

# Sustainability Certification Workbook for Lawn Care Providers



The step-by-step guide for lawn care providers interested in becoming Certified by Audubon Lifestyles and earning the Seal of Sustainability from the International Sustainability Council.



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*A journey of 1000 miles starts with a single step, so the saying goes. That is the same philosophy that our Sustainability Programs are based on.*

*Over the past couple of decades many programs have been created that all have a focus on getting people to “save the earth” where they live, work and play. While that is certainly a laudable goal, the fact of the matter is that most of these programs are so complicated and so expensive that the vast majority of people do not participate in them.*

*What we are focusing on are the ten most important actions that people can take at home or at their places of business that will truly make a difference. We believe that this approach is more easily understood and that the proposed actions are keys to improving the quality of the environment in cost effective and meaningful ways.*

*It has been said that in many cases it is the first few actions taken that make the biggest difference and the last few are the most expensive and least beneficial. Becoming Certified by Audubon Lifestyles, and earning the Seal of Sustainability from the International Sustainability Council as demonstrated by taking the ten actions outlined in this program workbook might just be a single step, but when one thousand individuals take those same measures we truly create a meaningful journey toward improving the quality of the environment, and gain the monetary rewards associated with being more sustainable at the same time.*

*We are trying to save the earth, one person, one place at a time please join us in this journey!!*

*R. Eric Dodson*



*Executive Director*



## **The Sustainable Lawn Care Provider Program**

The Sustainable Lawn Care Provider Program is a voluntary program that sets the bar for sustainable-minded, operated and managed lawn care providers. Not every lawn care provider will choose the path toward sustainability, but those that do will become leaders in the industry that stand the test of time.

The basic objective of The Sustainable Lawn Care Provider Program is to reduce the consumption of non-renewable resources, minimize waste, create healthy, productive environments, and inform the public, residents, guests, clients and employees about the benefits of sustainably managed landscapes.

Through participation in the program, ISC-Audubon is able to assist lawn care providers who desire to manage and operate their businesses sustainably. The program is geared toward assisting those seeking to become local, regional, national and international models of sustainability by incorporating sustainable principles, concepts, and management strategies.

Everyone has responsibilities for the future of our planet. This includes responsibilities at home, work, and in society in general. It is incumbent on each of us to take positive actions toward the common goal for being socially, environmentally and economically responsible where we live, work and recreate.

A Sustainable Lawn Care Business is managed by using practices that preserve limited and costly natural resources, reduce waste generation, and help prevent air, water, and soil pollution. The goal is to minimize environmental impacts and maximize value received from dollars expended.

As defined by ISC-Audubon, A Sustainable Lawn Care Provider is an economically sound business that provides safe, healthy and enjoyable environments for all employees and volunteers. A sustainable lawn care providers operations center is sited, designed, and constructed in ways that reduce or eliminate its impact on natural resources. It is managed in ways that provide balance safe and healthy working conditions for employees while also providing good stewardship of the immediate surrounding environment. Management strategies are based upon scientifically sound site specific best practices that improve the quality of all life on the site, regionally, and beyond. Through outreach and education a Sustainable Lawn Care Provider becomes a champion and advocate of sustainability.

Striving for and ultimately achieving the Seal of Sustainability from the International Sustainability Council (ISC), and becoming Certified by Audubon Lifestyles means that the Lawn Care Provider is setting the new standard for excellence. Certification coupled with the Seal of Sustainability indicates that the Lawn Care Provider has adopted and put into place recognized Best Management Practices that equal environmental superiority, social responsibility, and economically vitality.

Lawn Care Providers who complete the requirements of the Sustainable Lawn Care Provider Program become global examples of excellence not only regarding the business's facility itself, but in regard to the actual landscapes that they maintain.





## PLATINUM MEMBER

### Take the first Step!

Only Platinum Members can participate in the Sustainable Lawn Care Provider Programs.

As a non-profit, public interest organization, we rely exclusively on private donations, philanthropic grants, and membership dues. Your membership is put to work immediately to advance the tenets of sustainability and environmental protection, and we are deeply grateful for your support.

In addition, Platinum Membership provides a number of online resources to assist with sustainable living, and was created to help foster sustainability by working with, and providing educational resources to individuals, businesses, organizations, universities, government entities, municipalities, communities, neighborhoods, and virtually anyone seeking assistance in balancing the triple bottom line of people, profit, and planet.

Our ability to reach our organization's mission and vision depends on your participation.

#### **Platinum Membership Benefits**

- Listed on the Audubon Network for Sustainability as a Platinum Member with business logo, reciprocated link, contact information, map and address information, and business description.
- Ability to use the Platinum Member Logo on all marketing, sales and promotional, and educational materials
- New Members Packet include: ISC-Audubon Platinum Member vehicle and front door stickers and decals, computer mouse pad, co-written thank you letter from ISC-Audubon and Platinum Member Certificate for framing and display.
- Coauthored Press Release Announcing Platinum Membership distributed worldwide
- Multiple Subscriptions to SustainAbility Newsletter
- Platinum Membership is the first step in gaining Chartered ISC Member Designation and earning additional recognition by the International Sustainability Council.
- The knowledge that you are contributing to helping ISC-Audubon to continue in our mission, and receive the recognition that you are doing just a little bit more!

Please join with us today and make a positive contribution toward being socially, environmentally and economically responsible where you live, work and recreate.

Learn more about the benefits of membership by visiting:  
[www.isc-audubon.org/join.html](http://www.isc-audubon.org/join.html)

## TEN Requirements for a Landscape Company to earn Certification

1. Provide Clean, Organized and Safe Working Conditions
2. Store and Handle Pesticides & Fertilizers Responsibly
3. Mix and Load Responsibly
4. Perform Preventative Maintenance on Equipment
5. Manage the Equipment Wash Areas Correctly
6. Operate Equipment in the Field Safely and Properly
7. “Greening” the Office
8. All Required Licenses and General Liability Insurance are Current and Up-to-Date
9. Landscape at the Office and Shop using Sustainable Landscaping Practices
10. Use Technology and Innovation in Service Offerings

### What Are the Benefits of Sustainable Landscaping?

Survey results from a Survey conducted by Audubon International revealed that voluntary environmental actions taken not only the right thing to, but also make good business sense.

Some of the other results include the following:

- Increased Safety: 70% of respondents had reduced pesticide costs
- Reducing Risk: 90% of respondents mitigated risks as a result of improved management practices.
- Better Business: 15% of respondents reported new golfers/members as a result
- Economic Savings: 60% of respondents reported saving money and enhancing their image and reputation
- Water Resource Conservation: 50% of respondents reduced the amount of irrigated acreage

Saving energy in the office mounts up, and waste reduced through composting and sustainable management techniques can be accomplished on a scale proportionately greater than what most may think. The general public is demanding that our landscapes be managed more environmentally responsibly, while at the same time delivering high quality landscaped areas. This is the embodiment of what it means to become a Certified Sustainable Lawn Care Provider.

Sustainable Landscapes reflect a high level of self-sufficiency that once established, mature and flourish virtually on their own as part of their natural ecosystem. The resulting benefits can include added aesthetics, lower maintenance costs, more effective use of water and chemicals, enhanced open space and more effective wildlife habitat value.

### Use Sustainable Practices and earn Recognition

Sustainable landscaping practices incorporate beautiful plants, shrubs, and trees and reduce maintenance costs while at the same time protect the environment. Using sustainable landscape maintenance practices also makes good business sense. Using the Sustainable Golf Course Landscapes Program as a guide will reduce resource depletion, reduce waste, and pollution problems while also improving the health of the landscape in an aesthetically pleasing and cost-effective manner.



## A Sustainable Landscape Encourages

### **Building Healthy Soils**

Healthy soils are essential in any landscape type. Transforming poor soils into a fertile growth medium that supports healthy plant growth while reducing water use created healthy disease-and pest-resistant plants that improve the landscape appearance and increase property value.

### **Using Fertilizer Efficiently**

Applying precise amounts in a timely manner will reduce growth, diminish the potential for pollution, and promote healthy disease- and pest-resistant plants. Fertilize according to the needs of the species planted. Use slow-release or organic-based formulas based on nutrient needs as verified by soil testing. This will reduce growth spurts that increase the need for pruning and mowing.

