Final Edits Summary Table

In response to June 9th, 2008 Council comments on June 4th revision of PROPOSED Shoreline Environmental Sustainability Strategy

Pages	Description	*Staff Notes* & Text Changes or Additions
3	Revisions to TOC page numbers and title of added conclusion section	"Final Thoughts" => "In Closing…"
7, 45, 77, 78	Photo replacements	Pg 7 – *Photo of city staff touring KB Gardens replaced with better photo. Seattle example of bio-swale replaced with new Shoreline Townhomes example.* Pg 45 – *garbage can photo replaced with photo of CleanScapes garbage truck* Pg 77 – *Photo of city staff touring KB replaced with one from page 7 originally.* Pg 78 – *Photo of Puget sound view moved to In Closing… pg 80 so Junco moved to this location, minor correction to text*
19, 48, 54, 55 &106	Reduction of toxics and pesticides not very obvious in strategy. Clarification added.	Pg. 19 – Develop and adopt clear guidelines, preferences and requirements for preferred environmental attributes such as durability, waste reduction, low toxicity and environmental safety. Pg 48 – deleted No Spray Zones in Richmond Beach as it is not closely related to resource conservation and waste reduction category Pg 54 – Added to "What is Shoreline doing already?" list • Natural Yard Care Program Pg 55 – No Spray Zones in Richmond Beach and other areas of the City • Natural Yard Care Program Pg 106 – *See attached revisions. Natural Yard Card program added as existing program with recommendation to expand.*
52	Fircrest property has major natural area in the city.	In addition, large natural areas are located on Shoreline Community College campus, Shoreline School District properties, ~~City of Seattle~~ Fircrest campus, and private property (e.g. The Highlands, Innis Arden, and other locations).
54	Lake Ballinger Basin Plan currently underway and should be integrated into a Natural Resources Action Plan when developed	Examples of documents to be synthesized include the Thornton Creek Watershed Plan, the Pending Lake Ballinger Basin Plan, Surface Water Master Plan, Parks and Open Space Plan, forest assessments, Critical Areas Inventory and Shoreline Master Program Inventory and Characterization Reports.
56	Quality and quantity of fish habitat is an excellent indicator of stream health	Acres of fish, stream, and wetland habitat and related buffers that are enhanced and/or restored (as compared to previous 4 yrs).
70	Image of Seattle Permits info sheet fuzzy	*Replaced with crisp image of document*
79-80	Council would like to see "Final Thoughts" conclusion to Chapter 4 before adoption.	*See staff report attachment for changes. Section renamed "In Closing…" and text provided with staff report for July 14th Council meeting. Suggestion to interview youth for this section, not feasible in the time that was available for these revisions.*
91	Why just "a" demonstration site? Why limited to one?	*No change to text. This is a starting place and does not limit the City to just one demonstration project. One demonstration project has been part of Goal 6 since it was adopted and we are progressing towards that.*
124	Connection of Shoreline's regional trails to other regional systems and destinations such as Jackson Park Golf Course important part of Recommendation 28	Improve identification, mapping, designation, surfacing and signage of existing trails. Develop a plan for future trail expansion and regional connections.
126	"Consider advocating" is not strong enough. Please change word choice for #34	~~Consider advocating~~ Advocate for a Metro "feeder" route to improve east-west transit and support Aurora backbone.

Final Edits Summary Table - continued

128	Is provision of bus passes part of the Commute Trip Reduction program?	*Yes. No change to text needed.*
164	Chamber of Commerce's new program should be mentioned here and ECOSS contract not permanent so change.	Requires establishment of green business program. Sustainable Business Extension program ~~(contracted to ECOSS by the City)~~ does not currently have a CERTIFICATION component, but the Shoreline Chamber of Commerce has started developing a Green Business Program. City 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~~ the Sustainable Business Extension program.
181	Change to refer to ECOSS-like or City's program rather than ECOSS specifically. Correct spelling of Maryn's name.	A green-business program can be used to encourage sustainable practices within the private sector with minimal City investment. The City of Shoreline ~~already~~ currently partners with the Environmental Coalition of South Seattle (ECOSS) to help educate Shoreline businesses regarding sustainable business practices. Through this Sustainable Business Extension Service ECOSS provides information and education on industrial innovations that will lead to energy and water conservation, and pollution prevention, in small- to medium-size businesses. According to the Shoreline Economic Development Program, businesses have been slow to take advantage of ~~ECOSS~~ the Sustainable Business Extension Service. In late 2007, King County awarded a grant to the Shoreline Chamber of Commerce for development of a sustainable business program. Chamber of Commerce board member Maryn Wynne, also on the board of the Shoreline Solar Project, wrote the grant proposal and is directing the partnership program.
183-184	Image of Seattle Permits handout fuzzy	*Replaced with crisp copy of document.*

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Ten Guiding Principles

As a first step in this process, ten Guiding Principles were developed and organized into two areas of emphasis. Strategic Guidance principles address overall effort and process, and Action Area principles address key substantive aspects of initiatives.

STRATEGIC GUIDANCE

1 **Sustainability will be a Key Factor in Policy Development**
The City will establish policy decisions and priorities considering their long-term impacts on the natural and human environment.

2 **Lead by Example and Learn from Others**
The City will lead by example and encourage other community stakeholders to commit to sustainability. We will learn from others' success and design our programs, policies, facilities and practices as models to be emulated by other organizations and individuals.

Dr Arthur Kruckeberg and his wife Mareen created a four-acre collection of rare and native plants now owned by the City of Shoreline.

3 **Environmental Quality, Economic Vitality, Human Health and Social Benefit are Interrelated Systems**
The City recognizes that a sustainable community requires and supports economic development, human health and social benefit. Human health depends on the environmental, economic and social health of our communities.

Natural landscaping at Shoreline Townhomes on Echo Lake. Grass bioswale connects drive-way to new raingarden.

