

SEATTLE / *green factor*

The Seattle Green Factor is a menu of landscaping strategies that is required for all new development in neighborhood business districts with more than four dwelling units, more than 4,000 square feet of commercial uses, or more than 20 new parking spaces. It is intended to increase the amount and quality of urban landscaping in dense urban areas while allowing increased flexibility for developers and designers to efficiently use their properties.

City of Seattle Ordinance 122311 requires the equivalent of 30% of a parcel in the commercial zones to be vegetated by using the Seattle Green Factor. The Green Factor encourages maximizing the “vegetation potential” of the rights-of-way through planting of layers of vegetation and larger trees in areas visible to the public. There are additional bonuses for rainwater harvesting and/or low water use plantings. Use of larger trees, tree preservation, green roofs, green walls and water features are encouraged by this requirement.

SEE: www.seattle.gov/dpd/greenfactor/



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**Pre-Settlement
Conditions**



**Historical Urban
Development**

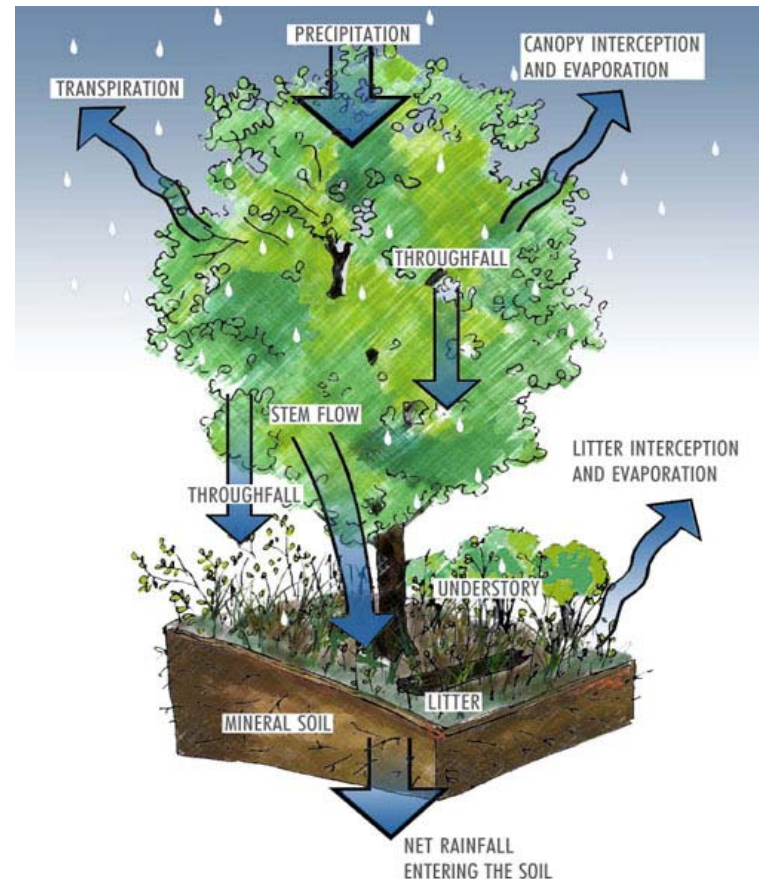


Urban Greening

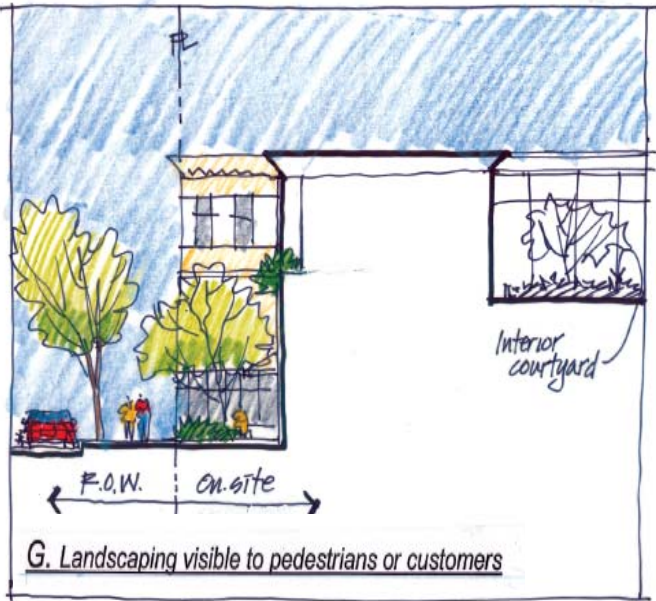
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Landscapes are not just an aesthetic amenity

