Seattle LEED Projects 2000 - 2011

EXECUTIVE SUMMARY

Introduction

This report is an analysis of a portfolio of LEED Certified Buildings within the City of Seattle. The objective of this study is to evaluate the impacts of these innovative green buildings on the City's infrastructure and resources. The documentation provided to the USGBC for certification has been analyzed to produce a series of reports or profiles on anticipated savings in transportation, water, energy, carbon and waste for these projects.

The City of Seattle City Green Building Program is interested in tracking the projected savings for LEED credits that impact the City utilities and the City sustainability goals. The goals of the study are to:
- Understand the LEED credit performance of Seattle buildings
- Identify the most commonly implemented sustainable design strategies

Reports are generated based on a set of parameters (such as date of certification or building owner) and results are shown for the filtered group of buildings. The title of the report is shown on the upper left corner of each report sheet - this title is based on the filtering parameters entered.

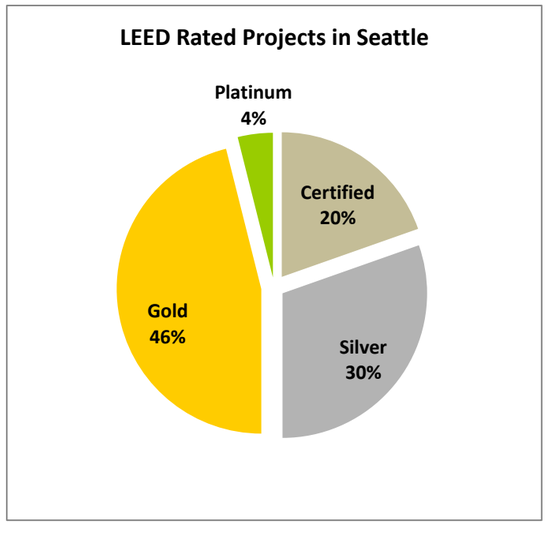
This sheet is the Executive Summary, which shows a summary of the selected portfolio of buildings. Projects certified under three different LEED rating systems within Seattle City limits are included in this report: LEED for New Construction (v2.1 and v2.2), LEED Core & Shell (v2.0), and LEED for Commercial Interiors (v2.0). The individual report sheets are divided to show the analysis of LEED-NC and LEED-CS projects on the left side, and LEED-CI projects on the right hand side. This distinction is made because of the significant differences between these rating systems. At the bottom of each report sheet is a bold box that provides a Combined Environmental Summary, which calculates the total of relevant information from all three ratings systems.

LEED Portfolio Summary

Number of NC/CS Projects	77
Number of CI Projects	29
Total Number of Projects	**102**
Total Square Footage	10,286,930

LEED Ratings

Certified	20
Silver	31
Gold	47
Platinum	4



Portfolio Environmental Savings Summary

Categories	Savings
Sustainable Sites	
Public Transportation Access	See Report
Total Bicycle Parking Spaces Provided	2325
Total Preferred Parking Spaces for Alternative Fuel Vehicles	264
Total Preferred Parking Spaces for Carpools/Vanpools	272
Total Annual Stormwater Runoff Reduction (gallons)	1,286,480
Stormwater Management - Treatment	See Report
Water Efficiency	
July Irrigation Water Savings (gallons)	1,140,590
Annual Wastewater Savings (gallons)	1,599,180
Annual Interior Potable Water Savings (gallons)	27,957,100
Energy and Atmosphere	
Annual Energy Savings (kBtu)	169,222,000
Annual Renewable Energy (kWh)	41,700
Annual Green Power Purchased (kWh)	34,558,900
(CO_2) Emission Savings (lbs)	42,489,500
Materials and Resources	
Total Construction Waste Diverted (tons)	175,700
Total Value of Recycled Content Materials	$131,490,900

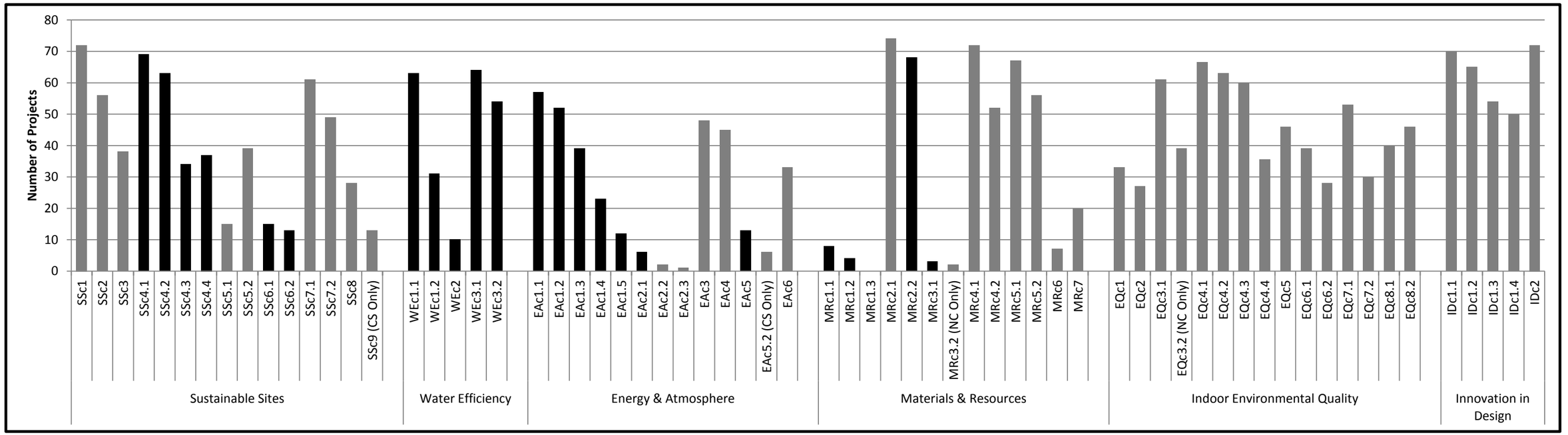
Seattle LEED Projects 2000 - 2011

LEED NC/CS CREDIT SUMMARY

Introduction The bar chart shown below shows the number of projects which achieved each credit in the LEED NC and CS rating systems for all projects in the current database. Darker bars in the chart represent credits that are further analyzed in the spreadsheet tool. Lighter gray bars represent credits that have no further analysis.

LEED-NC v2.1, LEED-NC v2.2, LEED-CS v2.0

Total Number of NC/CS Projects	77



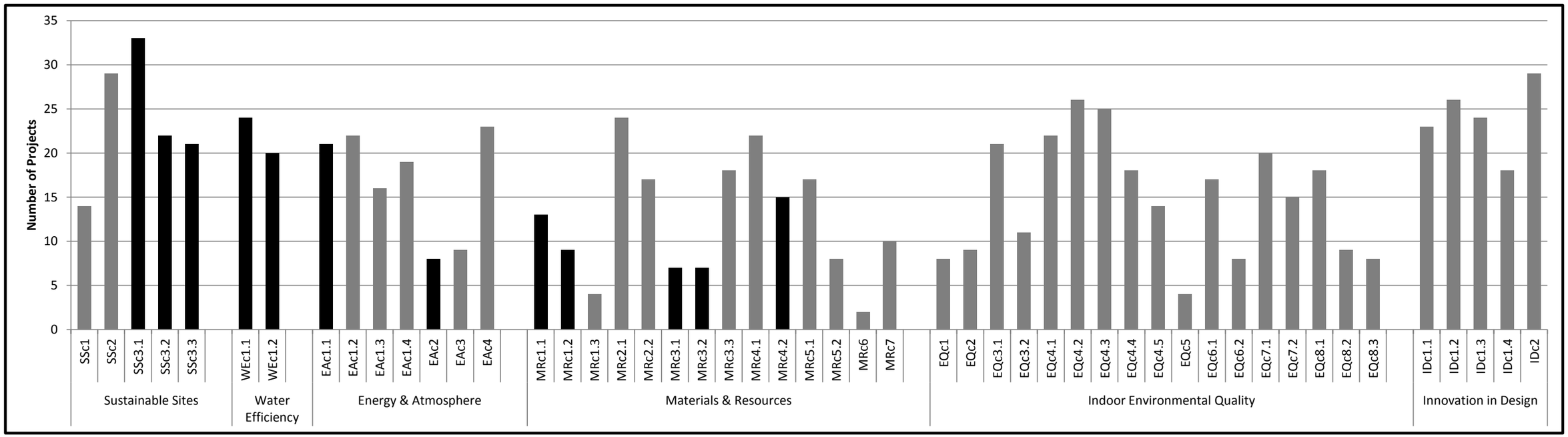
Seattle LEED Projects 2000 - 2011

LEED CI CREDIT SUMMARY

Introduction The bar chart shown below shows the number of projects which achieved each credit in the LEED CI rating system for all projects in the current database. Darker bars in the chart represent credits that are further analyzed in the spreadsheet tool. Lighter gray bars represent credits that have no further analysis.

LEED-CI v2.0

Total Number of CI Projects	29



Paladino

Seattle LEED Projects 2000 - 2011

ALTERNATIVE TRANSPORTATION: PUBLIC TRANSPORTATION ACCESS

LEED Credits Analyzed LEED-NC SSc4.1 LEED-CS SSc4.1 LEED-CI SSc3.1

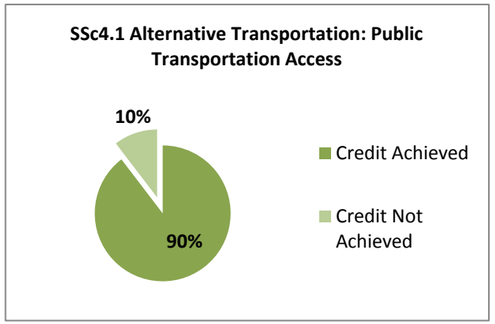
Introduction

Achievement of these credits reduces pollution and land development impacts from automobile use by locating projects close to public transportation. This analysis evaluates the percentage of projects achieving the credits and the modes of public transportation available.

