



SHORELINE CITY COUNCIL STUDY SESSION

Tuesday, January 22, 2008
6:30 p.m.

Shoreline Conference Center
Mt. Rainier Room

	<u>Page</u>	<u>Estimated Time</u>
1. CALL TO ORDER		6:30
2. FLAG SALUTE/ROLL CALL		
(a) Proclamation of "Martin Luther King Jr. Day"	<u>1</u>	
3. CITY MANAGER'S REPORT AND FUTURE AGENDAS		
4. COUNCIL REPORTS		
5. GENERAL PUBLIC COMMENT		6:40
<i>This is an opportunity for the public to address the Council on topics other than those listed on the agenda, and which are not of a quasi-judicial nature. The public may comment for up to three minutes; the Public Comment under Item 5 will be limited to a maximum period of 30 minutes. The public may also comment for up to three minutes on agenda items following each staff report. The total public comment period on each agenda item is limited to 20 minutes. In all cases, speakers are asked to come to the front of the room to have their comments recorded. Speakers should clearly state their name and city of residence.</i>		
6. STUDY ITEMS		
(a) Cleanscapes Transition and Implementation Update	<u>3</u>	7:00
(b) Goal #6: Environmental Sustainability Strategy	<u>5</u>	7:30
(c) Process for 2008 Planning Commission Appointments	<u>129</u>	9:00
7. ADJOURNMENT		9:20

The Council meeting is wheelchair accessible. Any person requiring a disability accommodation should contact the City Clerk's Office at 546-8919 in advance for more information. For TTY service, call 546-0457. For up-to-date information on future agendas, call 546-2190 or see the web page at www.cityofshoreline.com. Council meetings are shown on Comcast Cable Services Channel 21 Tuesdays at 12 noon and 8 p.m., and Wednesday through Sunday at 6 a.m., 12 noon and 8 p.m. Online Council meetings can also be viewed on the City's Web site at <http://cityofshoreline.com/cityhall/citycouncil/index.cfm>.

CITY COUNCIL AGENDA ITEM
CITY OF SHORELINE, WASHINGTON

AGENDA TITLE:	Proclamation declaring January 22 nd Dr. Martin Luther King Jr. Day in Shoreline and recognizing Shoreline teens for their efforts to honor Dr. King
DEPARTMENT:	Human Services and Parks Recreation and Cultural Services
PRESENTED BY:	Rob Beem, Human Services Manager Sigrid Batara, Teen Programs Coordinator

ISSUE STATEMENT:

On January 21, 2007 the nation celebrates Dr. Martin Luther King Jr. Day. In Shoreline, teens at Shorewood and Shorecrest High Schools and in the City's Teen Program each produce events that honor Dr King's accomplishments and celebrate his message of equality, empowerment, justice and the worth of all people.

This evening, representatives will join the Council to receive the proclamation and to share their celebration of Dr. King's message and legacy with the City Council and the community.

RECOMMENDATION

No action is required.

Approved By: City Manager _____ City Attorney _____



PROCLAMATION

WHEREAS, the Reverend Dr. Martin Luther King, Jr. believed that a person's worth should not be measured by his or her color, culture, or class, but rather by their commitment to creating a better life for all; and

WHEREAS, Dr. King's message of peace and service and his dream of pursuing a world free from prejudice and injustice lives on and has not been forgotten since his tragic death on April 4, 1968; and

WHEREAS, the majesty of his message, the dignity of his bearing and the righteousness of his cause are his lasting legacy and are commemorated on Martin Luther King, Jr. Day every January; and

WHEREAS, Dr. King's dream of racial equality, understanding, service and social justice is an inspiration to all of us; and

WHEREAS, service to others helps us to define a vision achievable by working for the common good; and

WHEREAS, teens at Shorewood and Shorecrest High Schools and in the City's Teen Program make special efforts to recognize both the diversity in our community and the bonds that unite us all;

NOW, THEREFORE, I, Cindy Ryu, Mayor of the City of Shoreline, on behalf of the Shoreline City Council, do hereby proclaim January 22, 2008 as

MARTIN LUTHER KING, JR. DAY

in the City of Shoreline and thank our teens for giving voice to Dr King's message, urge our citizens to reflect on our common goals, and celebrate his life and his ideals of freedom and justice for all.

Cindy Ryu
Mayor of Shoreline

CITY COUNCIL AGENDA ITEM
CITY OF SHORELINE, WASHINGTON

<p>AGENDA TITLE: CleanScapes Transition & Implementation Update DEPARTMENT: Public Works PRESENTED BY: Jesus Sanchez, Operations Manager; Rika Cecil, Environmental Programs Coordinator</p>

PROBLEM/ISSUE STATEMENT:

On February 28, 2008, the City's current contract for solid waste collection services expires. In order to find a service provider with the best package of services at the lowest price for residents and businesses, a Request for Proposals (RFP) was published on June 20, 2007, with the intent to complete the RFP process, finalize a contract, and allow sufficient start-up time to implement the contract prior to March 1, 2008.

On October 22, 2007, Council unanimously selected CleanScapes to provide solid waste and recycling service to Shoreline's residents and businesses. With service to begin on March 1, 2008, CleanScapes has been meeting weekly with the City, as well as coordinating with Waste Management to ensure a smooth transition. One element of the implementation process is to keep Council updated on the status of the transition.

DISCUSSION:

CleanScapes' PowerPoint presentation reviews the status of the following major milestones in the implementation process:

1. Labor
 - No drivers displaced by Waste Management
 - Experienced drivers have been hired and will report to work in February
 - Preliminary discussions have been held with both Unions
 - Negotiations will begin after the drivers have declared their desire to be represented by Unions
2. Equipment
 - Trucks are on schedule to be delivered from 2/4/08 to 2/15/08
 - Carts and containers are being shipped daily and stored at Aldercrest School
 - Call Center is fully equipped and operational
3. Public Education & Outreach
 - Newspaper advertisements will be published in the Enterprise on 1/25 and in the Journal on 2/5.
 - Postcards are being printed and will be mailed to residents one week prior to delivery of their carts
 - Cart and container graphics have been approved by the City

- Residential Welcome Packet has been approved by the City and is being printed
- Collection Day Reminder Calls
- Business Welcome Packets are being printed and will be mailed
- Website specific to Shoreline

4. Timetable


Staff has reviewed the status of the major milestones that CleanScapes needs to meet, and staff's assessment is that CleanScapes is meeting our expectations, as well as the required delivery dates.

FINANCIAL IMPACT:

Not applicable.

RECOMMENDATION

This report and presentation are to provide a Council briefing of the current status of the implementation of the new solid waste contract. No action is required.

Approved By: City Manager  City Attorney ____

CITY COUNCIL AGENDA ITEM

CITY OF SHORELINE, WASHINGTON

AGENDA TITLE:	Discussion of Goal No. 6: Environmental Sustainability Strategy
DEPARTMENT:	Planning and Development Services
PRESENTED BY:	Joseph W. Tovar, FAICP, Director Juniper Nammi, Associate Planner

PROBLEM/ISSUE STATEMENT:

On July 9th, 2007 Council authorized the City Manager to execute the services contract with AHBL for development of the Environmental Sustainability Strategy for the City of Shoreline. Substantial progress has been made to date, including two community conversations for public input and draft goals, objectives, recommendations and measures of change (See Attachments A through D).

This staff report and presentation to Council are intended to update Council on this progress. Council comments on the Strategy's key components and DRAFT recommendations will be solicited. Following this Council meeting, the consultant team, together with City staff, will combine the work completed thus far with the comments and feedback from the Council and public into a *Proposed Environmental Sustainability Strategy*. The *Proposed Strategy* will then be presented at a joint Parks Board and Planning Commission meeting and then to Council for a public hearing and discussion before adoption of the Strategy (See Attachment E).

Council input at this stage in the process will ensure that the elements and recommendations included in the *Proposed Strategy* accurately reflect public input to date and Council guidance about topical focus or relative priorities. Additional public input will be solicited at the Council's Public Hearing on the Strategy scheduled for April 21, 2008.


FINANCIAL IMPACT:

There are no new budget implications at this time. The City Council approved \$100,000 in the 2007 budget to support the preparation of an Environmental Sustainability Strategy and this Strategy will be completed within the specified budget. Any potential budget implications for implementation of this Strategy, if adopted, would be decided on through the regular budgeting processes.

RECOMMENDATION

No action is required at this time. This report and presentation lay out the format and preliminary draft content for the Environmental Sustainability Strategy for Council discussion. Council comments and questions are requested at this stage in the development of the Strategy to ensure that the Strategy is on the right track. By the end of the meeting, Council should understand the work completed to date and be

comfortable with the draft elements that will become the Environmental Sustainability Strategy. Staff will take Council input into account in drafting the proposed Environmental Sustainability Strategy for review by the Council, Planning Commission, Park Board, and public in meetings over the next several months. We hope to have a Final draft ready for Council's adoption in May.

Approved By: City Manager  City Attorney ____

INTRODUCTION

The City Council adopted "Create an Environmentally Sustainable Community" as Goal 6 of the 2007-2008 Council Work Plan. Council subsequently adopted the complementary Resolution No. 242 in support of the US Conference of Mayors Climate Protection Agreement and Resolution No. 260, expressing the City's interest in being designated as a "Cascade Agenda City." Two interdepartmental City staff teams were established to work on implementation of this goal and have worked together with AHBL consultants in developing an overarching Environmental Sustainability Strategy.

The final adopted strategy will provide future guidance and support for two other City projects now underway to implement Goal 6: (1) the Urban Forestry Assessment being done by Parks and (2) the Pilot Green Street projects/program under the auspices of Public Works. In addition, the strategy will also provide clarity and priority for a variety of other City projects and activities, including capital improvement projects, fleet and facilities design and operations, land use and development regulations, and public education and information, to name a few.

BACKGROUND

Every two years the City Council adopts goals that set the direction for the City's work in the coming years. Goal 6 for 2007-2008 is to "create an *environmentally sustainable community*." Components of this goal include implementing "green" practices at all City-owned or operated facilities, requiring new development or redevelopment to achieve high standards for storm water management, energy efficiency, and reduction of solid waste, and maximizing recycling and reuse of resources.

Adoption of the Environmental Sustainability Strategy is one of the major objectives to implement this City Council Goal. The City already has a number of programs, policies and codes that contribute to environmental sustainability. However, we do not have an overarching plan that coordinates these elements, facilitates environmentally sustainable decision making, or allows us to assess regularly just how environmentally sustainable City operations are currently. Also lacking is a tool by which we can decide what actions and priorities will best contribute to creating an *environmentally sustainable community*.

On July 9th, 2007, Council authorized the City Manager to execute the services contract with AHBL for development of the Environmental Sustainability Strategy for the City of Shoreline. Since approval of the contract, City staff has worked with the AHBL consultant team to:

- Draft a mission statement and guiding principles for the strategy
- Draft indicators, a tool for evaluating sustainability in decision making, and potential recommended actions
- Conduct two community conversations:
 - October 11th - focused on the scope of the Sustainability Strategy and exploring opportunities and tools that could contribute to sustainability.
 - November 14th - focused on how to incorporate sustainability into the City's decision making, potential actions that could be recommended for implementation of the strategy, and the potential indicators the City could

track to measure progress towards creating an environmentally sustainable community.

- Research and assess existing sustainability efforts – what the City should keep doing, do better, and what else can be done.

As part of Council Goal 6, regular progress reports on the development of this Sustainability Strategy have been provided as part of the Quarterly Reports to Council. Also, the presentation materials from each Community Conversation were provided to Council members following these public meetings and copies are available online: <http://www.cityofshoreline.com/cityhall/departments/planning/sustainable/index.cfm>.

DISCUSSION

A strategy rather than a plan:

The common policy tool for municipalities to use in thinking about the future is a *plan*, which typically includes goals and policies, problem analysis, and prescriptive programs and actions to be implemented through the plan. The most prominent of plans for a city like Shoreline is the Comprehensive Plan, which is legally mandated and binding.

When considering environmental sustainability and the multi-faceted complexity of the topic, it rapidly became clear that Shoreline did not simply need another plan. The Comprehensive Plan and its supporting master plans and regulations do account for many of the elements that contribute to environmental sustainability. Amendments to the Comprehensive Plan and its implementing projects and regulations may be one way to implement a broader Sustainability Strategy. However, a comprehensive plan is largely focused on land use and capital facilities. What the City needs to truly be able to “create an environmentally sustainable community” is an even broader, more inclusive set of principles and priorities set forth as policy – in short, it needs a *strategy*.

In the case of environmental sustainability, the City has already undertaken many progressive initiatives. However, we now lack measurable targets and tools to track our progress. We have no mechanisms in place to help us determine from an array of choices (e.g., budget, regulatory, or programmatic decisions) which of the possible alternatives would be most advantageous. AHBL was hired to help us find or create the tools needed to set out a path towards sustainability, tell us how we’re doing, and what course corrections might be needed along the way.

Context for a sustainability strategy:

An Environmental Sustainability Strategy is the next step in furthering implementation of many of the goals in the City of Shoreline Comprehensive Plan. As a tool for decision making, the Strategy is not the end of the process but a beginning in how the City organization as a whole operates. The final Strategy’s decision making tools, indicators and recommendations for action will help provide a sustainability context for even our regular processes, such as Planning Commission’s role in reviewing development code changes or Parks Board review of parks plans and projects.

The advantage of the Environmental Sustainability Strategy in future decision making lies with the tools provided. Indicators that track our progress towards sustainability will

inform our decisions and a tool for weighing options will facilitate consideration of sustainability in concert with the other priorities and issues important to the City.

An Environmental Sustainability Strategy will also put projects and programs, like the Hamlin, South Woods, and Shoreview Urban Forestry Assessments, into context. Are these programs having the desired impact on the health and sustainability of our City as a whole? It provides guidance in designing programs and policies to implement the City's resolutions to support the US Conference of Mayor's Climate Protection Agreement and to support the principles of the Cascade Agenda.

The City of Shoreline is setting a new standard and paving the way for other cities of our size interested in becoming sustainable, who understand that the expensive and complex plans used by larger cities are not the right tool for their more modest counterparts. Using a *strategy* approach rather than a *plan*, the City of Shoreline is developing internal capacity for environmental decision-making with the tools to evaluate and adjust our own progress as we move forward.

Strategy development process:

Development of this Environmental Sustainability Strategy has been a comprehensive process. Work to date by the AHBL consultant team and City staff includes:

- Research of similar programs for lessons learned
- Workshop, meetings, and interviews with City staff
 - What's working and what's not?
 - Interests and concerns
- Review City codes & policy for alignment with goals
- Community Conversations - public outreach/input:
 - Guiding Principles and Focus areas
 - Draft Objectives, Targets, Indicators and Potential Recommendations

The Strategy itself has yet to be written as a comprehensive document. Based on City Council feedback tonight and additional staff review, the final recommendations and capacity assessment for implementation will be crafted and combined with the work completed to date to comprise a functionally-oriented Environmental Sustainability Strategy by mid-March.

Strategy components and draft content:

The Environmental Sustainability Strategy will include:

- Mission Statement
- Guiding Principles
 - Process
 - Specific Priorities & Focus Areas
- Criteria to evaluate existing & potential Initiatives
- Benchmarking
- Objectives-Targets-Indicators
- Recommendations
 - New Initiatives
 - Existing Initiatives
- Capacity Assessment

Examples of the draft components of the Strategy will be highlighted as part of the presentation to Council on January 22nd. More detailed information is included as attachments to this report, which contain the first two Memos from the consultant team to the City, and a couple additional draft documents that will be combined to create the Sustainability Strategy.

SUMMARY

The City of Shoreline has already adopted and plans to implement many innovative measures which will reduce waste and energy consumption, protect ecosystems and natural capital, and help to create a more sustainable community. However, there has been no coherent and comprehensive direction or decision-making process to set priorities and foster systematic change across departments. The creation of this Sustainability Strategy will allow the City to evaluate progress and set more ambitious goals. The purpose of this update is to inform Council of progress to date, and receive additional direction. The Draft Proposed Environmental Sustainability Strategy is currently scheduled to be ready for Council and public review in mid-March.

RECOMMENDATION

No action is required at this time. This report and presentation lay out the format and preliminary draft content for the Environmental Sustainability Strategy for Council discussion. Council comments and questions are requested at this stage in the development of the Strategy to ensure that the Strategy is on the right track. By the end of the meeting, Council should understand the work completed to date and be comfortable with the draft elements that will become the Environmental Sustainability Strategy. Staff will take Council input into account in drafting the proposed Environmental Sustainability Strategy for review by the Council, Planning Commission, Park Board, and public in meetings over the next several months. We hope to have a Final draft ready for Council's adoption in May.

ATTACHMENTS:

- A. Discipline Report: "Sustainability Program Elements and Profiles"
- B. Discipline Report: "Sustainability Measurement and Tracking"
- C. DRAFT Preliminary Recommendations Matrix
- D. DRAFT Capacity Assessment Methodology Example
- E. Timeline of Council Action and Public Input Opportunities



ATTACHMENT A:

Discipline Report 1.A:

“Sustainability Program Elements and Profiles”



City of Shoreline Environmental Sustainability Strategy

Contract Deliverable 1.A.:

Sustainability Program Elements and Profiles



November 21, 2007

Prepared by:
AHBL, Inc.
O'Brien & Company



Memorandum:

Sustainability Program Elements and Profiles

I. Introduction

The City of Shoreline is taking significant steps toward sustainability, both in its internal operations and in the greater community. The proposed Environmental Sustainability Strategy will lend cohesiveness and measurability to existing efforts and establish new strategic initiatives that are aligned with the City's principles and goals. The Sustainability Strategy signals a bold direction for the City and establishes it as a regional leader.

This memorandum includes a draft mission statement for a Sustainability Strategy and a set of Guiding Principles and High-Level Goals that were developed with substantial input from City staff. These form the foundation for the Sustainability Strategy, and were presented to community stakeholders for input and refinement during Community Conversation #1.

The Shoreline Sustainability Strategy has the benefit of building on the collective experience of other cities. A substantial portion of this memorandum is dedicated to profiles of existing city sustainability programs that are instructive for the development of the Shoreline Sustainability Strategy. Profiles of significant and successful efforts in Fort Collins, CO; Santa Monica, CA; Whistler, BC; Cleveland, OH; and Burlington, VT indicate that many cities are using the principles of sustainability as criteria with which to evaluate and develop programs across all departments – including utilities (energy and water), economic development, purchasing, communications, transportation, parks and recreation, and natural resource management.

Common elements among these programs include:

- A framework of principles that provide guidance for program development as well as for implementation;
- A set of outcomes expressed in goals and measurable objectives, correlated to the program framework, and based on prioritized indicators of sustainability;
- Regular internal and public reporting mechanisms; and
- A set time horizon or schedule for regular program evaluation

However, programs differ in management structure and degree of detail specific to objectives. Structure and complexity vary according to funding and existing management resources. Some programs such as those in Fort Collins and Santa Monica are part of annual budgets and are initiated and

managed by city departments created for this purpose; others such as Burlington's are grant-enabled community visions without centralized leadership and ongoing management.

Many cities are developing or using advanced performance monitoring systems that include specific objectives with representative indicators (metrics) and performance targets. Indicators are defined as standards of measurement (of performance) that give evidence of a condition or direction of environmental change. Performance targets are goals established to measure progress of desired change for each indicator. The Whistler program is notable for its intricately crafted set of 16 strategic emphases and more than 100 indicators, each with specific performance targets; in contrast, the Cleveland program emphasizes major projects such as wind-power generation and river cleanup.

Shoreline can draw from existing models to create a Sustainability Strategy that is uniquely appropriate for its needs and resources. The City's Guiding Principles and High-Level Goals will set the course for establishment of specific objectives, indicators, performance targets and recommendations as follows:

- Guiding Principles
- High-Level Goals
- Specific Objectives
- Indicators
- Performance Targets
- Strategies to Achieve Targets
- Policies, Programs and Projects to Implement Strategies
- Evaluation Using Assessment Tool, Indicators and Targets
- Strategy, Program and Target Modification Based on Evaluation

Criteria for assessing current and potential actions and policy initiatives are needed to determine their consistency and effectiveness. A four-step approach and draft working tool for sustainability assessment are included in this memo. Finally, the memo contains an extensive discussion and analysis of the existing and potential green infrastructure elements for further discussion. We intend to use this tool to obtain valuable input from the community to help guide physical and spatial components of the overall effort.

Because of their close relationship, specific objectives, indicators and targets will be developed using an iterative process that relates these elements back to the Guiding Principles and High Level Goals. These relationships and related recommendations for sustainability measurement and tracking will be detailed in the upcoming Memo 1B.

II. Mission Statement and Guiding Principles

As part of Task 1A the consultant team used existing policy guidance contributions from City of Shoreline representatives during the project kick-off meeting, and additional feedback from City staff on specific potential work products to draft a Mission Statement and Guiding Principles with High Level Goals for the Sustainability Strategy. The foundation for this effort is the direction provided by the City Council's adopted Goal #6 for its 2007-2008 Work Plan.

To Create an "Environmentally Sustainable Community":

Provide management and stewardship of natural resources and environmental assets such that their value is preserved, restored, and enhanced for future generations; and such actions complement community efforts to foster economic and social health. Components include implementing "Green" practices at all City-owned or operated facilities, requiring new development or redevelopment to achieve high standards for stormwater management, energy efficiency, and reduction of solid waste, and maximizing recycling and reuse of resources.

Goal #6 lists the development of an "Environmental Sustainability Strategy" as a key objective.

Draft Mission Statement

The City of Shoreline Sustainability Strategy Mission Statement establishes environmental sustainability as a framework to align the City's plans, policies, operations and actions with the direction provided in Council Goal #6, as well as the City endorsed^{1,2} goals of the Cascade Agenda³, the Green Cities Program⁴, and the US Conference of Mayors Climate Protection Agreement⁵.

Mission:

We will provide management and stewardship of natural resources and environmental assets such that their value is preserved, restored, and enhanced for present and future generations. We will

¹ City of Shoreline has endorsed the principles of the Cascade Agenda and declared the City's intent to participate in the "Cascade Agenda City" and "Green City Partnership" by adoption of Resolution 260 on June 11, 2007.

² City of Shoreline authorized support of the US Conference of Mayors Climate Protection Agreement by adoption of Resolution 242 on April 24, 2006.

³ <http://www.cascadeagenda.com/>

⁴ <http://www.cascadeland.org/stewardship/green-cities>

⁵ <http://www.usmayors.org/climateprotection/agreement.htm>

reduce waste, energy and resource consumption, carbon emissions, and the use of toxics in our own operations. We will lead and empower our community to make these same changes and evaluate our shared progress. We will create and foster community-based stewardship programs for our community open spaces, critical areas and urban forest. We will promote sustainable land use development, improved parks and recreation facilities and transportation solutions to enhance the ecology, livability and health of our community.

Guiding Principles with High-Level Goals

The City of Shoreline has identified 10 Guiding Principles as the foundation for the City's Sustainability Strategy. The Principles are not prioritized, but they are organized into two areas of emphasis – Strategy Framework (including process guidance) and Focus Areas (which deal with specific topics). Each Guiding Principle is followed by related high-level goals that provide additional details on City priorities and future actions. These Guiding Principles will serve as the defining framework for the strategy and we will be able to trace our subsequent efforts back to these roots.

1. Sustainability Will be a Key Factor in Policy Development

The long-term impacts of policy choices will be considered to ensure a sustainable legacy. All policy decision will be considered according to impacts on conservation and restoration of the natural environment. The City will develop specific tools to ensure that citizens and decision makers understand the potential impacts of our choices on sustainability. The City will establish a clear list of sustainability priorities to guide the overall sustainability strategy and evaluate them on a regular basis to ensure the efficacy and efficiency of our actions.

2. Lead by Example and Learn from Others

The City will lead by example and encourage other community stakeholders to make a similar commitment to the environment. We will learn from others and incorporate successful approaches into our efforts. The City will act as an advocate for innovative programs and approaches that embody the goals of sustainability. The City's sustainable programs, policies, facilities and practices will be designed as models that can be emulated by special districts, services providers, businesses, institutions, organizations and individuals in the community.

3. Environmental Quality, Economic Vitality, Human Health and Social Benefit are Interrelated

The City recognizes that a sustainable community requires and supports economic development. The City will encourage environmentally sustainable business. We recognize that the health of humans is

inherently dependent on the health of the communities we create and the ecological framework that sustains us. In achieving a healthy environment, the City must ensure that inequitable burdens are not placed on any one geographic or socioeconomic sector of the population and that the benefits of a sustainable community are accessible to all its members.

4. Civic Education, Participation and Responsibility are Key Elements of a Sustainable Community

The City will be a leader in the creation and sponsorship of education opportunities to support community awareness, responsibility and participation in cooperation with schools, colleges and other organizations in the community. We recognize that partnerships between governments, businesses, residents and all community stakeholders are necessary to achieve a sustainable community, and we will serve as a catalyst and facilitator of these relationships. Public participation and a transparent decision making process are essential to finding and selecting alternatives.

5. Commitment to Continuous Improvement

The City will reevaluate its priorities, programs and policies on a defined, regular basis to ensure that the best possible investments in the future are being made. We will encourage our community partners to pursue similar efforts. The evaluation of a program's cost-effectiveness will be based on a lifecycle analysis of environmental and social costs and benefits. Performance monitoring will be achieved via a system of indicators and performance targets (e.g. a carbon scorecard). Analytical and monitoring tools will emphasize simplicity to ensure long-term utility for the City in terms of application and communication of the results for the explicit purpose of becoming more sustainable.

Focus Areas:

6. Manage Expected Growth in a Sustainable Way

We are part of a larger region and must accept our fair share of future housing needs and employment growth to achieve the goals of Growth Management and the Cascade Agenda. This growth must not come at the expense of our local environment or community livability. The City will seek innovative ideas and emerging technologies to minimize the negative impacts of growth and to leverage redevelopment to enhance environmental sustainability where practicable. Higher intensity land uses and increased density will be focused in specific areas that are environmentally suitable and served by adequate infrastructure, including transit, bicycle and pedestrian facilities. Community access to parks and natural features will be enhanced.