### **Irrigating Efficiently**

Overwatering aids rapid plant growth and runoff adds to groundwater pollution. Use water-efficient irrigation systems, such as drip or low-output sprinkler heads, that deliver a precise volume of water to plant root zones. Develop watering schedules based on historical or actual weather data. Use soil probes to monitor soil moisture before watering.

### **Reusing Organic Materials On-Site**

Landscapers can use a chipper at the job site to mulch prunings and clippings from woody shrubs and trees and apply mulch on the landscape. Trimmings and clippings from lawns, trees, and shrubs from large landscape sites can become feedstock for on-site composting operations. This will save on purchasing outside soil amendments.

### **Practicing Pollution Prevention**


Landscape managers are encouraged to use Integrated Pest Management (IPM) to reduce use of chemical pesticides and herbicides. These chemicals can eventually make their way off-site and contribute to nonpoint source pollution (pollution not traceable to a single location). Increased use of non-motorized equipment will also reduce emissions and noise pollution.

### **Retrofitting Inefficient Landscapes**

As established landscape sites age or grow beyond their intended use, they must be redesigned to integrate resource efficiency, site function, and aesthetics. Reduce turf areas and establish new landscape plantings with more low-maintenance and drought-tolerant plants. Irrigation systems must undergo retrofits and depleted soils enriched to save water and promote healthy plant growth.

### **Think Recycle/Buy Recycled**

Recycling materials from the construction, installation, or upkeep of landscape sites will reduce waste. Wood waste converts to mulch, and plastic pots can be recycled into products for landscape use. Buying recycled-content landscaping products, such as plastic edging or lumber, conserves natural resources and strengthens markets for these recyclable materials.



*"The future belongs to those who understand that doing more with less is compassionate, prosperous and enduring and thus more intelligent, even competitive." - Paul Hawken, Nature Capital Institute.*



## Frequently Asked Questions about the Workbook and Certification

### **We don't have a feature at our company outlined in the workbook. Do we still qualify for certification?**

Yes. We recognize that each landscape company is unique and that not all businesses will have the 10 Criteria Sections outlined in the workbook. If the landscape company seeking Certification does not have a certain feature at their business then simply make a note of that for our reviewers, and move on to the next section.

For example, #3 in this workbook states "Mix and Load Responsibly". However if you do not mix and load at your facility then simply make a note of that for our reviewers and move on to the next section.

### **In each of the Ten Criteria Sections there are sub sections. Are those the requirements? If not what are those?**

The text listed on each page of the Criteria Sections is intended to be educational in nature, and not viewed specially as the requirements for certification. It is not a requirement that a landscape company have or do each and every suggested management practice outlined in the text in this workbook. Under each one of the Ten Criteria Sections are methods, and management practices upon which a landscape company may meet that criteria, and should be viewed as opportunities upon which to meet certification.

For example, on Criteria Section #5 titled "Manage the Equipment Wash Areas Correctly"; one of the suggested items outlined in that section is "**Washwater Recycle Systems**", and under which describes best management practices as it relates to that topic. Specifically, having a Washwater Recycling System is not the requirement that must be met in order to meet certification requirement for that section, but "Managing the Equipment Wash Areas Correctly" is. Having a Washwater Recycling System is merely an opportunity in which an Landscape Company may use to meet that requirement.

### **What specifically is required for Certification?**

In order to earn certification, ISC-Audubon must feel confident that certain items have been achieved and that the overall objectives for each section have been met. At the bottom of each section is a list of required verification items under the heading "What is Required for Certification". Each of the items listed under each section should be submitted to us for review.

Additionally, the following items are required for certification:

- The Lawn Care Provider applying for certification is only available to Platinum Members of ISC-Audubon. However, a landscape owner is allowed to become a Platinum Member, and apply for Certification at the same time.
- All Verification Requirements in this Workbook must be met and submitted to ISC-Audubon
- A map of the Landscape Company's equipment, storage and office locations with all of the requested features depicted must be submitted for review. A map can be hand drawn, or digitized, or a combination of both.

# Provide Clean, Organized and Safe Working Conditions

*Offers: Financial Savings, Durability, Human Health, Human Wellbeing*

Providing a clean and sanitary place of employment which is free from recognized hazards that could cause death or serious physical harm to employees, guests, and visiting contractors is an often overlooked but highly important component of any sustainable landscape company's facility.

Effective housekeeping can eliminate workplace hazards and help get a job done safely and properly. Poor housekeeping can frequently contribute to accidents by hiding hazards that cause injuries. If the sight of paper, debris, clutter and spills is accepted as normal, then other more serious health and safety hazards may be taken for granted.

Housekeeping is not just cleanliness. It includes keeping work areas neat and orderly; maintaining halls and floors free of slip and trip hazards; and removing of waste materials (e.g., paper, cardboard) and other fire hazards from work areas. It also requires paying attention to important details such as the layout of the whole workplace, aisle marking, the adequacy of storage facilities, and maintenance. Good housekeeping is also a basic part of accident and fire prevention.

Effective housekeeping is an ongoing operation: it is not a hit-and-miss cleanup done occasionally. Periodic "panic" cleanups are costly and ineffective in reducing accidents.

## Effective housekeeping results in:

- reduced handling to ease the flow of materials
- fewer tripping and slipping accidents in clutter-free and spill-free work areas
- decreased fire hazards
- lower worker exposures to hazardous substances (e.g. dusts, vapors)
- better control of tools and materials, including inventory and supplies
- more efficient equipment cleanup and maintenance
- better hygienic conditions leading to improved health
- more effective use of space
- reduced property damage by improving preventive maintenance
- less janitorial work
- improved morale
- improved productivity (tools and materials will be easy to find)



## **Personal Safety**

When operating powerful tools, maintenance workers should wear personal protective equipment (PPE) such as face shields, hearing protectors, safety footwear, hard hats and insulated gloves.

## Hand Tools

All hand tools should be checked for damage or defects before use. Damaged handles should be repaired or replaced, and all cutting tools should be kept sharp.

## Power Lawnmowers

The mower should be properly inspected before starting. In most cases slopes and hills should be cut diagonally, rather than sideways, for better balance. Speeds should be reduced on slopes and when making sharp turns to prevent tipping and rollovers.

Safety striping in the garage, easy access to fire extinguishers, and eyewash stations should be used at every landscape company's garage.

### **Landscape Company Facility Grounds**

All parking areas should be kept free from loose lumber, trash, large stones or bricks, vehicle parts, excessive vehicle fluid spills. Fluid spills should be cleaned up using absorbent and disposed of properly. Trucks and equipment should be pulled into designated stalls as far as possible so as to provide free travel on roads.

Walkways should be in good repair, clean, and free of obstacles.

### **Inside the Buildings, Facilities, and Repair Shops.**

The floor of every area of the facility should be maintained, so far as practicable, in a dry condition. Where wet processes are used, drainage should be maintained and false floors, platforms, mats, or other dry standing places should be provided. Where practicable or appropriate, waterproof and slip proof footwear should be worn by employees.

- All garage areas should be kept free from obstacles and trip hazards.
- Floors and passageways should be kept free from protruding objects, storage of equipment, pallets of products, and uncovered openings in the floor. Parts and equipment should be placed in designated and/or marked areas so that walkways are not blocked. Ice, grease, debris, and excessive water should be kept clear from all walking surfaces.
- Fire hoses, extinguishers, eye wash stations, and showers should be kept free from obstruction or blockage by any item which could hamper or prevent someone from obtaining it in an emergency.
- Unnecessary tools and equipment should be picked up and stored when not in use.
- Managers should establish designated areas for spare parts, salvage material, debris, sand, gravel, topdressing etc. These areas should be maintained as neat and orderly as practicable and free from hazards to employees.
- Roof areas should always be maintained, clean, and free of material. No material should be evident on roof vents. If material is stored on or close to vents or stacks, the material should be removed.

### **Solvents and Degreasers**

Solvents and degreasers are generally flammable and toxic and should be stored in lockable metal cabinets in an area away from ignition sources and with adequate ventilation. Do not store near an area where welding or other similar activities are performed. Never store with pesticides or fertilizers. An inventory of the solvents stored and the MSDS sheets for these materials should be kept on the premises, but not in the solvent storage area. Any emergency response equipment recommended by the manufacturer of the solvent should be kept accessible to the storage area, but not inside the area itself.