Requirements

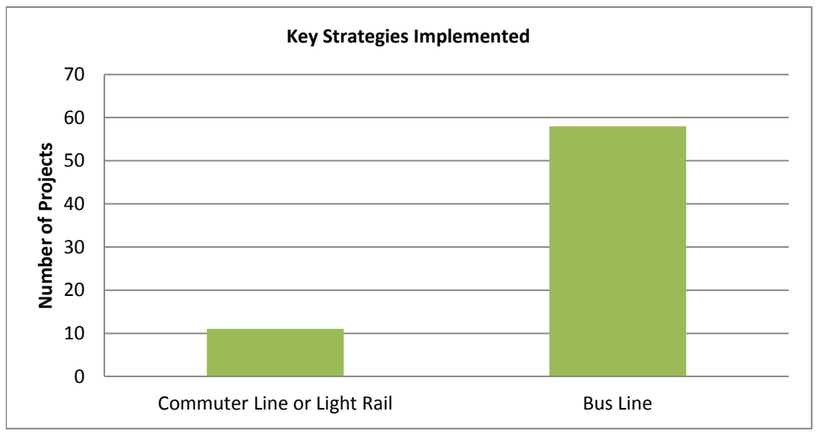
Locate project within 1/2 mile of an existing--or planned and funded--commuter rail, light rail or subway station, OR
Locate project within 1/4 mile of one or more stops for two or more public or campus bus lines usable by building occupants.

LEED-NC v2.1, LEED-NC v2.2, LEED-CS v2.0

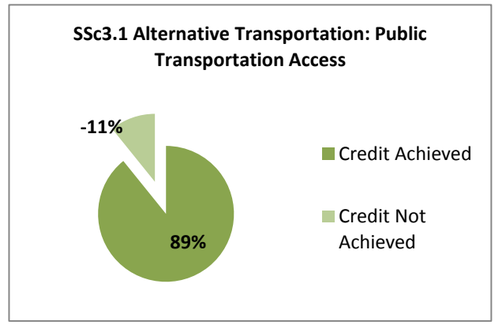


KEY FINDINGS

Number of Projects Achieving Credit	69
Total Number of Projects	77

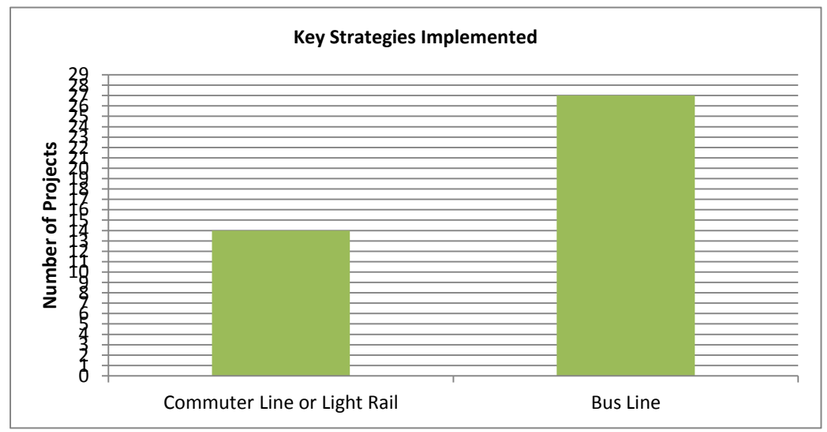


LEED-CI v2.0



KEY FINDINGS

Number of Projects Achieving Credit	33
Total Number of Projects	29



COMBINED ENVIRONMENTAL SUMMARY

Number of Projects Achieving Credit	102
Total Number of Projects	106

Seattle LEED Projects 2000 - 2011

ALTERNATIVE TRANSPORTATION: BICYCLE STORAGE & CHANGING ROOMS

LEED Credits Analyzed LEED-NC SSc4.2 LEED-CS SSc4.2 LEED-CI SSc3.2

Introduction

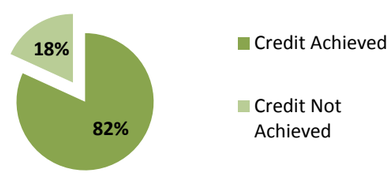
Achievement of these credits reduces pollution and land development impacts from automobile use by providing bicycle storage and changing rooms to promote bicycle commuting. This analysis evaluates the percentage of projects achieving the credits and the number of bicycle racks provided.

Requirements

Provide secure bicycle racks or storage for at least 5% of all building users, and showers for 0.5% of Full-Time Equivalent (FTE) occupants. For residential buidlings, provide covered storage facilities for securing bicycles for 15% or more of building occupants.
* requirements vary slightly for NCv2.1, CI and CS rating systems

LEED-NC v2.1, LEED-NC v2.2, LEED-CS v2.0

SSc4.2 Alternative Transportation: Bicycle Storage & Changing Rooms



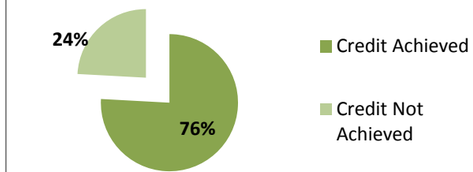
KEY FINDINGS

Number of Projects Achieving Credit	63
Total Number of Projects	77

Total Bike Parking Spaces Added	1953
Average Number of Bike Parking Spaces/Project	31
Average Bike Parking Spaces/FTE	6%
Total Number of Showers Added	209
Average Number of Showers/Project	3

LEED-CI v2.0

SSc3.2 Alternative Transportation: Bicycle Storage & Changing Rooms



KEY FINDINGS

Number of Projects Achieving Credit	22
Total Number of Projects	29

Total Bike Parking Spaces Added	372
Average Number of Bike Parking Spaces/Project	17
Average Bike Parking Spaces/FTE	12%
Total Number of Showers Added	76
Average Number of Showers/Project	3

COMBINED ENVIRONMENTAL SUMMARY

Number of Projects Achieving Credit	85
Total Number of Projects	106

Total Bike Parking Spaces Added	2325
Average Number of Bike Racks/Project	22
Total Number of Showers Added	285
Average Number of Showers/Project	3

Seattle LEED Projects 2000 - 2011

ALTERNATIVE TRANSPORTATION: ALTERNATIVE FUEL VEHICLES

LEED Credits Analyzed LEED-NC SSc4.3 LEED-CS SSc4.3

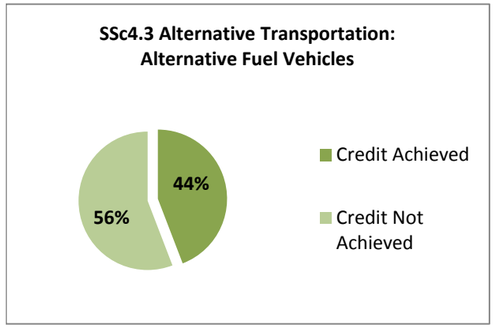
Introduction

Achievement of these credits reduces pollution and land development impacts from automobile use by providing alternative fuel vehicles for use by building occupants or amenities for alternative fuel vehicles owned by occupants.

Requirments

Provide low-emitting and fuel-efficient vehicles for 3% of occupants and preferred parking for these vehicles, OR
Provide low-emitting and fuel-efficient vehicles for 5% of the total vehicle parking capacity of the site, OR
Install alternative-fuel refueling stations for 3% of the total vehicle parking capacity of the site

LEED-NC v2.1, LEED-NC v2.2, LEED-CS v2.0

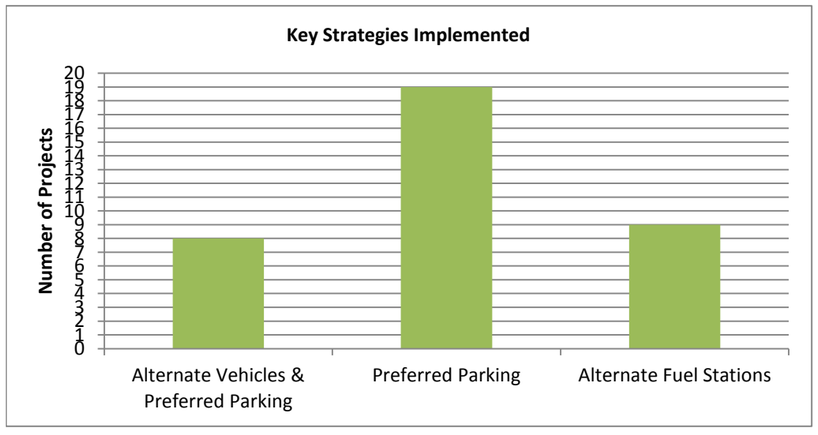


KEY FINDINGS

Number of Projects Achieving Credit	34
Total Number of Projects	77

Total Number of Parking Spaces *	3060
Total Number of Preferred Parking Spaces for Alternative Fuel Vehicles *	264
Average Number of AFV Parking Spaces/Project*	8

* This value may not represent data from all projects (data was missing for several projects prior to 2005)



LEED-CI v2.0

This credit is not available to LEED-CI projects.

Seattle LEED Projects 2000 - 2011

ALTERNATIVE TRANSPORTATION: PARKING CAPACITY

Introduction

Achievement of these credits reduces pollution and land development impacts from automobile use by reducing the overall number of parking spaces provided and providing preferred carpool/vanpool parking spaces for a percentage of the parking spaces or occupants of the building. This analysis evaluates the percentage of projects achieving the credits, the strategies used and the total number of preferred parking stalls provided for carpools/vanpools.

LEED Credits Analyzed LEED-NC SSc4.4 LEED-CS SSc4.4 LEED-CI SSc3.3

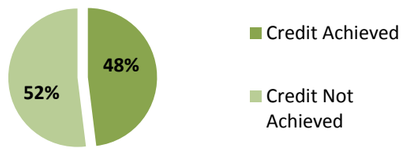
Requirements

LEED NC & CS: Provide no new parking, or provide parking that does not exceed code and provide preferred parking for carpools/vanpools. For residential projects, provide no new parking, or provide parking that does not exceed code and provide infrastructure and support programs to facilitate shared vehicle use.

LEED-CI: Parking spaces provided to tenant shall not exceed local zoning minimum and priority parking for carpools or vanpools will be provided for 5% or more of occupants.

