



Sustainable Best Management Practices Guide for Golf Courses

BRITISH COLUMBIA



Canadian Golf Superintendents Association



CGSA represents the people responsible for the care, performance and stewardship of golf course landscapes. Through education, professional development, advocacy and collaboration, the association supports superintendents and their teams as skilled land managers, technical specialists and leaders in responsible golf course operations.

GEO Sustainable Golf Foundation



GEO Sustainable Golf Foundation is an international non-profit dedicated to helping accelerate sustainability and climate action in and through golf. Working collaboratively across the amateur and professional game, the Foundation develops and provides accessible frameworks, programs and tools to help safeguard golf's future and make a greater positive impact in a changing world and on an increasingly pressured planet.

The CGSA would like to thank the many individuals and organizations who contributed to the guide

Particular thanks are due to golf course superintendents and turfgrass professionals across British Columbia, whose day-to-day work provides the practical foundation for responsible golf course management. Their knowledge and experience have helped ensure the guide is grounded in the realities of the profession.

Thanks are also extended to the public agencies, research bodies, conservation organizations, technical specialists, industry partners and golf sector organizations whose work continues to support better practice across the areas covered in this guide.

Welcome and Introduction



Welcome to the CGSA - British Columbia – Sustainable Best Management Practices Guide, which seeks to bring into clear focus the priority best practices for the delivery of high quality, responsible, safe and sustainable operations for golf courses in British Columbia.

There are over 300 golf courses across British Columbia, representing a wide range of sizes, layouts, memberships, and business models, spread across diverse landscapes, climates, and biogeographic regions. Some are coastal, many sit within agricultural, urban, or semi-urban areas, and others lie within forests and woodlands. While some cater to domestic and international tourists, the majority serve local communities.

Regardless of the type of course, club, or location, these facilities and their representative associations share a common concern for and responsibility to people and the environment. More specifically, they aim to provide valuable social and economic benefits to staff, players, and suppliers; strengthen communities in a host of different ways; foster nature; conserve critical natural resources; and contribute to climate mitigation and adaptation.

The Canadian Golf Superintendents Association has long prioritized research, education and the provision of high-quality guidance to members. Now, against a backdrop of increasing regulatory pressure, tighter and more costly resources, and growing public expectations around nature restoration and climate adaptation, the association is creating this best practice guidance for members.

This guide, directly connected to the Sustainable Golf in Canada program outlined later in the document, is central to the next phase of responsible, efficient, sustainable, and successful golf course and facility management.

It consolidates a significant body of content, gathered from an extensive bank of knowledge, with the dual purposes of:

Acting as a valuable educational resource for golf course superintendents across the region, as well as other staff members and decision-makers within golf facilities

Providing external stakeholders with insight into the breadth and depth of sustainability-based activities that the golf sector is both currently delivering and aiming to expand in the future

Importantly, this guide builds on the strong foundation of Best Management Practice (BMP) guidance developed to date, including the CGSA's [Environmental Management Resource Manual](#), while taking an important step forward: integrating clear principles and modern expectations around sustainability. It recognizes that golf's success and its contributions to nature and communities are not mutually exclusive, but closely interrelated.

In this way, the guide presents practices and an approach rooted in continual improvement. Every action is positioned not only as a technical measure, but as part of a wider effort to strengthen resilience, efficiency, and public trust in the game.

Golf has a unique opportunity to lead in this space. Few sports are so deeply connected to their natural surroundings or so capable of demonstrating how environmental stewardship can drive operational success and community impact. By protecting and regenerating the landscapes that sustain it, golf can reduce costs, enhance playing quality, attract new audiences, and contribute meaningfully to nature recovery and climate action.

This approach aims to position British Columbia at the forefront of a global shift, from maintaining courses as isolated businesses to managing them as dynamic assets that support both nature and communities. It connects decades of agronomic knowledge and operational expertise with a forward-looking sustainability framework, helping build facilities that are resilient, respected, and regenerative - profitable in every sense of the word.



The Canadian Golf Superintendents Association (CGSA) is pleased to introduce the first provincial *Sustainable Best Management Practices Guide for Golf Courses* - British Columbia to its members and stakeholders.

This project was born from a desire of the CGSA's Environment Committee to produce Canadian focused BMP's specific to each province. The CGSA Board of Directors wanted to further this initiative by modernizing and updating the information found in the *Environmental Management Resource Manual*. Coupled with the opportunity to have a digital – web-based document that could easily be referenced and updated made the project even more optimal. CGSA intends to keep the provincial documents as fluid as possible when new legislation or protocols come into effect. Environmental Committee Chair, T-Jay Creamer, AGS was instrumental in furthering this project working alongside the committee and Board of Directors as well as the GEO Sustainable Golf Foundation, including Dr Robbie Fitzpatrick for research and content curation, and Guy Stirling for document design and production, to create this important resource.

Golf Courses in British Columbia are in some of the most diverse landscapes in Canada and stakeholders have a strong desire to respect these individual environments while serving the communities around them. The Superintendents who manage these courses are stewards of these lands, maintaining and creating habitats for various wildlife, providing the opportunity for their patrons to enjoy and socialize in beautiful natural settings across the province.

The information in the *Sustainable Best Management Practices for Golf Courses* is intended to supply direction to and support the role of the Golf Course Superintendent. Providing guidance on where to find further details or information to serve each property in the most sustainable manner possible.

CGSA will continue creating *Sustainable Best Management Practices for Golf Courses* across the country by province, respecting the diversity in each province.

We are pleased to share this resource with you and hope that you find the information valuable and useful to your golf course environment.

Respectfully,

Kathryn Wood, CMP
CGSA Chief Executive Officer

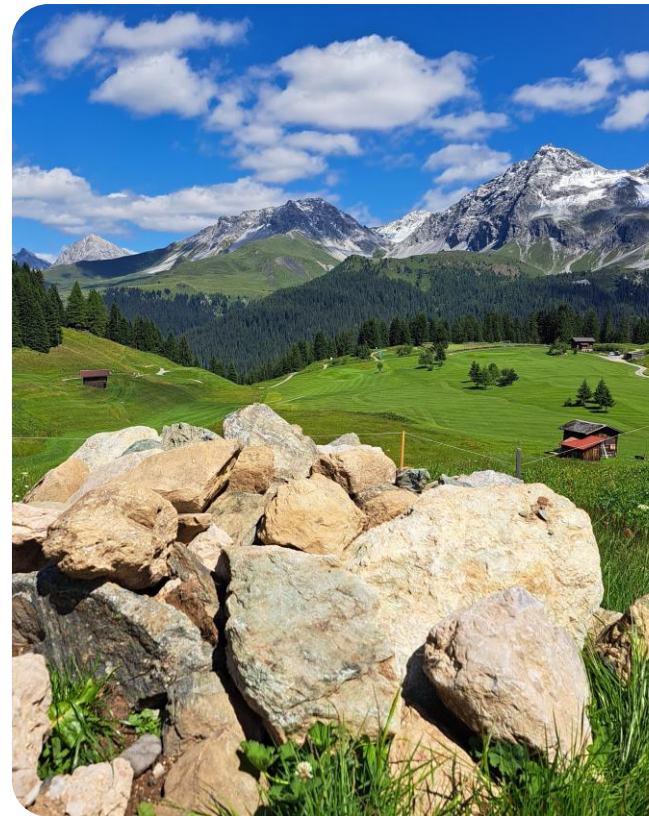


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Why Sustainability-Based Best Management Practices?

Best Management Practices have long underpinned professional golf course management, providing clear technical guidance on agronomy, turf health, and operational efficiency. Sustainability-based BMPs build upon that foundation, expanding the focus to reflect today's expectations for environmental protection, ethical governance, and community value.

This evolution is both natural and necessary. Around the world, regulation is increasingly shaped by environmental performance, including water protection, chemical use, habitat conservation, carbon management, and labour standards. Public expectations are shifting too: golfers, employees, and neighbours now judge facilities not only by the quality of their turf, but the integrity of their operations and their contribution to the local environment and community.

Integrating sustainability into BMPs ensures that golf facilities are not just compliant, but ahead of the curve - operating efficiently, transparently, and responsibly. It embeds environmental and social performance directly into the daily routines of course management, making sustainability measurable, visible, and operationally valuable.

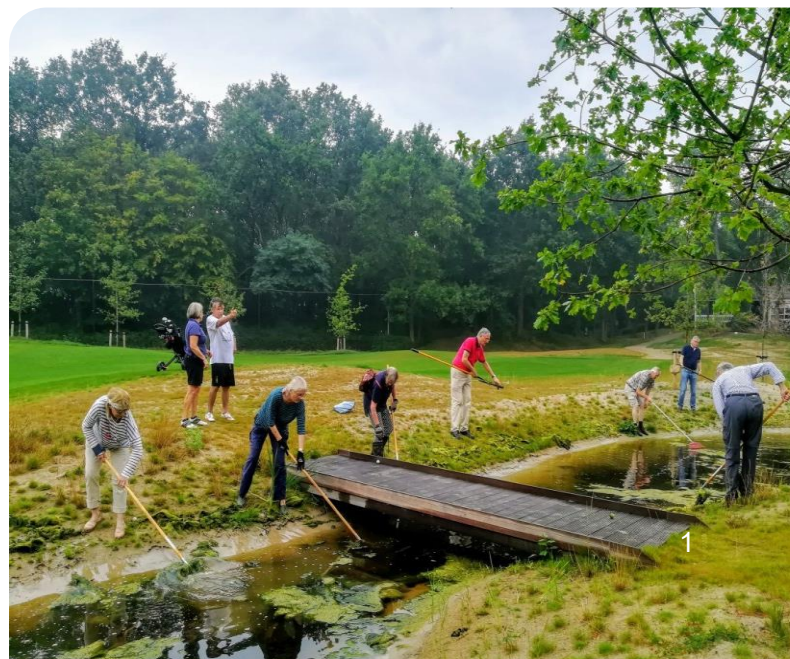
For the golf industry, this approach strengthens every aspect of the business.

Courses that restore nature enhance the quality and character of play.

Facilities that conserve water and energy reduce costs and build resilience
In the face of rising prices and a changing climate.

Clubs that engage with their communities build trust,
attract new members and demonstrate leadership.

In short, sustainability-based BMPs put purpose and performance on the same path. They help facilities operate within planetary boundaries while creating healthier workplaces, stronger communities, and more resilient, profitable businesses. This is the foundation for the next generation of golf - one that protects what matters most and ensures that the game continues to thrive long into the future.



Research and Development of the Guide

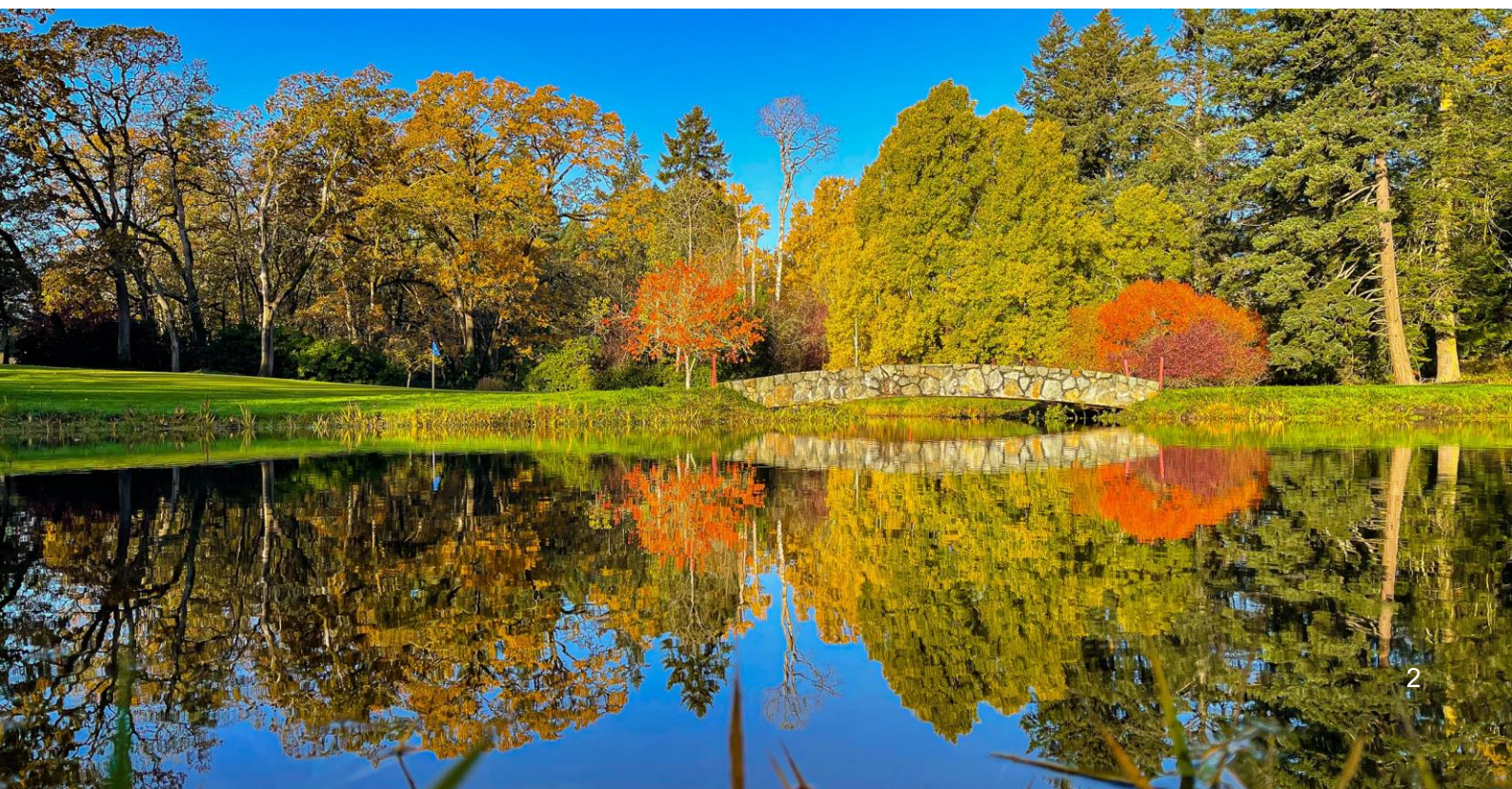
This guide consolidates over two decades of research, field experience, and collaboration across British Columbia and beyond, distilling the collective expertise of superintendents, scientists, policymakers, and sustainability leaders into a practical, forward-looking resource for the modern golf facility.

Its foundation rests on a wide body of respected sources, including:

- Provincial and non-governmental environmental agencies in British Columbia
- Previous British Columbia golf-related guidance, including AGA-BC's Manual of Integrated Pest Management for Turf Managers in BC
- Turfgrass, water stewardship, and nature conservation research directly related to golf course management
- Studies on carbon emissions, sequestration, and climate resilience
- The work of the IPM Council of Canada
- Best Management Practices developed by the Golf Course Superintendents Association of America and the Ontario Golf Superintendents Association
- Research and frameworks from international leaders such as the USGA, The R&A, the Scandinavian Turfgrass and Environmental Research Foundation, and the Asian Turfgrass Centre

The result is a synthesis of global science and local experience, designed to be both credible and practical. It translates the best available evidence into a clear direction of travel for high quality golf, environmental stewardship, operational efficiency, and social value. Every recommendation has been refined to reflect British Columbia's diverse landscapes, climates, and regulatory context while remaining aligned to international sustainability standards and maintaining the highest professional and scientific standards.

This guide is intended to be a living resource. As regulations, research, and technologies evolve, the CGSA will periodically review and update the document to maintain current links, regulatory references, and sustainable best practices, ensuring it remains accurate, relevant, and practical for golf course superintendents across the province.



Framework and Structure

The structure of this guide follows the international Sustainable Golf Framework, which is the result of a significant body of collaborative, multi-stakeholder work developed over the past 20 years and coordinated by the GEO Sustainable Golf Foundation.

The Sustainable Golf Framework is built around four interconnected Themes: **Nature, Resources, Climate** and **Community**; each encompassing a series of carefully evaluated **Action Areas** and best practices, including both compliance and beyond compliance measures across a wide range of priority environmental and social topics.

In this guide, the structure is organized around Nature, Resources and Community, with climate considerations integrated throughout. This approach reflects the way climate influences a broad range of day-to-day decisions - from turfgrass and habitat management to water use, energy, materials and community engagement - and is therefore most effectively addressed as a cross-cutting priority embedded across all Action Areas.



Connecting local action with national and international frameworks is central to the approach adopted by golf superintendents in British Columbia, with regional adaptation to reflect specific regulations and other priority practices.

As such, each Best Practice in this guide has been reviewed and adapted to reflect British Columbia's distinct landscapes, regulations, and operational contexts. They provide a roadmap for all types of facilities, from small community courses to large destination venues, to protect landscapes, improve efficiency and enhance value over time.

By adopting this structure, facilities can move confidently from compliance to leadership. The framework does not prescribe a set route, but instead provides a flexible system of continual improvement one that evolves with science, policy, and practice, ensuring golf's place as a forward-looking, responsible, and resilient part of landscapes and communities.

Best Practice Guide structure at a glance

Theme	Action Area	Activities	Best Practice	National / Regional Requirements and Opportunities
Nature	Habitat & Biodiversity	Priority activities that stem from each theme and action area	Best practice checklists for each activity, with supporting descriptions, guidance and resources for successful delivery	Key texts, links and documents providing clarity on compliance and beyond compliance opportunities
	Turfgrass			
	Pollution Prevention			
Resources	Water			
	Energy			
	Materials			
Community	Health & Wellbeing			
	Outreach & Inclusion			
	Communications & Advocacy			

Using the Guide

This guide is designed to function as both a reference and a practical tool. It can be read, shared, and discussed as a concise overview of golf's sustainability journey in British Columbia, while also providing practical guidance for day-to-day decision-making on the ground.

Each action area includes:

- A short introduction outlining its purpose and relevance within the wider Sustainable Golf Framework.
- A set of Best Practices providing high-level strategic and technical direction.
- Regional guidance tailored to British Columbia, reflecting provincial regulations and bio geoclimatic conditions.
- Tools, resources and examples highlighting practical applications and opportunities to learn from others.

Certain best practices are marked with a ★ symbol to highlight where there may be relevant regulatory considerations in British Columbia. These practices are more likely to intersect with provincial or federal legislation, local bylaws, or permitting requirements, depending on site conditions and the nature of the activity. Where a ★ is shown, users should review the accompanying Regional Requirements section to understand the relevant context and confirm any obligations before proceeding.

Across all action areas, facilities are encouraged to review these best practices, identify those most relevant to their site, and implement them progressively over time, using the hyperlinks provided to access supporting resources, tools, and examples.

Disclaimer

While the guide highlights regulatory considerations and selected legal requirements, it is not intended as a complete or definitive manual of all laws, regulations, permits, or compliance obligations that may apply to a golf facility or property. Regulations and their interpretation may vary by location, activity, and site conditions. Facilities should use the links and resources provided, and consult the relevant local, provincial, and federal authorities to confirm current requirements and ensure compliance with all applicable legislation.

OnCourse® Canada

The full contents of the guide have also been integrated into [OnCourse® Canada](#) - a free, fully customized and interactive digital tool, aligned with the wider 'Sustainable Golf in Canada' program.

Through OnCourse® Canada, facilities can assess their current implementation of best practices, track key performance metrics, access annual data and insight reports including a comprehensive carbon footprint, develop tailored action plans, and work towards validation and certification.

In this way, the best practices are embedded within a wider program of support and recognition for facilities and superintendents across the province, aligned with national and international approaches to sustainable golf.

Facilities are invited to explore and engage with OnCourse® Canada to support their ongoing journey of continuous improvement.



Find out more about recommended next steps and OnCourse ▶

The Best Practices

The table below is designed to help you explore the best practices. You can navigate between action areas and move directly to the activities most relevant to your role, priorities, or site conditions, whether focusing on turfgrass, water, energy, materials, or community engagement.

The structure is intentionally designed to help you work on sustainability and climate action as part of an interconnected system, based on a holistic mindset where protecting and restoring the environment can also strengthen social and economic performance. By engaging with these best practices, facilities can

unlock a wide range of co-benefits: increasing efficiency, reaching new audiences, strengthening brand loyalty and reputation, supporting richer and more memorable experiences, and building a greater game that delivers lasting value for both current and future generations.

Each best practice represents a practical step toward a model of golf that is resilient, regenerative, and rewarding for people, places and the planet. Seen together, they reveal golf's true potential: a game that not only thrives within its environment and communities but helps them flourish.

Habitat & Biodiversity ▶	Turfgrass ▶	Pollution Prevention ▶
Understand the Landscape ▶	Turfgrass and Soil Health ▶	Golf Course and Grounds ▶
Naturalize the Landscape ▶	Cultural and Mechanical Practices ▶	Maintenance Facilities and Clubhouse ▶
Conservation Management ▶	Managing Pests and Diseases ▶	
Water ▶	Energy ▶	Materials ▶
Reduce Need ▶	Reduce Need ▶	Reduce Need ▶
Use Efficiently ▶	Use Efficiently ▶	Purchase Responsibly ▶
Source Responsibly ▶	Source Responsibly ▶	Reuse and Recycle ▶
Health & Wellbeing ▶	Outreach & Inclusion ▶	Communications & Advocacy ▶
Participation ▶	Multifunctionality ▶	Awareness and Inspiration ▶
Human Health ▶	Volunteering and Charity ▶	Leadership ▶
Employment ▶	Partnerships ▶	

Habitats & Biodiversity



Understand the Landscape ▶	Naturalize the Landscape ▶	Conservation Management ▶
Habitats, Wildlife and Protected Species ▶	Opportunities for Naturalization ▶	Golf Course and Grounds ▶
Protected Features and Areas ▶	Landscape Protection and Restoration ▶	Grasslands ▶
	Microhabitats ▶	Woodlands ▶
		Water Bodies and Wetlands ▶
		Ecological and Cultural Consultations ▶

Habitat and biodiversity are central to the long-term health, resilience, and value of a golf facility. Across a course, they are expressed in the full mosaic of natural, semi-natural, and managed spaces - from rough grasslands, woodlands, wetlands, and water bodies to boundary features, out-of-play areas, and small but important microhabitats that support a rich variety of plants and wildlife.

When habitats are managed well, they provide refuge for key species, improve resilience to climate and environmental pressures, and demonstrate visible stewardship to golfers, communities, regulators, and partners. They can also strengthen the character, identity and interest of the course, contributing to the beauty of the landscape and the strategic quality of the playing experience. In this sense, biodiversity is not an added extra but a practical and increasingly important dimension of what makes a golf course distinctive, functional and future-ready.

Effective action typically begins with understanding the ecological features that are already present, as well as how the golf course connects to the wider landscape. With that foundation, superintendents can identify opportunities to protect existing assets, restore degraded areas, and create new habitats in ways that are locally appropriate and operationally realistic. This may include naturalizing out-of-play areas and managing land in ways that increase ecological value while also reducing long-term inputs, easing maintenance pressures, and enriching the course's visual and strategic character. From there, the focus shifts to long-term stewardship: managing habitats with clear intent, applying sound conservation practices, and drawing on ecological and cultural expertise where needed.

This action area is designed to support that journey - from establishing an ecological baseline to restoring nature and embedding conservation into everyday management, so that superintendents can take a clear, informed, and locally relevant approach to biodiversity stewardship.



Understand the Landscape

A clear understanding of the landscape provides the foundation for biodiversity protection, habitat restoration, and long-term conservation management. Through habitat assessments, wildlife surveys, and site mapping, golf facilities can develop a richer ecological picture of the course and its wider setting - identifying valuable assets, sensitive areas, practical constraints, and opportunities for enhancement. This baseline supports more informed planning, better-directed action, and greater confidence in long-term decisions that benefit nature, improve resilience, and add value across the facility.

Habitats, Wildlife and Protected Species

Building a clear picture of the habitats on site, together with the resident and migratory species they support, helps turn broad ecological understanding into practical action. A well-structured assessment can inform management priorities, strengthen biodiversity protection, support compliance, and provide a stronger basis for long-term restoration planning. It can also help superintendents balance playability with ecosystem health, reduce legal and operational risk, and show responsible stewardship of the course and its wider landscape.

Best Practice

- **General knowledge of habitats and wildlife.** Conduct an initial review to identify the main habitats and wildlife throughout the site. Use routine maintenance, seasonal observations, identification charts and / or digital tools to understand ecological areas and resident and migratory species.
- **Identify rare, protected or endangered species.** Review any ecological reports and trusted online resources such as the IUCN Red List, Canadian Species at Risk Public Registry and BC's Species and Ecosystem Explorer to determine whether rare, threatened, or endangered species are present.
- **Habitat assessment and wildlife survey by staff or volunteers at your facility.** Conduct in-house reviews using simple routes, standardized checklists or apps like iNaturalist. Focus on habitat type, general condition and the presence of resident and migratory species. Repeat at consistent times each year to monitor change.
- **Habitat assessment and wildlife survey by local group, charity, or body.** Partner with a recognized conservation organization or local naturalist society to conduct structured habitat assessments and species surveys. Use standardized methods, protocols and recording formats.
- **Habitat assessment and wildlife survey by trained ecologist or similar professional.** Commission a qualified ecologist to use established protocols, recognized methodologies and national or regional classification systems, especially before any developments or modifications. Where possible, include mapping and management recommendations for ongoing maintenance and long-term restoration planning.
- **Participatory event with the local community (e.g. BioBlitz survey).** Host public events where community members, local experts or students record as many species as possible within a set time frame. Use these events to verify internal records, strengthen local partnerships, and promote awareness of biodiversity value.
- **Habitat map.** Develop and maintain a habitat map using aerial imagery or GIS, developed in house or with conservation partners or a qualified ecologist. Delineate habitat boundaries, water features, sensitive features, buffer areas, and any protected species, integrating into golf course planning, maintenance, and regulatory reporting.
- **Monitoring system for rare, protected or endangered species.** Establish a long-term monitoring program that includes seasonal surveys or annual checks. Record species presence, relative abundance and habitat condition. Share verified data with conservation databases or partners to contribute to wider biodiversity efforts.



National / Regional Requirements

There is no blanket legal requirement for golf facilities in BC to conduct habitat assessments or wildlife surveys. However, regulatory obligations may apply depending on site location and management activities.

If the course lies within a [Development Permit Area \(DPA\)](#) designated for environmental protection, consult the local government before altering vegetation, grading land, or expanding maintained turf. Most DPAs require environmental assessment and management plans prior to approval.

If listed species or critical habitat are present, obligations may arise under the [Species at Risk Act \(SARA\)](#). Before construction, drainage changes, or habitat modifications, check for listed species and consult a Qualified Environmental Professional if required.

For work near streams, wetlands, or lakes, a formal riparian assessment by a QEP is required prior to soil disturbance or vegetation removal under the [Riparian Areas Protection Regulation \(RAPR\)](#). This applies to irrigation work, path construction, or landscaping within riparian buffer zones.

If any part of the course is located within the [Agricultural Land Reserve \(ALR\)](#), confirm permitted uses and application requirements with the Agricultural Land Commission before undertaking land use changes, construction, soil movement, or significant site alteration. Additional environmental assessments may be required where other regulations are triggered.

Superintendents can use the following resources to verify requirements and plan accordingly:

The [Canadian Species at Risk Public Registry](#) lists federally protected species, critical habitats, and recovery strategies under SARA. Review this before any habitat modification.

BC's [Species and Ecosystem Explorer](#) allows searches by location, ecosystem type, and conservation status to confirm whether sensitive habitats are present.

[Development Permit Area \(DPA\) Maps and Bylaws](#) outlines permit requirements and environmental protection zones. Contact your municipal planning department to access site-specific maps and guidance.

National / Regional Opportunities

Even where not legally required, understanding wildlife and habitat improves management, planning, biodiversity and environmental leadership. The following resources and programmes can support:

[Greening Your BC Golf Course: A Guide to Environmental Management](#) provides practical guidance for habitat and wildlife planning.

The [Bio Geoclimatic Ecosystem Classification \(BEC\) System](#) supports ecosystem identification and mapping across landscapes.

The [Habitat Conservation Trust Foundation \(HCTF\)](#) offers grants for habitat mapping, wildlife monitoring, and enhancement projects on private and public land.

[Investment Agriculture Foundation](#) funding may support riparian restoration and ecosystem service initiatives on or adjacent to managed landscapes.



“Our guests and team members are invited to become active participants in protecting biodiversity through the 123Survey app, contributing to an inventory of local wildlife and plant species by photographing sightings, recording sounds, or submitting observations. All data is geolocated and sent to ECOMED for scientific identification and mapping. This participatory initiative reflects our environmental commitment, with the most dedicated contributors rewarded at year-end.”

Terre Blanche Golf, France ▶

View more examples ▶

Protected Features and Areas

Some golf courses contain, adjoin, or influence features of historical, cultural, or environmental significance. These areas often contribute strongly to the identity of the landscape, but they may also be subject to specific protections or management requirements. Recognizing where these features are, understanding the obligations attached to them, and responding with appropriate care can help prevent damage, support compliance, and strengthen the long-term stewardship of important ecological and heritage assets.

Best Practices

- **Protect any archaeological, historical, or cultural designations on the site, if applicable.** Check whether your property contains or borders any heritage or archaeological sites. Use provincial databases, municipal maps, or previous environmental assessments to identify potential designations, and flag them clearly on internal maps to avoid disturbance. Maintain appropriate barriers, buffers or signage to ensure these areas remain protected during routine maintenance. ★
- **Understand legal responsibilities for landscape protection and special area designations, if applicable.** Review relevant legislation and consult local authorities before undertaking landscape alteration or construction. Ensure staff and contractors understand protection boundaries and conditions before work begins and integrate these requirements into ongoing management plans. Regularly review site activities to confirm compliance and adjust maintenance practices as needed. ★

National / BC Requirements★

Golf courses in BC may be subject to heritage or environmental designations that restrict development or require permits for certain activities. Superintendents should follow the steps below to ensure compliance and access the appropriate guidance.