7. Address Impacts of Past Practices

As a community we recognize that we must not only change the way we do things now and in the future, but we must also address the impacts of our past actions. The City will be a leader in identifying and addressing environmental degradation resulting from urban development. Impacts caused by use of outdated technologies and infrastructure will be a priority (e.g. stormwater system improvements and sidewalks). We recognize that we do not live in a pristine environment, but we will seek out ways to improve the ecological health, including the human health, of our community.

8. Proactively Manage and Protect Ecosystems

Good stewardship demands that we both protect and actively manage our dynamic local environment. The City will seek opportunities to enhance and restore our critical areas, shorelines, urban forest, landscape hydrology and other key elements of our natural environment so that we are ready to meet environmental challenges to come. The City will manage public lands, including right-of-ways, for multiple benefits, including ecosystem protection and sustainable transportation. The City will promote and empower residents and property owners to improve ecosystem conditions in residential yards, institutional sites and commercial properties. Our environment is constantly changing. Lasting ecological health and environmental services cannot be achieved in a human-altered ecosystem by simply leaving the remaining natural elements alone and hoping they will fix themselves.

9. Improve and Expand Waste Reduction and Resource Conservation Programs

The City will evaluate and implement strategies for reducing volumes and types of materials that are directed into the waste stream. We will be a leader in reducing waste and conserving resources through conscientious purchasing policies and expanded recycling programs. The City will take steps to reduce water consumption in its facilities and operations, investigate water reuse technologies and promote water conservation efforts in the larger community in partnership with utility providers. Policies and contracts will reflect our commitment to reducing internal waste generation and resource consumption by enabling partner organizations to lessen impacts on the environment through waste management and resource conservation. We will evaluate all policies and decisions according to the “Cradle to Cradle” idea of reducing negative environmental impacts from initial sourcing through the end of useful product or project life.

10. Energy Solutions are Key to Reducing Our Carbon Footprint

The City will reduce the amount of energy used in facilities and operations and promote sustainable sources of energy. The City will use a carbon

scorecard to evaluate energy use and carbon emissions of the Shoreline community and develop and promote conservation targets. Other ways in which the City can promote conservation goals include compact development that supports transit and walkability, non-motorized transportation improvements, and coordination and advocacy for efficient transit solutions that serve both the people of Shoreline and the region.

III. Sustainability Program Profiles

For Task 1A.4, the consultant team examined 19 city sustainability programs to determine applicable models for the Shoreline Sustainability Plan. Each program was evaluated according to the following components:

- **Leadership and Guidance** – What is the management and leadership structure? Who is in charge? Is it a single entity or dispersed across multiple entities? If it is a government entity, what department is it within? Staffing?
- **Programs and Scope** – We looked at plan components such as Mission, High-Level Goals/Objectives, Indicators, and Metrics. We included descriptions of specific planning/modeling tools used. Where information is available, we included budget, funding sources, and other financial considerations of a sustainability program.

The complete list of known sustainability programs and indicator projects in North America is presented in Appendix B. Four programs were selected for this memo based on existing conditions in comparison to those of Shoreline, scope of programs, and presence of indicators and ongoing monitoring:

- Fort Collins Action Plan for Sustainability, Fort Collins, CO
- Santa Monica Sustainable City Plan, Santa Monica, CA
- Whistler 2020 Comprehensive Sustainability Plan, Whistler, BC, Canada
- City of Burlington Legacy Project, Burlington, VT

Full details and analysis of these program profiles are provided in Appendix A.

Notably, two local sustainable city programs were not chosen as profiles – the Sustainable Seattle program and City of Portland Office of Sustainability and Sustainable Development Commission. Both cities have significantly greater resources than Shoreline, although this is not the primary reason for their exclusion. Sustainable Seattle is considered too complex to be considered a model for Shoreline given the primarily ecological goals of the Shoreline City Council and existing resources. In the case of the Portland program, it has been adapted by Fort Collins and scaled to fit resources more closely resembling those of Shoreline.

Lessons Learned:

Research and interviews with key sustainability program personnel from model programs indicate several common elements of successful sustainable city plans. Minimally, a program must include a:

- Framework to provide structure;
- Method to engage the community; and
- Baseline to track progress.

Specific recommendations from other programs include:

Engage the Community

Get people involved. According to the Director of Whistler2020, “You can’t just draw up a policy and then present it from some high level and expect citizens to be empowered to participate.” A representative framework is integral to success for something as amorphous as sustainability. Base descriptions of success on community input. Include from the outset those who may be opposed to the program.

Make the Program Stand Alone

Sustainability strategies span all city departments and programs, so they should be recognized as independent of existing programs – overarching and unbiased. Autonomy is common to most successful sustainability plans. For instance, both Fort Collins and Santa Monica house the sustainability program in the City Manager’s Office, which gives the program the authority of the office and independence from other departments. Some cities have found that housing a sustainability program within an existing department, such as the planning division or environmental services department can compromise the authority of the sustainability program.

Give the Plan Authority

Although a sustainability plan should be based in community values and participation, it must also be given statutory authority. A City Council mandated sustainability plan allows centralized control of the process and gives Council-level entities power to alter departmental functions to match the goals of the sustainability plan.

Empower Champions for the Plan

A champion – whether an individual or group – is needed to provide energy and continuity, not only during early program development, but also throughout the continued life of the program. Additional champions are needed for components that are the responsibility of individual departments. The more authority the champion has, the more success they and the strategy are likely to have. However, champions are especially needed in the larger community. Achieving community buy-in and momentum is critical. The City needs the ongoing assistance of the community to make the strategy a success.

Ensure Accountability

The development of indicators and targets is a key component of ensuring accountability for the sustainability strategy. In addition to identifying

progress, they signal where changes should be made and improvements are required.

Make Sustainability Part of the Overarching Policy Framework

Do not make sustainability an add-on. This does not mean creating an extra layer of staffing and programs, but rather working with existing governmental structure and resources and adjusting existing departments to set and achieve targets.

Start with a Measurable Rallying Point

One Director noted that a number of the climate action plans across the country are sustainable city plans “cut a different way.” Her point is that climate action plans may be too vague, so the community must be given something tangible. For instance, if the strategy is to reduce greenhouse gas emissions, introduce the concept of a carbon footprint, address how strategies will reduce the footprint, and what the effect will be.

Keep Indicators Static – Adjust Targets

Once indicators are determined and baselines are established, indicators must remain the same for a considerable period of time in order to build continuity and measure progress.

Base Decisions in Science

Science is the foundation of an evaluation tool called The Natural Step⁶, but it is not exclusive to that process. Many decisions during the process of developing and maintaining the sustainability plan will be either contentious or seemingly prohibitive in scope or cost. Yet, basing decisions in hard data can lend sustainability strategies validity in the eyes of the public and major stakeholders. One example from Santa Monica: Data indicated greenhouse gas (GHG) emissions did not decrease during a given year. The staff of the Sustainable City Program used this data to recommend a community energy independence initiative that became policy.

Focus on “Executable Tasks”

Most successful programs focus on strategies that are actionable within a year. Overall performance targets might be longer-term, but most strategies should be short-term in scope so that rapid feedback is possible and parties responsible for strategies have finite timelines. An additional aspect is annual reporting that informs the next strategy cycle – programs can build on successes and avoid repeating previous mistakes.

⁶ The Natural Step is a framework grounded in natural science that serves as a guide for businesses, communities, educators, government entities, and individuals working toward sustainable development. The Natural Step framework was developed in Sweden by oncologist Dr. Karl-Henrik Robèrt in 1989. Dr. Robèrt brought leading Swedish scientists together to develop a consensus on requirements for a sustainable society.

Find a Sustainable Funding Source

Most programs are not financed from the general fund because cities recognize that sustainability programs might lose priority during lean financial times. Sustainability plans should have reliable funding each year. Portland's program is financed through a .001% fee on all construction permits – permits are a convenient source of income in a growing community, and the fee is not prohibitive. Santa Monica's program is financed via revenue from the City's solid waste and water utilities.

Start Small and Scale Up

Start by expanding existing programs or initiating strategies that the public can easily grasp. One Director asserted that the easiest scale for people to grasp is building scale, so a green-building program was a logical component for the city's nascent program. Creating linkages between strategies is also effective: Green-building policies complement sustainable city planning and GHG reduction policies. In this way, green-building becomes the gateway to other, less tangible aspects of sustainability. This is often called "scale jump".

Areas of Emphasis

Other Cities

This section presents a number of areas that organizations typically address when they seek to adopt more sustainable practices.

Sustainable Purchasing

- Automotive vehicles & equipment
- Building materials
- Cleaning & coating materials
- Food
- Office equipment and Furnishings
- Paper products and other

Green Building

- New construction & major retrofits
- Tenant Improvements
- Operations & Maintenance
- Infrastructure

Healthy Ecosystems

- Water use management
- Chemical & nutrient containment
- Habitat and wetland conditions

- Land cover & stormwater runoff
- Erosion control

Pollution and Waste Reduction

- Construction and demolition
- Office recycling & waste
- Toxic or hazardous substances
- Food waste
- Other major waste streams

Sustainable Energy

- Facilities, vehicles, and equipment
- Office equipment
- Work travel
- Employee commuting

Open & Fair Process

- Fair contracting
- Equal opportunity employment
- Citizen involvement

City of Shoreline

By way of comparison, the City of Shoreline has identified the following areas that are addressed under the current sustainability program umbrella or that the City has indicated will be addressed. Specific programs are listed underneath each area. Full details are provided in the *City of Shoreline Environmental Sustainability Inventory* compiled by Juniper Nammi, revised 8/29/07. An asterisk (*) indicates that the City desires substantial analysis of this program as part of the Sustainability Strategy. Underlines indicate that a program is in its early stages or has not yet been initiated.

Climate Protection and Transportation Management

- Business Access/Transit Lanes on Aurora
- Promoting Alternatives to Driving*
- Climate Protection Campaign*
- Fleet Vehicles Purchasing
- Regional Roads Maintenance Forum

- Civic Center/City Hall
- Green Street Demonstration Project*

Resources Use and Consumption

- Sustainable Business Extension Service
- City Buildings Operations Practices and Policies*

Community Building and Public Outreach

- Earth Day Celebration
- Neighborhood Environmental Stewardship Team*
- Environmental Mini Grant Program
- Adopt-a-Road and Adopt-a-Trail Programs

Toxics Reduction

- No Spray Zones
- Pesticide Free Parks

Waste Reduction and Management

- Solid & Hazardous Waste Management Program*
- Municipal Compost Facility*
- Business Solid Waste Reduction, Recycling and Resource Conservation Program
- Free Wood Chips at Hamlin Park
- Battery Recycling

Habitat Conservation and Restoration

- Urban Forest Assessment Planning
- Open Space Acquisition
- Critical Areas Ordinance
- WRIA 8 Participation
- Ivy Out Volunteer Program*
- Habitat Restoration Projects

Water Resources Management

- Car Wash Kits
- Stormwater Standards Update
- Aurora Corridor Project Stormwater Solutions
- Storm Drain Medallions & Stenciling

Land Use and Development

- Green Building Program Implementation*

As part of our future work, the Consultant team will look at the City's existing programs, focusing on those priority programs for which the City has requested an in depth review. Using the Sustainability Assessment Tool discussed later in this memorandum and specific objectives, targets and indicators which will be detailed in the upcoming Memo 1.B, we will identify key gaps in the existing program mix that should be filled and opportunities where existing programs can be strategically realigned.

IV. Criteria for Assessment and Policymaking

The program profiles suggest possibilities for what the City *could* do with its Sustainability Strategy – from governance models to specific program components. The next step is to identify criteria for assessing what the City *should* do. Specific objectives, indicators, performance targets, and feedback methods will also form the backbone of implementing the City's Sustainability Strategy, and will be addressed in subsequent memos.

Program assessment criteria are extremely useful in studying possible actions and policy directions for the City. They will help provide a better sense of the value of existing programs, as well as identify where new actions are needed. Assessment criteria can identify actions or policies that on their face may seem to fit the overall sustainability strategy, but when evaluated more closely seem a poor use of City's finite resources. The intent is to find actions and policies that leverage resources and that provide significant benefit either by creating major improvements in a particular focus area, or better yet, address multiple high level goals.

The recommended approach is a four-step process:

- **Step 1:** Identify and Distill Potential Actions or Decisions
- **Step 2:** Initial Qualitative Evaluation and Comparison
- **Step 3:** Modified Strength, Weakness, Opportunity and Threat (SWOT) Analysis from Traditional Strategic Planning
- **Step 4:** Preliminary Cost and Resource Evaluation

In Step 1, actions are clearly identified and phrased as statements, such as "establish detailed sustainability purchasing policies and procedures." Statements should be as specific and concrete as possible.

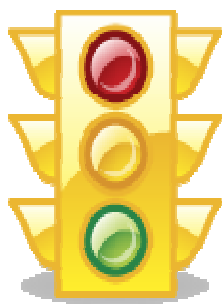
In Step 2, actions are screened by evaluating them against four environmental criteria, one economic criterion, a social, human health and safety criterion, and three feasibility criteria. Actions get check marks for each criterion they impact positively (see *Sustainability Assessment: Draft Working Tool* below).

Listing several actions within the same table, aids in comparison of benefits, gap analysis, and prioritization. An action must receive at least one check mark for an environmental criterion for it to be considered worthy of further analysis; otherwise it is eliminated from further review (red light). When more information is needed for evaluating an action, or when actions receive fewer

marks, they may be put on hold for future consideration (yellow light). Actions receiving several marks are considered worthy of further analysis (green light). Preferred actions will generally have economic, social, and/or human health benefits as well as environmental benefits.

In Step 3, actions that have received a green light in Step 2 are analyzed in more detail by assessing qualitatively their strengths, weaknesses, unknowns and the level of control the City has over their outcomes. This analysis may also be useful for evaluators having a difficult time establishing whether an action has a positive impact on a criterion in Step 2. In this way, Step 3 creates a feedback loop, where information can be fed back into Step 2 and results revised. The user should not be overly concerned with where to put a particular concern or benefit. The important point is that the discussion brings the concern to light and allows a forum for it to be properly considered. Once the strengths and weaknesses of actions have been analyzed, actions are again given either a red, yellow or green light to indicate whether they are worthy of further analysis.

In the final step, Step 4, actions are evaluated in terms of their costs. Initial cost increases and life cycle cost savings are incorporated into the evaluation as well as the availability of resources needed to accomplish the action. If action costs far outweigh potential benefits or pose an insurmountable barrier to implementation, actions are eliminated from further review (red light). If action costs match benefits, but potentially represent a barrier to short-term and/or long-term implementation, actions are put on hold for future consideration (yellow light). If action benefits exceed action costs and do not present a barrier to short or long term implementation, the action is worthy of further consideration (green light).



- **Red light actions are eliminated from further review.**
- **Yellow light actions are put on hold for future consideration.**
- **Green light actions are considered worthy of further review.**

Users of this tool should not be overly concerned with which column to put a particular concern, that every column is filled out, or discussions between users about whether something is a yellow or red light. The point is that the use of the tool results in a structured and purposeful discussion that provides opportunities for alternatives to be considered and decision making to be improved.



Sustainability Assessment: Draft Working Tool (Task 1.A.5)

Step 1: Identify and Distill Potential Action or Decision

Clearly identify a topic, policy issue, action or issue that you would like to evaluate for its impact on sustainability. The action should be phrased as a statement, such as “establish detailed sustainability purchasing policies and procedures” – and should be as specific and concrete as possible.

Step 2: Initial Qualitative Evaluation and Comparison


Evaluate each idea based on the sustainability criteria below (which are based on the Draft Guiding Principles) by putting a check in each box where the potential action, on balance, positively impacts the criterion listed. It is helpful to list potential actions and/or alternative actions within the same table to aid in benefit comparison, gap analysis and prioritization. Some users may also want to sum the checkmarks for each potential action; however certain criteria deserve greater emphasis. An action should address at least one of the four environmental focus areas (in green), to be considered a potential sustainability initiative or action. Preferred actions will also usually provide a clear or direct economic, social, and/or human health and safety benefit as well (in yellow).

POTENTIAL ACTION	SUSTAINABILITY					FEASIBILITY			
	Advances sustainable development & transportation	Directly + Impacts Energy Conservation and Carbon Reduction	Likely to result in Improved Local Ecosystem Health	Tangible Waste Reduction and Resource Efficiency Benefits	Provides Clear or Direct Economic, Social, or Human Health and Safety Benefits	Relies upon existing system, proven technology or incremental change	Promotes City Leadership and/or Broader Participation	Represents a Potential Quick Win	Recommendation:
Develop Sustainable Purchasing Guidelines for All Staff		✓	✓	✓	✓	✓	✓	✓	
Other potential actions for comparison									

If the initial evaluation indicates an idea presented is worthy of further thought, it should be given the “green light” for a modified SWOT analysis. Eliminate items (red light) or hold items (yellow light) for future consideration if more information is needed or there are higher priorities. When eliminating or “holding” ideas, please record the rationale for future reference.

Step 3: Modified SWOT Analysis

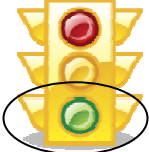


This step allows more detailed qualitative analysis of those potential actions that are able to pass through the filter of Step 2. Although presented here as Step 3, the Modified SWOT Analysis is also useful when evaluators find it difficult to establish whether an action is consistent with a criterion, and represents a “feedback” loop that provides an opportunity to revise the Step 2 evaluation.

POTENTIAL ACTION:		RECOMMENDATION & RATIONALE:		
Develop Sustainable Purchasing Guidelines for All Staff		Pursue this recommendation – conduct cost and resource evaluation based on multiple strengths		
Evaluation Criterion	Strengths	Weakness	Unknowns or Level of Control Over Outcome	
Advances sustainable development & transportation	None.	None.	Not clear how this would impact criterion.	
Directly Impacts Energy Conservation and Carbon Reduction	Products purchased under sustainable purchasing guidelines would be more energy efficient and have lower carbon emissions.			
Likely to result in Improved Local Ecosystem Health	Products purchased under sustainable purchasing guidelines would reduce impacts to local air and water quality.		Benefits to local ecosystem health may be difficult to quantify. Measurement of change could be difficult.	
Tangible Waste Reduction and Resource Efficiency Benefits	Products purchased under sustainable purchasing guidelines would emphasize reducing, reusing, and recycling resources.	Adjustments to perceived quality of sustainable products may be slow.		
Provides clear or direct economic, social, or human health and safety benefits	Products purchased under sustainable purchasing guidelines should be more economical in the long term, less harmful to ecosystem/human health, and promote sustainable business.		Unknowns regarding lifecycle costs could require more investigation and documentation.	
Relies upon existing system, proven technology or incremental change	Existing sustainable products could be substituted for less sustainable products and more could be added as they become available or more cost effective.	Unproven, yet potentially beneficial products may be dismissed.		
Promotes City Leadership and/or Broader Participation	City leadership in the purchase of sustainable products would strengthen the market for sustainable goods leading to greater availability.		City's ability to influence availability of sustainable products and purchasing by general public could be limited.	
Represents a Potential Quick Win	Using sustainable purchasing guidelines could be implemented quickly and benefits documented.	Documenting benefits would require coordination and training city-wide. Product lists would be very useful, but would take a greater level of effort.		

If, on balance, the idea seems worthy of further analysis, it should be given the “green light” for cost and resource evaluation. Eliminate (red light) or table (yellow light) items. When eliminating or “holding” ideas be sure to record rationale for future reference.

Step 4: Preliminary Cost and Resource Evaluation

Evaluate potential actions that are given the “green light” in Step 3 on the basis of cost and other resource availability factors. Red should be selected if costs appear to be an insurmountable barrier when compared to potential benefits, yellow if costs represent a barrier to short term implementation and possible long term implementation, and green should be selected if after evaluation of costs, the idea appears to be worthy of further consideration. Once again, eliminate items (red light) or hold items (yellow light) for future consideration if more information is needed or there are higher priorities that demand attention. When eliminating or “holding” ideas, record the rationale for future reference.

POTENTIAL ACTION	Initial Cost Increase?	Lifecycle Cost Savings?	Cost Estimate (if known)	Able to Accomplish Using Existing Resources?	Resource Assistance Availability and Details	<u>Summary Cost Evaluation (TBD)</u>
Develop Sustainable Purchasing Guidelines for All Staff	No, not if done by existing staff	Yes	TBD	Yes, with implementation steps to be described in Sustainability Strategy	Yes, details TBD	
<i>Other potential actions for comparison</i>						
						

V. Green Infrastructure Planning

Introduction

Infrastructure is defined as “the substructure or underlying foundation, especially the basic installations and facilities on which the continuance and growth of a community depends”. Recently, sustainability planning efforts both locally and nationally have devoted substantial effort and thought to the concept of *green infrastructure*. Efforts to define this concept included the President’s Council on Sustainable Development, who initiated efforts to apply the concept of sustainable development in the United States. In a May 1999 Report entitled *Towards a Sustainable America – Advancing Prosperity, Opportunity and a Healthy Environment for the 21st Century*, they identified green infrastructure as one of several key strategies for achieving sustainability. They defined green infrastructure as:

Our nation’s natural life support system – an interconnected network of protected land and water that supports native species, maintains natural ecological processes, sustains air and water resources and contributes to the health and quality of life for America’s communities and people.

Green infrastructure recognizes that humans are part of the environment and that viable ecosystems are the foundation for society by providing the natural resources we need to support our human systems and built environment. This concept recognizes the dependence of mankind on natural systems and the need for us to utilize these systems in order to maintain and improve our quality of life. However, it also recognizes that we must do this in a manner that enhances, not destroys, the natural processes we rely on for our existence, consistent with the basic tenets of sustainability.

Human development and the associated man made infrastructure needed to support it has fragmented and degraded natural ecosystems. We have developed new infrastructure systems, such as sanitary sewers and storm drainage, to deal with the symptoms of the problems this development and degradation have caused. The impacts of much of our growth and development have decreased nature’s ability to respond to both short-term changes, such as flooding and drought, and long-term environmental trends, such as global warming and the spread of invasive species.

Man-made infrastructure designed to support the built environment we have created, can also impede natural processes, including the flow of water and the migration of fish and animals. This spatial fragmentation also has human consequences: we have become dependent on the energy needed to support complex traditional infrastructure systems for a wide range of daily

tasks. Our dependence on the automobile and the resulting impacts on land use, human health and the health of the larger environment are examples of the limitations and notable consequences of viewing ourselves as separate from our natural environment.

The concept of sustainability recognizes that a viable ecosystem serves as the foundation for our society by providing the natural resources we need to support our human systems and man made surroundings. A variety of natural processes interact to create a healthy environment. The goal of green infrastructure is to integrate functioning ecosystems with the built environment and to mimic natural systems and leverage their benefits, flexibility and resiliency to improve both ecological and human conditions. Green infrastructure proponents seek to “design with nature” and plan land use and infrastructure based on land suitability, just as advocated by the famous landscape architect and planner Ian McHarg more than 30 years ago.

Recently, the concepts of green infrastructure have been adapted to the scale of an individual community. In this context, the concept of green infrastructure has been expanded beyond its traditional focus on natural lands and features to include elements with more human interaction. The focus is on those systems that connect humans more directly to the natural environment, that promote sustainable development and that replicate natural processes. In this context, green infrastructure can be thought of as:

A network of parks, natural vistas, shorelines, civic spaces, sidewalks, trails, shorelines, creeks, natural drainage features and urban forests that connect neighborhoods, individuals, landscapes, flora and fauna to one another.

In this paradigm, green infrastructure can include elements such as native landscaping, innovative low impact development and drainage systems, restored wetlands, managed urban forests and other attempts to mimic nature for the benefit of both humans and the larger ecology.

Green Infrastructure in Shoreline

As part of Task 1.A.7, we have used GIS technology, our working definition of green infrastructure and our knowledge of City plans, programs and landscapes to begin the process of identifying “possible elements of the existing and future green infrastructure system for further discussion.” The concept of green infrastructure can serve as a robust framework for the spatial and physical aspects of sustainability planning. It allows us to understand the impacts of past, current and proposed development practices and policies, how our currently planned improvements fit into the picture and how we may modify our future policies and plans to achieve multiple goals and embody these important concepts.

By breaking our existing physical landscape and urban improvements into specific components and mapping them we can begin to see both the extent and nature of the existing green infrastructure system. We can also see how existing elements of traditional infrastructure can be adapted and improved to serve a broader range and quality of functions. Put differently, we can see the ways in which we can “green” our current infrastructure. Looking at the current system, we can identify key gaps and opportunities to implement our sustainability objectives.

The development of this system strongly supports the Guiding Principles and related High Level Goals detailed earlier in this report. Notably the following:

- Sustainability Will be a Key Factor in Policy Development
- Environmental Quality, Economic Vitality, Human Health and Social Benefit are Interrelated
- Manage Expected Growth in a Sustainable Way
- Address Impacts of Past Practices
- Proactively Manage and Protect Ecosystems
- Energy Solutions are Key to Reducing Our Carbon Footprint

Green Infrastructure Maps

Figure 1 depicts the existing community connections that relate to our sustainability guiding principles and framework goals. These include various types of non-motorized facilities and transit which link commercial and civic hubs, schools, institutions, parks and open space. We have shown these “human” *hubs* (or centers) and *links* (or connections) on a separate map only so the detail of the underlying information can be conveyed and analyzed - so that this component of the whole can be fully understood. It is only part of the picture.

Figure 2 depicts the ecological framework or system, including watersheds, topography, open space, parks, streams, wetlands and shorelines. Habitat features, particularly forest areas and forest health conditions, can be added to the map as this information becomes available from the City through its work with Seattle Urban Nature Project. Priority Habitats and Species Data from the Washington Department of Fish and Wildlife should also be added so key areas of habitat diversity, quality, concerns and opportunity can be better understood. As various layers are added, combined and analyzed, systems (such as the headwaters of Thornton Creek) and their components (e.g. wetlands, streams and remnant forest on public and private land in a broad band through the middle of the City) become more apparent. Again, we have shown “natural” hubs and links (for which we could readily obtain data) on a separate map only so the detail of the underlying information can be understood.