LEED-NC v2.1, LEED-NC v2.2, LEED-CS v2.0

SSc4.4 Alternative Transportation: Parking Capacity



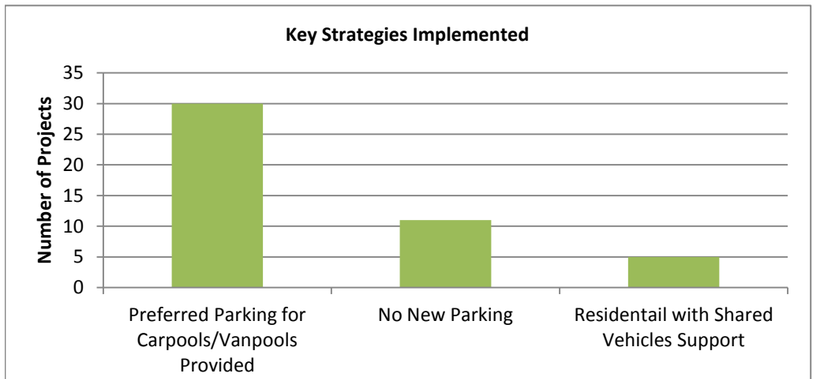
KEY FINDINGS

Number of Projects Achieving Credit	37
Total Number of Projects	77

Total Number of Parking Spaces *	3060
Total Number of Preferred Parking Spaces for Carpools/Vanpools *	172

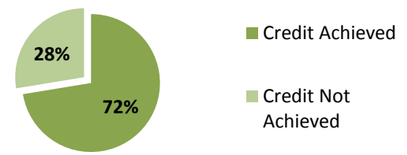
* This value may not represent data from all projects (data was missing for several projects prior to 2005)

Key Strategies Implemented



LEED-CI v2.0

SSc3.3 Alternative Transportation: Parking Capacity



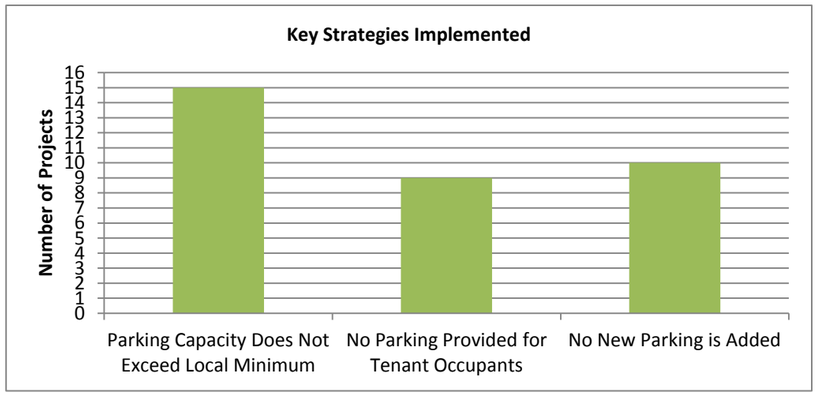
KEY FINDINGS

Number of Projects Achieving Credit	21
Total Number of Projects	29

Total Number of Parking Spaces *	299
Total Number of Preferred Parking Spaces for Carpools/Vanpools *	100

* This value does not represent data from all projects (data was missing for several projects prior to 2005)

Key Strategies Implemented



COMBINED ENVIRONMENTAL SUMMARY

Number of Projects Achieving Credit	58
Total Number of Projects	106

Total Number of Parking Spaces	3359
Total Number of Preferred Parking Spaces for Carpools/Vanpools	272

Seattle LEED Projects 2000 - 2011

STORMWATER DESIGN: QUANTITY CONTROL

LEED Credits Analyzed LEED-NC SSc6.1 LEED-CS SSc6.1

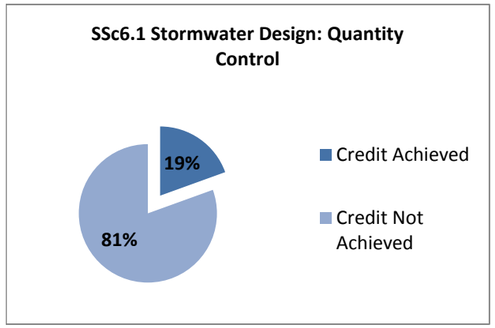
Introduction

Achievement of these credits limits disruption of natural hydrology by reducing impervious cover, increasing on-site infiltration and managing stormwater runoff. This analysis evaluates the percentage of projects achieving the credits, categorizes the strategies implemented, and estimates the total stormwater runoff quantity reduction (in gallons per year).

Requirements

Compliance paths vary depending on percentage of existing imperviousness. Projects must achieve reduced stormwater runoff or stream channel protection strategy that protects receiving stream channels from excessive erosion. Projects provide calculations or a stormwater management plan to demonstrate compliance.

LEED-NC v2.1, LEED-NC v2.2, LEED-CS v2.0

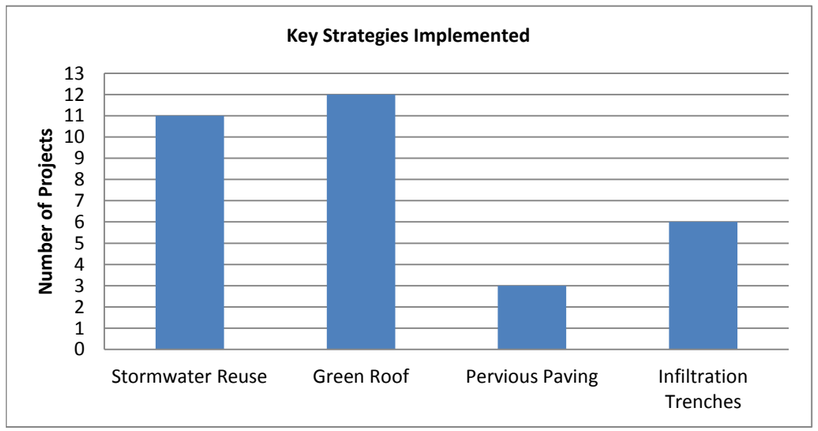


KEY FINDINGS

Number of Projects Achieving Credit	15
Total Number of Projects	77

Total Annual Stormwater Reduction (gallons) *	1,286,489
Average % Reduction in Stormwater Runoff *	36%

* Annual stormwater reduction not reported for all projects; projects who implement a stormwater management plan do not provide quantified information



LEED-CI v2.0

This credit is not available to LEED-CI projects.

Seattle LEED Projects 2000 - 2011

STORMWATER DESIGN: QUALITY CONTROL

LEED Credits Analyzed LEED-NC SSc6.2 LEED-CS SSc6.2

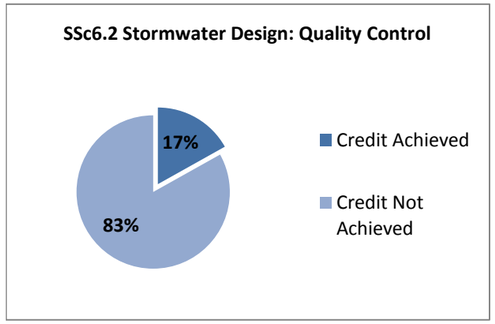
Introduction

Achievement of these credits reduces water pollution by reducing impervious cover, increasing on-site infiltration and removing contaminants. This analysis evaluates the percentage of projects achieving the credits and categorizes the strategies implemented.

Requirements

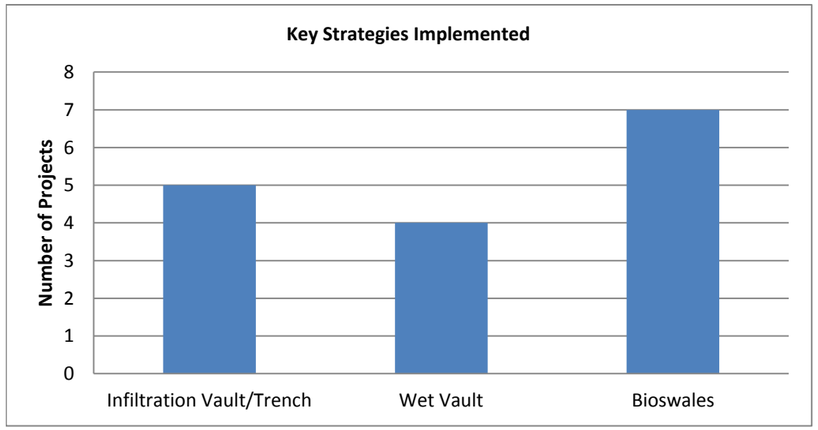
These credits require the implementation of a stormwater management plan that treats stormwater runoff and reduces post-development total suspended solids (TSS) in stormwater runoff. Projects achieving this credit in LEED NC 2.0 and 2.1 also require the reduction of total phosphorous (TP) in runoff.

LEED-NC v2.1, LEED-NC v2.2, LEED-CS v2.0



KEY FINDINGS

Number of Projects Achieving Credit	13
Total Number of Projects	77



LEED-CI v2.0

This credit is not available to LEED-CI projects.

Seattle LEED Projects 2000 - 2011

WATER EFFICIENT LANDSCAPING: REDUCED OR NO POTABLE WATER USE

LEED Credits Analyzed LEED-NC WEc1 LEED-CS WEc1

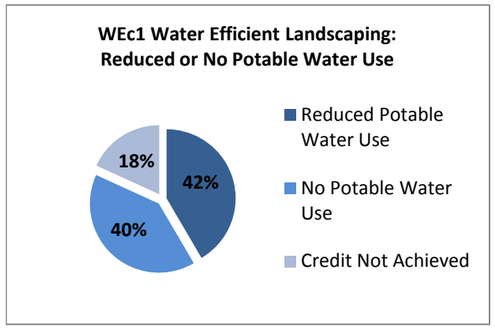
Introduction

Achievement of these credits limits or eliminates the use of potable water for landscape irrigation through the use of efficient irrigation systems, native plantings, and xeriscaping. This analysis evaluates the percentage of projects achieving the credits, estimates the average percentage reduction in irrigation water by LEED rated projects and the total irrigation water savings for the month of July (in gallons). The analysis also categorizes the strategies implemented.

Recommendations

Reduce potable water consumption for irrigation by 50% from a calculated mid-summer baseline case, OR
Use captured rainwater, recycled wastewater, recycled graywater, or water treated and conveyed by a public agency specifically for non-potable uses for irrigation, OR
Install landscaping that does not require permanent irrigation systems.

LEED-NC v2.1, LEED-NC v2.2, LEED-CS v2.0



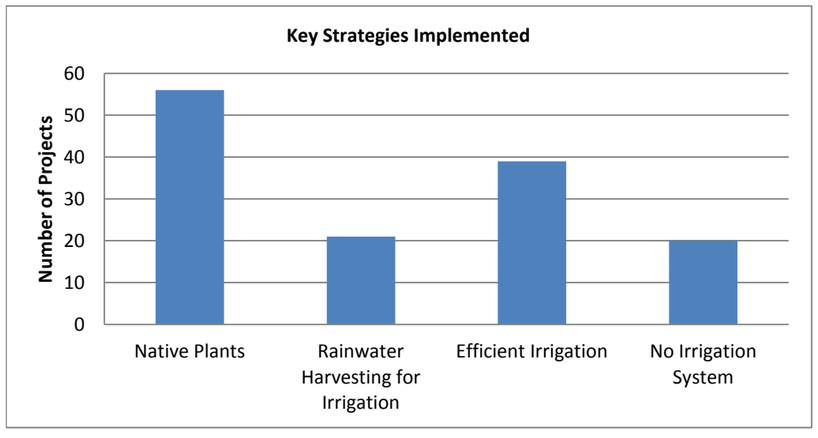
KEY FINDINGS

Number of Projects Achieving Credit	63
Total Number of Projects	77

Average % Reduction in Irrigation Water Use	75%
Total July Irrigation Water Savings (gallons)*	1,140,599
Estimate of Annual Irrigation Water Savings (gallons)**	4,659,685

* Does not include projects with no irrigation systems, as estimated savings are not reported. See Key Strategies Implemented for number of projects with no irrigation system.