Under the [Heritage Conservation Act](#), all archaeological sites are automatically protected, whether recorded or not. Before starting any soil disturbance, turf removal, grading, or construction, **contact the [BC Archaeology Branch](#)** to request a site inventory.

If there is evidence or a high likelihood of a site, apply for a Heritage Inspection Permit (HIP) to confirm its presence.

If a site is confirmed and work will impact it, apply for a Heritage Alteration Permit (HAP) before proceeding.

Guidance and forms are available from the [BC Archaeology Branch](#).

Some municipalities also designate Heritage Conservation Areas through their Official Community Plans.



Before starting any landscape or building alterations, consult your local planning department and apply for a Heritage Alteration Permit, if necessary, before modifying buildings, vegetation, or landscapes. Keep copies of correspondence and permits as part of your environmental documentation.

Environmental Designations

If the course lies within a [Development Permit Area \(DPA\)](#) designated for environmental protection, confirm applicable requirements with the local government before altering vegetation, grading land, or expanding maintained turf. Environmental assessment and management plans may be required prior to approval.

If listed species or critical habitat may be present, review obligations under the [Species at Risk Act \(SARA\)](#) before construction, drainage changes, or habitat modification. Consult a Qualified Environmental Professional where required.

If works are proposed within prescribed distances of streams, wetlands, or lakes, a riparian assessment by a Qualified Environmental Professional is required under the [Riparian Areas Protection Regulation \(RAPR\)](#) before soil disturbance or vegetation removal.

If any part of the course is located within the [Agricultural Land Reserve \(ALR\)](#), confirm permitted uses and application requirements with the Agricultural Land Commission before undertaking land use changes, construction, soil movement, or significant site alteration.

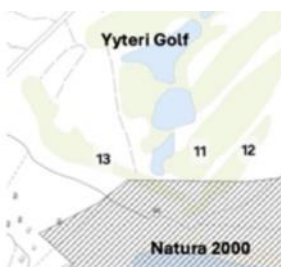
If the course is located within or directly adjacent to a provincial park, conservancy, or ecological reserve, confirm applicable restrictions and approval requirements with your [BC Parks](#) regional office before altering vegetation, land use, or infrastructure near protected boundaries. Each designation—such as *Class A Park* or *Conservancy*—has specific restrictions and allowable activities.

National / BC Opportunities

Even where heritage or environmental protection is not required, golf courses can show leadership by integrating cultural and ecological stewardship into management practices. Provincial organizations offer tools and partnerships to help care for these areas:

[BC Parks Cultural Heritage Conservation Handbook](#) outlines how cultural and ecological values can be integrated into landscape stewardship.

Organizations like [The Land Conservancy of British Columbia](#) protect culturally or ecologically significant lands through covenants and partnerships. Golf courses with heritage or biodiversity value may partner for mutual conservation benefit or explore stewardship agreements.



"We are partly located within a designated Natura 2000 area, which places clear legal and environmental requirements on land use and course management. Course maintenance, land use and development activities are adapted to conservation objectives to avoid significant adverse impacts on protected habitats and species, demonstrating how golf can coexist with long-term nature conservation in a sensitive protected environment."

Yyteri Golf, Finland ▶

[View more examples ▶](#)





Naturalize the Landscape

Naturalizing parts of the course can help golf facilities restore habitat, reduce maintenance intensity, and create a landscape that is both more distinctive and more resilient. Areas that are underused, out of play, or heavily dependent on inputs often offer the greatest opportunity for change, whether through more natural rough, meadow areas, native grasslands, or carefully planned planting. Managed well, these transitions can lower long-term resource demands and maintenance costs, while strengthening the ecological value, visual character, and overall identity of the course.

Opportunities for Naturalization

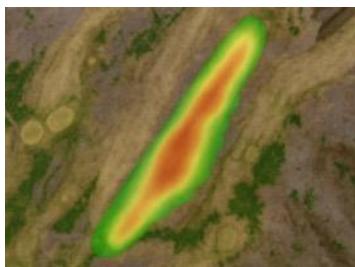
Naturalizing the landscape begins with recognizing where changes in design and management can deliver the greatest benefit. Areas of limited play value, high maintenance demand, or ecological fragmentation often present the strongest opportunities to create something more resilient, distinctive, and better connected to the surrounding landscape. When approached thoughtfully, naturalization can enhance habitat continuity, improve visual definition and strategic interest, and reinforce a stronger sense of place, while remaining practical, coherent, and well aligned with the wider character of the facility.

Best Practices

- **Monitor patterns of play to identify underutilized areas of turfgrass.** Use play observation, hole-by-hole performance reviews, or player surveys to identify turf areas that receive minimal traffic or have little strategic value. Convert to native grassland, pollinator habitat, or low-input rough to reduce mowing and irrigation.
- **Monitor patterns of play to identify underutilized bunkers.** Review bunker placement and usage through maintenance data and golfer feedback. Where bunkers no longer serve strategic or aesthetic purpose, consider partial or full naturalization using drought-tolerant turf or native vegetation.
- **Conduct visual assessments to determine wear patterns.** Walk the course regularly to record compacted, shaded, or low-use areas where turf struggles to perform. Replace or buffer these zones with naturalized edges or plantings that better suit site conditions.
- **Use GPS tracking and maintenance data to identify opportunities.** Map mowing patterns, irrigation coverage, and machinery routes using GPS-enabled equipment or apps. Overlay this data with play heatmaps to pinpoint high input zones with low functional value, prioritizing them for phased naturalization.

National / Regional Requirements

Naturalization itself does not require formal approval in BC, but some conversions may fall within regulated zones, especially if they alter vegetation near riparian or protected habitats. Superintendents should confirm whether proposed changes trigger additional oversight (see restoration and naturalization, overleaf).



"We used golf course architecture expertise and custom golf-shot forecasting software to identify regularly mown turf receiving minimal play. Of 143,836 square meters of fairways and mown rough, 18,204 square meters were converted into low-maintenance grassland, a 12.66% reduction in mown footprint. This has lowered mowing frequency and input requirements while enhancing biodiversity and the natural character of the landscape."

Golfklúbbur Þorlákshafnar, Iceland ▶

[View more examples ▶](#)



Landscape Protection and Restoration

Golf courses sit within broader ecological systems and can play a meaningful role in protecting and restoring the landscapes around them. By reducing the footprint of intensively managed turf and managing land with greater ecological intent, facilities can help strengthen biodiversity, reconnect habitats, and create more functional corridors for wildlife. This broader landscape approach can also improve water quality, increase resilience to climate-related pressures, and deepen the course's contribution to the quality of the wider environment.

Best Practices

- **Replace intensively managed areas with natural habitat, where possible.** Identify high-input turf areas with limited strategic or aesthetic value and convert them to naturalized zones. Use site-appropriate soil preparation and native seeding or planting to support successful establishment and long-term stability.
- **Prioritize native species of varying size and structure when planting.** Select locally adapted species that reflect the surrounding ecosystem. Include a mix of grasses, shrubs, and trees to create layered vegetation, improve resilience, and provide habitat diversity for wildlife.
- **Create and maintain natural corridors between habitat areas.** Establish and manage continuous strips of native vegetation linking any woodlands, ponds and meadow areas. Design corridors to support species movement, pollination, and hydrological connectivity, maintaining suitable width, structure, and plant diversity.
- **Connect on-site habitats to surrounding habitats where possible.** Coordinate with neighbouring landowners, municipalities, or conservation organizations to extend habitat corridors beyond the course boundary. Align planting, mowing, and buffer management practices to enhance connectivity and ecological function at the landscape scale.
- **Adopt a policy to protect existing habitats from future developments.** Integrate habitat protection zones into course management plans and highlight these areas clearly for staff and contractors. Conduct an environmental review and consult management plans before any proposed development or major maintenance near sensitive sites.

National / Regional Requirements

Restoration or alteration in sensitive areas may require formal review and approval. Superintendents should ensure all work aligns with provincial and local legislation before ground disturbance or vegetation removal.

If your course lies within a [Development Permit Area \(DPA\)](#) designated for environmental protection, you must obtain approval from your local government before altering vegetation or grading land. Submit an environmental management or restoration plan with your permit application.

Any work within 30 metres of a stream, wetland, or lake also requires a site assessment and written report by a Qualified Environmental Professional (QEP) under the [Riparian Areas Protection Regulation \(RAPR\)](#). This applies to replanting, regrading, or restoration projects, even if the intent is ecological enhancement.

If your project may impact listed species or critical habitat, consult the [Canadian Species at Risk Public Registry](#) for recovery strategies and legal requirements. Confirm the presence of at-risk species using [Species and Ecosystem Explorer](#) before starting work.

If ground disturbance occurs in previously undeveloped areas, confirm there are no archaeological or cultural heritage constraints through the [BC Archaeology Branch](#). Restoration in these areas may require a Heritage Inspection or Alteration Permit.



National / Regional Opportunities

A wide range of programs and funding mechanisms are available to help golf courses in BC restore natural landscapes and showcase environmental leadership. These resources provide technical guidance, financial assistance, and partnership opportunities:

The [BC Restoration Guidelines](#) provide a comprehensive framework for planning, implementing, and monitoring ecological restoration projects, helping ensure work meets provincial standards and delivers measurable results.

The [Habitat Conservation Trust Foundation \(HCTF\)](#) offers grants for ecosystem restoration, habitat enhancement, and species conservation, as well as funding for mapping and monitoring to guide long-term stewardship.

The [BC Conservation Fund](#) supports area-based conservation initiatives, including the restoration and protection of high-value biodiversity areas that may overlap with or border golf facilities

The [Investment Agriculture Foundation](#) provides Riparian Restoration Payments to encourage naturalization and habitat improvement in buffer zones around streams, helping meet water quality and biodiversity goals.

The [Northern Development Initiative Trust \(NDIT\)](#) offers Recreation Infrastructure Grants that can fund restoration or naturalized landscape features as part of broader improvement projects.

Regional Biodiversity Services, such as the [Capital Regional District Biodiversity Service](#), provide mapping, ecological planning, and community engagement resources to support biodiversity and naturalization initiatives.



"We have participated in Syngenta's Operation Pollinator for many years, through which we have created a flower garden and designated habitat to attract and support pollinators. This area provides nesting and food resources for bees, beneficial insects, small mammals and farmland birds, while enhancing biodiversity and ecosystem services such as pollination and pest control. We also collaborate with the Harmony Bee Club to offer nature walks and educational sessions throughout the summer."

Mickelson National Golf Club, Canada ▶

[View more examples ▶](#)

Microhabitats

Alongside larger-scale landscape change, smaller habitat features can make an important contribution to ecological richness. Microhabitats such as log piles, bare ground, wet hollows, nest sites, and other refuge areas can provide valuable shelter, breeding, and foraging opportunities for insects, birds, amphibians, and small mammals. Integrated carefully into out-of-play areas and the wider course setting, they can complement broader habitat work, support natural processes such as pest regulation, and add aesthetic and experiential value.

Best Practices

- **Amphibian houses.** Create shelters using log piles, rock stacks, or partially buried drainage pipes near ponds, ditches, or damp ground. Position in shaded, humid areas near water to provide refuge for frogs, toads, and newts.



- **Bat boxes.** Mount bat boxes on trees or buildings, facing south or southeast for warmth. Install clusters of at least three boxes at different orientations to provide roosting options for varying light and temperature conditions.
- **Bird boxes.** Install nesting boxes, ideally a minimum of 2 metres above ground, facing northeast or east to avoid direct sun and prevailing winds. Provide a range of entrance hole sizes to support different species, spacing boxes well apart to reduce competition.
- **Beehives.** Prioritize diverse, flower rich habitats for wild pollinators, including initiatives such as [Syngenta Operation Pollinator](#). Where beehives or solitary bee boxes are introduced, assess ecological impacts on native species and locate in sheltered areas near forage and water, away from pesticides.
- **Bug hotels.** Build structures from untreated wood, bamboo, hollow stems, and straw, stacked securely in a frame. Position south- or southeast-facing and close to vegetation to attract insects and pollinators.
- **Hedges.** Plant a mix of native species to provide food and shelter. Allow a natural understorey to develop, cut rotationally and avoid trimming during the nesting season.
- **Small mammal nesting boxes.** Install sturdy wooden boxes or artificial burrows along woodland edges or dense vegetation. Face openings away from prevailing winds, inspecting and cleaning annually outside of breeding periods.
- **Open sandy areas.** Maintain patches of exposed, south-facing sand or fine soil to provide nesting sites for ground-nesting bees and wasps. Prevent vegetation encroachment with light annual raking or soil turnover.
- **Rock piles.** Stack flat and irregular stones to create crevices for reptiles, amphibians, and small mammals. Choose sunny, well-drained sites and integrate piles with adjacent vegetation or water bodies for thermoregulation and cover.
- **Woody debris.** Retain felled logs, branches, and stumps in shaded or semi-shaded areas to support decomposers and invertebrates. Group material in natural piles and leave undisturbed to maintain stability.

National / Regional Requirements

There are no formal legal requirements for installing or maintaining microhabitats on golf courses in BC. However, when working near protected areas or watercourses, ensure compliance with the [Riparian Areas Protection Regulation \(RAPR\)](#) and avoid disturbing [Species at Risk](#).

National / Regional Opportunities

Several programs encourage microhabitat creation and biodiversity enhancement on managed landscapes:

The [Habitat Conservation Trust Foundation](#) provides funding for small-scale habitat enhancement projects.

The [South Coast Conservation Program \(SCCP\)](#) supplies technical advice for habitat enhancement tailored to species in southwestern BC.



"As a pivotal component of our sustainability objectives, our Golf Operations team created bug hotels on both courses using materials sourced from the course grounds and upcycled off-cuts from recent renovations. The project supports biodiversity enhancement, natural pest control, pollinators and education. Following golfer interest, we installed on-site information and QR codes at each bug hotel. The initiative also fostered teamwork and a strong sense of community within our team."

Mimosa Plus Golf Course, Philippines ▶

View more examples ▶





Conservation Management

Conservation management is the ongoing practice of caring for habitats and natural areas in ways that protect their ecological value while strengthening the wider character and function of the golf course. Thoughtful management of grasslands, woodlands, wetlands, water bodies, and other non-play areas can help sustain biodiversity, improve habitat quality, and ensure that natural features contribute positively to the course's playability, visual appeal, and distinctive sense of place.

Golf Course and Grounds

Effective conservation management depends on natural areas being cared for in ways that remain ecologically sound while working within the demands of an active golf course. Routine monitoring, selective intervention, and adaptive management can help sustain biodiversity without compromising safety, presentation, or performance. When these practices are embedded in day-to-day operations, they not only protect ecological value but also strengthen the character, playability, and strategic richness of the course.

Best Practices

- **Follow local best practice to protect or attract endangered, protected or rare species.** Incorporate habitat-friendly maintenance such as rotational cutting, reduced chemical use, and protection of nesting or breeding areas. Adjust mowing, irrigation, and fertilization schedules in sensitive areas to minimize disturbance.
- **Annually review and follow a habitat management plan.** Assess the condition and progress of habitat areas each year. Record changes in vegetation cover, species presence, and physical condition, then adjust maintenance schedules and management targets based on observed results.
- **Plan by staff or volunteers at your facility.** Create a practical, site-specific plan covering mowing regimes, buffer zones, and selective management. Schedule work seasonally to align with growing cycles and breeding periods.
- **Plan by local group, charity or body.** Work with a local conservation organization or wildlife group to review habitat areas and agree clear management objectives. Apply established methods to guide mowing, cutting, or restoration schedules, and establish consistent monitoring routines suited to local conditions.
- **Plan by trained ecologist or similar professional.** Commission a qualified ecologist to prepare or review a detailed habitat management plan. Ensure the plan includes defined habitat zones, measurable targets, and maintenance prescriptions aligned with ecological best practice and regulatory standards.

National / Regional Requirements

While ongoing habitat management is not legally mandated, certain practices may fall under provincial or federal oversight depending on the site. Superintendents should:

Check whether your course lies within a [Development Permit Area \(DPA\)](#) with environmental protection provisions that influence vegetation management or maintenance schedules.

Review obligations under the [Riparian Areas Protection Regulation \(RAPR\)](#) if routine work occurs near wetlands, lakes, or streams. Vegetation clearance, bank maintenance, or drainage work may require a Qualified Environmental Professional (QEP).

Ensure compliance with the [Species at Risk Act \(SARA\)](#) if maintenance activities could affect protected species or habitats.



National / Regional Opportunities

Several programs can help courses improve habitat management practices through guidance and funding:

The [BC Invasive Species Council](#) provide practical tools and best management practices for encouraging native species in habitat areas.

BC's [Species and Ecosystem Explorer](#) enables you to search for protected species or ecosystems by location, conservation status, and type of ecological community.

The [Habitat Conservation Trust Foundation](#) offers grants for habitat enhancement, including native grassland management and control of invasive species

[BC Conservation Fund](#) supports area-based conservation and habitat management projects.

The [South Coast Conservation Program \(SCCP\)](#) provide technical advice and coordination for habitat projects in southwestern BC.



"We have renewed our Environmental Management Plan for the next five years, demonstrating a strong commitment to conservation and environmental stewardship. Developed by Narla Environmental's team of ecologists, the plan identifies sensitive habitats on site and outlines best practices for controlling invasive species, enhancing local fauna habitat, and ensuring compliance with conservation acts and environmental policies to maintain and enhance ecosystem health."

Eastlake Golf Club, Australia ▶

[View more examples ▶](#)

Grasslands

Grasslands and rough areas form an important part of the golf course ecosystem, supporting pollinators, birds, and small mammals while also providing opportunities to reduce maintenance and inputs. Actively managing these areas can maintain ecological health, prevent the spread of invasive species, and help demonstrate compliance with environmental standards and expectations. Practices like proper mowing, nutrient management, and periodic renewal are important to sustaining diverse, resilient grassland habitats over time.

Best Practices

- **Prevent fertilization of natural rough.** Exclude rough and out-of-play areas from fertilizer, compost, or clipping applications. Maintain unfertilized buffer zones between managed turf and natural vegetation to prevent nutrient drift and runoff, supporting the persistence of low-nutrient grassland communities.
- **Mow and remove clippings according to local best practice.** Cut grasslands once or twice per year to control woody growth and promote native species. Time mowing after peak flowering and seed set to support pollinators. Remove clippings to maintain low soil fertility and encourage a wider range of wild species.
- **Create and maintain wildflower patches and meadows, such as participation in [Syngenta Operation Pollinator](#).** Select native or regionally adapted species suited to local soil and moisture



conditions. Sow or plug plant small pilot areas first to test establishment success. Maintain through light scarification, selective weeding, and late-season cutting.

National / Regional Requirements

Grasslands are recognized as sensitive ecosystems in many parts of BC. While routine maintenance does not typically require permits, alterations or restoration work near designated or riparian areas may trigger environmental assessments. Superintendents should:

Check for [Development Permit Area \(DPA\)](#) designations to confirm whether habitat changes, reseeding, or mowing near protected zones require approval.

Follow the [Riparian Areas Protection Regulation \(RAPR\)](#) when maintaining grasslands near watercourses, ensuring buffer integrity and limiting disturbance.

Review local bylaws and management plans that reference sensitive species or ecosystems to align course management with municipal and regional conservation objectives.

National / Regional Opportunities

The following programs and resources can support effective grassland conservation:

[Grasslands Conservation Council of BC](#) offers conservation mapping, best-practice stewardship guidance, and advocacy through its Priority Grasslands Initiative, helping land managers identify and protect critical grassland habitats.

[Green Bylaws Toolkit](#) provides planning tools and strategies for local governments and landowners to regulate and protect sensitive ecosystems, including guidance on policy development, community partnerships, and conservation planning for grasslands.



"During the first course construction at Cumberwell Park, an area of former agricultural land was stripped of topsoil. Since then, the area has received no inputs allowing the development of a wildflower area. All species are naturally colonized, and it is now managed by annually cutting and collecting in late summer."

Cumberwell Park, England ▶

View more examples ▶

Woodlands

Woodlands bring depth, structure, and environmental value to the golf course, influencing ecology, visual character, and local microclimate. Their management calls for a careful balance between safety, tree health, ecological function, and the playing experience. Prioritizing native species, managing understorey growth, and retaining a varied woodland structure can help support wildlife, protect soils, and strengthen the long-term resilience and distinctiveness of the landscape.



Best Practices

- **Prioritize native trees and shrubs when planting.** Select species adapted to local soil type, moisture, and climate conditions to support long-term establishment and reduce maintenance. Work with a qualified arborist or landscape designer to create a planting list and source species of local or regional provenance where possible to preserve genetic integrity and ecological compatibility.
- **Allow understorey vegetation to grow when possible.** Encourage natural regeneration of shrubs and groundcover in out-of-play areas. Limit mowing and chemical control to maintain structure, improve soil, and create habitat.
- **Leave dead trees, stumps, woody debris and leaf litter.** Retain standing deadwood and fallen material where safe to provide nesting, foraging, and decomposer habitat. Remove only where necessary for safety, playability, or disease control.
- **Develop a natural transition between grassland and woodland.** Manage woodland edges as gradual transitions with tall herbs, shrubs, and young trees. Avoid abrupt mowing lines to encourage edge effects, enhance habitat connectivity and reduce erosion.

National / Regional Requirements

Woodland management in BC is shaped by a range of provincial and municipal regulations designed to protect sensitive ecosystems and species at risk. These frameworks govern activities near streams, wetlands, and other critical habitats, and may include site designations that restrict development or require permits. Please review these before undertaking vegetation removal, thinning, or construction within or near wooded areas:

The [Wildlife Act & Forest and Range Practices Act \(FRPA\)](#) provides protection for designated *Wildlife Habitat Areas (WHAs)* and *Wildlife Habitat Features (WHFs)* such as veteran trees, snags, and nesting sites. Check mapping databases or consult the [Ministry of Forests](#) to confirm whether these apply.

The [Riparian Areas Protection Regulation \(RAPR\)](#) requires assessment by a Qualified Environmental Professional (QEP) if working on woodland areas adjacent to streams, lakes, or wetlands.

Some municipalities have Tree Protection Bylaws that regulate tree safety, removal or pruning. Under [WorkSafeBC Occupational Health and Safety regulations](#), employers must ensure that trees which could pose a risk to workers are identified and assessed by a qualified person, with appropriate control measures implemented where necessary. Please confirm whether a Tree Protection Bylaw applies to your property and ensure that tree assessments are conducted where required.

National / Regional Opportunities

A range of technical and funding resources can support golf facilities in BC in managing woodland areas for both biodiversity and safety considerations:

The [Wildlife Tree Committee](#) offer guidance and best-practice advice for managing wildlife trees and coarse woody debris to support biodiversity.

The [Habitat Conservation Trust Foundation \(HCTF\)](#) funds woodland enhancement projects such as native planting, invasive species control, and erosion management.

The [BC Community Resiliency Investment \(CRI\) Program](#) supports wildfire risk reduction and fuel management in areas identified as wildfire prone. Golf courses located in the wildland urban interface may be eligible to participate in community led [FireSmart Community Funding and Supports](#) for planning, fuel treatment, and woodland resilience initiatives in partnership with local governments.



“Set within an historic parkland landscape containing several areas of Ancient Woodland, the course supports a diverse tree population, with a 2017/18 inventory identifying 64 species. Since the Millennium there has been a focus on tree planting, supported by a woodland management plan and expert arboricultural advice to increase biodiversity, strengthen woodland habitat and create further visual interest within enclosed urban surroundings. Nest boxes were also installed with support from the Scottish Wildlife Trust.”

The Royal Burgess Golfing Society Of Edinburgh, Scotland ▶

View more examples ▶

Wetlands and Water Bodies

Wetlands and water bodies are often among the most ecologically valuable features on a golf course. They support wildlife, influence water quality, and play an important role in functions such as filtration, storage, and flood management. Because of this, their care requires particular sensitivity. Protecting these areas from unnecessary disturbance, managing them in line with their ecological function, and considering them as part of the wider landscape and watershed can help sustain their integrity while supporting compliance and the overall quality of the course environment.

Best Practices

- **Prioritize native aquatic species of varying size and structure when planting.** Use locally adapted emergent, floating, and submerged species to stabilize banks, improve water quality, and provide habitat. Work with a qualified professional to create a planting list and source species of local or regional origin where possible to preserve genetic integrity and ecological compatibility.
- **Establish mowing buffer zones.** Maintain unmown strips between managed turf and wetland edges to filter runoff and reduce disturbance. The width should reflect slope, soil type, and water movement (typically 3–10 metres for most golf courses).
- **Create and maintain riparian buffer areas around edges.** Use shrubs and grasses to create vegetated buffer zones that intercept sediment and nutrients. Inspect these areas regularly and replant bare patches to maintain filtration capacity.
- **Create and maintain shallow banks around edges.** Shape margins with gradual slopes to reduce erosion, improve safety and provide access to wildlife. Avoid steep drops or artificial edging where possible.
- **Allow water levels to fluctuate naturally with the seasons.** Minimize artificial water-level control unless necessary for course infrastructure. Limit artificial control structures and interventions to essential areas only, while maintaining outlet points and banks to allow gradual, unimpeded seasonal variation in water depth.

National / Regional Requirements

Wetlands and water bodies are regulated under several provincial and federal frameworks in BC. Please review these before undertaking any maintenance, or restoration near water features, as the rules that apply will depend on the location, type of feature, and any proposed alterations:

Under the [Water Sustainability Act \(WSA\)](#), any work that modifies a wetland, pond, or drainage feature, such as dredging, filling, or installing outflows, typically requires a notification, approval, or water license. Consult the [Ministry of Water, Land and Resource Stewardship](#) before starting work.



Furthermore, under the [Dam Safety Regulation](#), any constructed pond, reservoir, or water storage feature that meets the definition of a dam may be subject to provincial dam safety requirements. Owners of regulated dams must ensure proper classification, regular inspection, maintenance, and, where applicable, submission of safety documentation. Golf facilities with irrigation reservoirs or embanked ponds should confirm whether their structures fall within the regulation.

The [Riparian Areas Protection Regulation \(RAPR\)](#) applies where course areas intersect riparian zones such as ponds, creeks, or marsh edges. If within a designated area, an environmental assessment by a Qualified Environmental Professional (QEP) and maintenance of Streamside Protection and Enhancement Areas (SPEAs) is required.

Under the [Fisheries Protection Act](#), any harmful alteration, disruption, or destruction of fish habitat, including sediment release or chemical use, requires prior authorization from [Fisheries and Oceans Canada](#).

National / Regional Opportunities

Golf courses can also access a range of tools, programs and partnerships to support wetland restoration. Provincial resources and conservation groups offer funding, expertise, and collaboration opportunities to enhance biodiversity and strengthen community and regulatory relationships:

BC's [Wetland Action Plan](#) outlines the province's long-term strategy to conserve and restore wetlands, including goals like building a robust wetland inventory, improving legal tools, and promoting incentives that support wetland protection.

[Wetland Ways - Interim Guidelines for Wetland Protection and Conservation in BC](#) offers step-by-step best practice guidance for planning activities near wetlands.

[Wetlands of British Columbia: A Guide to Identification](#) can help to identify and classify wetland ecosystems using the [Biogeoclimatic Ecosystem Classification \(BEC\) System](#). This resource provides important context for restoration planning.

[Ducks Unlimited Canada](#) often partner with landowners to restore and maintain wetlands through technical support and co-funding opportunities



"Located along the Fraser River estuary, Cutthroat Creek runs through the Shaughnessy property as a vital aquatic corridor and the last remaining creek in Vancouver accessible for salmon and trout migration. Since restoration work began in 2007 with Musqueam Fisheries volunteers, the Course and Grounds team has maintained the naturalized buffer zone. In 2022, Musqueam volunteers documented the largest number of juvenile coho salmon and cutthroat trout to date."

Shaughnessy Golf and Country Club, Canada ▶

[View more examples ▶](#)

Ecological and Cultural Consultations

Sound conservation management is often strengthened by the right expertise at the right time. Input from ecologists, arborists, landscape specialists, environmental engineers, and cultural advisors can help ensure that habitat management, restoration, and land-use decisions are informed by sound evidence, technical understanding, and local context. Early and thoughtful consultation can also reduce risk, build trust, and support a more transparent, collaborative, and credible approach to long-term stewardship.



Best Practices

- **Natural heritage groups.** Engage local naturalist clubs or land trusts to assist with habitat mapping, species recording, and ecological monitoring. Coordinate survey methods and data formats to ensure compatibility with regional biodiversity records.
- **Cultural heritage groups.** Engage with cultural heritage offices, or local historical societies to identify and protect sites of cultural significance. Incorporate alternative or traditional ecological knowledge into land management where appropriate.
- **National or regional wildlife groups.** Collaborate with accredited environmental organizations for specialist input on species management and habitat restoration. Align monitoring protocols with recognized standards to support integration into regional or national datasets.
- **Environmental groups.** Coordinate with conservation organizations or NGOs on habitat restoration, invasive species management, and public engagement projects. Define clear roles, timelines, and data-sharing arrangements to ensure continuity and measurable outcomes.
- **Bird groups.** Partner with local birding societies or ornithological bodies to implement nest box checks, breeding and migration surveys, and seasonal monitoring. Use standardized recording methods and maintain long-term datasets to guide adaptive habitat management.

National / Regional Opportunities

Specific partnership opportunities in BC include:

[The Land Trust Alliance of BC](#) and regional conservation societies, which can assist with land management planning, ecological inventories, and habitat restoration.

Indigenous Communities and Stewardship Offices, which provide Traditional Ecological Knowledge (TEK) and opportunities for [collaborative stewardship](#) of culturally significant sites.

Municipal and Regional Governments, including [BC Parks](#) and local environmental planners, who can support compliance with bylaws, habitat mapping, and protected area management.

