How EasyTurf Can Contribute To Obtaining

LEED® Credits

EASYTURF®
SYNTHETIC LAWNS & PUTTING GREENS

Southern California's Exclusive FIELDturf Dealer

EasyTurf and LEED's Credits

EasyTurf has an impact on environmental conservation through a variety of means. It can reduce water usage by 70%, serve as a directional tool in gray water reclamation and is 100% recyclable.

As a member of the United States Green Building Council (USGBC), EasyTurf supports its efforts to provide a national standard for what constitutes a "green building." LEED credits are a Green Building Rating System™ that is utilized as a design guideline and certification tool for architects and designers seeking to develop high-performance, sustainable buildings.

Installing an EasyTurf synthetic lawn allows a building to obtain a possible 1 to 18 credits that can result in different levels of certification leading to grants and special funding. The environmental advantages of EasyTurf landscaping make it a significant tool in obtaining possible point certification.

EasyTurf synthetic grass contributes to greater water efficiency, utilizes recycled resources, assists in protecting and restoring existing habitats and can reduce heating costs.

EasyTurf is one of many methodologies that can contribute to obtaining LEED credits. The information in this guide provides suggestions that help with LEED accreditation, but does not guarantee certification. EasyTurf helps achieve a portion of the necessary requirements to obtain credits, but may not meet all of them. This document should not serve as a replacement for any LEED Guidelines, which can be obtained at www.usgbc.org or by contacting the United States Green Building Council.

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Water Efficiency: Credit 1.1

Water Efficient Landscaping: Reduce by 50%

SS	WE	EA	MR	EQ	ID
Credit 1.1					

1 Point

Intent
Limit or eliminate the use of potable water, or other natural surface or subsurface water resources available on or near the project site, for landscape irrigation.

Requirements
Reduce potable water consumption for irrigation by 50% from a calculated mid-summer baseline case.

Ways EasyTurf Can Contribute:
- Capture and store rain runoff and gray water for irrigation through cool drain system.
- Porous turf allows existing vegetation to maintain water supply through rainfall.
- Capture and reuse excess water from below porous turf through cool drain system.

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SS	WE	EA	MR	EQ	ID
Credit 1.2					

1 Point
(in addition to WE Credit 1.1)

Water Efficiency: Credit 1.2

Water Efficient Landscaping: No Potable Water Use or No Irrigation

Intent

Eliminate the use of potable water, or other natural surface or subsurface water resources available on or near the project site, for landscape irrigation.

Requirements

Achieve WE Credit 1.1 and use only captured rainwater, recycled wastewater, recycled gray water, 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. Temporary irrigation systems used for plant establishment are allowed only if removed within one year of installation.

Ways EasyTurf Can Contribute:

- Capture and store rain runoff and gray water for irrigation through cool drain system.
- Porous turf allows existing vegetation to maintain water supply through rainfall.
- Capture and reuse excess water from below porous turf through cool drain system.

Water Efficiency: Credit 2

Water Efficient Landscaping: Innovative Wastewater Technologies

SS	WE	EA	MR	EQ	ID
Credit 2					

1 Point

Intent
Reduce generation of wastewater and potable water demand, while increasing the local aquifer recharge.

Requirements

OPTION 1
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 gray water, and on-site or municipally treated wastewater).

OR

OPTION 2
Treat 50% of wastewater on-site to tertiary standards. Treated water must be infiltrated or used on-site.

Ways EasyTurf Can Contribute:
- Capture and store building gray water for reuse.
- Synthetic grass has natural filtering factors to increase water quality.
- Mix or replace potable water for flushing, heating/cooling, fire protection, and/or irrigation.

SS	WE	EA	MR	EQ	ID
Credit 3.1					

1 Point

Water Efficiency: Credit 3.1

Water Use Reduction: 20% Reduction

Intent

Maximize water efficiency within buildings to reduce the burden on municipal water supply and wastewater systems.

Requirements

Employ strategies that in aggregate use 20% less water than the water use baseline calculated for the building (not including irrigation) 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 (as applicable to the building): water closets, urinals, lavatory faucets, showers and kitchen sinks.

Ways EasyTurf Can Contribute:

- Capture and store rain and gray water for reuse.
- Mix or replace potable water for flushing, heating and cooling.

Water Efficiency: Credit 3.2

Water Use Reduction: 30% Reduction

SS	WE	EA	MR	EQ	ID
Credit 3.2					

1 Point
(in addition to WE Credit 3.1)

Intent
Maximize water efficiency within buildings to reduce the burden on municipal water supply and wastewater systems.