** This esimate is based on calculation provided by Seattle Public Utilities, which uses a peaking factor of 2.97.



LEED-CI v2.0

This credit is not available to LEED-CI projects.

Seattle LEED Projects 2000 - 2011

INNOVATIVE WASTEWATER TECHNOLOGIES

LEED Credits Analyzed LEED-NC WEc2 LEED-CS WEc2

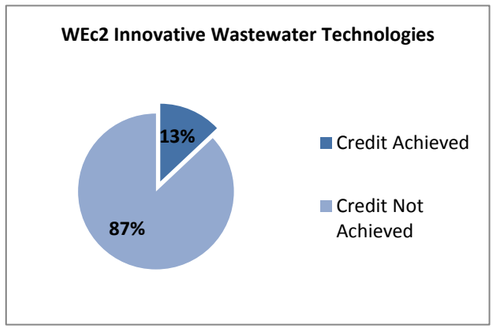
Introduction

Achievement of this credit results in a reduction in the generation of waste water and potable water demand by reducing the quantity of potable water required for toilets and urinals. This analysis evaluates the percentage of projects achieving the credit and estimates the total waste water savings (in gallons per year).

Requirements

Reduce potable water use for building sewage conveyance by 50% through the use of water-conserving fixtures (water closets, urinals) or non-potable water (captured rainwater, recycled graywater, and on-site or municipally treated wastewater), OR
Treat wastewater on-site to tertiary standards. Treated water must be infiltrated or used on-site.

LEED-NC v2.1, LEED-NC v2.2, LEED-CS v2.0

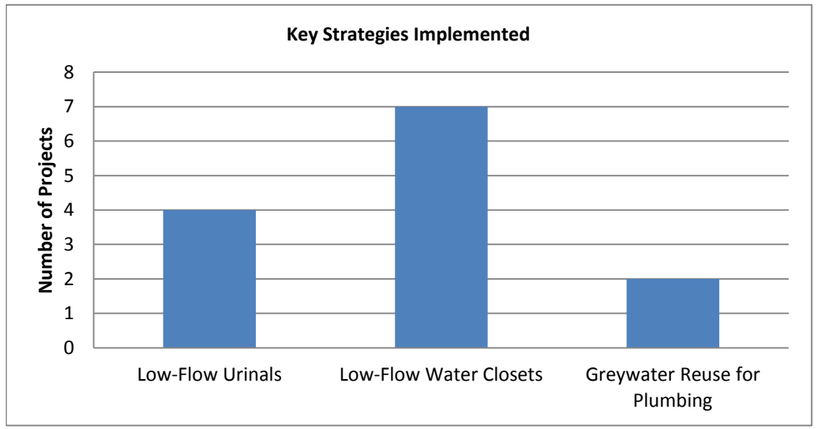


KEY FINDINGS

Number of Projects Achieving Credit	10
Total Number of Projects	77

Average Baseline - Wastewater/Capita/Day (gallons)	4
Average LEED Projects - Wastewater/Capita/Day (gallons)	1.96
Total Annual Wastewater Savings by Projects Achieving Credit (gallons)	1,599,100

**Baseline water use calculations in LEED are based on the Energy Policy Act of 2005 (EPACT)*



LEED-CI v2.0

This credit is not available to LEED-CI projects.

Seattle LEED Projects 2000 - 2011

WATER USE REDUCTION: WATER EFFICIENT INDOOR PLUMBING FIXTURES

LEED Credits Analyzed LEED-NC WEc3 LEED-CS WEc3 LEED-CI WEc1

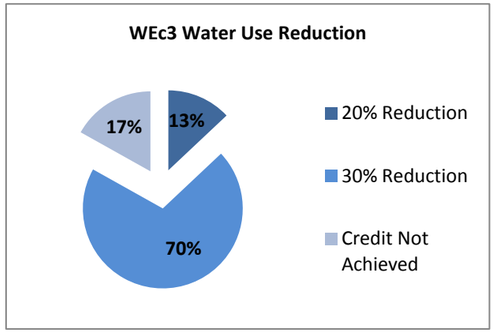
Introduction

Achievement of credits maximizes water efficiency within buildings to reduce the burden on municipal water supply and wastewater systems by demonstrating water savings over a baseline building that meets the Energy Policy Act fixture performance requirements. The analysis evaluates the percentage of projects achieving the credits and estimates the total water savings (in gallons per year), average percentage of water savings by LEED rated projects, and also categorizes the strategies implemented and estimates water saved by each strategy (in gallons per year).

Requirements

Employ strategies that in aggregate use at least 20% less water than the water use baseline calculated for the building (not including irrigation; applies only to tenant space for LEED CI) after meeting the Energy Policy Act of 1992 fixture performance requirements. Calculations are based on estimated occupant usage and shall include only the following fixtures: water closets, urinals, lavatory faucets, showers and kitchen sinks.

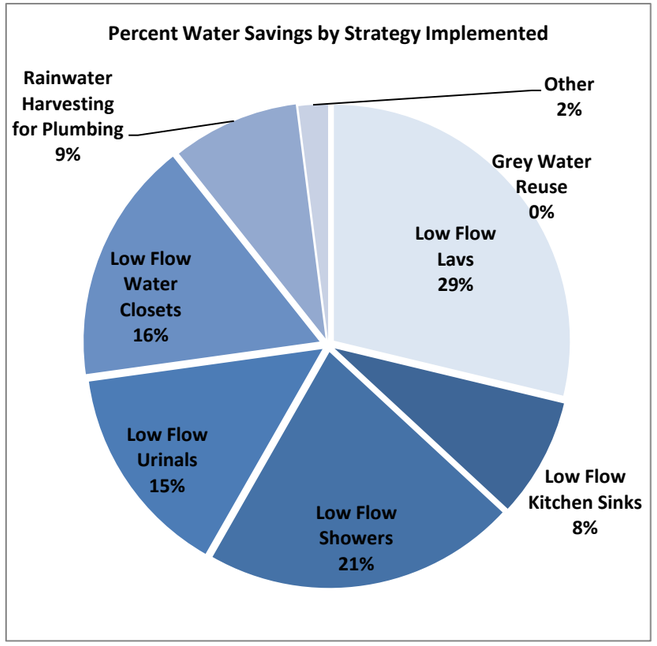
LEED-NC v2.1, LEED-NC v2.2, LEED-CS v2.0



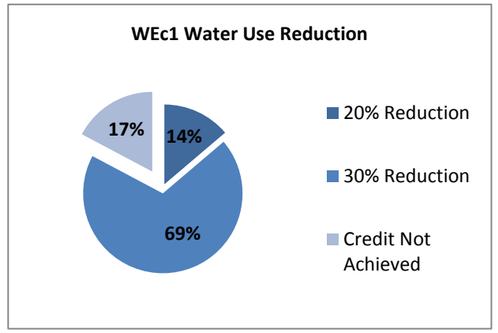
KEY FINDINGS

Number of Projects Achieving Credit	64
Total Number of Projects	77

Average Baseline - Water Use/Capita/Day (gallons)	16.67
Average LEED Projects - Water Use/Capita/Day (gallons)	10.77
Average Annual Water Savings Achieved by LEED Projects	37%
Total Annual Water Savings by Projects Achieving Credit (gallons)	27,957,100



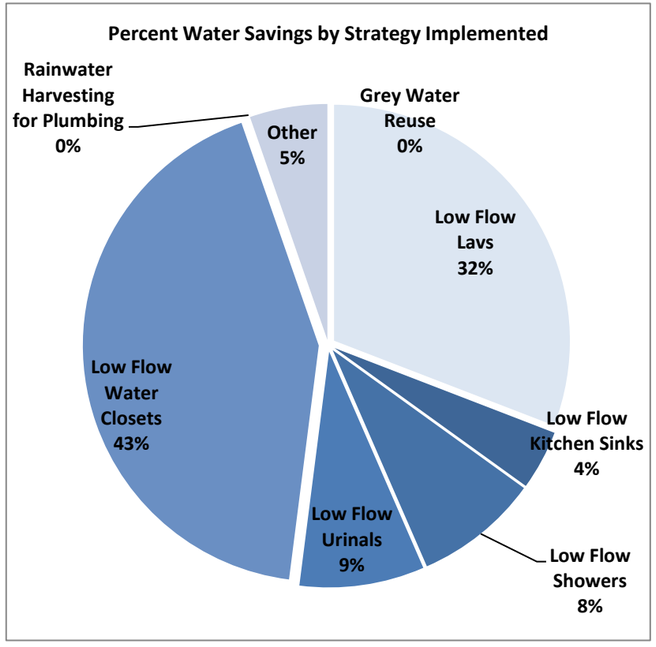
LEED-CI v2.0



KEY FINDINGS

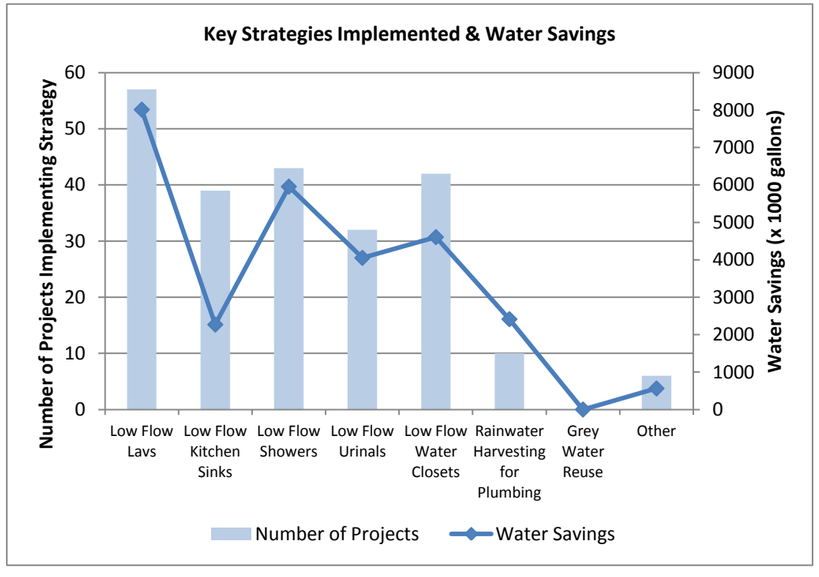
Number of Projects Achieving Credit	24
Total Number of Projects	29