Universities and Colleges in BC, which can offer partnerships for ecological field studies, data collection, and student-led monitoring programs that support long-term course sustainability goals.



“Our working relationship with the local Wildlife Trust is valuable for both parties. Throughout the year, specialists in botany, fungi and birds visit the site to carry out biodiversity surveys. In return, we receive a comprehensive record of flora and fauna, their locations and information on key species. This helps us better understand the site and tailor management practices, particularly where sensitive species have been identified.”

Northamptonshire County Golf Club, England ▶

View more examples ▶



Turfgrass and Soil Health ▶	Cultural and Mechanical Practices ▶	Managing Pests and Diseases ▶
Considerations for Turfgrass Selection ▶	Cultural and Mechanical Practices – Greens, Tees and Fairways ▶	Proactively Prevent Pests and Diseases ▶
Understanding the Turfgrass and Soil ▶		Assess Pest and Disease Potential ▶
Consider Organic and Biological Nutrition ▶		Identify and Monitor Pest Pressure ▶
Considerations for Developing a Fertilizer System ▶		Establish Tolerance Thresholds ▶
Considerations for Timing of Fertilizer Applications ▶		Consider Alternatives to Pesticides ▶
Considerations when Applying Fertilizers ▶		Considerations when Selecting Products ▶
		Considerations for Timing of Pesticide Applications ▶
		Considerations when Applying Pesticides ▶

Turfgrass management is at the heart of every successful golf facility, shaping the playability and presentation of the course while also influencing how efficiently resources are used over time. For golf superintendents, the task is not simply to maintain turf, but to manage a living system in a way that supports performance, responds to pressure, and makes careful use of water, nutrients, energy, and plant protection products.

A sustainable approach is not about lowering standards, but achieving the playing qualities golfers expect through more considered and efficient decision-making. With proactive, sustainable management, surfaces can become healthier and more resilient, inputs can be used more precisely, and the course is better placed to cope with environmental stresses, rising costs, and changing expectations.

This largely depends on seeing turfgrass as part of a wider soil–plant system. Knowledge of turf species, soil conditions, moisture dynamics, plant health, and site-specific pressures helps superintendents make better choices about nutrition, irrigation, cultivation, and pest management. In practice, that means creating stronger growing conditions, applying inputs where they add most value, and reducing unnecessary or reactive intervention wherever possible.

This action area supports that progression, helping to strengthen turf and soil knowledge, refine daily practices, and make better decisions about pests, diseases, and inputs.



Turfgrass and Soil Health

Turfgrass and soil health underpin the quality, consistency, and sustainability of golf course management. Soil condition, together with the suitability and performance of the turf it supports, shapes how surfaces play, how they present, how efficiently inputs are used, and how well they withstand stress over time. A deeper understanding of this relationship enables superintendents to make more precise and effective decisions on nutrition, cultivation, irrigation, and day-to-day surface management, supporting healthier turf and more dependable performance over the long term.

Considerations for Turfgrass Selection

Turfgrass selection has long-term implications for how a course performs and how intensively it needs to be managed. Different species and cultivars vary in their tolerance to drought, shade, wear, pests, and disease, as well as in the quality of surface they produce. Selecting the right turf therefore depends on a clear understanding of local climate, soil conditions, drainage, water availability, and the expectations of golfers and club management. When these factors are weighed carefully from the outset, turfgrass selection is more likely to support both environmental realities and long-term performance goals.

Best Practices

- **Drought tolerance.** Select species and cultivars proven to maintain quality and recovery under limited water availability. Use regional trial data or research from universities and turf institutes to guide selection.
- **Disease tolerance.** Select turfgrass species and cultivars proven to perform well under local pest and disease pressures. Verify selections through regional trial data or independent turf research, and update choices periodically as new resistant varieties become available.
- **Heat tolerance.** Choose grasses that sustain growth and colour during periods of high temperature and low humidity, especially in warmer, drier regions.
- **Winter stress tolerance.** In colder regions, select turf species with proven resistance to snow mould, ice cover, and desiccation. Review local trial data to match cultivars to microclimates on the course.
- **Salinity tolerance.** Where irrigation water has elevated salt content, use turfgrass species that can tolerate moderate salinity without significant loss of quality.
- **Shade tolerance.** Select turfgrass varieties with proven adaptability to shaded conditions, ensuring adequate performance under reduced light levels typical of tree-lined or built-up areas.
- **Wear tolerance.** Select cultivars with strong shoot density and recovery capacity in high-traffic areas such as tees and approaches. Consider combining species with complementary wear tolerance.
- **Soil type.** Choose turfgrass species compatible with the site's dominant soil characteristics, including texture, moisture retention, and drainage capacity, to optimize establishment and long-term stability.
- **Soil pH and other values.** Evaluate pH, nutrient balance, and organic matter before selection. Choose species that perform best under existing conditions to minimize the need for amendments and reduce long-term maintenance.

National / Regional Requirements

In BC's diverse climates, turfgrass selection is a key aspect of sustainable golf course management. While there are no provincial laws that require golf courses to use a specific species of turfgrass, some regulations and local bylaws can influence turfgrass selection, particularly for new developments or sensitive landscapes:



The [BC Weed Control Act](#) requires control of noxious weeds, discouraging the use of invasive or aggressive turf species. Reference the [Invasive Species Council of British Columbia](#) for identification and management guidance.

Some municipalities, particularly in arid or water-sensitive areas, require drought-tolerant or native-adapted turf species in new developments or major renovations. Always confirm requirements with your local planning authority.

If turf selection is part of a new build or significant redevelopment in a [Development Permit Area \(DPA\)](#), seed or sod choices may be specified in an Environmental Management Plan.

National / Regional Opportunities

Advances in turfgrass species and cultivars are also creating opportunities for golf courses in BC to improve playability while reducing environmental impacts. The resources below provide practical guidance and tools to make informed choices and avoid invasive species:

[Greening your BC Golf Course: A Guide to Environmental Management](#) contains recommendations for species selection that balance playability and environmental resilience.

The [National Turfgrass Research Foundation](#) publish research on drought, heat, and disease-tolerant turf cultivars suitable for Canadian climates.

Golf courses can also connect with established turfgrass education providers to support species selection, applied research and workforce development. For example, programs like the [Turf Management diploma](#) at [KPU Turf Management \(Kwantlen Polytechnic University\)](#) in BC, the [Turfgrass Management Diploma](#) at [Olds College of Agriculture and Technology](#) in Alberta, and the [Diploma in Turfgrass Management](#), at [University of Guelph Turfgrass Institute](#) in Ontario all offer practical expertise and collaboration opportunities to improve cultivar and species selection.



"In 2003, we converted the turfgrass on our greens from bentgrass to Champion Ultradwarf bermuda grass to provide a better summer putting surface, while also delivering environmental and economic benefits. Due to less disease pressure, chemical input costs on the greens were reduced from \$39,000 to \$8,000. Reduced hand-watering also saved over a million gallons of water per year, hundreds of man hours, and thousands of dollars annually."

The Bear Trace At Harrison Bay, United States ▶

View more examples ▶

Understanding the Turfgrass and Soil

Good decisions depend on a detailed understanding of the turfgrass–soil system itself. The physical, chemical, and biological properties of soil all influence how turf grows, responds to stress, and makes use of water and nutrients. Regular testing and close observation provide the insight needed to refine decisions on irrigation, nutrition, cultivation, and overall surface management. Over time, tracking changes in soil condition and turf response can help superintendents improve consistency, reduce the risk of decline, and build a stronger foundation for long-term turf performance.



Best Practices

- **Test and monitor the soil pH.** Sample greens, tees, and fairways at least annually to confirm that soil pH remains within the optimal range for the turf species in use. Adjust by liming or with acidifying amendments as needed.
- **Test and monitor soil nutrients.** Conduct laboratory nutrient analyses to guide fertilizer planning. Interpret results to balance nutrient supply with turf demand and reduce waste.
- **Test and monitor soil compaction.** Use penetration resistance meters or sampling to identify compacted zones caused by traffic or maintenance. Adjust aeration frequency and tine selection based on results.
- **Test and monitor organic matter content.** OM246 testing is a valuable tool for monitoring organic matter levels in turfgrass systems, particularly putting greens. Use results as an internal benchmark, rather than comparing directly with other golf courses, as construction methods, soil profiles, turf species, and management goals can vary widely. Regular testing helps to track trends and evaluate whether cultural practices are maintaining organic matter levels that support desired playing conditions such as firmness, smoothness, and consistency. Monitor these trends annually to adjust cultural practices like aeration and topdressing, ensure organic matter levels remain consistent and that the turf system continues to perform as intended.
- **Test and monitor average root length.** Record root depth and density during core sampling to evaluate soil health, moisture management, and plant resilience. Shallow roots may indicate compaction, poor aeration, or imbalance in irrigation.
- **Test and monitor turfgrass density.** Visually assess and record turf coverage across key playing areas. Combine with soil and clipping yield data to identify stress patterns and prioritize management adjustments.
- **Work with an independent soil consultant.** Engage a qualified soils specialist to assess site-specific soil conditions and micro-climate factors such as moisture patterns, shade, and air movement. Their expertise helps identify limiting factors and guide a detailed fertilizer system aligned with course performance expectations. Periodic third-party assessment strengthens in-house monitoring and supports long-term turf and soil resilience.

National / Regional Requirements

There are no provincial or federal legal requirements mandating soil testing for golf courses in BC. However, testing may be required as part of:

Environmental Management Plans under [Development Permit Areas \(DPA's\)](#) where land alteration, drainage, or a reduction in chemical use is proposed.

Nutrient Management Plans for facilities with significant fertilizer storage or use, as required by some local governments or regional authorities.

National / Regional Opportunities

The following resources provide technical support and practical guidance for BC facilities:

[BC Ministry of Agriculture](#) provide provincial guidance sampling methods, laboratory procedures, and interpretation frameworks for turf and managed landscapes. They also have a range of templates and calculation tools for developing nutrient management plans based on soil test results.

The [National Turfgrass Research Foundation](#) also publish best-practice studies on soil health, nutrient balance, and sustainable turf management across Canadian climates.



“After implementing the Minimum Levels for Sustainable Nutrition (MLSN) soil test interpretation guidelines, we saw a dramatic reduction in fertilizer use. Initial soil testing across all course surfaces showed ample levels of most essential nutrients, allowing the GM superintendent team to focus primarily on Nitrogen. Annual potassium application fell from 432 kg in 2022 to 12 kg in 2024, while phosphorus application was eliminated entirely, decreasing from 211 kg to 0 kg.”

Golfklúbbur Mosfellsbæjar, Iceland ▶

View more examples ▶

Consider Organic and Biological Nutrition

Organic and biological approaches can play a valuable role in supporting healthier soils and more resilient turf. Composts, organic fertilizers, and biological amendments may help improve soil structure, encourage microbial activity, and support more effective nutrient cycling when used in a way that suits site conditions and performance requirements. Rather than replacing conventional inputs in every case, they can form part of a broader nutrition strategy that supports long-term soil function and a balanced approach to turf management.

Best Practices

- **Apply organic fertilizers.** Organic fertilizers may be incorporated into nutrient management programs where they align with agronomic and environmental objectives. These materials release nutrients gradually and can support microbial activity, depending on their composition and the conditions in which they are used.
- **Apply composts.** Well-matured, stable composts can support soil biological function and may influence soil physical properties such as structure, firmness, and moisture dynamics. Because compost characteristics vary widely, some materials may negatively affect infiltration or surface performance—particularly in sand-based rootzones. When compost use is being considered, evaluating properties such as maturity, particle size distribution, and compatibility with existing materials can help determine suitability.
- **Add compost to topdressing.** In some situations, incorporating screened compost into topdressing materials may help manage organic matter or support soil biological activity. Suitability depends on compost quality, the specifications of the sand blend, and desired playing characteristics. Testing or small pilot applications can help assess performance before broader use.
- **Add compost to divot mixes.** Compost may be included in divot or repair mixes when appropriate. Potential benefits include improved moisture retention and enhanced establishment.
- **Apply bio stimulants.** Bio stimulants such as humic substances, kelp extracts, or amino-acid-based products may be part of an integrated management approach aimed at influencing soil biological processes or plant stress responses. Their effects can vary across sites and conditions, so performance is typically evaluated over time.
- **Return grass clippings.** Returning clippings to the turf, where appropriate, can recycle nutrients and contribute to organic matter dynamics. Nutrient programs may be adjusted when clippings are regularly retained.

National / Regional Requirements

There are no specific provincial or federal regulations governing the use of organic fertilizers or composts on golf courses in BC. However:

Compost Quality Standards under the [Organic Matter Recycling Regulation \(OMRR\)](#) apply if compost is produced or stored on-site.



Facilities must also prevent nutrient runoff or leaching under the [Environmental Management Act](#) and applicable local bylaws, especially near water bodies.

National / Regional Opportunities

Superintendents can access several programs and guidance resources that support organic and biological nutrient management:

[Greening your BC Golf Course: A Guide to Environmental Management](#) provides practical approaches for integrating organic amendments and bio stimulants into golf course management.

The [National Turfgrass Research Foundation](#) also publishes research on the performance and sustainability benefits of organic nutrient programs in Canadian climates.



“At Aphrodite Hills Golf Course, grass clippings are not collected when cutting fairways and rough, and where clipping volumes are high they are dispersed using mechanical methods. As the clippings decompose, nutrients are returned to the soil, reducing synthetic turfgrass inputs required. This also reduces green waste requiring processing or disposal, while contributing to significant savings in time, labour and cost.”

Aphrodite Hills Golf, Cyprus ▶

View more examples ▶

Considerations for Developing a Fertilizer System

An effective fertilizer system is built around the needs of the turf. By matching nutrient supply to growth demand, facilities can maintain surface quality while reducing waste, inefficiency, and unnecessary environmental impact. Soil test results, seasonal patterns, site conditions, and performance expectations all help shape a program that is more precise, more responsive, and better suited to the specific demands of the course.

Best Practices

- **Soil tests.** Interpret soil test data to understand existing nutrient reserves, pH, and cation exchange capacity. Use this baseline to identify priorities and plan nutrient inputs before finalizing fertilizer selections.
- **Temperature.** Assess soil and air temperature patterns throughout the year to identify active growth periods. Use this information to align nutrient programs with turfgrass uptake potential.
- **Sunlight hours.** Track light availability throughout the year to anticipate growth potential. Lower sunlight levels indicate reduced nutrient demand and slower recovery rates.
- **Shade.** Map shaded areas on the course and note their influence on growth and nutrient uptake. Use this knowledge to plan lower-input strategies for persistently shaded zones.
- **Rainfall.** Evaluate rainfall distribution and soil drainage capacity to understand leaching risk and nutrient retention. Factor this information into seasonal nutrient budgets.
- **Height of cut.** Relate mowing height to turf vigour and nutrient demand. Finer surfaces with lower heights generally require tighter nutrient control to maintain consistency.



- **Stress caused by foot traffic.** Identify high-wear areas and evaluate how mechanical stress affects recovery and nutrient needs over time. Use this understanding to prioritize monitoring and resource allocation.
- **Clipping production.** Monitor and record clipping yield to track growth rates and nutrient response. Use trends to guide fertilizer adjustments and maintain consistent growth.
- **Customized growth curve.** Develop a course-specific growth model that integrates local climate, turf species, and historical performance data. Use this information to forecast nutrient requirements across the season.
- **Objective testing of playing parameters (roll, firmness, etc.).** Measure key surface performance indicators regularly and correlate them with nutrient inputs. Use results to fine-tune nutrient systems that support both turf health and playability standards.

National / Regional Requirements

While BC has no specific law prescribing how fertilizers must be applied on golf courses, nutrient management planning is guided by broader environmental protection regulations. Superintendents should understand how these frameworks influence fertilizer planning and align management strategies accordingly:

Under the [Environmental Management Act \(EMA\)](#), you should evaluate site conditions, such as drainage patterns, soil permeability, and proximity to water bodies, to ensure planned fertilizer use will not lead to runoff or contamination. Nutrient plans should include mitigation strategies like buffer zones and controlled-release formulations.

The [Riparian Areas Protection Regulation \(RAPR\)](#) restricts fertilizer use within riparian areas. If your course includes or borders riparian zones, assess these areas during the planning phase. Any nutrient management strategy near streams or wetlands may require review by a Qualified Environmental Professional (QEP) and documentation within an Environmental Management Plan.

Some municipalities in BC impose additional controls on fertilizer type, rate, or timing—particularly in sensitive or drought-prone regions. Before finalizing a fertilizer system, verify any local restrictions or permitting requirements through the municipal planning or environmental office.

National / Regional Opportunities

Superintendents can draw on several provincial and national resources that support the development of evidence-based, efficient, and environmentally responsible fertilizer systems:

Golf courses should consider working with independent soil consultants and accredited agronomists to interpret soil and tissue test data, develop site specific nutrient management plans, and optimize fertilizer inputs in line with environmental objectives and regulatory requirements.

[Greening your BC Golf Course: A Guide to Environmental Management](#) offers province-specific recommendations on soil fertility and nutrient planning, helping to balance turf performance with environmental responsibility.

[BC Ministry of Agriculture](#) provide templates and technical guidance for designing nutrient budgets that align with soil data and regulatory expectations.

[The Canadian Fertilizer Institute](#) have a [4R Nutrient Stewardship Stewardship Framework](#), which is a recognized approach to creating a fertilizer program using the right source, rate, time, and place.

Some programs from the [BC Climate & Agriculture Initiative Council](#) also focus on nutrient efficiency and runoff reduction strategies that can be adapted for use on golf courses.



"We collect all grass clippings from the greens on The Ailsa course and divide the litres by green size to measure how fast the greens are growing. This measurement forms the basis of our fertility and PGR strategy, tailored to performance objectives. With over a year of clip volume data collection, we achieved a reduction of over 30% in fertilizer usage, while also minimizing labour hours and fertilizer costs."

Trump Turnberry, Scotland ▶

View more examples ▶

Considerations for Timing of Fertilizer Applications

When nutrients are applied can be just as important as the quantity used. Timing applications around periods of active growth, suitable weather conditions, and the pattern of play helps improve uptake, maintain performance, and reduce the risk of loss to the wider environment. A well-timed approach also allows superintendents to work more effectively with natural turf responses, rather than relying on retrospective action.

Best Practices

- **Legal requirements.** Review all laws, regulations and rules when creating fertilizer systems. Confirm buffer zones and restricted timing periods around water bodies and sensitive habitats to ensure compliance.★
- **Schedule of course play.** Map peak play and maintenance windows to minimize surface disruption and maximize efficiency. Schedule fertilizer applications during low-play periods or overnight maintenance cycles.
- **Weather conditions and forecast.** Integrate local weather data into nutrient scheduling. Anticipate rainfall, temperature shifts, and soil saturation to plan safe application periods and avoid runoff or volatilization risk.
- **Ecological factors (e.g., bird breeding and pollinators).** Identify nesting areas, pollinator zones, and bloom periods across the course. Avoid fertilizer use during these sensitive times to prevent indirect impacts on wildlife.

National / Regional Requirements★

While BC has no direct legislation governing fertilizer timing on golf courses, environmental laws indirectly regulate when and where nutrients may be applied. Superintendents should incorporate the following considerations during planning:

Under the [Environmental Management Act \(EMA\)](#), fertilizer applications must not result in contamination of soil, groundwater, or surface water. Plan schedules to avoid heavy rainfall, frozen ground, or saturated soils that could cause runoff or leaching.

Under the [Water Sustainability Act \(WSA\)](#) and [Riparian Areas Protection Regulation \(RAPR\)](#), there may be restrictions if the course includes lakes, streams, wetlands or riparian areas. Review these zones and requirements, as fertilizer applications may need to be avoided during wet seasons or ecological sensitivity windows.

While not legislated, applying fertilizer during flowering periods can affect pollinator activity. Plan nutrient schedules around bloom periods to minimize disturbance in pollinator-friendly zones.



National / Regional Opportunities

The following resources provide further guidance for timing and scheduling nutrient applications in line with environmental best practice:

[BC Ministry of Agriculture](#) offer tools to align nutrient application timing with plant uptake and environmental protection goals.

[The Canadian Fertilizer Institute](#) also have a [4R Nutrient Stewardship Framework](#), which provides a structured approach to nutrient management planning, including timing principles that optimize uptake and minimize losses.



"We employ a sophisticated turf grass growth model using temperature data to determine precise fertilizer needs, alongside a 5-day forecast to assess dollar spot infection probabilities and support strategic fungicide decisions. This approach conserves resources and reduces costs by minimizing application frequency, while also curbing fertilizer runoff and groundwater contamination and promoting soil health across the course."

Wylihof Golf Club, Switzerland ▶

[View more examples ▶](#)

Considerations when Applying Fertilizers

The quality of fertilizer application has a direct impact on turf response, consistency, and environmental protection. Method, rate, calibration, and operator practice all influence how evenly nutrients are applied and how effectively they are used by the plant. Careful planning, accurate records, and well-maintained equipment help ensure that applications are safe, consistent, and compliant, while also giving superintendents greater confidence in the performance of the program as a whole.

Best Practices

- **Ensure staff are fully qualified to use fertilizers.** Ensure staff are appropriately trained in the safe handling, mixing, storage, and application of fertilizers. Provide regular training and refresher sessions to maintain competence and keep clear records of training and internal authorizations.★
- **Ensure staff use appropriate protective equipment.** Select PPE according to the Material Safety Data Sheet (MSDS) and task, commonly including gloves, eye protection, coveralls, and respirators for mixing or spraying operations. Conduct fit checks and ensure PPE is replaced as required.★
- **Regularly calibrate and test applicators.** Calibrate all spreaders and sprayers at the start of each season, after any repairs, and at a frequency that reflects the amount of usage. Record calibration data to ensure application rates match nutrient plans and to prevent overuse or uneven coverage.
- **Blanket spray or spread fertilizers over large areas only when appropriate.** Reserve blanket applications for times when uniform delivery is required, such as early-season establishment or major recovery periods. Document a justification for each treatment.
- **Spot treat with handheld sprayers or spreaders.** Apply nutrients only to clearly defined areas showing localized deficiency or stress. Calibrate equipment for accurate delivery and maintain consistent coverage within treatment zones.



National / Regional Requirements*

The application of fertilizers is tightly regulated under provincial workplace safety laws. Golf courses must ensure that staff follow strict requirements for labelling, protective equipment, safe operation of spraying / spreading equipment, and emergency preparedness.

The resources and regulations below provide detailed guidance to help you apply fertilizers safely, efficiently, and in compliance with provincial standards:

In BC, fertilizers that meet the definition of a hazardous product under WHMIS (Workplace Hazardous Materials Information System) must comply with [OHSR Part 5 – Chemical & Biological Substances](#). This includes:

- Having SDSs available,
- Ensuring all containers are properly labelled,
- Training workers on hazards and controls,
- Writing safe work procedures,
- Providing and enforcing [PPE](#) based on the SDS.

Mobile equipment used to apply fertilizers, like spreaders and sprayers, must comply with [OHSR Part 16 – Mobile Equipment](#). This includes:

- Pre-operation inspections,
- Guarding of moving parts,
- Visibility standards,
- Operator protection measures,
- Seatbelts, ROPS, and restraints where applicable.

If workers could be exposed to corrosive or irritant fertilizers, emergency eyewash and shower facilities must also be installed as per [OSHR 5.85-5.95](#). This includes:

- Risk assessments,
- Monthly flow tests,
- Tempered water,
- Signage and training.

National / Regional Opportunities

There are also a number of provincial and academic resources to support golf courses in optimizing fertilizer application accuracy, operator safety, and environmental performance:

BC's [Nutrient Application Guidelines](#) offer practical direction on rate, method, and timing to improve nutrient use efficiency while minimizing environmental risk.

BC's [Good Agricultural Practices - Nutrient Use](#) provide step-by-step guidance for developing a nutrient management plan based on soil data, slope, and proximity to sensitive areas.

Penn State Extension's [Calibrating your Fertilizer Spreader Guide](#) also offers a concise technical guide detailing calibration methods for both walk-behind and tractor-mounted spreaders, supporting accurate and uniform application.



"We have mapped the course using GPS technology and use a GPS sprayer to apply fertilizers, pesticides and herbicides with precise control over application rate and coverage. This allows us to track treated areas in real time and record chemicals used and application rates for analysis and planning. By adopting this approach, we have improved accuracy, reduced chemical use, and strengthened resource management across the course."

Pinnacle Country Club, United States ▶

View more examples ▶



Cultural and Mechanical Practices – Greens, Tees and Fairways

Cultural and mechanical practices are essential to maintaining turf resilience and health, surface consistency, and playability. The balance and intensity of these operations should be tailored to each playing surface. Greens typically require precision and frequency; tees focus on wear management and recovery; and fairways prioritize uniformity, thatch control, and sustainable mowing regimes.

Best Practices - Greens

- **Change hole locations frequently.** Rotate hole positions daily or as traffic patterns dictate to distribute wear evenly, protect turf health, and maintain smooth putting surfaces.
- **Sharpen mowing blades.** Inspect and sharpen blades regularly to ensure clean cuts and minimize stress or disease risk. Ensure proper reel/bedknife contact and check cut quality with paper prior to each mowing use.
- **Remove surface moisture.** When not mowing or rolling, switch or drag dew in the morning to reduce surface moisture, improve ball roll consistency, and limit conditions favourable to disease.
- **Adjust mowing patterns.** Vary mowing directions and routes to reduce grain formation, distribute wear, and prevent soil compaction from repeated traffic. Skipping clean up cuts or moving them off edge can help alleviate stress in this area.
- **Adjust mowing heights.** Modify cutting height based on growth rate, stress, and seasonal conditions. Raise slightly during heat, drought, or disease pressure to support recovery.
- **Collect and measure clippings.** Monitoring and recoding clipping volume has proven to be a valuable tool among superintendents. It provides insight into plant health, mower setup, and can influence decisions on nutrient applications and mowing frequency.
- **Utilize lightweight rolling.** Along with increasing green speed, smoothness, and firmness, lightweight rolling has been shown to reduce thatch accumulation, decrease clipping yield, and help reduce disease pressure.
- **Consider rolling instead of mowing.** Use lightweight rolling to maintain green speed without excessive mowing stress. Alternate between rolling and mowing days when growth slows. Use daily clipping collection and correlation between that data and daily collected KPI's (greens speed, smoothness, firmness) to determine mowing / rolling frequencies.
- **Direct foot traffic to reduce wear.** Installing ropes, stakes, or signage at access and transition zones, rotating routes as needed to support recovery. Thoughtful course design further supports this effort by minimizing traffic pressure through strategic placement of cart paths, bunkers, and entry and exit points.
- **Scarifying / Verti-cutting.** Carry out light scarifying or verti-cutting during active growth to control thatch and maintain surface firmness / smoothness. Adjust depth and frequency according to turf species, thatch levels, and seasonal recovery potential.
- **Top Dressing.** Apply sand top dressing at rates, intervals, and annual amounts designed to modify or maintain soil organic matter levels that best allow you to achieve your daily KPI's (greens speed, smoothness, firmness).
- **Aeration: Solid tining / deep tining / slitting / spiking.** Use these aeration methods as required by soil compaction testing / desired goals to relieve compaction and promote healthy root development.
- **Aeration: Hollow coring.** Conduct hollow-core aeration as required to remove thatch and improve infiltration. Follow with topdressing to restore surface uniformity.



Best Practices - Tees

- **Change teeing positions frequently.** Rotate tee markers daily or as wear dictates to spread traffic evenly and promote uniform turf recovery.
- **Sharpen mowing blades.** Inspect and sharpen blades regularly to ensure clean cuts, reduce stress, and prevent turf damage. Ensure proper reel/bedknife contact and check cut quality with paper prior to each mowing use.
- **Adjust mowing patterns and heights.** Alternate mowing directions to reduce compaction and grain. Raise the height of cut slightly during drought, stress, or recovery periods to maintain density and root strength.
- **Consider rolling instead of mowing.** Use lightweight rolling to maintain surface quality without excessive mowing stress. Alternate between rolling and mowing days when growth slows. Lightweight rolling has been proven to reduce thatch, clipping yield, and disease pressure.
- **Remove surface moisture.** When not mowing or rolling, switch or drag dew in the morning to reduce surface moisture and limit conditions favourable to disease.
- **Return clippings.** Where conditions permit, leave clippings to decompose naturally and recycle nutrients. Adjust frequency if debris affects playability or the risk of disease.
- **Direct foot traffic to reduce wear.** Install ropes, stakes, or signage at access and transition zones, rotating routes as needed to support recovery. Use thoughtful course design to further support this effort by minimizing traffic pressure through strategic placement of cart paths, bunkers, and entry and exit points.
- **Top Dressing / Deep Tining / Scarifying / Verti-cutting / Aeration.** Apply light to moderate treatments to control thatch, improve air exchange, and relieve compaction.

Best Practices - Fairways

- **Sharpen mowing blades.** Check and sharpen blades routinely to maintain a clean cut across wide areas, reduce fuel consumption, and prevent bruising. Ensure proper reel/bedknife contact and check cut quality with paper prior to each mowing use.
- **Adjust mowing patterns and heights.** Alternate mowing directions to reduce compaction and grain. Raise the height of cut slightly during drought, stress, or recovery periods to maintain density and root strength.
- **Consider rolling instead of mowing.** Use lightweight rolling to maintain surface quality without excessive mowing stress. Alternate between rolling and mowing days when growth slows. Lightweight rolling has been proven to reduce thatch, clipping yield, and disease pressure.
- **Remove surface moisture.** When not mowing or rolling, drag dew in the morning to reduce surface moisture, improve ball roll consistency, and limit conditions favourable to disease.
- **Return clippings.** Where conditions permit, leave clippings to decompose naturally and recycle nutrients. Adjust frequency if debris affects playability or the risk of disease.
- **Direct foot traffic to reduce wear.** Install ropes, stakes, or signage at access and transition zones, rotating routes as needed to support recovery. Use thoughtful course design to further support this effort by minimizing traffic pressure through strategic placement of cart paths, bunkers, and entry and exit points.
- **Top Dressing / Deep Tining / Scarifying / Verti-cutting / Aeration.** Undertake periodic thatch management and aeration using solid or hollow tines suited to soil conditions. Schedule operations during active growth to ensure effective recovery and improved infiltration.



