

b. Implementation Plan

Now that goals and targets are outlined, the implementation section addresses the *'how'* for achieving these ambitions. Below is a narrative to concentrate on each individual working section with both background and activities to help the City of Banks move further toward environmental sensitivity. Most of the working sectors include a table, either as an appendix or within the narrative, which outlines specific activities and also provides columns to assign a responsible party. As the BSS develops over time and the activities are modified and targets met or surpassed this section will need updating, and thus is meant to act as an independent and amendable element of the document.

Energy

Understanding how electricity is generated by PGE, the City of Banks' utility provider, helps provide sufficient background on why energy efficiency and purchasing renewable energy is an important sustainability goal. Currently Banks purchases the standard energy makeup from PGE, which is composed of 38.9% coal, 36.6% hydro, 23.2% natural gas, 0.8% renewable and 0.5% nuclear. Presently the largest source of generated and purchased energy from PGE is coal, a fossil fuel which contributes to

climate change and fluctuates in price. It is in the best interest of Banks to steer away from unstable sources and purchase renewable energy sources.

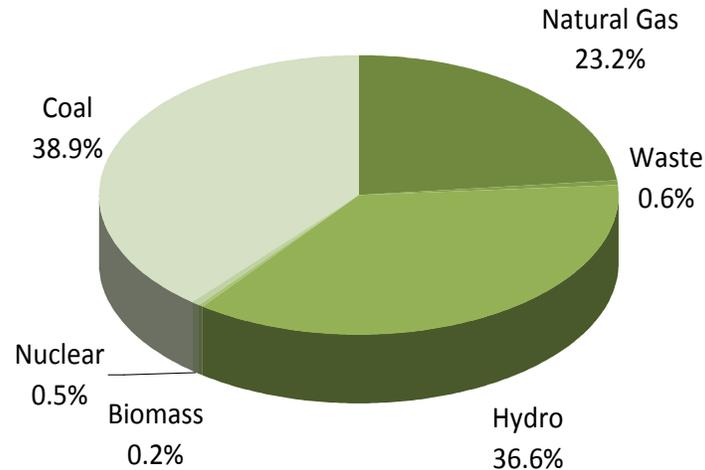


Figure 8: PGE's generated and purchased power supply mix

(www.portlandgeneral.com, 2010)

Purchasing renewable energy is not only good for the environment; it also invests in local industries and jobs. The City of Banks can join the U.S. EPA Green Power Community program (with help from PGE) by setting a goal for the City to purchase a percentage of renewable energy. This is coupled with a goal for local businesses and residents to collectively buy green power that meets or exceeds the EPA Green Power Community purchase requirements. This program is unique because it incorporates businesses and households, in addition to local government buildings. This holistic approach adheres to Banks' Sustainability Strategy principles and combines the City's goals with its community outreach aspirations. This program is currently being discussed with possible implementation for spring of 2012.

The best method to decrease nonrenewable energy use is to consume less energy. It is important not to assume increased efficiency will solve all energy problems. There are many examples that illustrate how increased efficiency can actually have a 'backfire' effect (Owen, 2010). This can occur by making products cheaper and therefore more available, which ultimately increases consumption. This increased energy use offsets

the savings from the efficiency in the first place. This example illustrates the importance of prioritizing overall decreased consumption.

Once Banks has analyzed where it can decrease overall energy consumption, focus should be placed on increasing the efficiency of appliances and other goods, which can also have beneficial environmental and financial effects. The Banks government has a good start on implementing a sound energy reduction plan as a result of the 2009 energy audit performed by ADAPT engineering and sponsored by the Energy Trust of Oregon. This audit provides a solid baseline to monitor and evaluate the effectiveness of

The City of Banks spends \$12,456 on energy consumption per year (132,804 kWh). This is equivalent to the annual emissions from 10,728 gallons of gasoline or 222 barrels of oil

the activities recommended in Appendix D. In 2009, Banks spent \$12,456 on energy consumption and used 132,804 kWh. This is equivalent to the annual greenhouse gas emissions from 18 vehicles, 10,728 gallons of gasoline consumed, or 222 barrels of oil. In addition to embracing environmental sensitivity, the City of Banks will also be saving money due to decreased costs. In order to meet the target of a 10%

reduction in 2012, Banks government facilities would need to reduce their electricity purchased by 13,280 kWh in two years.

The third target in the energy conservation working section is for the City to adopt green building standards for future development projects and remodels. Green building is the practice of creating structures and using processes that are environmentally sensitive and resource efficient throughout the lifecycle of a building: from extraction, design, construction, operations, maintenance, renovation and deconstruction. Environmentally sensitive building is meant to decrease the overall

- Decreased costs for building operation and maintenance
 - Decreased cost for community infrastructure (roads, sewer, waste water treatment)
 - Increased productivity
 - Reduced electrical peak demand costs and fossil fuel use
 - Reduced water use
 - Reduced water and air pollution
 - Enhanced competitiveness by spurring private sector work and living environments with superior health and comfort
- Source: (Sherrie Gruder, 2007)

Figure 9: The benefits of green building

impact on environmental and human health by: Efficiently using energy, water and other resources; protecting occupant health and improving employee productivity; and reducing waste and pollution. ¹

The City recently drafted the 2010 Parks & Recreation Master Plan (PRMP) to address recreational facilities and opportunities for the citizens of Banks and its visitors. The PRMP is meant to enhance the City's commitment to public participation, environmental sensitivity, cooperation between public service providers, innovative design, long term sustainability, and safety and accessibility (Banks, 2010). By integrating the ideals of the BSS and future green building standards into the upcoming development of parks and recreation structures, the City will continue to fulfill its mission of providing responsible and environmentally sensitive services to its citizens.