Average Baseline - Water Use/Capita/Day	2.55
Average LEED Projects - Water Use/Capita/Day	1.64
Average Annual Water Savings Achieved by LEED Projects	30%
Total Annual Water Savings by Projects Achieving Credit (gallons)	1,526,700

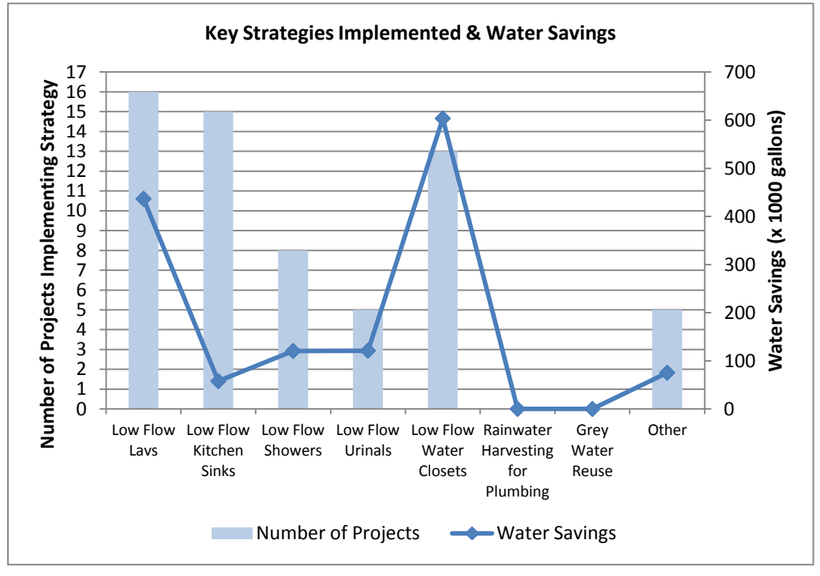


Paladino

LEED-NC v2.1, LEED-NC v2.2, LEED-CS v2.0



LEED-CI v2.0



COMBINED ENVIRONMENTAL SUMMARY

Number of Projects Achieving Credit	88
Total Number of Projects	106

Average Annual Water Savings Achieved by Projects Achieving Credit	35%
Total Annual Water Savings by Projects Achieving Credit (gallons)	29,483,900

Seattle LEED Projects 2000 - 2011

OPTIMIZE ENERGY PERFORMANCE

LEED Credits Analyzed LEED-NC EAc1 LEED-CS EAc1 LEED-CI EAc1.1-1.4

Introduction

Achievement of these credits reduces environmental impacts associated with excessive energy use. For LEED NC and CS projects, EAc1 may be achieved by demonstrating increasing levels of performance above an ASHRAE 90.1 baseline through a whole building energy simulation. Although Seattle Energy Code is periodically updated to reflect the current version of ASHRAE 90.1, studies have shown that SEC has some differences in requirements, and thus a comparison to SEC may show slightly higher/lower savings. For LEED CI projects, projects are evaluated for savings on different energy efficiency strategies.

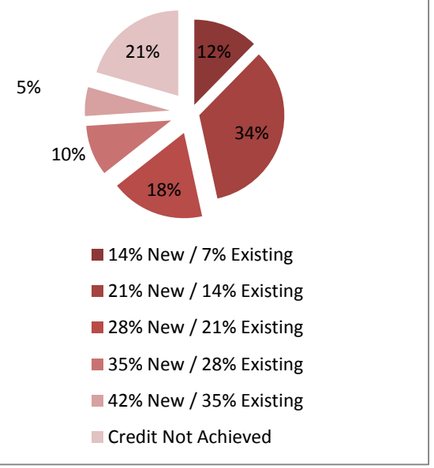
Requirements

LEED NC & CS: Demonstrate increasing levels of performance above an ASHRAE 90.1 baseline through a whole building energy simulation or by following prescriptive measures in the ASHRAE Advanced Energy Design Guide for Small Office Buildings or the Core Performance Guide. The analysis evaluates the percentage of projects achieving the credits, estimates total annual electricity savings (in kWh) and gas savings (in therms), and reports the electricity and gas savings by end use.

LEED CI: Four credits are available to demonstrate energy savings. The analysis for each LEED CI credit evaluates the percentage of projects achieving the credit and categorizes the compliance paths taken and strategies implemented. Projects can earn points by demonstrating that they have reduced lighting power density, installed lighting controls and efficient HVAC systems or specified ENERGY STAR equipment and appliances.

LEED-NC v2.1, LEED-NC v2.2, LEED-CS v2.0

EAc1 Optimize Energy Performance



KEY FINDINGS

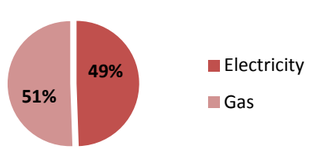
Number of Projects Achieving Credit	57
Total Number of Projects	77

Total Annual Energy Savings	49,596,100 kWh	169,222,000 kBtu
Total Annual Electricity Savings[1]	24,521,500 kWh	83,667,500 kBtu
Total Annual Gas Savings	855,700 therms	85,543,300 kBtu

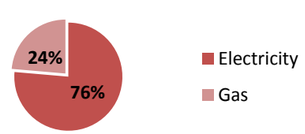
Total Process Loads	19,981,100 kWh	68,175,700 kBtu

Annual Electricity Savings Energy Use Intensity (EUI) (kBtu/SF/Yr)	8.1
Annual Gas Savings Energy Use Intensity (EUI) (kBtu/SF/Yr)	8.3
Total Annual Savings EUI (kBtu/SF/Yr)	16.4

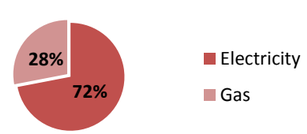
Total Energy Savings



Total Energy Consumption (Regulated + Unregulated Loads)

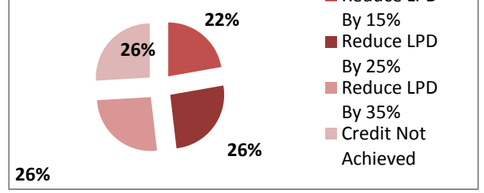


Total Energy Consumption (Regulated Loads[2] Only)



LEED-CI v2.0

EAc1.1 Optimize Energy Performance: Lighting Power

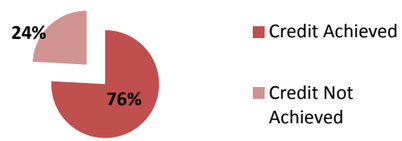


LIGHTING POWER KEY FINDINGS

Number of Projects Achieving Credit	21
Total Number of Projects	29

Total Lighting Power Density Savings (watts)	136,000

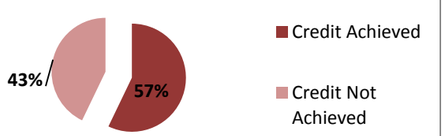
EAc1.2 Optimize Energy Performance: Lighting Controls



LIGHTING CONTROLS KEY FINDINGS

Number of Projects Achieving Credit	22
Total Number of Projects	29

EAc1.3 Optimize Energy Performance: HVAC



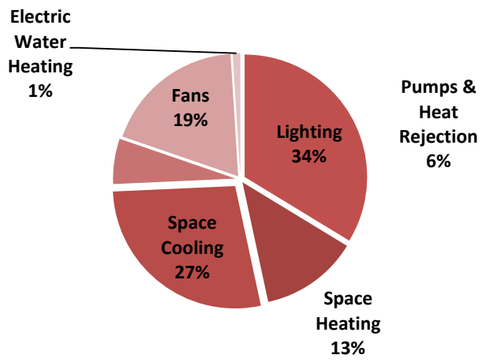
HVAC KEY FINDINGS

Number of Projects Achieving Credit	16
Total Number of Projects	29

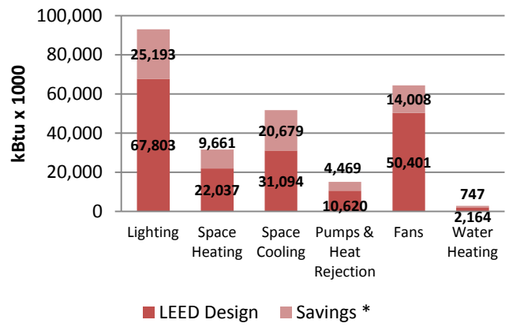
Paladino

LEED-NC v2.1, LEED-NC v2.2, LEED-CS v2.0

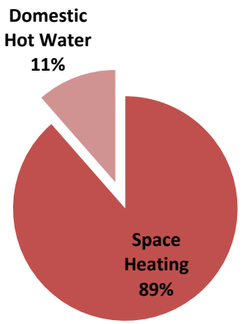
Electricity Savings by Enduse [1]



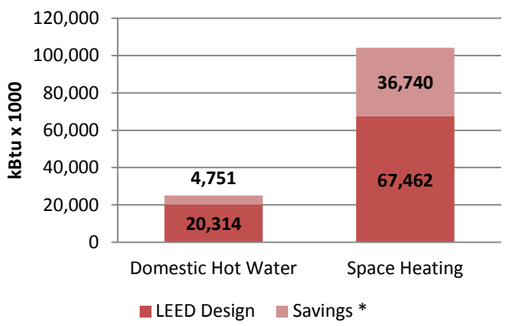
Total Regulated Electricity Use and Savings Relative to ASHRAE 90.1



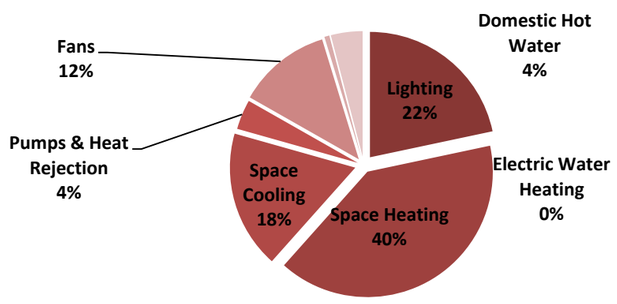
Natural Gas Savings by Enduse [1]