National / Regional Requirements

There are no federal or provincial mandates specifying cultural or mechanical practices on golf courses. However, several [WorkSafeBC](#) regulations apply to the safe operation, maintenance, and servicing of turf equipment:

Under [OHSR Part 7 - Noise, Vibration, Radiation and Temperature](#) it is necessary to monitor exposure levels and maintain a hearing conservation program where equipment noise exceeds 85 dBA.

Under [OHSR Part 10 - De-Energization & Lockout](#) it is necessary to implement lockout procedures when servicing or sharpening equipment to prevent accidental start-up.

Under [OHSR Part 12 - Tools, Machinery & Equipment](#) it is necessary to ensure guarding, dust suppression, and safe layout of grinders, topdressers, and mechanical equipment used in maintenance areas.

Under [OHSR Part 16 - Mobile Equipment](#), it is necessary to inspect ride-on and tow equipment before use. Maintain rollover protection, visibility measures, and slope safety protocols.

The [WorkSafeBC Education Portal Workplace Hazardous Materials Information System \(WHMIS\)](#) provides resources and toolbox materials, covering hearing conservation, ergonomics, silica exposure, and equipment lockout that can be integrated into staff SOP's.

National / Regional Opportunities

Superintendents in BC can access regional expertise through the [Manual of Integrated Pest Management for Turf Managers in BC](#), which includes detailed guidance on cultural and mechanical practices that reduce pest incidence and build turf resilience. The manual outlines regional timing, intensity, and recovery recommendations tailored to BC's varied climates and soil types.



"We regularly aerate our greens and fairways to secure long-term turf health and playing quality by relieving compaction and improving oxygen flow and the movement of water and nutrients. Combined with sand topdressing, this helps roots grow deeper and stronger, reduces thatch, improves firmness and smoother ball roll, and supports quicker recovery after rain. This work is an investment in the future of our courses and consistently firmer, truer surfaces."

Nokia River Golf, Finland ▶

[View more examples ▶](#)





Managing Pests and Diseases

Managing pests and diseases responsibly is a vital part of integrated turfgrass management. It relies on understanding the conditions that drive pressure, recognizing risk at an early stage, and monitoring turf health closely over time. With a more informed and preventative approach, superintendents can respond earlier, set clearer thresholds for action, explore practical alternatives to pesticide use, and make more precise decisions when intervention is genuinely needed.

Overview of Integrated Pest Management (IPM) in BC

Integrated Pest Management (IPM) is a structured, science-based approach used to manage pests in an environmentally responsible and economically viable way. The core principle of IPM is to prevent pest problems before they occur, monitor pest activity through systematic observation, and apply control measures only when necessary.

For golf courses, IPM integrates mechanical, cultural, biological and chemical methods to maintain healthy, high-quality turf with minimal environmental impact. It involves understanding pest life cycles, setting tolerance thresholds, maintaining accurate records, and making evidence-based decisions about interventions.

National / Regional Requirements

In BC, IPM is a legal requirement under the [Integrated Pest Management Act \(IPMA\)](#) and [Integrated Pest Management Regulation \(IPMR\)](#), which govern all pesticide use on golf courses. These regulations require that pesticides be used as part of an integrated program with a clear, documented system of prevention, monitoring, and record-keeping.

All licensed facilities must have appropriate Pesticide User Licenses, maintain a Written IPM Plan, follow public notification requirements, and retain pesticide use records for inspection:

- **Pesticide User License**

Golf courses that apply non-excluded pesticides must hold a [Pesticide User License](#). A Service License is required if you apply pesticides as a service to others. A Non-Service License is required if you apply pesticides on your own property.

Each license holder must also have a [Certified Applicator](#) supervising all pesticide use. This individual must have a Landscape Applicator Certificate, which is mandatory for anyone applying landscape pesticides. Non-certified staff may assist under direct supervision after completing online training and passing an exam.

- **Written IPM Plan**

Every licensed golf course must also maintain an up-to-date **IPM Plan** demonstrating that pesticide use is justified and integrated with mechanical, cultural and biological controls. Plans should include:

- **Site Description**, with maps of treated areas and identification of sensitive features.
- **Identification and Monitoring**, with target pest lists, scouting schedules, monitoring methods and data recording procedures.
- **Non-Chemical Controls**, with use of mowing, aeration, hand weeding, and biological methods before any pesticide use.
- **Decision-Making and Thresholds**, with defined criteria and tolerance thresholds that trigger intervention.
- **Pesticide Selection and Application**, with approved products, rates, calibration protocols, and mitigation steps to prevent drift and runoff.
- **Training and Roles**, with defined responsibilities for Certified and Assistant Applicators.
- **Emergency Response**, with clear procedures and details of spill kits, eyewash stations, and emergency contacts.



- **Public Notification Procedures**, with the location and duration of signage for public safety.
 - **Record-Keeping System**, with methods for storing and retrieving application and monitoring records.
- **Notification and Signage**

Publicly accessible areas must display clear signage before pesticide application begins. Each access point must be marked, and signs must remain in place until the listed re-entry period has passed.

Using this BC [Treatment Notice Template](#) will ensure compliance with IPMR standards. Each sign must include:

- “DO NOT ENTER” and a hazard symbol
 - Date and time of application
 - Product name and PCP registration number
 - Target pest and re-entry details
 - Contact details for the licensee or applicator
- **Record-Keeping and Reporting**

License holders must keep pesticide use records for a minimum of three years. These must be available during inspections and include:

- Date, time, and exact location of application.
- Product name, PCP registration number, rate, and area treated.
- Weather conditions, equipment used, and calibration notes.
- Posting and removal times for signage and any incident reports.

Use this BC [Pesticide Use Record Template](#) to ensure all data is captured consistently.

Proactively Prevent Pests and Diseases

Prevention sits at the heart of effective pest and disease management. The strongest programs are those that create conditions in which turf remains healthy and pressure is naturally reduced, limiting the need for reactive intervention. This begins with sound design and agronomic choices, such as selecting resilient species, improving drainage, and reducing underlying plant stress, and continues through day-to-day practices that make outbreaks less likely to take hold.

Best Practices

- **Appropriate seed and planting material.** Use certified, high-quality seed or vegetative stock that is free of pests and suited to local growing conditions. Source from reputable suppliers and verify cultivar performance data.
- **Native, disease-tolerant turfgrass.** Select turf species and cultivars proven to perform in the local bioclimate, prioritizing those with natural resistance to local pests and pathogens.
- **Biological control (e.g., habitats for natural predators of pests).** Promote ecological balance by encouraging beneficial insects, birds, and microorganisms that naturally suppress pest populations.
- **Appropriate cultural and mechanical practices.** Maintain turf vigour through mowing, aeration, rolling, and topdressing programs that reduce stress and prevent pest establishment.



- **Balanced drainage and irrigation practices.** Design and manage drainage and irrigation systems to maintain consistent soil moisture and prevent extremes. Adjust scheduling and flow rates according to soil type, topography, and weather patterns.
- **Balanced fertilization practices.** Apply nutrients at rates that sustain steady turf growth without excess. Base applications on soil nutrient analysis and avoid large nitrogen fluctuations to maintain balance and surface quality.
- **Wash machinery frequently according to a set management plan.** Establish wash-down procedures for mowers, sprayers, and other equipment to prevent cross-contamination between turf areas and other sites.
- **Shoe and club washing station for golfers arriving from other courses.** Provide cleaning facilities to minimize the risk of transferring seeds, pathogens, or soil pests from other sites and locations.

National / Regional Requirements

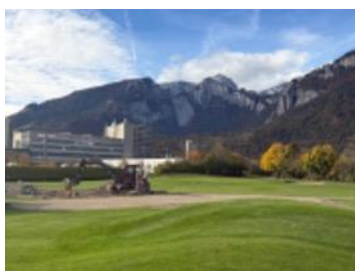
Under the [Integrated Pest Management Regulation \(IPMR\)](#), prevention is a mandatory first step for all licensed golf facilities in BC. A written [IPM Plan](#) must explicitly outline preventive measures, including resistant turf varieties, soil management, fertilization, and drainage. During inspections, prevention records—such as overseeding logs, mowing adjustments, and irrigation maintenance—can also serve as evidence of due diligence.

National / Regional Opportunities

Golf course superintendents in BC can access practical, locally adapted resources to improve preventive pest management and strengthen IPM compliance:

[Manual of Integrated Pest Management for Turf Managers in BC](#) offers comprehensive guidance on cultural and biological, prevention methods suited to BC's regional conditions.

[Greening your BC Golf Course: A Guide to Environmental Management](#) also includes case studies and strategies for building resilient turf systems that reduce reliance on pesticides.



"In response to the increasing challenges posed by dollar spot, we are testing a range of new turfgrass varieties on both chipping and putting greens. Our focus is on identifying the optimal combinations in terms of disease resistance, playing quality and maintenance needs. The goal is to develop more resilient and sustainable turf surfaces that can better withstand changing climatic and biological conditions in the long term."

Golf Club Domat/Ems, Switzerland ▶

[View more examples ▶](#)

Assess Pest and Disease Potential

A preventative approach depends on understanding where pressure is most likely to arise and what is driving it. Site-specific factors such as soil type, moisture, shade, airflow, and drainage can all influence the likelihood and severity of pest or disease problems. Assessing these conditions helps identify vulnerable areas, anticipate periods of higher risk, and guide management attention before visible damage develops. In this way, risk assessment becomes a practical tool for more targeted and informed decision-making.



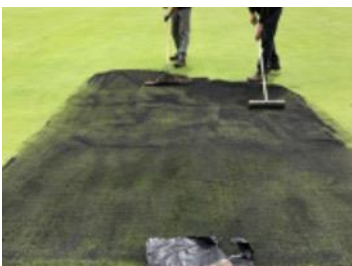
Best Practices

- **Soil type.** Identify variations in soil texture, structure, and compaction across the course. Use the information to prioritize aeration, drainage improvements, and targeted monitoring in high-risk areas that are prone to poor infiltration.
- **Turfgrass species and cultivars.** Record where different turf types are established and evaluate their resistance to local pest and disease pressures. Use this information to guide future overseeding and renovation plans.
- **Topography and slopes.** Survey slope gradients and low-lying areas to determine drainage flow and water accumulation patterns. Integrate findings into drainage design and surface management to reduce standing water and improve surface conditions.
- **Air circulation and shade.** Evaluate airflow and light penetration around greens, tees, and fairways. Prune vegetation or adjust landscape features where necessary to improve drying rates and reduce humidity.
- **Seasonal and climatic fluctuations.** Track temperature and rainfall patterns across the year to anticipate pest and disease cycles. Use historical data to refine timing for cultural practices and monitoring.
- **Drainage lines and patterns.** Inspect subsurface and surface drainage to identify areas of standing water, slow infiltration, or uneven moisture distribution. Address these imbalances to reduce disease incidence.
- **Water quality.** Test irrigation water for salinity, pH, and nutrient content. Poor-quality water can weaken turfgrass and increase susceptibility to pests and disease.
- **Stress caused by foot traffic.** Identify high-wear areas where compaction and turf thinning create entry points for pests and pathogens. Rotate traffic routes and enhance aeration in these zones.

National / Regional Requirements

Under the [Integrated Pest Management Regulation \(IPMR\)](#), all pesticide license holders must document how site conditions influence pest activity as part of a written [IPM Plan](#). This includes the identification of susceptible areas, with active management through cultural and mechanical practices. Maintaining records of soil, turf, and climatic assessments used to inform prevention and monitoring strategies can also serve as evidence of due diligence.

The [Manual of Integrated Pest Management for Turf Managers in BC](#) provides detailed guidance on site assessment, pest identification, and environmental monitoring, supporting compliance and best-practice implementation.



“Since 2018, restrictions in Wallonia have increased the need to assess pest and disease potential more precisely. In response, we developed a strategy based on course layout optimization, data monitoring, prevention analytics and additional maintenance. We modified the course to reduce disease susceptibility, then worked with MAYA to monitor ground and turf indicators alongside weather and disease data. This supports a decision algorithm that helps us anticipate risk and trigger prevention activities proactively.”

Golf De Rigenée, Belgium ▶

View more examples ▶



Identify and Monitor Pest Pressure

Once likely problem areas and underlying pressures are understood, regular monitoring provides the detail needed to respond well. Structured scouting and accurate identification help confirm which pests or diseases are present, where they are occurring, and how conditions are changing over time. This reduces the risk of misdiagnosis, avoids unnecessary treatment, and provides the evidence needed to justify action when necessary. Good monitoring also strengthens the consistency and credibility of management decisions.

Best Practices

- **Create a monitoring plan for pests and diseases.** Develop a written plan outlining inspection frequency, monitoring locations, and recording procedures. Incorporate seasonal patterns and assign responsibilities to ensure consistency.
- **Identify and track pest and disease hotspots, including sensitive areas.** Map recurring problem zones such as shaded greens, compacted fairways, or poorly drained roughs. Use this data to prioritize preventive maintenance and targeted monitoring.
- **Identify any excessively shaded areas of turfgrass.** Record areas with reduced air circulation and light, as these are prone to fungal diseases. Adjust pruning, mowing height, or air movement to minimize risk.
- **Scout the course daily for early signs and symptoms.** Conduct systematic inspections during peak activity periods, focusing on leaf, root, and soil conditions. Record pest stage, severity, and environmental context for trended analysis.
- **Accurately diagnose to determine the cause of weeds, pests, and diseases.** Confirm diagnoses using field guides, extension resources, or professional laboratory services before treatment. Misidentification can lead to ineffective or unnecessary pesticide applications.

National / Regional Requirements

Under the [Integrated Pest Management Regulation \(IPMR\)](#), golf courses must document pest identification and monitoring methods in a written [IPM Plan](#). Provincial inspectors may request evidence that monitoring and identification guide decision-making and that pesticide applications are based on verified pest presence rather than preventive use.

The [Manual of Integrated Pest Management for Turf Managers in BC](#) and [Greening your BC Golf Course: A Guide to Environmental Management](#) both provide practical templates and case studies for developing monitoring systems that meet regulatory standards.



"In the Northeast, Annual Bluegrass Weevil is a significant turf pest. University research has shown that the optimal timing for spring larvicide applications is immediately following the bloom of the 'Catawba' Rhododendron, targeting larvae at a critical stage in their lifecycle. By planting this species on our property, we use it as a scouting tool to improve application timing, reduce larvicide frequency, lower chemical use and support more sustainable pest management."

TPC River Highlands, United States ▶

[View more examples ▶](#)



Establish Tolerance Thresholds

Not all pest activity requires intervention. Clear tolerance thresholds help define the point at which damage, population levels, or surface impact become unacceptable in relation to course standards and playing expectations. Setting these thresholds allows decisions to be made more consistently and proportionately, balancing turf quality and playability with environmental responsibility. It can also support clearer communication with golfers and other stakeholders by showing that action is based on evidence rather than a routine response.

Best Practices

- **Establish tolerance thresholds for different areas of the golf course before curative treatment.** Define acceptable pest or damage levels for greens, tees, fairways, and roughs based on turf function and visibility. Document these limits in an IPM Plan.
- **Base thresholds on understanding of target market and customer base.** Align tolerance levels with player expectations, course standards, and maintenance budgets. High-end or tournament venues may choose to set stricter limits than community or public facilities.
- **Align thresholds with objective tests of playing parameters (e.g., roll, firmness, speed).** Use performance data to ensure decisions are based on measurable impacts for playability rather than aesthetic preferences.
- **Include tolerance thresholds in a course policy document.** Incorporate tolerance thresholds into a turf management or IPM policy so they can guide staff training, decision-making, and communication with stakeholders.

National / Regional Requirements

Under the [Integrated Pest Management Regulation \(IPMR\)](#), pesticide use must be justified through written thresholds documented in an [IPM Plan](#). These thresholds can be:

- Qualitative (e.g., visible turf thinning, unacceptable weed cover), or
- Quantitative (e.g., pest counts per square metre, percentage of affected area).

Inspectors may request evidence that thresholds are established, monitored, and used to trigger decisions, showing that pesticides are applied only when pest pressure exceeds defined levels of surface performance or quality.

The [Manual of Integrated Pest Management for Turf Managers in BC](#) provides detailed examples and field-based methods for setting and reviewing tolerance thresholds tailored to local conditions and pest pressures.



“Our club uses advanced technologies such as drones, unmanned mowers and smart golf balls to monitor course conditions daily and collect detailed data. This information allows us to apply precise fertilization, targeted chemical treatments and tailored mowing practices based on the specific needs of the course. Since implementing this science-based management system, we have significantly reduced the use of fertilizers and pesticides while maintaining optimal playing conditions.”

The Club At Nine Bridges, Republic of Korea ▶

View more examples ▶



Consider Alternatives to Pesticides

Where thresholds are exceeded, non-chemical options should be considered before pesticide use is pursued. Cultural, biological, and mechanical measures can often help suppress outbreaks, reduce recurrence, and extend the interval between chemical interventions. Their success depends on good timing, a sound understanding of pest biology, and careful attention to site conditions.

Best Practices

- **Hand weeding.** Use hand tools to remove weeds at early stages of growth, ensuring that the full root is removed to prevent recolonization. Bag and dispose of seed heads before they spread. Schedule regular inspections after rainfall or irrigation when the soil is soft.
- **Mechanical weeding.** Deploy verticutters, groomers, or mechanical weed pullers for larger outbreaks, particularly during seasonal renovation or cultivation programs. Follow with topdressing or overseeding to close canopy gaps and prevent recolonization.
- **Biopesticides.** Incorporate biological products such as nematodes, bacteria, or fungi that target specific pests. Apply under optimal soil temperature and moisture conditions and avoid high UV periods to maintain efficacy. Keep records of product type, timing, and observed results to guide future use.
- **Cultural controls.** Adjust mowing height, irrigation, drainage, and fertilization systems to make conditions less favourable for pest development. For example, maintaining drier surfaces can reduce fungal disease risk, while balanced fertilization system limits thatch accumulation and weak growth that can encourage pests.

National / Regional Requirements

Under the [Integrated Pest Management Regulation \(IPMR\)](#), golf courses must demonstrate that integrated pest management principles are applied, including consideration of cultural, mechanical, biological, and chemical control options. Pesticide use must be justified, documented, and aligned with an approved [IPM Plan](#).

Alternative measures may include cultural practices such as aeration, mowing, and overseeding; mechanical controls such as hand or mechanical weeding; and biological controls such as nematodes or beneficial organisms. These approaches, alongside any pesticide use, must be documented in the written [IPM Plan](#), which may be reviewed by inspectors to confirm that pest management decisions are evidence-based and appropriately applied.



“Weed control is essential for turf care on the golf course, and we use a small shovel to remove all weeds and, more importantly, their roots. By manually pulling weeds, we eliminate the use of pesticides and reduce the accidental dispersal or spraying of chemicals during treatment. This approach also helps prevent weeds from becoming resistant to chemicals, while protecting beneficial wildlife.”

Golf Las Américas, Spain ▶

View more examples ▶



Considerations when Selecting Products

Where pesticide use is justified, product choice becomes a critical part of responsible decision-making. Any product used should be legally approved, suited to the target pest or disease, and selected with close attention to efficacy, environmental behaviour, and potential risks to people and non-target species. Factors such as toxicity, persistence, solubility, and volatility all matter in determining whether a product is appropriate for the site and situation. Up-to-date product information and accurate recordkeeping are essential aspects of compliance and sound judgement.

Best Practices

- **Legally registered and approved products.** Only use products that are registered and approved for professional turfgrass use under the relevant national or regional authority. Confirm registration numbers and ensure the intended use site and pest are listed on the label. *
- **Targeted rather than broad-spectrum products.** Select the narrowest-spectrum product that controls the specific pest or disease identified. Work to reduce impacts on beneficial organisms, maintain ecological balance, and support resistance management.
- **Human and environmental risk.** Review product safety data sheets (SDS) and label hazard classifications before purchase. Prioritize products with lower toxicity, reduced persistence, and minimal risk to aquatic systems, pollinators, and soil biodiversity.
- **Resistance management.** Rotate active ingredients from different chemical groups and incorporate non-chemical controls to delay resistance. Keep an annual record of products and actives used to inform future planning.
- **Toxicity rating.** Use internationally recognized signal words and hazard classes to assess acute toxicity. Select the least hazardous effective option and ensure PPE requirements match product hazard levels.
- **Soil type.** Match products to site-specific soil characteristics. For example, sandy or low-organic soils may increase leaching risk, while heavy clays may retain residues longer. Adjust product selection and rate accordingly.
- **Solubility.** Consider water solubility and leaching potential when selecting products, especially in high-rainfall or irrigated regions. Choose formulations with lower solubility to minimize movement into groundwater or drainage systems.
- **Volatility.** Avoid volatile products under hot, dry, or windy conditions to prevent drift and off-target exposure. Use formulations and timings that minimize vapour loss and surface evaporation.

National / Regional Requirements*

Golf courses in BC must comply with both the provincial [Integrated Pest Management Regulation \(IPMR\)](#) and the federal [Pest Control Products Act \(PCPA\)](#) when selecting pesticides.

- **Registered Products:**

All pesticides used on golf courses must be federally registered for the intended use and must display a valid [Pest Control Product \(PCP\)](#) number issued by Health Canada's [Pesticides Regulatory Directorate \(PRD\)](#), formerly the Pest Management Regulatory Agency (PMRA).

The pesticide label is the legal direction for use. Products must only be used according to the current authorized label, including approved use sites, application rates, restrictions, precautions, personal protective equipment requirements and any environmental protection measures.



- [Health Canada Pesticide Label Search](#) provides access to current pesticide label information, including approved use sites, application directions, rates, restrictions and precautions.
 - [Pesticide Product Information Database \(PPID\)](#) provides product registration information, including active ingredients, registration status, product classifications and other regulatory details.
- **Label Compliance:**

Products must be applied strictly according to label instructions, including rate, timing, environmental precautions, and re-entry intervals. Deviating from label directions is a breach of federal law.
 - **Risk Factors:**

Selection should consider both human health risks (toxicity, re-entry intervals) and environmental risks (pollinators, persistence, and drift potential).

National / Regional Opportunities

Superintendents can use Health Canada's [Reduced Risk Framework](#) and Agriculture and Agri-Food Canada's [Pesticide Risk Reduction Program](#) to improve product selection as part of a wider IPM approach to environmental protection and responsible golf course management.



"We use precision spraying technology on greens, approaches and fairways through a GPS-controlled sprayer with individual nozzle control. This allows us to apply products more precisely and conserve approximately 10% of pesticides across the same area compared with older foam marker technology. Alongside more targeted product selection, this reduces product consumption, limits impact on non-target species and pollinators, helps reduce water contamination, and supports soil health."

Wylihof Golf Club, Switzerland ▶

View more examples ▶

Considerations for Timing of Pesticide Applications

The success and impact of a pesticide application depend heavily on timing. Applying at the right moment can improve efficacy while reducing disruption to play, avoiding unnecessary repeat treatments, and lowering the risk of harm to surrounding habitats and non-target species. This requires an understanding of pest life cycles, weather conditions, course use patterns, and wider ecological sensitivities, including periods of pollinator activity or bird nesting.

Best Practices

- **Legal requirements.** Follow all national pesticide regulations and product label directions. Labels are legally binding and define acceptable timing, conditions, and re-entry intervals. Applications outside these parameters may constitute a breach of law. *



- **Developmental state / life cycle.** Target pests at their most vulnerable stage, which is typically larvae or juvenile development. Integrate timing with pest monitoring data to ensure treatments coincide with peak activity or emergence.
- **Schedule of course play.** Plan treatments outside of peak play hours to avoid exposure risk and allow sufficient re-entry intervals. Early morning or evening applications often provide better conditions for efficacy and safety.
- **Weather conditions and forecast.** Check wind speed, humidity, and precipitation forecasts before application. Avoid treatments ahead of rain, during high winds, or under temperature inversions to prevent drift or runoff.
- **Ecological factors.** Consider nearby habitats, nesting birds, and pollinator activity. Schedule applications outside breeding or bloom periods, especially where flowering plants attract pollinators.

National / Regional Requirements*

In BC, pesticide timing is governed by the [Integrated Pest Management Regulation \(IPMR\)](#) and the federal [Pest Control Products Act \(PCPA\)](#). While these do not set universal timing windows, applications must follow the legally enforceable product label approved by Health Canada's [Pesticides Regulatory Directorate \(PRD\)](#), formerly the Pest Management Regulatory Agency (PMRA).

- **Follow Product Labels:**

Labels outline where, when and how a product may be applied, including any restrictions linked to temperature, rainfall, wind, water, pollinator activity or other environmental conditions.

- [Health Canada Pesticide Label Search](#) can be used to check current approved labels.
- The [Pesticide Product Information Database \(PPID\)](#) provides supporting details on product classification, active ingredients and registration status.

- **Weather Conditions:**

Pesticides must not enter water or drift off-target. Applications during high winds, rainfall, or on saturated ground can be considered non-compliant. Inspectors may review weather logs during audits to confirm responsible timing.

- **Pollinator Protection:**

Where labels carry bee hazard statements, applications must be scheduled during non-bloom periods or outside pollinator activity windows (typically evening or early morning). Timing restrictions on labels are legally binding.

- **IPM Plan:**

A written [IPM Plan](#) must outline how timing decisions are made. Inspectors may request documentation demonstrating that weather, ecological, and play factors are routinely considered before each application.

National / Regional Opportunities

This PRD [Pollinator Protection Guide](#) provides regionally tailored advice for scheduling applications that protect pollinators and beneficial insects. Using this reference will demonstrate due diligence and strengthen environmental stewardship.



“As a pesticide-free course, The Royal Bercuit Golf Club uses a connected weather station to provide real-time information to the team and improve the timing of disease prevention. By analyzing weather patterns and using disease models, disease threats are forecast locally. These forecasts form an integral part of the club’s integrated pest management strategy, helping guide timely action that supports pesticide-free management, long-term healthy turf and enhanced playability.”

Royal Bercuit Golf Club, Wallonia ▶

View more examples ▶

Considerations when Applying Pesticides

Where treatment is necessary, application should be carried out with precision, control, and full regard for legal and environmental responsibilities. Calibration, operator competence, label compliance, and attention to weather and site conditions all influence how safely and effectively products are applied. The aim is to achieve the required level of control while minimizing drift, exposure, and unintended impacts. Follow-up monitoring then becomes essential, helping superintendents evaluate results, refine future decisions, and demonstrate a disciplined approach to continuous improvement.

Best Practices

- **Use pesticides curatively.** Apply chemical treatments only when monitoring data and tolerance thresholds confirm that pest activity exceeds acceptable levels. Use pesticides as part of an integrated program for turfgrass health and performance, accounting for wider environmental considerations.
- **Ensure staff are fully qualified.** Only certified applicators or trained, supervised assistants should handle, mix, or apply pesticides. Maintain up-to-date records of all certifications and training.*
- **Use appropriate protective equipment.** Follow the product label and Material Safety Data Sheet (MSDS) to determine required PPE, such as respirators, gloves, and eye protection. Inspect PPE regularly and replace when damaged.*
- **Calibrate and test applicators regularly.** Check and adjust nozzles, pressure, and flow rates before every use to ensure accurate delivery and even coverage. Recalibrate after maintenance or when switching products.
- **Blanket spray only when appropriate.** Limit full-area applications to cases where pest pressure is widespread or curative control is essential. Prefer localized treatment when practical.
- **Spot treat with handheld sprayers or wipers.** Use handheld or shielded applicators to target localized infestations accurately. Calibrate equipment for uniform delivery and to minimize drift, waste, and impact on non-target organisms.
- **Use shrouded sprayers and anti-drip nozzles.** Select low-drift technologies and anti-drip systems to prevent off-target movement and reduce risk to non-target species or water bodies.
- **Dilute and dispose of leftover product correctly.** Apply diluted rinsate to labelled turf areas or dispose of excess through licensed hazardous waste facilities. Never discharge into drains, ditches, or natural water.*
- **Monitor control efficacy.** Evaluate results after each application through pest counts, turf condition assessments, photographic monitoring, or trial plots to compare treatment performance. Use findings to refine IPM decisions and inform future pesticide selection.



National / Regional Requirements*

Golf courses in BC must follow strict application rules under both the [Integrated Pest Management Regulation \(IPMR\)](#) and the federal [Pest Control Products Act \(PCPA\)](#). These frameworks ensure pesticides are used only by qualified personnel, according to label directions, and with full protection of workers, the public, and the environment.

- **Licensing and Certification**

A [Pesticide User License](#) is required for any course applying pesticides. Applications must be performed or directly supervised by a Certified Applicator, while all staff assisting must complete assistant training and work under supervision.

- **Label Compliance**

Labels approved by the [Pesticides Regulatory Directorate \(PRD\)](#) are legally binding. These specify application rates, timing, PPE, buffer zones, and re-entry intervals.

- **Signage and Public Notification**

All public-access areas must be marked with signage before treatment begins and remain closed until re-entry intervals expire. Use this [Treatment Notice Template](#) to ensure signage meets regulatory standards and includes all required details.

- **Worker Safety and PPE**

Products meeting [Workplace Hazardous Materials Information System \(WHMIS\)](#) criteria are regulated under [WorkSafeBC's Occupational Health and Safety Regulation \(OHSR\)](#):

- [OHSR Part 5 - Chemical & Biological Substances](#) covers labelling, SDS access, training, safe-work procedures.
- [OHSR Part 8 - Personal Protective Clothing and Equipment](#) sets covers PPE selection, use, and maintenance standards.
- [OHSR Part 12 - Tools, Machinery & Equipment](#) covers guarding, dust control and placement of hazardous machinery.
- [OHSR Part 16 - Mobile Equipment](#) covers safety standards for ride-on sprayers and spreaders, including pre-operation checks, ROPS, and slope stability.