Banks City Hall front view with energy efficient windows

Please refer to Appendices C and D for additional information on the energy working section and a detailed proposed activity table for energy reduction initiatives.

Transportation

The current national transportation system relies heavily on the usage of fossil fuels and this affects the public health, economic, and environmental aspects of our communities. As fossil fuel resources for vehicles becomes increasingly scarce and expensive, communities and governments are starting to realize that this system is no longer feasible. Local governments can make policies to positively affect the transportation of residents, employees, visitors and material goods to and from the community. Transportation is an important community issue that will be addressed in more detail in the Community Outreach Plan.

¹ From <http://www.epa.gov/greenbuilding/pubs/about.htm>

In October 2010, the U.S. Environmental Protection Agency and Department of Transportation began the first phase of implementing national standards to reduce greenhouse gas emissions and improve fuel efficiency of pick-up trucks, school buses, and semi-trucks beginning in 2014². These standards will affect future fleet purchases for Banks government and other commercial entities. Currently, the City of Banks fleet consists of two gasoline powered trucks. These vehicles are in good shape and most likely will not require replacement for many years to come. When replacement is needed, Banks can consider purchasing highly fuel efficient vehicles (i.e., hybrid or electric).

Banks and other rural cities have transportation challenges unique to the region and that are not found within urban neighborhoods. For example, efficient mass transit for employees is not a feasible option in rural areas; therefore, more creative alternatives are needed. Small cities also have minimal staff and commuting options are not as plentiful. The Banks transportation strategy focuses on creating both short and long term goals that are realistic and related to the city fleet, commuting behavior, and possible bio-fuel alternatives.

The City of Banks may consider converting their gasoline fleet to more efficient fuel sources for short term options. Two popular options for the transition of gasoline to alternative fuels are propane and compressed natural gas. Propane, although still a fossil fuel, is much more efficient and burns cleaner than gasoline. Propane is readily available, 90% of it is produced domestically, and emits 60-70% less smog related hydrocarbons than gasoline. Compressed natural gas is much more expensive to convert and would most likely not be an ideal option for the limited financial resources of the City.³

The most important step in beginning a solid transportation reduction initiative while adhering to the performance based and milestone process is to have a solid baseline. In

²Retrieved from EPA website under Newsroom tab. Press release 10/25/10
<http://yosemite.epa.gov/opa/admpress.nsf/d0cf6618525a9efb85257359003fb69d/9b3706622f4ac560852577c7005ea140!OpenDocument>

³ Banks can contact Larry Joholske with Ferrelgas (503-510-0246) to learn more about propane.

contrast to the energy efficiency baseline provided by the 2009 energy audit, the City of Banks does not currently have an organized baseline to measure gasoline usage and reduction. The ultimate target is to decrease the volume of fossil fuels (gasoline) purchased while still performing the necessary functions of the City government. To track the money and volume consumed per month, Banks should create a reporting system for the two vehicle operators. Following each fill up, the operator records the odometer reading and total price spent on gasoline for that particular transaction. This process will increase transparency and make tracking for the eventual greenhouse gas inventory and sustainability strategy simpler. These tracking sheets can be turned in monthly and compiled quarterly. An example of this tracking sheet is below:

Operator	Date	Odometer Reading	Gallons Purchased	Total \$\$ Spent

Table 1: Example Transportation Tracking Sheet

Once a baseline is established from this information sustainable transportation initiatives can be monitored and tracked for success.

Refer to Appendix E for additional information about the transportation section and a detailed proposed activity table for short term and long term transportation reduction initiatives.

Sustainable Purchasing

Environmentally Preferable Purchasing (EPP) is the purchasing of “products and services [that] have a lesser or reduced effect on human health and the environment when compared to other products and services that serve the same purpose” (Sherrie Gruder, 2007). The City of Banks has already created a Sustainable Purchasing Policy (SSP) (Appendix A) with a goal to purchase equipment or materials that are recyclable, made of recycled content, and reduce waste in an effort to make Banks a healthier place to live, work and do business. The SSP lists guidelines for procurement activities to maximize the purchase of recycled content products and reduce waste where performance will not be compromised. The success of the purchasing policy depends on

the extent to which the guidelines are implemented and incorporated into the purchasing culture. The policy should be revisited annually and progress reported to the City Council.

“Greening the supply chain” means making environmentally sensitive choices based on the ecological impact of goods and services from the extraction, manufacture, use, and disposal phases of its existence. Studies show that the largest greenhouse gas emissions come from the products we use. The supplies needed for operations, including vehicles, computers, paper, and food are a critical component of the BSS. The City of Banks’ environmental sensitivity approach, as well as the first and third conditions of the Natural Step framework, supports purchasing products that decrease the amount of material taken from the earth and prevent the degradation of the physical environment and therefore supports sustainable purchasing.