Figure 3 is a conceptual and potential *Future Green Infrastructure System Map*, with specific Green Infrastructure *Opportunities* identified. This is where we see the full power of green infrastructure planning take shape, as we show the blending of human and ecological hubs and links to form a more coherent system. Looking at the entire system and the interaction between human and more natural elements allows us to identify opportunities. These include specific locations where there are missing elements to the system, where gaps exist or where existing facilities can be improved to serve green functions. In defining these opportunities, we looked at the following factors:

- Key human connections, which support sustainable development, and could be made between existing pedestrian facilities, commercial and civic hubs, neighborhoods and natural features
- Key natural links that could be made between drainage features, open space and habitat hubs
- Vulnerable landscapes, features and processes that should be protected, conserved, restored or otherwise actively managed
- Potential new or enhanced public access improvements that would provide connections to natural features or link neighborhoods
- Opportunities, such as low impact development, green building and green streets that combine multiple elements in a key location.

Green Streets

Special attention was paid to potential green street locations. In addition to the green infrastructure benefits that a combined program of pedestrian improvements, native landscaping and natural drainage provide, we believe green streets can be used as a tool to help define the different characters of the City. In areas where a more urban feel is appropriate, standard sidewalks with street trees and traditional storm drainage infrastructure may be more desirable. As you move away from the arterials, the green streets help signal and solidify the residential neighborhood character and a closer connection with natural processes. In some areas, traffic calming will be a significant priority in the design of a green street.

In the July 2005 Shoreline Transportation Master Plan, the City has developed some basic “Design Guidelines for Transportation Green Streets”. The Master Plan contains the recommendation that the City “adopt the recommended standards in Table 6-2 for arterials and neighborhood collectors”. The Master Plan calls on the City to “conduct a planning study with the storm and surface water utility to identify an initial *Green Street* corridor”. Table 6-2 is included in Appendix C. While the city has developed preliminary design standards, no criteria have been developed yet to determine where green streets are desirable, feasible or are a priority.

The focus of the green street analysis and discussion in this report is to establish criteria for prioritizing potential locations and where they may serve the maximum pedestrian and environmental benefit, preferably at a lower relative cost. For the purposes of our analysis, the preliminary criteria for the siting of potential green streets included the following priorities (not absolutes, but important factors):

- **Seek a Balance of Character and Connectivity.** Lower volume neighborhood collectors that are or could be important non-motorized community links were favored in this analysis because they provide a mix of connectivity, neighborhood character and safety for non-motorized users. Neighborhood residential streets are acceptable if they provide an important connection that will be used for walking and biking. Limited portions of arterial collectors were selected by default - because they provided a key link. Overall, the preference is to find streets where speeds are slower, so there are fewer conflicts between vehicles, pedestrians and vegetation. However, we also favor a high degree of connectivity, so the City will be able to move a greater number of people sustainably and thereby provide a higher return on investment.
- **Prioritize Safety, Provide Connections and Fill Gaps in the System.** Locations that are near and/or connect to schools and parks, where pedestrian safety concerns are paramount, will take priority. Yet the City should also consider opportunities to provide needed connections to commercial, residential and institutional centers. Locations where there are limited pedestrian facilities currently are an obvious consideration because it is not cost effective to replace functional improvements.
- **Link and Leverage Existing Assets with an Opportunistic Approach.** Corridors that provide connections across the community and that feed into existing pedestrian facilities found on several major arterials are important. Potential locations may have existing ditches or rustic off-street paths that can be enhanced and integrated into an “opportunistic” and cost effective improvement. Locations with an existing ditch or wide shoulder provide more room for improvements and design flexibility for this approach.
- **Review Existing Plans for Improvement Opportunities.** Where construction plans have not already been completed, planned road and stormwater capital improvements that are already in the pipeline should be assessed to see how various Green Street concepts can be integrated cost effectively in priority locations. It is important to not only consider opportunities where the full range of green street elements can be implemented, but also incremental improvements to more traditional street designs along identified corridors.

The City should review these potential siting criteria and provide additional guidance to help frame this key element of the sustainability strategy. Anecdotal information indicates that in other communities in the region, green streets have become be a desired improvement for a neighborhood. Once

priority locations are established based on feasibility and suitability, pilot programs should focus on gaining the cooperation of neighboring homeowners. Homeowners could also partner on implementing low impact development improvements on the private side of the property line, including rain gardens and infiltration facilities targeting run-off.

Greener Streets and Complete Streets

In addition, it should be noted that continued landscape and art improvements on 175th Street from Fremont to 15th Ave. NE and improvements along the majority of 15th Ave. NE will have a significant benefit in terms of linking community destinations in more sustainable ways and improving the visual character within key corridors of the City. Providing a pedestrian landscape amenity zone is also a key need along 145th Street, Richmond Beach Road and 205th Street. Continued care and improvement of pedestrian and bike facilities and street trees, and enhancement with additional vegetation on the following streets is also important for the development of sustainable connections across the city: 155th Street and 185th Street. These needed improvements are recognized in the City's Comprehensive Plan and Transportation Master Plan and are important priorities, regardless of whether they are called "green streets" or by another name.

Preliminary Analysis and Findings

Based on our analysis of these elements, in combination with a review of key City policy documents that outline recognized needs and planned facilities (e.g. Comprehensive Plan, Parks, Recreation and Open Space Plan, Transportation Master Plan and Surface Water Master Plan), we have developed a typology of 8 general categories of improvements that could be made to the green infrastructure system. These can be further refined into more site specific and detailed improvements in later planning and implementation phases. Figure 3 depicts the locations of the various items on this "menu" of opportunities that were used in this initial investigation:

Natural Landscaping– While applicable throughout the City, this icon depicts the location where natural landscaping would help promote a stronger connection to the environment, enhance community appearance and pride, improve ecological function and connect natural features. This category of improvement or "green infrastructure prescription" is particularly applicable in key commercial centers that were developed under outdated standards (e.g. Aurora Village) and key arterials that currently have sidewalk facilities, but very limited landscaping, such as 145th and 175th Streets. Continued enhancement of the I-5 freeway corridor and City gateways are also needed. Notably, the City's existing and planned improvements to the Aurora Corridor and Interurban Trail include a significant amount of natural landscaping.

Public Access – This icon depicts the location of where a key public access enhancement would improve non-motorized community connections or would help reconnect the community to the natural environment. A pedestrian connection across the I-5 freeway near 165th Street is a key example. Of particular emphasis in this memorandum is promoting stronger connections to the Puget Sound shoreline. Only limited legal public access is currently provided in large part due to the presence of the Burlington Northern Santa Fe railroad tracks and the lack of public property. Private ownership of these lands will determine how feasible it is to create public access. However, examples of improvements could include a pedestrian bridge over the railroad tracks to connect the City's Innis Arden Reserve to the shoreline, a public access easement and safe pedestrian connection from Richmond Beach Drive NW to the popular community beach south of the Pt. Wells terminal, a more established walking connection from 145th Street into the Paramount Open Space, and formal and legal public access to the Boeing Creek Reserve. We observe that the City could create a bold long term vision for shoreline public access to enhance and leverage this historically neglected community asset to meet recreation needs locally.

Natural Drainage Connection or Feature – While applicable citywide, this icon depicts the general location where the construction of a natural drainage feature would enhance or help restore natural processes and address human issues, such as flooding. Locations were selected using GIS, based on the presence of extensive roadside ditches, historic stream channel locations, and location within the drainage basin. Examples include re-establishing and enhancing surface water connections in the upper Thornton Creek and Boeing Creek Watersheds, in Hamlin Park and on the Fircrest Campus. Notably, the City's next phase of planned improvements along Aurora Ave. North includes a substantial natural drainage component.

Habitat Enhancement - This icon depicts the location where a key high quality element of the natural environment should be conserved, restored or otherwise actively managed. Examples include vegetation management in Hamlin Park, Richmond Beach Saltwater Park and South Woods. Continued enhancement of high quality wetlands and streams on private land in Richmond Beach, Innis Arden, near Lake Forest Park and in City owned parks and open space is needed.

Low Impact Development (LID) and Green Building– While applicable citywide, this icon depicts the location where encouraging in-fill and redevelopment using LID and Green Building techniques and standards would protect vulnerable ecological conditions or address ongoing impacts to humans or other elements of the environment. Examples include targeting the upper portions of the Boeing Creek basin to enhance natural drainage and infiltration and protecting water quality, groundwater springs, soils and

vegetation in a key area in the northeastern portion of the City where multiple cold, clear springs feed tributaries to McAleer Creek. Redevelopment of Aurora Square using LID and Green Building standards has the potential to significantly improve stormwater run-off to the Boeing Creek watershed and provide a model for a new era of commercial development in Shoreline. The planned new City Center/City Hall and future redevelopment of the Fircrest Campus are two other prime examples of LID and Green Building opportunities.

Complete Streets – This symbol represents a potential future network of complete streets. Complete streets are designed and operated to enable safe access for all users, including pedestrians, bikes, motorists and buses. Arterial and collector streets that link important community destinations should be high priority for street improvements such as sidewalks, landscaping, enhanced pedestrian crossings and bike lanes. Locations near schools are also an identified priority.

In areas identified as Complete Streets, the emphasis is on traditional non-motorized improvements and landscaping, but low impact development principles can be integrated where appropriate. Locations, such as N 155th Street, 5th Ave. NE, Meridian Ave. N, and N 185th Street, which currently have sidewalks and landscaping, the focus should be on enhancing pedestrian and bike safety and landscaping. Arterials with limited or no pedestrian and bicycle facilities (such as Dayton Ave. N and 25th Ave. NE) where improvements are planned were also selected. On arterials that currently have substandard sidewalks (such as Richmond Beach Road, N 145th Street, 15th Ave. NE and N 175th Street), additional improvements are needed. Other collector and local streets that provide key connections were also included.

Pedestrian and Bike Paths – This symbol represents a potential future network of pedestrian trails and paths. These paths would range from roughly surfaced forest footpaths to paved improvements suitable for a wider range of users. In areas with fewer limitations related to topography, user conflicts and resource protection issues, non-motorized improvements should also be designed for bikes. Mapped features include existing paths, where improvements such as designation and way findings are needed. Potential new paths are also shown that would help complement both complete streets and green streets to form a sustainable transportation network. Non-motorized paths are particularly important in those areas where direct vehicle access is not provided and the street grid is discontinuous. Examples include public access and way-finding on trails in the Innis Arden and Highlands neighborhoods. Better trail designation and signage on trails in parks in Shoreview and Hamlin Parks are needed. East-west connections and a trail between Hamlin Park and South Woods on the Fircrest Campus are other examples of potential new pedestrian and bike paths that would improve the overall sustainable transportation network.

Green Streets – This icon depicts potential high priority locations where a combined program of natural landscaping, surface drainage and non-motorized improvements would help link the human and natural environments and form the core of the green infrastructure system. We have provided some examples of where green streets might be appropriate. However the City should give further consideration to our draft siting criteria, other City goals and financial and locational feasibility in deciding which streets to identify as high priority locations for these improvements.

Our initial efforts have focused primarily on arterial collectors and neighborhood collectors (where there are lower speeds and arguably somewhat less emphasis on the automobile) as priority locations for green streets. The City's Transportation Master Plan recognizes that the concept of green streets can be adapted to fit a variety of community situations. We feel the use of the public right of way as a strategic tool for achieving environmental goals and improving community appearance, while continuing to meet our transportation objectives, should be a key sustainability strategy.

The Green Streets concept addresses several key Guiding Principles, including:

- Manage Growth in a Sustainable Way
- Address Impacts of Past Practices
- Proactively Manage and Protect Ecosystems
- Energy Solutions are Key to Reducing Our Carbon Footprint



















The *Draft Green Infrastructure Maps* shown in Figures 1-3 are intended to initiate a discussion of green infrastructure planning within the City and the larger community during Community Conversation #1. The concept of green infrastructure is a robust tool not only for parks and open space planning, but also for the broader aspects of land use planning and the development of our sustainability strategy. We recommended the continued use and refinement of this tool to help identify a range of potential actions that synergistically impact the physical environment, ecology and livability of the city.

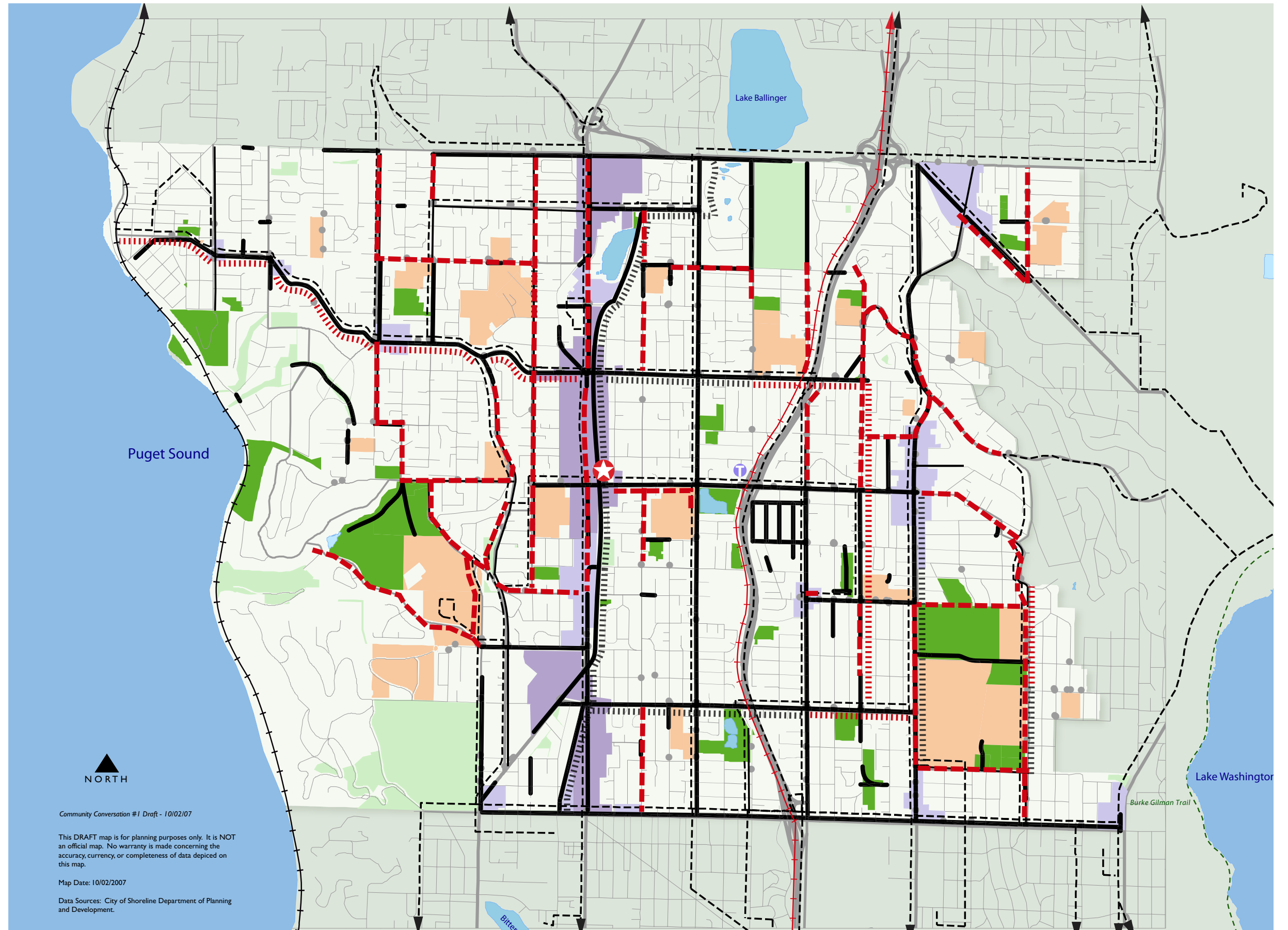
The Project team will use the *Draft Green Infrastructure Maps* during Community Conversation #1 and throughout public involvement efforts to get input from citizens on key human and natural links and hubs which need to be conserved, restored, created or otherwise actively managed. We will discuss examples of improvements planned by the City and other potential improvement ideas shown in Figure 3 to promote community discussion and feedback.

Green infrastructure should be a key element of the overall *Environmental Sustainability Strategy* – it will provide a framework for analysis and











discussion of potential actions which have a physical and/or spatial component. Following community input, the *Draft Sustainability Strategy* will include recommendations related to the existing and potential Green Infrastructure System. Strategies and potential physical improvement ideas that result from green infrastructure analysis can be evaluated and prioritized along with the larger menu of recommendations using the assessment and decision tool described earlier on page 15 of this memo. Recommendations included in the *Sustainability Strategy* adopted by the City Council, will be subject to further consideration and refinement in future plans, programs, projects and budgets.

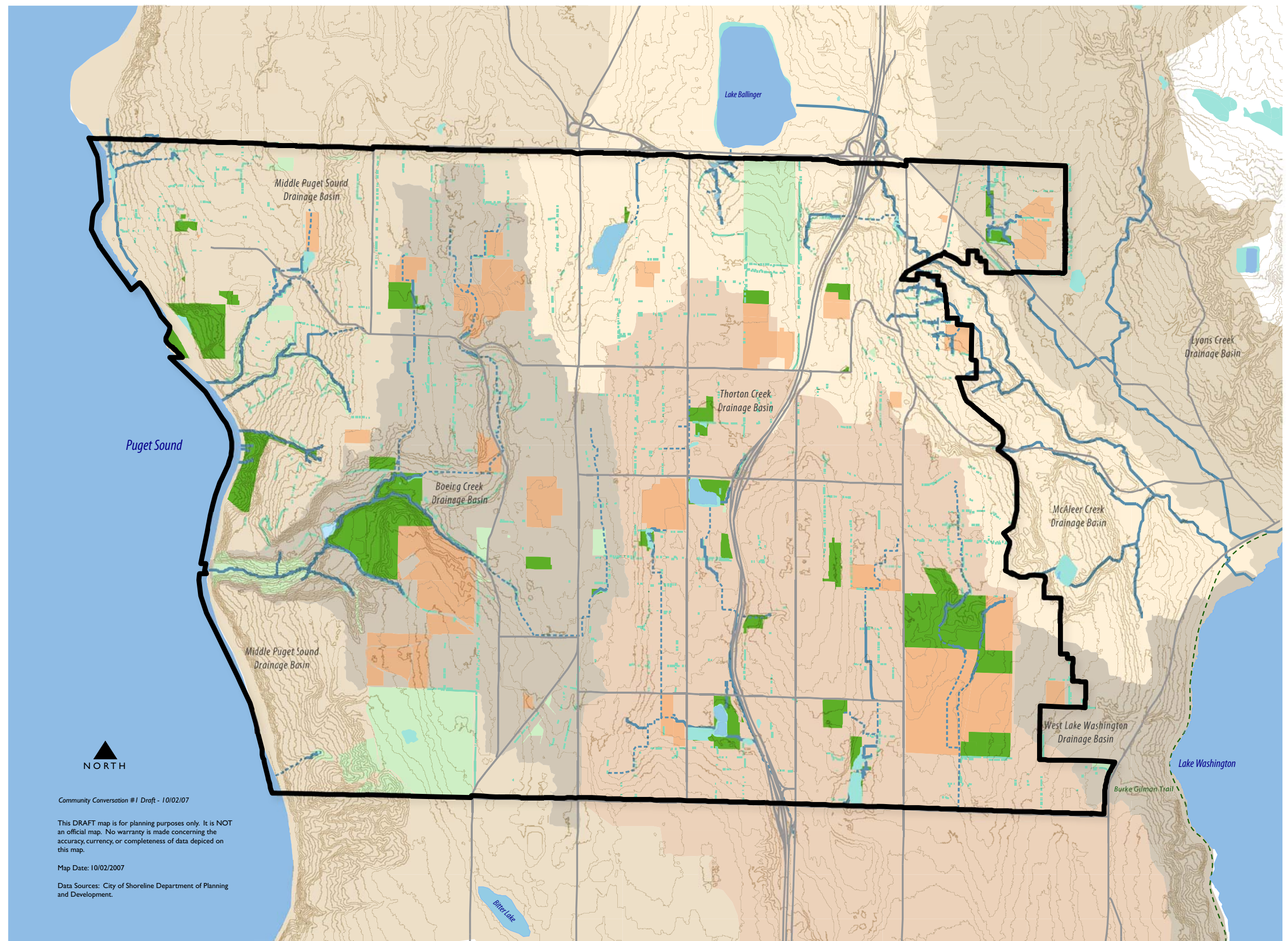
Legend

-  Civic Hub
-  Light Rail Station Proposal
-  City of Shoreline
-  Crosswalks
-  Sidewalks/Trails
-  Shoulders
-  Bike Routes
-  Bus routes
-  Sounder Commuter Rail
-  Planned Pedestrian Improvements (Comprehensive Plan 2005)
-  Planned Bicycle Project or Study (Comprehensive Plan 2005)
-  Sound Transit Light Rail Proposal
-  Water
-  Public & Private Institutions
-  Shoreline Parks
-  Private Open Space
-  High Intensity Land Use Hubs
-  Medium Intensity Land Use Hubs



Legend




-  City Boundary
-  20 Foot Contours
-  Open Watercourse
-  Piped Watercourse
-  Ditches
-  Water
-  Wetlands
-  Public & Private Institutions
-  Shoreline Parks
-  Private Open Space





Legend

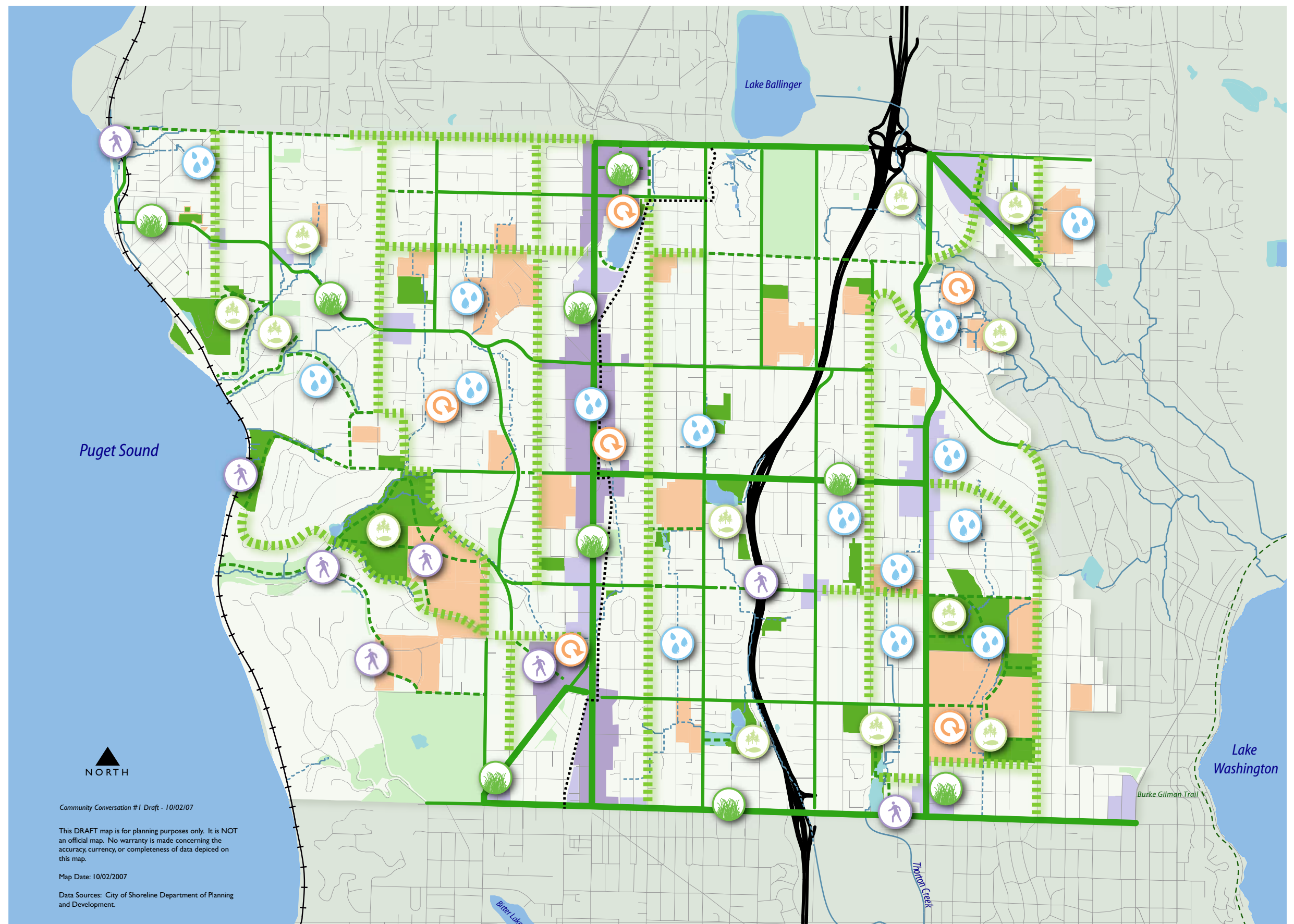
Opportunities

-  Natural Landscaping
-  Public Access
-  Natural Drainage
-  Habitat Enhancement
-  Low Impact Development & Green Building

-  Green Streets
-  Complete Streets
-  Pedestrian Paths

Current features

-  City Boundary
-  I-5
-  Street
-  Interurban Trail
-  Railroad
-  Open Watercourse
-  Piped Watercourse
-  Water
-  Wetlands
-  High Intensity Land Use Hub
-  Medium Intensity Land Use Hub
-  Public & Private Institutions
-  Shoreline Parks
-  Private Open Space



VI. Summary

This memorandum provides recommendations for the basic foundation of the City's Environmental Sustainability Strategy. A Mission Statement and Guiding Principals with High Level Goals, establish the policy direction and general priorities for this effort. The Guiding Principals with High Level Goals will also serve as the framework upon which we develop more specific objectives, indicators and targets in Task 1B.

Extensive review of the sustainability programs in other communities provides some insight into what the City could do, as well as lessons learned from the other efforts. Given the unique needs and resources of the City of Shoreline, no profile is a perfect match. To reiterate, the most common elements of existing sustainability plans include:

- Create or use a framework that provides structure for the program;
- Engage the community and build capacity for citizen involvement;
- Make the program autonomous within the City governance structure;
- Identify a champion to be a steward and public face of the program;
- Give the plan statutory authority;
- Make sustainability the overarching policy framework;
- Start with a measurable rallying point;
- Create a baseline;
- Keep indicators static – adjust targets;
- Base decisions in science;
- Focus on “executable tasks”;
- Find a sustainable funding source; and
- Start small and scale up.