- **Waste Management**

Under the [Integrated Pest Management Regulation \(IPMR\)](#) and [Hazardous Waste Regulation](#), pesticide containers must be triple- or pressure-rinsed and recycled or disposed of via approved programs such as [Cleanfarms](#). Rinsate must be used on labelled areas or sent to an approved hazardous waste facility.

National / Regional Opportunities

Superintendents can strengthen pesticide application practices by using the following provincial, federal, and international resources, which provide guidance on safe use, environmental protection, and continuous improvement in Integrated Pest Management (IPM):

[BC's Nutrient & Pesticide Application Guidelines](#) provide provincial guidance on responsible nutrient and pesticide use, covering rates, timing, and application methods for turf and amenity areas.



[BC's Safe Disposal of Pesticides](#) offers detailed provincial guidance on triple-rinsing, rinsate use, and safe disposal of leftover pesticides and containers under the Hazardous Waste Regulation.

[WorkSafeBC's Standard Practices for Pesticide Applicators](#) is a comprehensive safety manual outlining legal and procedural requirements for pesticide handling, PPE, and storage, aligned with BC's Occupational Health and Safety Regulation.

This [Spray Buffer Zone Calculator](#) can help determine appropriate buffer distances during pesticide applications. By entering information such as weather conditions and sprayer configuration, users can adjust label buffer zones while ensuring protection of nearby aquatic and terrestrial habitats and minimizing spray drift. If modified buffer zones are used, applicators must retain a summary record of the calculation to demonstrate compliance with label requirements.



"Shaughnessy Golf Course uses the GreenKeeper App to support conscious and informed decision-making around fertilizer and chemical applications. The app collects and stores key operational data, including historical application records and trend tracking, helping guide responsible product applications and more efficient product usage. This data-driven approach helps minimize over-fertilization, reduce runoff and environmental impacts, while also enhancing turf health, lowering annual product costs and improving budgeting."

Shaughnessy Golf and Country Club, Canada ▶

[View more examples ▶](#)



Pollution Prevention



Golf Course and Grounds ▶	Maintenance Facility and Clubhouse ▶
Reduce Pollution Potential ▶	Actions for Storage of Hazardous Substances ▶
Water Testing ▶	Actions for Storage of Fuels and Gases ▶
	Mixing and Loading of Pesticides and Fertilizers ▶
	Machinery Wash Station ▶
	Wastewater Discharge ▶

Preventing pollution is central to sustainable golf course management and a shared responsibility across the whole facility. On a golf course, pollution risks can arise from many sources, including nutrients, plant protection products, fuels, wash water, and other substances used in the maintenance and operation of the site. For superintendents, managing these risks is not an isolated compliance task but an essential element of running a safe, well-organized, and responsible operation.

Done well, pollution prevention delivers benefits that extend well beyond compliance. It helps safeguard soil, water, wildlife, and human health, while also reducing operational risk, avoiding costly incidents, and reinforcing trust with golfers, regulators, neighbours, and the wider community. In that sense, pollution prevention is both an environmental priority and a clear expression of professional standards.

Good practice starts with recognizing where vulnerabilities exist - across the course, within maintenance compounds, and through wider operational activities linked to the facility. Once risks are understood, facilities can take practical steps through better storage, handling, mixing, testing, drainage, washdown, infrastructure, and staff awareness. The aim is not simply to respond to problems when they occur, but to create systems and routines that prevent harm in the first place. Over time, this requires pollution prevention to be integrated into everyday decision-making, so that risks are routinely identified, controlled, and reviewed as part of consistent operational practice.

This action area is designed to support that process, helping superintendents strengthen site awareness, improve operational controls, and build a more consistent and proactive approach to pollution prevention, risk management, and legal compliance.



Golf Course and Grounds

Preventing pollution across the golf course and grounds starts with recognizing where routine operations can place soil, water, and surrounding habitats at risk. Nutrient loss, pesticide movement, sediment runoff, and deteriorating water quality can all have consequences beyond managed areas, particularly where water bodies, wetlands, or drainage channels are present. A more careful and preventative approach helps superintendents reduce pollution at its source, safeguard natural resources, and strengthen compliance, resilience, and responsible environmental management.

Reduce Pollution Potential

Reducing pollution risk across the golf course depends on understanding how routine practices interact with the wider environment. Fertilizers, pesticides, fuels, wash-water, and soil disturbance can all create pathways through which pollutants reach surface water, groundwater, and nearby habitats if they are not managed with sufficient care. Identifying vulnerable areas, maintaining effective buffers, and putting suitable containment and emergency measures in place can help superintendents limit harm at source, protect natural resources, and meet both regulatory and community expectations.

Best Practice

- **Document emergency spill procedures.** Maintain a written spill response plan covering all hazardous products used on site, including pesticides, fertilizers, and fuels. Ensure all staff are aware of procedures and emergency contacts. *
- **Retain buffer areas around water and wetlands.** Establish permanent no-spray/no-spread zones beside all surface waters, wetlands, and drainage ditches. Maintain vegetated buffer strips to intercept runoff and filter contaminants. *
- **Protect ecologically sensitive areas.** Designate and retain additional buffer zones around mapped sensitive habitats such as riparian corridors, nesting zones, or protected vegetation.
- **Map sensitive zones.** Mark buffer areas, water features, and sensitive habitats on site maps. Include within an Environmental or IPM Plan to guide operations.
- **Irrigate lightly after fertilizer applications.** Unless the application is designed as a strictly foliar application, apply a light irrigation cycle to move nutrients into the root zone and prevent volatilization. Ensure soils are unsaturated and no rainfall is forecast to avoid runoff or leaching.

National / Regional Requirements*

Golf courses in BC must comply with the [Environmental Management Act \(EMA\)](#), [Integrated Pest Management Regulation \(IPMR\)](#), and the federal [Pest Control Products Act \(PCPA\)](#) to prevent contamination of soil, water, and sensitive ecosystems. These frameworks focus on pollution prevention through planning, spatial protection measures, and emergency preparedness.

- **No-Spray and Pesticide-Free Zones**
 - Under the [Integrated Pest Management Regulation \(IPMR\)](#), 30m no-treatment zones (NTZs) must be maintained around wells and water intakes.
 - 10m pesticide-free zones (PFZs) are also required adjacent to surface water bodies, wetlands, and dry stream channels, measured from the high-water mark.
 - Product labels may specify larger setbacks or drift-reduction technologies. These label directions are legally enforceable under the [Pest Control Products Act \(PCPA\)](#).



• **Spill Prevention and Response Plans**

Under the [Environmental Management Act \(EMA\)](#) and [Integrated Pest Management Regulation \(IPMR\)](#), facilities that store or use pesticides, fertilizers, or fuels must have a spill contingency plan. The plan should identify storage areas, potential risks, containment materials, and staff responsibilities.

- Any spill that could affect human health or the environment must be reported immediately to [Emergency Management BC](#) via the Provincial Emergency Number: 1-800-663-3456.
- Guidance on spill reporting and response thresholds is provided by [Emergency Management BC](#).
- The [BC Ministry of Environment and Climate Change Strategy](#) also provides detailed templates for spill prevention and response planning:

• **Nutrient and Fertilizer Pollution Prevention**

While there is no fertilizer-specific legislation for golf courses, pollution from nutrient runoff is prohibited under the [Environmental Management Act \(EMA\)](#). Over-application, poor timing, or irrigation mismanagement that results in discharge to surface or groundwater may constitute non-compliance. This BC [Nutrient Management Guidance](#) reinforces best practice for preventing nutrient losses.

National / Regional Opportunities

This [Spray Buffer Zone Calculator](#) can help determine appropriate buffer distances during pesticide applications. By entering information such as weather conditions and sprayer configuration, users can adjust label buffer zones while ensuring protection of nearby aquatic and terrestrial habitats and minimizing spray drift. If modified buffer zones are used, applicators must retain a summary record of the calculation to demonstrate compliance with label requirements.

Contaminant or Quantity	Spill Response	Notification and Reporting
Gasoline	1. Stop the spill immediately. 2. Contain the spill. 3. Notify the appropriate authority. 4. Clean up the spill.	1. Notify the appropriate authority. 2. Notify the appropriate authority.
Antifreeze	1. Stop the spill immediately. 2. Contain the spill. 3. Notify the appropriate authority. 4. Clean up the spill.	1. Notify the appropriate authority. 2. Notify the appropriate authority.
Oil	1. Stop the spill immediately. 2. Contain the spill. 3. Notify the appropriate authority. 4. Clean up the spill.	1. Notify the appropriate authority. 2. Notify the appropriate authority.
Other	1. Stop the spill immediately. 2. Contain the spill. 3. Notify the appropriate authority. 4. Clean up the spill.	1. Notify the appropriate authority. 2. Notify the appropriate authority.

"We have implemented a comprehensive Spill Prevention and Response Program supported by reference materials. As part of staff orientation, all team members receive training in spill response procedures, first aid and wildfire management, while our Superintendent is certified to handle spill response emergencies. This training helps prevent accidents that could cause environmental pollution or harm to human health."

Sun Peaks Golf Course, Canada ▶

View more examples ▶

Water Testing

Water testing adds an important layer of evidence to pollution prevention by showing whether management controls are working in practice. Runoff from treated turf, maintenance areas, and irrigation systems can carry nutrients, sediments, and pesticides into ponds, streams, and groundwater, sometimes without obvious signs at the surface. Regular sampling helps detect potential problems early, assess the performance of drainage and buffer measures, and build a clearer picture of how the site is affecting water quality over time.



Best Practices

- **Ponds, lakes, and other surface waters.** Test all surface water bodies on-site, including ponds, lakes, streams, and constructed features that may receive runoff. Collect representative samples from consistent depths and points to establish a reliable baseline.
- **Inflows and outflows.** Sample both water entering and leaving the property to assess potential impacts of course management on water quality. Include drainage outlets, inflow channels, and perimeter watercourses.
- **Consistent sampling points.** Use fixed, clearly marked sampling locations to maintain data comparability. Record GPS coordinates or reference features on site maps for accuracy.
- **Consistent timing.** Conduct tests at regular seasonal intervals to capture variation in temperature, rainfall, and nutrient availability. Maintain a repeatable schedule year to year.
- **Record sampling locations.** Include water-testing points on course maps and within an Environmental or IPM Plan to ensure continuity in monitoring and reporting.
- **Track water-quality trends.** Maintain a central record of results to identify gradual shifts in parameters such as nutrient levels, pH, or pesticide residues. Use these insights to guide management decisions and mitigation measures.

National / Regional Requirements

There is no law requiring routine water quality testing on golf courses in BC unless:

- You operate a drinking water system (well, reservoir, or irrigation source supplying potable water). In that case, you must comply with the [Drinking Water Protection Regulation](#), which requires routine bacteriological and chemical testing as directed by your local health authority.
- You are subject to environmental permits or approvals under the [Environmental Management Act \(EMA\)](#), such as a discharge permit for irrigation water or stormwater, which may include water testing as a condition.
- Your golf course is undergoing development, pesticide licensing audits, or riparian work that triggers monitoring requirements under the [Riparian Areas Protection Regulation \(RAPR\)](#) or local bylaws.

Although not mandated for all courses, voluntary testing demonstrates due diligence and helps validate environmental protection measures. Results can be benchmarked against the [Water Quality Guidelines](#), which define acceptable parameters for aquatic life, drinking water, and recreation.



"We take a thorough approach to pollution control due to our close proximity to the North Sea. This includes cultural turfgrass practices such as grazing and reduced nutrient inputs, chemical filtering of wastewater from wash-areas and the clubhouse before release, wetland areas that help filter runoff, and regular testing of irrigation water quality prior to application to support compliance with legislation."

Domburgsche Golfclub, Netherlands ▶

View more examples ▶



Maintenance Facility and Clubhouse

Maintenance and clubhouse buildings bring together many of the highest-risk activities at a golf facility, making pollution prevention essential. Fuels, chemicals, wash-water, waste, and other potentially hazardous materials must be stored, handled, and disposed of with care to avoid spills, leaks, exposure, and contamination. Strong operational controls, suitable infrastructure, and clear day-to-day procedures can help protect people and property, reduce risk, support compliance, and maintain high standards of safety across the facility.

Actions for Storage of Hazardous Substances

Safe storage is one of the most important foundations of pollution prevention within the maintenance facility and clubhouse. Fertilizers, pesticides, fuels, cleaning agents, and other hazardous materials all require conditions that minimize the risk of leaks, spills, accidental mixing, and unsafe handling. Well-designed storage areas can protect people and the environment, improve day-to-day control of materials, and make it easier to meet legal requirements, inspection standards, and good operational practice.

Best Practices

- **Concrete or metal building.** Construct or designate a purpose-built structure that is non-combustible, weatherproof, and lockable to ensure security and durability. *
- **Well ventilated.** Maintain mechanical or passive ventilation to prevent fume build-up and condensation. Ensure airflow does not vent directly toward staff areas or drains. *
- **Impermeable flooring.** Install sealed, chemical-resistant flooring to prevent seepage into soil or groundwater. *
- **Curbed flooring.** Include a raised lip or curb around the floor perimeter to contain spills and facilitate effective clean-up. *
- **Spill containment kits.** Store absorbent pads, neutralizers, and disposal bags within easy reach. Train staff to deploy kits during drills and incidents. *
- **Secondary containment (bunds, drip trays).** Use bunds, pallets, or drip trays under all liquid containers large enough to capture the full volume of the largest vessel stored. *
- **Emergency wash area.** Install an eyewash station and/or body shower near chemical handling areas in accordance with local standards. Test monthly and keep access clear. *
- **Sufficient storage capacity.** Size the storage area to prevent overcrowding and reduce stacking hazards. Maintain clear walkways and safe separation of incompatible products. *
- **Impermeable shelving.** Use corrosion-resistant shelving (metal or heavy-duty plastic). Avoid wood or porous materials.
- **Liquid materials stored below dry materials.** Store liquids on lower shelves to prevent leakage onto dry materials such as fertilizers or seed.
- **Fertilizers stored separately from solvents, fuels, and pesticides.** Maintain dedicated storage spaces for each substance category to prevent cross-contamination and chemical reactions.
- **List of hazardous substances available to authorized staff.** Maintain an up-to-date inventory with container counts, storage locations, and expiry dates. Review quarterly. *
- **Product and Material Safety Data Sheets (MSDS) available.** Keep current MSDS for every product stored. Display in both physical and digital form within the storage building. *
- **Hazardous substances safely collected by a registered company.** Use approved hazardous waste carriers and maintain documentation for all collections. *
- **Follow any additional legal requirements.** Confirm compliance with national and regional standards governing hazardous materials, environmental protection, and fire prevention. *



National / Regional Requirements★

Golf courses in BC must meet strict requirements under the [Integrated Pest Management Regulation \(IPMR\)](#), [Occupational Health and Safety Regulation \(OHSR\)](#), [Hazardous Waste Regulation](#), and the [BC Fire Code](#).

- **Storage Requirements**
 - Under the [Integrated Pest Management Regulation \(IPMR\)](#) and [OHSR Part 5: Chemical and Biological Substances](#) pesticides must be stored in a locked, ventilated room with restricted access to authorized staff.
 - Each entrance must display: “WARNING: CHEMICAL STORAGE — AUTHORIZED PERSONS ONLY.”
 - Containers must remain in original packaging or be clearly relabelled with product name and PCP number.
 - Employers must also maintain an inventory (with maximum quantities stored at their location) of all hazardous substances, with risk assessments, control measures, up-to-date SDSs and staff training.
- **Structural Requirements**
 - Under the [BC Fire Code](#) and [OHSR Part 5: Chemical and Biological Substances](#), storage areas for flammable or hazardous substances must be non-combustible, liquid-tight, and equipped with containment equal to the largest stored vessel.
 - Floors and walls must be resistant to corrosion and impermeable to the stored substances.
 - Where workers handle corrosive or irritant materials, plumbed eyewash and shower stations must be installed, tested monthly, and accessible year-round.
- **Emergency Planning & Spill Response**
 - Every facility must maintain an [Emergency Response Plan](#), designate trained staff, and document annual response drills conducted.
 - Spills that pose a risk to human health or the environment must be reported immediately to [Emergency Management BC](#) at 1-800-663-3456.
- **Hazardous Waste Storage & Disposal**
 - Under the [Hazardous Waste Regulation](#), hazardous wastes (e.g., pesticide residues, used oils) must be labelled, stored, and disposed of through an approved carrier with a completed waste manifest.



“We installed a new 300-gallon mixing station at the maintenance facility to improve environmental safety, application efficiency and operator safety. The station creates a controlled environment that reduces the risk of spills, runoff and contamination of nearby water sources, while built-in agitators ensure products are thoroughly mixed before application. A dedicated water source and integrated safety features have further improved operational efficiency and environmental protection.”

Shaughnessy Golf and Country Club, Canada ▶

View more examples ▶



Actions for Storage of Fuels and Gases

Fuels and gases demand particularly careful management because of the pollution, fire, and health risks they present. Even small leaks or releases can contaminate soil and groundwater, damage infrastructure, and create serious hazards for staff and visitors. Appropriate storage design, secondary containment, ventilation, separation, and regular inspection are all essential in reducing the likelihood of incidents and maintaining a safe, compliant, and well-managed facility.

Best Practices

- **Tank secured to a horizontal, flat, non-combustible surface.** Place all aboveground fuel tanks on stable, level pads constructed from concrete or another non-combustible material to prevent movement and reduce fire risk. *
- **Tanks placed a sufficient distance away from buildings.** Follow national fire code setback distances to minimize ignition hazards and allow safe access for maintenance and refuelling. *
- **110% spill capacity in all tanks.** Ensure all containment systems can hold at least 110% of the largest tank's capacity to prevent fuel from escaping during a major spill. *
- **Double or triple skinned containers.** Use double- or triple-walled tanks with integrated leak monitoring for enhanced protection against corrosion and rupture.
- **Leak detection monitors.** Install automatic leak detection systems to provide early warning of failures in tanks or underground lines. *
- **Bump barriers.** Install bollards, guardrails, or concrete blocks to prevent accidental impact from vehicles or machinery. *
- **Secondary containment (bunds and drip trays).** Place tanks and dispensing areas within bunded enclosures or spill trays to capture any leaks or overflows. *
- **Inspection of storage tanks at least quarterly.** Conduct visual and functional inspections every quarter to check for corrosion, leaks, or damaged fittings. Keep a log of all inspections.
- **Nozzles fitted with an automatic shut-off valve.** Equip all dispensing nozzles with automatic shut-off systems to prevent overfilling and reduce the risk of spills.
- **Nozzles stored within the drip tray.** Store dispensing nozzles within containment trays to capture residual drips and prevent ground contamination.
- **Fire extinguisher in the immediate area.** Position portable fire extinguishers rated for within 10 metres of fuel storage or dispensing areas. *

National / Regional Requirements*

Golf courses in BC must comply with the [BC Fire Code](#), [Gas Safety Regulation](#), and [Occupational Health and Safety Regulation \(OHSR\)](#) for the safe storage and handling of gasoline, diesel, propane, and other fuel gases. These frameworks focus on secure containment, safe siting, spill prevention, and fire protection.

- **Fuel Tanks (Gasoline/Diesel)**
 - Under the [BC Fire Code](#), tanks must meet minimum setback distances from buildings and property lines, with bump barriers for impact protection.
 - Aboveground tanks must include containment equal to 110% of the largest tank's volume, built from non-combustible, liquid-tight materials.
 - Tanks must be securely anchored to a stable, horizontal and level pad constructed of concrete or another non-combustible material to prevent movement and reduce fire risk.



- Tanks and piping must include venting, overflow prevention, and leak detection systems.
- Dispensing areas must retain at least 1,000 L of spilled fuel and be fitted with an emergency shutoff.
- Underground tanks must be double-walled, with monitored sumps and active leak detection.
- **Propane and Other Fuel Gases**
 - Tanks and cylinders must comply with [CSA B149.2 Standard \(Propane Storage and Handling\)](#), adopted under the [Gas Safety Regulation](#).
 - [Technical Safety BC](#) issues and inspects operating permits for propane systems.
- **Fire Protection**
 - Fire extinguishers must meet [NFPA 10 Standards](#) and be installed and maintained according to the [BC Fire Code](#).
- **Worker Safety**

All fuels and gases fall under [WHMIS Program](#) and [OHSR Part 5: Chemical and Biological Substances](#), requiring Material Safety Data Sheets (MSDS), labelling, training, and written safe-work procedures.



"We have upgraded the maintenance facility to improve water and energy efficiency and limit environmental exposure. Underground fuel tanks were removed and replaced with modern above-ground tanks to reduce environmental risk. LED lights are replacing original fluorescent lighting to improve energy efficiency, and a new wash bay has been installed to support more efficient water use and a cleaner operation."

TPC Scottsdale, United States ▶

View more examples ▶

Mixing and Loading of Pesticides and Fertilizers

Mixing and loading are among the most sensitive points in the handling of pesticides and fertilizers, Careful control of this process is essential to protect staff, prevent spills, splashes and contamination, and ensure that products are used safely and effectively. A dedicated, well-contained, and properly maintained mixing area can make these operations safer, cleaner, and more efficient for the maintenance team.

Best Practices

- **Prevent cross-contamination of fertilizers and pesticides in loading area.** Designate separate mixing and loading zones for fertilizers and pesticides to avoid potential contamination or reactions.
- **Completed over an impermeable surface.** Conduct all mixing and loading on sealed concrete or an equivalent material to prevent leaching into soil or water systems. ★



- **Impermeable surface covered with a roof with substantial overhang.** Install a permanent roof that prevents rainfall from contacting chemicals or wash water.
- **Impermeable surface drains to a sump.** Ensure that the mixing / loading pad drains to a contained sump that captures any spilled liquids or wash water for safe collection.
- **Frequent pumping of the sump to a storage container.** Pump out captured liquid regularly into a labelled holding tank or container for later reuse or disposal through an approved facility.
- **Triple rinse pesticide containers.** Immediately rinse pesticide containers three times after use, adding the rinse water back into the spray tank to eliminate residue and prevent waste. *
- **Store empty pesticide containers in a watertight bag until collection.** Keep rinsed containers dry, sealed, and secure until they are collected by a licensed waste carrier.

National / Regional Requirements

In BC, the mixing and loading of pesticides and fertilizers is regulated under the [Integrated Pest Management Regulation \(IPMR\)](#), [Pest Control Products Act \(PCPA\)](#), [BC Fire Code](#), and [Occupational Health and Safety Regulation \(OHSR\)](#). These rules focus on spill prevention, safe water management, containment, and worker protection.

- **Mixing Area & Spill Preparedness**
 - Under the [Integrated Pest Management Regulation \(IPMR\)](#), mixing and loading must take place on a non-porous, liquid-tight surface such as sealed concrete. This should be designed to prevent runoff or leakage into soil and water.
 - Mixing areas must have spill containment kits and clearly defined procedures for clean-up and reporting within a [Spill Response Plan](#).
 - An air gap or backflow prevention device is also required when filling spray tanks to prevent contamination of water sources.
- **Triple Rinsing of Containers**
 - Pesticide labels approved under the [Pest Control Products Act \(PCPA\)](#) require that all containers be triple-rinsed or pressure-rinsed immediately after use, with rinse water added to the spray tank.
- **Worker Protection**
 - Under [OHSR Part 5: Chemical and Biological Substances](#), workers must be trained in safe-handling procedures and equipped with required personal protective equipment (PPE). Material Safety Data Sheets (MSDSs) must be accessible at the mixing site.
- **IPM Plan Integration**
 - Under the [Integrated Pest Management Regulation \(IPMR\)](#), mixing and loading procedures must be described in a written [IPM Plan](#), including safeguards, spill prevention, and containment management steps.



“Our environmental room is a self-contained area for the secure storage and handling of pesticides and fertilizers. Its design includes a drainage system connected to a large mix tank, allowing any spilled product to be captured and safely reused in spray rigs rather than lost to the surrounding environment. By isolating these products, we prevent cross-contamination, support regulatory compliance, improve operational efficiency, and reinforce responsible environmental stewardship.”

TPC Summerlin, United States ▶

View more examples ▶

Machinery Wash Station

Washing down machinery and equipment can generate contaminated runoff containing grass residues, oils, greases, sediments, and traces of pesticides or fertilizers. Without suitable collection and treatment, this wash-water can enter drains, soak into the ground, or reach nearby watercourses. A well-planned wash station, with effective containment and clear operating procedures, helps manage this risk while supporting cleaner working practices, staff safety, and higher standards of environmental control.

Best Practices

- **Formal discharge agreement, if applicable.** Obtain a written discharge agreement from your municipality or sewer authority if wash water enters a public sanitary system. ★
- **Impermeable surface.** Build the wash station on sealed, chemical-resistant concrete to prevent water leaching or seepage into soil. ★
- **Curbed surface.** Include raised curbing to keep wash water within the pad and prevent escape to uncontained areas.
- **Grass clipping separation, as per local requirements.** Install a primary interceptor or filter to capture grass and sediment before water enters the drainage or treatment system.
- **Oil and grease separation, as per local requirements.** Fit an oil-water separator approved for your flow rate and maintain it regularly to remove floating hydrocarbons. ★
- **Closed-loop system.** Where possible, install a closed-loop recycling system that captures, treats, and reuses wash water.
- **Other authorized treatment system.** If a closed-loop system is not feasible, direct wash water through a certified on-site treatment system approved by your municipality or environmental authority.
- **Discharge to main sewer.** Direct any wash water only to an approved sanitary sewer, and never to storm drains or open ground. Ensure all interceptors, filters, and inspection points meet local regulations and are regularly maintained to meet compliance.
- **Discharge to surface water feature.** Where possible, recycle or reuse treated wash water for non-potable purposes such as equipment pre-rinsing. If discharge is required, ensure the effluent meets local water quality standards and is approved by the relevant environmental authority.

National / Regional Requirements★

In BC, golf courses must design and operate wash stations in accordance with the [Environmental Management Act \(EMA\)](#), [Municipal Wastewater Regulation](#), [Integrated Pest Management Regulation \(IPMR\)](#), and [Occupational Health and Safety Regulation \(OHSR\)](#).



- **Wash Pad Structure**

- Under the [Municipal Wastewater Regulation](#), wash stations must be built on sealed, liquid-tight surfaces to prevent infiltration or runoff.
- Wash water must drain to a sanitary sewer or approved treatment system - not to storm drains or open ground.
- Multi-chamber interceptors are required to trap solids and prevent clogging downstream.
- Oil-water separators must be installed, inspected monthly, and cleaned when accumulation exceeds design limits.
- Sludge and oily waste must be handled by approved carriers under the [Hazardous Waste Regulation](#).

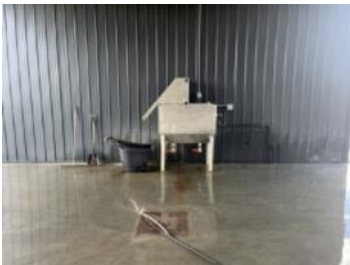
- **Rinsate Management**

- Under the [Integrated Pest Management Regulation \(IPMR\)](#), rinsate from sprayers must be collected and reused on labelled sites, not discharged to sewers or drains.
- A backflow prevention device or air gap is required during tank filling.

- **Regional Specifications**

- Sewer-use bylaws govern discharge quality and maintenance intervals. Always confirm requirements with your local government or regional district.

Where local guidance is unavailable, the [Metro Vancouver](#) and [Capital Regional District](#) sewer-use bylaws provide strong reference standards.



“Our grass clipping separation system features a fully contained sump with a pump and float that transfers wash water, clippings, organic material and debris into a separation unit. Clippings and debris are screened out, followed by three additional separation chambers to ensure only clean water exits the system. This allows us to recycle water used for equipment washing, reduce machinery clogging, and improve operational efficiency and sustainability.”

Mickelson National Golf Club, Canada ▶

View more examples ▶

Water Discharge – Maintenance Facility and Clubhouse

Wastewater from the maintenance facility and clubhouse can include effluent from wash areas, kitchens, bars, locker rooms, and staff facilities, all of which require responsible management. Whether discharge is directed to a municipal sewer or handled through on-site treatment, system performance depends on correct operation, regular maintenance, and close attention to legal requirements.

Best Practices

- **Formal discharge agreement, if applicable.** Confirm whether your facility requires a discharge agreement with the local authority. Adhere to legal parameters for effluent quality, monitoring frequency, and recordkeeping. ★



- **Septic tank.** If using a septic system, ensure it is properly sized, inspected annually, and pumped out regularly to prevent overflow or groundwater contamination.
- **Main sewer.** Where connected to a public sewer, comply with local sewer-use bylaws covering pH, grease, solids, and chemical discharge limits. Maintain grease traps and inspection points to meet local standards.
- **On-site treatment plant.** If operating an on-site package treatment system, conduct regular monitoring and servicing by certified personnel. Maintain maintenance logs, sampling results, and discharge reports as evidence of compliance.
- **Other authorized treatment system.** Alternative or hybrid systems (e.g., constructed wetlands, biofilters) must meet effluent standards approved by the relevant authority. Keep documentation confirming authorization and testing results to demonstrate compliance.

National / Regional Requirements

Clubhouse wastewater generated from kitchens, bars, locker rooms, and maintenance areas is regulated under the [Municipal Wastewater Regulation](#) and municipal sewer-use bylaws. These frameworks ensure wastewater is properly treated before discharge to protect water quality and public health.