As Banks embarks on a robust procurement strategy, Full Cost Accounting can be utilized by viewing the economic, social and environmental costs of purchases. Weighing these interdependent values evenly would result in the best decision as opposed to a singular economic measurement. ‘Greening the supply chain’ will help stimulate the production of environmentally friendly and local products and services, investing in positive business practices. Many of these operational changes involve researching comparable products. Other cities have leveraged purchasing power through collaborative purchasing and this is something that Banks could consider expanding in the future.

Water Conservation

All new developments and retrofits of existing buildings and structures should incorporate water conservation in the planning phases. In order to ensure high quality drinking water and encourage the conservation of water by community members, the City of Banks should draw from the vast local resources working on these issues.

The Low Impact Development Approaches (LIDA) handbook created by Clean Water Services (Banks’ storm and wastewater treatment provider) is an excellent source of standards and information for those involved in development decisions. As the City of

Banks considers new expansion projects such as roads and building construction, implementing LIDA can significantly conserve water and other natural resources. The five objectives of LIDA are to:

1. Conserve Existing Resources
2. Minimize Disturbance
3. Minimize Soil Compaction
4. Minimize Imperviousness
5. Direct Runoff from Impervious Areas onto Pervious Areas

(Low Impact Development Approaches Handbook, 2009)

The LIDA concept incorporates vegetated landscape design, green roofs, porous pavements and other methodologies to filter stormwater and reduce impervious area runoff volume. The benefits of using LIDAs include providing onsite stormwater management, aesthetic appeal, preservation of trees and vegetation, and conservation and reuse of water.

The City currently relies on water from Green Mountain Springs and the Behrman Well to meet water demand in the service area, and utilizes storage in the Carstens Reservoirs to meet peak demands. The adequacy of the City's water supply is currently gauged by monitoring the operating water levels in the Carstens Reservoirs. During the summer months the City relies heavily on production from the Behrman Well to keep the Carstens Reservoirs full and meet water demand.

The first water shortage stage is triggered by excessive well operating time. If the well pump is running for more than 20 hours per day in order to fill the Carstens Reservoirs the first trigger for implementation of water-use limits will be met. Second stage curtailment conditions will be triggered if the Behrman Well run continuously, indicating that daily demand is in excess of available water supply. Alternately, second tier curtailment will occur if the water surface elevation of the Carstens Reservoirs falls

Carstens Reservoir



below 403 feet. This water level benchmark is meant to provide response time for implementing water-use curtailment measures in order to avoid tank water levels below 400 feet elevation (the minimum level necessary to meet emergency fire flows, if necessary). The third curtailment stage conditions will be triggered if water levels in the Carstens Reservoirs fall below 400 feet. Without the benefit of secondary water sources or system inerties, the loss of either the Large Spring or the Behrman Well during the summer would result in supply deficits. Should the City be faced with the loss of either supply source that anticipates a three day repair scheduled, a third tier condition would be triggered.

Table 2: Curtailment Actions

Stage 1	Stage 2	Stage 3
<ul style="list-style-type: none"> • Request major landscape irrigation customers to curtail all outdoor water use. • Identify alternate day irrigation schedules for schools, parks and green spaces. • Issue notice to public requesting all users to voluntarily conserve water. 	<p>Mandate major landscape irrigation customers to curtail all outdoor water use. Mandate other users limit outdoor water use per the following steps:</p> <ol style="list-style-type: none"> 1. Unattended outdoor irrigation of turf and plants limited to the period between 5:00 P.M. and 9:00 A.M. 2. Limit the length of time that unattended irrigation can occur in each sprinkler zone to 20 minutes per day. 3. Limit irrigation to alternate day schedule. Even house numbers may water on even days. Odd house numbers may water on odd days. 4. Prohibit home washing of cars or hosing down of patios, walkways, and other surfaces. 	<p>Order suspension of all outdoor water use and curtail indoor use to limit all customers to uses for public health and preparation of food. Curtailment requests for reduction of water use should be supported by a public information program that includes issuing notices. When issuing a notice to the public, examples of ways to conserve water should be provided. For example, the public notification for a First Stage condition should be aimed at outdoor uses. These uses can form a significant proportion of summer residential use and tend to be more discretionary in nature. Specific conservation measures that can be recommended in the notice include the following:</p> <ul style="list-style-type: none"> • No landscape irrigation during daylight hours to reduce evaporation • Limit length of time irrigation system is on to reduce waste from runoff and over watering • Landscape irrigation no more than three days per week • No home washing of cars or hosing down of patios, walkways, and other surfaces

Waste Reduction and Recycling

Swatco Sanitary Service, Inc is the franchised hauler for the City of Banks, and has been since 1978. Residents located within the City of Banks receive franchised garbage, recycling, and yard debris service, whereas residents living in the rural areas of Banks are offered unfranchised garbage service only. Although garbage and recycling service is currently optional, it is in the best interest for the City of Banks, for public health and sustainability reasons, to make these services obligatory. As in the transportation section, a solid baseline of short tons or cubic yards collected annually

will help the City manage the success of waste reduction and recycling initiatives. Once a sound baseline is complete, then the City can work with Swatco and Washington County to identify actions and implement waste reduction and recycling campaigns.