In Section IV, we presented a set of draft Criteria for Assessment and Policymaking that are rooted in the Guiding Principals. These will help guide our review of existing programs and the development of specific recommendations. The Decision and Assessment Tool presented is also designed to be used by the City for sustainable decision making.

Finally, Section V of this memo described the concept of green infrastructure, how this concept relates strongly to sustainability and how this tool can serve as a robust framework for sustainability planning and for obtaining valuable input from the community to guide the physical and spatial aspects of the overall effort. This tool also allows us to see you how planned city improvements fit into the overall sustainability strategy. A select number of the green infrastructure opportunities identified through this preliminary analysis could be further evaluated and prioritized by the City. Criteria for evaluating potential green street locations and designs should be further refined and applied by the City as the program is developed in the coming months.

Key ideas and concepts presented in this memo will be refined and integrated into future project deliverables. The *Draft Environmental Sustainability Strategy* will integrate significant project findings and will be presented to the City Council for review and revision by City staff as necessary prior to adoption. All recommendations will be subject to further refinement during future planning, budgeting and implementation phases.

Appendix A. Sustainable City Program Profiles

Fort Collins Action Plan for Sustainability, Fort Collins, CO

Background

The City of Fort Collins Action Plan for Sustainability provides recommended policy, goals, and targets for advancing sustainability within the City of Fort Collins operations with a unified, cross-departmental approach. A staff team, with representation from each City service area, developed the Plan. The team used the City of Portland Sustainable Development Commission's *Resourceful Government Guidebook* for City of Portland and Multnomah County agencies to guide the development of the Action Plan.

Fort Collins has a long history of environmental planning, ranging from a 1992 Framework for Environmental Action to a comprehensive Air Quality Policy Plan, Natural Areas Policy Plan, Environmental Policy Plan, and more recently, a Greenhouse Gas Reduction Plan. However, coordination and standard metrics of performance were lacking. Overlapping practices were in place, but without coordinated effort toward measurement, management, or optimization. Thus, the motivation for this Action Plan was to elevate the City's sustainability performance by following a strategic and systematic path.

During the planning process for development of the Action Plan, the first step the Ft. Collins team undertook was to develop the following policy statement for City adoption:

The City of Fort Collins will serve as a community leader in sustainability by conducting daily operations through balanced stewardship of human, financial, and environmental resources for present and future generations.

The next step the City took was to assess existing sustainability practices and identify new opportunities in daily operations. Based on these documented successes and opportunities, the team then used worksheets from the *Resourceful Government Guidebook* to prioritize nine areas of key importance to the City, with no implied priority.

- Sustainable Purchasing: General
- Sustainable Purchasing: Auto Vehicles and Equipment
- Healthy Productive Employees: Employee Health
- Healthy Productive Employees: Employee Safety

- Green Buildings: New Construction, Major Retrofits, Operations & Maintenance
- Healthy Ecosystems: Water Use Management, Irrigation
- Sustainable Energy: Employee Commuting
- Pollution and Waste Reduction: Office Recycling and Waste Reduction
- Management Tools: Planning

The final step in the planning process was to develop goals and quantitative targets for each of the nine priorities. Each target contains four elements:

1. Performance measure: how results will be quantified;
2. Scope: what part of the operation will be measured;
3. Performance goal: what the desired outcome is; and
4. Completion date: when the outcome will be achieved.

The next phase was to develop the Action Plan based on the Priorities, Goals, and Targets. The project boundaries established for the process were to develop an Action Plan for Sustainability that includes all City departments and internal operations designed to apply the triple bottom line of sustainability.⁷ Policies and programs that affect stakeholders external to the City as an employer were not included in the project boundary. Also, it was outside of the scope of the Action Plan to cover regulatory compliance issues or to serve as a management system.

Leadership and Guidance

The City's Environmental Leadership Team (ELT), which directed early planning phases of the Action Plan, established a technical team to develop targets and implementation schemes. The technical team consisted of 18 members from each service area across the City (City Manager, Library and Recreation, Purchasing, Planning and Environmental Services, Transportation, Utilities, Communications, and Neighborhood Resources). The Brendle Group, Inc. and its subcontractor, Colorado State University Institute for the Built Environment, facilitated the team process, providing technical support in developing the Action Plan. In addition, the U.S. Environmental Protection Agency (EPA) Region 8 provided in-kind technical support to the process. The team met monthly from April through August.

Programs and Scope

The technical team developed the following objectives related to the nine priority topics:

⁷ In practical terms, triple bottom line (TBL) accounting means expanding the traditional reporting framework to take into account environmental and social performance in addition to financial performance. TBL is often referred to as "the three e's" – economics, environment, and social equity – or "three p's" – people, planet, and profit. The phrase was coined by John Elkington in 1994.

- A. General Purchasing. Establish a purchasing guideline.
- B. Auto Vehicles and Equipment. Purchase the highest fuel efficient and/or lowest emission vehicles for the requested transportation application.
- C. Employee Health. Increase overall mental and physical health of employees. Value mental and physical health within the City organization.
- D. Employee Safety. Incorporate a City-wide program fostering a culture of safety that is supported by administration and practiced throughout the organization.
- E. New Construction and Major Retrofit. Pursue the Leadership in Energy and Environmental Design for New Construction and Major Renovations (LEED-NC) Silver requirements.
- F. Operations and Maintenance. Report utility usage for all City buildings to promote resource efficiency.
- G. Water Use Management. Reduce water use at City-owned landscapes.
- H. Employee Commuting. Reduce employee single occupancy vehicle trips. Increase the number of work-related trips using ultra low emitting vehicles (ULEVs).
- I. Office Recycling and Waste Reduction. Institute reduction practices.
- J. Management Tools Planning. Make sure the Action Plan for Sustainability does not sit on a shelf. Institute the ongoing maintenance of the Action Plan for Sustainability. Reflect sustainability in the capital planning process.

Next, Goals and Related Targets were developed, including a completion schedule. Examples of goals and targets are as follows:

A. Sustainable Purchasing - General

- Goal: Establish a purchasing guideline.
- Target: Publish a purchasing guideline by December 2004.

B. Sustainable Purchasing - Auto Vehicles and Equipment

- Goal: Purchase highest fuel efficient and/or lowest emission vehicles for the requested transportation application.
- Target: Purchase three to five of the highest fuel efficient and/or lower emission light-duty City fleet vehicles per year according to the Environmental Project Agency's Green Vehicle Guide 1.

The first task in the Action Plan was creation of an inter-departmental implementation team responsible for reporting biannually on progress toward the goals and targets. Ultimately, individual departments are responsible for implementation of actions for achieving targets. However, the implementation team provides support and is responsible for measuring and reporting progress toward the targets. A detailed schedule for new goals and targets was developed in coordination with individual departments, followed by

implementation plans that include specific resource needs, responsible staff members, and timelines. The final step is to communicate Action Plan and Implementation Plan components to City employees.

Santa Monica Sustainable City Program, Santa Monica, CA

Background

In 1994 the Santa Monica City Council adopted the Santa Monica Sustainable City Program, created and proposed by the City's Task Force on the Environment. The Sustainable City Program provides an overarching set of guidelines for all City operations, and provides criteria for evaluating the long-term impacts of decisions.

Development of the Plan was guided by the Sustainable City Task Force – a large group of community stakeholders that included elected and appointed officials, City staff, and representatives of neighborhood organizations, schools, the business community and other community groups. The Task Force evaluated the long-term sustainability of Santa Monica using a framework comprised of three forms of community capital: natural capital – the environmental resources of the community; human and social capital – the connectedness among people in the community and the education, skills and health of the population; and financial and built capital – manufactured goods, buildings, infrastructure, information resources, credit and debt.

The Sustainable City Plan includes goals for the City government and all sectors of the community: to conserve and enhance local resources, safeguard human health and the environment, maintain a healthy and diverse economy, and improve the livability and quality of life for all community members in Santa Monica. Bi-annual progress reports are compiled by the Task Force on the Environment.

Leadership and Guidance

The City's Task Force on the Environment assumed the initial leadership role on behalf of the community for the Sustainable City Program. With the update and expansion of the Sustainable City Plan into new and more diverse goal areas, the Task Force on the Environment recommended the creation of a Sustainable City Task Force (SCTF) that includes broad representation from community stakeholders with expertise in all of the SCP goal areas. The Sustainable City Task Force was created in 2003 to provide leadership and guidance for implementation of the SCP.

At the City staff level, the Sustainable City Program is managed by three full time employees (FTE's): a Director, a Purchasing Specialist, and an Outreach Specialist. The Director is tasked with working with each City department to help meet targets. The entire staff provides technical assistance to departments in four specialty areas: Toxic substance use reduction, green building, energy efficiency, and stormwater management. An interdepartmental Sustainability Advisory Team (SAT) was created to coordinate existing City activities so that they are consistent with the

Sustainable City goals and to facilitate the future implementation of innovative programs and policies to achieve the goals. Members of this group serve as Sustainable City liaisons to their respective departments.⁸

The SCTF and the SAT are responsible for developing a comprehensive implementation plan for meeting Sustainable City goals and targets, and for coordinating implementation, both interdepartmentally and between the City and community stakeholder groups.

Programs and Scope

The Sustainable City Program was created using two well-known tools, The Natural Step (TNS) sustainability framework and the Ecological Footprint calculator. The City enlisted the help of Doug McKenzie-Mohr to guide a “community-based social marketing” initiative that rallied residents around the concept of The Natural Step. The City worked with Redefining Progress to examine its Ecological Footprint in 1999 and again in 2004 to show reductions in land-use area and development impacts.

The Plan is founded on nine Guiding Principles – created during a community visioning process – which provide the basis for policy and program decisions. Eight Goal Areas encompass the Guiding Principles:

- Resource Conservation
- Environmental and Public Health
- Transportation
- Economic Development
- Open Space and Land Use
- Housing
- Community Education and Participation
- Human Dignity

For each Goal Area specific Indicators have been developed to measure progress toward meeting the goals. Indicators are tools that help to determine the condition of a system, or the impact of a program, policy or action. Two types of indicators are tracked as part of the Sustainable City Plan. System level indicators measure the state, condition or pressures on a communitywide basis for each respective goal area. Program level indicators measure the performance or effectiveness of specific programs, policies or actions taken by the City government or other stakeholders in the community.

Specific Targets have been created for many of the indicators (see Figure 1A.4 1) – the targets are for the year 2010 and use data from 2000 as a

⁸ Santa Monica’s sister city, Culver City, is developing a Sustainable City Program based on the Santa Monica model. Staff requirements for the new Culver City program have included one lead and three support staff, borrowed from city departments. Total new hours are equivalent to one FTE.

baseline. For some indicators no specific numerical targets have been assigned. This was done where development of a numerical target was determined to be not feasible or where limits on data type and availability made it difficult to set a numerical target. In many cases a trend direction was substituted for a numerical target. Many of the goals and indicators measure more than one area of sustainability. A Goal/Indicator Matrix was developed to show linkages.

Figure 1A.D 1 Example of the City of Santa Monica's Indicators and Targets. Note that Indicators are specific and measurable. Targets have both numeric targets and time components.

<u>Indicators – System Level</u>	<u>Targets</u>
Solid waste generation <ul style="list-style-type: none"> ▪ Total citywide generation (also report per capita and by sector) ▪ Amount landfilled ▪ Amount diverted (recycled, composted, etc) from landfill 	Generation: Do not exceed year 2000 levels by 2010 Diversion: Increase amount diverted to 70% of total by 2010
Water use <ul style="list-style-type: none"> ▪ Total citywide use (also report per capita and by sector) ▪ Percent local vs. imported ▪ Potable vs. non-potable 	Reduce overall water use by 20% by 2010. Of the total water used, non-potable water use should be maximized Increase percentage of locally-obtained potable water to 70% of total by 2010
Energy use <ul style="list-style-type: none"> ▪ Total citywide use (also report per capita and by sector) 	(Target pending completion of Greenhouse Gas Emission Reduction Strategy in 2003)

The Sustainable City Program is financed through enterprise funds, which are used to account for revenues received for goods or services provided to the general public on a continuing basis and primarily financed through user charges. Because the City is its own water and solid waste utilities, it generates revenue from services such as wastewater conveyance and treatment, water provision, and waste management. Portions of revenue are dedicated toward the Sustainable City Program. Enterprise funds must be linked by common elements – for instance, sustainability strategies that address water use and treatment must be funded by fees from water use and treatment services.⁹

⁹ One-third of municipal sustainability programs nationwide are financed via enterprise funds. Fees can be tied to waste hauling and management, water-related services, and other City services, providing the area of service from which fees are derived is the same as the area governed by the sustainability program.

Whistler 2020 Sustainability Plan, Whistler, BC, Canada

Background

Whistler2020 is the Resort Municipality of Whistler (RMOW) plan for sustainability. The plan includes a set of guiding principles similar to those of The Natural Step (TNS), a sustainability framework that was the inspiration for the town's sustainability movement. Whistler2020 is the highest policy level in the municipality – no policy can supersede the Plan, and every government decision is vetted through the Plan.

RMOW decided to develop its sustainability plan in 1999, and a consortium of government entities, large businesses, and NGOs agreed in 2000 that the best framework for this process would be The Natural Step. This started a three-year visioning process called Whistler: It's Our Future. Whistler2020 was adopted in 2002, the first in North America to adopt a comprehensive sustainability plan at its highest level. This evolved into the 2020 document.

Whistler2020 was developed in four phases over three years of consultation and community collaboration before it was adopted in 2005. During Phase 1, the community identified "success factors". In Phase 2, five alternative futures were explored and assessed by the community. Phase 3 involved crafting a preferred future and developing the draft plan with the involvement of sixteen community task forces. In Phase 4, the preferred future was transformed into the Whistler2020 vision, and the sixteen strategies were completed with ongoing action-planning by the strategy task forces and on-the-ground implementation through the involvement and commitment of a broad spectrum of implementing organizations throughout the community.

Leadership and Guidance

The Whistler2020 plan was created by 30 Whistler2020 Partner organizations, and is managed by a three-person government team – a Community Engagement Manager, an Internal Project Manager, and a Sustainability Coordinator. Plan updates and performance targets are guided by 16 Task Forces comprised of more than 140 members from 75 official Implementing Organizations. Whistler2020 Partners have each signed Partnership Agreements that express commitment to work cooperatively toward achieving the stated Vision and Priorities of the Plan.

Ongoing action planning is driven by a wide group of interested community members – each holding expertise, experience and/or representative perspectives in specific strategy areas. The 16 Whistler2020 task forces meet on an annual basis to assess progress and prioritize recommended actions for moving forward. By tapping into the breadth and depth of knowledge represented on task forces, the community focuses its limited resources on identifying actions that may not otherwise be identified by individual organizations and that may better leverage synergies within the community.

Whistler2020 Implementing Organizations review task-force recommended actions, implement those that are feasible, and report progress to the community.

Programs and Scope

The Whistler2020 Plan has at its heart the principles of sustainability, but the plan is equally committed to performance monitoring and hard data (one of the precepts of The Natural Step framework).¹⁰ The Whistler2020 Monitoring Program consists of a monitoring and reporting system that tracks status and progress towards the Vision and strategy Descriptions of Success. Performance is reported at three levels:

- **Core Indicators** – Core indicators provide high level, ‘Whistler-at-a-Glance’ information for tracking progress relative to the Vision, Priorities and Sustainability Objectives.
- **Strategy Indicators** – Strategy indicators provide more detailed information for tracking progress relative to each of the sixteen strategy Descriptions of Success.
- **Context Indicators** – Context indicators provide additional information about the resort community, and are not directly linked to Whistler2020 performance.

Reporting is the process of communicating monitored information to a chosen audience. The Whistler2020 Team characterizes effective reporting by:

- Completeness – concerning the unbiased inclusion of performance in all areas
- Materiality – reflecting the needs of key stakeholder groups
- Timeliness – current enough to be used as an effective input for decision making
- Credibility – potentially verified or deemed reliable by the users
- Accessibility – communicated in a way that is accessible by key stakeholders

Once Whistler’s Vision and Strategy Descriptions of Success were established, the first step was to identify appropriate indicators. The Whistler2020 team conducted external research to identify best practice indicators used in other jurisdictions, as well as internal research to

¹⁰ The Natural Step sustainability principles present four science-based conditions for achieving a sustainable society: Reduce and eventually eliminate contributions to systematic increases in concentrations of substances from the Earth’s crust; reduce and eventually eliminate contributions to systematic increases in concentrations of substances produced by society; reduce and eventually eliminate the contributions to systematic physical degradation of nature; and, reduce conditions that undermine the ability of others to meet their basic human needs.

understand what was already being reported within Whistler. The results of this research were then proposed to various users and data providers, who reviewed potential options and added their own suggestions. This revised list of potential indicators was then assessed against specific criteria to assess tradeoffs and prioritize the options. Criteria included:

- Reliability
- Validity
- Resource Intensity / Information Availability
- Comparability

The second step in the monitoring process was to collect the baseline indicator data. In some cases, the data gathering systems already existed, and in others, they had to be developed. The third step was to analyze the data and prepare preliminary findings, which were reviewed by task forces and other interested stakeholders.

Whistler2020 is divided into 16 strategic areas of emphasis. Each strategic area has multiple indicators and targets that are closely monitored – a total of 103 indicators. Data are presented via the Whistler2020 Monitoring Report, which is communicated through the Whistler2020 website and through other channels.

Two Internet-based tools are used to efficiently document and report indicator data. The Explorer Tool is the tracking and monitoring tool, intended to make the process transparent and to ensure accountability. The Action Browser allows users to filter actions according to lead, year, or strategy. Both tools were developed by RMOW with a UK firm called Credit 360, which specializes in web-based data monitoring and dissemination.¹¹ The RMOW Council bases political actions on the sustainability actions documented online.

Data is derived from a variety of sources, both within Whistler (e.g. Resort Municipality of Whistler (RMOW) and Tourism Whistler) and external to Whistler (e.g. Statistics Canada, BC Hydro). In addition to existing data sources, the Whistler2020 Monitoring Program requires the development of new forms of data gathering in areas that were either not measured previously, or where the current data sources are not sufficiently timely or valid for use in decision-making. In 2005 and 2006, two additional data gathering tools were developed and executed: an annual Whistler community survey; and a Whistler affordability report. Whistler2020 Task Forces are reconvened every year to assess progress and to prioritize actions. Each Task Force reviews the results of past recommended actions, evaluates the most current indicator data, strategically

¹¹ <http://www.credit360.com/credit2/site/home.acds?context=1847001&instanceid=1847002>

assesses local and regional opportunities and then presents a recommended set of actions – each capable of moving our community one step closer to their Vision.

All task force recommended actions have an identified Lead implementation organization, and often one or more Assisting organizations. All organizations that have been identified as a potential implementing organization are then presented with a list of recommended actions, and asked to consider incorporating these actions into their next year's work plan. If the organizations decline the responsibility of implementation, a detailed public rationale must be provided so that transparency and accountability are maintained and so that the task forces can evaluate the responses and improve subsequent recommendations.

If the organizations accept the responsibility, they confer with the potential assisting organizations, craft an implementation plan, and execute the action in the recommended year. Additionally, they commit to providing two brief progress reports back to community through the Whistler2020 website (July and December).

In 2005 task forces cumulatively recommended 215 actions – 144 of which were accepted (67%); in 2006, 160 were recommended and 115 accepted (72%). Of the 144 accepted 2005 actions, 79.9% either achieved full outcome (39.6%), partial outcome (13.9%), or are currently in progress (26.4%). However, the system's strength can at times be a weakness – representatives acknowledge that “accepting an action is not the same as executing it.” While 15 actions from the 2005 list were moved to the 2006 implementation year, roughly 7% were not initiated at all.

The RMOW does not provide funding for actions – there is no “heavy hand”. It is understood that leads on action items are responsible for implementing action items. Technology is used to remove mid-level management – for instance, the Action Browser is used to assign actions to lead organizations.

City of Burlington Legacy Project, Burlington, VT

Background

The Legacy Project is a sustainability initiative for the City of Burlington – a community visioning process without centralized city management. Initiated in 1999, the goal of the Legacy Project is to engage Burlington citizens in a comprehensive process to develop a community vision and plan for the future of the city. Citizens from all neighborhoods and sectors were asked to imagine what they wanted Burlington to look like in the year 2030 and, through the visioning process, determine how this could be achieved. The process led to creation of a community vision:

- Maintaining Burlington as a regional population, government, cultural, and economic center with livable wage jobs, full employment, social supports, and housing that matches job growth and family income
- Improving the quality of life in neighborhoods
- Increasing participation in community decision-making
- Providing youth with high-quality education and social supports, and lifelong learning opportunities for all
- Preserving environmental health

The following principles were identified as the base of the community's vision:

- Economic security, local self-sufficiency and equity
- Empowerment and responsibility
- Social wellbeing
- Ecological integrity

Through a large-scale public process, these principles were further developed into the Legacy Project Action Plan, which included goals and objectives, but no means of measuring progress.

Leadership and Guidance

The planning process, Burlington's most extensive participation effort to date, was directed by a steering committee comprised of stakeholders from non-governmental (NGO) and business institutions along with youth and municipal representative, as well as leaders from low-income, social service, academic and environmental communities. The involvement of these stakeholders was critical to the success of the project.

The Institute for Sustainable Communities, an international NGO based in Vermont, provided guidance on defining sustainability and information on similar processes in cities around the world. During a period of a year-and-a-half, more than 1,000 residents contributed to the development of the vision. The multi-faceted participation process included a survey asking residents to

identify the city's strengths and weaknesses; a series of focus groups to discuss neighborhood and subject-specific issues; a youth participation component; informal discussions with community-based organizations; and a series of public hearings on the first draft of the plan.

Programs and Scope

The Legacy Project steering committee explicitly framed the program as a community vision owned by all City residents, rather than as a centrally managed program with performance targets. In 2001, principles and objectives in the Legacy Project Action Plan were integrated into the city's overall Municipal Development Plan. The City has developed a number of more specific plans, including a climate action plan, a 10% challenge plan to reduce emissions, an open space protection plan, and an urban forestry master plan.

Financing and staffing of Burlington's sustainability initiatives are managed by the individual municipal departments responsible for different issue areas and projects. Staff members included a Legacy Project Director and two community organizers. Startup funding for The Legacy Project was provided by a grant of \$98,000 from the United States Environmental Protection Agency. The Institute for Sustainable Communities, the main project partner, received funding from the Jane B. Cook 1992 Charitable Trust. Financing for project implementation by the Legacy Project was \$100,000. This budget is very small in comparison to the city's budget, which in FY 2002 was \$158 million.

The lack of a sustainable funding model has compromised the effectiveness of The Legacy Project in advancing sustainability initiatives. In contrast to the Fort Collins, Santa Monica, and Whistler sustainability programs, the Burlington program does not have specific indicators and metrics: a performance monitoring program, called the Burlington Legacy Project Community Indicators, managed by the University of Vermont Center for Rural Studies, was canceled due to insufficient funding.

The Legacy Project is thus a set of guiding principles intended to steer policy, but without substantial monitoring or measurement to indicate progress. However, many objectives have been integrated into the Municipal Development Plan (similar to a Comprehensive Plan), including:

Air Quality:

- Provide for safe bicycle and pedestrian access
- Promote and invest in nonpolluting transportation technologies
- Invest in ongoing air quality monitoring and reporting

Lake Champlain Water Quality

- Minimize use of pollutants

- Implement broad-based environmental education
- Invest in ongoing water quality monitoring and reporting

Energy and Resource Conservation

- Explore sustainable, renewable energy sources
- Implement energy conservation measures
- Provide incentives for reuse and recycling efforts

Appendix B. Sustainable City Programs in North America

Sustainability Programs Evaluated

1. The Livable Tucson Vision Program, Tucson, AZ
2. Whistler 2020 Comprehensive Sustainability Plan, Whistler, BC
3. The South Coast Community Indicators Project, Santa Barbara, CA
4. Santa Monica Sustainable City Plan, Santa Monica, CA
5. The Sustainability Program, Boulder, CO
6. Fort Collins Action Plan for Sustainability, Fort Collins, CO
7. Vision for a Greater New Haven, New Haven, CT
8. Jacksonville Indicators Project, Jacksonville, FL
9. IndyEcology, Indianapolis, IN
10. Sustainable Lansing, Lansing, MI
11. EcoVillage at Ithaca, Ithaca, NY
12. City of Cleveland's Sustainability Program, Cleveland, OH
13. City of Portland Sustainable Development Commission *Resourceful Government Guide*, Portland, OR
14. Sustainable Chattanooga, Chattanooga, TN
15. Sustainable Communities Initiative, Austin, TX
16. Grantsville General Plan for Sustainable Community, Grantsville, UT
17. City of Burlington Legacy Project, Burlington, VT
18. Sustainable City Indicators/Sustainable Community Roundtable, Olympia, WA
19. Sustainable Seattle's *Indicators of Sustainable Community*, Seattle, WA

Other North American Indicator and Measurement Projects

1. Bay Area Alliance for Sustainable Communities' *Bay Area Indicators: Measuring Progress toward Sustainability*, San Francisco, CA
2. City of Berkeley: *Sustainable Community Inventory*, Berkeley, CA
3. City of Pasadena Public Health Department's *Pasadena / Altadena Quality of Life 2003 Index*
4. Crossroads Resource Center's *Fifty-Year Vision and Indicators for a Sustainable Minneapolis*, Minneapolis, MN
5. Fraser Basin Council's 2004 State of the Fraser Basin Report Sustainability Snapshot 2
6. Governor's Sustainable Washington Advisory Panel's *Progress Report on the Action Plan for a Sustainable Washington*
7. Healthy Community Initiative, St. Joseph, IN (in *The Community Indicators Handbook*)
8. Indicators for a Sustainable San Mateo County: 2005 Report Card on our County's Quality of Life

9. Jacksonville Community Council, Inc.'s *Quality of Life 2004 Progress Report, Jackson*
10. Joint Venture's *Index of Silicon Valley*
11. Morrison Institute for Public Policy's *What Matters in Greater Phoenix* (1999) and *What Matters: The Maturing of Greater Phoenix* (2004), Phoenix, AZ
12. Multnomah County's *The Environmental Health of Multnomah County 2003*
13. Multnomah County Progress Board Benchmarks
14. Multnomah County Service Efforts & Accomplishments: Public Safety 2003
15. Nantucket Sustainable Development Corporation's *Sustainable Nantucket: A Compass for the Future*
16. Neighborhood Knowledge for Change's *West Oakland Environmental Indicators Project*
17. Northwest Environment Watch's *Cascadia Scorecard*
18. Oregon Progress Board's *Achieving the Oregon Shines Vision: The 2005 Benchmarks Performance Report*
19. Oregon Progress Board's *Benchmarks*
20. Oregon Progress Board's *State of the Environment Report 2000* (paper copy only)
21. Portland-Multnomah County Progress Board Benchmarks
22. Quality of Life in the Truckee Meadows, Washoe, Reno Counties, NV (in *The Community Indicators Handbook*)
23. Quality of Life Indicators in Toronto, Canada (in *The Community Indicators Handbook*)
24. Santa Barbara South Coast Community Indicators 2003
25. Southern Oregon Quality of Life Index (<http://www.sou.edu/sorsi/Qlife.htm>)
26. Sustainability Plan for the City of San Francisco (<http://www.sustainable-city.org>)
27. The New Jersey Sustainable State Institute's *Living with the Future in Mind: Goals and Indicators for New Jersey's Quality of Life 2004*
28. United Way Community Indicators, Greenville, SC (in *The Community Indicators Handbook*)
29. Yale Center for Environmental Law and Policy and the Center for International Earth Science Information Network's *2005 Environmental Sustainability Index: Benchmarking National Environmental Stewardship*

Appendix C. Draft Green Street Design Guidelines

“Green Streets”

The Community Design Element directs the City to develop a program to implement “Green Street” improvements that prioritizes connections to schools, parks, neighborhood centers and other key destinations. The public works department is charged with developing “Green Street” transportation standards to overlay existing street design standards. The “Green Street” standards will provide guidelines for an enhanced streetscape, including street trees, landscaping, lighting, pathways, crosswalks, bicycle facilities, decorative paving, signs, seasonal displays, and public art. The “Green Street” standards proposed in **Table 6-2** vary with the underlying street classification.