4 **Community Education, Participation and Responsibility are Key Elements**
The City will promote community awareness, responsibility and participation in sustainability efforts through public outreach programs and other opportunities for change. The City will serve as catalyst and facilitator for partnerships to leverage change in the broader community.

5 **Commitment to Continuous Improvement**
The City will ~~regularly evaluate~~ apply adaptive management to its efforts and clearly communicate findings to the Shoreline community - individuals, businesses, non- profits, utilities, and City decision makers ~~and stakeholders~~. Analytical and monitoring tools and performance targets will be used to ensure the best possible investments in the future are made.

STRATEGIC DIRECTIONS

Adopt a more aggressive green fleet policy
Require alternative fuel vehicles, 45 mpg or higher for fossil fuel vehicles and most efficient cost effective option available for exempt vehicle types. The current policy of replacing 2% of the vehicles annually with alternative fuel vehicles will not achieve the commitments made in the U.S. Mayor's Climate Protection Agreement. **6**

Adopt a clear and aggressive green building policy
Lead by example. For all new City construction, require at a minimum the US Green Building Council's Leadership in Energy and Environmental Design (LEED) Silver standard and the American Society of Heating, Refrigeration and Air Condition Engineers (ASHRAE) Commissioning standard. For existing City buildings, require upgrade of building systems and fixtures to meet Energy Star, using most efficient options. This is required to effectively meet the Mayor's Climate Agreement. **7**

Forested slopes merge into shoreline and railroad tracks.

Adopt a comprehensive environmental purchasing policy
Develop and adopt clear guidelines, preferences and requirements for preferred environmental attributes such as durability, waste reduction, low toxicity and environmental safety. This is a relatively "quick-win" that will enhance sustainability efforts across departments. **8**

Strengthen internal recycling efforts and community outreach
Expand existing efforts to reduce, reuse and recycle in City offices, parks and other facilities with dedicated containers, more opportunities and more training. Additional "quick-wins" are available in City facilities and operations. With the CleanScapes transition occurring, the time is right to expand messaging and outreach on this issue in City facilities as well as out in the community. **9**

A vegetated swale at High Point in West Seattle.

Structure and prioritize natural resources enhancement
A focused effort is needed to establish City priorities, targets, partners and funding mechanisms. A specific plan to identify and prioritize enhancement of our natural resources ~~Natural Resources Action Plan~~ would improve the City's ability to obtain grant funding and synthesize existing watershed and functional plans. Two local examples of focusing and leveraging resources are Lake Forest Park and Kirkland. In the medium-term, the restructuring of surface water management utility fees and an enterprise fund should be considered for increasing stream, wetland and forest canopy enhancement efforts. **10**

The following sections of the Strategic Directions chapter contain more detailed discussion of each of the five Focus Areas that are general priority areas and provide the organizational framework for this strategic plan.

FOCUS AREA 4: RESOURCE CONSERVATION & WASTE REDUCTION

WHY IS IT IMPORTANT?

The simplest and most cost-effective way to conserve resources – both water and material resources – is to simply not use them. However, in the real world, resources must be consumed, and inevitably, waste is generated in every process from the simple act of eating a meal to building a home.

The Sustainability Strategy focuses on efficient resource use and appropriate means of dealing with waste. The result will put less of a burden on the municipal infrastructure, as well as provide opportunities for businesses and residents to reduce costs due to waste disposal.

Economic efficiencies and environmental benefits can be realized through improved purchasing policies and operations practices. In short, the less you use, the more you save.

In addition, this focus area provides City staff and the community with a very tangible way to become participants in the greater Sustainability Strategy. The public's ready awareness of the three "R" principles, reduce, reuse and recycle, gives this focus area a "jump start" - thereby providing leverage for the more complex areas of sustainability addressed in the strategy.

CleanScapes

CleanScapes, based in Seattle, Washington, provides sustainable solid waste and recycling collection and comprehensive StreetScape management services to municipalities, commercial properties, business improvement districts, and stadiums in Washington, Oregon, and California.

Beginning March 1, 2008, CleanScapes is the new garbage and recycling company for the City of Shoreline. CleanScapes was selected by the City of Shoreline through a competitive process at the end of 2007. New services include:

- *Recycling for businesses and residents;*
- *Weekly garbage collection;*
- *Every-other-week recycling;*
- *Fluorescent tube and bulb collection (residences only);*
- *Year round, every-other-week food scrap and yard debris collection;*
- *Bulky waste (appliances, furniture) collection; and*
- *Outreach and education for businesses.*

Cleanscapes' garbage trucks are fueled by biodiesel manufactured from reclaimed fryer oil from their our restaurant customers.

FOCUS AREA 4: RESOURCE CONSERVATION & WASTE REDUCTION

(Recommendations continued)

- **For high use operations including irrigation and park restrooms replace fixtures and equipment with the highest efficiency, cost-effective water conservation options available.**
- **For retrofits and new construction of City indoor facilities, specify/replace fixtures with high efficiency, low flow alternatives.**
- **Investigate the use of non-potable sources or non-potable uses, such as grey water reuse and rainwater catchment for toilet flushing.**
- **Work with utilities to expand existing incentives and develop new incentives to reduce potable and irrigation water consumption.**
- **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.**

Please see Appendix A for a complete list of recommendations, Appendix B for the full evaluation of existing programs and Chapter IV for implementation capacity and resources.

Existing Program Evaluation: Resource Conservation & Waste Reduction

Existing program to ***Ensure Continuation***

- *Pesticide-Free Parks*
- *Free Wood Chips at Hamlin Park*
- *Battery and Techno Waste Recycling*
- *City of Shoreline Stormwater Program and Standards Update*

Existing program areas where the City should ***Expand Current Efforts***

- *~~No Spray Zones in Richmond Beach~~*
- *Municipal Compost Facility*
- *Business Solid Waste Reduction, Recycling and Resource Conservation Program*
- *Clean and Green Car Wash Kits*

Existing program area where the City should ***Modify Overall Approach***

- *Solid and Hazardous Waste Management Program*

Please see the Existing Program Evaluation description on page 21 for category definitions. See Appendix B for full details on program evaluation.