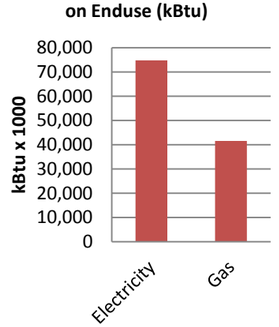
Total Regulated Gas Use and Savings Relative to ASHRAE 90.1



Total Energy Savings by Enduse [1]



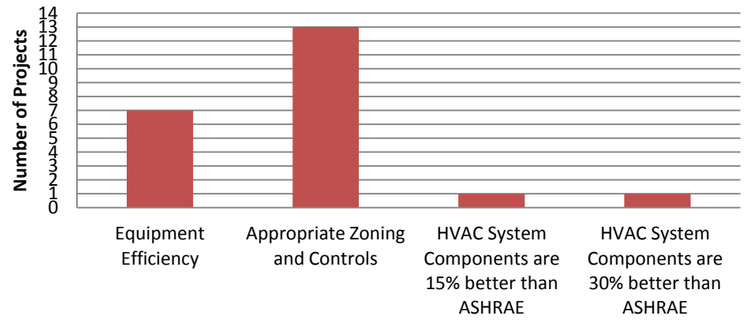
Total Energy Savings based on Enduse (kBtu)



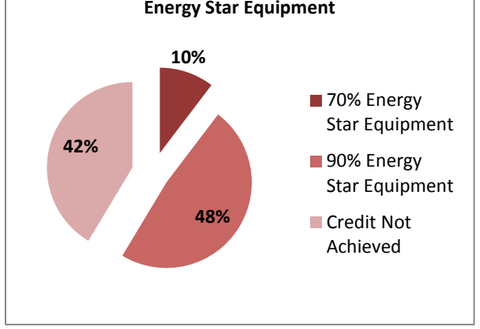
[1] Total Energy Savings m*ay include savings not accounted for in the enduse values*
[2] *Regulated Loads are defined by ASHRAE*
* LEED Design + Savings = Baseline Energy Use

LEED-CI v2.0

EAc1.3 Optimize Energy Performance: HVAC Key Strategies Implemented



EAc1.4 Optimize Energy Performance: Energy Star Equipment



ENERGY STAR EQUIPMENT KEY FINDINGS

Number of Projects Achieving Credit	19
Total Number of Projects	29

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Seattle LEED Projects 2000 - 2011

RENEWABLE ENERGY

LEED Credits Analyzed LEED-NC EAc2 LEED-CS EAc2

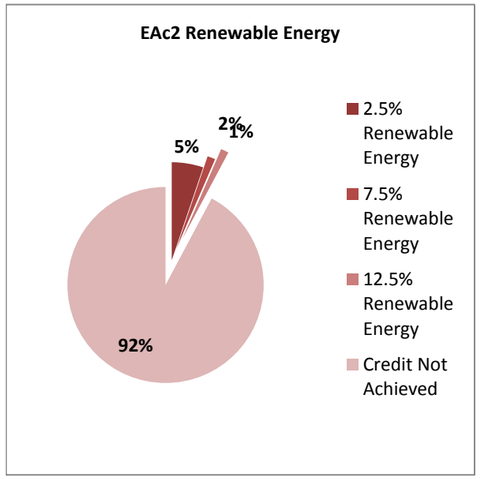
Introduction

Achievement of these credits reduces environmental impacts associated with fossil fuel energy use by supplying the building's energy use through on-site renewable energy systems. This analysis evaluates the percentage of projects achieving the credits, categorizes the strategies implemented and estimates the total renewable energy generated by projects that achieved this credit.

Requirements

Use on-site renewable energy systems to offset building energy cost. Calculate project performance by expressing the energy produced by the renewable systems as a percentage of the building annual energy cost.

LEED-NC v2.1, LEED-NC v2.2, LEED-CS v2.0

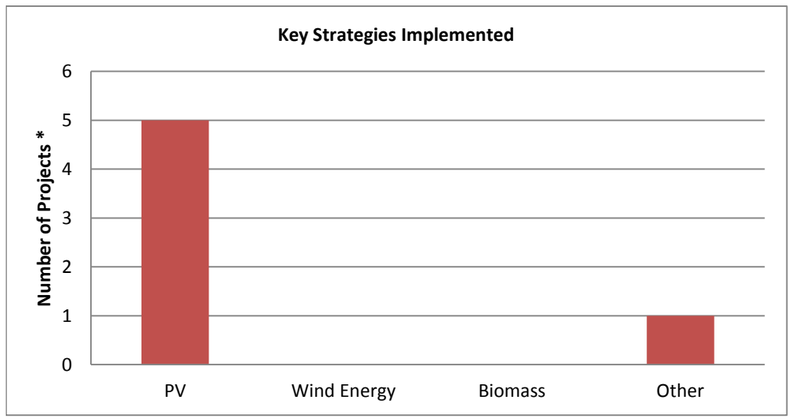


KEY FINDINGS

Number of Projects Achieving Credit	6
Total Number of Projects	77

Total Annual Renewable Energy (kWh)*	41,745
Average Annual % Total Building Energy Use *	183%

* This value does not represent data from all projects (data was missing for several projects prior to 2005)



LEED-CI v2.0

This credit is not available to LEED-CI projects.

Seattle LEED Projects 2000 - 2011

GREEN POWER

Introduction

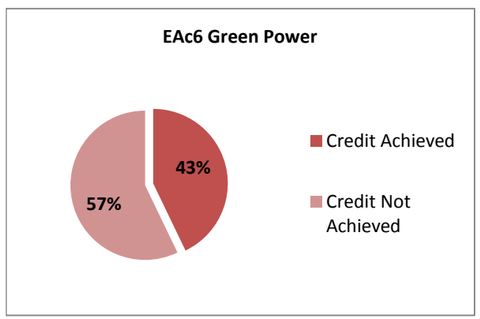
Achievement of these credits promotes the development and use of grid-source, renewable energy technologies by requiring that a significant percentage of the building's electricity be sourced from a renewable energy source. This analysis estimates the total green power purchased (in kWh) by projects.

LEED Credits Analyzed LEED-NC EAc6 LEED-CS EAc6 LEED-CI EAc4

Requirements

Provide at least 35% (50% for NCv2.1) of the building's electricity from renewable sources by engaging in at least a two-year renewable energy contract. Renewable sources are as defined by the Center for Resource Solutions (CRS) Green-e products certification requirements. To determine the energy electiricty, use the annual electricity consumption from the results of EA Credit 1, or the DOE CBECS database to determine the estimated electricity use.

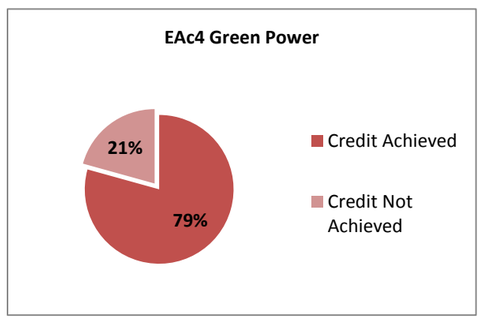
LEED-NC v2.1, LEED-NC v2.2, LEED-CS v2.0



KEY FINDINGS

Number of Projects Achieving Credit	33
Total Number of Projects	77
Total Annual Green Power Purchased (kWh)	14,445,500

LEED-CI v2.0



KEY FINDINGS

Number of Projects Achieving Credit	23
Total Number of Projects	29
Total Annual Green Power Purchased (kWh)	2,833,800

COMBINED ENVIRONMENTAL SUMMARY

Number of Projects Achieving Credit	56
Total Number of Projects	106
Total Annual Green Power Purchase (kWh)	17,279,300

Seattle LEED Projects 2000 - 2011
CARBON

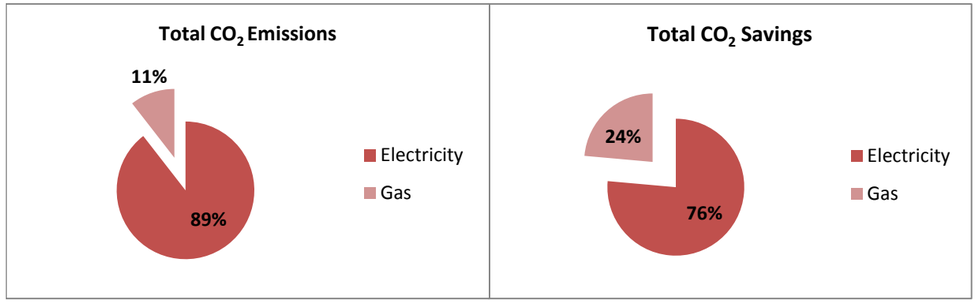
Introduction

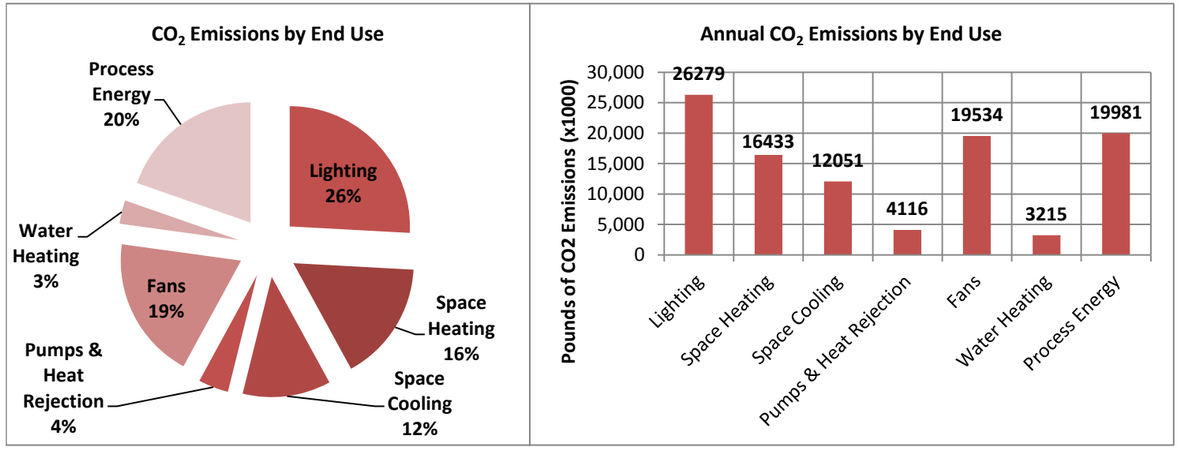
Information reported on this sheet reflects data provided for Energy & Atmosphere Credit 1. Converting electricity and gas use into CO_2 impacts illustrates their different contributions to atmospheric conditions. This report also shows the CO_2 emissions by end use, as reported for EAc1.