Goal	Targets	Action	Responsible Party	Indicator	Progress to Date
Identify and implement projects that reduce waste and increase recycling within city operations.	<ul style="list-style-type: none"> Reduce amount of solid waste sent to landfill, ___% by 2012 (TBD after baseline) 	<ul style="list-style-type: none"> Work with Swatco to establish a baseline of tons of recycling and solid waste hauled for one calendar year Identify and implement waste reduction campaigns 		<ul style="list-style-type: none"> Baseline reported Decreased tonnage of solid waste sent to landfill 	
	<ul style="list-style-type: none"> Increase amount of recycling ___% by 2012 (TBD after baseline) 	<ul style="list-style-type: none"> Identify and implement recycling awareness campaigns among city staff 		<ul style="list-style-type: none"> Increased amount of recycling hauled 	
	<ul style="list-style-type: none"> Make garbage and recycling collection mandatory 	<ul style="list-style-type: none"> Draft obligatory garbage and recycling policy 		<ul style="list-style-type: none"> Garbage and recycling collection is mandatory for all community members 	

Table 3: Solid Waste and Recycling Activity Table

Oregon’s first Opportunity to Recycle Act was passed in 1983 and recognized that in order to conserve energy and natural resources, solid waste management should adhere to the following hierarchy:



Figure 10: Solid Waste Hierarchy⁴

⁴ Retrieved from Oregon Recycling Laws Fact Sheet at <http://www.deq.state.or.us/lq/pubs/factsheets/sw/OregonRecyclingLaws.pdf>

Figure ten helps prioritize solid waste reduction techniques. The City can focus on each square of this graphic to identify activities that meet each level.

Greenhouse Gas Inventory

Greenhouse gas inventories help organizations understand the sources and degree of their environmental impact, as well as identify and prioritize areas for improvement.

A key component of GHGI is setting boundaries of what should be included and excluded, all of which can be addressed when the time emerges for Banks to proceed with a baseline GHGI. A Carbon Footprint calculation measures emissions in three 'scopes' that are expanded upon below:

Scope 1: Direct Emission(s) from sources owned by an organization. For example, emissions from fleet use would be a direct emission.

Scope 2: Indirect Emission(s) that result from an organization's activities but that are controlled by another company. For example, purchased electricity.

Scope 3: Other Indirect Emissions. The emissions here could come from the supply chain (the extraction, manufacture, use, and disposal of goods), transportation related activities in vehicles not owned by an organization (commuting related emissions) and waste disposal.

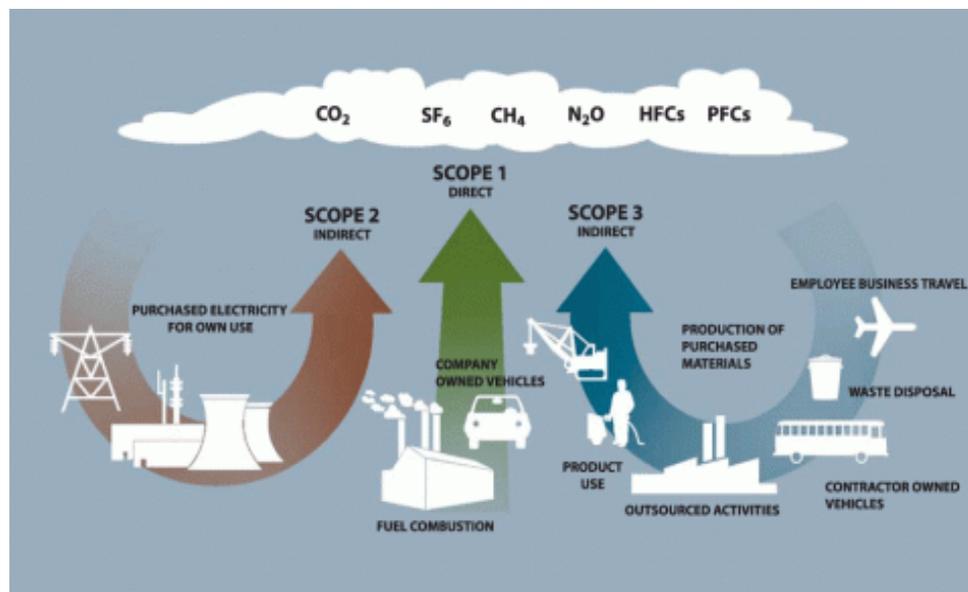


Figure 11: Scope 1, 2 and 3

Source: World Resources Institute

An important component of an organizations carbon footprint is Scope Three due to large emissions associated with the life cycle of goods. As illustrated in the Metro GHGI below, Scope Three far exceeds the emissions from Scope One and Two, and therefore if it is left out of calculations, the resulting data would be greatly skewed. The U.S. Scope Three accounts for approximately 46% of total emissions. Calculating an organization’s emissions (using all three Scopes), helps to understand ones’ ‘carbon risk’ if taxes, caps or regulations limit greenhouse gas emissions.