City of Shoreline recycling instructions.

FOCUS AREA 5: ECOSYSTEM MANAGEMENT & STEWARDSHIP

WHY IS IT IMPORTANT?

Current trends place the health and future of our remaining natural areas and systems at risk: reduction in tree canopy, degradation of surface water quality, declining forest health, fragmentation of upland habitat and degradation of stream and wetland habitats. Although the scope of these problems – and the range of solutions needed to address them – transcend the purpose and limits of this strategy, new and existing regional, landscape-scale planning across jurisdictional boundaries will be supported with these Focus Area recommendations. ~~However, as part of the strategy development process, the project team has identified key strengths, weaknesses, threats and opportunities in this Focus Area.~~

Ecosystem management and stewardship preserve and enhance valuable resources and build on existing initiatives. They also complement efforts in the other Focus Areas, for example, effective stewardship of our tree canopy can help reduce our carbon footprint. These strategies will help address the impacts of past practices and ensure that future generations can enjoy the City's natural resources. Stewardship efforts must engage the community - building human capital to support a sustainable future.

Good stewardship demands that we both protect and actively manage our dynamic local environment. In addition to providing habitat for plants and animals, we rely on ecosystem functions to meet a variety of human needs, including flood control, temperature moderation, clean water, carbon sequestration and oxygen production. Our natural areas are community treasures – they are highly valued recreation and aesthetic resources and they remind us of our link to the natural world.

Natural Areas in Shoreline

The City includes the Puget Sound shoreline and several lakes and ponds, such as Echo Lake, Hidden Lake, Ronald Bog and Twin Ponds. Streams in Shoreline include Boeing Creek, McAleer Creek, Storm Creek, Thornton Creek and various smaller streams and tributaries. The City of Shoreline manages approximately 345 acres of parks, open spaces and trails, of which approximately 100 acres are natural areas. In addition, large natural areas are located on Shoreline Community College campus, Shoreline School District properties, Fircrest campus and private property (e.g. The Highlands, Innis Arden and other locations).

Boeing Creek in Shoreline.

FOCUS AREA 5: ECOSYSTEM MANAGEMENT & STEWARDSHIP

WHAT IS SHORELINE DOING ALREADY?

Key existing ecosystem management and stewardship efforts by the City include:

- Forest health assessment in several parks;
- 2006 Park Bond funding for acquisition of 25 acres of open space;
- Update of the Critical Areas Ordinance (2006);
- Continued participation in Water Resource Inventory Area (WRIA) 8 Chinook Salmon Regional Recovery Plan and implementation;
- Ivy O.U.T. (Off Urban Trees) program;
- Various habitat restoration projects in partnership with the community; and
- The Neighborhood Environmental Stewardship Team (NEST) program.
- Natural Yard Care Program

OBJECTIVES

The objectives for this Focus Area work to enhance and restore forest and watershed systems, and provide a means of encouraging, sustaining and measuring long-term progress. Specifics include systematically improving the hydrological and habitat conditions of the City's watersheds over time, measuring and conserving tree canopy and forest health citywide and establishing effective programs for ongoing stewardship. Measurable performance targets should be established and backed up with sufficient investment and monitoring to ensure results.

Key Recommendation: Develop a Natural Resources Action Plan

The key recommendation in this Focus Area is to consider the creation of an appropriate framework, such as a Natural Resources Action Plan. Such a plan would synthesize and prioritize the various improvements identified in current planning documents prepared by various agencies and City departments and identify key gaps. Examples of documents to be synthesized include the Thornton Creek Watershed Plan, the pending Lake Ballinger Basin Plan, Surface Water Master Plan, Parks and Open Space Plan, forest assessments, Critical Areas Inventory and Shoreline Master Program Inventory and Characterization Reports. The City of Kirkland is a good model for this approach. In conjunction with this effort, the City should establish specific targets and funding levels for natural area restoration so priorities can be established, performance monitored and the overall objectives achieved.

Please see Appendix A and Chapter IV for implementation capacity and resources.

A view of the Puget Sound from Shoreline.

FOCUS AREA 5: ECOSYSTEM MANAGEMENT & STEWARDSHIP

RECOMMENDATIONS

The strategy seeks to employ creative approaches and utilize increased participation by volunteers to accomplish these objectives where feasible. Recommended ways to accomplish the objectives include:

- **Synthesize existing recommendations and set priorities and targets in a Natural Resources Action Plan;**
- **Prioritize forest health data collection and improvement projects;**
- **Enhanced public outreach and education information and programming for private property owners;**
- **Creating a sustainability position at the City (e.g. volunteer coordinator) to coordinate activities and leverage greater community support;**
- **Green Infrastructure initiatives such as the Green Streets program, which can help address stormwater from existing development;**
- **Revised City standards that promote Low Impact Development (LID)/Green Building;**
- **Stewardship partnerships with the Cascade Land Conservancy's Green Cities Initiative, private landowners and institutions such as the Shoreline School District (e.g. senior year volunteer requirements) and Shoreline Community College; and**
- **Identification of underutilized City Park lands for ecological improvements.**

Existing Program Evaluation: Ecosystem Stewardship

Existing programs to ***Ensure Continuation***

- *Regional Roads Maintenance Forum*
- *Adopt-a-Road and Adopt-a-Trail Programs*
- *Critical Areas Ordinance*
- *WRIA 8 Participation*
- *Pesticide-Free Parks*
- *City of Shoreline Stormwater Program and Standards Update*
- *Storm Drain Medallions & Stenciling*

Existing program areas where the City should ***Expand Current Efforts***

- *Earth Day Celebration*
- *Neighborhood Environmental Stewardship Team*
- *Environmental Mini Grant Program*
- *Urban Forest Assessment Planning*
- *Clean & Green Car Wash Kits*
- *Ivy OUT Volunteer Program*
- *No Spray Zones in Richmond Beach and other areas of the City*
- *Natural Yard Care Program*

Existing program areas where the City should ***Modify Overall Approach***

- *Habitat Restoration Projects*
- *Open Space Acquisition*
- *Green Street Demonstration*

Please see the Existing Program Evaluation description on page 21 for category definitions. See Appendix B for full details on program evaluation.