- **Sewer Connections**
 - Facilities connected to municipal systems must comply with discharge limits for grease, solids, pH, and temperature.
 - Food service areas must have correctly sized grease interceptors, maintained as per local plumbing codes.
 - Municipal inspectors may request maintenance records and inspection logs during audits.
- **Onsite Systems**
 - Rural or remote clubhouses using septic or on-site systems must meet the [Sewerage System Regulation](#).
 - Systems must be designed, operated, and maintained by registered practitioners, with periodic inspection and pumping schedules documented.
- **Discharge Authorization**
 - Direct discharge to ground or surface water is prohibited unless specifically authorized under the [Municipal Wastewater Regulation](#).
 - Facilities should retain discharge approvals, inspection records, and water quality test results to demonstrate compliance.



“A closed-loop, ‘zero discharge’ wash water treatment system is used for cleaning machinery. Dirty water from the wash rack drain is treated, filtered and looped back for continued use in washing site equipment. The system biologically removes grease, grime, oil and other residues, protecting the surrounding environment from pollution. Fully contained, it recycles all water outflows, cutting costs and minimizing the club’s water footprint day after day.”

Royal County Down Golf Club, Northern Ireland ▶

View more examples ▶



Reduce Need ▶	Use Efficiently ▶	Source Responsibly ▶
Reduce Irrigated Area ▶	Irrigation Technology ▶	Alternative and Lower Impact Water Sources – Golf Course and Grounds ▶
Considerations for Irrigation Scheduling ▶	Irrigation Management and Optimization ▶	Alternative and Lower Impact Water Sources – Maintenance Facility and Clubhouse ▶
	Water Conservation – Maintenance Facility and Clubhouse ▶	
	Efficient Appliances – Maintenance Facility and Clubhouse ▶	

Water shapes the condition, character, and resilience of every golf facility. Its influence extends far beyond irrigation, affecting playing surfaces, landscaped areas, maintenance operations, and the way the course connects to the wider landscape. For golf superintendents, stewarding water well is about more than meeting turf needs. It means managing the course as part of a broader hydrological system, with the opportunity to improve water quality, support healthy habitats, and create landscapes that are better able to absorb, store, and respond to changing conditions.

This matters both on and beyond the course. A water-conscious approach can help sustain presentation and playability while reducing pressure on shared resources, lowering exposure to drought and cost pressures, and contributing to wider benefits such as cooling, infiltration, flood mitigation, and downstream catchment health. In this way, water stewardship becomes not only an operational priority, but a means of delivering environmental value and demonstrating responsible management.

For many facilities, the most immediate gains come from using less water unnecessarily: choosing and managing turf with greater care, reducing demand through more resilient landscape design, and thinking more deliberately about where irrigation adds value and where it can be reduced. Efficiency is equally important, whether through better scheduling, improved system performance, or more disciplined water use across the site. Attention should also be placed on the source itself, including whether alternative supplies or lower-impact options can strengthen long-term security. Together, these decisions shape how well a course performs under pressure and how positively it contributes to the landscape around it.

This action area is intended to help superintendents make those decisions with confidence - connecting day-to-day water management with long-term resource stewardship, environmental responsibility, and operational resilience.



Reduce Need

Using less water unnecessarily is one of the clearest ways to strengthen long-term water stewardship. Looking closely at where irrigation is truly needed and where it may be habitual, excessive, or delivering limited benefit can help superintendents make more deliberate decisions across playing surfaces, landscaped areas, and the wider site. This often creates opportunities to promote firmer, more consistent conditions, lower operating costs, ease pressure on shared water resources, and shape a course that is better adapted to its setting and more resilient in the face of a changing climate.

Reduce Irrigated Area

One of the most direct ways to lower water demand is to reduce the amount of land that depends on routine irrigation. By focusing water use on essential playing surfaces and allowing less critical areas to become more naturalized, superintendents can conserve substantial volumes of water without undermining playability or course quality. Managed well, this can also strengthen the course's character, encourage firmer and more strategic playing conditions, and create a landscape that is more authentic, distinctive and resilient over time.

Best Practice

- **Select appropriate grass species for climate.** Choose turfgrass varieties adapted to local temperature, rainfall, and soil conditions to minimize irrigation demand and improve drought performance.
- **Prioritize firmer, drier conditions in line with expectations and budget.** Engage management and members in setting realistic playability standards that support reduced watering, particularly during dry periods or restrictions.
- **Irrigation targeted to essential playing surfaces only according to legislation and local guidance.** Concentrate irrigation on greens, tees, and high-traffic areas while reducing or eliminating watering on roughs and other non-essential turf.
- **Replace underutilized areas of turfgrass with native vegetation, where possible.** Convert low-play zones into native grassland or shrub areas that require little to no irrigation once established.
- **Naturalize landscaping beds and other non-playing areas.** Transition decorative beds to drought-tolerant plantings that reflect regional ecology and reduce long-term maintenance.
- **Prioritize native drought-tolerant species for landscaping and planting.** Use local, climate-adapted species that thrive under minimal irrigation, support biodiversity, and strengthen the course's natural character.

National / Regional Requirements

Golf courses in BC are operating under increasing pressure to manage water sustainably due to hotter summers and frequent drought advisories. The [Water Sustainability Act](#) and local bylaws regulate how water is sourced, managed, and conserved:

- **Water Licensing**
 - Any golf course drawing from surface or groundwater must hold a provincial [Water License](#), outlining the approved source, volume, and purpose.
 - Both new and existing groundwater users are required to register and maintain compliance with license terms, including beneficial use and reporting.
- **Drought Protection Orders**
 - Under the [Water Sustainability Act](#), the province may issue [Temporary Protection Orders](#), including Water Shortage Declarations, Critical Environmental Flow Protection



Orders, or Fish Population Protection Orders requiring reductions or suspension of water withdrawals.

- **Regional and Municipal Bylaws**

- Local governments may enforce outdoor watering restrictions during droughts. Examples include Metro Vancouver's [Drinking Water Conservation Plan](#) and the Capital Regional District [Water Conservation Bylaw](#), which specify watering days, hours, and permitted uses.

National / Regional Opportunities

A number of provincial tools and programs support irrigation reduction planning and efficient water use on golf courses:

- [Irrigation Industry Association of BC \(IIABC\) Standards](#) provide performance benchmarks for irrigation system design, zoning, and water efficiency.
- BC's [Landscape Water Calculator](#) estimates site-specific water needs based on plant type, soil, and climate to guide planning for footprint reduction.
- BC's [Develop with Care - Golf Courses](#) offers design and management guidance promoting narrower irrigated corridors and native vegetation between holes.
- The Allied Golf Association of BC's [public commitment to water stewardship and restrictions](#) provides a framework for communicating responsible water use and drought response to members and communities.
- Local efficiency programs, such as [CRD Business Water Conservation Services](#), provide audits, rebates, and technical support for efficiency upgrades tied to a reduction in irrigated areas.



"As part of our water optimization strategy, we have eliminated irrigation across 5 hectares of non-critical areas and planted 200,000 mastic trees (Pistacia lentiscus), a native species highly resistant to drought. This initiative has delivered significant water savings and reduced maintenance costs, while also stabilizing soil, preventing erosion, and promoting biodiversity by providing shelter for local wildlife and enhancing the field's natural ecosystem."

La Hacienda Golf Links Resort, Spain ▶

View more examples ▶

Considerations for Irrigation Scheduling

Where irrigation remains necessary, scheduling has a major influence on how effectively water is used. Applying the right amount at the right time depends on close attention to soil moisture, weather conditions, evapotranspiration, and the differing needs of individual areas across the course. A more responsive approach can help superintendents avoid unnecessary watering, maintain healthier turf, and ensure that each application delivers clear benefit. This becomes especially important during periods of drought, restriction, or peak demand, when precision and restraint matter most.



Best Practices

- **Soil moisture.** Base irrigation decisions on soil moisture rather than fixed schedules to ensure water is only applied when required for turf performance and health.
- **Handheld moisture sensors.** Use portable sensors to take spot readings on greens, tees, and high-stress areas. Use these to guide daily decisions and fine-tune irrigation volumes and timing.
- **In-ground moisture sensors.** Install permanent sensors in key zones to monitor trends and automatically adjust irrigation in response to changing soil conditions.
- **Visual observation.** Complement data with field inspections for turf wilt, wear or colour change to confirm readings and refine thresholds.
- **Weather forecasts.** Use short-term forecasts to anticipate rainfall or temperature spikes, adjusting irrigation to prevent overwatering or stress.
- **Data from on-site weather station.** Collect local data on temperature, humidity, rainfall, and wind to improve irrigation accuracy and track site-specific ET rates.
- **Data from off-site weather station.** If no on-site system exists, use the nearest reliable regional station to approximate local conditions for schedule adjustment.
- **Data from online sources.** Use reliable online platforms that combine weather data from multiple stations for a location-specific forecast.
- **Historical climate records.** Analyse long-term climate data to identify seasonal patterns and establish baseline irrigation strategies for normal and dry years.
- **Microclimates around the course.** Map and manage distinct zones, such as shaded greens, elevated tees or undulating fairways, that differ in moisture demand due to wind, shade, or soil variation.
- **Wind speed.** Factor in wind when scheduling irrigation to reduce drift and improve uniformity across treated surfaces.
- **Evapotranspiration rates.** Track ET to understand how much water turf loses daily, adjusting irrigation frequency and volume accordingly to maintain an optimal balance.

National / Regional Requirements

In BC, irrigation needs vary widely by region and season. While there are no specific legal mandates for using sensors or ET-based scheduling, the [Water Sustainability Act](#) and local drought bylaws require facilities to reduce or suspend watering during declared shortage periods. Adopting data-driven scheduling supports compliance, conserves water, and ensures consistent turf quality across variable conditions and climates.

National / Regional Opportunities

BC superintendents can access several resources to optimize irrigation scheduling:

- The Irrigation Industry Association of BC's guide on [Turf and Landscape Irrigation Scheduling](#) provides practical methods for using soil moisture and ET data to develop efficient irrigation schedules.
- BC's [Irrigation Management Guide](#) explains how to integrate soil type, holding capacity, rainfall, and ET data for aligning irrigation with actual plant requirements.
- FarmWest's [ET Data Services](#) provides real-time and reference evapotranspiration data across BC to support accurate irrigation management.



"By using day-to-day technological management solutions such as Maya software and the POGO sensor on the greens, we are able to optimize water consumption as efficiently as possible. Maya integrates course data, including weather, forecasts, irrigation and disease management, to predict course needs, while the POGO sensor provides precise information on green conditions and identifies areas requiring more or less water."

Real Club de Golf La Peñaza, Spain ▶

View more examples ▶





Use Efficiently

Using water efficiently is not simply a matter of using less; it is about applying it with greater accuracy, awareness, and control. When irrigation is timed well, distributed evenly, and adjusted in response to weather, soil moisture, and turf need, superintendents can make better use of every application without compromising quality, presentation, or playability. A more targeted, informed approach helps reduce waste, manage costs, and strengthen the resilience of the course, while reinforcing the long-term value of careful water stewardship within the wider landscape.

Irrigation Technology

Efficient water use depends not only on good scheduling, but on an irrigation system that can deliver water accurately and consistently. Outdated equipment, poor calibration, and uneven pressure can all undermine performance, creating patchy coverage, avoidable waste, and unnecessary energy use. Improvements such as pressure-regulated heads, valve-in-head control, and centralized automation can support greater precision, quicker responses to changing conditions, and better alignment with restrictions during periods of scarcity. Phased upgrades, focused first on the areas of greatest impact, can often deliver meaningful gains in efficiency.

Best Practices

- **Evaluate new irrigation technologies.** Review the latest manufacturer guidance on sprinklers, sensors, and central control software. Pilot products before committing to full installation, comparing factors like distribution uniformity, power use and water savings against the current system.
- **Modern sprinkler heads.** Upgrade to pressure-regulated models to maintain consistent delivery and improve distribution uniformity across elevation changes. Match nozzles for precipitation rate within each irrigation zone.
- **Part circle or adjustable arc sprinklers.** Install along edges, paths, and boundaries to limit overspray onto non-play surfaces. Adjust arcs precisely to match area shape and optimize uniformity.
- **Individual control with valve-in-head systems.** Use sprinklers with independent valve control to fine-tune irrigation schedules. Ensure precise watering of localized dry spots to reduce unnecessary application in surrounding areas.
- **Computer-automated central control systems.** Integrate pumps, sensors, and field controllers under one central platform. Use real-time inputs from weather or soil data to automate run times and remotely adjust irrigation via a computer or mobile device.
- **Manual override of automated systems.** Ensure staff can suspend or adjust automated irrigation easily during rainfall or maintenance. Provide training on when and how to manually override schedules.
- **Automatic rain shut-off switches.** Install sensors that suspend irrigation after a defined rainfall amount (typically 6–12 mm), calibrated to local soils. Position in open, unobstructed locations to prevent false readings.
- **Automatic adjustment to evapotranspiration data.** Link irrigation programs to local or on-site ET data so run times reflect actual plant requirements. Adjust thresholds based on turf type and rooting depth.
- **Automatic adjustment to soil moisture data.** Install soil moisture sensors in representative root zones. Program irrigation to run only when soil moisture falls below pre-set levels, ensuring precise application across varying site conditions.
- **Efficient pumps (variable speed or frequency drive).** Equip irrigation pumps with variable-speed or frequency drives to match flow and pressure to real-time demand. Regularly monitor energy use and system pressure to maintain peak efficiency and minimize mechanical stress.
- **Drip irrigation for gardens and landscaped areas.** Use drip or micro-irrigation to deliver water directly to root zones of shrubs and ornamentals, minimizing evaporation and overspray in non-play areas.



National / Regional Requirements

While not legally required, several industry standards and provincial resources support efficient irrigation system design and performance assessment in BC:

- IIABC [Standards for Landscape Irrigation Systems \(2018\)](#) establish benchmarks for pressure regulation, distribution uniformity, and controller functionality.
- [BC Irrigation Management Guide - Chapter 6: System Performance & Efficiency](#) provides design and maintenance guidance for irrigation uniformity, energy efficiency, and automation.
- Investment Agriculture Foundation of BC's [Water Infrastructure BMP's](#) offer funding and technical support for system upgrades, including metering, backflow prevention, and efficiency improvements.



"We have implemented a state-of-the-art irrigation system across all greens, installing new high-efficiency sprinklers connected to an innovative control system that allows precise, individual regulation of each sprinkler. This ensures only the necessary amount of water is applied to maintain optimal turf health and reduce waste. Annual water consumption is expected to decrease by 40–50%, with automated scheduling and real-time adjustments further improving efficiency and reliability."

Kungsbacka Golfklubb, Sweden ▶

[View more examples ▶](#)

Irrigation Management and Optimization

Even a well-designed system depends on careful day-to-day management to perform at its best. Optimizing irrigation is an ongoing process of adjustment, using weather, soil conditions, turf response, and system performance to refine how water is applied across the course. Regular auditing, fine-tuning, and staff awareness all play a role in maintaining efficiency over time. This more attentive approach can help superintendents protect turf quality, conserve resources, control costs, and stay aligned with water restrictions or license conditions.

Best Practices

- **Provide staff training on efficient irrigation practices.** Use recognized certification, accreditation or internal workshops to teach scheduling, catch-can testing, soil moisture monitoring, and manual spot watering. Emphasize how ET rates, infiltration, and root-zone depth affect run times.
- **Adjust sprinkler heads to water playing surfaces only.** Regularly inspect coverage patterns to eliminate overspray on paths, bunkers, and natural areas. Use part-circle or adjustable heads near boundaries and features.
- **Adjust sprinkler heads according to site topography.** Shorten run times or split cycles to prevent runoff on slopes. Install check valves in low areas to prevent low-head drainage after shutdown.
- **Adjust sprinkler heads according to climate (e.g., wind speed and direction).** Apply triangular spacing in wind-prone areas for even coverage and reduce or delay irrigation during high winds to minimize drift.
- **Water in the evenings or at night.** Operate between 10 pm and 6 am when temperatures and wind speeds are lower. Confirm that pump capacity and pressure regulation are sufficient for nightly flow demand.



- **Hand water when appropriate.** Use quick-coupler valves to manually target stressed turf areas. Focus water on high-value zones like greens and tees during restrictions or dry spells.
- **Irrigation audit by staff or volunteers at your facility.** Carry out annual internal audits using catch-can tests and pressure checks to identify inefficiencies such as mismatched nozzles or poor spacing.
- **Irrigation audit by external professional.** Engage a certified irrigation auditor every 3–5 years to evaluate distribution uniformity (DU), scheduling efficiency, and overall system performance.
- **Check for pipe leaks in the irrigation system.** Monitor water meters for abnormal consumption and visually inspect valves, joints, and fittings. Install pressure or flow sensors to support early detection of leaks.
- **Conduct a catch-can test and calculate distribution uniformity.** Run a zone, measure water collected in containers, and calculate DU. A uniformity above 80% is ideal; adjust heads or replace nozzles if below the target value.
- **Remove sprinkler heads where irrigation is unnecessary.** Cap or remove heads in naturalized or non-play areas. Where feasible, convert multi-row zones to single-head control for precision management.

National / Regional Requirements

Efficient irrigation management is critical in BC's variable climate and complex landscapes. While not legally prescribed, effective optimization ensures compliance with [Water Sustainability Act](#) license conditions and local drought bylaws.

National / Regional Opportunities

- [IIABC Certification & Training programs](#) provide professional education in irrigation auditing, system performance, and efficient scheduling.
- [BC's Irrigation Management Guide](#) offers detailed procedures and worksheets for evaluating pressure, distribution uniformity, and scheduling efficiency.
- Regional efficiency programs, such as [CRD's Business Water Conservation Services](#), supports facilities in Greater Victoria through water audits, technical advice, and rebate programs for system upgrades.



"We have installed 45 new Quick Couplers within the existing irrigation system, mainly on fairways, to reduce reliance on sprinklers, conserve water and target localized dry spots more effectively. By prioritizing hoses over running sprinkler heads, the club has reduced annual water usage. Wetting agent attachments can also be added to improve water infiltration and retention in identified historical dry spot areas."

Shaughnessy Golf and Country Club, Canada ▶

View more examples ▶



Water Conservation – Maintenance Facility and Clubhouse

Water stewardship extends beyond the irrigation system itself. Maintenance facilities and clubhouses, including workshops, wash bays, machinery areas, kitchens, and washrooms, can all account for a significant share of water use, often through small inefficiencies that go unnoticed day to day. Monitoring consumption, reviewing working practices, and identifying avoidable losses can help facilities reduce waste, lower costs, and show a more complete commitment to responsible water management across the whole site.

Best Practices

- **Monitor and record water consumption.** Use water bills, sub-meters, or flow meters to track facility water use. Establish baseline data to identify anomalies and target improvements.
- **Understand seasonal trends in water consumption.** Analyse monthly and seasonal variations to anticipate peak demand and spot leaks or inefficiencies during low-use periods.
- **Water audit by facility staff or volunteers.** Conduct annual in-house reviews of taps, hoses, toilets, and wash stations. Check for leaks, flow rates, and automatic shutoff.
- **Water audit by external professional.** Every few years, bring in an auditor to benchmark performance, identify high-use areas, and quantify potential savings through fixture or process upgrades.
- **Encourage water-saving practices among staff and visitors.** Train staff on efficient water use in cleaning, irrigation, and vehicle washing. Display signage to promote responsible habits in locker rooms, kitchens, and maintenance areas.

National / Regional Requirements

In BC, water use in maintenance facilities falls under general water licensing and municipal utility regulation. Although not governed by standalone facility standards, accurate monitoring and reporting are essential for compliance.

- **Water Licensing**
 - Under the [Water Sustainability Act](#), any non-domestic water withdrawal must be licensed and used beneficially. Licenses may require tracking or reporting total water use, including facility consumption.
- **Municipal Metering**
 - Local governments and utilities require metered connections for billing and may request usage data for audits, drought management, or conservation programs.

National / Regional Opportunities

Resources and programs across BC can support facility water conservation:

- The Capital Regional District (CRD) offer [Efficiency Audits](#), including leak detection, fixture assessment, usage analysis, and financial recommendations for upgrades.
- This [Manual for Conducting Water Audits and Developing Water Efficiency Programs at Federal Facilities](#) offers a practical, step-by-step approach to auditing, developing water balances, and planning efficiency projects applicable to golf course operations.



“Following a drought, we strengthened water conservation measures within the clubhouse and other buildings. Blow driers were installed in locker rooms to reduce towel washing, showers were temporarily closed with waterless soap provided as an alternative, and clubhouse water pressure was reduced. Cotton napkins and tablecloths were removed to cut washing needs, while upgraded air conditioning units also helped reduce water use.”

Atlantic Beach Links, South Africa ▶

View more examples ▶

Efficient Appliances – Maintenance Facility and Clubhouse

Fixtures and equipment within buildings can make a significant difference to overall water use. Older plumbing fittings, hose stations, and wash equipment often use far more water than modern alternatives. Replacing these with efficient, compliant systems can offer a straightforward and cost-effective way to reduce consumption, while also supporting operational standards and reinforcing a wider culture of conservation.

Best Practices

- **Volume reducers in cisterns.** Install displacement devices or dual-flush systems to reduce the amount of water used per flush without compromising performance.
- **Low-flow toilets or waterless urinals.** Replace older units with low-volume or waterless alternatives certified to meet efficiency standards.
- **Motion-sensor or percussion taps.** Use automatic shut-off taps in locker rooms, washrooms, and workshops to reduce waste from taps left running.
- **Aerators on shower heads and sink taps.** Fit aerators to mix air with water, maintaining pressure while reducing flow.
- **Efficient shower heads.** Install low-flow shower heads rated to current plumbing standards for flow rate and performance.
- **Efficient dishwashers.** Select commercial or staff-use dishwashers with high water efficiency ratings or eco-modes.
- **Efficient washing machines.** Choose front-loading or high-efficiency models that use less water per cycle and optimize rinse performance.

National / Regional Requirements

In BC, all plumbing fixtures and appliances must comply with the [BC Plumbing Code 2024](#) and local bylaws, which establish efficiency standards for taps, toilets, urinals, and showers:

- **BC Plumbing Code**
 - Sets efficiency criteria for dual-flush toilets, low-flow urinals, washroom faucets, kitchen taps, and shower heads. It also supports non-potable water systems, allowing recycled or rainwater use for approved applications.
- **Local Bylaws and Permits**
 - Municipal building permits may add conditions for low-flow spray wands, automatic shut-off valves, or water recycling systems in wash bays or maintenance areas.



National / Regional Opportunities

Several provincial and institutional standards help facilities select efficient, compliant equipment and identify opportunities to upgrade:

- [The British Columbia Institute of Technology \(BCIT\) Facility Standards](#) recommend selecting plumbing fixtures that deliver the highest performance at the lowest practical water flow. This is useful as a benchmark for golf facilities updating or expanding maintenance buildings.
- Some utilities and suppliers offer rebates or technical guidance for [WaterSense](#) certified or equivalent fixtures, including low-flow toilets, automatic shut-off valves, and efficient wash bay spray systems. These programs can reduce upgrade costs while ensuring compliance with provincial codes.



"In a bid to enhance sustainability practices, our golf club recently underwent a significant renovation, implementing modern solutions aimed at conserving resources without compromising convenience. Traditional restroom faucets were replaced with automatic ones, urinals were converted to waterless fixtures, and the sauna was changed to operate on a timed schedule rather than running continuously. These upgrades help reduce water and energy use across the clubhouse."

Golf Pirkkala, Finland ▶

[View more examples ▶](#)





Source Responsibly

Where water comes from matters just as much as how it is used. A more responsible approach to sourcing begins with understanding the origin of supply, the rules and constraints that govern it, and the pressures that may affect its reliability over time. With that knowledge, superintendents can make more informed decisions about supply, storage, and long-term planning, helping the facility reduce pressure on shared resources, strengthen resilience, and play a more considered role within the wider catchment.

Alternative and Lower-Impact Water Sources – Golf Course and Grounds

Broadening the range of water sources available to the course can strengthen security and reduce reliance on supplies that may be under growing pressure. Options such as reclaimed water, stormwater capture, on-site storage, and appropriately licensed groundwater can all help facilities respond more confidently to drought, restriction, and long-term uncertainty. Where these sources are feasible and well managed, they can support playability, improve resilience, and ease demand on shared water resources.

Best Practices

- **Irrigate with recycled wastewater.** Use reclaimed wastewater where infrastructure and regulations allow. Ensure treatment levels meet local health and environmental standards for turf irrigation.
- **Irrigate with groundwater (e.g., borehole).** Secure appropriate abstraction licenses and monitor water levels to ensure withdrawals don't affect neighbouring wells or ecosystems.
- **Irrigate with water from an on-site retention pond.** Capture runoff or excess irrigation water for reuse. Use ponds to improve local watershed management, moderating peak flows during storms, recharging groundwater, and contributing to healthier, more resilient landscapes during drought.
- **Irrigate with treated sewage effluent (TSE).** Partner with municipalities or treatment facilities to reuse treated effluent, ensuring compliance with quality, monitoring, and exposure category requirements.
- **Irrigate with desalinated water.** Where feasible, consider small-scale desalination systems in coastal areas with limited freshwater, ensuring energy use and discharge are managed responsibly.
- **Avoid using any water from a public drinking source.** Eliminate or phase out the use of potable municipal water for irrigation, except for essential or safety purposes.
- **Water abstraction permit.** Obtain and maintain a valid license for all non-domestic water use. Record volumes and follow conditions for withdrawal limits and conservation measures. *
- **Report water consumption to the relevant authority.** Submit usage data if required by license conditions or drought management programs to demonstrate responsible use. *

National / Regional Requirements*

Alternative water sourcing in BC is tightly regulated to ensure safe use and the protection of ecosystems:

- **Water Sustainability Act**
 - The [Water Sustainability Act](#) requires a license for all non-domestic groundwater withdrawals, including wells used for irrigation or pond filling. Licenses often include reporting and conservation conditions.
- **Municipal and Regional Regulations**
 - The [Municipal Wastewater Regulation](#) and accompanying [Reclaimed Water Guideline](#) establish treatment standards, registration, and monitoring requirements for using treated sewage effluent. Facilities must comply with water quality limits and operational categories.



Local regulations and bylaws often govern stormwater management, reservoir construction, and potable water connections. Many municipalities discourage irrigation with drinking water and may require environmental assessments for new reuse or storage systems.

National / Regional Opportunities

There are several resources and programs for diversified, lower-impact water sourcing in BC:

- The [BC Stormwater Planning Guidebook](#) outlines best practices for capturing, storing, and reusing stormwater through ponds, cisterns, and landscape design.
- The [Agriculture Water Infrastructure Program](#) offers cost-shared funding for feasibility studies, engineering designs, and construction of new storage or supply infrastructure.
- BC’s [Infrastructure Planning Grant Program](#) provides up to \$10,000 for integrated water, stormwater, or liquid waste management plans—potentially including golf course projects.
- The [Natural Infrastructure Fund](#) provides federal funding for projects that use natural or hybrid systems (e.g., ponds, wetlands, vegetated buffers) to enhance water resilience and ecosystem services.



“We have commenced our second full season of irrigating the golf course with Treated Sewage Effluent (TSE), repurposing wastewater from Harmony Town to support sustainable water management and reduce our environmental footprint. TSE also contains nutrients that can enhance turfgrass health and reduce fertilizer requirements. In anticipation of drought and potential water restrictions in Alberta, this approach helps maintain water security, free up resources for other users, cut costs and alleviate pressure on the course.”

Mickelson National Golf Club, Canada ▶

[View more examples ▶](#)

Alternative and Lower-Impact Water Sources – Maintenance Facility and Clubhouse

Buildings and service areas offer other practical opportunities to reduce reliance on potable water. Rainwater harvesting, greywater reuse, and the recycling of suitable non-potable supplies can support activities such as washdown, toilet flushing, and irrigation of ornamental or landscaped areas. Used appropriately, these measures can lower operational costs and extend responsible water stewardship beyond the course itself.

Best Practices

- **Wastewater recycling system.** Capture and treat suitable wastewater streams for reuse in non-potable applications such as washdown, toilet flushing, or irrigation, in line with relevant health, safety, and environmental requirements.
- **Rainwater collection system on roof.** Collect rainwater from building roofs for non-potable uses such as equipment washing, toilet flushing, or landscape irrigation. Ensure appropriate filtration, storage, and overflow management.



- **Rainwater collection system in car park.** Capture runoff from suitable hard surfaces such as car parks or service yards for reuse where feasible. Incorporate treatment and pollution controls to manage sediments, oils, and other contaminants.
- **Reuse wastewater from sinks and showers.** Assess opportunities to collect and treat greywater for non-potable uses, ensuring that system design and end uses comply with relevant building, public health, and environmental requirements.

National / Regional Requirements

The same regulations and opportunities that govern water sourcing for the golf course also apply to clubhouse and maintenance buildings. Facilities can reduce potable water demand by capturing rainwater or stormwater for wash bays, toilets, or irrigation equipment cleaning, and by reusing greywater where permitted under the Municipal Wastewater Regulation. Small cisterns or storage tanks, combined with backflow prevention and proper plumbing, as required by the [BC Plumbing Code 2024](#), are practical options.



"We initiated a sustainability project by repurposing old Intermediate Bulk Containers (IBCs) for rainwater harvesting. The collected rainwater is used for various turf-applied products, helping optimize resource use and reduce reliance on mains water. This approach enhances the efficiency of our applications while turning outdated containers into environmentally friendly storage tanks, demonstrating our commitment to resource efficiency and sustainable land management."

Cabot Cape Breton, Canada ▶

[View more examples ▶](#)





Reduce Need ▶	Use Efficiently ▶	Source Responsibly ▶
Avoid Unnecessary Golf Course Maintenance ▶	Efficient Technology – Maintenance Facility and Clubhouse ▶	Work Towards Renewable Energy – Maintenance Facility and Clubhouse ▶
Electric, Hybrid or Alternative Fuel Vehicles ▶		
Understand Energy Consumption – Maintenance Facility and Clubhouse ▶		
Passive Design – Maintenance Facility and Clubhouse ▶		
Green Transport – Maintenance Facility and Clubhouse ▶		

Energy use and emissions are increasingly important to how golf facilities perform, adapt, and plan for the future. Their impact reaches across the whole operation, from maintenance activities and fleet management to buildings, infrastructure, and the movement of people and materials around the site. For golf superintendents, this is not simply a question of utilities or machinery. It is part of shaping an operation that is efficient, cost-aware, and better prepared for the pressures of climate change, rising energy prices, and changing expectations.