Solvents and degreasers should be used over a collection basin or pad that can collect all used material. The collected material should be stored in marked containers until it can be recycled or legally disposed of. There are a number of private firms that provide a service that includes solvent wash basins that drain into recovery drums. These drums are then picked up and the contents recycled or properly disposed of. Solvents should never be allowed to drain onto pavement or soil, or discharged into storm drains, sewers or septic systems, even in small amounts. Routine discharge of even small amounts of solvents can result in the accumulation of contaminants in soil or ground water over time, with serious environmental and liability consequences.

## **What's Required for Certification?**

*please provide the following*

- One Example Photo of inside the garage.
- One Example Photo of the outside of the garage.
- One Example Photo of Flammables Storage

# Store and Handle Pesticides & Fertilizers Responsibly

*Offers: Water Conservation, Water Quality, Soil Health, Human Health*

The primary goals of storing and handling chemicals properly is to ensure the safety of employees and to reduce impacts on soil, groundwater, surface water, and wildlife. Also, cleanups resulting from accidental spills and contamination are costly.

Store chemicals in a secure building so only authorized employees have access. The floor should be impervious and have a curb, sump, and/or lip to contain any spilled materials. Proper ventilation is extremely important. Provide secondary containment that will hold a larger volume of chemical than the largest container or tank used.

Store chemicals in their original containers with the original labels. Organize chemicals so that labels are clearly visible and separate different kinds of chemicals (herbicides, fungicides, insecticides) to avoid contamination or misapplication. Before chemical application, ensure equipment is properly calibrated and not leaking. Be aware of valves and overflowing tanks.

Always store, mix, handle, and dispose of chemicals according to label directions. All storage, mixing, and chemical clean-up areas should be located away from areas of possible surface, ground, and well-water contamination. Mix and apply chemicals only when weather conditions are appropriate.

Maintain a current material safety data sheet (MSDS) for each chemical on site. Communicate safe chemical application policies with employees. Have an on-site emergency response plan in case of an uncontained spill, and know how to contact the proper authorities.

## Benefits of storing, handling, selecting, and applying chemicals properly:

- Protects surface and ground water quality.
- Protects air quality from chemical drift.
- Prevents soil contamination.
- Saves expensive chemicals through spill prevention, or by containment and reuse when appropriate
- Protects beneficial organisms and wildlife.

Before you select and use chemicals evaluate your current chemical use and determine where and how you might make reductions. Integrated Pest Management (IPM) is a widely accepted management system that you should consider if you are not already using it. IPM integrates genetic, biological, cultural, and chemical controls to keep pest populations (insects, fungal diseases, and weeds) below an established tolerable level; for example, threshold (or tolerable) levels for putting greens are much lower than for fairways and roughs. IPM also considers physical factors affecting chemical mobility, including soil properties, topography, drainage, and the location of surface waters. IPM typically results in a more efficient use of chemicals, benefiting both your budget and the environment.

## **Fertilizer Storage and Handling**

The proper storage of fertilizer is important. Take care when storing fertilizer to prevent the contamination of nearby ground water and surface water. Fertilizer bags are often damaged in handling, sometimes even before they reach the landscape. Any spillage exposed to rain threatens nearby ground water or surface water. In addition, fertilizers are often oxidizers and may pose a serious fire threat to a maintenance area, especially where fuels and other hydrocarbons are present.

## Fertilizer Storage and Handling BMPs

- Always store nitrogen-based fertilizers separately from solvents, fuels, and pesticides, since many fertilizers are oxidants and can accelerate a fire. Ideally, fertilizer should be stored in a concrete building with a metal or other type of flame-resistant roof.
- Always store fertilizer in an area that is protected from rainfall. The storage of dry bulk materials on a concrete or asphalt pad may be acceptable if the pad is adequately protected from rainfall and from water flowing across the pad. Even where not required, secondary containment is a sound practice.
- Sweep up any spilled fertilizer immediately.

## Pesticide Storage

Few other functional spaces in your garage offer the potential for expensive liability, either for chemical contamination of the environment or for exposure to employees. Proper thought and care in the design, construction, and operation of this aspect of your facility can greatly reduce liability exposure, while failure to do so can greatly increase the likelihood of costly governmental or civil liability.

### Pesticide Storage

Design and build pesticide storage structures to keep pesticides secure and isolated from the surrounding environment. Store pesticides in a roofed concrete or metal structure with a lockable door. Locate this building at least 50 feet from other structures (to allow fire department access and space for a water curtain to protect adjacent structures). Keep pesticides in a separate facility, or at least in a locked area separate from areas used to store other materials, especially fertilizers, feed, and seed. Do not store pesticides near burning materials, near hot work (welding, grinding), or in shop areas. Do not allow smoking in pesticide storage areas.

An eyewash station and emergency shower should be provided. Provide a space for a written pesticide inventory and the MSDS (Material Safety Data Sheet) files for the chemicals used in the operation on site. Do not store this information in the pesticide storage room itself, although copies may be kept there for convenience.

When designing a pesticide storage facility, keep in mind that temperature extremes during storage may reduce safety and affect pesticide efficacy. Provide appropriate exhaust ventilation and an emergency wash area. The emergency wash area should be located outside the storage building.

Local fire and electrical codes may require explosion-proof lighting and fans. The light/fan switch should be located outside the building so that both are on before people enter and until they have left the building.

BMPs for pesticide storage often address the ideal situation of newly constructed, permanent facilities. However, it is encouraged to apply these principles and ideas to existing facilities, and to portable or temporary facilities that may be used on leased land where permanent structures are not practical.

### Pesticide Storage BMPs

- Store pesticides in a roofed concrete or metal structure with a lockable door.
- Construct floors of seamless metal or concrete sealed with a chemical-resistant paint.
- Equip the floor with a continuous curb to retain spilled materials.
- Do not store pesticides near burning materials or hot work (welding, grinding), or in shop areas.
- Provide adequate space and shelving to segregate herbicides, insecticides, and fungicides.
- Use shelving made of plastic or reinforced metal. Keep metal shelving painted.
- Provide appropriate exhaust ventilation and an emergency wash area.
- Always place dry materials above liquids, never liquids above dry materials.
- Never place liquids above eye level.



## What's Required for Certification?

*please provide the following*

- List of all Pesticides and Fertilizers stored at the Facility
- MSDS and where they are located on map
- Photo of the an eyewash station on site

# Mix and Load Responsibly

*Offers: Water Conservation, Water Quality, Financial Savings, Durability*

## Locating Mixing and Loading Activities

Use extreme caution when handling concentrated chemicals. Spills could result in an expensive hazardous waste cleanup. It is important to understand how mixing and loading operations can pollute vulnerable ground water and surface water supplies if conducted improperly and at the wrong site. Locate operations well away from ground water wells and areas where runoff may carry spilled pesticides into surface water bodies. If these areas cannot be avoided, protect wells by properly casing and capping them, and use berms to keep spills out of surface waters. Areas around public water supply wells should receive special consideration and may be designated as wellhead protection areas. Before mixing or loading pesticides in such areas, consult with state and local government officials to determine if special restrictions apply.

## Mixing and Loading BMPs

- Locate operations well away from ground water wells and areas where runoff may carry spilled pesticides into surface waterbodies.
- An open building must have a roof with a substantial overhang on all sides
- The sump should be small and easily accessible for cleaning.
- Ensure that workers always use all Personal Protective Equipment (PPE's) required by the pesticide label.
- Any material that collects on the pad must be applied as a pesticide or disposed of as a (potentially hazardous) waste.
- Clean up spills immediately!

## Fertilizer Loading

Load fertilizer into application equipment away from wells or surface waterbodies. A concrete or asphalt pad with rainfall protection is ideal, as it permits the easy recovery of spilled material. If this is not feasible, spread a tarp to collect spillage. Where dedicated facilities are not available, loading at random locations can prevent a buildup of nutrients in one location. It is not recommended to load fertilizers where pesticides and other chemicals are mixed because of the potential for cross-contamination. Fertilizers contaminated with pesticides may cause turf damage or generate hazardous wastes. Many pesticide carriers are hydrocarbon based and they may react with oxidizers in spilled fertilizer materials.