A seal pup on the beach at Point Wells.

OBJECTIVE 18
Improve/Restore Critical Areas and Habitat

TARGET

Upward trending number of acreage enhanced, specific goal TBD based on City input.

INDICATOR

Acres of fish, stream, and wetland habitat and related buffers that are enhanced and/or restored (as compared to previous 4 yrs).

Recommendations

1. Synthesize existing recommendations and set priorities and targets in a Natural Resources Action Plan.
2. Pursue funding for Volunteer Coordinator.
3. Implement the Cascade Land Conservancy's Green Cities Program by prioritizing data collection improvement projects and increasing use of volunteers for improvement projects.

OBJECTIVE 19
Improve Health of Public Forests

TARGET

Upward trending number of acreage treated, specific acreage goal TBD based on City input.

INDICATOR

Acres (and percentage) of public forests enhanced that year (as compared to previous four years).

Recommendations

1. Identify underutilized park lands for habitat improvements, infiltration, water treatment and other compatible purposes.
2. Prioritize forest health data collection and improvement projects – emphasize partnerships and increasing the acreage analyzed and enhanced.
3. Pursue funds or adjust responsibility and priorities to create space in the budget for a sustainability position.
4. Public outreach for private property owners.

Establish a Residential Green Building Program (#22).

WHY A PRIORITY?

The establishment of a green building program at the City will promote the adoption of these concepts in the private sector through public outreach, informed service and assistance at the permit counter, and improved permit processing. This priority goes hand in hand with two other recommendations discussed in this Chapter, including prioritizing training of City staff in the concepts of green building and LID (Recommendation #21), as well as revising zoning and engineering standards to be more consistent with the City's green building and LID goals (Recommendation #23). Customer assistance materials, including standard details, code compliance worksheets, LEED and Built Green checklists and other information are needed as part of this program. Providing information to homeowners and builders on green building practices, resources and opportunities will help increase awareness and adoption of green building concepts. At the same time, establishing expertise and a formal process or pathway for green building and LID projects at the City will improve the speed and reduce the overall effort of processing these permits.

IMPLEMENTATION CONSIDERATIONS

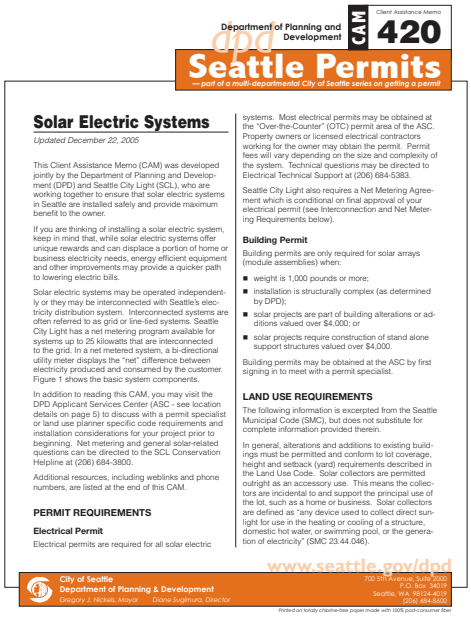
According to City staff, a $20,000 grant has been awarded to the City to support outreach by PDS and Public Works – Environmental Services staff in 2008. Based on discussions with the City, staff time needed to get this project up and running will be approximately .5 of an FTE, spread across the Planning and Development Services Department and Environmental Services. This does not include the time necessary to implement Recommendation #21 and #23 in Appendix A. However, no additional FTEs need to be hired.

Start-up and maintenance of the program can be rolled into the existing staff duties. This means, however, that other responsibilities will need to be adjusted within the Planning and Development Services work plan and some other code review may be streamlined to accommodate this program.

Planning offices wanting to encourage private green development generally provide incentives or educational tools to facilitate this. One example includes the City of Seattle's practice of producing client informational worksheets on innovative concepts to support projects that want to employ such systems. These worksheets provide an easy pathway for permitting approval by setting forth what is acceptable.[8]

Another example includes a sustainable building and infrastructure policy passed by the City of Issaquah in December 2004. Resolution #2004-11 provides free professional consultation to developers intending to use LEED. Also, such projects are bumped to the front of the building permitting queue.

6 http://web1.seattle.gov/DPD/CAMs/CamLIst.aspx



Department of Planning and Development

CAM 420

Client Assistance Memo

dpd Seattle Permits

— part of a multi-departmental City of Seattle series on getting a permit

Solar Electric Systems

Updated December 22, 2005

This Client Assistance Memo (CAM) was developed jointly by the Department of Planning and Development (DPD) and Seattle City Light (SCL), who are working together to ensure that solar electric systems in Seattle are installed safely and provide maximum benefit to the owner.

If you are thinking of installing a solar electric system, keep in mind that, while solar electric systems offer unique rewards and can displace a portion of home or business electricity needs, energy efficient equipment and other improvements may provide a quicker path to lowering electric bills.

Solar electric systems may be operated independently or they may be interconnected with Seattle's electricity distribution system. Interconnected systems are often referred to as grid or line-tied systems. Seattle City Light has a net metering program available for systems up to 25 kilowatts that are interconnected to the grid. In a net metered system, a bi-directional utility meter displays the "net" difference between electricity produced and consumed by the customer. Figure 1 shows the basic system components.