Requirements
Employ strategies that in aggregate use 30% less water than the water use baseline calculated for the building (not including irrigation) 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 (as applicable to the building): water closets, urinals, lavatory faucets, showers and kitchen sinks.

Ways EasyTurf Can Contribute:
- Capture and store rain and gray water for reuse.
- Mix or replace potable water for flushing, heating and cooling.

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SS	WE	EA	MR	EQ	ID
Credit 2.1					

1 Point

Materials and Resources: Credit 2.1

Construction Waste Management: Divert 50% from Disposal

Intent

Divert construction, demolition and land-clearing debris from disposal in landfills and incinerators. Redirect recyclable recovered resources back to the manufacturing process. Redirect reusable materials to appropriate sites.

Requirements

Recycle and/or salvage at least 50% of non-hazardous construction and demolition debris. Develop and implement a construction waste management plan that, at a minimum, identifies the materials to be diverted from disposal and whether the materials will be sorted on-site or co-mingled. Excavated soil and land-clearing debris do not contribute to this credit. Calculations can be done by weight or volume, but must be consistent throughout.

Ways EasyTurf Can Contribute:

- Preserve and/or reuse existing trees and shrubs found onsite by integrating them into the synthetic landscaping.
- Turf provides greater flexibility in grading versus hardscaping.
- Crumb rubber is made from recycled tires and is reusable in synthetic landscaping.

Materials and Resources: Credit 2.2

Construction Waste Management: Divert 75% from Disposal

SS	WE	EA	MR	EQ	ID
Credit 2.2					

1 Point
(in addition to MR Credit 2.1)

Intent
Divert construction and demolition debris from disposal in landfills and incinerators. Redirect recyclable recovered resources back to the manufacturing process. Redirect reusable materials to appropriate sites.

Requirements
Recycle and/or salvage an additional 25% beyond MR Credit 2.1 (75% total) of non-hazardous construction and demolition debris. Excavated soil and land-clearing debris do not contribute to this credit. Calculations can be done by weight or volume, but must be consistent throughout.

Ways EasyTurf Can Contribute:
- Preserve and/or reuse existing trees and shrubs found onsite by integrating them into the synthetic landscaping.
- Turf provides greater flexibility in grading versus hardscaping.
- Crumb rubber is made from recycled tires and is reusable in synthetic landscaping.

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SS	WE	EA	MR	EQ	ID
Credit 3.1					

1 Point

Materials and Resources: Credit 3.1

Materials Reuse: 5%

Intent

Reuse building materials and products in order to reduce demand for virgin materials and to reduce waste, thereby reducing impacts associated with the extraction and processing of virgin resources.

Requirements

Use salvaged, refurbished or reused materials such that the sum of these materials constitutes at least 5%, based on cost, of the total value of materials on the project. Mechanical, electrical and plumbing components and specialty items such as elevators and equipment shall not be included in this calculation. Only include materials permanently installed in the project.

Ways EasyTurf Can Contribute:

- Preserve and/or reuse existing trees and shrubs found onsite by integrating them into the synthetic landscaping.
- Turf provides greater flexibility in grading versus hardscaping.
- Maintains water flow and oxygen to existing root systems.
- Prevents erosion of steep slopes due to slower water flow.
- Capture and store rain and gray water for reuse.
- Crumb rubber is made from recycled tires and is reusable in synthetic landscaping.

Materials and Resources: Credit 3.2

Materials Reuse: 10%

SS	WE	EA	MR	EQ	ID
Credit 3.2					

1 Point
(in addition to MR Credit 3.1)

Intent
Reuse building materials and products in order to reduce demand for virgin materials and to reduce waste, thereby reducing impacts associated with the extraction and processing of virgin resources.

Requirements
Use salvaged, refurbished or reused materials for an additional 5% beyond MR Credit 3.1 (10% total, based on cost). Mechanical, electrical and plumbing components and specialty items such as elevators and equipment shall not be included in this calculation. Only include materials permanently installed in the project.

Ways EasyTurf Can Contribute:
- Preserve and/or reuse existing trees and shrubs found onsite by integrating them into the synthetic landscaping.
- Turf provides greater flexibility in grading versus hardscaping.
- Maintains water flow and oxygen to existing root systems.
- Prevents erosion of steep slopes due to slower water flow.
- Capture and store rain and gray water for reuse.
- Crumb rubber is made from recycled tires and is reusable in synthetic landscaping.