Clean up spilled material immediately. Collected material may be applied as fertilizer. The area can be cleaned by sweeping or vacuuming (or by using a shovel or loader, if a large spill), or by washing down the loading area to a containment basin specially designed to permit recovery and reuse of the washwater. Washwater generated should be collected and applied to turf areas only. Discharging this washwater directly into waterbodies, wetlands, storm drains, or septic systems should never occur.

## Pesticide Containers

Pesticide containers should be cleaned immediately upon emptying. Containers should be properly cleaned by pressure-rinsing or triple-rinsing and the rinse water dumped into the sprayer as part of the make-up water. Non-rigid bags should be shaken clean so that all dust and material falls into the application equipment. The clean containers should be stored in a clean area, out of the rain and weather, until they can be disposed of or recycled. Storing the containers in large plastic bags is one popular option to protect the containers from collecting rainwater. The cleaned containers should be recycled in counties where such a program is available, or they may be taken to a landfill for disposal.

## Pesticide Loading and Mixing

Loading of pesticides and mixing with water or oil diluents should be done over an impermeable surface (such as lined or sealed concrete) so that spills can be collected and managed. Use of a Mix and Load Center is strongly encouraged.

## The Mix and Load Center

The purpose of a Mix and Load Center is to provide a place where the operator can perform all operations where pesticides are likely to be spilled in concentrated form, or where even dilute formulations may be repeatedly spilled in the same area, over an impermeable surface. Such a surface should provide for easy cleaning and recovery of spilled materials.

To minimize the risk of pesticides accumulating in the environment from repetitive spills, landscape companies may opt to construct a permanent mixing and loading facility with an impermeable surface (such as sealed concrete) so that spills can be collected and managed.

In its most basic form, a Mix and Load Center consists of a concrete pad treated with a pesticide-resistant sealant and sloped to a liquid-tight sump where all of the spilled liquids can be recovered. When considering a Mix and Load Center, it is important to assess the level of training and supervision required by the staff using the center, so that it is operated safely and responsibly. Even the best-designed facility cannot prevent environmental contamination if it is not properly managed.

The Mix and Load Center, should be designed to provide a place where spill-prone activities can be performed over an impermeable surface that can be easily cleaned and permits the recovery of spilled materials. Where feasible, the facility should



be close to the pesticide storage building to reduce the potential for accidents and spills when transferring pesticides to the mixing site. Do not build new facilities on potentially contaminated sites, since subsequent efforts to clean up previous contamination may mean relocating the Mix/Load Center.

It is very important that wherever feasible, a Mix and Load Center should be located away from wells or surface waterbodies and above floodplains. The first principle of Mix and Load Center management is that any material that collects on the pad must be applied as a pesticide or disposed of as a (potentially hazardous) waste. Because any water, including rain, that collects on the pad must be used as a pesticide or disposed of as a (potentially hazardous) waste, an open building must have a roof with a substantial overhang (minimum 30° from vertical, 45° recommended) on all sides to protect against windblown rainfall.

The Mix and Load Center sump should be small and easily accessible for cleaning. There must be a way to pump liquid in the sump to a sprayer or to storage tanks. Immediate application in accordance with the label instructions is usually the preferred method of handling both spills and rinsate. If rinsate storage tanks are used, there should be at least one tank for each group of compatible pesticide types. This allows rinsate to be saved and used as makeup water the next time that type of material is applied.

## What's Required for Certification?

*please provide the following*

- Photo of the Mix Load Area
- Location of Mix and Load Center depicted on Map

# Perform Preventative Maintenance on Equipment

*Offers: Water Quality, Soil Health*

## **Oil & Filters**

Throughout its life, an engine will eventually start to use some oil; typically units with over 1,000 hours of use that are out of warranty. If oil isn't properly added, you could end up with a 'lack of lubrication' failure, resulting in the need for a short block or complete engine replacement. This could cause thousands of dollars in repair in addition to downtime and lost revenue that could have been avoided by simply checking the oil.

Landscape Companies should change the oil within the first 10 hours of use, and then every 50 to 100 hours. Oil filters can be changed every other oil change. However, oil checks should be completed daily. Daily oil checks tell a lot about the condition of the oil and the equipment, and also help detect early warnings of an engine malfunction. What might take you a few minutes a day could save significantly in the long-run.

## **Air Filters**

Keeping fresh, new filters on an engine is vital to its life. A clogged air filter can result in a rich-running engine, causing excessive carbon buildup. On the other hand, by keeping air filters clean or replaced, you will reduce dirt ingestion and increase air circulation, which will have a dramatic impact on the longevity of equipment while also boosting performance and reducing downtime.

Keep a maintenance log for your units, and observe what the manufacturer recommendations are for service intervals. Try to stay as close as you can to those recommendations. A lot of landscapers don't realize that warranty can be denied when there has been a lack of maintenance.

Keep in mind, that not all air filters are created equal. There are different types for different applications. Consult with your local dealer, vendor or owner's manual to determine which is best suited to your needs.

Remember to clean out the actual air filter box when replacing or cleaning air filters. Consider purchasing at least one extra filter and pre-filter with each new filter purchase—because if you have it on hand, you're more likely to use it.

## **Belt Condition**

Belts are one of the most inexpensive parts that often get missed during a check by a landscaper. As inexpensive as they are, belts can result in very costly downtime and an unnecessary trip to the service facility. If you have crew members who are mechanically inclined, you should consider keeping extra belts in the truck that could be put on in the field.

## **Tire Pressure**

Keeping tire pressures at correct levels will increase performance and efficiency, while also minimizing flat tires as well as tire wear.

There's a side benefit when it comes to mowers: Properly inflated tires will improve cut quality. Tire pressure is important for checking deck level. A low tire on one side directly affects the cutting level—and quality. Again, tires are very inexpensive compared to a day without a machine, or an unhappy customer with an unevenly cut lawn.

## **Sharpened & Balanced Blades**

Sharp blades produce the healthiest lawns.

Sharp, balanced blades are also critical to the life of your machine. Unsharpened blades cause unneeded stress to pulleys, spindles, belts, engines, gear boxes and clutches. Additionally, unbalanced blades can cause abnormal vibration, resulting in spindle or gear box damage, not to mention long-term damage to the cutting deck and its components.

## **Careful Cleaning**

Keeping your equipment clean not only leaves a good impression with the customer, but can also help preserve the life and performance of your equipment. Interestingly, improper cleaning procedures may do more harm than good.



## Lubrication

High-revolution parts such as blade spindles and wheel bearings are critical to grease on a daily basis. The type of grease you use can be critical. For most applications, spending an extra 40 cents on a better grade of high-temperature grease, which won't dissipate as quickly as a less-expensive multi-purpose grease.

Finally, keep in mind that gear boxes for handheld equipment such as string trimmers, pole saws and hedge clippers typically need special greases. Consult with your dealer or vendor.

## Work With Your Dealer

By working with your dealer to develop an effective program to stop costly downtime before it starts, the long-term savings will prove that the time and monetary investment were well worth it.

Statistics show that most landscape contractors start to handle more of their own equipment maintenance and repairs in-house when their annual sales approach \$1 million. Still, many of these larger contractors count on their servicing dealer to handle warranty work and other more intensive repairs. Some even continue to look to their dealer for basic maintenance procedures, as do most smaller landscape companies.

## Other Odds & Ends

In adopting a proactive mind-set in regard to preventive maintenance, you also have to trust your instincts. Sometimes operators know when something is wrong. They can sense it—or maybe even see it. The key is to have them note it right away before something goes terribly wrong.

When the operator is going through his morning checklist, they might see things that normally might not be noticed. Worn parts such as wiring or throttle/choke cable, a loose air filter cover, etc. should be noted and later looked at by either your maintenance manager or servicing dealer. This could spare you downtime and big expenses in the future.