In addition to reading this CAM, you may visit the DPD Applicant Services Center (ASC - see location details on page 5) to discuss with a permit specialist or land use planner specific code requirements and installation considerations for your project prior to beginning. Net metering and general solar-related questions can be directed to the SCL Conservation Helpline at (206) 684-3800.

Additional resources, including weblinks and phone numbers, are listed at the end of this CAM.

PERMIT REQUIREMENTS

Electrical Permit

Electrical permits are required for all solar electric systems. Most electrical permits may be obtained at the "Over-the-Counter" (OTC) permit area of the ASC. Property owners or licensed electrical contractors working for the owner may obtain the permit. Permit fees will vary depending on the size and complexity of the system. Technical questions may be directed to Electrical Technical Support at (206) 684-5383.

Seattle City Light also requires a Net Metering Agreement which is conditional on final approval of your electrical permit (see Interconnection and Net Metering Requirements below).

Building Permit

Building permits are only required for solar arrays (module assemblies) when:

- weight is 1,000 pounds or more;
- installation is structurally complex (as determined by DPD);
- solar projects are part of building alterations or additions valued over $4,000; or
- solar projects require construction of stand alone support structures valued over $4,000.

Building permits may be obtained at the ASC by first signing in to meet with a permit specialist.

LAND USE REQUIREMENTS

The following information is excerpted from the Seattle Municipal Code (SMC), but does not substitute for complete information provided therein.

In general, alterations and additions to existing buildings must be permitted and conform to lot coverage, height and setback (yard) requirements described in the Land Use Code. Solar collectors are permitted outright as an accessory use. This means the collectors are incidental to and support the principal use of the lot, such as a home or business. Solar collectors are defined as "any device used to collect direct sunlight for use in the heating or cooling of a structure, domestic hot water, or swimming pool, or the generation of electricity" (SMC 23.44.046).

www.seattle.gov/dpd

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The City of Seattle's Client Assistance Memo.

IMPLEMENTATION RESOURCES

Green Permitting Processes reward projects that are green, and can encourage conventional projects to go green. As pointed out earlier in this chapter, the City of Issaquah passed a resolution in December 2004 that provides technical assistance and expedited permitting. Earlier this year, Kirkland enacted a similar policy. Other innovative examples include Chicago and Santa Monica. Chicago combines reduced planning fees in combination with expedited permitting.

For green permitting to work effectively, Shoreline Planning and Building Department staff must be proficient in green building. A natural complement to reviewing plans will be providing information/education to development clients on approved green technologies. The City of Austin provides a full kit of resources to developers and builders that includes design assistance and workshops. The City of Santa Barbara's building department is developing an educational kiosk that provides builders information on the local Built Green program and its relationship with city processes.

Also as mentioned earlier in this chapter, the City of Seattle provides Client Assistance Memos for a variety of development strategies. An example – Green Parking Lots – is included as Appendix F. Made available both electronically and at permit counters, these technical resources can help promote green building without placing undue additional burden on staff.

City of Shoreline staff tour the Kruckeberg Gardens.

Green Building Code(s). Sustainable design strategies are considered by Shoreline's permitting department on a case-by-case basis – no different than a conventional building permit. New, unfamiliar strategies and technologies must be researched and vetted, which often delays processing. Additionally, Shoreline does not emphasize green building beyond IBC and State requirements such as the Washington State Energy Code (which is more stringent than IECC), citing a lack of resources dedicated to code revisions and enforcement.[13]

However, resource-constrained departments such as Shoreline's can implement performance standards that do not require significant code changes and that are compatible with IBC standards. The key to encouraging green building from the permitting side, according to the International Code Council, is increasing proficiency among permitting and review staff so that new green building strategies can be quickly reviewed and accepted or denied, thereby placing no undue additional burden on developers.

Ongoing development of the IECC, the National Green Building Standard (for residential construction), and ASHRAE/IESNA/USGBC 189 *Standard for the Design of High-Performance Green Buildings Except Low-Rise Residential Buildings*, are making it increasingly possible for the full range of concerns associated with sustainable and environmentally responsible building to be properly addressed.

13 The International Code Council (ICC), a membership association dedicated to building safety and fire prevention, develops the codes used to construct residential and commercial buildings. Most U.S. cities, counties and states that adopt codes choose the International Codes developed by the ICC, specifically the International Building Code (IBC). Additionally, the U.S. Department of Energy continues to reference the International Energy Conservation Code (IECC) as the benchmark for conserving resources used in construction and daily living.

With regard to the IECC, more performance-based methods will be incorporated. The result will be a range of thresholds, up to and including the goal envisioned by the Architecture 2030 Challenge (which aims to reduce carbon dioxide emission due to combustion of fossil fuels in buildings to net zero by the year 2030)[14] that will allow individual jurisdictions to designate achievable levels of energy conservation with few, if any, code amendments. This will, in turn, eliminate redundant or even contradictory regulations and levels of enforcement.

BUSINESS PARTNERSHIPS

Green Business Certification may be one of the best ways to engage Shoreline's business community in the Sustainability Strategy. The City of Shoreline already partners with the Environmental Coalition of South Seattle (ECOSS) to help educate Shoreline businesses regarding sustainable business practices.

ECOSS provides information and education on industrial innovations that will lead to energy and water conservation and pollution prevention in small- to medium-size businesses. According to the Shoreline Economic Development Program, businesses have been slow to take advantage of ECOSS' services.

In late 2007, King County awarded a grant to the Shoreline Chamber of Commerce for development of a sustainable business program. The Chamber is seeking to use the grant to create a "one-stop shop" to educate businesses to be more efficient – to use less, waste less, and save money – and to be recognized for sustainability efforts.

Shoreline can also use existing resources to promote sustainable business practices. Puget Sound Energy and Seattle City Light can provide data that can be used to create an overall "business footprint" for Shoreline businesses. This may be used to encourage businesses to pursue sustainable business strategies and take advantage of resources in order to promote their business and save money through operations and maintenance efficiencies.