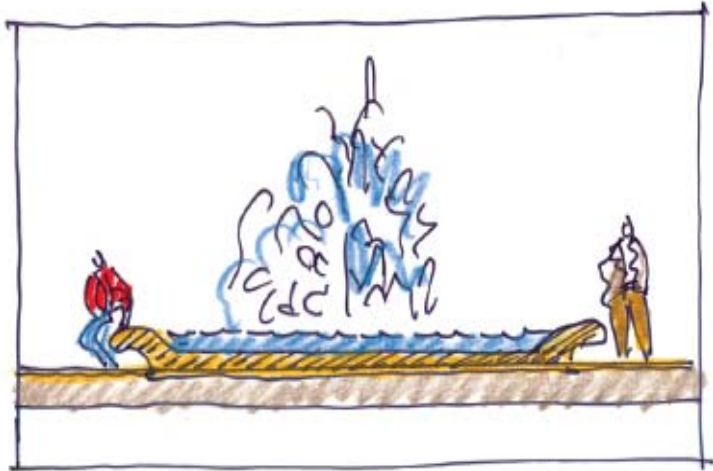
- Increase evapo-transpiration due to increase of surface area
- Absorb carbon, release oxygen
- Capture urban dust/ help clean air
- Muffle sound reflectivity
- Provide habitat for birds and bees
- Increase property values
- Cool buildings with shade
- Cool cities – urban heat island affect
- Insulate buildings
- Increase life of roof membrane (green roofs)
- Increase life of building cladding (green walls)



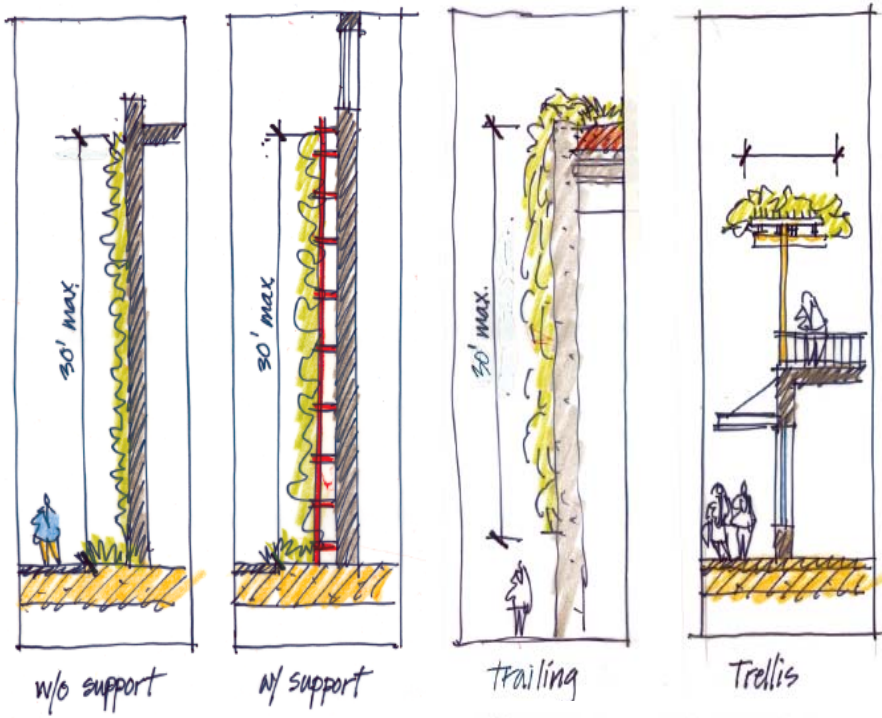
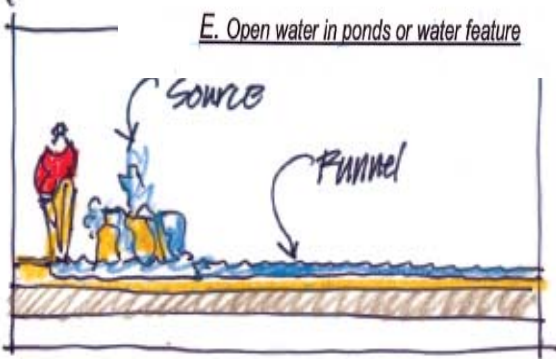
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G. Landscaping visible to pedestrians or customers