## Other odds and ends

- Tighten loose fasteners. It's ideal to do this at the same time you're having the oil changed.
- Fuel and fuel mix. This is obviously critical when it comes to two-cycle and hybrid-type engines. Mix gas and oil properly and use the right oil. Also, old/stale fuel sitting up in equipment that is seasonal or rarely used will cause downtime and/or poor performance.
- Tire plug kit. Keep one in the truck and know how to use it. This very small investment will save you a lot of time as your tires pick up nails, screws, irrigation flags, etc. **from time to time.**

## What's Required for Certification?

*please provide the following*

- Photo of the a Preventative Maintenance Checklist displayed and an in use in the Garage

# Manage the Equipment Wash Areas Correctly

*Offers: Water Conservation, Water Quality, Financial Savings, Durability*

The first rule of equipment washing is not to wash any equipment unnecessarily. Clean equipment over an impervious area and keep it swept clean to prevent rain from carrying pollutants off the pad. Grass covered equipment should be brushed or blown with compressed air before being washed. Dry material is much easier to handle and store or dispose of than wet clippings. It is best to wash equipment with a bucket of water and a rag, using only a minimal amount of water to rinse the machine. Spring-operated shutoff nozzles should be used. Freely running hoses waste vast amounts of water, and water can harm the hydraulic seals on many machines.

Some local governments may require a closed recycling system for washwater, but even when not a requirement the use of a well designed system may be considered a best management practice.

Be cautious in operating closed loop equipment where maintenance activities are involved, because the filters can concentrate traces of oils and metals that are washed off the engines and worn moving parts. In some cases, the concentrations of these substances can become high enough that the filters must be treated and disposed of as hazardous waste. Ask the recycling system manufacturer or sales representative for information about filter disposal. The contractor who handles oil filters, waste oil, and solvents can probably handle these filters, too.

- Do not discharge washwater to surface water directly, or indirectly through ditches and storm drains.
- Construct a roof over the wash pad to prevent clean rainwater from being collected into a filtering system.
- Minimize detergent use and use only biodegradable, phosphate-free detergents.
- Handle water used to clean pesticide equipment in its own system.
- Washing equipment on a pesticide loading pad will contaminate clippings and other debris.
- Research local requirements for washwater treatment.

Wash areas may be regulated as industrial waste facilities. Washwater systems with an overflow pipe must connect the overflow either to a sanitary sewer or to a specially designed and permitted treatment system such as a separate drainfield, or contain the discharge and have it hauled and disposed of by a licensed contractor. The overflow should not discharge to the ground, a storm drain, or a surface waterbody.

At the very minimum, wash water should be directed to a location where water can spread out and be filtered, away from any environmentally sensitive areas. This type of system is not appropriate for water used to wash the inside and outside of pesticide equipment. That water should be collected and handled according to pesticide label instructions.

Constructing an impervious wash pad to divert water to a collection system is another option. The collected water could connect to a sanitary sewer for off-site treatment or be treated on-site in a closed loop system and reused. Closed loop systems can be designed to treat pesticide equipment wash water. The type of system appropriate for the course will depend on the volume of water generated, contents of the wash water, and the potential for pollution in the surrounding area.

## Washwater Recycle Systems

Washwater recycle systems reduce or eliminate contaminated discharges to surface or ground water, or to Publicly Owned Treatment Facilities. These systems require somewhat significant capital costs up front, for engineering, purchasing and installation of the equipment. However, water conservation, along with the additional monetary benefits of cost savings associated with lowered water bills and sewer connection fees make these systems a wise investment choice. Water conservation is achieved by piping the wash water through a purification system and reusing it. Therefore, there is no need to purify the wash water to meet drinking water or surface water quality standards.

There are many types of systems varying in complexity. All systems must comply with any federal, state, or local water quality regulations and obtain any necessary authorizations.

Washwater can contain organic material such as grass clipping and soil as well as soaps, oil residue, fertilizer, and pesticide residue. These materials can degrade water quality and should never be allowed to flow directly into surface water. There are many options for washing sites.

Minimally, washwater should be directed to a location where water can spread out and be filtered, away from any environmentally sensitive areas. This type of system is not appropriate for water used to wash the inside and outside of pesticide equipment. That water must be collected and handled according to pesticide label instructions.

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There are many types of systems varying in complexity. All systems must comply with any federal, state, or local water quality regulations and obtain any necessary authorizations.

Always try to minimize the volume of water used when washing equipment. Conserve water by using nozzles that produce high-pressure spray at a low volume. Keep an air hose nearby to blow off equipment before washing. Consider using the clippings in compost .

#### Equipment Wash Area BMPs

- Do not wash equipment unnecessarily.
- Clean equipment over an impervious area, and keep it swept clean.
- Brush or blow equipment with compressed air before, or instead of washing.
- Use spring shutoff nozzles.
- Use a closed-loop recycling system for washwater
- Recycle system filters and sludge should be treated and disposed of as hazardous waste.
- Do not discharge wash water to surface water directly, or indirectly through ditches and storm drains.
- Construct a roof over the wash pad to prevent clean rainwater from being collected into a filtering system.
- Minimize detergent use and use only biodegradable, phosphate-free detergents.
- Handle water used to clean pesticide equipment in its own system.
- Washing equipment on a pesticide loading pad will contaminate clippings and other debris.
- Research local requirements for wash water treatment.



## What's Required for Certification?

*please provide the following*

- Photographs of Wash Area
- Photographs of Rinse System
- Photographs of Washwater Recycling System *(if applicable)*

# Operate Equipment in the Field Safely and Properly

*Offers: Social and Recreational Opportunities, Outreach and Education, Wildlife Conservation*

Along with diligently keeping up with a preventive maintenance program, the way that the team operate equipment will also have a big impact on the bottom line as it relates to maintenance costs. Operator malfunction often leads to large, unnecessary expenses.

No matter how hard manufacturers try to make their equipment safe, there is no blade guard or operator presence detector that will prevent a human being from being careless. Many dealers offer some kind of “getting started” and/or “safety” training when they sell a machine. That’s not fool-proof, either. But it’s a good start.

Reviewing proper operating procedures with employees is crucial. Quarterly reviews would be a good start for most companies, and perhaps more often for companies where turnover rates may be higher. Additionally, a review of proper equipment procedures should be preformed for employees who return after a long layoff just to be sure to review safe and efficient operating procedures before the season starts.



Some common operational procedures that should be covered in ongoing training:

- Ensure that equipment is strapped down properly during transport. Shut gas off on all equipment with shut-off valves, because bouncing around on trailers can cause gas to flood the crankcase and produce unnecessary downtime. Properly secure handheld equipment such as trimmers and blowers.
- Ensure that guards are in tact and in place on string trimmers. By removing guards, you cause the engine, shaft and gear boxes to carry a larger load than they are designed to, which causes premature wear and damage to clutches, shafts, engines and gear boxes.
- For stick edgers, be sure to clean out any buildup that accrues within the edger blade guards. This will keep the blade turning stress-free, creating greater performance and efficiency while prolonging the life of the gear box, shaft and engine.
- Mowing over large objects such as limbs, rocks and other debris is not only unsafe, but also reduces belt, blade, blade spindle and clutch life. Additionally, with larger impacts, spindles, blades and belts can all become damaged, if not completely break.
- Be sure to engage and disengage blades on mowers at half throttle. By doing so, you will prolong the life of electric PTO (Power Take Off) clutches as well as belt and engine life.
- When operating chain saws, be certain not to allow the chain to cut into the dirt. Dirt will cause chains, guide bars and sprockets to wear out or dull prematurely.
- When training your team to trim hedges, be certain that they don't try to prune hedges that are larger than the capacity of the hedge clipper. Along with hitting fences and the ground, pruning a larger-diameter limb than capable produces premature gear box failure and blade dullness or damage.
- When going over curbs or loading mowers on trailers, be certain to go slow enough that you won't cause damage. Most manufacturers recommend backing over curbs rather than facing them head on. Whatever you do—slow down.

## General Heavy Equipment Safety

- Make sure no person or pet is standing close by when operating outdoor power equipment.
- Staff should wear tight-fitting clothing (long pants, long-sleeve shirt), goggles, ear protection, and rugged, slip-resistant footwear.
- Long hair should be tied back.
- Don't leave power equipment running unattended.