The Cities of Kirkland, Santa Monica, and several in the Bay Area are good examples of municipalities that have developed green business certification programs in partnership with the business community.

Junco enjoying the day in Shoreline's urban forests.

14 http://www.architecture2030.org/

INVENTORY ITEM	ANALYSIS	RECOMMENDATION
Land Use and Development - continued		
City Buildings Operations Practices and Policies – This is not necessarily sustainable now, but future decisions should be made to reduce the carbon/ecological footprints of our buildings, purchasing decisions, and standard operations.	**Modify Overall Approach:** This is a major area of opportunity, as reflected in Recommendations. Specific targets should be adopted, and as mentioned above, City Hall is a great way to kick off all new initiatives, including public outreach and possibly new requirements for developers.	**#14**: Engage in Seattle City Light green power program (Green Up). As part of annual budget planning, increase proportion of green power purchase to 100%. **#37**: Expand existing efforts to reduce, reuse, and recycle in City offices, parks, and other facilities. **#38**: Include in purchase guidelines preference/requirement for products that promote reduction and reuse; reduce consumption of raw materials; and, present reduced risk to human and ecological health (non-toxic materials). **#3**: Create standard office procedures, training and department expectations that support sustainability goals; then measure, reward and promote individual and departmental achievement of these goals. **#4**: Establish a permanent green team or interdepartmental committee to focus on sustainability program management and sustainability techniques. **#6**: Develop a comprehensive environmental purchasing policy for all City purchasing decisions.
Toxics Reduction		
No Spray Zones in Richmond Beach (PW) – Based on community interest, the City of Shoreline initiated a pilot "No Spray Zone" in the Richmond Beach neighborhood in 2004. The City agreed not to spray pesticides in the right-of-way for four years, and local residents agreed to maintain the six-inch area adjacent to the road pavement.	**Expand Current Efforts:** Increase awareness of this program and make an explicit offer to expand it to other communities if they are interested.	**#7**: Provide expanded "how to" sustainability information to the community through varied approaches (e.g. mailers, events, website and City Hall brochures).
Natural Yard Care Program (PW) - This program is currently limited to outreach during the annual Earth Day Celebration and about three neighborhood workshops annually. The annual event includes informational booths, workshops, and free tools given away.	**Expand Current Efforts:** Surveys have indicated behavior change as a result of this program to date. Opportunities exist to expand program to include additional workshops and demonstration gardens at the new City Hall and other City properties.	No specific recommendations in Strategy for expansion of this program, but grant funding is currently being pursued for expansion of this program.
Pesticide-Free Parks (PCS) – The City of Shoreline is proud to say that it makes every effort to not use pesticides or herbicides in the maintenance of City parks. Chemical pesticide or herbicide use is prohibited for use near City-owned critical areas such as streams and wetlands. The current Shoreline Parks and Maintence Standards manual includes best management practices from the Tri-County Integrated Pest Management Model Policy.	**Ensure Continuation (As Is):** Program is working well. Possible future efforts might include the creations of specific lists of banned products and preferred providers of environmentally sustainable products. Make lists publicly available. Adopt new best management practices when they are safe, reliable and cost effective.	**#38**: Include in purchase guidelines preference/requirement for products that promote reduction and reuse; reduce consumption of raw materials; and, present reduced risk to human and ecological health (non-toxic materials). **#2:** Create standard office procedures, training and department expectations that support sustainability goals; then measure, reward and promote individual and departmental achievement of these goals.

FOCUS AREA 3: Sustainable Development & Green Infrastructure *continued*

#	POTENTIAL ACTION	FIRST COST PREMIUM	LIFECYCLE COST SAVINGS	BENEFITS	ADDITIONAL STAFF OR CONSULTANT REQUIRED	CITY OPERATING BUDGET COSTS
27	**Expand and reorient the existing sidewalk improvement program to focus on linking destinations and connectivity.**	LOW to MEDIUM. Revise the Transportation Master Plan.	No direct savings.	Would improve sidewalk continuity and overall walkability in targeted areas. Encourages walking and healthier lifestyles.	Depends if consultant retained to revise Transportation Master Plan. However, revision is planned.	NEGLIGIBLE
28	**Improve identification, mapping, designation, surfacing and signage of existing trails. Develop a plan for future trail expansion and regional connections.**	MEDIUM to HIGH costs associated with improvement plan.	No direct savings.	Would improve safety and comfort of user, and potentially increase trail usage. Encourages walking and healthier lifestyles.	Yes. Trail improvements likely contracted out. Staff time required to coordinate effort.	LOW
29	**Strengthen the bike and pedestrian facility elements to strategize a network.**	NEGLIGIBLE. Rolled into Transportation Plan Update.	Not directly. More bicycle and pedestrian trips means less car trips, precluding road widenings and other infrastructure investments.	Potentially better mode split and improved air quality. Non-motorized improvements encourage walking and healthier lifestyles.	Potential for outside assistance. Staff time required to do updating, but update planned.	NEGLIGIBLE
30	**Update the Transportation Master Plan (TMP) and provide a stronger link to the Land Use Element in the Comp Plan.**	NEGLIGIBLE. Staff time req to do updating, but update already planned.	No direct savings.	More consistency & coordination among plans would result in better implementation of planning goals.	NEGLIGIBLE. Staff time required to do updating, but update planned.	NEGLIGIBLE

24 http://www.bicyclealliance.org/saferoutes/minigrants.phprg/saferoutes/minigrants.php
25 http://www.wildliferecreation.org/wwrp-projects
26 http://www.wsdot.wa.gov/ta/operations/localplanning/pdf/GMA_Ammend.pdf