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SS	WE	EA	MR	EQ	ID
Credit 4.1					

1 Point

Materials and Resources: Credit 4.1

Recycled Content: 10% (post-consumer + 1/2 pre-consumer)

Intent

Increase demand for building products that incorporate recycled content materials, thereby reducing impacts resulting from extraction and processing of virgin materials.

Requirements

Use materials with recycled content such that the sum of post-consumer recycled content plus one-half of the pre-consumer content constitutes at least 10% (based on cost) of the total value of the materials in the project. The recycled content value of a material assembly shall be determined by weight. The recycled fraction of the assembly is then multiplied by the cost of assembly to determine the recycled content value.

Mechanical, electrical and plumbing components and specialty items such as elevators shall not be included in this calculation. Only include materials permanently installed in the project. Recycled content shall be defined in accordance with the International Organization of Standards document, ISO 14021—Environmental labels and declarations—Self-declared environmental claims (Type II environmental labeling).

Post-consumer material is defined as waste material generated by households or by commercial, industrial and institutional facilities in their role as end-users of the product, which can no longer be used for its intended purpose.

Pre-consumer material is defined as material diverted from the waste stream during the manufacturing process. Excluded is reutilization of materials such as rework, regrind or scrap generated in a process and capable of being reclaimed within the same process that generated it.

Ways EasyTurf Can Contribute:

- Preserve and/or reuse existing trees and shrubs found onsite by integrating them into the synthetic landscaping.
- Crumb rubber is made from recycled tires and is reusable in synthetic landscaping.

Materials and Resources: Credit 4.2

Recycled Content: 20% (post-consumer + 1/2 pre-consumer)

SS	WE	EA	MR	EQ	ID
Credit 4.2					

1 Point
(in addition to MR Credit 4.1)

Intent
Increase demand for building products that incorporate recycled content materials, thereby reducing the impacts resulting from extraction and processing of virgin materials.

Requirements
Use materials with recycled content such that the sum of post-consumer recycled content plus one-half of the pre-consumer content constitutes an additional 10% beyond MR Credit 4.1 (total of 20%, based on cost) of the total value of the materials in the project. The recycled content value of a material assembly shall be determined by weight. The recycled fraction of the assembly is then multiplied by the cost of assembly to determine the recycled content value.

Mechanical, electrical and plumbing components and specialty items such as elevators shall not be included in this calculation. Only include materials permanently installed in the project. Recycled content shall be defined in accordance with the International Organization of Standards document, *ISO 14021—Environmental labels and declarations—Self-declared environmental claims (Type II environmental labeling).*

Post-consumer material is defined as waste material generated by households or by commercial, industrial and institutional facilities in their role as end-users of the product, which can no longer be used for its intended purpose.

Pre-consumer material is defined as material diverted from the waste stream during the manufacturing process. Excluded is reutilization of materials such as rework, regrind or scrap generated in a process and capable of being reclaimed within the same process that generated it.

Ways EasyTurf Can Contribute:
- Preserve and/or reuse existing trees and shrubs found onsite by integrating them into the synthetic landscaping.
- Crumb rubber is made from recycled tires and is reusable in synthetic landscaping.

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SS	WE	EA	MR	EQ	ID
Credit 5.1					

1 Point

Materials and Resources: Credit 5.1

Regional Materials: 10% Extracted, Processed & Manufactured Regionally

Intent

Increase demand for building materials and products that are extracted and manufactured within the region, thereby supporting the use of indigenous resources and reducing the environmental impacts resulting from transportation.

Requirements

Use building materials or products that have been extracted, harvested or recovered, as well as manufactured, within 500 miles of the project site for a minimum of 10% (based on cost) of the total materials value. If only a fraction of a product or material is extracted/harvested/recovered and manufactured locally, then only that percentage (by weight) shall contribute to the regional value. Mechanical, electrical and plumbing components and specialty items such as elevators and equipment shall not be included in this calculation. Only include materials permanently installed in the project.

Ways EasyTurf Can Contribute:

- Dependent on site location.
- Materials are shipped unassembled to reduce number of trucks. Product is assembled by local distributor to project specifications.

Sustainable Site: Credit 5.2

Site Development: Maximize Open Space

SS	WE	EA	MR	EQ	ID
Credit 5.2					

1 Point

Intent
Provide a high ratio of open space to development footprint to promote biodiversity.

Requirements

OPTION 1
Reduce the development footprint (defined as the total area of the building footprint, hardscape, access roads and parking) and/or provide vegetated open space within the project boundary to exceed the local zoning's open space requirement for the site by 25%.