### Heavy Equipment Safety for Electrical Devices

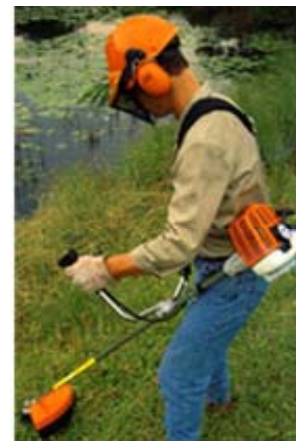
- Make sure the ON / OFF switch is in the OFF position before plugging device into an outlet.
- Heavy equipment should never be used under wet conditions, but this goes doubly for electrical power equipment.
- Don't take extension cords for granted. Old, nicked up extension cords should be replaced. Make sure extension cords are the right size for the device's electric current capacity.
- Unplug electric power equipment prior to making any adjustments to it.

### Heavy Equipment Safety for Gas-Powered Devices

- Disconnect the spark plug wires prior to making any adjustments, as when tuning up lawn mowers
- Don't refill a gas tank while the device is running or when the engine is still hot, and wipe up any spillage.
- Don't leave gas-powered machines running in an enclosed area.
- Store gas in a proper container, clearly marked, G-A-S.

### String Trimmer Safety

- Harnesses should be issued to an operator and not shared. (Ensures ownership and removes the necessity for frequent readjustments.)
- Inspect harness for damage (cuts and stitching).
- Adjust harness so that the operator will have a comfortable stance while operating, i.e. so that the string trimmer is being hung at a comfortable height and is balanced.
- Adjust handles so that the elbows are slightly bent.
- Ensure a safe working distance from other personnel. (Flying objects.)
- Operate at full speed.
- Use leg muscles to move the string trimmer rather than twisting.
- Never leave the string trimmer running unattended.
- Allow at least two minutes for the string trimmer to cool down prior to re-fuelling.
- Avoid spilling fuel or oil. Spilled fuel must be immediately cleaned up.



## What's Required for Certification?

*please provide the following*

- Signup for 3 Free Lessons from [www.landscapesafety.com](http://www.landscapesafety.com)
- Complete and submit the Landscape Company Safety Self Audit

## “Greening” the Office

*Offers: Water Conservation, Energy Efficiency, Outreach and Education, Wildlife Conservation*

### “Greening” the Office Building

The green building movement in the U.S. originated from the need and desire for more energy efficient and environmentally friendly construction practices. There are a number of motives to building green, including environmental, economic, and social benefits. However, modern sustainability initiatives call for an integrated and synergistic design to both new construction and in the retrofitting of an existing structure.

Green buildings bring together a vast array of practices and techniques to reduce and ultimately eliminate the impacts of buildings on the environment and human health. It often emphasizes taking advantage of renewable resources, e.g., using sunlight through passive solar, active solar, and photovoltaic techniques and using plants and trees through green roofs, rain gardens, and for reduction of rainwater run-off. Many other techniques, such as using packed gravel or permeable concrete instead of conventional concrete or asphalt to enhance replenishment of ground water, are used as well.

While the practices, or technologies, employed in green building are constantly evolving and may differ from region to region, there are fundamental principles that persist from which the method is derived: Siting and Structure Design Efficiency, Energy Efficiency, Water Efficiency, Materials Efficiency, Indoor Environmental Quality Enhancement, Operations and Maintenance Optimization, and Waste and Toxics Reduction. The essence of any green building is an optimization of one or more of these principles. Also, with the proper design, individual green building technologies may work together to produce a greater cumulative effect.

### Green Ideas to Consider

#### Switch your office paper use to 100% recycled

Did you know that the average US worker uses 12,000 sheets of paper per year? Paper accounts for roughly 40% of all municipal solid waste in the United States. Whether you work in an office or telecommute from home, chances are you use a lot of paper. Green America committed to switching our paper for our publications and our member letters to 100% post consumer recycled paper.

#### Invest in reusable plates, cups, and utensils

Ask people in your office to bring in some items from home. Or, check out a yard sale on the weekend to find second hand items for office use.

#### Make sure your office recycles paper, aluminum, glass, and plastic

If your building does not already offer the service, look for an independent recycling firm that can come and pick up your office recyclables on a weekly or biweekly basis. If this isn't an option in your area, work with individuals in your office to encourage people to take their recyclables home with them to put in their own residential curbside recycling.

#### Switch office light bulbs to compact fluorescent bulbs

While the initial investment may cost more than conventional bulbs, CFLs last longer-- so over time your office will save money and save energy.

#### Start an office compost program

At Green America, we keep a sealed compost container in our office kitchen and individual staff members take turns taking the compost home to add to their own compost piles. You can also chip in to get a worm composter for your office kitchen.

#### Encourage use of green transportation to and from work

Offer incentives to encourage people to take public transportation, walk, bike, or car pool.

#### Buy green gifts

Whether you are buying a special gift for a client or a present for an office baby shower, make sure you buy green or Fair Trade items to show that you care about your customers and co-workers as well as people and the planet.

You can improve your business' bottom line by taking the following steps to make your office more energy-efficient.

### Lighting

- Turn off lights when not needed. For example, turning off fluorescent lights saves energy, extends overall lamp life and reduces replacement costs. Myth: Turning lights on and off uses more electricity than leaving the lights on.
- Reduce or replace inefficient, outdated or excessive lighting within your building.
- Where practical, replace incandescent lamps with compact fluorescent lamps (CFLs).
- Replace incandescent "EXIT" signs with LED signs. LEDs use about one-tenth the wattage and last 50 times longer than incandescent-lamp signs.
- Install lighting occupancy sensors that automatically turn lights on or off, depending on occupancy. These sensors work well in areas such as conference rooms, break rooms or individual offices that are not occupied continuously.
- Take advantage of natural daylight: turn off or dim electric lighting when adequate sunlight is available to illuminate interior space.

### Heating and Cooling

- Establish a preventative maintenance program for your heating, venting and air conditioning (HVAC) equipment and systems. Ensure that you regularly:
  - Change or clean all air filters, preferably every month.
  - Clean all heat exchanger surfaces, water and refrigerant coils, condensers and evaporators.
  - Repair leaks in piping, air ducts, coils, fittings and at the unit(s).
  - Replace defective equipment insulation, ducting and piping.



### Temperature control

- During summer months, adjusting your thermostat setting up one degree typically can save 2-3% on cooling costs.
- Consider installing locking devices on thermostats to maintain desired temperature settings.
- Install programmable thermostats that automatically adjust temperature settings based on the time of day and day of the week. If you have multiple HVAC units, set thermostats to return to the occupied temperature a half an hour apart.

### Office equipment

- To conserve energy and reduce internal heat gain, turn off computers, monitors, printers and copiers during non-business hours.
- Ensure your screen saver is compatible with the computer's power management features, and that the setup allows the system to go into power saver mode.
- When purchasing new office equipment, look for ENERGY STAR. The ENERGY STAR office equipment program promotes energy-efficient computers, monitors, printers, fax machines, scanners, copiers and multi-function devices that automatically power down during extended inactivity. Energy saving of 50% or more is possible.

## What's Required for Certification?

*please provide the following*

- Proof of action in any THREE of the opportunity areas listed in this section.

# All Required Licenses and General Liability Insurance are Current and Up-to-Date

*Offers: Economic Viability, Employee Safety*

In today's litigious society, even small mishaps can result in large lawsuits. That's why general liability insurance, along with property and worker's compensation insurance, are essential for Landscapers, whether they are licensed Contractors or not.

Landscapers are unique in that they may perform, per most state issued license, a wide variety of work within the scope of the license. This may include earthwork, tree trimming, flatwork, block work, lighting, sprinklers, drains etc. For this reason, it is important for the insurance Agency or Broker to be knowledgeable not only in the various types of landscaper policies, but in the work being performed.

## **Basics of Landscaper Insurance Coverage**

Liability insurance protects the assets of a business when it is sued for something it did (or didn't do) to cause an injury or property damage.

General liability insurance can be purchased separately or as part of a Business-Owner's Policy (BOP). A BOP bundles property and liability insurance into one policy; however, the liability coverage limits are generally pretty low. Businesses that need more coverage usually purchase liability insurance as a separate policy. The amount of coverage a business needs depends on a couple of factors:

### Perceived Risk

Business owners should first consider the amount of risk associated with their business. For example, a business that manufactures heavy machinery is at a greater risk of being sued than a company that manufactures linens, and would therefore need more liability insurance.