Recommendation: Adopt the recommended transportation “Green Street” standards in **Table 6-2** for arterials and neighborhood collectors. Conduct a planning study with the storm and surface water utility to identify an initial “Green Street” corridor.

Table 6-2. Design Guidelines for Transportation “Green Streets”

	Arterial “Green Street”	Neighborhood Collector “Green Street”
Vehicle Travel Lanes	2, 3 or 5	2
Vehicle Speed	Moderate	Slow
Turn/Median	Mix of medians and turn lanes that provide pedestrian refuge	None
On-Street Parking	Allowed	Usually
Landscaping	Street trees, landscaped medians and buffers between roadway and sidewalk	Street trees and buffers between roadway and sidewalk or mixed use path
Public Art	Included	Not included
Transit Amenities	High quality service supported with amenities at major stops and station areas	Buses/transit stops not generally allowed
Pedestrian Amenities	Sidewalk with buffering, special lighting and special crossing amenities tied to major transit stops	Sidewalk or mixed use path, with buffering, lighting and special crossing amenities
Bikeways	Striped or shared	Shared roadway or mixed use path
Drainage	Consider street edge alternatives that reduce storm water runoff from streets.	Consider street edge alternatives that reduce storm water runoff from streets.
<i>Note: Application of “Green Street” design elements and guidelines shall depend upon the unique characteristics of the design project, available right of way, and the character and intensity of planned land use.</i>		

Appendix D. Sustainability Strategy Logo and Branding ideas



Green and growing
Growing Green
Building on a legacy of education for a greener future
Shoreline Sustainability Strategy: Creating the Action Plan for a Better Tomorrow...or...Our
Vision for a Better Future...or...Building a Green Legacy

or

Growing Green: Building a Sustainable Legacy
Growing Green: An Action Plan for a Sustainable Legacy
Shoreline Sustainability Strategy: An Action Plan for Growing Green
Shoreline Sustainability Strategy: A Green Action Plan

Maybe we also have a tag line that is different for the community conversation #1 – maybe
its:

Community Conversation #1
Green Vision: Establishing the Framework for a Sustainable Shoreline

Or

VisionGreen: Creating the Framework for the Shoreline Sustainability Strategy





ATTACHMENT B:

Discipline Report 1.B:

"Sustainability Measurement and Tracking"



City of Shoreline Environmental Sustainability Strategy

Contract Deliverable 1.B.:

Sustainability Measurement and Tracking

December 7, 2007

Prepared by:
AHBL, Inc.
O'Brien & Company





Memorandum:

Sustainability Measurement and Tracking

Introduction

This memo builds on the sustainability program elements and profiles detailed in Memo 1.A by providing specific implementation recommendations for program measurement and tracking. Measurement and tracking of sustainability initiatives through indicators and assessments allows the City to effectively manage a wide range of sustainability actions, target specific objectives, identify community values and priorities, make informed decisions, gauge progress, and report on successes.

The memo is organized by the following major objectives:

- 1) Identify the City of Shoreline's specific sustainability objectives;
- 2) Review and analyze potential key benchmarking and assessment systems for possible use in the strategy; and
- 3) Identify and prioritize indicators and the development of performance targets.

We have identified potential specific objectives for the Environmental Sustainability Strategy based on a review of:

- On-going and recent activities that are included in the current sustainability program inventory prepared by City staff,
- Major regional or national initiatives that have recently been adopted through Council action, and
- Objectives which are included in the City's Comprehensive Plan or the Guiding Principles and High Level Goals identified in the previous Memo 1A, but are not currently fully implemented.

Based on this analysis, specific objectives for moving the sustainability strategy forward have been identified in four broad realms:

- Energy Conservation and Carbon Reduction,
- Waste Management and Resource Conservation,
- Sustainable Development and Green Infrastructure, and
- Ecosystem Conservation and Stewardship.

The specific objectives listed herein have been further refined and expanded based on feedback from City staff and community input from Community Conversation #1, which took place on October 11, 2007.

After the specific objectives of the Sustainability Strategy are finalized, benchmarking and assessment systems need to be selected and implemented to monitor performance. This memo contains a slate of recommended indicators that will need to be refined, amended and implemented by City staff.

As part of Task 1B, we have reviewed potential assessment systems for further consideration by the City, including the Resourceful Government Guidebook, PLACE³S, the Ecological Footprint, The Natural Step, Local Agenda 21, and carbon calculators. Detailed descriptions of these tools are included in Appendix A. A synopsis is included in this Memo for how these tools can be used in future Comprehensive and Master Planning, community engagement, and for guidance as the City implements and refines the Strategy. These tools can also assist in the development of a sustainability plan framework, planning green infrastructure, reducing energy consumption, calculating green house emissions, and comparing current versus sustainable practices.

We recommend a system of approximately 20-30 indicators to measure and monitor progress. Indicators must be closely tied to the specific objectives that are selected. Prioritizing and selection of program objectives, indicators and performance targets is driven by the potential **impact** or result of the initiative, where the City can exert the most **influence** towards achieving the identified objective, and **investment**, or where existing resources can be optimized, and multiple objectives can be achieved for the lowest relative cost.

Priority should be given to those indicators and measurements that best address the Guiding Principles and specific objectives, have the greatest City and community interest, are easy to implement, and lead to early program successes. This memo includes a list of key questions to ask when determining appropriate indicators. A list of preliminary draft indicators that are consistent with the City's Guiding Principles are provided in the body of the report for further review, refinement, and selection through an iterative, interactive and public process. These were chosen, refined and/or adapted from a larger list that was initially developed for City review (see Appendix C). Performance targets will be developed for the indicators that are ultimately selected. We have offered some potential targets to promote discussion of potential targets at the City of Shoreline and with stakeholders.

Why Measurement and Tracking?

Benchmarking and assessment programs allow municipalities to:

1. Obtain measurable results that can be used as internal management tools;
2. Engage the general public by tapping into values and attitudes and generate public investment in sustainability programs;
3. Enable a community to identify what it values and prioritize those values;
4. Hold individuals and specific groups accountable for achieving the results they want;
5. Build democracy and community through collaboration; and
6. Allow people to measure what is important and make decisions based on results.

Indicators are defined as standards of measurement (of performance) that illustrate the current condition or direction of change of environmental factors. Performance targets are thresholds established to measure progress within each indicator. Indicators should be selected that generate performance targets aligned with the City's objectives.

What are the City's Objectives?

The City's environmental sustainability objectives can be drawn from four sources:

- On-going activities promoting some act of environmental stewardship provide insights as to what the City cares about;
- Major regional and national initiatives the City has recently adopted include specific objectives;
- The City's Comprehensive Plan includes language promoting specific aspects of sustainability; and
- As part of this project, through the Community Conversations and City Team meetings, we will identify additional objectives.

Ongoing Activities

These current activities provide insights as to what the City has already committed to through program development and resource allocation. As part of this project, existing programs have been inventoried by City Staff in *Shoreline's Environmental Sustainability Inventory (Revised 8/29/07)*. The Inventory includes the following programs, projects, and regulations, organized by the Focus Areas of the Draft Guiding Principles:

Sustainability Program Inventory	
Status	Activity Description
Overarching Environmental Sustainability – not focus area specific	
2007 - Ongoing	Environmental Mini Grant Program

2003 - Ongoing	Earth Day Celebration – annual event
2007 - Ongoing	Neighborhood Environmental Stewardship Team
Sustainable Development and Green Infrastructure	
2007 - Development	Green Building and Low Impact Development Programs
2007 - Development	Green Streets Demonstration and Program
1995 - Ongoing	Solid & Hazardous Waste Management Program
2004 - Ongoing	Municipal Compost Facility
2007 - Development	Civic Center/City Hall - LEED Gold planned
Ongoing	City Building Operations Practices and Policies improvements
1998 - Ongoing	Business Access/Transit Lanes on Aurora
Energy Conservation and Carbon Reduction	
2006 - Development	Climate Protection Campaign
2006 - Ongoing	Promoting Alternatives to Driving
2005 - Ongoing	Green Fleet Vehicles Acquisition
Ecosystem Conservation and Stewardship	
2006 - Ongoing	Open Space Acquisition Bond
Ongoing	Habitat Restoration Projects - various
2001 - Ongoing	Water Resource Inventory Area 8 Salmon Habitat Conservation participation
2002 - Ongoing	Regional Roads Maintenance Endangered Species Act Forum participation
2005 - Ongoing	Critical Areas Ordinance Update and Implementation
2006 - 2008	Urban Forest Assessment – Hamlin Park, South Woods, Shoreview and Boeing Creek Parks
2005 - Ongoing	Ivy Out Volunteer Program
2003 - Ongoing	Clean & Green Car Wash Kits
2003 - Ongoing	Pesticide-Free Parks/No Spray in Richmond Beach
2001 - Ongoing	Adopt-a-Road and Adopt-a-Trail Programs
Waste Reduction and Resource Efficiency	
2006 - Ongoing	Sustainable Business Extension Service
1998 - Ongoing	Business Solid Waste Reduction, Recycling & Resource Conservation Program
Ongoing	Free Wood Chips at Hamlin Park
2002 - Ongoing	Household Battery Recycling
2007 - 2008	City of Shoreline Stormwater Standards Update
2007 - Development	Aurora Corridor Project Stormwater Solutions
1999 - Ongoing	Storm Drain Medallions & Stenciling

Major New Initiatives

Three major regional and national initiatives have been adopted: The Cascade Agenda¹, Cascade Land Conservancy Green Cities Program², and the US Conference of Mayors Climate Protection Agreement.³ These three initiatives address a wide range of sustainability objectives. We have grouped the range of objectives into four main focus areas. These include: energy and carbon, waste management and resource conservation, sustainable development and green infrastructure, and ecosystem conservation and stewardship. These objectives apply both internally at the City of Shoreline and within the larger community.

Energy Conservation and Carbon Reduction objectives aim to reduce green house emissions, fossil fuel use, energy consumption and vehicle use, as well as increase in green power use and public awareness about global warming.

Waste Management and Resource Conservation objectives are focused on decreasing the amount of waste generated, adoption of a cradle to cradle perspective, increasing the recycling rate, reducing water consumption and increasing water reuse.

Sustainable Development and Green Infrastructure objectives provide a framework for compact growth, transit and walking supportive development, low impact development, green building, green streets, and recreation improvements.

Ecosystem Conservation and Stewardship objectives aim to protect habitat, water quality, urban forest, environmentally sensitive areas and open space and provide for long term conservation and enhancement of these areas.

City's Comprehensive Plan

A review of the City's Comprehensive Plan provides additional insight into the City's environmental stewardship priorities. A review and analysis of Comprehensive Plan policies entitled *Shoreline Sustainability Strategy: Existing Guidance and Potential Framework Goals and Objectives for Discussion* was provided to City staff and will be revised and included in the Sustainability Strategy at the City's direction. This document includes a discussion of the current policy direction provided in the Comprehensive Plan as well as a preliminary analysis of where more policy guidance may be

¹ <http://www.cascadeagenda.com/>, City of Shoreline has endorsed the principles of the Cascade Agenda and declared the City's intent to participate in the "Cascade Agenda City" and "Green City Partnership" by adoption of Resolution 260 on June 11, 2007

² <http://www.cascadeland.org/stewardship/green-cities>

³ <http://www.usmayors.org/climateprotection/agreement.htm>. City of Shoreline authorized support of the US Conference of Mayors Climate Protection Agreement by adoption of Resolution 242 on April 24, 2006.

needed or useful. Based on this analysis, it is clear that the Comprehensive Plan currently addresses the following objectives at some level:

- Protect and enhance environmentally sensitive areas,
- Protect and enhance habitat and vegetation,
- Preserve and enhance open space,
- Promote native and drought tolerant landscaping,
- Encourage ecologically sensitive site design,
- Encourage a mix of land uses near transit,
- Promote and improve non-motorized transportation and transit,
- Encourage reduced energy and material use,
- Promote waste reduction and recycling,
- Protect and improve water quality,
- Develop and implement green streets programs, and
- Promote public awareness and stewardship.

Based on review of the Comprehensive Plan and comparison with the Sustainability Program Inventory, it is evident that there are programs that correspond to some aspect of the majority of the policies identified in the Comprehensive Plan. However, there are potential gaps, or areas where additional programs or program modifications may be needed to implement Comprehensive Plan policies. These include:

- Internal purchasing policies that do more to support sustainability
- Clear staff guidance, training and procedures for green practices
- A more complete and specific set of waste reduction and recycling objectives and programs for the City, but also for the Community (e.g. target construction and demolition waste),
- Specific objectives and an overall framework for public awareness and stewardship programs,
- Specific programs to promote or require ecologically sensitive site design, building and landscaping in private development (e.g. Low Impact Development and LEED),
- Specific programs to promote or require ecologically sensitive site design and landscaping in City projects, and
- A policy framework and strategy for implementation of the Green streets (program in its infancy and siting criteria and other guidance needed), and
- Additional areas that will be detailed in specific recommendations in the Environmental Sustainability Strategy.

Potential Gaps to Consider

While the City of Shoreline Comprehensive Plan provides general guidance for many components of sustainability, there are important aspects of sustainability that are not currently addressed in Shoreline's Comprehensive

Plan. City staff will update the Comprehensive Plan policies where necessary to reflect the policy direction and key recommendations of the Environmental Sustainability Strategy. The City should consider whether the Comprehensive Plan should include policies and more specific objectives for:

- Identifying and leveraging partners in achieving sustainability
- Interventions that improve public health
 - encouraging active lifestyles
 - eliminating use of toxic substances
 - encouraging use of non-hazardous materials
- Local and/or regional food production, sales and consumption
 - farmer's markets
 - p-patch program
 - public awareness campaigns
 - farm to school programs
- Water conservation
- Air quality

Identifying Quick Wins

Initial efforts in the Sustainability Strategy should be focused strategically on areas of greatest impact and “low-hanging fruit” – opportunities that will build on existing programs and lead to early successes. Three general areas of consideration include:

Impact

Where does the City have the greatest opportunity to benefit the economy, the environment and the community? It might be those areas that account for most resource use and costs. It might also be areas that have very acute impacts. For example, toxic substances can have tremendous impact even when used in small quantities.

Influence

The greatest opportunity to make a difference may be in those areas where the City can influence or support others in the community. Also, some otherwise lower impact projects have high potential for generating attention and employee interest.

Investment

The sustainability program should, above all, be sustainable – projects should be selected that contribute to the City financially, in terms of improved worker morale, safety or customer relations. The program should optimize existing resources and programs, and should build on previous work. As part of the Environmental Sustainability Strategy we will examine resources necessary to implement the recommendations, as well as administer the overall program of performance measures.

Going Forward – Draft Specific Objectives for Consideration

An important aspect of developing a strategy is to inventory and analyze existing policy direction and current programs and compare them with potential objectives that are built on the policy framework we have developed. Using this process, preliminary potential specific objectives for the Environmental Sustainability Strategy have been identified in four focus areas: **Energy and Carbon, Waste Management and Resource Conservation, Sustainable Development and Green Infrastructure, and Ecosystem Conservation and Stewardship**. Some of these potential objectives focus on internal action, some external, and some on both internal and external. Each objective also ties directly to several of the draft Guiding Principles and High Level Goals identified in Memo 1A.

Focus Area	Potential Objective	Emphasis
Energy and Carbon	Meet or beat the greenhouse gas emission reduction target suggested for the United States in the Kyoto Protocol	Internal and External
	Increase public awareness levels regarding the importance of reducing global warming within the public and private sectors of Shoreline Community.	External
	Establish and meet or beat greenhouse gas emission, conservation and alternative energy targets for the larger Shoreline community	External
	Reduce dependence on fossil fuels for City Operations	Internal
	Increase the use of green power (through green tags or on-site)	Internal and External
	Reduce energy consumption for City operations	Internal
	Reduce use of single occupancy vehicles	External and Internal
	Increase transit use and mode split	External and Internal
	Implement City procurement policies and standards to reduce energy and resource consumption (overlap with	Internal

Focus Area	Potential Objective	Emphasis
Waste Management and Resource Conservation	Waste Management below)	
	Reduce sources of waste through internal purchasing guidelines, training, reuse strategies and a comprehensive cradle to cradle approach.	Internal
	Target waste source reduction (e.g. through promotion of a cradle to cradle approach).	External
	Increase recycling in City operations	Internal
	Increase use of recycled content supplies	Internal
	Increase recycling participation in the community	External
	Reduce total waste generated and land-filled	Internal and External
	Reduce the volume of hazardous waste generated	Internal and External)
	Target reduction of organic waste land-filled	Internal and External
	Target reduction in construction waste land-filled	Internal and External
	Reduce water use in indoor and outdoor operations	Internal
	Reduce water use by businesses	External
	Reduce per capita water use	External
	Strengthen partnerships with water related utility providers	External and Internal
Sustainable Development and Green Infrastructure	Focus new growth in environmentally suitable areas served by adequate infrastructure, including transit	External
	Increase community's non-motorized transportation infrastructure to improve walkability	External
	Define and implement a green streets (complete streets) program	Internal
	Improve public access natural areas and features (e.g. the	Internal and External

Focus Area	Potential Objective	Emphasis
	Puget Sound shoreline) to enhance livability and provide more recreation opportunities locally	
	Implement and promote low impact development standards, including incentives and removal of current barriers	Internal and External
	Implement and promote a green building program, including incentives and removal of current barriers	Internal and External
	Reduce stormwater impacts from new development and improve overall basin water quality and quantity (e.g. reduce peak run-off rates and during, increase infiltration, etc.)	External and some Internal
	Provide additional developed recreation facilities (e.g. athletic fields) to help meet demand and maintain and enhance community livability	Internal with External input and potential partnerships
Ecosystem Conservation and Stewardship	Improve habitat quality of existing forested areas in parks	Internal and External
	Increase canopy coverage and habitat city-wide	External and some Internal
	Protect existing streams, wetlands and related riparian habitat	External and Internal
	Enhance and restore streams, wetland and related riparian habitat	External and some Internal
	Preserve and enhance existing natural open space	Primarily External Efforts but Internal Support Needed
	Increase amount of and access to open space	Internal Commitment and External Support and Input Needed
	Improve surface water quality	External and Internal Monitoring
	Increase volunteer and partner efforts in habitat improvement	External and some Internal needed to

Focus Area	Potential Objective	Emphasis
	projects	organize and support

This list of preliminary objectives has been further refined and modified. Revised objectives are included in the indicators table on page 16. Additional analysis will be done to assess potential gaps and overlaps and to make sure that a recommendation, target and indicator is provided for all key objectives. The list of objectives will be reviewed and amended in an iterative process as targets and indicators are refined and additional input is obtained from the community and the City Council. A revised list of objectives will be identified in the Draft Environmental Sustainability Strategy.

Benchmarking and Assessment Systems

Once objectives are identified, they can only be evaluated by determining baselines – current conditions – and measuring the effects of sustainability strategies in the future. Benchmarking and assessment systems can be used to monitor performance. There are a number of tools that may be used to develop Shoreline’s unique benchmarking and assessment system.

For Task 1B, we have reviewed the *Resourceful Government Guidebook*, PLACE³S, the Ecological Footprint, The Natural Step, Local Agenda 21, and carbon calculators. Descriptions of the tools are included in Appendix A. A quick synopsis of the results of our analysis:

- The *Resourceful Government Guidebook* is a framework for development of a sustainability plan. The *Resourceful Government Guidebook* has proven effective in Portland and Fort Collins. Some of the worksheets from the Guidebook may be useful in prioritizing indicators and determining performance targets.
- PLACE³S is a software tool for evaluating planning alternatives. There is a free version of the PLACE³S software and it has been used with great success in regional and national projects. It could be useful for Shoreline, in particular as it addresses Guiding Principles relating to Green Infrastructure and Energy.
- Carbon calculators are quite useful for implementing climate change initiatives, both in terms of measurement and education. Within the PLACE³S system, a carbon calculator can be used to measure Green House emissions and serve as a rallying point for community engagement.

- Ecological Footprint Accounting is a widely recognized tool for calculating current versus sustainable resource use (energy, water, materials) for countries, regions, municipalities, businesses, and individuals. It can be a valuable tool, but it is proprietary and available only through contracting with Redefining Progress consultants based in California (and therefore a potentially significant expense). However, project team members have utilized the concept of ecological foot-printing to create graphic representations showing current vs. projected improved conditions of consumption. This approach may be useful in the future as an educational tool.
- The Natural Step (TNS) framework is the most holistic approach to sustainable development for municipalities and organizations, but is at a very high level. It takes a great deal of work to translate TNS to concrete actions an organization might take. However, it has been used with success in Whistler and elsewhere. Case studies indicate at least three years of lead time before indicator programs are implemented through the TNS framework. TNS does not appear to suit Shoreline's desire for a simple, timely process.
- Local Agenda 21 is the United Nations sustainability framework for local governments. Its precepts are global in scope. Unfortunately it has little guidance for local programs.
- The International Council of Governmental Initiatives (ICLEI) has developed software that the City will use to inventory green house gas emissions, analyze potential improvements and monitor progress towards specific emission reduction targets. City staff has received an initial orientation to the software and expect to receive additional training in its use in late 2007 or early 2008 to define the inventory data for collection.

In summary, the Environmental Sustainability Strategy will include recommendations for how PLACE³S and other visualization and analysis tools can be integrated into future subarea, transportation and comprehensive planning efforts. We recommend use of a carbon calculator as a tool for community engagement and measuring progress towards reduction of green house gases. The City is currently gaining training using ICLEI and additional information about this tool will be included in the Environmental Sustainability Strategy. Finally Ecological Footprint Accounting will also be discussed further in the Environmental Sustainability Strategy and could be used as an education tool in the future. We recommend a system of indicators, as well as the City's use of ICLEI, as the primary focus of the benchmarking and assessment system.

Measurements of Progress

Prioritizing Indicators

There are more potential indicators than can be feasibly adopted at the outset. Indicators should be closely tied to the Guiding Principles and High Level Goals discussed in Memo 1A. Indicators must be also closely tied to specific objectives, as discussed on page 7. In addition, specific objectives are closely related to performance targets, which are used to gauge progress. More internal City discussion of performance targets is needed to finalize the draft targets presented in this Memo.

Indicators should measure the City's progress towards specific objectives and targets. In addition, recommendations (developed in Task 2) should be closely related to specific objectives for maximum strategic program integration and efficiency. Thus, there should be a clear relationship between:

Guiding Principles – Establish the basic direction and focus of the strategy

Specific Objectives – Identify clear goals

Targets – Refine goals into more specific statements

Recommendations – To help us reach our goals

Indicators – to measure progress towards our goals

Development of appropriate indicators will thus be an iterative process – as specific objectives, targets and recommendations are further refined, indicators will be adjusted accordingly.

Key Questions in Determining Appropriate Indicators

In addition to be aligned with the overall strategy, there are practical considerations for indicators as well. The following are some questions that should be considered when developing a list of potential indicators:

1. Is it informative? Does it tell us what we need to know?
2. How easy is it to analyze and track?
3. Does it rely on existing or readily available data?
4. Does it require new resources for measurement?
5. Is there a better option? Is it redundant?
6. How important/useful is the information?
7. How can the city influence this indicator and in what kind of timeframe?
8. Is it understandable to the public/city?
9. Does the public want to know? Is the indicator interesting/compelling?

10. Will it be suitable for long term measurement of progress?

Another method of sorting through objectives and indicators that may be useful is to use the applicable worksheets from the City of Portland's *Resourceful Government Guide*. Sample worksheets are provided in Appendix B. However, following discussion with the City it has been determined that the best path was to use the list of questions above rather than a formal assessment of indicators.

Performance Targets

Once general priorities are determined through development of a policy framework, the next step is to clarify specific objectives and performance targets, or metrics. Targets provide a specific description of the results you plan to achieve – it puts a number on your objective, making it measurable. A complete objective details how results will be quantified (performance measure), what part of the operation will be measured (scope), what the desired outcome is (performance goal) and when it will be achieved (completion date). In benchmarking lingo, it is known as a “performance target”.