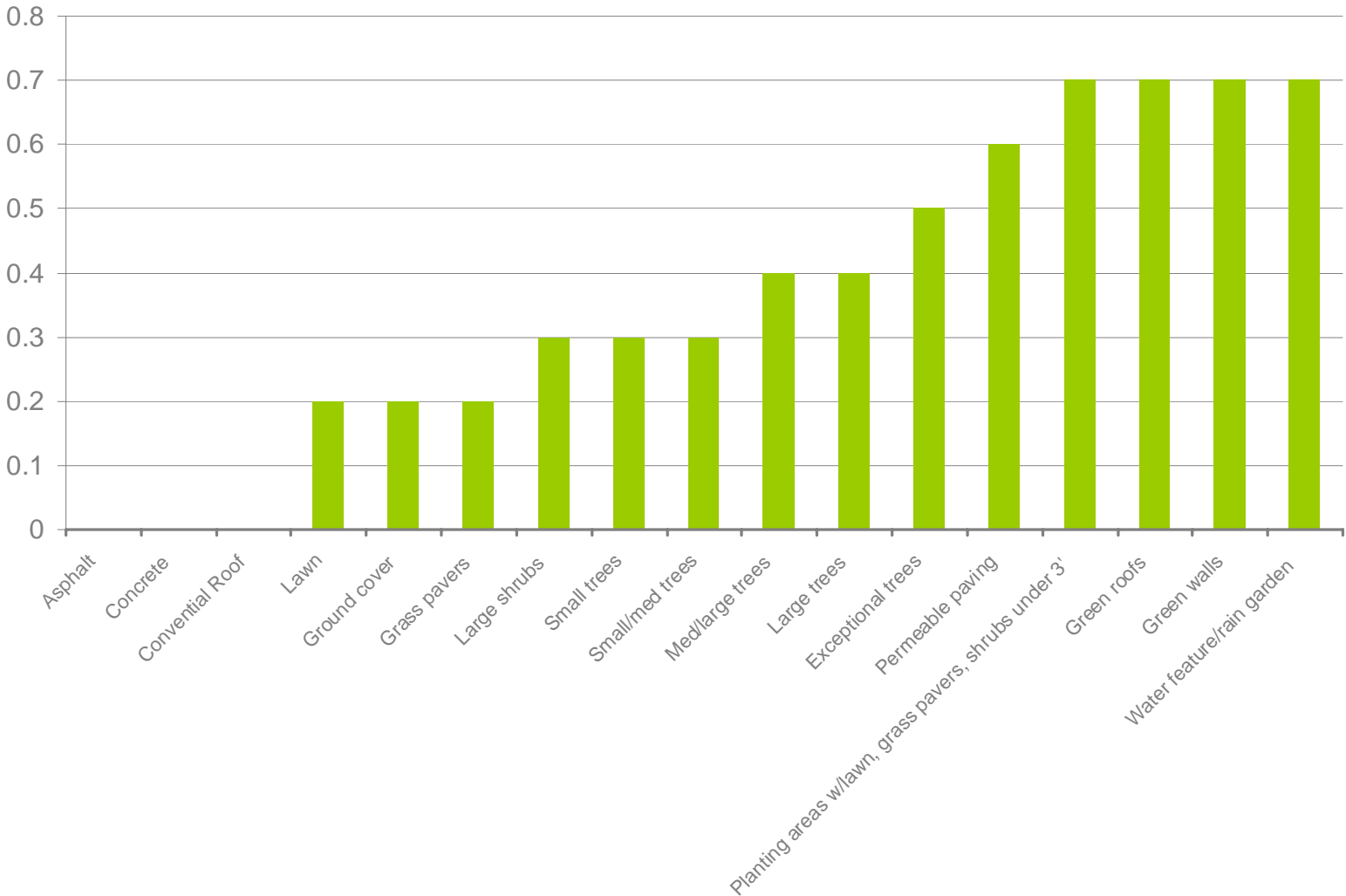


E. Open water in ponds or water feature



D. Vertical vegetated walls

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FINAL VERSION 1-22-07

		enter sq ft of parcel	You need at least 0.300	
Parcel size (ENTER THIS VALUE FIRST)*		1	SCORE	-
Types of Area**	Square Feet	Factor	Total	
A Vegetation planted with a soil depth of less than 24"				
1	Lawn or grass pavers or ground covers	<input type="text" value="0"/>	0.2	-
2	Plants and shrubs 3' and higher at maturity	<input type="text" value="0"/>	0.3	-
B Vegetation planted with a soil depth of more than 24"				
1	Lawn, grass pavers or other plants less than 3' tall at maturity	<input type="text" value="0"/>	0.7	-
2	Shrubs taller than 3' at maturity - calculated at 16 sq ft per plant (typically planted no closer than 18" on center)	<input type="text" value="0"/> 0	0.3	-
3	Tree canopy for "small trees" in SDOT's Street Tree Planting Schedule or equivalent canopy spread of 15' - calculated at 50 sq ft per tree	<input type="text" value="0"/> 0	0.3	-
4	Tree canopy for "small/medium trees" in Street Tree Planting Schedule or equivalent canopy spread of 20' - calculated at 100 sq ft per tree	<input type="text" value="0"/> 0	0.3	-
5	Tree canopy for "medium/large trees" in Street Tree Planting Schedule or equivalent canopy spread of 25' - calculated at 150 sq ft per tree	<input type="text" value="0"/> 0	0.4	-
6	Tree canopy for "large trees" in Street Tree Planting Schedule or equivalent canopy spread of 30' - calculated at 200 sq ft per tree	<input type="text" value="0"/> 0	0.4	-