OR

OPTION 2
For areas with no local zoning requirements (e.g., some university campuses, military bases), provide vegetated open space area adjacent to the building that is equal to the building footprint.

OR

OPTION 3
Where a zoning ordinance exists, but there is no requirement for open space (zero), provide vegetated open space equal to 20% of the project's site area.

ALL OPTIONS:
- For projects located in urban areas that earn SS Credit 2, vegetated roof areas can contribute to credit compliance.
- For projects located in urban areas that earn SS Credit 2, pedestrian oriented hardscape areas can contribute to credit compliance. For such projects, a minimum of 25% of the open space counted must be vegetated.
- Wetlands or naturally designed ponds may count as open space if the side slope gradients average 1:4 (vertical: horizontal) or less and are vegetated.

Ways EasyTurf Can Contribute:
- Visual lawn, functional traffic surface.
- Preserve and/or reuse existing trees and shrubs found onsite by integrating them into the synthetic landscaping to increase ratio of open space.

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SS | WE | EA | MR | EQ | ID

Credit 6.1

1 Point

Sustainable Site: Credit 6.1

Stormwater Design: Quantity Control

Intent

Limit disruption of natural water hydrology by reducing impervious cover, increasing on-site infiltration, reducing or eliminating pollution from stormwater runoff, and eliminating contaminants.

Requirements

CASE 1 — EXISTING IMPERVIOUSNESS IS LESS THAN OR EQUAL TO 50%
Implement a stormwater management plan that prevents the post-development peak discharge rate and quantity from exceeding the pre-development peak discharge rate and quantity for the one- and two-year 24-hour design storms.

OR

Implement a stormwater management plan that protects receiving stream channels from excessive erosion by implementing a stream channel protection strategy and quantity control strategies.

OR

CASE 2 — EXISTING IMPERVIOUSNESS IS GREATER THAN 50%
Implement a stormwater management plan that results in a 25% decrease in the volume of stormwater runoff from the two-year 24-hour design storm.

Ways EasyTurf Can Contribute:

- Porous turf allows direct infiltration (quantity).
- Porous turf slows speed of surface flow (rate).
- Porous turf and cool drain system direct water for short or long-term subsurface storage (quantity).
- Directs flow of excess water to help implement a storm water management plan.

Sustainable Site: Credit 6.2

Stormwater Design: Quality Control

SS	WE	EA	MR	EQ	ID
Credit 6.2					

1 Point

Intent
Limit disruption and pollution of natural water flows by managing stormwater runoff.

Requirements
Implement a stormwater management plan that reduces impervious cover, promotes infiltration, and captures and treats the stormwater runoff from 90% of the average annual rainfall using acceptable best management practices (BMP's).

Ways EasyTurf Can Contribute:
- Porous turf acts as bio-filter for treatment of pollutants.
- Bio-swale for capture and conveyance with cool drain system.
- Capture and convey treated water below surface for storage.

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SS | WE | EA | MR | EQ | ID
Credit 7.1

1 Point

Sustainable Site: Credit 7.1

Heat Island Effect: Non-Roof

Intent

Reduce heat islands (thermal gradient differences between developed and undeveloped areas) to minimize impact on microclimate and human and wildlife habitat

Requirements

OPTION 1

Provide any combination of the following strategies for 50% of the site hardscape (including roads, sidewalks, courtyards and parking lots):

- Shade (within 5 years of occupancy)
- Paving materials with a Solar Reflectance Index (SRI) of at least 29
- Open grid pavement system

OR

OPTION 2

Place a minimum of 50% of parking spaces under cover (defined as underground, under deck, under roof, or under a building). Any roof used to shade or cover parking must have an SRI of at least 29.

Ways EasyTurf Can Contribute:

- Reduces Heat Islands (Non-Roof).
- Turf has reflective attributes, but SRI has not been determined.
- Albedo number of 0.40 (grass fill, color and water transpiration).

Sustainable Site: Credit 7.2

Heat Island Effect: Roof

SS	WE	EA	MR	EQ	ID
Credit 7.2					

1 Point

Intent
Reduce heat islands (thermal gradient differences between developed and undeveloped areas) to minimize impact on microclimate and human and wildlife habitat.

Requirements
OPTION 1
Use roofing materials having a Solar Reflectance Index (SRI) equal to or greater than the values in the table below for a minimum of 75% of the roof surface.

OR

OPTION 2
Install a vegetated roof for at least 50% of the roof area.