Handled well, this can deliver immediate practical benefits as well as longer-term environmental gains. Lower energy demand can reduce operating costs, improve the working environment, and make day-to-day systems more efficient and dependable. At the same time, cutting emissions helps facilities respond more credibly to climate responsibilities and strengthens the long-term resilience of the operation.

In many cases, progress comes first from examining where energy is being used unnecessarily and where demand can be reduced without compromising standards. That may involve naturalizing areas that require frequent inputs, choosing lower-energy equipment, improving how buildings and infrastructure are used, or rethinking transport and vehicle use across the facility. Beyond this, there are opportunities to improve efficiency through better technology, stronger building performance, and more disciplined operational management. Energy supply also matters, particularly as facilities look at renewable energy, lower-carbon systems, and cleaner on-site options where these are practical and appropriate.

Together, these choices can help golf facilities become leaner, more resilient, and better aligned with the direction of travel across the wider economy. This action area is designed to help superintendents identify where the biggest opportunities lie and respond in a way that is practical, informed, and relevant to local conditions.



Reduce Need

Reducing energy demand is one of the most effective ways to lower emissions and improve long-term efficiency. This typically means looking carefully at how the course, built landscape, and wider operation are designed and managed, and where unnecessary energy consumption can be designed out. This may involve naturalization, passive design, and more thoughtful use of space, shade, shelter, and infrastructure. Done well, it can reduce running costs and emissions while creating a site that feels more characterful, more authentic, and better adapted to a changing climate.

Avoid Unnecessary Golf Course Maintenance

One of the most direct ways to reduce energy demand is to question where intensive maintenance is genuinely needed. Areas with limited influence on play, strategy, or overall presentation may offer opportunities for naturalization, lower-input vegetation, or managed grazing where appropriate. Reducing the extent of routine mowing and other energy-intensive operations can lower fuel and electricity use, cut operating costs, and create a course that feels more coherent, more distinctive, and more ecologically expressive.

Best Practice

- **Naturalize non-playing areas to reduce mowing and other energy-intensive inputs.** Identify areas outside normal play corridors, such as out-of-bounds zones, steep slopes, and course perimeters, that can be transitioned to naturalized vegetation. Reduce mowing frequency progressively, allow succession to occur, and introduce native seed mixes suited to soil and microclimate conditions.
- **Modify or remove energy-intensive features (e.g., sand bunkers).** Audit the number and maintenance requirements of bunkers and ornamental elements, noting fuel, sand, and labour inputs. Remove or reshape underused bunkers, convert to grass hollows or rough, and consolidate smaller features to simplify upkeep while maintaining strategic value.
- **Prioritize low-irrigation and low-maintenance vegetation types.** Select regionally adapted, drought-tolerant turfgrass and native species that thrive with minimal inputs. Establish plantings with proper soil preparation and adjust irrigation zones and mowing patterns to match their lower maintenance needs.
- **Use animals to manage roughs and grasslands (sheep, deer, etc.).** Where permitted, introduce controlled grazing rotations to replace or reduce mechanical mowing. Install temporary fencing to protect greens and tees, and coordinate grazing schedules to coincide with periods of slower turf growth and low course activity.

National / Regional Requirements

There are no regulations in BC mandating naturalization or low-input landscape management to conserve energy. However, these actions support [CleanBC](#) objectives and many municipal climate action strategies, which encourage reductions in fuel consumption, greenhouse gas emissions, and maintenance intensity across landscapes. Reducing mowing frequency, rethinking bunker maintenance, and using grazing or native plantings all align with the province's emphasis on sustainable land use and carbon reduction.

National / Regional Opportunities

There are several resources and funding opportunities that promote naturalization, biodiversity, and low-input land management in BC:

- BC's [Develop with Care - Golf Course Factsheet](#) provides provincial guidance encouraging habitat expansion, reduced mowing, and simplified course design to lower energy demand and enhance ecosystem value.



- The [Habitat Conservation Trust Foundation \(HCTF\)](#) provide grants for native grassland and habitat restoration projects that replace high-maintenance areas with natural ecosystems.
- BC Grassland's [Conservation Topics](#) showcase grazing-based management approaches from ranching that can be adapted to golf courses for maintaining roughs and open grasslands efficiently.



"We have strategically reduced the area of intensively maintained rough to reduce both maintenance time and fuel consumption. The natural areas have gradually expanded over the years, now encompassing approximately 5.5 hectares. By lowering the frequency of mowing and irrigation, we have reduced fuel consumption and annual maintenance costs, saving €2500 while also promoting flora diversity and supporting local biodiversity."

Suur-Helsingin Golf Lakisto, Finland ▶

[View more examples ▶](#)

Electric, Hybrid or Alternative Fuel Vehicles

The types of machinery and equipment used has a major influence on emissions, noise, and running costs. Electric, hybrid, and alternative-fuel vehicles can now meet many of the practical demands of turf management and site operations while aligning more closely with wider sustainability objectives. Focusing first on high-use or aging equipment can help facilities achieve the greatest benefit, while also improving working conditions and reducing reliance on conventional fuels over time.

Best Practices

- **Electric golf carts.** Replace petrol-powered carts with electric models featuring regenerative braking and lithium-ion batteries. Install dedicated charging points near cart storage areas and maintain a routine inspection schedule for batteries and connectors.
- **Electric mowers.** Prioritize electric walk-behind or ride-on mowers for greens and tees where low noise and precision are essential. Assess charging capacity and daily run time needs before full conversion. Monitor energy use to track efficiency gains.
- **Electric robotic mowers.** Deploy robotic mowers in roughs or out-of-play areas to reduce fuel use and labour hours. Ensure perimeter wires or GPS boundaries are correctly configured. Maintain regular cleaning and blade checks to optimize performance.
- **Electric utility vehicles.** Use electric or plug-in hybrid utility vehicles for course maintenance and transport. Plan charging infrastructure in central locations and select models with sufficient range for daily operations without mid-shift charging.
- **Electric cars.** Provide EV charging stations for staff and visitors, ideally powered by renewable energy where feasible. Track usage data to inform future charging infrastructure upgrades and energy management.
- **Electric tools (string trimmers, leaf blowers, etc.).** Phase out small gas-powered tools and switch to battery-operated versions with interchangeable battery systems. Train staff in proper charging, rotation, and storage to maximize battery life and reduce downtime.
- **Hybrid vehicles.** Where full electrification is not yet practical, replace older gas or diesel models with hybrids that automatically switch between fuel and electric power. Focus these on long-range or multi-purpose transport roles.



- **Hybrid mowers.** Adopt hybrid reel or rotary mowers that combine battery and combustion power to reduce emissions while maintaining runtime. Schedule servicing and monitor performance data to assess cost and fuel savings over time.
- **Solar-powered machinery.** Incorporate solar charging systems for carts, robotic mowers, and lighting where grid access is limited. Ensure panels are kept clean and unshaded to maintain efficiency.
- **Alternative-fuel vehicles.** Evaluate biodiesel or hydrogen-powered options for heavy machinery where electric alternatives are not yet viable. Confirm compatibility with existing infrastructure and ensure staff are trained in safe handling and refuelling procedures.

National / Regional Requirements

There are no provincial or federal mandates requiring golf courses in BC to replace internal-combustion vehicles. However, [CleanBC](#) targets net-zero emissions across transportation sectors and encourages the adoption of zero-emission vehicles and battery-powered equipment.

Many municipal climate strategies set voluntary or incentivized reduction goals for small-engine and fleet emissions. Local idling bylaws, typically limiting idling to three minutes, also apply to maintenance fleets and course vehicles operating on or near public roads.

National / Regional Opportunities

Golf courses in BC have access to several programs and resources to support the transition to electric, hybrid, or alternative-fuel vehicles:

- [Plug In BC](#) offers advisory services, case studies, and rebates for zero-emission vehicle adoption, including maintenance carts and small utility vehicles.
- [CleanBC's Go Electric Fleets Program](#) supports fleet assessments and provides funding for EV purchases and charging infrastructure.



"Electric equipment has been integrated into our fleet, including autonomous mowers, line trimmers, backpack blowers, rotary push mowers and a mobile charging station. The electric fleet operates at a lower decibel level than traditional gas-powered tools, reducing noise disruption in high-profile areas and to wildlife. Autonomous mowers also enhance efficiency by allowing labour to be redirected, while supporting our goal of reducing emissions."

Shaughnessy Golf and Country Club, Canada ▶

[View more examples ▶](#)

Understand Energy Consumption – Maintenance Facility and Clubhouse

Reducing energy demand within buildings often starts with understanding where and how energy is being used. Maintenance facilities and clubhouses often account for a significant share of total consumption through lighting, heating, cooling, ventilation, equipment use, and charging systems. Tracking when and where energy is used can reveal inefficiencies such as idle machinery, poor insulation, or outdated systems, while also providing a stronger basis for budgeting, maintenance planning, and more informed investment in efficiency improvements.



Best Practices

- **Monitor and record energy consumption (bills, meters, etc.).** Record monthly electricity, fuel, and heating use separately. Keep copies of bills and meter readings to build a clear picture of total energy demand and detect spikes caused by equipment or seasonal use.
- **Understand seasonal trends in energy consumption throughout the year.** Compare winter heating, summer cooling, and equipment-use periods to identify patterns and potential inefficiencies. Use this data to plan equipment servicing and schedule high-demand activities during off-peak energy periods.
- **Energy audit by staff or volunteers at your facility.** Inspect buildings for unnecessary lighting, heat loss, or running equipment outside of working hours. Check for insulation gaps, unsealed doors, and outdated bulbs or appliances that could be upgraded.
- **Energy audit by external professional.** Hire a certified energy auditor to evaluate building insulation, heating and ventilation systems, and workshop equipment. Use recommendations to implement practical actions and identify upgrades that qualify for efficiency rebates.
- **Visit energy provider's website for tips.** Review resources from local utilities for energy-saving tools and funding programs. Implement practical actions like timer controls, motion-sensor lighting, or programmable thermostats based on recommendations.

National / Regional Requirements

There are no specific BC regulations requiring golf facilities monitor or report energy use. However, [CleanBC Roadmap](#) and related municipal climate strategies encourage all commercial operations to track and reduce energy consumption. Demonstrating active monitoring shows alignment with these policies and can support future compliance with reporting or emissions-reduction programs.

National / Regional Opportunities

Golf facilities can also take advantage of several resources and incentive programs to measure and improve energy performance:

- [BC Hydro](#) offer free or subsidized energy audits for small and large businesses, identifying inefficiencies in lighting, heating, and electrical systems.
- [ENERGY STAR Portfolio Manager](#) is a national benchmarking tool to track and compare energy performance in commercial buildings like workshops.



"Following an assessment of the facility by an energy consultant in 2021, several measures were implemented, including replacing outdated direct-acting electric radiators with oil-filled alternatives, resealing windows where required, installing a new water heater and an additional air source heat pump, and introducing individual electricity meters in all houses. These upgrades proved highly beneficial and support our sustainability goals by reducing reliance on grid electricity and lowering our carbon footprint."

Viksjö Golfklubb, Sweden ▶

View more examples ▶



Passive Design – Maintenance Facility and Clubhouse

Building performance can often be improved by reducing reliance on mechanical systems altogether. Passive design measures such as natural daylighting, shading, insulation, ventilation, and thoughtful orientation can all help lower heating, cooling, and lighting demand while improving comfort and day-to-day usability. Whether introduced through retrofit or incorporated into new development, these features can deliver long-term energy savings with less operational complexity and greater resilience over time.

Best Practices

- **Capture natural lighting (skylights, large windows, sunlight pipes, etc.).** Position skylights or clerestory windows to maximize daylight, reducing the need for artificial lighting. Use diffused glazing or light tubes to minimize glare and heat gain while maintaining consistent illumination.
- **Extensions to add heat from sun.** Design south-facing extensions or sunspaces to collect solar heat in winter. Use thermally massive materials (e.g., concrete or brick) to store and gradually release warmth into adjoining areas.
- **Use exposure to ventilate naturally.** Incorporate operable windows, vents, or ridge openings on opposite walls to create cross-ventilation. Use higher-level vents or clerestories to release warm air and maintain comfortable internal temperatures without fans.
- **Plant trees and shrubs to insulate from wind or provide shade.** Position deciduous trees to shade the building in summer and allow sunlight in winter. Use evergreens or shrubs as windbreaks on exposed sides to reduce heat loss and buffer against temperature extremes.
- **Low U-value insulation (walls, ceilings/roofs).** Install or retrofit with insulation that meets or exceeds current building code standards. Focus on roof and wall assemblies, sealing gaps and joints to prevent thermal bridging and air leakage.
- **Double/triple window glazing.** Use high-performance glazing with low-emissivity coatings to maintain stable indoor temperatures. Prioritize triple glazing for exposed elevations or high-altitude sites where winter heat loss is greatest.

National / Regional Requirements

There are no provincial or federal laws that require passive design in golf course maintenance facilities. However, all new construction and major renovations must comply with the [BC Building Code](#), which sets minimum standards for building envelope performance, insulation, and glazing.

Municipalities may also adopt the [BC Energy Step Code](#), which raises efficiency standards incrementally. Facilities located in jurisdictions adopting higher steps may need to meet more stringent air-tightness, insulation, and window performance criteria.

National / Regional Opportunities

Passive design aligns strongly with provincial climate and energy efficiency goals, with several programs providing practical guidance and incentives:

- BC's [Energy Step Code Resources](#) offer best-practice guides for improving orientation, envelope insulation, glazing, and air sealing beyond minimum code.
- [Passive House Canada](#) provides training, case studies, and technical advice on passive strategies suitable for smaller facilities, including daylighting, airtightness, and thermal performance.
- [Better Buildings BC](#) supports high-performance building projects with funding and design guidance for integrating passive design features.



"In 2018, we moved to our newly built sustainable clubhouse, erected as a timber construction on a concrete slab foundation. The roof is covered with solar panels, providing a return of approximately 30% of the running cost, while the building also has heated floors and LED lighting. A greenhouse provides a pleasant climate in early spring and late autumn, and additional lockers have encouraged more golfers to arrive by bicycle."

Golf Ockenburgh, Netherlands ▶

View more examples ▶

Green Transport – Maintenance Facility and Clubhouse

A facility's energy and emissions profile is shaped not only by what happens on site, but also by how people travel to and from it. Supporting lower-carbon options such as electric vehicle charging, public transport access, cycling infrastructure, and safe pedestrian routes can help reduce transport-related emissions while making the site more accessible and future-ready. When considered as part of wider planning and investment, these measures can strengthen the facility's sustainability credentials and respond more credibly to changing expectations around climate, emissions and mobility.

Best Practices

- **Electric car chargers.** Install fast chargers in parking areas accessible for members, guests, and staff. Prioritize chargers compatible with multiple vehicle types and consider solar-assisted or off-peak charging to lower energy costs.
- **Bus route.** Work with local transport authorities to ensure public transit stops are available nearby and clearly signposted. Provide timetable information on the website and in the clubhouse to make access easier for members, guests and staff.
- **Bicycle path.** Support safe cycling access by maintaining a clear, signposted route between the course and nearby roads or trails. Where possible, coordinate with local councils to link paths into existing community cycling networks.
- **Bicycle storage.** Provide secure, weather-protected racks or lockers near main entrances. Position them in visible, well-lit areas to encourage use and deter theft.
- **Incentives to walk or cycle.** Encourage staff and members through small incentives such as reduced fees, recognition programs, or access to preferred parking for those who regularly walk or cycle. Promote active transport in newsletters and sustainability updates.

National / Regional Requirements

There are no province-wide laws requiring golf courses in BC to provide EV charging, bicycle facilities, or public transport connections. However, local government bylaws often set conditions for EV-ready parking and active transport infrastructure as part of new developments or major renovations. For example, the City of Vancouver Building By-law mandates EV-ready parking spaces in most new off-street areas, and similar provisions have been adopted by municipalities across the province through zoning and community plans. Facilities undergoing upgrades must meet these local requirements when applicable.



National / Regional Opportunities

BC's climate and mobility initiatives actively support green transport planning and investment:

- [CleanBC Go Electric](#) provides rebates and planning support for Level 2 and DC fast charger installations at workplaces and public sites.
- [BC Hydro](#) offers funding, technical advice, and case studies for commercial charging infrastructure.
- The Province of BC also have [Active Transportation Grants](#) that fund projects to improve walking and cycling routes, including links to recreational destinations like golf courses.



"We are committed to helping people stay healthy not only by playing golf, but by staying active while travelling to and from the club. We have therefore installed a secure bicycle storage area for members and guests to encourage more people to ride to the club, knowing their bikes are secure. This provides a greener alternative to travelling by car, with the option to add more storage if required."

The West Lancashire Golf Club, England ▶

[View more examples ▶](#)





Use Efficiently

How energy is used day to day has a major influence on both emissions and operational performance. In golf facilities, this includes the systems that keep buildings and workplaces functioning effectively, from lighting, heating, cooling, ventilation, and hot water to the controls and equipment that support them. When these systems are well chosen, properly maintained, and managed with greater care, facilities can cut unnecessary energy use, lower costs, reduce emissions, and create working environments that are more comfortable, efficient, and better prepared for the future.

Efficient Technology – Maintenance Facility and Clubhouse

Much of a facility's energy performance depends on the technology it relies on every day. In maintenance buildings and clubhouses, upgrades to lighting, heating, cooling, ventilation, hot water systems, and appliances can deliver meaningful reductions in energy use without compromising comfort, safety, or reliability. When paired with smart controls and well-specified equipment, these improvements can lower running costs, reduce operational emissions, and help ensure that buildings perform to a higher standard over the long term.

Best Practices - Lighting

- **Energy efficient landscape lighting.** Use LED fixtures with directional shields to reduce light spill and energy use in car parks, pathways, and landscaping. Connect to timers or sensors to run only when needed.
- **LED lightbulbs.** Replace halogen and fluorescent bulbs with LEDs across all facilities.
- **PIR motion sensors.** Install passive infrared (PIR) or occupancy sensors in offices, workshops, and storage areas to automatically switch off lights when unoccupied.
- **Automatic timers.** Use programmable timers or daylight sensors for lighting in clubhouses, wash bays, and outdoor spaces. Adjust settings seasonally to align with daylight hours.
- **Voltage optimizer.** Consider voltage optimization units to stabilize supply and improve equipment lifespan where multiple lighting circuits run continuously.
- **Adjust lighting seasonally.** Review schedules twice a year to reflect changing daylight patterns and operational hours.

Best Practices – Heating and Cooling

- **Adjust heating and cooling settings seasonally and train staff.** Program thermostats to match occupancy patterns and set temperature bands to avoid unnecessary energy use. Train staff on efficient operation.
- **Upgrade to more efficient heating or cooling systems.** Replace old boilers, furnaces, or air-conditioning units with efficiency-rated or heat pump systems. Include zoning controls to match use areas.

Best Practices - Vehicles

- **Service vehicles regularly.** Maintain engines, filters, and tire pressure to improve efficiency and extend lifespan.
- **Fit golf carts with auto switch-off.** Install or activate idle-off features to prevent unnecessary power draw.



- **Charge vehicles during non-peak hours.** Schedule EV charging overnight or during off-peak energy times to reduce costs and grid strain.

Best Practices - Lighting

- **100% of appliances A-rated or equivalent.** Prioritize top-rated appliances in kitchens, offices, and staff areas to minimize energy use.
- **More than 50% of appliances A-rated or equivalent.** For older facilities, set a target to replace over half of all appliances with high-efficiency models within the next upgrade cycle.

National / Regional Requirements

There are no BC-specific regulations requiring golf courses to install efficiency technologies. However, the [BC Building Code](#) governs lighting, insulation, and HVAC system performance in new builds and major retrofits.

Where adopted, the [BC Energy Step Code](#) sets higher energy performance targets that encourage LED lighting, advanced controls, and efficient heating and cooling systems.

Nationally, the [Energy Efficiency Act](#) sets minimum standards for equipment and appliances sold in Canada, gradually eliminating outdated, inefficient models from the market.

National / Regional Opportunities

Golf facilities can take advantage of several programs and rebates to support energy efficiency upgrades:

- [BC Hydro](#) provides rebates and technical advice for LED lighting, occupancy sensors, timers, and HVAC upgrades.
- [Better Buildings BC](#) offers funding for retrofits that exceed code, including efficient HVAC systems, lighting, and controls.
- [ENERGY STAR Canada](#) provides directories and tools to help identify certified, high-performance equipment and appliances.
- Some municipalities also provide grants or low-interest financing for lighting and equipment upgrades in community and recreational facilities.



"We completed a comprehensive LED light conversion across all areas of the club, including the greenkeeping maintenance facility, professional shop and clubhouse. Warm white and cool white LEDs were strategically installed to suit different spaces while preserving the clubhouse's character and improving visibility in the maintenance facility. This upgrade significantly reduces energy consumption, lowers electricity use and operational costs, and helps minimize the club's environmental impact and carbon footprint."

Royal Cinque Ports Golf Club, England ▶

View more examples ▶



Source Responsibly

The impact of energy use depends not only on how much is consumed, but on where that energy comes from. Sourcing responsibly means looking at how power is generated, how supply is secured, and where there are opportunities to shift towards cleaner, lower-carbon, and more resilient options over time. For golf facilities, that may involve on-site renewables, lower-emission technologies, or greener supply agreements where these are available and appropriate. Taken together, these choices can reduce environmental impact, strengthen energy security, and signal a clear commitment to climate responsibility.

Work Towards Renewable Energy – Maintenance Facility and Clubhouse

One of the clearest ways to improve energy supply is to generate or harness more from renewable sources. Clubhouses and maintenance buildings often offer strong opportunities for technologies such as solar photovoltaics, heat pumps, and, in some locations, small-scale wind. When combined with efficient systems and the gradual electrification of equipment, these measures can reduce carbon emissions, improve cost control, and strengthen energy resilience over time. They can also help position the facility more credibly in relation to wider climate goals and the long-term direction of travel in energy use.

Best Practices

- **Understand the energy mix of your electricity supplier.** Review your energy provider's fuel mix and emissions data. Determine how much electricity comes from renewable sources to establish a baseline and identify where further improvements can be made.
- **Explore possible greener energy providers.** Compare available green power programs or renewable incentives offered by local utilities. Where available, opt into 100% renewable or carbon-neutral electricity supply options.
- **Switch to electric or hybrid vehicles when possible.** Integrate renewable energy use with on-site electrification by charging golf carts, maintenance and utility vehicles from solar or other renewable systems.
- **Consult experts on potential small-scale renewables.** Before installation, work with energy consultants or certified contractors to assess site conditions, orientation, shading, wind exposure, and electrical load profiles. Conduct a feasibility study to determine the most effective system and payback period.
- **Photovoltaics.** Install rooftop or ground-mounted solar panels on clubhouse or maintenance buildings. Size systems to match daily demand and orient panels to maximize annual yield. Combine with battery storage for energy security or night-time use.
- **Wind turbine.** Where wind speeds are consistently high, consider small-scale vertical or horizontal turbines. Ensure installations meet zoning, setback, and noise requirements, and confirm grid-connection compatibility with your energy provider.
- **Ground source heat pump.** Use buried loops to extract stable ground temperatures for heating and cooling. Integrate with radiant floors or air distribution systems.
- **Air source heat pump.** Install for space heating or hot water in clubhouses and maintenance facilities. Modern cold-climate units perform efficiently even in sub-zero conditions and can replace or supplement gas boilers.
- **Biodigester.** Convert organic waste such as grass clippings or food waste into biogas for heat or power generation. Integrate into a composting system.
- **Renewable power generator.** Use portable solar generators or hybrid systems to power remote irrigation pumps, halfway houses, or event setups. Reduce reliance on diesel or gas generators.



National / Regional Requirements

While there is no legal requirement for golf courses in BC to generate renewable energy, provincial policy under the [CleanBC Roadmap](#) aims for a fully decarbonized electricity grid and broad adoption of low-carbon technologies. Any installation of solar, wind, or geothermal systems must comply with the [BC Building Code](#) and local permitting processes. Systems connected to the grid may also require interconnection approval from [BC Hydro](#) or [FortisBC](#). Municipal zoning bylaws may set additional height, setback, or noise limits for wind or heat pump installations.

National / Regional Opportunities

Several programs and funding streams support renewable energy adoption for golf facilities in BC:

- [BC Hydro Self-Generation Program](#) allows small-scale renewable producers to generate electricity for on-site use and sell excess power back to the grid.
- [Better Buildings BC](#) offers funding and technical assistance for solar PV, heat pump, and building electrification projects.
- The [Community Energy Association](#) offers case studies and practical guidance for municipalities and facilities implementing solar, heat pump, and small wind systems.



"We invested in two separate Solar PV installation projects, the largest on the greenkeepers' sheds, which provides sufficient solar-generated electricity to power the entire sheds operation during May to September and reduces grid requirements for most of the working day. A second installation on the clubhouse roof also helps reduce grid electricity demand, while solar thermal is currently providing all hot water for use in the greenkeeping sheds."

Royal Portrush Golf Club, Northern Ireland ▶

[View more examples ▶](#)



Materials



Reduce Need ▶	Purchase Responsibly ▶	Reuse and Recycle ▶
Reduce Material Consumption – Maintenance Facility and Clubhouse ▶	Sustainable Purchasing Practices ▶	Collect Materials for Composting and Reuse ▶
Eliminate Single Use Products ▶		Recycle – Golf Course and Grounds ▶
Produce Goods Onsite ▶		Reuse Equipment and Goods ▶
		Recycle – Maintenance Facility and Clubhouse ▶
		Minimize and Recycle Food Waste – Maintenance Facility and Clubhouse ▶
		Waste Management – Maintenance Facility and Clubhouse ▶

The way materials are purchased, used, and managed has a direct influence on the efficiency, cost, and environmental impact of a golf facility. Across the course, maintenance operation, and clubhouse, everyday choices about products, equipment, packaging, and waste shape how responsibly resources are used and how much unnecessary material passes through the site. For golf superintendents, this is a practical area of management with clear opportunities to cut waste, use resources more carefully, and improve the overall efficiency of the operation.

Done well, material conservation is not only about disposal. It is about reducing avoidable consumption in the first place, making better decisions about what comes onto the site, and keeping useful materials in circulation for as long as possible. That may mean phasing out unnecessary single-use items, finding better uses for materials already available on site, or choosing products with greater durability, reparability, recycled content, and whole-life value. These decisions often bring operational benefits as well as environmental ones, helping facilities lower costs, reduce inefficiency, and rely less on throwaway practices.

Waste management remains an important part of that picture, but it is most effective when supported by a broader resource mindset. Reuse, composting, recycling, and better segregation all have a role to play, particularly when they are backed by more thoughtful purchasing and day-to-day working practices. Taken together, these measures can help move a facility towards a more circular and considered approach to materials.

This action area is intended to help superintendents identify where materials are being used unnecessarily, make more informed purchasing decisions, and strengthen the systems that support reuse and waste reduction across the site.



Reduce Need

Reducing waste starts with using fewer materials in the first place. Across the course, maintenance operation, clubhouse, and wider site, a closer look at how materials are selected, used, and replaced can reveal opportunities to cut unnecessary consumption, move away from disposable items, and make better use of resources already on hand. Done well, this can lower costs, reduce environmental impact, and support a more disciplined, resilient, and responsible approach to everyday operations.

Reduce Material Consumption – Maintenance Facility and Clubhouse

Reducing material consumption is one of the most practical ways for golf courses to save resources, improve efficiency and minimize waste. By tightening purchasing decisions and avoiding unnecessary use, facilities can lower costs while aligning more closely with wider goals for waste reduction and a circular economy. In turn, this can simplify storage, procurement, and compliance by reducing the volume and range of materials that eventually need to be reused, recycled, or disposed of.

Best Practice

- **Maintain accurate stock control system for catering and operations, to avoid over-ordering.** Use digital inventory tracking and minimum/maximum stock levels to prevent spoilage and unnecessary purchasing. Review usage data regularly and align orders with seasonal activity.
- **Organize menus to use local seasonal produce.** Coordinate with suppliers on seasonal availability to reduce packaging, transport energy, and food waste. Build flexibility into menus so alternative options are feasible during periods of low yield.
- **Minimize paper usage.** Shift to digital records and communication systems for internal forms, work orders, and purchasing. Provide tablets or shared screens for staff to access daily notes and schedules.
- **Set all your printers to double-sided.** Configure all network printers to print double-sided by default. Encourage staff to preview documents before printing and set quotas for each department.

National / Regional Requirements

There are currently no specific provincial or federal laws in BC that require golf courses to reduce their overall material consumption. However, several frameworks encourage organizations to use resources more efficiently and prevent waste at the source.

The [Environment Management Act](#) establishes the foundation for responsible resource management in BC, promoting pollution prevention and efficient material use. The [CleanBC Roadmap](#) also identifies waste reduction and sustainable procurement as key pathways toward net-zero emissions. This encourages all sectors, including recreation and tourism, to consume fewer raw materials and shift toward circular practices.

National / Regional Opportunities

Golf courses in BC can access a growing number of resources to help reduce material consumption through smarter procurement and operational efficiency:

Zero Waste BC's [Circular Economy Strategy](#) provides guidance on preventing waste at the design and purchasing stage, encouraging reuse, repair, and efficient material flows.

BC Ministry of Environment have [Sustainable Procurement Resources](#) that offer tools and templates to integrate life-cycle thinking and low-waste criteria into purchasing decisions.



Local Chambers of Commerce and Tourism Associations also often partner with regional districts on circular economy and zero waste initiatives that include workshops and recognition programs for sustainable business practices.