The state in which you operate. Businesses that operate in states with a history of awarding high damage amounts to plaintiffs typically need to carry liability insurance with higher coverage limits. An insurance broker can offer guidance in this area.

The following is a checklist of key issues for a landscape business to review in analyzing the terms and conditions of a liability insurance policy:

- What exactly is the scope of work being performed?
- Is the dollar amount of the coverage sufficient?
- Is the insurer financially strong?
- Are the premium payments competitive?
- Is the deductible too large?
- Does the policy cover bodily injury to customers and guests on the company's premises?
- Does the policy cover property damage caused by employees and third parties?
- Does the policy cover personal injuries?
- Does the policy cover advertising injury?
- Does the policy cover problems stemming from the company's products, or is a special policy needed?
- Does the insurer have a solid history of paying claims on time?
- When does a claim have to be made?
- Are the exclusions from coverage too broad?
- Are there special endorsements that may be appropriate?



### How General Liability for Landscapers Works

Under a general liability insurance policy, the insurer is obligated to pay the legal costs of a business in a covered liability claim or lawsuit. Covered liability claims include bodily injury, property damage, personal injury, and advertising injury (damage from slander or false advertising).

The insurance company also covers compensatory and general damages. Punitive damages aren't covered under general liability insurance policies because they're considered to be punishment for intentional acts.

General liability insurance policies always state a maximum amount that the insurer will pay during the policy period. Usually these policies also list the maximum amount the insurer will pay per occurrence. For example, if a company has a \$1 million occurrence cap in its liability policy and it's successfully sued for \$1.5 million, the insurer would pay \$1 million and the business would be responsible for paying \$500,000.

To cover these types of situations, many companies purchase umbrella liability insurance, which picks up where their general liability coverage ends. Umbrella liability covers payments that exceed their other policy's limits, and provides additional coverage for liabilities not covered in a standard liability insurance policy.

Most insurance companies require their policyholders to report as soon as possible any accidents that could lead to a liability claim. The insurer may then require the business owner to document the situation, forward all summonses and legal notices, and cooperate fully in any investigations.



Taking precautions before an accident can help keep your liability and insurance rates down. All businesses can take certain steps to lower the chance of a liability insurance claim:

- Set a high standard for product quality control;
- Make sure all company records are complete and up-to-date;
- Be sure employees are properly trained;
- Get safety tips for your type of business from your insurance company.

### What's Required for Certification?

*please provide the following*

- Proof of General Liability Insurance
- Proof of Up to Date Licenses

# Landscape at the Office and Shop using Sustainable Landscaping Practices

*Offers: Water Quality, Biological Diversity, Water Conservation, Financial Savings, Aesthetic Value*

A Sustainable Landscape can be a front yard, a community common area, municipal landscape, or any area of land that is managed by using practices that preserve limited and costly natural resources, reduce waste generation, and help prevent air, water, and soil pollution. The goal is to minimize environmental impacts and maximize value received from dollars expended.

## **Building Healthy Soils**

Healthy soils are essential in any landscape type. Transforming poor soils into a fertile growth medium that supports healthy plant growth while reducing water use created healthy disease- and pest-resistant plants that improve the landscape appearance and increase property value.

## **Using Fertilizer Efficiently**

Applying precise amounts in a timely manner will reduce growth, diminish the potential for pollution, and promote healthy disease- and pest-resistant plants. Fertilize according to the needs of the species planted. Use slow-release or organic-based formulas based on nutrient needs as verified by soil testing. This will reduce growth spurts that increase the need for pruning and mowing.

## **Irrigating Efficiently**

Overwatering aids rapid plant growth and runoff adds to groundwater pollution. Use water-efficient irrigation systems, such as drip or low-output sprinkler heads, that deliver a precise volume of water to plant root zones. Develop watering schedules based on historical or actual weather data. Use soil probes to monitor soil moisture before watering.

## **Reusing Organic Materials On-Site**

Landscapers can use a chipper at the job site to mulch prunings and clippings from woody shrubs and trees and apply mulch on the landscape. Trimmings and clippings from lawns, trees, and shrubs from large landscape sites can become feedstock for on-site composting operations. This will save on purchasing outside soil amendments.

## **Practicing Pollution Prevention**

Landscape managers are encouraged to use Integrated Pest Management (IPM) to reduce use of chemical pesticides and herbicides. These chemicals can eventually make their way off-site and contribute to nonpoint source pollution (pollution not traceable to a single location). Increased use of non-motorized equipment will also reduce emissions and noise pollution.

## **Retrofitting Inefficient Landscapes**

As established landscape sites age or grow beyond their intended use, they must be redesigned to integrate resource efficiency, site function, and aesthetics. Reduce turf areas and establish new landscape plantings with more low-maintenance and drought-tolerant plants. Irrigation systems must undergo retrofits and depleted soils enriched to save water and promote healthy plant growth.

## **Think Recycle/Buy Recycled**

Recycling materials from the construction, installation, or upkeep of landscape sites will reduce waste. Wood waste converts to mulch, and plastic pots can be recycled into products for landscape use. Buying recycled-content landscaping products, such as plastic edging or lumber, conserves natural resources and strengthens markets for these recyclable materials.

## Practice what you preach and earn Certification in the Sustainable Landscapes Program

Everyone has responsibilities for the future of our planet. This includes responsibilities at home, work, and in society in general. It is incumbent on each of us to take positive actions toward the common goal for being socially, environmentally and economically responsible where we live, work and recreate.

When landscapes require excessive amounts of water, energy, labor, and other resources, environmental and economic costs outweigh many of the natural benefits of landscapes. In contrast, Sustainable Landscapes feature healthier, longer-lived plants that rely less on chemical pesticides and fertilizers, minimize water use, and reduce waste generation and disposal. They also require less maintenance and alleviate groundwater and air pollution problems.

Sustainable landscaping practices incorporate beautiful plants, shrubs, and trees and reduce maintenance costs while at the same time protect the environment. Using sustainable landscape maintenance practices also makes good business sense. Using the Sustainable Landscapes Program as a guide will reduce resource depletion, reduce waste, and pollution problems while also improving the health of the landscape in an aesthetically pleasing and cost-effective manner.

### TEN Requirements of a Sustainable Landscape

1. Select Proper Turf and Manage it Correctly
2. Fertilize Appropriately
3. Water and Irrigate Responsibly
4. Provide Adequate and Appropriate Filtered Drainage
5. Create Water Efficient and Region Friendly Plant Beds
6. Manage Trees and Shrubs Responsibly
7. Manage Water Features Responsibly
8. Control Pests Responsibly
9. Provide Amenities for Humans & Wildlife
10. Use Technology and Innovation



The Sustainable Landscapes Program assists property owners and managers lower their environmental impact through the adoption of resource efficient lifestyle and management practices.

The Sustainable Landscapes Program is available as a benefit to all Platinum Members.

To learn more about this program and the specific requirements contact us at: (727) 733-0762 or visit the programs website at: [www.isc-audubon.org](http://www.isc-audubon.org)

## What's Required for Certification?

*please provide the following*

- Photos of the Sustainable Landscaping at the Shop and Office

# Use Technology and Innovation in Service Offerings

*Offers: Water Quality, Energy Savings, Resource Management, more...*

We recognize that there are numerous ways to incorporate green technologies into any landscape. This is your opportunity to showcase the unique innovation and green technology strategies employed by your landscape company.

## **Potential Technology & Innovation Projects for Landscape Providers**

### Fertigation

Fertigation is a landscaping and gardening practice in which water-soluble materials are added to the water used for irrigation. Classically, fertigation supplies nutrients in the form of fertilizers, although it can also be used to deliver soil amendments and a variety of other materials, including chemicals to cope with pests and plant diseases.

This technique can reduce fertilizer application costs by eliminating high operational requirement. It may also improve nutrient efficiency by applying them closer to when the plant needs them. Fertigation is becoming widely accepted in the industry due to the fact that a properly designed system will perform accurately, is now economical, easy to install, saves time, labor and most importantly, will save you money. A proper system will eliminate waste, sludge and residues. It allows one to "fine tune" fertility levels, and will monitor the rates of fertilizer being applied. A good system will also address the reduction of fertigation water runoff.