LEED-NC v2.1, LEED-NC v2.2, LEED-CS v2.0

Total LEED Design Electricity Use (kWh)	75,476,800
Total LEED Design Gas Use (Therms)	1,003,500

	Emissions	Savings
Total LEED Design CO_2 from Electricity (lbs)	99,810,600	32,427,300
Total LEED Design CO_2 from Gas (lbs)	11,735,500	10,007,000
Total CO_2 Savings from Renewables		55,204
Total CO_2	111,546,100	42,489,504

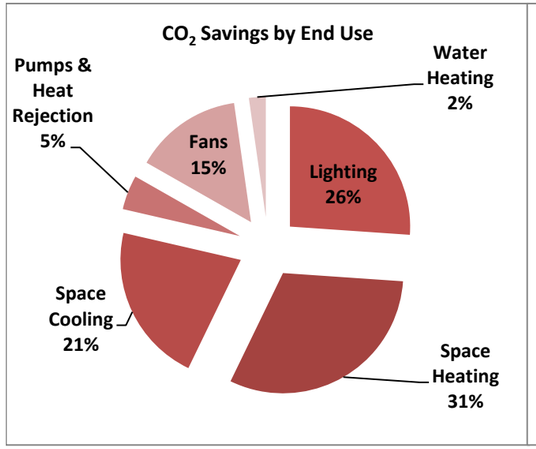


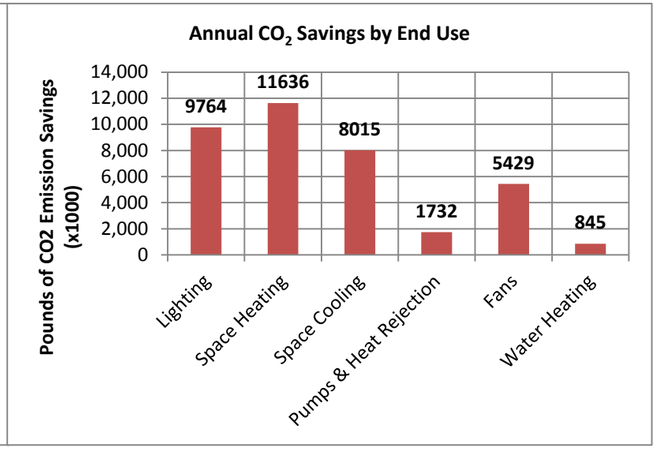


LEED-CI v2.0

	Savings
Total CO_2 Savings from Interior Lighting (lbs)	0

LEED-NC v2.1, LEED-NC v2.2, LEED-CS v2.0





Conversion Assumptions

City of Seattle CO_2 Impact Values:		*General Conversions:*
Electric Use	*0.6 Metric Tons/MWH*	*1 MWH = 1000 kWh*
Gas Use	*11.7 lbs/Therm*	*1 Metric Ton = 2204 lbs*

LEED-CI v2.0

Seattle LEED Projects 2000 - 2011

CONSTRUCTION WASTE MANAGEMENT: DIVERT FROM DISPOSAL

LEED Credits Analyzed LEED-NC MRc2 LEED-CS MRc2 LEED-CI MRc2

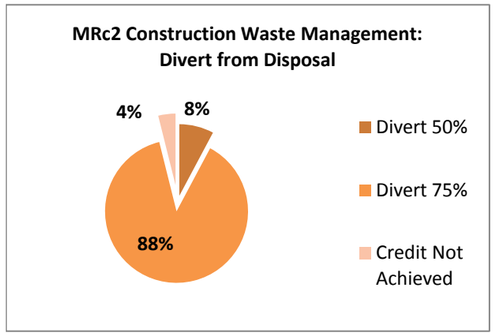
Introduction

Achievement of these credits diverts construction and demolition debris from disposal in landfills and incinerators, and promotes recycling and/or salvaging of non-hazardous construction and demolition waste. This analysis categorizes the waste stream, and estimates the amount of each stream of waste diverted (in tons) and total waste diverted (in tons) by LEED rated projects. The analysis also estimates the average construction waste diverted (in lbs/SF) and the average percentage of construction waste diverted.

Requirements

Recycle and/or salvage non-hazardous construction and demolition debris. Materials diverted from disposal can be sorted on site or commingled. Excavated soil and land-clearing debris do not contribute to this credit.

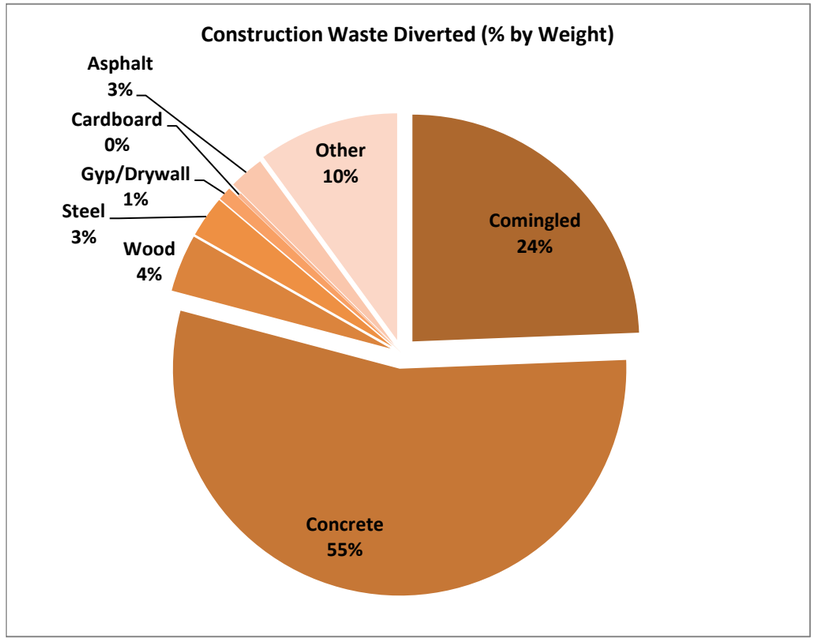
LEED-NC v2.1, LEED-NC v2.2, LEED-CS v2.0



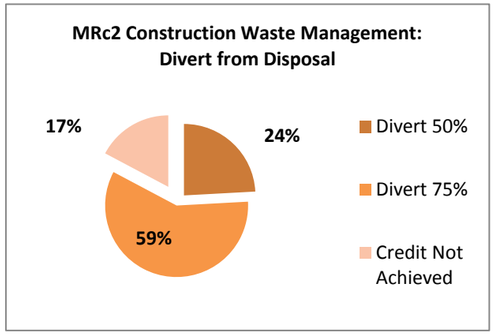
KEY FINDINGS

Number of Projects Achieving Credit	74
Total Number of Projects	77

Average Percent of Construction Waste Diverted	90%
Average Construction Waste Generated (lbs/SF)	56.2
Average Construction Waste Diverted (lbs/SF)	50.6
Total Construction Waste Diverted (tons)	174,000



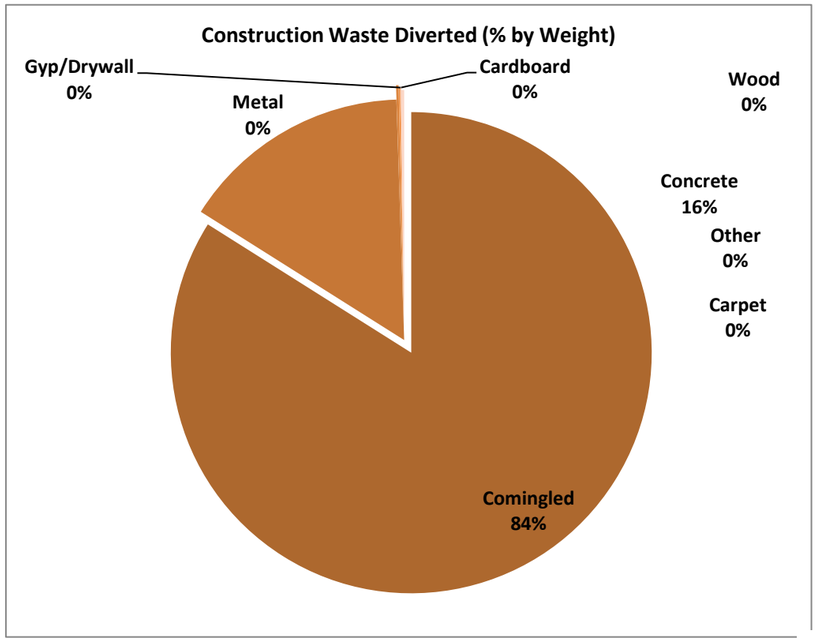
LEED-CI v2.0



KEY FINDINGS

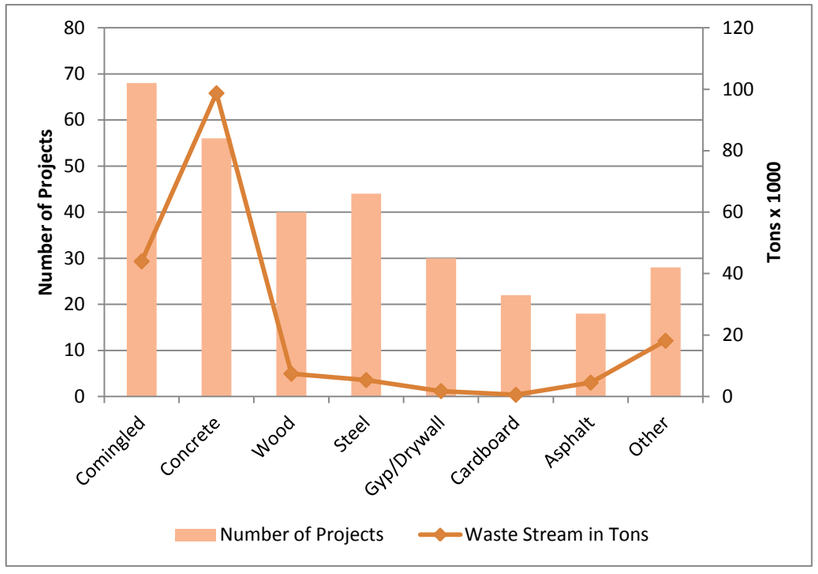
Number of Projects Achieving Credit	24
Total Number of Projects	29