FOCUS AREA 3: Sustainable Development & Green Infrastructure *continued*

#	POTENTIAL ACTION	FIRST COST PREMIUM	LIFECYCLE COST SAVINGS	BENEFITS	ADDITIONAL STAFF OR CONSULTANT REQUIRED	CITY OPERATING BUDGET COSTS
31	**Identify clear and specify near- and long-term priorities for transit improvements as part of the TMP process.**	NEGLIGIBLE. Part of TMP update process.	No direct savings.	Potentially improved transit service. Priority setting is needed to coordinate actions, develop momentum and achieve results.	Yes. May require funding for increased lobbyist or new position.	NEGLIGIBLE
32	**Advocate for a revised Sound Transit Phase II Plan (ST2) which includes improvements that serve the City of Shoreline.**	LOW to MEDIUM depending on level of involvement.	No direct savings. Improved transit Will encourage smart growth investment & reduce carbon emissions.	Improved transit means better mode split. Improved transit services would result in less car use, improved air quality, etc.	Yes. May require funding for increased lobbyist or new position.	LOW to MEDIUM
33	**Advocate for a single, integrated and continuous bus rapid transit system on Aurora Ave. (SR 99) between Everett and Seattle.**	NEGLIGIBLE	No direct savings.	Improved transit creates better mode split. Improved transit services would result in less car use, improved air quality, etc.	Yes. May require funding for increased lobbyist or new position.	NEGLIGIBLE
34	**~~Consider advocating~~ Advocate for a Metro "feeder" route to improve east-west transit and support Aurora backbone.**	NEGLIGIBLE	No direct savings.	Improved transit = better mode split. Improved transit services would result in less car use, improved air quality, etc.	Yes. May require funding for increased lobbyist or new position.	NEGLIGIBLE

27 http://transit.metrokc.gov/
28 http://www.soundtransit.org/
29 http://commtrans.org/

City Operations, Practices & Outreach		
1)	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.
2)	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, but the Shoreline Chamber of Commerce has started developing a Green Business Program. City 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~~ the Sustainable Business Extension program.
Energy & Carbon Reduction		
3)	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 or similar) -- 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.
	Dept/Data Source:	PW-F/O or PCRS – whoever manages each facility. Data from PSE and SCL bills or directly from utility companies.

Note: 1) the number (#) assigned to each recommendation is for reference purposes only and is not intended to indicate priority or sequence. The number used here does not correlate with the numbers used for the recommendations in this Strategy. 2) FI – before a number means that the indicator is more involved to develop and is reserved as a potential Future Indicator for consideration.

Department Acronyms:

C – Clerks
CMP – City Manager's Office
CS – Community Services
ED – Economic Development
F – Finance
HR – Human Resources
IT – Information Technology
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

of providing assistance with limited resources. For example, the City of Seattle provides Client Assistance Memos for a variety of development strategies. CA Memos include design strategies and code compliance considerations. For a full list of City of Seattle CA Memos, visit http://web1.seattle.gov/DPD/CAMs/CamList.aspx. An example – Green Parking Lots – is included as Appendix 1. Made available both electronically and at permit counters, these technical resources can help promote green building without placing undue additional burden on staff.

Business Partnerships

Green Business Certification

A green-business program can be used to encourage sustainable practices within the private sector with minimal City investment. The City of Shoreline ~~already~~ currently partners with the Environmental Coalition of South Seattle (ECOSS) to help educate Shoreline businesses regarding sustainable business practices. Through this Sustainable Business Extension Service ECOSS provides information and education on industrial innovations that will lead to energy and water conservation, and pollution prevention, in small- to medium-size businesses. According to the Shoreline Economic Development Program, businesses have been slow to take advantage of ~~ECOSS~~ the Sustainable Business Extension Service.

In late 2007, King County awarded a grant to the Shoreline Chamber of Commerce for development of a sustainable business program. Chamber of Commerce board member Maryn Wynne, also on the board of the Shoreline Solar Project, wrote the grant proposal and is directing the partnership program.[2] The Chamber is seeking to use the grant to create a "one-stop shop" to educate businesses to be more efficient – to use less, waste less, and save money – and to be recognized for sustainability efforts.

The Chamber is organizing a committee to develop the mission and scope of the program, and to identify key stakeholders. Interested parties include CleanScapes (the City's solid waste contractor), Seattle City Light, and Puget Sound Energy. The Chamber is also working with Shoreline Community College to determine opportunities for a partnership in conjunction with the College's increased focus on alternative energy. Next steps include branding – creation of a logo and website – and creation of an implementation and administration plan.

Some other municipalities are making sustainable businesses the centerpiece of their economic development programs, including Kirkland.

Kirkland Green Business Program

The Kirkland Green Business Program is an incentive program created in partnership between the City of Kirkland, Kirkland Chamber of Commerce and Puget Sound Energy to recognize Kirkland businesses for environmentally-friendly practices.[3] The City's Tourism Marketing Plan and tourism website, www.ExploreKirkland.com, feature certified Green Businesses.

[2] Maryne Wynne: (206) 306-9233
[3] Brenda Nunes, Associated Earth Sciences: (425) 827-7701

(Example) Client Assistance Memo:

Seattle -- Green Parking Lots (2 pp. of 8)

Department of Planning and Development

CAM *Client Assistance Memo* 515

Seattle Permits

— part of a multi-departmental City of Seattle series on getting a permit

Green Parking Lots

September 30, 2005

WHO SHOULD CONSIDER GREEN PARKING LOTS?

If you're looking for a cost-effective option for meeting landscaping and water quality requirements when building or redeveloping a parking lot, consider "going green."

WHAT ARE GREEN PARKING LOTS?

Green parking lots reduce runoff that is discharged into local water bodies by using permeable paving and natural drainage landscapes.

Alone or together, these two strategies can be used to meet water quality and landscape requirements and provide credit toward flow control requirements for parking lots.