OR

OPTION 3
Install high albedo and vegetated roof surfaces that, in combination, meet the following criteria:
(Area of SRI Roof / 0.75) + (Area of vegetated roof / 0.5) >= Total Roof Area

Roof Type	Slope	SRI
Low-Sloped Roof	≥2:12	78
Steep-Sloped Roof	>2:12	29

Ways EasyTurf Can Contribute:
- Turf has reflective attributes, but SRI has not been determined.
- Albedo number of 0.40 (grass fill, color and water transpiration).

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SS	WE	EA	MR	EQ	ID
Credit 1					

1-10 Points

Energy and Atmosphere: Credit 1

Optimize Energy Performance

Intent

Achieve increasing levels of energy performance above the baseline in the prerequisite standard to reduce environmental and economic impacts associated with excessive energy use.

Requirements

Select one of the four compliance path options described in LEED Version 2.2, Section Energy and Atmosphere, page 33.

Ways EasyTurf Can Contribute:

• Reduces solar reflection on buildings, requiring less energy for heating.

Go Green and Save Green

EasyTurf is a "Green" product that doesn't require mowing or pesticides, which cuts carbon emissions and prevents harmful chemicals from entering the soil.

Synthetic grass is potentially the most effective water conservation tool that commercial and municipal facilities can install, and with water costs projected to rise 40% by 2009, it is quickly becoming a necessary investment to reduce monthly overhead. Watering and maintaining natural grass uses as much as 325,900 gallons of water annually for every 10,000 square feet. EasyTurf requires no water or pesticides, little maintenance, looks and feels real and lasts from 20 to 25 years, making it an unbeatable solution for reducing excessive water use and reducing landscaping costs.

For more information and a FREE estimate, contact EasyTurf at 1-866-EASYTURF (1-866-327-9887).

EasyTurf is a proud member of the following associations:

The Greening of Southern California by EasyTurf

Municipal Installations:

San Diego Unified School District
National City School District
Poway Unified School District
Solana Beach School
Glendale Unified School District
Coast Community College District
Los Angeles Unified School District
Cal-Tech University
City of Oceanside
City of Carlsbad
City of Brea
City of Temecula
City of Brentwood
City of Irvine
City of El Monte
City of Westminster
City of Stanton
City of Riverside Public Utilities
Elsinore Valley Municipal Water District
Olivenhain Municipal Water District
Ramona Municipal Water District
Padre Dam Municipal Water District
Western Municipal Water District
Cucamonga Valley Water District
Otay Water District
Vallecitos Water District
Helix Municipal Water District
Tecolote Canyon Little League
San Diego Airport - Dog Relief Area
San Diego Harbor Police Dogs
San Diego Humane Society
North County Animal Services
South County Animal Shelter
UCSD Child Education Center
Palomar College Child Development Center
Cuyamaca College

Commercial Installations:

Petco Park
SeaWorld of San Diego
LEGOLAND
San Diego Zoo
San Diego Wild Animal Park
Quail Botanical Gardens
Humphrey's by the Bay
Hotel Del Coronado
Sheraton Harbor Island
Guide Dogs of the Desert
VCA Emergency Animal Hospital
Target Shopping Center
Costco Wholesale
Scripps Hospital
Lifetime Fitness
Frogs/Club One Fitness
Center for Medicine and Sport
Mossy Nissan
Sandpiper Point Homeowners Association
Montessori School of San Diego
Oceanside Pet Hotel
Wags to Whiskers
Acacia Animal Hospital
Animal & Bird Hospital of Del Mar
Cole's Cottage
Evans School
Francis Parker School
Together We Grow
Harmony Animal Hospital
Drake Center for Veterinary Care
Spring Creek Kennel and Cattery
University City United Church
Graham Memorial Pre-School
The Child's Primary School
Saint James Lutheran Church
Congregation Ner Tamid

Military Installations:

32nd Street Naval Base
Vesta Hall
Vesta Monument
Mole Pier
Matthews Field
High Voltage Area
Gate 6
Gate 32
Gate 43
Building 91
Building 72
Building 330

Point Loma (Admiral Kidd)
Ocean Front Area

Naval Amphibious Base (Coronado)
Building 618

Camp Pendleton
Browne Child Development Center
San Onofre Child Development Center
Courteau Child Development Center
Stuart Mesa Child Development Center
Fisher Child Development Center

MCAS Miramar
Air Fields

Balboa Naval Hospital
Playgrounds
Emergency Exit Area

Fort Rosecrans National Cemetery
Common Area

And Over 5,000 Residential Installations Across Southern California.

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For more information, contact EasyTurf at:

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www.easyturf.com

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