Average % Rate of Construction Waste Diverted	80%
Average Construction Waste Generated (lbs/SF)	101.2
Average Construction Waste Diverted (lbs/SF)	7.7
Total Construction Waste Diverted (tons)	1768.1

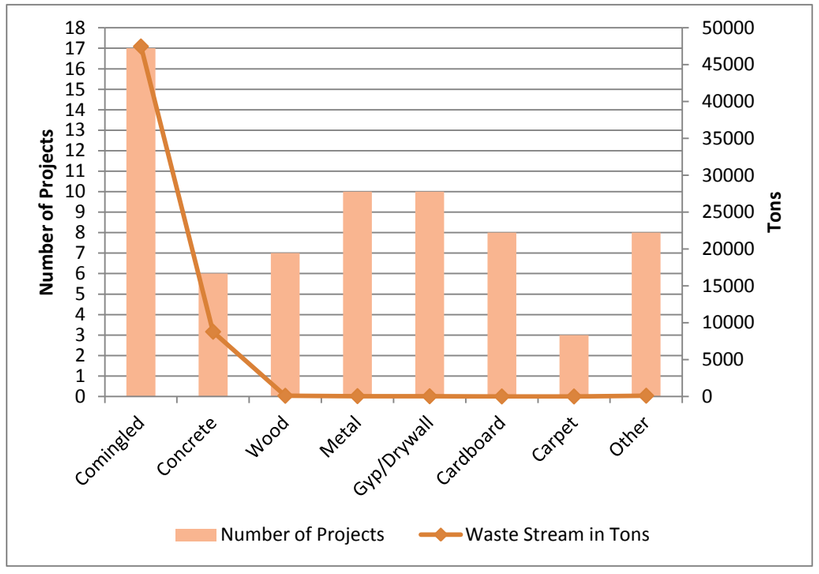


Paladino

LEED-NC v2.1, LEED-NC v2.2, LEED-CS v2.0



LEED-CI v2.0



COMBINED ENVIRONMENTAL SUMMARY

Number of Projects Achieving Credit	98
Total Number of Projects	106

Total Construction Waste Diverted (tons)	175,768

Seattle LEED Projects 2000 - 2011

RECYCLED CONTENT

LEED Credits Analyzed LEED-NC MRc4 LEED-CS MRc4 LEED-CI MRc4

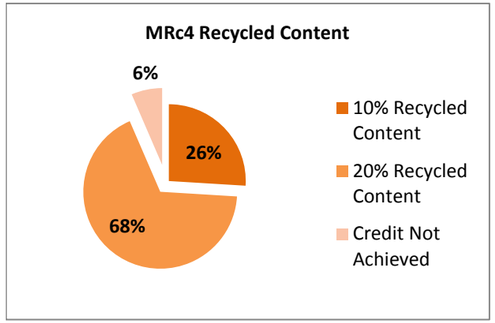
Introduction

Achievement of these credits reduces impacts from extraction and processing of virgin materials by using building products that incorporate recycled content materials. This analysis categorizes the materials that incorporate recycled content and estimates the total recycled content value of each category, and estimates the total recycled content cost and the average value of recycled content as a percentage of total material cost for projects.

Requirements

Use materials with recycled content such that the sum of post-consumer recycled content plus one-half of the pre-consumer recycled content constitutes at least 10% (based on cost) of the total value of the materials in the project.

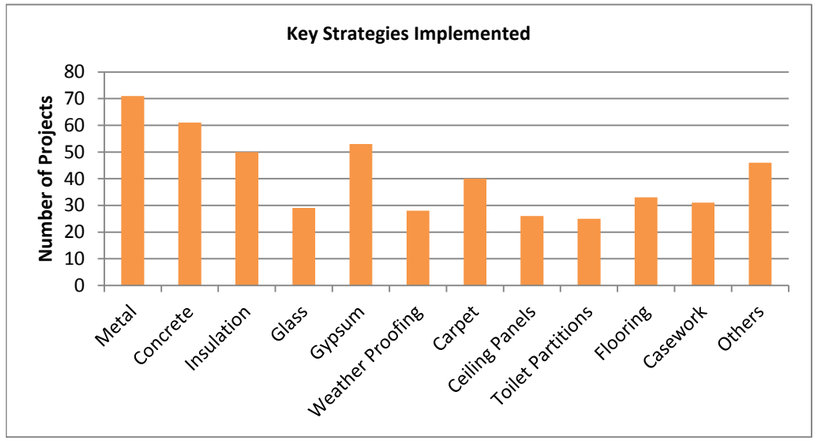
LEED-NC v2.1, LEED-NC v2.2, LEED-CS v2.0



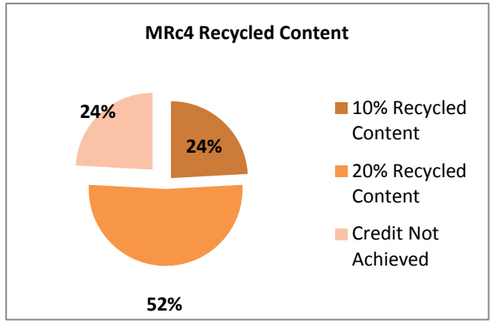
KEY FINDINGS

Number of Projects Achieving Credit	72
Total Number of Projects	77

Average % Recycled Content Materials by Cost	21%
Total Value of Recycled Content Materials	$129,081,800



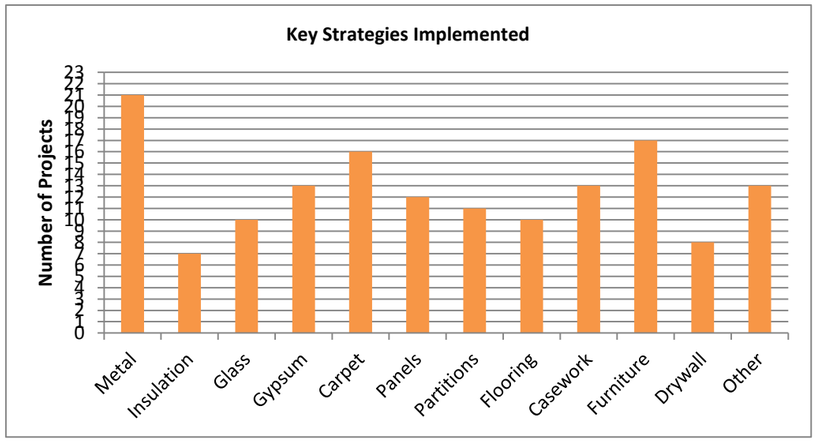
LEED-CI v2.0



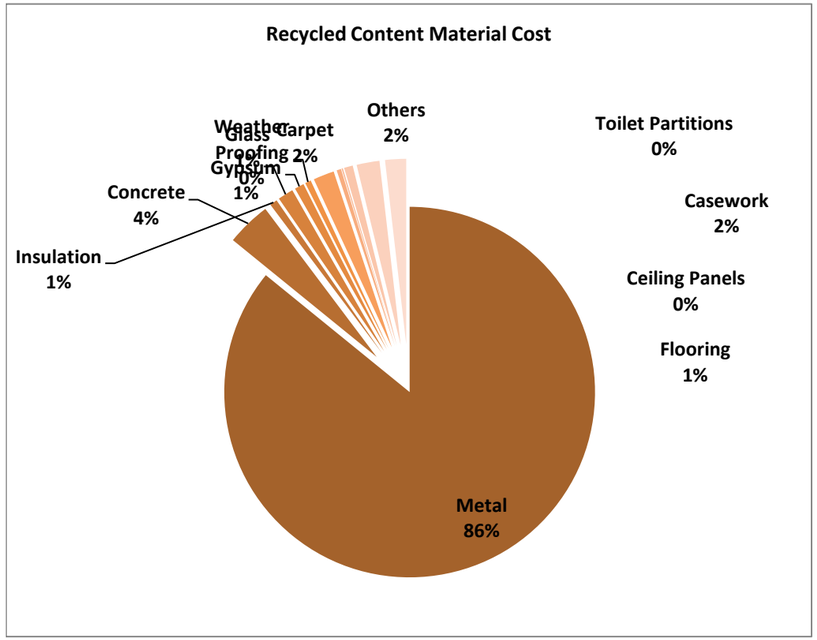
KEY FINDINGS

Number of Projects Achieving Credit	22
Total Number of Projects	29

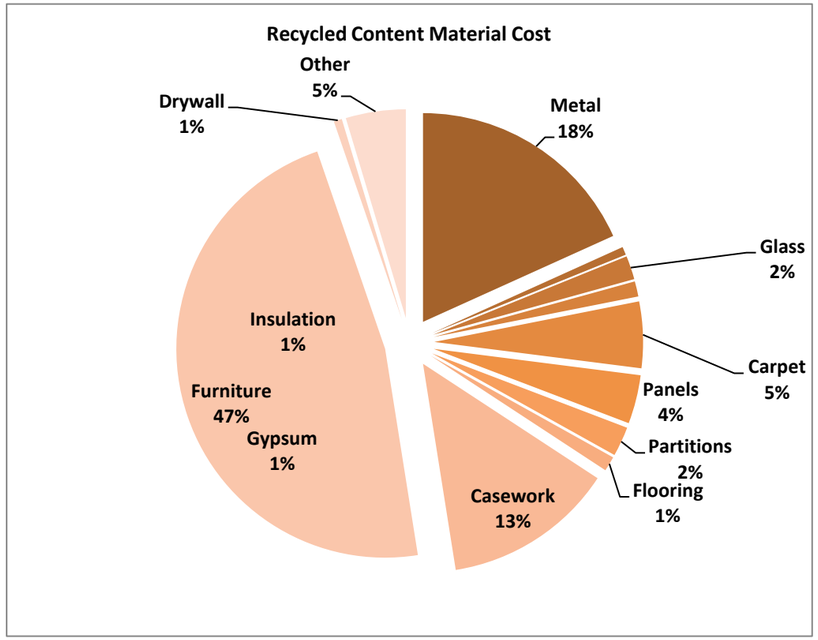
Average % Recycled Content Materials by Cost	20%
Total Value of Recycled Content Materials	$2,409,100



LEED-NC v2.1, LEED-NC v2.2, LEED-CS v2.0



LEED-CI v2.0



COMBINED ENVIRONMENTAL SUMMARY

Number of Projects Achieving Credit	94
Total Number of Projects	106

Total Value of Recycled Content Materials	$131,490,900