7	Tree canopy for preservation of "exceptional trees" or trees with trunk diameter exceeding 24" at four and one half feet above the ground. calculated at 250 sq ft per tree	<input type="text" value="0"/> 0	0.5	-
8	Permeable paving that drains only itself. It must be at grade. - calculated per square foot	<input type="text" value="0"/>	0.6	-
C	Green roofs - 4" minimum soil depth at time of planting	<input type="text" value="0"/>	0.7	-
D	Vegetated walls	<input type="text" value="0"/>	0.7	-
E	Water features (fountains) or rain gardens (where allowed by SPU)	<input type="text" value="0"/>	0.7	-
		sub-total of sq ft =	0	
Bonuses				
F	Landscaping using drought tolerant plants or where at least 50% of annual irrigation needs are met from non-potable sources	<input type="text" value="0"/>	0.1	-
G	Landscaping visible to passers-by from adjacent public right of way or public open spaces	<input type="text" value="0"/>	0.1	-
		green factor numerator =		-

* Do not count public rights of way in parcel size calculation.

** To calculate your green factor score, you may count the landscape elements that are in public rights of way if they are contiguous with the parcel.



FINAL VERSION 1-22-07

Parcel size (ENTER THIS VALUE FIRST)*

enter sq ft of parcel
1

You need at least 0.300

SCORE -

Enter the square footage of your development parcel in this box. **Do NOT count public rights of way when calculating your parcel size.** This number is the denominator used to calculate your score.