Permeable Paving

Permeable pavements include pavers, grid systems, porous asphalt and porous concrete. Pavers may be pre-cast sections or individual units that fit together. They are available in a variety of patterns and colors and can be used to enhance the project's aesthetic. Grid or lattice systems are rigid plastic forms that are filled with gravel or soil and vegetation. Porous asphalt and porous concrete are similar to conventional asphalt and concrete in structure and form except that the fines (sand and finer material) have been removed.

When installed over a drainage storage bed, these permeable pavements allow rain to infiltrate through the voids of the permeable surface. Beneath the permeable surface, runoff storage is achieved and/or infiltration occurs where soil permits. Surfaces that infiltrate 100% of the six-month storm runoff may be eligible to be removed from area calculations for water quality requirements. See attached handout for more information on different types of permeable paving.

Natural Drainage Landscapes

Natural drainage landscapes include bio-swales, rain gardens, and bioengineered planting strips that can improve water quality and reduce runoff.

Bio-swales are open, linear channels that filter stormwater as the water flows through vegetation to the discharge point. Although their width and length vary as needed to achieve function, at a minimum they are two feet wide at the bottom and have a maximum slope of 2.5:1.

Rain gardens are shallow depressions in the landscape and are designed to hold and infiltrate runoff. They are amended with bioengineered soil and vegetated with plants that are adapted to both wet and dry conditions.

Bioengineered planting strips are similar to bio-swales but they include an infiltration component. As with rain gardens, native soil below the swale is excavated and backfilled with gravel and loamy sand and planted with shrubs and groundcover.

All systems include an overflow system such as a perforated pipe or a raised overflow device to convey excess drainage to another system or discharge point. These natural drainage landscapes can help reduce the volume of runoff generated from parking lots and filter, infiltrate and store runoff for slower discharge. Existing landscape features such as planters and landscape strips can be converted to natural drainage landscapes.

HOW DO GREEN PARKING LOTS MEET REQUIREMENTS?

The green parking lot strategies described above may help meet requirements for several City codes, including:

- Seattle Municipal Code (SMC) Ch.22.800, Stormwater, Grading, and Drainage Control Code
- SMC 23.47.016, Screening and Landscape Standards
- DPD Director's Rule (DR) 26-2000, Volume 3, Flow Control Technical Requirements Manual

www.seattle.gov/dpd

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Department of Planning & Development
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- DPD DR 27-2000, Volume 4, Stormwater Treatment Technical Requirements Manual
- DPD DR 13-92, Landscape Standards for Compliance with the Land Use Code and SEPA Requirements

Stormwater Treatment Technical Requirements

Depending on the site, SMC 22.800-22.808 and DPD DR 27-2000 require new and redeveloped parking lots to meet water quality treatment requirements.

Landscaping Requirements

SMC 23.47.016 specifies landscaping requirements for parking lots. These requirements are articulated further in DPD DR 13-92.

Water Quality Treatment Requirements

Permeable paving can reduce the size of engineered stormwater treatment facilities by reducing the amount of runoff needing treatment. If designed to infiltrate the six-month storm, permeable pavement can be used to get a one-to-one impervious surface reduction credit for water quality treatment requirements.

Credit Toward Flow Control Requirements

DPD DR 26-2000 specifies how credit toward flow control requirements can be achieved.

Natural drainage landscapes may be used to meet both landscaping and water quality requirements. Parking lot areas that direct runoff to natural drainage landscapes may be eligible for water quality credit if they are sized to filter or infiltrate the six-month storm event. Permeable paving can be designed to meet water treatment requirements and provide credit toward flow control requirements. Refer to the codes and manuals listed above for design requirements.

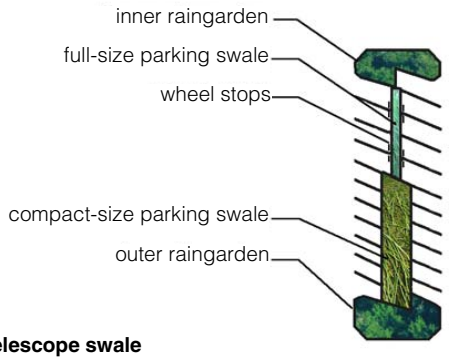
ADDITIONAL BENEFITS FROM GREEN PARKING LOTS

In addition to achieving landscaping, water quality treatment and flow control requirements, green parking lots may reduce capital costs and overall facility maintenance costs. Green parking lots also enhance the pedestrian experience for clients and customers by providing green islands in a sea of asphalt. Additional benefits include an increase in the amount of infiltration surfaces that filter and attenuate stormwater runoff flows, which can enhance the protection of nearby water bodies. The next section illustrates how these benefits can be achieved.

GREEN PARKING LOT DESIGN OPTIONS

Three innovative design options were developed for an existing 15-acre commercial parking lot to evaluate the feasibility and cost-effectiveness of green parking lots. Each of the three options uses permeable pavements and/or natural drainage landscapes. These options demonstrate that parking lots can achieve water quality treatment requirements using green strategies. Although unquantified for this project, the use of a natural drainage landscape is anticipated to reduce the total volume of stormwater from the site through some infiltration. For this case study, each green parking lot design option was compared to a conventional parking lot design that was being considered. A long-term economic analysis of the capital and maintenance costs found the green parking lot design options to be equal to or less expensive than the conventional parking lot design.

The green parking lot design options demonstrate that different combinations of porous asphalt, unit pavers, rain gardens and telescope swales can be used to meet the water quality treatment requirement. With the exception of the telescope swale, each of these elements has specific technical requirements for their design and construction that can be found in DPD DR 26-2000. The telescope swales are a strategy specifically designed to integrate into parking lots. Telescope swales are designed to have multiple sections that vary in width over the length of the swale to accommodate both compact and standard size parking spaces (see figure).



Telescope swale
Image courtesy of SvR Design Company

Source: http://www.seattle.gov/dpd/publications/cam/CAM515.pdf