Note that in the sample below, energy use is measured on a per square foot basis. In other cases, results might be measured on a per-acre, per-employee, or per-work-output basis. These types of measures facilitate comparison. They also ensure that changes in levels of activity or output aren't mistaken for increases or decreases in efficiency.

Sample objective statement:

Decrease energy use

Sample measurable objective or performance target:

Decrease energy use per square foot in City Hall by 15% by 2004.
(measure) (scope) (goal) (deadline)

Performance targets will be developed for the specific objectives and indicators that are ultimately selected by the City. We have recommended some potential targets for the City to consider in this Memo, starting on page 13. Both indicators and the related performance targets will be crafted through an iterative, interactive and public process. Public input on potential specific objectives, targets and indicators obtained during Community Conversation #2 will be reflected in the revised performance measurements presented in the Environmental Sustainability Strategy.

City of Shoreline's Indicators

Appendix C contains a list of the range of draft indicators that were initially considered by the Consultant and the City. Based on City feedback on that list, we have developed a preliminary set of specific objectives, targets and indicators.

The recommended slate of indicators and related objectives and targets below is much smaller than the range of indicators considered in Appendix C. Our recommendation to the City is to narrow the list down to a workable number of internal and external indicators for reporting and decision making purposes. We recommend actively monitoring no more than 20 to 30 indicators

With both internal and external indicators, it is important to address the guiding principles meaningfully. With internal indicators, it is vital to identify indicators that provide a long life and afford actions that can provide results within natural planning cycles. With external indicators, it is vital to capture the community's imagination and leverage and document community response.

The following is our list of preliminary objectives, targets and indicators for further consideration by the City and public input during Community Conversation #2. The specific targets and definitions of the indicators are still in DRAFT form and will be refined before the Draft Sustainability Strategy is completed.

Energy Conservation and Carbon Reduction		
Internal/Operations:		
1)	Objective:	Reduce energy consumption in City facilities.
	Target:	Reduce energy consumption in City facilities from baseline by 5% per year and 20% by 2012.
	Indicator:	Percentage decrease in City's monthly electric and gas usage (measured in consumption unit/sf) -- obtainable from SCL and PSE.
	Discussion:	2012 is both consistent with the US Mayors Climate Protection Agreement language and aligned with the City of Shoreline update to its Comprehensive Plan.
2)	Objective:	Increase reliance on Green Power in City facilities, in order to reduce carbon emissions from facilities, consistent with US Mayors Climate Protection Agreement and Kyoto Protocol target of 7% reduction from 1990 levels by 2012.
	Target:	Increase Green Power consumption as a proportion of total electricity consumption in City facilities by 10% per year, and 50% by 2012.

Indicator:	Proportion of City Consumption supplied by alternative energy sources through Seattle City Light "Green Up" Program.
Discussion:	Could also offset carbon emissions from natural gas and other sources through various initiatives.
3) Objective:	Reduce carbon emissions from fleet vehicles and equipment, consistent with US Mayors Climate Protection Agreement and Kyoto Protocol target of 7% reduction from 1990 levels by 2012.
Target:	Reduce carbon emissions from city fleet vehicles and equipment by increasing average miles/gallon of fleet 5% per year and 25% by 2012.
Indicator:	Average fleet miles per gallon
4) Objective:	Increase use of alternative fuel vehicles in City fleet.
Target:	Reduce carbon emissions from city fleet vehicles and equipment by replacing 2% of petroleum-based-fuel vehicles per year with hybrid or alternative fuel vehicles.
Indicator:	Percentage of fleet that is hybrid or alternative fuel
Discussion:	This target is consistent with the existing vehicle purchase and replacement policy.
External/Public:	
5) Objective:	Reduce energy consumption
Target:	Reduce per capita/per household energy consumption by 10% in the first year and an additional 3% per year through 2012
Indicator:	Percentage decrease in consumption units of electric and gas annually (measured in % change per capita)
Discussion:	Further discussion with PSE and SCL needed, but appears feasible. Could also potentially get at this through statistically valid survey.
Waste Management and Resource Conservation	
Internal/Operations	
6) Objective:	Reduce solid waste land filled as a result of City operations
Target:	Downward (positive) trend. Specific target TBD. E.g. Reduce by 10% per year total volume directed to landfills from City operations
Indicator:	Volume of total waste generated (as compared to previous 4 years)
Discussion:	Internal discussion necessary to establish target, but this appears to be plausible at least in the short to medium term.
7) Objective:	Increase recycling in City operations
Target:	Upward trend. Specific target TBD. E.g. Increase by 10% the percentage of materials sorted and recycled from City operations waste stream.

	Indicator:	Percentage of total waste recycled (as compared to previous 4 years)
	Discussion:	Internal discussion necessary to establish target, but this appears to be plausible at least in the short to medium term.
8)	Objective:	Increase purchasing of environmentally preferred products for City operations.
	Target:	Adopt a comprehensive Environmental Purchasing Policy (EPP) with specific targets in four key areas: Reduce consumption, reduce toxic materials, increase use of recycled-content materials, and increase use of recyclable materials.
	Indicator:	Percentage of purchases that meet top-tier EPP requirements.
	Discussion:	Shoreline can adapt policies already in place in Seattle, King County, and Washington State.
9)	Objective:	Reduce potable water use in City outdoor operations
	Target:	Downward (positive) trend. Specific target TBD. E.g. Reduce total potable water use for irrigation by 100% by 2012.
	Indicator:	Consumption units per year for outdoor operations based on utility billing.
	Discussion:	Data based on water bill. Potential strategies include stormwater storage and reuse, and Citywide moisture sensors, centrally controlled. Need to investigate how and if consumption units for irrigation are or can be separated.
10)	Objective:	Reduce potable water use in City indoor operations
	Target:	Downward (positive) trend. Specific target TBD. E.g. Reduce water use in City office facilities by 50% by 2012.
	Indicator:	Consumption units per year for indoor operations based on utility billing.
	Discussion:	Baseline will be established to include new City Hall/Civic Center facility. Need to investigate how and if consumption units for indoor operation are or can be separated. Probably want to calibrate this by units/per square foot of space or per employee.
External/Public		
11)	Objective:	Increase recycling rates in the community
	Target:	Upward trend. Specific target TBD. E.g. Divert an additional 10% per year of total volume from landfills.
	Indicator:	Percentage of total solid waste recycled by the Community (via CleanScapes)
	Discussion:	City to determine if this can be measured or monitored through existing waste contract.
12)	Objective:	Reduce residential potable water consumption

	Target:	Downward (positive) trend. Specific target TBD. E.g. Reduce water use in Shoreline households by 50% by 2012.
	Indicator:	Consumption units per year per residential customer
	Discussion:	Data would be gathered from water district billing data. Potential strategies include information outreach, changes to plumbing code interpretation, subsidization for the installation of low-flow and waterless fixtures, and grey water re-use for toilet flushing and irrigation. City will need to coordinate data collection with Shoreline Water District. Could broaden measure to include commercial customers, but size of business customers is more diverse. Could do measures of both units/per employee and units/per resident.
13)	Objective:	Promote sustainability among Shoreline businesses
	Target:	Upward trend. Specific target TBD. E.g. Increase by 10% each year the number of participating green businesses for the next five years.
	Indicator:	Number of participating (or certified) green businesses (per year as compared to previous 4 years)
	Discussion:	Requires establishment of green business program. Sustainable Business Extension program (contracted to ECOSS by the City) does not currently have a CERTIFICATION component. Could track number of businesses that participate in program based on criteria that they offer an environmentally preferable product or service alternative (similar to Chinook book criteria) and implement recommended changes to ECOSS.
Sustainable Development and Green Infrastructure		
Transportation: Transit		
14)	Objective:	Increase use of modes of transportation other than single occupant vehicles
	Target:	Upward trend (relative to increasing population), specific number TBD based on review of data
	Indicator:	Public transit rider-ship or number of transit boardings per year in Shoreline (as compared to previous 4 years)
	Discussion:	Obtain data from 3 transit agencies, could establish a specific target after baseline data collection. This indicator could also be combined with change in transit rider-ship compared with employment growth and/or park and ride usage (e.g. King County Benchmarks Program) when establishing a trend. Note: The City already conducts a statistically valid survey for "Strategic Objectives and we could get more directly at mode split by asking about it in the survey. Please see "potential future indicator" for additional suggestions.
15)	Objective:	Increase number of new households (density) near transit

Target:	Upward trend, specific number could be established through housing strategy or in future comprehensive plan update
Indicator:	Percentage of new residential units within 1/4 mile of transit stop with 30 minute minimum headway
Discussion:	Requires integrating permit data with GIS analysis, could establish a specific target after baseline data collection and policy discussion.
Transportation: Non-motorized Facilities	
16) Objective:	Increase pedestrian facility network length on major streets to make walking to destinations easier and safer
Target:	Upward trend; specific target TBD
Indicator:	Percentage of the total major street length (principal arterials, minor and neighborhood collector) citywide that has separated pedestrian facilities (sidewalk or paved off street trail) on at least one side of the street
Discussion:	Target TBD by City based on analysis of GIS data, CIP and internal discussion. Future Transportation Plan update is an opportunity to set the target. May also want to consider establishing a target and indicator for trail improvements as well. Additional investigation of sidewalk connectivity measurements may also be needed - see Pedestrian LOS indicator.
17) Objective:	Increase number of bicycle facilities throughout the city to encourage this mode and improve safety
Target:	Upward trending number, specific target TBD
Indicator:	Total miles of designated bicycle routes meeting minimum standard
Discussion:	Bike lanes and interurban trail will be measured using GIS. City would need to define a minimum standard for other bike improvements that constitute a "bike route", map these and track year to year or change over 5 years.
Smart Growth	
18) Objective:	Concentrate new growth in proximity of services and transit
Target:	Upward trending number, specific numeric goal TBD
Indicator:	Number of new residential units and total units (or average density) within a designated commercial center (and perhaps a 1/8 mile or other distance from boundary)
Discussion:	Would need to define boundaries of designated commercial centers, 1/8 mile may be appropriate to the size of the centers themselves
19) Objective:	Improve pedestrian/bicyclist access to open space and parks
Target:	Upward trending number, specific numeric goal TBD

Indicator:	Percentage of households within a 1/4 mile of a neighborhood park or 1/2 mile of a community/regional park
Discussion:	Similar to measure currently identified in Parks Plan. An alternative measure could also try to get at accessibility through the presence of sidewalks/bicycle facilities on major streets within 1/4 and 1/2 mile of park boundary.
Green Building	
20) Objective:	Promote efficient energy and material use in buildings
Target:	Upward trending number, Potential goal might be 3 projects in 2008
Indicator:	Number of certified LEED and 3+ star BuiltGreen projects within the City (by public and private).
Discussion:	Seems like an easy measure, but current permit system does not appear to track this.
Potential Future Indicator(s)	
Objective:	Reduce the number of single occupant vehicle commuters (SOV)
Target:	TBD by City after collection and analysis of baseline data
Indicator:	Percent of commute trips taken by a mode other than SOV
Discussion:	More info needed to develop and apply this, but this is a more encompassing indicator than #1. The City collects Commute Trip Reduction (CTR) data from the City's largest employers and this data could be reported, however it would over estimate the number of workers who take alternative modes if extrapolated and it does not capture people who commute from Shoreline to jobs elsewhere. The City should consider using a statistically valid phone survey to get this data (e.g. expand the existing survey used to obtain the "strategic objectives" measurements). Census numbers can be compared with the phone survey every 10 years. Could also do this in conjunction with an expansion of the CTR program.
Objective:	Measure and improve the overall pedestrian "level of service"
Target:	TBD by City after collection of baseline data and refinement of the methodology to match local conditions and factors
Indicator:	Pedestrian LOS - combination of measuring continuity and directness of pedestrian network

Discussion:	More info needed to develop and apply this. Adapt Fort Collins Pedestrian LOS methodology, assigning a LOS of A,B,C,D,E, or F in terms of continuity, directness, street crossings, visual interest, and security. Concurrency requirements currently focus on cars and concurrency for other modes, especially pedestrians, is not currently measured in Shoreline. http://www.ci.fortcollins.co.us/transportationplanning/pdf/levelofservice.pdf
Ecosystem Conservation and Resource Stewardship	
Stormwater and Water Quality	
21) Objective:	Decrease stormwater impacts through use of natural drainage techniques
Target:	Upward trending number, specific target could be established
Indicator:	Area (square feet) of new natural drainage constructed (by both private applicants and through public CIP projects) and total system area meeting defined minimum standard.
Discussion:	Realistic goal can be set for public improvements following review of CIP. Target for private development will be harder to establish, should be modest at first, but should be attempted. Need to define a minimum standard, e.g. consistent with LID Manual and King County Surface Water Design Manual.
22) Objective:	Reduce impervious surfaces in new development
Target:	Downward trending number or possibly the goal of no net increase over existing baseline is more realistic given increasing population and density
Indicator:	Median percentage of effective impervious surface in new projects (as compared to previous 4 years)
Discussion:	Could also establish a defined numeric target, calculations derived from permitting data that is not currently tracked or aggregated. Current calculations do not identify "effective" impervious or distinguish between pervious and impervious paving systems.
23) Objective:	Improve surface water quality
Target:	Upward trend. Specific target could be established through trend analysis
Indicator:	Washington Department of Ecology (DOE) Water Quality Index (WQI)

Discussion:	<p>The City has begun collecting data to use in the WQI and is <u>determining whether or not it is appropriate as a reporting tool for the sustainability indicators</u>. The WQI is intended as a tool to summarize and report Ecology's Freshwater Monitoring Unit's routine stream monitoring data. The WQI is a unit less number ranging from 1 to 100; a higher number is indicative of better water quality. Scores are determined for temperature, pH, fecal coliform bacteria, dissolved oxygen, total suspended sediment, turbidity, total phosphorus, and total nitrogen. Constituent scores are then combined and results aggregated over time to produce a single yearly score for each sample station.</p>
Potential Future Indicator(s)	
Objective:	Reduce impervious surfaces citywide
Target:	Downward trend or possibly the goal of no net increase from baseline is more realistic given increasing population and density. A specific goal could also be established.
Indicator:	Percentage of impervious surface citywide
Discussion:	LIDAR data can be interpreted to create an impervious data layer - research partnership, internship or thesis opportunity with UW. Given cost and rate of change considerations, data would be updated perhaps every 5 years.
Objective:	Improve surface water quality
Target:	Upward trending number for each stream reach and other surface water body as compared to previous 4 years or other study period, specifics TBD
Indicator:	Index of Benthic Invertebrate Diversity (IBID)
Discussion:	IBID was developed and used by UW - Derek Booth. There is an opportunity to partner with the Homewaters project and schools like Evergreen and Meridian Park that have done IBID sampling over the years in Thornton creek.
Vegetation and Habitat	
24) Objective:	Improve/restore habitat areas
Target:	Upward trending number, specific goal TBD based on City input
Indicator:	Acres of stream, wetland and related buffers that are enhanced and/or restored (as compared to previous 4 years).
Discussion:	City does not currently track and aggregate this data. Data should be broken out by voluntary/public projects and those done as permit requirements and mitigation. Invasive species removal could be tracked as a subset.
25) Objective:	Improve health of public forests
Target:	Upward trending number, specific acreage goal TBD based on City input

Indicator:	Acres (and percentage) of public forests enhanced that year through removal of invasive species, replacement of dead or dying, thinning and other forest health management practices (as compared to previous 4 years).
Discussion:	This is most actively occurring under Urban Forests Program and Ivy out efforts in parks. SF can be hard to track but should be measured. We will continue to study the Green Seattle program to look at ways to improve and refine this indicator.
26) Objective:	Increase citywide tree canopy and natural vegetation through strategic use of the right of way
Target:	Upward trending number, Specific target TBD following collection of baseline data and City review of existing, planned and possible CIP efforts.
Indicator:	Number of street trees and square feet of landscaping planted in the right-of-way (ROW) per year by city services or programs (or private development in the ROW) as compared to previous 4 years
Discussion:	Data from CIP projects, operations and DSG permit data related to right of way improvements would be combined. Might want to measure every 2 to 5 years to be more tangible and show change.
Potential Future Indicator(s)	
Objective:	Increase and maintain citywide tree canopy
Target:	Target to be established following collection of baseline data. E.g. 40% or potentially break down further by broad zoning category using American Forest's goals
Indicator:	Percentage of tree canopy coverage citywide
Discussion:	Establish baseline in medium term and update every 5 to 10 years based on remote sensing imagery. Consider use of CityGreen software.
Objective:	Measure and reduce the rate of tree canopy loss due to permitted development
Target:	Target to be established following collection of baseline data and further discussion. No net loss at least in single family areas may not be realistic given increasing density.
Indicator:	Median tree retention percentage achieved (better to use canopy coverage) and replacement trees planted on lots reviewed under the tree code.
Discussion:	Data could be tracked, but is tedious and replacement trees may not survive. More input from City needed to establish an appropriate indicator for private development. Overall City canopy coverage is a better potential future indicator and may be sufficient.
General	

27)	Objective:	Increase volunteer hours devoted to sustainability projects
	Target:	Upward trending number, based on current City "strategic objectives" program, target is 3,800 for <u>all</u> volunteer programs in 2008
	Indicator:	Number of volunteer hours and distinct individuals devoted to sustainability projects per year (as compared to previous 4 years)
	Discussion:	The City already gathers and tracks volunteer hours through "strategic objectives" program and could track hours in future years devoted to sustainability projects, e.g. habitat, recycling, right-of-way landscaping and other similar projects with a sustainability benefit.
28)	Objective:	Increase staff training on sustainability issues
	Target:	Upward trending number for next 5 years, then stabilize at appropriate level based on FTE, specific number TBD, including targets for certain positions.
	Indicator:	Number of staff hours devoted to sustainability training per year per full time employee equivalent (as compared to previous 4 years)
	Discussion:	The City already gathers and tracks training hours and establishes a training budget by department and by employee for some departments. A specific amount could be devoted to sustainability.

This list of potential indicators will be reviewed by the City and revised based on public input during Community Conversation #2. Additional consideration of target feasibility and goal setting by the City will be needed.

APPENDIX A - Assessment and Benchmarking Systems

Resourceful Government Guidebook

The Sustainable Development Commission's *Resourceful Government Guidebook* for City of Portland and Multnomah County is designed to help agencies put the concepts of sustainability into practice. The Guidebook helps agencies identify objectives and determine realistic performance targets given existing resources.

The *Resourceful Government Guidebook* includes:

- A step-by-step process that agencies can follow to create a sustainability initiative;
- Local policy requirements;
- Technical and financial resources; and
- A standardized reporting format which will allow the public, elected officials, and staff to review progress in a consistent manner.

The Guidebook has been used by other municipalities to create sustainability plans, most notably Fort Collins, Colorado (which was profiled in Task 1A memo).

The Guidebook contains a series of worksheets that support agencies through the steps of creating a sustainability plan. The steps outlined in the Guidebook are: Assessing Opportunities, Creating an Action Plan, Implementing the Action Plan, and Evaluating Results. Although the Shoreline Sustainability Planning Project is using different language for its process, we are currently at the equivalent of Step 2 as shown in the following graphic used in the Guide:



- **Assessing Opportunities**
The worksheets in this section of the Guidebook help an agency conduct an initial assessment of opportunity areas commonly targeted by sustainability initiatives. Opportunities are presented in three categories:
 1. Building organizational support: Assessment of steps to incorporate sustainability into management and culture. What kind of leadership team is required? What policies and management systems are needed? How will the agency involve and educate employees?
 2. Modeling sustainable business practices: Review of areas where an agency can improve stewardship of resources in its internal operations. What does

the agency buy, build, or maintain? What resources are used and what waste is generated?

3. Promoting community development: This section helps an agency examine how its external programs and policies promote sustainability in the community. How is the agency changing behavior of citizens? How is it shaping the built and natural environment? Is the agency supporting the growth of sustainable business activity?

- **Creating an Action Plan**

This section of the Guidebook contains a worksheet that helps set priorities and a simple template to organize goals, targets, and recommended actions.

- **Implementing the Action Plan**

The *Resourceful Government Guidebook* does not provide information specific to implementation – rather, it lists available resources in Multnomah County. The City of Shoreline would need to develop lists of agencies and organizations that may partner in implementation efforts (see the Whistler2020 implementation scheme in the Task1A Memo). Note that the capacity assessment to be done as part of the Shoreline Sustainability Planning project will identify such resources.

- **Evaluating Results**

The reporting template in this section of the Guidebook is used to evaluate and report results. The Guidebook then points the user back to Step 1 to identify new opportunities.

We found the Resourceful Government Guidebook useful as a source of ideas about indicator selection and in defining performance targets, and concepts related to these components were borrowed and adapted from this source. The City should consider this a good source for potential ideas and tools as the Sustainability Strategy is revised in the future.

PLACE³S

PLACE³S, an acronym for **PL**anning for **C**ommunity **E**nergy, **E**conomic and **E**nvironmental **S**ustainability, is a free software-based planning method that focuses on public participation, community development and design, and computer-assisted quantification tools such as geographic information systems (GIS). Utilizing parcel-level land use data, PLACE³S is designed to estimate the community, environmental, economic, and transportation benefits associated with alternative development scenarios including existing land development patterns.

PLACE³S is unique because it employs energy as a yardstick to measure the sustainability of urban design and growth management plans. Using a Btu-based accounting system, PLACE³S can evaluate how efficiently a city or neighborhood uses land, provides housing and jobs, moves people and materials, operates buildings and public infrastructures, sites energy facilities, and uses other resources. PLACE³S integrates public participation, planning, design, and quantitative measurement into a five-step process appropriate for regional and neighborhood-scale assessments.

PLACE³S calculations rely on a community's own data to answer two key questions.

- How energy efficient is the neighborhood or region today?
- How much more or less energy efficient will it become in the future?

PLACE³S creates an information base that functions as a baseline and allows comparisons of actions and policies. The objective of the PLACE³S tool is for a community or municipality to build a Smart Growth plan by consensus that can be tracked and reported annually. A primary purpose for using the PLACE³S approach is to inform the public and decision-makers about quantitative differences among alternative development proposals. Because PLACE³S applies a common set of assumptions to all analyses, it compares alternatives objectively.

PLACE³S was applied in the Mid-City neighborhood of San Diego to help the community identify redevelopment options in conjunction with the completion of a freeway through the neighborhood. The model was used interactively in community workshops in order to help people understand the impacts of different zoning policies on redevelopment potential, energy use, vehicle travel, and other performance measures. The results helped shape a master plan for the neighborhood.

Data and Computer Needs

PLACE³S can be data-intensive. The method's reliance on energy measurements means that large communities or regions must use computers to assemble and interpret data, especially when evaluating multiple planning alternatives. In small community or neighborhood settings, however, a modest amount of data and hand calculations may support a PLACE³S study. Local priorities and resources will determine how many data are enough and how best to make computations.

If a community or region operates a GIS, it possesses a system it can adapt to make PLACE³S calculations. In locations without a GIS, a personal computer and spreadsheet software can tabulate data, which are then transferred to drawings. A CAD system can also automate this approach.

Software has been developed specifically for PLACE³S assessments. This software, called INDEXTM, is available from Criterion, Inc. in Portland, Oregon for site or program-specific applications. Its use requires ArcViewTM from ESRI, Inc. Aside from desired customization; its database must be populated before operation.⁴

For Shoreline, PLACE³S would be very useful for major comprehensive plan updates, master plans and significant redevelopment projects. The Environmental Sustainability Strategy will contain some recommendations related to the use of this tool in future planning efforts.

Ecological Footprint Accounting

The Ecological Footprint, a product of Redefining Progress, a public policy think tank (and consultancy), is a resource accounting and environmental education tool that inverts the traditional concept of carrying capacity (the population a given region could support) and instead seeks to determine what total area of land is required to sustain a population, organization or activity. For example, a nation's footprint is calculated by adding the footprint attributable to imports and subtracting the footprint of exports from domestic production: Total footprint = production footprint + imports footprint – exports footprint. This is computed for 72 product categories such as grains, timber, coal, oil, and cotton. A nation's footprint can be compared to the

⁴ Contact Eliot Allen, Principal, Criterion Inc for details about INDEX, eliot@rain.com or 503-224-8606.

global average to provide perspective. A footprint can also be calculated, using different metrics, for municipalities.

The Footprint provides a graphic and poignant representation of sustainability. In 2001, the United States Ecological Footprint was 108 acres per capita, while the biocapacity (nature's supply) of the country was only 15 acres per capita. Each person in the country was using an average of more than seven times the amount of resources available to maintain current standards of living.

"Ecological Footprinting" targets the avoidance of ecological overshoot. Overshoot refers to a situation in which human demand for renewable resources exceeds nature's supply at a local, national or global scale. Once these limits have been exceeded, development can only occur through the liquidation of the planet's natural capital.

The Ecological Footprint measures human use of nature and aggregates human impact on the biosphere into one number – the bioproductive space occupied exclusively by a given human activity. This allows a comparison of biocapacity with humanity's demand (or consumption), and determines whether a defined region is moving into or avoiding overshoot.

Municipal Footprint Analysis

Redefining Progress has created a methodology to measure the amount of renewable and non-renewable ecologically productive land area required to support the resource demands and absorb the wastes of a city or region. Municipal Footprints are scientific, unbiased measurements that can be used to track progress towards sustainability goals.

Redefining Progress conducts three types of footprint analyses for municipalities, depending on the level of complexity needed. The Municipal Footprint options are:

- A "snapshot" of the city or region using readily available data about energy use, housing, consumption of goods and services, transportation, and recycling. The resulting spreadsheet allows the user to vary parameters in an urban planning framework.
- An analysis that incorporates local data compiled by Redefining Progress researchers on consumption, transportation, water use, and energy use patterns. Footprint calculations are generated over time to produce time-series data for use in policy analysis.
- Footprint analysis adapted to particular planning needs, in which a series of policy simulations is conducted over time, providing sustainability projections for different policy or planning options.

One drawback is that the Ecological Footprint is an expensive process – professional facilitation by Redefining Progress is required. However, project team members have utilized the concept of ecological footprinting to create graphic representations showing current vs. projected improved conditions of consumption as related to specific green building projects (see Figure 1). This graphic approach to showing the impact of human activities on biocapacity may be useful in the future as an educational tool. Improved footprint graphics could also be generated for the

shoreline strategy. In addition, this may be an opportunity to engage youths/students in collecting the (external) data needed to create the graphics.