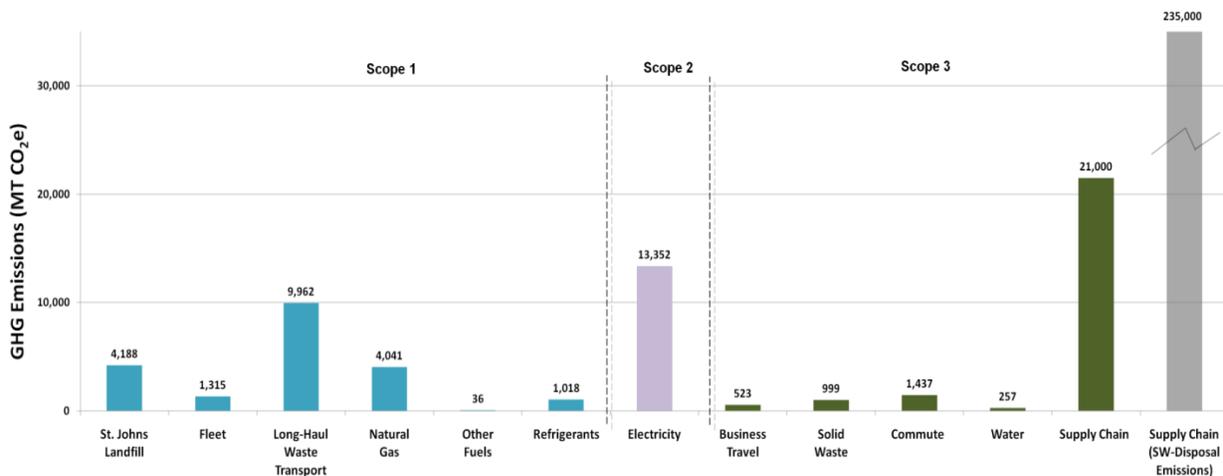


Figure12: Metro GHGI Results

Source: Metro Sustainability Plan 2010

Greenhouse gas inventories not only illustrate carbon related emissions but also tend to show where and how an organization is spending money and how that money is affecting the environment. It is a great organizational development tool to serve as a change mechanism to help save money and improve the environmental impact of Banks.

Community Outreach



There are many initiatives already in place throughout the community of Banks that help make Banks a place where people want to live, work and play. Many of these initiatives are voluntarily led and incorporate businesses as well. For example, the Banks Chamber of Commerce has created a “Business

Green Team”, where fellow businesses are encouraged to voluntarily reduce waste in the work place. Prioritizing recycling among small businesses, especially within a challenging economy, is recognized and rewarded within the Banks Chamber of Commerce. The businesses in Banks who receive the Business Green Award meet the following standards:

1. Have a recycling coordinator or green team
2. Have recycling available at all workstations
3. Collect paper, tin, aluminum, cardboard, plastic bottles and tubs, and glass for curbside
4. Adopt a written purchasing policy that supports the purchase of recycled products
5. Purchases all copy paper at 30% post consumer recycled content
6. Purchases at least three other business related items made from recycled content (Refer to Appendix A)
7. Engages in at least five waste prevention activities (refer to official list of options)
8. Engage in at least one additional activity that improves the livability of the Banks community and enhances our overall Environmental Sensitivity (refer to official list of options) ⁵

In addition to the Chamber of Commerce Green Team, the City Manager has begun discussions with interested local business owners regarding the opportunities around electric vehicle charging stations. This would be an investment opportunity for business owners, but also serve the community as it would allow for the expansion of electric vehicles and drive through electric vehicle traffic. Installing a charging station would make Banks a leader in semi-rural areas for progressive alternative transportation practices. The City government can help build momentum towards the sustainability goals listed in the above section by engaging in the activities outlined in Table 3. These activities can be prioritized and amended as needed.

⁵ A complete list of requirements for the Banks Chamber of Commerce Green Team Business Award can be found on the Chamber website at <http://www.oregonbankschamber.com/wp-content/uploads/2010/09/BusinessGreenAwardApplication10110.pdf>

Goal	Activities
To decrease the community’s dependence on fossil fuels through <ul style="list-style-type: none"> • Consuming less energy • Implementing projects to improve energy efficiency • Purchasing renewable energy 	<ul style="list-style-type: none"> • Spread awareness on purchasing renewable energy options through newsletter and press releases • Enlist the help of PGE for direct sales, courtesy calls, and to increase the purchase of renewable energy • Disseminate energy efficiency brochures • Free energy audits by Energy Trust of Oregon
To promote transportation practices that minimize greenhouse gas emissions, fossil fuel use, health hazards, and costs through the use of renewable energy sources and through decreasing total distance traveled	<ul style="list-style-type: none"> • Encourage biking, install more bike lanes and bike parking • Disseminate awareness on fuel efficiency, vehicle maintenance, transportation issues • Encourage carpooling, telecommuting • Install electric charging stations
To minimize negative impacts on human and social health and the environment through making environmentally sensitive procurement decisions	<ul style="list-style-type: none"> • Disseminate information about environmentally sensitive vendors for community goods • Encourage the purchase of energy star and water sense products
To reduce water consumption and spread awareness on water conservation	<ul style="list-style-type: none"> • Pass out information on water efficient landscapes, water sense appliances, and other water conservation techniques • Continue outreach on how to detect toilet and other leaks • Disseminate information on LIDAs
To reduce waste sent to the landfill and increase recycling from homes and businesses	<ul style="list-style-type: none"> • Work to make garbage service mandatory • Encourage recycling awareness materials to citizens currently recycling • Increase number of households that recycle