This is your score. It is automatically calculated by this worksheet as you enter values.

Types of Area**

	enter sq ft	Square Feet	Factor	Total
A Vegetation planted with a soil depth of less than 24"				
1	Lawn or grass pavers or ground covers enter sq ft 0		0.2	-
2	Plants and shrubs 3' and higher at maturity enter sq ft 0		0.3	-
B Vegetation planted with a soil depth of more than 24"				
1	Lawn, grass pavers or other plants less than 3' tall at maturity enter sq ft 0		0.7	-
2	Shrubs taller than 3' at maturity - calculated at 16 sq ft per plant (typically planted no closer than 18" on center) enter number of plants 0	0	0.3	-
3	Tree canopy for "small trees" in SDOT's Street Tree Planting Schedule or equivalent canopy spread of 15' - calculated at 50 sq ft per tree enter number of plants 0	0	0.3	-
4	Tree canopy for "small/medium trees" in Street Tree Planting Schedule or equivalent canopy spread of 20' - calculated at 100 sq ft per tree enter number of plants 0	0	0.3	-
5	Tree canopy for "medium/large trees" in Street Tree Planting Schedule or equivalent canopy spread of 25' - calculated at 150 sq ft per tree enter number of plants 0	0	0.4	-
6	Tree canopy for "large trees" in in Street Tree Planting Schedule or equivalent canopy spread of 30' - calculated at 200 sq ft per tree enter number of plants 0	0	0.4	-
7	Tree canopy for preservation of "exceptional trees" or trees with trunk diameter exceeding 24" at four and one half feet above the ground. calculated at 250 sq ft per tree enter number of plants 0	0	0.5	-
8	Permeable paving that drains only itself. It must be at grade. - calculated per square foot enter sq ft 0		0.6	-
C Green roofs - 4" minimum soil depth at time of planting				
	enter sq ft 0		0.7	-
D Vegetated walls				
	enter sq ft 0		0.7	-
E Water features (fountains) or rain gardens (where allowed by SPU)				
	enter sq ft 0		0.7	-
sub-total of sq ft =		0		

Applies to planting areas with less than 24" of soil that only have lawn, grass pavers or ground covers. This box will usually be used for planters and at-grade planting areas with shallow soils due to underground structures.

Applies to any planting area where soil is less than 24" deep and plants are 3' or taller at maturity - and are NOT lawn, grass pavers, or ground cover. Layering is encouraged, so you may count ground covers as well as larger shrubs planted on these shallow soils.

Enter the square footage of landscape areas where the mature vegetation is less than 3' at maturity and where soil depths are at least 24" deep. This will typically be landscapes in touch with underlying native soils. Vegetation must cover entire area at maturity (no greater than 5-years). You may also count any landscape improvements you do in the public rights of way in calculating your Seattle Green Factor score.

Enter the number of plants that you will be installing that are 3' or taller at maturity. Plantings 18" on-center are the maximum density allowed in this calculation. This is in addition to any credit you received for planting areas already calculated in B.1. For pedestrian safety and visibility, SDOT discourages shrubs that exceed three feet in public rights-of-way.

You receive additional credit beyond B.1 or B.2. for canopy coverage for any trees you plant. The larger the tree at maturity, the larger the score. The intent is to encourage more trees in the city and to maximize the vegetation potential of the site.

You can claim additional credit beyond B.1 or B.2. for canopy if you plant larger trees or preserve larger trees already on site.

You can claim additional credit beyond B.1 or B.2. for canopy if you plant larger trees or preserve larger trees already on site.

You can claim additional credit beyond B.1 or B.2. for canopy if you plant larger trees or preserve larger trees already on site.

You can claim additional credit beyond B.1 or B.2. for canopy if you plant larger trees or preserve larger trees already on site, or if exceptional trees in right-of-way are required to be retained by SDOT.

Enter square footage for at-grade permeable paving. Paving may only drain rain that falls upon it and cannot be designed to accept other drainage unless otherwise authorized by Seattle Public Utilities. Structural soils may be required.