Figure 1: Example of a graphic representation of a green building project (O'Brien & Company)

The Environmental Sustainability Strategy will contain additional guidance related to the use of ecological footprinting as a tool for community engagement. It may also be useful to use this tool as a way to show the impacts and benefits of new facilities (e.g. planned City Hall and Civic Center).

The Natural Step

The Natural Step (TNS) Framework is a science and systems-based approach to organizational planning for sustainability. It provides a set of design criteria that can be used to direct social, environmental, and economic actions. The Natural Step framework was developed in Sweden by Dr. Karl-Henrik Robèrt in 1989. Dr. Robèrt brought leading Swedish scientists together to develop a consensus on requirements for a sustainable society.

The Natural Step has four systems conditions:

1. In order for a society to be sustainable, nature's functions and diversity are not systematically subject to increasing concentrations of substances extracted from the earth's crust.
2. In order for a society to be sustainable, nature's functions and diversity are not systematically subject to increasing concentrations of substances produced by society.
3. In order for a society to be sustainable, nature's functions and diversity are not systematically impoverished by physical displacement, over-harvesting, or other forms of ecosystem manipulation.
4. In a sustainable society, people are not subject to conditions that systematically undermine their capacity to meet their needs.

Both the Whistler2020 and Santa Monica Sustainable City programs profiled in Task 1A memo used The Natural Step framework to guide development of their respective plans. Both cities cite the value of TNS in building consensus and creating tangible rallying points for the communities. Communities that embrace TNS have demonstrated remarkable results. The Whistler2020 program now includes more than 100 indicators managed by volunteer task forces. The UK used TNS to develop a nationwide program that includes 20 headline indicators that measure overall progress with a national set of 68 indicators which focus on specific issues and identify areas for action. Shoreline may decide to adopt this two-tiered approach to setting indicators. A simplification of TNS, such as the concept of living on “natural capital” can be useful in educational efforts.

After reviewing the available information, it appears that this tool has limited immediate applicability for Shoreline. A “two-tiered” system of indicators may be useful and will be given further consideration. The concept of living on “natural capital” should be integrated into community education efforts.

Carbon Calculator

Carbon calculators are abundant – they can be found on Al Gore’s “An Inconvenient Truth” website, via Bonneville Environmental Foundation’s renewable energy program, and on the websites of a host of environmental organizations. Calculators vary according to complexity, but most are free. The calculator will estimate how many tons of carbon dioxide and other greenhouse gases a municipality’s choices create each year.

Carbon calculators are best considered as tools that are easily incorporated into broader sustainability plans. A specific sustainability objective, such as reducing carbon emissions or achieving carbon neutrality, can be simply calculated with readily available data. Calculators are accessible and applicable at many scales, and often provide tangible evidence of performance necessary to building consensus in sustainability plans. The City should use this tool for community engagement.

Local Agenda 21

Local Agenda 21 (LA21) provides the opportunity for Local Governments to work with communities to create ecologically sustainable development (ESD) agendas in concert with the United Nations Division for Sustainable Development Agenda 21. Agenda 21 is the action program adopted at the 1992 Earth Summit in Rio de Janeiro. 181 countries committed to work actively for sustainable development. Localities were requested to start local Agenda 21 processes that involve citizens in actively planning and creating projects that move the community toward sustainability.

LA21 is described as a process that involves local governments and communities working together to create a strategy which incorporates action plans based on environmental, economic, and social indicators. LA21 is best considered as a framework based on the high-level goals of Agenda 21. In fact, the chapter within Agenda 21 that addresses LA21 is remarkably short and lacking in detail – the implicit message being that local governments should use available resources to support the objectives of Agenda 21. However, there is no guidance and no specific

measurement system included. Some municipalities and local councils in Australia and England have developed LA21 indicator programs, but they are very unique to those locations and not replicable models. The best available research on LA21 efforts reveals that where local Agenda 21 efforts have been strong, such as in Sweden and the UK, they have included:

- A process orientation;
- A cross-sectoral approach;
- Grassroots participation;
- A holistic perspective including environmental, economic, and social considerations;
- A long-term perspective; and
- A search for innovative ideas.

After reviewing the available information, it appears that this tool has limited immediate applicability for Shoreline. It does not provide significant guidance for our efforts.

International Council of Governmental Initiatives (ICLEI)

The City also joined the International Council for Local Environmental Initiatives (ICLEI), the international leader for municipal implementation of climate protection, to obtain climate protection inventory software and training. Shoreline staff has received an initial software orientation. Staff expects to receive additional training in late 2007 or early 2008 to help define the inventory data for collection. The first step is to inventory the City's global warming emissions for 1990 and 2007, consistent with the timeframes in the recently adopted Mayor's Climate Protection Agreement. Toward this effort, City staff is researching how to accurately measure emission levels. City staff recently met with the City of Seattle to learn about and assess their method of completing a climate protection inventory. Additional information about ICLEI and related climate protection software is available at <http://www.iclei.org/>.

ICLEI software will be used by City to inventory emissions and benchmark progress towards greenhouse gas reduction targets. This tool is recommended for inclusion in the Environmental Sustainability Strategy.

APPENDIX B – Alternative Forms of Prioritization and Selection

Resourceful Government Guidebook: Worksheet 4.1

Directions

1. In left-hand column, list the opportunity areas you identified in sections II and III of this guide.
2. Ask each team member to complete the worksheet on their own, rating the opportunities against the criteria shown. Rating system:

2 = Significant opportunity 1 = Moderate opportunity 0 = Insignificant opportunity
3. Compare and discuss your scores.
4. Total the scores and discuss which areas are top priorities for action. *It may not be the items with the most points.*
5. Record your rationale for your choices. This will be important for future planning efforts.

Opportunities (see Worksheets 1.0 - 3.3)		Impact Has benefits for . . .		
Opportunity areas	Description	Small/local business	Environment	Community
2.1 Sustainable purchasing				
2.1.1 Automotive Vehicles and Equipment	Purchase biodiesel	2	2	2
2.2 Green building				
2.2.4 Infrastructure	Roadside vegetation: requirements for landscaping focused on beautification, utility, and low resource use	1	2	1

Does this really have an impact?

A variety of resources help people assess the impact of their decisions.

"How many simple things do people need to do to save the planet?"

That's the question the Union of Concerned Scientists pose in their book The Consumers' Guide to Effective Environmental Choices. They weigh the impact of consumer choices and offer a list of priority actions which focus on transportation, food, and home energy use.

How many planets does it take to meet our needs?

The Ecological Footprint is an environmental accounting tool that calculates the acres required to meet our resource needs. According to its calculations, the average American uses 24 acres to support his or her current lifestyle. In comparison, the average Italian uses 9 acres. Find the Footprint online at www.redefiningprogress.org

What is our impact on global warming?

Human-caused greenhouse gasses are building up in the atmosphere, trapping heat and disrupting climate. To find out what you're doing to create this problem, and what you can do differently, use the global warming calculator at www.sustainableportland.org.

Influence		Investment				Summary	
Is visible	Supports community solutions	Saves/makes money	Is easy to implement	Is timely	Benefits employees	Total score	Why selected or not
2	1	1	2	1	1	14	County currently conducting a pilot. Easy to implement right away.
2	1	2	1	1	1	12	High cost of maintaining roadside areas makes this a priority.

Setting goals & targets

Once your agency has identified its priorities, the next step is to clarify what you plan to achieve and how you will measure your progress. Use Worksheet 4.2 to record goals and targets for your priority areas.

Goals provide a broad statement of direction. Targets provide a specific description of the results you plan to achieve. A complete target details how results will be quantified (performance measure), what part of the operation will be measured (scope), what the desired outcome is (performance goal) and when it will be achieved (completion date). Note that in the sample below, energy use is measured on a per square foot basis. In other cases, results might be measured on a per acre, per employee, or per work output basis. These types of measures facilitate comparison with others. They also ensure that changes in levels of activity or output aren't mistaken for increases or decreases in efficiency.

Sample goal: Decrease energy use

Sample target: Decrease energy use per square foot in City Hall
performance measure scope
by 15% by 2004.
performance goal completion date

Worksheet 4.2 A

Opportunity area	Goals	Targets
2.3 Healthy ecosystems		
2.3.1 Water use	Increase water use efficiency by 25% by 2010.	At 10 largest sites, reduce gallons used per square foot by 2% by December 2002.
2.5 Pollution and waste reduction		
2.5.2 Office waste reduction & recycling	Reduce paper use	Reduce monthly copy paper use by 10% per employee by November 2002.

Perspectives on performance measures

Compare with other communities:

These websites allow you to link to sustainability indicator programs established by other communities, or search for indicators by topic area. These examples can help you to identify good ways to measure progress and to compare your results with others.

www.sustainabilityindicators.org; www.sustainablemeasures.com

Workload or output measures

Organizations often use workload or output measures to put their sustainability performance measures in perspective. For example, a farm might track water used per acre. A manufacturing company might track energy used per product produced. For key workload measures for City agencies, refer to the *Service Efforts and Accomplishments Report* produced by the Auditor's Office.

www.ci.portland.or.us/auditor

Identifying specific actions

What will it take to meet your target? Part B of Worksheet 4.2 provides a basic format for recording the tasks required. Make sure that the tasks you identify are written into the appropriate agency workplans.

Charting a course

Backcasting

Should you reduce the amount of packaging for a product, switch to packaging that is completely recyclable, or do away with packaging altogether? Backcasting is a process that organizations use to envision a truly sustainable product or service, then focus on the actions needed to head that direction. For more information contact Oregon Natural Step Network 503-241-1140. For a case study using this approach, see *A Sustainability Vision for the Automotive Services Industry*, online at www.ortns.org/resources.htm

Quest for Performance -- training teams to solve problems

Quest for Performance is a training seminar that provides employees with the tools to analyze problems, identify root causes, develop solutions and manage for results. For example, Bureau of Licenses staff put their Quest training to use, slashing their annual printing costs by over \$18,000 -- and saving a lot of paper in the process. Contact Laurel Butman at the Office of Management and Finance. 503-823-6806

Worksheet 4.2 B

What	Who	When
1. Complete water use audits at four sites.	Joe	by May 2001
2. Provide monthly water use data to facility staff.	Karen	by Dec 2001
3. Budget for water efficiency upgrades	Karen	by Jan 2002
1. Evaluate paper use from last year	Tom	by Jan 2003
2. Monitor monthly paper use; email usage trends to staff	Tom	Monthly, (starting Feb 03)
3. Purchase printer that prints 2-sided; multiple pages per sheet	Jane	by Feb 2003

When you've completed your draft plan, schedule an appointment to meet with the Sustainable Development Commission (SDC). SDC can identify technologies, expertise, partnerships and resources that will help you meet your targets. In addition, Matt Emlen 503-823-7224 and Amy Joslin 503-988-4092 are available for consultation as you develop your plan.

APPENDIX C

Potential Internal and External Indicators for Tracking Sustainability in the City of Shoreline

Below is a draft list of indicators that was initially developed for this task. These indicators were revised and a subset was selected for inclusion in the body of the Final Memo 1B. Please note that additional City input will be needed to define performance targets for the indicators that are ultimately selected. Each indicator addresses one or more of the Guiding Principals. Indicators are organized by focus areas (which also correspond to specific guiding principles).

Indicator	Method/Potential Measures	Source/Reasoning/Comment
<i>Energy Conservation and Carbon Reduction</i>		
Internal		
Annual energy consumption by City buildings	Electric and Gas Utility Bills	Common indicator
Annual greenhouse gas emissions from City fleet vehicles?	Based on Utility Bills, Utility energy sources, Motor Pool Logs and probably using an existing calculator application	Common indicator
Percentage of electricity use from renewable sources	Green Tags	Common indicator
Green Fleet – Percentage of fleet vehicles fueled by alternative sources Green Fleet – Average fuel efficiency Green Fleet - Number and percent of city motor pool VMT with natural gas, biodiesel, or hybrid vehicles	Motor Pool Log	Common indicator
External		
Annual per capita greenhouse gas emissions (by shoreline residents and businesses)	Not clear who would calculate this and what sources they would use. ICLEI is one source for doing this.	Common indicator
Annual per capita energy consumption (by shoreline	Not clear who would calculate this and	Common indicator

Indicator	Method/Potential Measures	Source/ Reasoning/ Comment
residents and businesses)	what sources they would use. ICLEI is one potential source for doing this. Could limit this to just natural gas and electricity consumption but that would only be part of the picture.	
Ratio of renewable to nonrenewable energy consumption for shoreline residents and businesses	PSE (gas), Seattle City Light (electric). E.g. Green tags program	Common indicator
Number of registered alternative fuel vehicles	Department of Licensing Records?	
<i>City Operations and Purchasing</i>		
Paper – recycled content and post-consumer waste recycled content as a percentage of total paper content purchased	City purchasing records	
Number of service providers and companies on a green vendors list that meet defined minimum requirements for environmentally friendly operations		Would need to develop and brand this program, probably as part of overall purchasing and outreach strategy
<i>Transportation</i>		
<i>SOV and HOV Use</i>		
Number of City residents that participate in Metro, Community, or Pierce Transit agency rideshare programs	Transit Agency Data and/or phone survey	
Number of employers/employees that have adopted voluntary or mandatory commute trip reduction programs	Survey and Transit Agency Data	
<i>Transit</i>		
Number of residential units within ¼ mile (network distance) of transit stop with 30 minute minimum peak headways.	GIS buffer analysis, land use data	Relates strongly to current LOS in City's Comp Plan. Also used in TND, LEED-

Indicator	Method/Potential Measures	Source/ Reasoning/ Comment
		ND
Number of transit boardings per year in Shoreline	Transit agency data	A way to measure transit use within the City of Shoreline. However improvements in this category limited by access to and convenience of service.
Total yearly and average daily park and ride usage by vehicles	Transit agency data	Provides additional information – suggested by City staff
Non-Motorized Facilities		
Total length and proportion of major streets (principal, minor, collector and neighborhood collector) citywide that have pedestrian facilities (sidewalk, off street path, or improved trail on at least one side of the street)		Sustainable Seattle, Richmond B.C. .
Total length and proportion of major streets citywide that have pedestrian facilities on at least one side of the street that are within: <ul style="list-style-type: none"> • ¼ mile of Aurora, Ballinger Ave, 15th Ave, and 145th St • ¼ mile of schools • ¼ mile of parks • ¼ mile of transit route/stop • ¼ mile of commercial centers 	Network distance would give a more accurate measure of directness. Criteria chosen based on suggestions from City staff on important transit streets, mixed use and multifamily development areas, and other areas where sidewalks are particularly desirable.	This measure gets at proximity of non-motorized facilities to key destinations/ facilities
Total number of “enhanced crosswalks” per mile of arterial roadway.	Will also establish a baseline, or establish a goal such as 2 per mile, This would give an overall citywide measure, but would	Similar to Fort Collins, CO <i>Pedestrian LOS</i> , walkinginfo.org An enhanced pedestrian crossing is a designated

Indicator	Method/Potential Measures	Source/ Reasoning/ Comment
	not address specific corridors where there is a known problem.	crossing that has curb ramps and standard signage and incorporates two or more of the following features: pedestrian-activated signal, overhead lighting, textured paving, illuminated overhead crosswalk sign, ladder crosswalk markings, curb extensions, median refuge area. City has concerns about cost, whether enhanced crosswalks are actually better in all cases and whether they are a measure of walkability.
Overall pedestrian level of service	Facilities - % of roadways with sidewalks on one or both sides of street meeting current city standards Directness - could compare buffer analyses based on a ¼ mile radius vs. network distance – changes between the two measures would indicate a trend towards or away from directness Crossings – changes in the year-to-year ratio of enhanced	This is likely a future effort that could be done during transportation master planning due to the time and data it will take. Fort Collins has an integrated Pedestrian LOS and other communities are developing LOS standards that encompass all modes.

Indicator	Method/Potential Measures	Source/ Reasoning/ Comment
	crossings would indicate a trend towards improved safety at crossings	
Number of miles of bike lanes, trails and routes citywide	6, 7, 10	Sustainable Seattle
Number of pedestrian injuries per year	Trending upward/downward based on previous year, we could make this per 1,000 population	Numbers of injuries is an indication of facility safety and are readily available.
Number of bicycle injuries per year	Police records, we could make this per 1,000 population and combine with peds.	Number of injuries is an indication of facility safety
<i>Resource Protection and Management</i>		
Stormwater Runoff		
Percentage of impervious surface citywide	King County data can provide baseline but it is very coarse. LIDAR data can be interpreted to create an impervious data layer. Measure trend based on previous year, update every 2-5 years.	Establishing baseline and tracking impervious would allow for establishing a stormwater utility.
Percentage of effective impervious surface in new projects	Permitting records, trending upward/ downward	This data would need to be collected via permits
Number of miles of swept roadway per month (or year)	Mile log of street sweeping equipment	Addresses suspended solids in stormwater
Lineal feet of existing or new natural drainage system meeting defined minimum standard.	Need to track from this point forward -does not appear to be part of their Utilities GIS data	Need to establish a minimum standard with City input.
Number of major drainage	It appears the City	measures water

Indicator	Method/Potential Measures	Source/ Reasoning/ Comment
incidents, flooding, landslides, significant erosion, etc.	tracks "drainage incidents" and incorporates into GIS	quantity. Could measure on a basin by basin basis and City-wide
Total estimated volume and number of sewer overflows to surface waters	Wastewater utilities are required to track this information.	
Amphibian count or benthic invertebrate count	Most likely beyond the capabilities of City, but could partner with researchers at UW, engage volunteers or find another source	Puget Sound Wetlands and Stormwater Research Program contributed to Sustainable Seattle for biodiversity as indicator of urban water quality
Water quality monitoring results	Existing City program, need recommendation on how to display this information in an indicator.	
Vegetation and Habitat		
Number of street trees planted per year by City Number of total documented trees planted in the community	In relation to an established goal, i.e. 500 trees per year, or a trend based on first recorded year City needs to establish goal and would need to begin tracking how many trees it plants each year, if it doesn't already	Many cities across the country have established tree planting goals, recognizing trees provide critical services such as stormwater uptake and evapotranspiration, reducing heat island effect, etc.
Square feet of native vegetation planted or restored in new projects on public land	Measured, plus trend upward/downward from previous year to year average	Will need to talk with the City about what data exists, how they update their inventory and what they are willing to collect.
Acres of critical areas (excluding	Based on permit data	Goal is to enhance

Indicator	Method/Potential Measures	Source/ Reasoning/ Comment
landslide and erosion hazard areas) enhanced/restored		City's tracking efforts for critical areas
Length and proportion in lineal feet of restored/enhanced streambank	Use permit data, need to set minimum definition trending upward/downward.	Will need to talk with the City about what data exists, how they update their inventory and what they are willing to collect.
Square feet of designated and permanently protected or restored/enhanced wetlands	Based on permit data, trending upward/downward	See previous comments and questions needing City input. Eventually could do both area and proportion, but wetland data is limited.
Acres of designated protected habitat	Based on City's open space inventory and records of native growth protection easements on private property.	Eventually could do a proportion when good data is established.
Percentage of lineal feet of major streets (primary, minor and collector arterials) with planting strips or street trees between sidewalk and street.	City would need to begin collecting data, if it doesn't exist already	Gets at urban landscaping and complete streets.
Percentage of canopy coverage citywide	<p>Establish baseline using LANDSAT satellite imagery, track in relation to American Forest goals:</p> <ul style="list-style-type: none"> • Average tree cover counting all zones 40% • Suburban residential zones 50% • Urban residential zones 25% 	<p>American Forests City would need to collect this data for any additional areas beyond what SUNP has analyzed. American Forests' City Green GIS software can be used to calculate benefits</p>

Indicator	Method/Potential Measures	Source/ Reasoning/ Comment
	<ul style="list-style-type: none"> Central business districts 15% 	
Air Quality		
Number of complaints about air quality per year	Number of complaints from within City of Shoreline registered with the Puget Sound Clean Air Agency	www.Sustainablemeasures.com
Number of days key air pollutants (e.g. particulates) exceed healthful levels	Puget Sound Clean Air Agency trend graphing tool can provide data the two nearest monitoring stations (Lynnwood and Lake Forest Park) http://www.pscleanair.org/airq/reports.aspx , providing a clear upward or downward trend	www.Sustainablemeasures.com
Number and percent of city motor pool VMT with natural gas or hybrid vehicles	Motor pool log	More VMT by hybrid or natural gas = less CO2
Percentage of School District Busses that meet "clean diesel" standards		
Number of miles of swept roadway	Mile log of street sweeping equipment	Addresses particulates
Tons of waste landfilled annually both by City and total for the entire City	Rabanco, Waste Management and City records	
Recycling rate as a percentage of material generated both by City and total for the entire City.		
Number of sites within the City with known soil, surface water or ground water contamination		
Number of hazardous materials incidents		
Total volume of recycled motor oil		
Total for City, per capita and		

Indicator	Method/Potential Measures	Source/ Reasoning/ Comment
community total water consumption and water reuse		
Number of recycled products purchased by the City, or percentage of supplies budget spent on recycled products	City's financial records, procurement policy	
Gallons of water not used for city operations (reused water for toilet flushing and, irrigation, efficient water fixtures)	Utility bills	
<i>Citizen Initiatives/Community Issues</i>		
Total number of volunteer hours and hours per population dedicated to managing, monitoring, restoring and conserving biodiversity		
Number of volunteer events dedicated to environmental enhancement		
Number of "Growing Green" certified businesses	This is a potential program that could be established to promote green businesses and practices, similar to the "Chinook Book"	
Total acres and number of public agricultural gardens (could also do private gardens through survey)		
<i>Land-use and development</i>		
Number of certified LEED and 3+ star BuiltGreen projects within the City	Existing programs	
Number of ADUs, multifamily units permitted	Permit data	
Number or density of residential units within ¼ mile of the boundary of a designated commercial center, including:	GIS buffer analysis, land use data	Common measure taken from Traditional Neighborhood

Indicator	Method/Potential Measures	Source/ Reasoning/ Comment
<ul style="list-style-type: none"> • Aurora • North City • Paramount • Ballinger • Hillwood • Richmond Beach • Westminster/Highlands 		Development (TND)
<p>Percentage of households within a ¼ mile (radius or network distance) :</p> <ul style="list-style-type: none"> • Transit stops • Schools • Parks 	GIS analysis	¼ mile is a widely accepted measure for how far the average person is willing to walk to a destination, LEED-ND uses ¼ for its transportation efficiency credit
Parks and Open Space		
<p>Percentage of households within a ½ mile of a neighborhood park amenity (either a neighborhood park or a designated school site that offers a neighborhood park amenity)</p>	GIS buffer analysis, trending upward/downward	Neighborhood parks are intended to be within walking distance. The PROS plan has a service area of ½ mile (15 minute walk) for neighborhood parks, which results in substantial deficiency. The PROS plan cites an “amenity driven approach” in lieu of traditional service area, which would include schools as potential sites for developing neighborhood park amenities and addressing neighborhood park deficiencies. LEED-ND also uses a ½

Indicator	Method/Potential Measures	Source/ Reasoning/ Comment
		mile
Total miles of walking/biking trails (per capita)	Trending upward/downward in relation to standard.	Would show how city is meeting growing demand for trails. City of Edmonds, WA developed a formula for determining how many miles of trails would meet demand, based on a comparison of participation and trail systems in other communities and a community survey – the standard Edmonds uses is 0.17 miles per 1,000. Shoreline appears to not currently have a trails LOS standard
Percentage of parks within ¼ of a transit stop.	GIS buffer analysis, trending upward/downward	Measure of park accessibility, a key component of quality of system
Percentage of parks located adjacent to a designated bicycle route and/or green street *sidewalk measure under non-motorized transportation would measure how accessible parks are by walking	GIS buffer analysis, trending upward/downward	Measure of park accessibility, a key component of quality of system
Percentage of multi-family residential units within a ¼ mile of a park	GIS buffer analysis, trending upward/downward	Measure of park accessibility and how well city is meeting the greater need for parks near more densely developed areas, a key component of quality of system
Number of criminal incidents	Police data	Measures park

Indicator	Method/Potential Measures	Source/ Reasoning/ Comment
within parks and open spaces		safety, a key component of quality of system
Linear feet of publicly accessible shoreline		Shoreline access both on the sound and Echo Lake is cited in the PROS plan as an important community need.
<i>Other</i>		
Number or sustainability strategy recommendations adopted		
Percent of budget devoted to infrastructure and facility maintenance		



ATTACHMENT C:

DRAFT Preliminary Recommendations Matrix

Preliminary DRAFT Recommendations

12-26-07- For City Staff, City Council and Stakeholder Review and Input

NOTE: The number (#) assigned to each recommendation is for reference purposes only and is not intended to indicate priority or sequence. An * in the # column indicates that this is a continuation or expansion of an existing City of Shoreline program, policy or project.

#	DEPT.	RECOMMENDATIONS	CONSULTANT NOTES
<i>Sustainable Development and Green Infrastructure</i>			
1 *	PDS PW F/IT PRCS	Prioritize and promote Green Building and Low Impact Development (LID) training for select staff (e.g. PDS, Finance & Engineers).	Emphasize training where it will do the most good. Planners, Building Plan Reviewers, Engineers, Grant Coordinator, Surface Water and Environmental Services personnel appear to be the highest priorities. Some of these personnel have already received training. Promote education and change in the community and leverage greater support.
1.5 *	PW-ES PDS	Establish a Residential Green Building Program	Provide information to homeowners and builders on residential green building practices, resources, and opportunities. Concurrently establish a green building permitting process and expertise in the Planning Department. Funding was just obtained to start outreach in 2008.
2 *	PDS PW	Revise zoning and engineering standards to provide guidance and incentives for Low Impact Development (LID) and Green Building.	Many opportunities exist in this area and they will be detailed in consultant recommendations. These range from LID engineering details and specific standards to provide guidance, modifying how impervious surface coverage is calculated, and creating development flexibility and incentives for green building projects. The City's stormwater engineering standards are currently under review.
3 *	PW-S/A PW-SW	Prioritize and structure the development of the Green Streets program.	A demonstration project is needed, but emphasis should also be on planning, site selection criteria, and implementation strategies using an "opportunistic" approach that addresses site conditions, neighbor interest and budgets. Priority should be placed on funding and specific goals for this program. The Transportation and Storm Water Master Plans should be revised to include additional guidance for where and how this initiative should be pursued.
4	PW-SW	Modify the stormwater utility fee to promote low impact development, calibrate for true system impact/cost and encourage natural drainage improvements.	This would require a fee study and is potentially a medium-term time frame action. Current fee, particularly for residential users, is not calibrated for true impact on the system and fee structure does not provide incentives for reducing run-off and improving water quality. Ronald Wastewater District is the partner to work with on this before the next franchise update.