Table 4: Community Outreach Activity Table

Some other possible community related activities include expanding the Strategy to incorporate the local school district and its bus drivers. School buses can be converted to biofuels relatively easily or can implement a ‘no-idling’ policy that greatly reduces the gasoline fumes inhaled by students and the amount of fossil fuel being used. Gas mileage can improve by up to 3.3% by keeping tires inflated to the proper pressure. Disseminating this type of information can help encourage behavior changes and proper vehicle maintenance with the wellbeing of both Banks and its’ citizens in mind.

There are numerous local resources that can help the City of Banks meet the community outreach goals. The Energy Trust of Oregon is a good resource for homeowners and business owners alike, since it performs free energy audits that can provide recommendations for community members to reduce their energy and thus fossil fuel use. Banks has already illustrated its commitment to creating a healthy,

desirable community by beginning the installation of bike lanes. Installed bike lanes continue to improve community health by encouraging physical activity and reducing pollution from vehicles.

The City website⁶ has a water conservation section under the “City Services” tab on the left hand column. Community members can access this information with monthly conservation tips, informational brochures, a water savings calculator, water efficiency links and other useful tools. Also outlined on the website is the City of Banks Water Curtailment Plan as discussed above in the water conservation working sector. Community level water conservation is critical to prevent Banks from entering Stage Two or Three of water shortage. Banks can continue to invest in a public education program to encourage water conservation. Community outreach especially in schools and local events can effectively encourage citizens to curtail water usage. The EPA Water Sense program also provides many resources for community level water conservation strategies.⁷

c. *Measuring Success and Prioritizing Activities*

The success of the BSS will largely depend on the advisory board set up to implement and monitor progress. There are many action items laid out in this report and the appendices that realistically need to be prioritized and implemented based on financial resources and the capability of a very limited, yet dedicated staff. The staff at the City of Banks has already exhibited countless environmentally sensitive choices and this strategy outlines options for a path forward to continue on the sustainability journey.

Next steps should include:

1. Organize the ESAB consisting of community members that will revisit and monitor action items
2. ESAB requirements are to:
 - i. Prioritize activities based on effort/impact analysis
 - ii. Implement activities
 - iii. Formally report progress to City Council annually

⁶ www.cityofbanks.org

⁷ Learn more at <http://www.epa.gov/watersense/>

The ESAB should be comprised of five Banks community members who are familiar with, and have an interest in, promoting the BSS especially with regard to environmental sensitivity. If possible, one member of the ESAB should reside outside of the Banks City Limits but within the boundaries of the Banks School District #13. The Community Development Director, or designee, should provide staff support to the ESAB, which can include orientation of new board members and liaison with all board members regarding the progress of BSS actions. ESAB members should be appointed to staggered, position designated (e.g. ES1, ES2, etc.), three-year terms and should be limited to serving no more than two complete terms.

References

Assembly, 7. O. (2001). House Bill 3498. Salem, Oregon, United States .

Banks, C. O. (2010). *Parks & Recreation Master Plan*. Banks: City of Banks.

(2009). *Low Impact Development Approaches Handbook*. Hillsboro : CleanWater Services .

Owen, D. (2010, December 20 & 27). The Efficiency Dilemma: If our machines use less energy, will we just use them more? *The New Yorker* , pp. 78-85.

S. Solomon, D. Q. (2007). *Contirbution of Working Group I to the 4th Assessment Report of the Intergovernmental Panel on Climate Change*. Cambridge and New York : Cambridge University Press.

Shepard, E. (2010). *Supporting the Governor's Vision of Sustainability* . Portland: Department of Administrative Services.

Sherrie Gruder, A. H. (2007). *Toward a Sustainable Community: A Toolkit for Local Government* . Madison: Focus on Energy .

www.portlandgeneral.com. (2007). Retrieved October 13, 2010, from Portland General Electric: http://www.portlandgeneral.com/residential/your_account/billing_payment/basic_service.aspx

(2009). *Low Impact Development Approaches Handbook*. Hillsboro : CleanWater Services .

.

Appendix A

Sustainable Purchasing Policy

I. POLICY

As part of ongoing efforts to make Banks a healthier place to live, work and do business, the City of Banks will work to the extent possible to purchase equipment or materials that are recyclable, made of recycled content, and reduce waste.

II. PURPOSE

To provide guidelines for purchasing activities to maximize the purchase of recycled content products that are recyclable and reduce waste, where performance will not be compromised.

Businesses generate more than three-quarters of Banks' waste, much of which can be reduced through the use of reusable products, the implementation of recycling and careful waste segregation. Buying products with recycled content also helps create a market for these materials and drives their prices down.