Applies to green roofs - with a minimum of 4" of soil. Green roofs are any plantings on top of a structure that is at least one floor above the at-grade building entrance.

For vertical vegetated walls, measure height and width of area expected to be covered by vegetation within five years. Requires signature of licensed landscape architect. Plants may be climbing or trailing on vertical surfaces with or without support. Maximum calculated vertical dimension must not exceed 30' nor encroach within City Light safety setbacks. See CAM 122 for details at <http://www.ci.seattle.wa.us/dclu/Publications/cam/cam122.pdf>

Enter the square footage of area to be under water at least nine months of the year - or square footage of rain garden.

This sub-total of sq ft cannot be exceeded in claiming credit for bonus scores below.

Enter square feet of areas that qualify including canopy cover credit where applicable. May be achieved either through choice of low water use or drought-tolerant plants (list available from DPD), or by use of systems designed for rainwater retention and reuse where at least 50% of the annual irrigation needs are met from non-potable sources.

Enter square feet of areas that qualify including canopy cover credit where applicable. Count only that vegetation which is visible to pedestrians in the public right of way or public open spaces within one block of the project.

Numerator: This number is the numerator that is automatically divided by the parcel size to calculate your score.

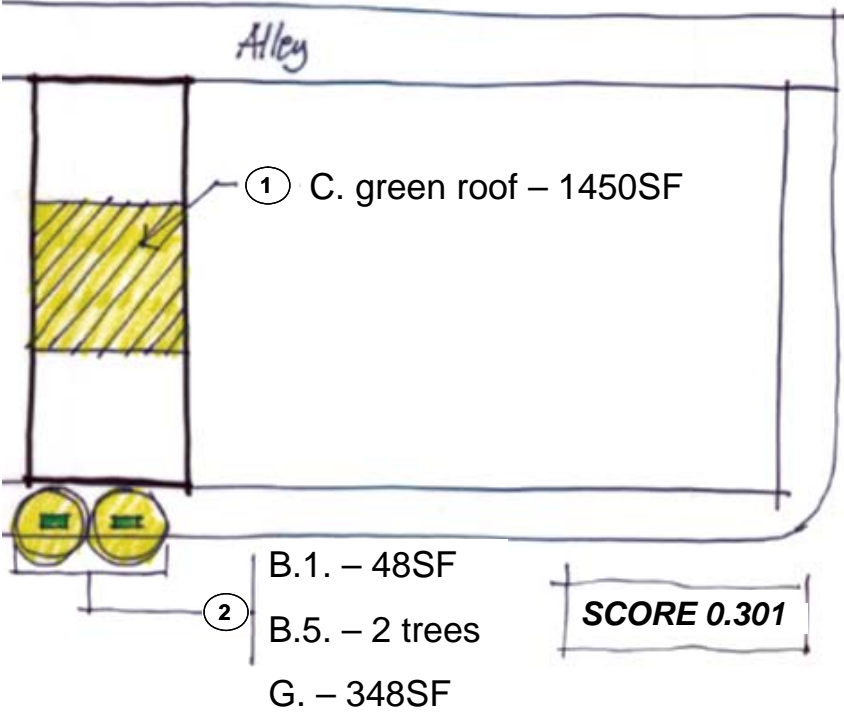
green factor numerator = -

* Do not count public rights of way in parcel size calculation.

** To calculate your green factor score, you may count the landscape elements that are in public rights of way if they are contiguous with the parcel.

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		Planting Area					TOTAL
		1	2	3	keep adding columns as needed		
A1	square feet						0
A2	square feet						0
B1	square feet		48				48
B2	# of plants						0
B3	# of trees						0
B4	# of trees						0
B5	# of trees		2				2
B6	# of trees						0
B7	# of trees						0
B8	square feet						0
C	Green Roofs - square feet	1,450					1450
D	Vegetated Walls - square feet						0
E	Water Features - square feet						0
F	Water use - square feet						0
G	Visibility - square feet		348				348





Seattle Green Factor