#	DEPT.	RECOMMENDATIONS	CONSULTANT NOTES
5 *	PW-E PDS F/IT	Expand and reorient the existing sidewalk improvement program to focus on linking destinations and connectivity.	Aurora corridor program will represent a major achievement. Existing focus on sidewalks near schools will result in benefits, but there is a recognized need to both broaden and reorient the program as budget constraints allow. The Transportation Master Plan should be revised to provide clear guidance on the development of an overall pedestrian system for utilitarian walking. A bond issue or other funding mechanism could be explored as a funding mechanism for this future work.
6	PW-E	Develop a pedestrian or non-motorized Level of Service (LOS) measure	During the update of the Transportation Master Plan if feasible, the City could develop or adapt an existing LOS standard for pedestrian and possibly for bicycle facilities (e.g. a combined "non-motorized LOS). The pedestrian LOS that was developed by Ft. Collins is one potential model. The data required and cost of establishing and tracking a pedestrian LOS may be prohibitive or may not justify the benefit of such a system.
7 *	PRCS PW F/IT	Improve identification, mapping, designation, surfacing and signage of existing trails. Develop a plan for future trail expansion.	City has recently convened a trail user and planning group to identify and prioritize improvements. Specific priorities and locations should result from this effort. City should also focus on linking destinations with trails and treating them as part of the transportation system – focus not just on trails pleasure walking, but for utilitarian walking as well. The Parks and Transportation Master Plan should be revised to provide clear guidance on the development of an overall pedestrian system, including trails.
8 *	PW-E	Strengthen the bicycle and pedestrian facility plans, which are significant components of the Trans Master Plan, to focus on a strategy for a cohesive network that connects major destinations.	Improvements include Interurban Trail "feeders", complete gaps on 155th and 185th, and connections in the Fircrest, North City and Richmond Beach areas. The Transportation Master Plan should be revised to provide clear guidance on the development of an overall pedestrian system for utilitarian, as well as recreational, walking.
9 *	PDS PW-E	Update the Transportation Master Plan and provide a stronger link to the Land Use Element and Plan.	Provide a vision for the future of all major streets consistent with the land use plan to guide future investment and capital improvement decisions, including street classifications and Right-of-Way improvement standards and needs.
10 *	CMO PW PDS	Devote additional City resources to regional coordination and lobbying for expanded Metro bus and Bus Rapid Transit (BRT) service, Community Transit service, and advance planning and coordination to shape future Sound Transit	Additional coordination and advance planning could help promote additional transit service for Shoreline residents and shape the future of a potential Sound Transit expansion using either light rail or bus rapid transit when it eventually comes to Shoreline. For example, underutilized commercial area near 185 th and 10 th NE combined with closed North City Elementary School is an opportunity area. City should promote 185 th or other suitable location for future station.

#	DEPT.	RECOMMENDATIONS	CONSULTANT NOTES
		expansion.	Cities such as Bellevue, Tukwila and others have “gotten out in front” of Sound Transit and have or will have a greater influence on its system as a result. This would complement the Housing Strategy recommendation to increase density near existing and future transit routes and hubs.
11 *	CMO PW PDS	Push for better coordination of north-south service on Aurora between Metro, Sound Transit and Community Transit.	Existing coordination between transit agencies along Aurora can be strengthened and current Aurora Village Transit Center at Aurora Village may not be the best place for inter-county connections to take place. These factors make it less convenient for riders to travel up and down Aurora and hurt rider-ship. City Staff has mentioned these concerns in the past.
12	CMO PDS PW	Consider lobbying for a Metro “feeder” route to improve east-west transit and support Aurora backbone.	Residents and staff have noted that east-west transportation in the City is poor. City should try and capitalize on Aurora corridor investment and service levels. Where the demand exists or is likely with future densities, additional east-west service should be a priority for the City and its lobbying efforts.
13 *	PW-S/A	Consider expansion of the commute trip reduction (CTR) program to include medium size employers.	This is another potential idea that was mentioned by a City staff member that should be investigated. More incentives for non-SOV commuters can be targeted for employers large and medium size employers not currently required to participate in the CTR program. Current program only requires participation of 6 employers in the City. Funding options for a program expansion would need to be researched as it is significant issue for this program. Current support and administration of this program for the City is provided through an inter-local agreement with Metro, however voluntary expansion of the program might not get additional funding/support. Options for expansion of the CTR program should be explored the next time the CTR plan is updated.
14 *	PDS PW	Housing strategy should include a focus on Transit Oriented Development (TOD) and transit supportive neighborhoods to create density nodes that support transit use. Continue to focus new development near existing and proposed transit corridors and improvements.	Existing park and ride at 192 nd and Aurora has been considered as a key potential location in the past for a TOD. This location is more convenient for riders making connections on Aurora than the current Aurora Village location. Upcoming Housing Strategy is a key opportunity to address tough decisions about where future growth should be located. Sustainability factors (e.g. managing growth in locations near existing and future transportation investment, such as light rail stations, where density will help support transit use) should be given strong consideration in this public conversation and decision making process.

#	DEPT.	RECOMMENDATIONS	CONSULTANT NOTES
<i>Ecosystem Conservation and Resource Stewardship</i>			
15 *	PRCS PW-SW	Identify underutilized park lands and other city property and use for habitat improvements, infiltration, water treatment and other compatible purposes.	This is another great idea that was mentioned by City staff during the interviews. Transform some underutilized grass areas into plant and wildlife habitat. Reduction in maintenance costs would partially offset cost of habitat improvements. Improvements at Cromwell Park provide an example. Areas at Hamlin Park, Ronald Bog and elsewhere could also be considered.
16	PRCS PDS PW-SW	Consider the development of a Natural Resources and Habitat Master Plan.	A focused and strategic planning effort is needed to establish key goals, specific objectives, priority locations, targets, partners and funding mechanisms. A Plan will improve the City's ability to obtain grant funding.
17 *	PRCS PW-SW	Continues and expand restoration & enhancement priority locations and targets for publicly funded or assisted wetland & stream enhancement projects.	The City has some established priorities and targets for habit improvement in the current Surface Water Master Plan. Specific City goals should be updated and expanded for enhancement of wetlands and streams in future updates of the Surface Water and Parks Master Plans and in other logical project or planning processes. Focus can be on City owned property at first, but outreach efforts should seek partners and opportunities on private property as well.
18 *	PRCS	Prioritize forest health data collection & improvement projects & pursue partnerships to increase the acreage analyzed & enhanced.	Existing work with Seattle Urban Nature Project includes Hamlin, Shoreview, Boeing and South Woods parks is a priority and findings will be reported to City Council in early 2008. Current program budget is \$50K and program should be continued and enhances if possible. Next steps will include looking at additional parks and acting on implementation recommendations. City should look at grants and volunteers to leverage greater implementation support if possible.
19 *	PRCS PW-SW PW-ES	Promote & expand environmental mini-grant program, with focus on critical area & urban forest enhancement	Existing City environmental grant program should be expanded to leverage greater community support of restoration and enhancement efforts
<i>Energy and Carbon Reduction</i>			
20	PW-SW PW-ES	Develop a baseline for energy consumption and carbon data using ICLEI "5 Milestones Toolkit"	Using ICLEI's process (provided in a toolkit to City's who "sign on" to ICLEI, the City creates a baseline for their carbon emissions. The City (generally with the use of volunteers) collects energy and waste data, and calculates greenhouse gas emissions for a base year (e.g., 2000) and for a forecast year (e.g., 2015). The inventory and the forecast capture emissions from all municipal operations (e.g., city owned and/or operated buildings, streetlights, transit systems, wastewater treatment facilities) and from

#	DEPT.	RECOMMENDATIONS	CONSULTANT NOTES
			all community-related activities (e.g., residential and commercial buildings, motor vehicles, waste streams, industry). The inventory and forecast provide a benchmark against which the city can measure progress.
21	PW-F/O PDS	For all new construction of City facilities (including the City Hall), meet requirements specified in LEED Core Performance Guide, referenced in the prescriptive path for LEED Energy & Atmosphere Credit 1.	City buildings that get state funding must meet the state requirement to meet LEED Silver. Regardless of whether state funding is used, the City should consider implementation of this recommendation and related recommendations.
22	PW-F/O	For all new construction of City facilities (including the City Hall), require the use of Commissioning as outlined by the ASHRAE Commissioning Process Guideline 0-2005.	Commissioning is a process that ensures buildings operate as intended, thus ensuring energy efficiencies are actually achieved.
23	PW-F/O	Upgrade existing City facilities to meet Energy Star building performance standard for similar building types.	Shoreline can also become an ENERGY STAR partner. As part of your partnership commitment, you agree to: measure, track, and benchmark your energy performance; develop and implement a plan to improve your energy performance; and educate your staff and the public about your partnership and achievements with ENERGY STAR energy performance (Energy Star provides tools to develop the plan, and benchmark buildings against similar types, including local government facilities).
24	PDS	Include requirements to meet Energy Star for building equipment and appliances in purchasing guidelines.	Energy Star provides lists of equipment and appliances that meet their standards. Their website shows a range, including equipment that goes well beyond their minimal standards.
25	PDS	Engage in Seattle City Light's (SCL) green power program (Green Up). As part of annual budget planning, increase proportion of green power purchase to 100%	Greater coordination with power utilities could be pursued. In addition, zoning and permitting incentives could specifically target energy efficient construction. Local non-profit groups, such as Shoreline Solar Project could be approached as partners.
26	PW-F/O *	Require all new fleet vehicles be alternatively fueled, or rated by EPA for 45 mpg or higher for fossil fuel vehicles.	For exempt vehicles, require the most efficient options available. This requirement would only apply to vehicle types where these options are generally available and cost effective. Fleet decisions must consider the use and initial cost of the vehicles as well as maintenance costs.
27	HR PW-S/A	Conduct a campaign for city staff to reward "smart" trip planning to reduce unnecessary trips/miles	The campaign could reward staff for both thinking up and implementing "smart" trip planning, including using the most efficient vehicle for the job, or planning trips to reduce miles traveled

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		traveled.	or gas used. Example: UPS found that it used more time (and more gas) idling at left hand turns. They created software to come up with routes that eliminated most left hand turns. (NPR Report)
28	CS PW-ES *	Promote use of SCL and Puget Sound Energy (PSE) incentives or other incentives for conservation and alternative energy as part of an outreach campaign.	Utilities promote these incentives through bill stuffers. The city could include information in its public outreach campaign (see General recommendations)
29	CS PW-SW PW-ES	Work with SCL & PSE to prepare a report showing Shoreline Community's overall energy use as of baseline year; update figures provided by SCL/PSE.	The City should work with Seattle City Light and Puget Sound Energy to gain their support for the City's Sustainability Strategy by assisting with collection of baseline data. The City of Kirkland has successfully engaged Puget Sound Energy in components of their sustainability efforts. Data in such a report would need to be normalized per capita or household and explain other factors that impact utility rates such as house size and annual temperature variations.
30	PDS	Collect information about greenhouse gas emissions and energy use through the State Environmental Policy Act (SEPA) Review process.	The SEPA Checklist already requires a project proponent to estimate the air emissions that will result from the project. King County asks project proponents to include greenhouse gas emissions in that estimate. See worksheet: http://www.metrokc.gov/permits/codes/pdf/Climatechangeimpactsworksheetaugust312007.pdf . An effort to collect this information should be rolled out first. This will set the stage for eventual regulation and requiring mitigation of impacts through the SEPA process.
Waste Management and Resource Conservation			
31	PDS	Employ PLACEs software or similar for future land use planning efforts (e.g. the next major Comprehensive Plan update).	PLACE ³ S, an acronym for PLAnning for Community Energy, Economic and Environmental Sustainability, is an innovative planning method that fully integrates focused public participation, community development and design, and computer-assisted quantification tools (GIS) to help communities produce plans that retain dollars in the local economy, save energy, attract jobs and development, reduce pollution and traffic congestion and conserve open space. PLACE ³ S creates an information base that functions as a common yardstick, empowering a community to compare components of each plan "apples-to-apples," make informed trade-offs, and arrive at a consensus. The consensus plan would be broadly supported, economically and environmentally realistic, make investment sense, and encourage Smart Growth benefits to be tracked and reported annually. For more info, see http://www.energy.ca.gov/places/index.html .

#	DEPT.	RECOMMENDATIONS	CONSULTANT NOTES
32	PW-SW PW-ES *	Expand existing efforts to reduce, reuse, and recycle in City offices, parks, and other facilities.	Build on existing plan to implement plastic bottle recycling in Twin Ponds Park. Extend program to additional parks and City facilities and the recycling of additional materials as feasibility issues are worked out and as funding is available. Current recycling program at City Hall should be emphasized and improved. Lake Forest Park currently offers bins for batteries and electronic waste at their City Hall.
33	F/IT *	Include in purchase guidelines preference/requirement for products that promote reduction and reuse (e.g. duplex copiers, durable goods); reduce consumption of raw materials (e.g. recycled content and recyclable materials) and present reduced risk to human and ecological health (non-toxic materials).	This is perhaps the most mature element of most EPP guidelines (Seattle, King County EPA)
34	PW-F/O PRCS	Provide convenient opportunities (prominent and labeled bins) for sorting, collecting, and composting solid waste streams in the community.	This recommendation has strong potential for engagement of volunteers.
35	PW-SW PW-ES *	Implement construction and business waste reduction outreach and incentives through the permitting process and municipal waste contract	Both King County and City of Seattle have had tremendous success using education and technical assistance to help reduce construction and business waste. Expedited permitting is a popular incentive with builders. The reduction of construction waste should be an important focus, e.g. free and early demo permit issuance for projects that recycle construction waste as well as outreach materials to promote building "deconstruction" and related recycling and reuse of materials. Permit incentives could include. Rate structure could encourage construction waste recycling. Currently there is no drop-off for commercial hazardous waste near Shoreline. At a minimum, information and outreach materials are needed on this issue.
36 *	PRCS PW-F/O	For high use operations including irrigation and park restrooms replace fixtures and equipment with the highest efficiency, cost-effective water conservation options available.	Examples include more efficient irrigation equipment; automatic low flow fixtures in park restrooms, grey water reuse systems, etc. Retrofit if funding is available, develop a phased plan for replacement or at a minimum require when existing equipment reaches end of serviceable lifespan. A supporting recommendation is to include expanded use of naturalized drought tolerant plantings in low use park areas. Fixture and equipment selection must take into consideration product performance, maintenance and replacement constraints and costs.

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37 *	PW-F/O	For retrofits and new construction of City indoor facilities, specify/replace fixtures with high efficiency, low flow alternatives.	Examples include automatic low flow fixtures in bathrooms, two-stage flush toilets, etc. Require for new facilities. For existing facilities, retrofit if funding is available, develop a phased plan for replacement or at a minimum require when existing equipment reaches end of serviceable lifespan. Fixture and equipment selection must take into consideration product performance, maintenance and replacement constraints and costs.
38	PRCS PW-F/O	Investigate the use of non-potable sources or non-potable uses, such as grey water reuse and rainwater catchment for toilet flushing.	There are a range of opportunities to save potable water use for indoor water consumption, from conserving water consumption overall, to replacing potable water used for non-drinking purposes, such as toilet flushing with grey water. Rainwater catchment for outdoor use/irrigation is less effective in our climate, because the rain comes mostly in the seasons when we don't need it. However, new Built Green residential project near Shoreline Community College includes rainwater catchment for irrigation and it can be used to supplement irrigation needs in some applications.
39	PW-SW PW-ES	Work with utilities to expand existing incentives and develop new incentives to reduce potable and irrigation water consumption.	For example, not all utility districts in Shoreline bill based on consumption, so there is no financial incentive to conserve and not all utility districts actively promote conservation. Shoreline Water District used to give out rain barrels at cost and such programs should be reinstated. Overall, more strategic direction and expansion of water and wastewater conservation programs is needed. City should meet with utilities and see what is planned and where they can partner.
40 *	PW-SW PW-ES	Implement residential waste incentives and requirements through the municipal waste contract and permit process. Expand community outreach and information efforts to reduce waste and recycle.	The recent CleanScapes contract is a major achievement in the City's efforts to reduce waste and improve recycling efforts. By linking the familiar three R's with the Sustainability Strategy in community outreach efforts it will both revitalize interest in three R's and bridge to other less familiar concepts. Specific requirements should be established for waste and recycling facilities in new residential construction.
GENERAL			
41	All	Create baselines for all Sustainability Strategy focus areas and implement indicator tracking system to track progress over time.	Implement sustainability indicators tracking system with indicators identified in Sustainability Strategy.
42	CMO	Create standard office procedures, training and	Represents a "quick win". Use the move to the planned new City Hall as a key opportunity for

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		department expectations that support sustainability goals; then measure, reward and promote individual and departmental achievement of these goals.	internal change. Employee of the quarter and other programs could be used to reward sustainability. Currently, there are no formal standards or clear employee and department expectations related to sustainability. Performance should be measured, and a “carrots rather than sticks” approach should be used to build and maintain support.
43	CMO	Establish a permanent green team or interdepartmental committee to focus on sustainability program management and sustainability techniques.	Current working structure of leadership team and technical working group could be formalized and enhanced. Establishing a “Sustainability Coordinator” is not recommended at this time due to budget constraints. It is very important to have clear leadership and emphasis at the highest levels of the City.
44	F/IT	Pursue funding to establish a key City staff position or contracted consultant related to sustainability.	The need for a Volunteer Coordinator position was mentioned several times by different people in staff interviews. Volunteers require organization and guidance to leverage this resource effectively. Other ideas included a mid or senior level Sustainability Coordinator Position to oversee the overall effort. Current budget needs and projections do not appear to support an additional general funded position.
45	F/IT	Develop a comprehensive environmental purchasing policy for all City purchasing decisions.	Represents a “quick win”. Use the move to the planned new City Hall as a key opportunity for internal change. Existing programs from King County, Seattle and elsewhere can be modified and adopted. Guidelines for specific areas should be separate and updatable.
46	ED C *	Create a green business certification and promotion program.	Existing sustainable business program is not a certification program and does not currently appear to be a priority. More emphasis, structure and focus would be helpful here. Consider stronger efforts to attract and promote environmentally friendly businesses.
47	PW PADS CS *	Provide expanded “how to” sustainability info to the community through varied approaches (e.g. mailers, event, website and city hall brochures)	Use the move to the planned new City Hall as a key opportunity to promote community outreach. City currently uses website effectively and regularly mails out information. Key area for improvement appears to be informational mailers. Plans appear to be in the works for this already, but time and resources are always an issue.
48	PDS *	Practice and promote green building and LID proficiencies in City building and planning staff.	Essentially a specific component of the larger and more encompassing recommendation #1, this is the highest training priority and has implications for all of the environmental focus areas and the larger community outreach effort, so it is being included here as well. By being “literate” in green building, city staff can be available to provide information at the permitting counter to those interested in green building and LID, and help when developers have innovative projects.

#	DEPT.	RECOMMENDATIONS	CONSULTANT NOTES
49	PDS PW	Provide incentives to the private sector to build to LEED, Built Green, or other sustainable building standards.	Essentially a specific component of the larger and more encompassing recommendation #2, this is a priority and has implications for all of the environmental focus areas and the larger community outreach effort, so it is being included here as well. Over forty jurisdictions in the country have enacted policies to incentivize the use of building standards. Most do this with the carrot: expedited permitting, tax credits, grants, technical assistance, density bonuses, FAR allowances tied to meeting a standard are examples. Both Issaquah and Kirkland for example allow a verified five star Built Green project to receive expedited permitting.
50	PDS	Provide worksheets on specific innovations for permitting clients. (e.g. greywater systems that meet code)	Essentially a specific component of the larger recommendation #2, this is a "quick win" that has implications for all of the environmental focus areas and the larger community outreach effort and is being included here as well. City of Seattle has produced informational sheets on innovative systems; these can be used as a model for Shoreline worksheets.

Department Acronyms:

C - Clerks

CMO – City Manager's Office

CS – Community Services

ED – Economic Development

F/IT – Finance and Information

Technology

HR – Human Resources

PDS – Planning and Development Services

PRCS – Parks, Recreation and Cultural Services

PW – Public Works

PW-E – Public Works-Engineering

PW-ES – Public Works-Environmental Services

PW-F/O – Public Works-Facilities/Operations

PW-S/A – Public Works-Streets/Aurora

PW-SW – Public Works-Surface Water



ATTACHMENT D:

DRAFT

Capacity Assessment Methodology Example

DRAFT Capacity Assessment Methodology with Descriptions

Potential Action	First Cost Premium	Lifecycle Cost Savings	Staffing Required to Implement	Operating Budget Impacts	Capital Budget Impacts	Internal Responsibility	External Responsibility	External Resources Necessary or Available	Required to Meet Existing Agreement	Notes
Develop Sustainable Purchasing Guidelines for All Staff	Negligible for the guidelines themselves. Item costs will generally vary from Low to Medium. Specific details TBD in Strategy.	Yes + Generally Negligible to Low. Varies by item. Details TBD	Generally No. In most cases will require a Negligible to Low training and time commitment of existing staff. Details TBD.	Yes, development and implementation of guidelines will have LOW operations budget impacts. Costs of the items themselves will vary. Details TBD.	N/A for guidelines themselves. Generally recommendations deal with non-capital items. Impacts to Capital Budget TBD more in Strategy.	Yes - Finance with support from others and guidance from the Strategy, TBD.	No - External responsibility very limited for this action. Implementation details will be included in report	Existing EPP will be discussed as models & Potential Partners will be identified	No, this item not required to implement Mayor's Climate Agreement or other specific commitment.	KO will estimate hours & cost for this item and implementation details will be included in this column.

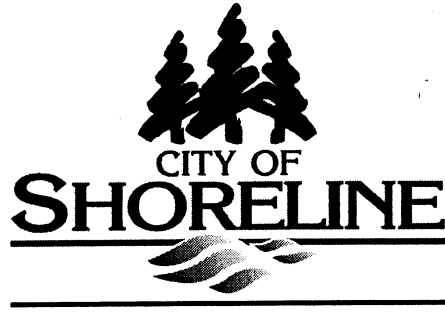
Cost Categories - Costs beyond conventional or current

Negligible up to 2 % over existing practices under \$5,000

Low Up to 5%

Medium Up to 30%

High Over 30%



ATTACHMENT E:

Timeline of Council Action and Public Input Opportunities

Timeline of Council Action and Public Input Opportunities

<u>Target Date</u>	<u>Description</u>	<u>Council Action</u>	<u>Public Input</u>
9-Jul-07	Contract Awarded	Approved contract award	
11-Oct-07	Community Conversation #1	Invited to attend	Input solicited on draft Strategy mission statement, framework guidelines and focus areas. World Café sessions to brainstorm possible actions and opportunities.
14-Nov-07	Community Conversation #2	Invited to attend	Public input on draft decision making tool, preliminary recommended actions, and indicators.
22-Jan-08	Council Update	Council comments requested on the draft framework and elements for the Strategy. Are we on the right track? Not yet ready for textual editing.	
17-Mar-08	DRAFT Environmental Sustainability Strategy to be provided to Council and the general public for review prior to public hearing, discussion, and adoption	Will be provided hard and electronic copies of the DRAFT for review and comment.	Electronic copy will be provided online of the DRAFT for review and comment. Hard copies will also be provided to the Planning Commission and Parks Board members.
27-Mar-08	Joint Planning Commission and Parks Board meeting to review and comment on DRAFT Strategy		Parks Board and Planning Commission opportunity to review and comment on DRAFT.
14-Apr-08	Council Discussion of DRAFT Strategy	Council opportunity to discuss the DRAFT Strategy.	
21-Apr-08	Council Public Hearing on DRAFT Strategy	Council to respond to Public Comment and direction to City staff on Strategy finalization.	Opportunity for official public comment on the DRAFT Strategy
30-Apr-08	FINAL Environmental Sustainability Strategy ready for Council.	FINAL Strategy conveyed to Council with Staff Report for Adoption.	FINAL Strategy available with Council Meeting materials for public information.
5-May-08	City Council Adoption of Final Environmental Sustainability Strategy	Earliest reasonable date for adoption.	

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CITY COUNCIL AGENDA ITEM
CITY OF SHORELINE, WASHINGTON

AGENDA TITLE: Process for Planning Commission Appointments for 2008 DEPARTMENT: Planning and Development Services PRESENTED BY: Joseph W. Tovar, FAICP, Director

PROBLEM/ISSUE STATEMENT:

The terms of the following five Planning Commissioners will expire on March 31, 2008:

- ◆ Michael Broili
- ◆ Will Hall
- ◆ David Harris
- ◆ Robin McClelland
- ◆ Chakorn Phisuthikul.

The four members whose terms are not up this year are Chair Rocky Piro, Vice-Chair Sid Kuboi, Michele Wagner and David Pyle.

The rules for Planning Commission Membership at SMC 2.20.020 (A) state: "...No member shall serve longer than two consecutive terms." Since David Harris and Robin McClelland have already served two consecutive terms, they would not be eligible for reappointment. The other three Commissioners are eligible for reappointment if they decide to reapply. The vacancies will be advertised February 4 through February 22, with the application period closing on Friday, February 22, 2008.

In the past, Council has selected a subcommittee from among its members of two or three Councilmembers to review the applications, conduct interviews, and make recommendations to the full Council regarding candidates. If Council chooses to again employ this process, the staff recommends that the subcommittee bring its recommendation to the full Council for action no later than the March 24, 2008 business meeting. The new Planning Commissioner(s) would take office at the April 3, 2008 regular meeting of the Planning Commission.

RECOMMENDATION

It is recommended that the City Council appoint a subcommittee to begin the review process for the Planning Commission applications.

Approved By: City Manager  City Attorney ____