In complying with this, the City of Banks will request that suppliers specify whether there is an alternative product that has recycled content or is recyclable that could be substituted.

III. GUIDELINES

A. Responsibilities

1. Purchasing Department

In an effort to minimize waste, staff involved in purchasing decisions shall adhere to the guidelines set forth in this policy when making purchasing decisions. The Purchasing Department will participate in establishing goals to increase the number of recyclable products or products that are made of recycled content used by the City of Banks.

2. Department Managers and End Users

Individuals in all departments must work with purchasing to evaluate the feasibility of recyclable products, products that are made of recycled content and products that reduce waste in application.

B. Purchasing Guidelines

1. Establish a waste minimization policy with vendors.

Whenever possible the use of equipment and products that are recyclable, made of recycled content and/or reduce waste should be maximized. These products should be purchased whenever such alternatives exist and performance is not compromised.

Vendors should be contacted and provided information regarding the City of Banks' waste minimization goals.

2. Select those vendors who are willing to meet waste minimization goals.

Purchasing agents shall request from vendors information relating to recycled content and recyclability of products and equipment, and the opportunities these items offer to prevent waste. Purchasing agents will then develop a preferred list of vendors based on those who are willing to help provide such alternatives.

Appendix B**CITY OF BANKS***Good People Serving Good People***POLICY MEMORANDUM**

2010-001

May 3, 2010

Subject: BOTTLED WATER USAGE POLICY

Policy:

Tap water will be utilized in lieu of bottled water as much as possible in City of Banks buildings, grounds, parks and programs.

Overview:

Banks is an “environmentally sensitive” community, and as such we acknowledge that actions taken by the City need to be made with a view toward the impact that each has on the physical environment and ecosystem.

One aspect of such sensitivity is the use of tap water in lieu of bottled water. Tap water is healthier, cheaper, and more environmentally sensitive than bottled water. The recycling process is Reduce, Reuse, Recycle. Historically we have participated well in the recycle process, and we are currently in the process of reusing more and more material. This policy is an attempt to reduce the use of plastic bottles by the city staff and groups using public buildings.

Implementation:

In activating this policy, no bottled water will be purchased by city staff. Where water is needed, tap water will be used and reusable glassware, or environmentally useful containers containing post consumer paper will be used where possible. Groups renting city spaces for meetings or events will be encouraged to refrain from using bottled water in lieu of tap water. Employees will be encouraged to use tap water while at work, and where necessary Brita Water Filters will be installed on water taps in the Library and in City Hall. The Banks Wellness Committee will actively seek ways to improve on employee health through the use of tap water.

Policy Review:

This policy will be reviewed in May of each even numbered year, for continuation, modification or cancellation.

Appendix C

Energy Working Section Additional Information

The energy working section focuses on the three largest energy consuming buildings: the Behrman Wells Pump House, the Public Library and City Hall. Other City buildings include the slow sand filter water treatment plant, the public works, the log cabin, and the Greenville city park gazebo but since potential savings are minimal it is not prioritized in the Strategy at this time.

Routine checks by City staff
City Hall, Library, and Public Works Building
<ul style="list-style-type: none"> • Ensure HVAC equipment is scheduled off when building is unoccupied (nights and weekends) • Check condenser and evaporator coils to ensure no build up/ change as needed

There are two tasks that should be routinely performed by City staff as recommended in the Energy Trust of Oregon’s audit and are listed in Table1. Responsible parties should be identified and the results of the HVAC and condenser coil checks reported in the annual update to city council.

There are three recommendations made in the Energy Trust of Oregon’s energy audit that could dramatically reduce the City’s utility bills but would require extensive infrastructure and research: Green walls, green roofs, and the installation of skylights. These are larger investments that undoubtedly would move the City toward the goal of energy independence yet due to their complexity, would require someone to research their costs and logistical feasibility. These three projects would be ideal for an intern to specifically research and report on and thus are not included in the activity table below.

Appendix D

Energy Working Sector Activity Table

Goal	Target	Activities/Projects	Means to Measure Target	Responsible Party	Progress to Date
To decrease Banks' dependence on fossil fuels through 1. Implementing projects that decrease energy consumption and improve energy efficiency 2. Purchase renewable energy.	1. Purchase ___% renewable energy by 2015, 100% by ___ (Blanks TBD in collaboration with PGE's Green Power Community)	1.1 Research cost difference of purchasing a % of renewable energy 1.2 Partner with PGE in EPAs Green Power Community Program	% Renewable energy purchased from PGE in replacement of fossil fuel mix		<ul style="list-style-type: none"> • Energy efficient windows installed in Council Chambers and City Hall • Improved ceiling insulation in the council chambers • White roof • T8 lights installed in Admin and City Hall • Bike Trails • Resealed exterior of Council Chambers and Admin office
	2. Reduce energy use by 10% in 2011 and 20% by 2013	<p><i>For City Hall, Berhman Pump, and Public Library</i></p> 2.1 Install occupancy sensors for lighting rooms that are not regularly occupied each day 2.2 Research costs and benefits for solar electric photovoltaic panels (research incentives) <p><i>Activities for City Hall only</i></p> 2.3 Replace remaining T12 lamps with T8 2.4 When kitchen equipment needs replacement purchase Energy Star equipment (see also procurement) 2.5 Replace remaining five single-pane windows with double-paned glazing 2.6 Research costs and potentially install occupancy sensors for lighting rooms that are not occupied each day <p><i>Activities for Public Library only</i></p> 2.7 Replace existing MR16 spot lights with CFLs 2.8 Improve insulation above dropped ceilings <p><i>Activities for Behrman Pump House Well only</i></p> 2.9 When replacement pumps are needed, purchase high efficiency pumps 2.10 Replace incandescent bulbs to CFL 2.11 Install thermostatic lockout control 2.12 Install LED streetlights	City utility bills recorded and organized by building (A 10% and 20% decrease in kWh and Therms consumed from 2009 audit)		
	3. Adopt green building standards for development	3.1 Draft a green building policy to present for adoption by City Council	Sustainable building standards adopted by City Council		