### Xeriscaping

An added benefit of Xeriscape landscapes is less maintenance. A well-designed landscape can decrease maintenance by as much as 50 percent through reduced mowing, once-a-year mulching, elimination of weak, un-adapted plants, and more efficient watering techniques.

### Rain Gardens

Rain gardens are becoming and increasingly popular landscape feature. A rain garden is a natural or dug shallow depression designed to capture and soak up stormwater runoff from roofs and other impervious areas such as driveways, walkways, and even compacted lawn areas. They can be used as a buffer to shoreline areas to capture runoff from the landscape before it enters a lake, pond, or river. The rain garden is planted with suitable trees, shrubs, flowers, and other plants allowing runoff to soak into the ground and protect water quality.

In addition to adding beauty to the landscape, rain gardens also help protect water quality by reducing stormwater runoff. Stormwater runoff is considered one of the main sources of water pollution on the planet. A rain garden will allow the runoff generated on the landscape to infiltrate into the ground and help to reduce potential water quality problems.

### Rainwater harvesting

Rainwater harvesting or "living water" harvesting involves collecting and storing rainwater for future use and it has become a common practice in many parts of the world that receive dry, humid weather and very little rainfall. Now, it is gaining popularity again in North America, particularly in British Columbia. In B.C., residents are using rainwater harvesting as a sustainable water source for household use, organic farmers are using it to grow supposedly healthier plants and crops, and commercial green houses and public buildings are recognizing its water-conserving benefits as well.

### Using Pervious or Permeable Pavers

Permeable Pavers help protect the quality of our water supplies. They reduce the amount of storm water runoff entering our natural waterways and carrying with it contaminants and pollutants. Pervious and permeable pavers allow rain water to naturally drain into the surface through the voids in the pavers. This promotes the infiltration of rainwater and also helps to recharge the groundwater.

Using permeable pavers within a landscape also means less storm water runoff, which means that our streams and riverbeds are less likely to flood as often. This also means that there will be a reduction in the rate of the erosion of riverbanks and streambeds.

### Using Non-Potable Water to Irrigate such as Reclaimed Water and Effluent

Reclaimed water is an important component of wise water management. Reclaimed water is derived from domestic wastewater and small amounts of industrial process water or stormwater. Using reclaimed water has multiple benefits such as; it costs less than drinking water, it reduces fertilizer use, as some nutrients like nitrogen and phosphorus remain, it reduces stress on drinking water supplies, and it reduces disposal into waterways, which can help reduce nutrient loads in bays and rivers.

### Composting

Compost is organic material that can be used as a soil amendment or as a medium to grow plants. Mature compost is a stable material with a content called humus that is dark brown or black and has a soil-like, earthy smell. It is created by: combining organic wastes (e.g., yard trimmings, food wastes, manures) in proper ratios into piles, rows, or vessels; adding bulking agents (e.g., wood chips) as necessary to accelerate the breakdown of organic materials; and allowing the finished material to fully stabilize and mature through a curing process.



Yard trimmings and food residuals together constitute 23 percent of the U.S. municipal solid waste stream. That's a lot of waste to send to landfills when it could become useful and environmentally beneficial compost instead. Composting offers the obvious benefits of resource efficiency and creating a useful product from organic waste that would otherwise have simply been sent to the landfill.

### There are Many Opportunities for Innovation and Technology

- Incorporating Eco-friendly & Sustainable Design concepts
- Using salt tolerant turf grasses in coastal areas
- Using rain collection techniques such as rain barrels, and catch basins
- Installing Weather Stations
- Creating Stormwater Planters
- Soil Moisture Sensors
- Using Recycled Lumber
- Green Roofs
- Investing or participating in Carbon Sequestration Projects
- Incorporating products that reduce erosion

### **What's Required for Certification?**

*please provide the following*

- One Photograph of Innovation or Technology Used in Practice
- Description of the Innovation or Technology

## Workbook References/ More Information

1. Lawn & Landscape—Market Leadership  
<http://www.lawnandlandscape.com/lawn-0411-human-resources-workers-comp.aspx>
2. Safety Culture  
[http://www.safetyculture.com.au/audits/self\\_auditing.php](http://www.safetyculture.com.au/audits/self_auditing.php)
3. Florida Department of Environmental Protection: Agricultural Source and Water Well Management Section. May 1995. Best Management Practices for Golf Course Maintenance Departments.  
<http://www.dep.state.fl.us/water/nonpoint/docs/nonpoint/golfbmp.pdf>
4. GreenIndustryPros.com.  
<http://www.greenindustrypros.com/publication/article.jsp?pubId=3&id=1447&pageNum=4>
5. The Green Industries of Colorado (GreenCo). May 2004. Green Industry Best Management Practices (BMPs) for the conservation and protection of water resources in Colorado. Wright Water Engineers, Inc., Boulder, CO.  
[http://www.greenco.org/bmp\\_list.htm](http://www.greenco.org/bmp_list.htm)
6. Suffolk County Sanitary Code. Article 12: Toxic and Hazardous Materials Storage Handling and Controls.  
[http://gcp.esub.net/cgi-bin/om\\_isapi.dll?clientID=44804&infobase=suffolk.nfo&softpage=Browse\\_Frame\\_Pg42](http://gcp.esub.net/cgi-bin/om_isapi.dll?clientID=44804&infobase=suffolk.nfo&softpage=Browse_Frame_Pg42)
7. Peconic Estuary Program. Spring 2005. Is the grass really greener? Nitrogen and lawn care: do your part. PEP Talk, Vol 2, Issue 2, page 4.  
[http://www.peconicestuary.org/PT\\_Spring05.pdf](http://www.peconicestuary.org/PT_Spring05.pdf)
8. Pesticide Community Advisory Committee Policy for Suffolk County Golf Courses.  
[http://www.cce.cornell.edu/suffolk/IPM/scgolf\\_pest\\_policy.pdf](http://www.cce.cornell.edu/suffolk/IPM/scgolf_pest_policy.pdf)
9. U.S. Environmental Protection Agency National Pollutant Discharge Elimination System. Pollution Prevention/ Good Housekeeping for Municipal Operations: Landscaping and Lawn Care.  
<http://cfpub.epa.gov/npdes/stormwater/menuofbmps/index.cfm?action=browse&Rbutton=detail&bmp=1>
10. U.S. Environmental Protection Agency National Pollutant Discharge Elimination System. Pollution Prevention/ Good Housekeeping for Municipal Operations: Spill Response and Prevention. /  
<http://cfpub.epa.gov/npdes/stormwater/menuofbmps/index.cfm?action=browse&Rbutton=detail&bmp=107>



# The Sustainable Lawn Care Provider Certification Application

Contact Name \_\_\_\_\_

Landscape Company \_\_\_\_\_

Address \_\_\_\_\_  
\_\_\_\_\_

City, State, Zip \_\_\_\_\_

Phone \_\_\_\_\_

Fax \_\_\_\_\_

Email address \_\_\_\_\_

Website Address \_\_\_\_\_

## Documentation Requirements

- Platinum ISC-Audubon Membership
- Completed Safety Self Audit
- Certification Requirements of this Workbook have been met
- Map of the Garage and Office with Features Depicted

**The Sustainable Lawn Care Provider Program is free for ISC-Audubon Platinum Members.** Platinum Membership fees include a one-time registration fee of \$250 (first year membership included), and then only \$100 annually. Maintaining Platinum Membership is required in order to retain certification. To begin participation in the program mail, fax or email this application form with Platinum Membership (if applicable) registration fee (check or credit card). Membership applicable for one location only.

- We are already a Platinum Member and wish to submit this application for free
- I would like to become a Platinum Member. Please add the cost of membership (\$250) with this certification request and mail me a new Member packet today!

Name on Card \_\_\_\_\_

Credit Card Number \_\_\_\_\_

Exp. Date \_\_\_\_\_

By signing below you indicate that all photographs, and documentation submitted, and that all information submitted is accurate to the best of your knowledge.

Signature \_\_\_\_\_

Date \_\_\_\_\_

Print Name \_\_\_\_\_

Please mail this completed registration form, with required verification documentation and photographs to:  
**ISC-Audubon — 35246 US Hwy 19 #299, Palm Harbor, FL 34684**