Appendix E

Transportation Working Sector Activity Table

Goal	Target	Activities/Projects	Means to Measure Target	Responsible Party	Progress to Date
<p>To promote transportation practices that minimize greenhouse gas emissions, fossil fuel use, health hazards, and costs through the use of renewable energy sources and through decreasing total distance traveled.</p>	<p>Reduce fossil fuel (gasoline) use ___% as compared to 2009.</p>	<ul style="list-style-type: none"> • Establish a baseline of how many gallons purchased per quarter • Establish a baseline of how many miles traveled (can use avg price of gas and total gallons purchased) • Research and implement propane conversion for gas vehicles • When new vehicles are needed, purchase the most fuel efficient in their class and/or hybrid/electric • Keep vehicles maintained well • Use refined motor oils for vehicles • Research feasibility of providing incentives to those who walk, cycle or carpool to work • Allow telecommuting when possible 	<ul style="list-style-type: none"> • tracking sheet created and being utilized • gallons purchased • gallons biodiesel purchased • miles traveled 		<ul style="list-style-type: none"> • New bike lanes installed • Began research for electric charging station <p>Banks also supplies its employees with travel reimbursement for their own vehicle use. This encourages employees to use fuel efficient vehicles and to think about consumption.</p>

Appendix F

Resolution Endorsing the U.S. Mayor's Climate Protection Agreement



RESOLUTION NO. 2008-16

**A RESOLUTION ENDORSING THE U.S. MAYORS
CLIMATE PROTECTION AGREEMENT**

WHEREAS, the U.S. Conference of Mayors has previously adopted strong policy resolutions calling for cities, and communities to take actions to reduce global warming pollution; and

WHEREAS, the Inter-Governmental Panel on Climate Change (IPCC), the international community's most respected assemblage of scientists, is clear that there is no longer any credible doubt that climate disruption is a reality and that human activities are largely responsible for increasing concentrations of global warming pollution; and

WHEREAS, recent, well-documented impacts of climate disruption include average global sea level increases of four to eight inches during the 20th century, a 40% decline in Arctic sea-ice thickness, and nine of the ten hottest years on record occurring in the recent past; and

WHEREAS, climate disruption of the magnitude now predicted by the scientific community will cause extremely costly disruption of human and natural systems throughout the world including: increased risk of floods or droughts, sea-level rises that interact with coastal storms to erode beaches inundate land and damage structures, more frequent and extreme heat waves, more frequent and greater concentrations of smog; and

WHEREAS, the Kyoto Protocol, an international agreement to address climate disruption, has entered into force in 141 countries that have ratified it to date, with 38 of those countries now legally required to reduce greenhouse gas emissions on average 5.2 percent below 1990 levels by 2012; and

WHEREAS, the United States of America, with less than five percent of the world's population, is responsible for producing approximately 25% of the world's global warming pollutants, yet is not a party to the Kyoto Protocol; and

WHEREAS, the Kyoto Protocol emissions reduction target for the U.S., had it ratified the treaty, would have been 7% below 1990 levels by 2012; and

WHEREAS, many leading U.S. companies that have adopted greenhouse gas reduction programs to demonstrate corporate social responsibility have also publicly expressed preference for the U.S. to adopt precise and mandatory emissions targets and timetables as a means by which to remain competitive in the international marketplace, to mitigate financial risk, and to promote sound investment decisions; and

WHEREAS, state and local governments throughout the United States are adopting emission reductions targets and programs, and that this leadership is bipartisan; and

Page 1 of 3

Appendix G

Environmentally Preferable Product Resources

- Green Seal
 - greenseal.org
 - A third party certification
 - Website allows you to search for “green” products covered by green seal
- Ecologo
 - <http://www.environmentalchoice.com>
 - A third party certification
 - Website allows you to search for green products and services
- EPEAT
 - www.epeat.net
 - A third party certification for computer standards
 - Sets benchmarks with the goal of driving manufacturing towards greener products
 - Used federally
- EPP NET (Part of the Northeast Recycling Council)
 - <http://www.nerc.org/eppnet/index.html>
 - Guide to creating an online forum
 - Good place to ask about greener product specifications
 - Login required
- City of Portland
 - <http://www.portlandonline.com/index.cfm?c=43046>
 - Good resource for sample specifications, but not all specifications are accurate