"Paperless systems are in place for the greenkeeping team to log pre- and post-use checks via a tagging system and mobile phones. Staff can flag any equipment defects, with all completed checks stored on the cloud. A separate paperless system is also used to log daily staff exposure to vibrations, with records stored online. Together, these systems save a ream of paper each year and remove the need for oily check sheets in the office."

Elmwood Golf Course, Scotland ▶

View more examples ▶

Eliminate Single-Use Products

Single-use products are among the most visible symbols of waste and one of the clearest opportunities for improvement across a golf facility. Disposable cutlery, cups, bottles, and bags can quickly add to material consumption, procurement costs, and unnecessary waste, even where practical alternatives already exist. By shifting towards durable, reusable products and rethinking how services are delivered, facilities can reduce waste at source, lower ongoing costs, and create an experience that feels more considered, modern, and environmentally responsible.

Best Practices

- **Eliminate disposable cutlery.** Replace single-use plastic or wooden cutlery with durable, alternatives in the clubhouse, halfway house, and staff areas. Keep spare sets at service points and ensure all catering stations have designated collection bins for used items.
- **Eliminate disposable cups.** Provide reusable cups or mugs for staff and guests and introduce a deposit-return system for beverages. Ensure dishwashing facilities can handle the increased volume and clearly label refill points for tap or filtered water.
- **Eliminate bottled water.** Install filtered water stations in the clubhouse, golf and maintenance shop, and key locations. Encourage players and staff to bring refillable bottles and provide branded reusable options for sale or as giveaways.
- **Eliminate plastic bags.** Remove single-use bags from the shop and catering operations. Offer paper or reusable cloth alternatives or encourage guests to carry their own bags through clear signage and reminders.

National / Regional Requirements

BC has implemented some of the strongest single-use item regulations in Canada, with bans and restrictions designed to reduce plastic waste across all sectors, including hospitality and recreation.

Under the [Environmental Management Act](#), the [Single-Use and Plastic Waste Prevention Regulation \(2023\)](#) prohibits the manufacture, sale, and distribution of certain single-use plastics, including checkout bags, cutlery, and food-service ware made from hard-to-recycle plastics (e.g., polystyrene foam).

Many local governments, including Vancouver, Victoria, and Kelowna, also have additional rules restricting single-use items such as cups and straws. Courses operating within these areas must follow both provincial and municipal requirements.



National / Regional Opportunities

A variety of programs and tools support businesses in eliminating single-use products and improving sustainability across food and retail operations:

CleanBC’s [Plastics Action Plan](#) outlines the province’s roadmap for reducing plastic waste and supporting a circular economy for packaging and single-use items.

The City of Vancouver’s [Single-Use Reduction Strategy](#) provides practical guidance, templates, and signage to help food and beverage businesses transition away from disposable items.

The National Zero Waste Council’s [Circular Economy Resources](#) offers case studies, toolkits, and guidance for hospitality operators on eliminating disposables and adopting reuse systems.

The [Ocean Wise Plastic Reduction Program](#) certifies and supports hospitality businesses that phase out single-use plastics and adopt sustainable alternatives.



“One of our main focuses is to become as plastic-free as possible. We have already eliminated plastic lids and takeout containers, replacing them with paper straws, wooden stirrers and wooden takeaway cutlery. Woburn-branded pens are now made from wheat straw, takeaway cups and food containers are 100% compostable, reusable flasks are incentivized with a refill discount, and compostable bin bags are being introduced across the club.”

Woburn Golf Club, England ▶

[View more examples ▶](#)

Produce Goods Onsite

Producing goods on site is a practical way for golf facilities to reduce reliance on external suppliers, cut transport-related emissions, and build a closer connection with the landscape and community. Kitchen gardens, orchards, apiaries, and composting systems can all contribute to a more local and circular approach to resource use, while also creating distinctive products that enhance the course’s identity and add depth to the visitor experience. Even modest initiatives, such as growing herbs for the clubhouse kitchen can reduce inputs, strengthen character, and foster a greater sense of pride and connection among staff, members, and guests.

Best Practices

- **Fruit.** Plant fruit trees and berry bushes in suitable non-play areas or near buildings. Choose local, low-maintenance varieties that require minimal irrigation and integrate them into existing landscaping for combined visual and practical value.
- **Vegetables.** Develop small kitchen gardens or raised beds near the clubhouse to supply seasonal produce. Use compost generated onsite and rotate crops to maintain soil health and reduce pest pressure naturally.
- **Honey.** Establish a small apiary in a quiet, safe corner of the property to promote pollination and produce honey for internal use or member sales. Review all environmental impacts, follow local beekeeping regulations and ensure staff are trained in safe hive management.



- **Wine.** Where climate and space allow, plant a small demonstration vineyard using disease-tolerant varieties. Partner with local winemakers for processing and bottling or showcase the initiative as part of a sustainability story.
- **Olive oil.** In suitable climates, plant olive trees in decorative or boundary areas to produce small quantities of oil. Alternatively, partner with local growers to bottle or brand oil under the club's label, reducing transport miles and supporting the local economy.
- **Compost.** Collect grass clippings, leaves, and organic kitchen waste to create nutrient-rich compost. Use the finished product on landscaped areas, gardens, or turf surrounds to improve soil health and reduce the need for imported fertilizers.
- **Jam or Syrups.** Use surplus fruit or honey from the course to make small-batch jams, syrups, or condiments for sale or as gifts. Clearly label with ingredients and allergen information in accordance with local health authority regulations.

National / Regional Requirements

There are no specific provincial laws in BC that regulate small-scale, non-commercial production of produce, honey, or compost on golf courses. However, several frameworks will apply when products are shared, sold, or distributed beyond the property.

National / Regional Opportunities

Golf courses in BC can draw on multiple programs and resources to develop onsite production projects that align with local food and sustainability goals:

The [BC Honey Producers Association](#) offers training, resources, and community connections for beekeepers of all scales.

Although designed for schools, [Farm to School BC](#) offer toolkits on garden planning, composting, and food literacy offer valuable guidance for any community-based growing initiative.



"We have established Q-Farm in the heart of the Quinta do Lago Resort to serve our restaurant outlets with farm-to-table produce. The original plot contains approximately 2000m² of raised beds, each with its own drip irrigation network and fertigation system, and a second site with a state-of-the-art greenhouse increases yields through the cooler winter months. We now produce upwards of 5,500 kgs of seasonal vegetables each year for use in our restaurants."

Quinta do Lago, Portugal ▶

[View more examples ▶](#)





Purchase Responsibly

Once unnecessary consumption has been reduced, purchasing decisions are a key consideration. The materials and products brought onto a golf site can shape environmental impact, long-term cost, and day-to-day practicality across the operation. Looking beyond upfront price to consider durability, reparability, recycled content, responsible sourcing, and end-of-life options can lead to better-informed choices, stronger long-term value, and a more responsible approach to resource use, supply chains, and waste.

Sustainable Purchasing Practices

Responsible purchasing depends on more than choosing the lowest upfront cost. Across the course, clubhouse, and maintenance facility, procurement decisions can shape environmental impact, operational efficiency, and long-term value well beyond the point of purchase. Favouring products that are durable, repairable, recyclable, or locally sourced can help facilities reduce waste, strengthen supply resilience, and support a more considered approach to day-to-day management.

Best Practices

- **Favour responsible, lower-impact products.** Choose materials and products with environmental credentials. Prioritize those with minimal packaging and clear end-of-life recyclability.
- **Create a sustainable procurement policy.** Develop a written policy that defines sustainability criteria, supplier expectations, and purchasing priorities (e.g. durability, recycled content, and social responsibility). Review annually and share with key suppliers and stakeholders.
- **Share your commitment with players and staff.** Display procurement principles publicly, such as posters in maintenance areas or supplier codes in the staff handbook. Use regular communications to build shared awareness and accountability.
- **Consider durability and reparability.** Favour products that can be repaired or upgraded rather than replaced. Include expected lifespan and serviceability as part of purchasing decisions.
- **Purchase from suppliers committed to sustainability.** Request evidence of environmental or social performance from suppliers, such as sustainability reports or certifications. Prefer local businesses where possible to reduce transport impacts.
- **Purchase in bulk where appropriate.** Consolidate orders to reduce packaging and delivery frequency. Coordinate with nearby businesses or golf facilities to combine purchasing power and negotiate better terms on sustainable products.
- **Purchase goods made from recycled or sustainable materials.** Select paper, packaging and consumables with high recycled content or certified sustainable sources. Apply this principle across maintenance, office and catering supplies.
- **Request recyclable or compostable packaging.** Work with suppliers to eliminate unnecessary plastics and ensure packaging aligns with local recycling or composting systems.
- **Avoid purchasing non-recyclable materials.** Phase out Styrofoam, PVC, or composite materials that cannot be easily recycled. Replace with biodegradable or mono-material alternatives.
- **Use eco-friendly cleaning products.** Choose biodegradable, phosphate-free, and low-VOC cleaning agents to protect staff health and reduce potential wastewater contamination.

National / Regional Requirements

While there are no direct laws mandating sustainable purchasing for private golf courses in BC, provincial and municipal frameworks increasingly set expectations for environmentally responsible procurement:

The Government of BC's [Sustainable Procurement Guidelines](#) outline principles for lifecycle thinking, ethical sourcing, and supplier engagement, serving as a model for private facilities.



Municipal Sustainable Purchasing Policies, such as those in Vancouver and Victoria, also integrate environmental and social value into public procurement. These provide templates for developing in-house frameworks aligned with local expectations.

National / Regional Opportunities

Adopting sustainable procurement practices allows golf courses to influence markets, support local suppliers, and align with community sustainability goals. Several resources and programs can help implement or strengthen responsible purchasing systems:

The City of Vancouver's [Sustainable Purchasing Guide](#) provides practical steps and checklists for embedding environmental and social sustainability into procurement decisions.

[Buy Social Canada](#) offer certification and guidance for purchasing from businesses that generate community and environmental benefit.

The [Ecolabel Index](#) is a global directory of verified environmental certifications for evaluating product sustainability.

[BC Marketplace](#) and local directories can also connect facilities with regional suppliers of certified, sustainable products and services.



"Through close collaboration with our local distributor, we have arranged for larger containers of liquid fertilizer to be delivered, reducing the number of deliveries required. One supplier is now switching to a cardboard solution to remove hard plastics from the supply chain"

Hoiana Shores Golf Club, Vietnam ▶

[View more examples ▶](#)





Reuse and Recycle

Keeping materials in use for longer is a practical way to reduce waste, improve resource efficiency, and recover greater value from day-to-day operations. Across the site, opportunities to reuse materials, separate recyclable waste streams, and make better use of organic resources such as grass clippings, leaves, and food waste can all help reduce disposal volumes and lessen reliance on new inputs. Managed well, this supports a more circular and cost-effective approach to operating the facility.

Collect Materials for Composting and Reuse

By recycling organic materials such as cores, clippings, leaves, and food waste, courses can produce a valuable soil amendment while keeping large volumes of material out of landfill. Well-managed composting systems also support broader sustainability goals by closing material loops and reducing reliance on imported topdressing or fertilizers. The resulting compost can be used in divot mixes, renovations, landscaping beds, or brewed into compost teas to help enhance soil biology.

Best Practices

- **Soils and sands.** Screen and reuse soil and sand from renovation, construction, or aeration. Blend with composted organics to create a versatile amendment for turf or landscaping.
- **Cores.** After aeration, collect and compost cores by mixing with leaves or other brown materials to balance moisture and carbon. Turn regularly to speed up decomposition.
- **Turf and scarified material.** Compost dethatching or scarifying waste in windrows or contained bays. Maintain good aeration and moisture levels for efficient breakdown.
- **Clippings.** Allow clippings to decompose naturally on the surface whenever possible, or collect and compost them with dry, carbon-rich materials such as leaves or woodchips.
- **Waste from kitchens.** Separate kitchen organics, such as coffee grounds or peelings, for composting or inclusion in local food waste programs. Avoid contamination with plastics, oils, or meat products unless using an enclosed system.
- **Waste from gardens.** Compost prunings, weeds, and trimmings. Shred or chip woody material for faster breakdown or use directly as mulch in landscaped areas.
- **Leaf litter.** Collect autumn leaves and compost them separately or mix into turf compost piles for added carbon and improved texture.

National / Regional Requirements

There are no specific regulations requiring golf courses in BC to compost turf, soil, or organics on-site. However, several provincial and municipal policies encourage or indirectly regulate the practice:

The [Organic Matter Recycling Regulation \(OMRR\)](#) governs large-scale composting and the production or distribution of compost. On-site composting for internal use is exempt, provided the material is not sold or given away.

Many regional districts, including Metro Vancouver and the Capital Regional District (CRD), enforce municipal bylaws that restrict the disposal of organics in landfill. Golf courses must divert materials such as leaves and clippings to composting or recycling streams.

The [Environmental Management Act](#) requires composting operations to prevent leachate or runoff contamination of soil or water. Composting areas should be on impermeable surfaces and away from sensitive water bodies.



National / Regional Opportunities

BC offers a number of programs and resources to help golf courses establish or improve composting systems:

The [Composting Council of Canada](#) provides training, certification, and case studies relevant to both small- and large-scale composting.

The [Compost Education Centre](#) offers hands-on training, workshops, and technical support for small-scale composting and food waste diversion.



"This year, the turf team embraced composting for the first time as a straightforward and cost-effective practice. It allows us to process general course waste efficiently and repurpose it for landscaping projects across the site. Composting has eliminated the need for green waste removal, reducing haulage costs and our carbon footprint. The process is self-regulated and, within 12 to 18 months, produces valuable, high-quality material ready for processing and screening."

Cabot Cape Breton, Canada ▶

[View more examples ▶](#)

Recycle - Golf Course and Grounds

A clear, consistent recycling system ensures materials like glass, paper, and plastics are properly separated and recovered while keeping the course clean and visually appealing. The approach should balance accessibility for players with ease of collection for maintenance staff, integrating seamlessly with the clubhouse, maintenance facility and other back-of-house recycling operations.

Best Practices

- **Recycling bin every several holes.** Position multi-stream recycling points at key locations, such as every three to four holes, near shelters, or by tee complexes to make recycling convenient without cluttering the landscape.
- **Separate bins for glass, paper/cardboard, plastics, and metals.** Use clearly labelled or color-coded bins to minimize contamination. Ensure lids and signage are weatherproof and match clubhouse recycling stations for consistency.
- **No bins on course; players encouraged to dispose of waste at the clubhouse.** Where operational simplicity is preferred, remove bins entirely from the course and provide prominent recycling stations at the clubhouse, halfway house, and cart return area. Encourage players to return waste with clear messaging and visible signage.

National / Regional Requirements

In BC, recycling obligations are governed by the BC [Recycling Regulation](#), which establishes Extended Producer Responsibility (EPR) programs. While there is no law mandating the presence or placement of bins on golf courses, facilities must comply with municipal solid waste bylaws, which often prohibit recyclable materials from disposal. Many regional districts, such as Metro Vancouver and the Capital Regional District (CRD), set additional standards for multi-stream separation, container labelling, and contamination limits that apply to all commercial properties, including golf facilities.



National / Regional Opportunities

Visible, well-maintained recycling points reduce contamination and improve recovery rates while reinforcing environmental commitment. [Recycle BC Guidelines](#) outline accepted materials, bin setup, and contamination control. In most municipalities, waste streams should be separated into (1) containers (plastic, metal, glass), (2) paper and cardboard, (3) refundable beverage containers (e.g. through [Return-It](#)), (4) organics (where local composting collection is available), and (5) residual garbage.



"We're making our waste management more sustainable by removing the traditional bins on each hole where all waste was mixed. In their place, we've installed central waste stations where players and visitors can separate plastic and general waste. Separating waste is becoming standard practice, and this is a small but meaningful step that reflects how sustainability is also about the everyday choices we make, together."

De Hooge Rotterdamse, Netherlands ▶

[View more examples ▶](#)

Reuse Equipment and Goods

Before materials are recycled or replaced, there is often value in keeping them in use for longer. Furniture, appliances, maintenance tools, and clubhouse goods can frequently be repaired, refurbished, repurposed, or donated rather than discarded. A more deliberate approach to reuse can lower purchasing costs, reduce waste, and recover greater value from existing resources, while also creating opportunities to strengthen links with the wider community.

Best Practices

- **Consider purchasing second-hand (e.g. furniture and porcelain).** Source durable, high-quality second-hand items for the clubhouse, offices, or maintenance facility. Use local resale networks, online marketplaces, or hospitality surplus suppliers to reduce both costs and environmental impact.
- **Upcycle wherever possible.** Refurbish or repurpose older materials and equipment before replacing them. For example, use reclaimed wood for signage or furniture, convert outdated course materials for storage or decor, and repaint or refinish rather than discard.
- **Donate equipment and goods no longer required for re-use.** When items are no longer needed, donate them to local community groups, schools, or charities. Tools, furniture, and catering equipment often have strong reuse value and can extend service life outside the facility.
- **Organize an annual golf equipment swap.** Host a yearly member event for exchanging or donating golf clubs, bags, apparel, and accessories. Consider using the event for fundraising or wider outreach and engagement.

National / Regional Requirements

There are no specific legal requirements in BC mandating the reuse of equipment or materials within golf facilities. However, waste reduction and reuse align with the BC [Recycling Regulation](#) and the [CleanBC Roadmap](#) to reduce material consumption and support circular economy initiatives. Many municipalities also have solid waste management plans that include reuse and repair programs, encouraging businesses to minimize waste generation before recycling or disposal.



National / Regional Opportunities

BC has a growing reuse and circular economy network that helps facilities extend the life of equipment, furniture, and materials while reducing waste. Golf courses can use these programs to donate or acquire quality second-hand items, divert materials from landfill, and demonstrate leadership in sustainable resource management.

The Recycling Council of BC’s [Residential Reuse Program](#) connects individuals and businesses with reuse organizations across the province, including thrift stores, charities, and material exchanges that accept furniture, tools, and building supplies. This is a reliable first stop when donating or sourcing used goods.

[ReuseTech BC](#) refurbishes donated computers, electronics, and IT equipment, redistributing them to schools, non-profits, and low-income families. Golf courses upgrading office or clubhouse technology can donate old hardware here to ensure responsible reuse rather than disposal.

[The ReUse People of Canada](#) specializes in salvaging and redistributing building materials from renovations or demolitions. For golf facilities upgrading clubhouses, maintenance buildings, or on-course structures, TRP can deconstruct and recover wood, fixtures, and fittings for reuse in other projects.



“The golf course maintenance team has started repurposing materials disposed of by other departments within Emirates Golf Club. Wooden pallets have been used to make boxes for the back of golf carts, green shade netting is reused to keep clippings in after cutting so plastic bags are no longer required, and discarded carpet has been attached to fairway mowers to drag clippings cleanly, reducing the need to use a blower after cutting.”

Emirates Golf Club, United Arab Emirates ▶

View more examples ▶

Recycle - Maintenance Facility and Clubhouse

Clear infrastructure, staff training, and communication are essential to prevent contamination and ensure that recyclable materials are separated and directed into the correct recovery streams. For golf courses, this includes everyday glass, paper, plastics, as well as specialized materials such as oils, batteries, lamps, and electronic equipment. A well-organized approach can improve recovery rates and reduce risk.

Best Practices

- **Put in place a recycling separation system according to local rules and availability.** Contact your local authority or waste hauler to confirm accepted materials and collection schedules. Design your internal system to match these streams, ensuring consistency between clubhouse, kitchen, and maintenance areas. ★
- **Colour-coded bin system.** Use standardized bin colours across the property for each waste stream. Incorporate consistent colour to improve recognition and reduce contamination.
- **Bin signage clear, simple and visible.** Place large, image-based signs above or on bins at eye level. Include photos of accepted materials rather than written lists to make sorting easier for users.



- **Clear description of materials for each waste stream.** Label bins with examples of what belongs in each category - containers, paper/cardboard, refundable bottles, and organics. Review and update these as collection rules change.
- **Clustering of bins for all waste streams.** Place bins for recycling, organics, and landfill together in high-traffic areas to make sorting convenient and reinforce the correct behaviour.
- **Provide staff training on the recycling program (handbook, induction etc.).** Include recycling procedures in staff inductions and update annually. Train teams on contamination risks and where to take specialty waste like batteries, bulbs or chemicals.
- **Inform or educate staff and golfers about the recycling program.** Use posters, newsletters, and digital screens to explain how the system works. Use regular communication to keep participation high and maintain standards.
- **Kitchen staff (training, signs).** Place laminated quick-reference cards near dishwashing, preparation, and bar areas. Emphasize segregation of food waste, plastics, glass, and metals.
- **Golf staff (training, signs).** Provide clear instructions in course starter huts, halfway houses, and maintenance sheds. Ensure all temporary staff and volunteers are briefed before events.
- **Golfers/members (newsletters, signs).** Use clear, positive messages near bins and on the course. Reinforce that sorting recyclables correctly protects the environment and reduces waste disposal costs.

National / Regional Requirements

Golf course maintenance facilities must comply with BC's Recycling Regulation, which establishes Extended Producer Responsibility (EPR) programs requiring certain materials to be kept out of landfill and handled through approved stewardship systems:

Used oil, filters, and antifreeze are managed under the [BC Used Oil Management Association \(BCUOMA\)](#). Facilities must store these in labelled, leak-proof containers or tanks until they are collected or dropped off at a registered depot. Disposal through general waste or drains is prohibited.

Landfilling tires is prohibited. Facilities must return used tires through registered retailers or depots under [Tire Stewardship BC \(TSBC\)](#).

Batteries are handled through [Call2Recycle](#) for small and rechargeable batteries and [Return-It](#) depots for larger automotive or lead-acid types.

Electronics and Small Appliances are recycled via the [Electronic Products Recycling Association \(EPRA\)](#) or the [Return-It Electronics Program](#). Golf courses should send items like radios, computers, or tools to participating depots.

Lightbulbs and fixtures are recycled through [Product Care Recycling](#), covering fluorescents, LEDs, halogens, and HID lamps.

Paints, solvents, and flammable liquids are also managed by [Product Care Recycling](#). Keep in approved containers and deliver to a licensed depot.

National / Regional Opportunities

For golf courses looking to enhance compliance and reduce costs, [Recycle BC](#) provides guidance and toolkits for implementing effective on-site recycling systems that align with municipal collection standards.



"We have eliminated landfill waste and continue to increase the amount recycled. In 2024, we invested in new segregated waste bins inside the clubhouse and around the car parks, increasing recycling from 30% in 2023 to 52% in 2024. We also compost food waste via anaerobic digestion, while waste weights are tracked through a contractor portal."

Birchwood Park Golf Centre, England ▶

View more examples ▶

Minimize and Recycle Food Waste – Maintenance Facility and Clubhouse

Food waste is one of the most significant and preventable sources of environmental impact across golf operations. Within kitchens, bars, and staff areas, reducing and recovering organic waste can lower costs, reduce emissions, and support a more circular approach to resource use. Thoughtful menu planning, flexible service options, and well-managed collection systems can enable golf facilities to minimize the amount of food sent to landfill while recovering value through composting, donation, or other appropriate recovery routes.

Best Practices

- **Careful menu planning.** Design menus around predicted demand and seasonal availability. Review sales patterns to adjust quantities and reduce overproduction, particularly for buffets and events.
- **Flexibility of portion sizes.** Offer different portion sizes or side options to suit appetite and reduce waste. Use feedback from staff and members to optimize serving sizes.
- **Provide incentives to use perishables.** Track perishable ingredients nearing expiry and create daily specials or staff meals to ensure they are used before being spoiled.
- **Donate surplus food.** Partner with local food banks, shelters, or redistribution programs to donate safe, unsold items. Label and store surplus food according to local food safety rules before collection.
- **Use TooGoodToGo App or similar services.** Register the clubhouse kitchen with food-sharing platforms like [TooGoodToGo](#) or [Flashfood](#), which offer surplus meals to local buyers at discounted prices.
- **Recycle cooking oil.** Collect used cooking oil in sealed containers and arrange pickup through licensed recyclers. Used oil is commonly processed into biodiesel or industrial lubricants.
- **Compost food waste onsite.** Establish a dedicated organics bin system in kitchens and dining areas, ensuring contamination is minimized. Compost food waste with clippings and leaves to create nutrient-rich material for landscaping or topdressing.
- **Compost food waste offsite.** Where on-site composting is not feasible, contract an organics hauler or use a municipal green bin service. Confirm accepted materials and collection frequency with your local authority.

National / Regional Requirements

Food waste is regulated indirectly in BC through local solid waste and organics diversion bylaws, which restrict landfill disposal of compostable materials. Many regional districts, such as Metro Vancouver and the Capital Regional District, ban food scraps and soiled paper from garbage collection. Golf facilities should therefore separate food waste into an organics stream for composting or anaerobic digestion.



Used cooking oil is regulated under the [Environmental Management Act](#) and must be collected, stored, and transported in sealed containers by approved service providers or listed recyclers to prevent spills and water contamination.

National / Regional Opportunities

Several provincial and local initiatives support golf courses in reducing and recycling food waste:

[Love Food Hate Waste Canada](#) provides free tools, signage, and training materials to help kitchens reduce food waste through improved planning and storage.

[FoodMesh](#) are a BC-based food recovery network connecting commercial kitchens with charities and farms to redistribute edible surplus food and divert organics from landfill.



“As part of our sustainable waste management program, and in the spirit of a circular economy, we are trialling a scheme in which members can avail of free compost produced from all accumulated food waste from the club. Compost from the initiative has also been used for different projects within the club, including our pollinator-friendly flowerbed outside the clubhouse.”

The Royal Dublin Golf Club, Ireland ▶

[View more examples ▶](#)

Waste Management – Maintenance Facility and Clubhouse

Effective waste management is essential for controlling costs and meeting regulatory requirements. Tracking waste volumes, separating streams clearly, and working with authorized contractors can help facilities reduce landfill reliance, meet regulatory requirements, and identify where further improvements are possible. A structured waste management plan also creates a clearer basis for reducing waste overall and strengthening reuse and recycling across the wider operation.

Best Practices

- **Follow a waste management plan.** Develop a written plan outlining each waste stream, storage locations, collection schedules, and contractor responsibilities. Review and update it annually to reflect changes in operations, recycling options, or regulations.
- **Monitor and record weight of waste (invoices, bills etc.).** Keep records of waste invoices and collection receipts to track volumes by type. Use this data to identify trends, measure progress, and inform procurement or recycling initiatives.
- **Contact your waste contractor to get advice and negotiate the best contract.** Discuss service options with haulers to optimize pickup frequency, container size, and cost. Ensure your provider is licensed for all relevant waste types and can provide proof of responsible disposal or recycling.
- **Partner with other local businesses to secure the best rates from waste contractors.** Collaborate with nearby golf facilities or hospitality businesses to negotiate group rates or shared collection services, particularly for recyclables or organics.
- **Authorized collector - General waste.** Use a licensed hauler for mixed or residual waste. Ensure all bins are covered, labelled, and located away from watercourses to prevent litter and leachate. ★



- **Authorized collector - Hazardous waste.** Store hazardous materials such as paints, solvents, and batteries in sealed, clearly labelled containers in a covered, bunded area. Use only registered carriers who comply with applicable regulations for collection and disposal. ★
- **Authorized collector - Industrial waste.** Classify and segregate industrial waste from maintenance activities, such as filters, oily rags and contaminated soils. Confirm your contractor is certified to handle industrial residues safely. ★
- **Authorized collector - Green waste.** Collect green waste separately for composting or offsite processing. Avoid mixing with general waste to comply with national or regional organics disposal bans.

National / Regional Requirements★

Under BC's [Environment Management Act](#), all non-recyclable waste must be handled by an authorized collector. This includes general, industrial, hazardous, and green waste streams.

Facilities that generate or store hazardous materials must comply with the [Hazardous Waste Regulation](#), which outlines classification, containment, labelling, and manifest requirements for transport.

Many municipalities also prohibit the landfilling of organics, cardboard, metals, and other recoverable materials. Facilities must therefore separate these materials and use approved recycling or composting services.

National / Regional Opportunities

BC offers several resources to help golf courses manage waste more efficiently and in compliance with environmental standards:

BC's [Waste Discharge Authorizations](#) outline permits, codes of practice, and reporting requirements for facilities producing waste.

The City of Vancouver's [Waste Management Planning Guide](#) provides templates and best practices for businesses to create waste management plans, set targets, and monitor waste generation.



"We continue to make strides towards a circular economy by prioritizing effective waste management across all operations. In the last financial year, 68.61% of the site's total waste, more than 37 tonnes, was diverted from landfill. Recyclables included plastic, cardboard, paper, glass and metal, while local partners repurposed crushed glass into sand and green waste into organic fertilizer."

Heritage Golf Club - Le Chateau Course, Mauritius ▶

View more examples ▶

Health & Wellbeing



Participation ▶	Human Health ▶	Employment ▶
Promote Golf to All ▶	Promote Walking ▶	Offer Fair and Safe Employment ▶
Engage Stakeholders ▶	Facilitate Coaching and Mentoring ▶	Provide Training to Employees ▶
Create Inclusive Policies ▶	Build Confidence and Life Skills ▶	Offer Employee Benefits ▶
Ensure Accessibility ▶	Create a Safe Environment ▶	Offer Apprenticeships and Work Experience ▶

Health and wellbeing shapes how a golf course supports not only the environment, but also the people who use it, work on it, and live around it. This includes creating places that are safe, welcoming, and positive to spend time in - whether through opportunities for recreation and active travel, healthy working conditions, inclusive participation, or access to attractive and well-managed green space.

For golf superintendents, this goes beyond presenting an enjoyable course. It is also about helping to shape an environment that supports physical health, mental wellbeing, social connection, and a stronger sense of value within the wider community. When course and environmental management are approached thoughtfully, these benefits can extend further, creating landscapes that are greener, more appealing, more accessible, and more rewarding for a wider range of people.

A sustainable approach recognizes that golf facilities can contribute in several interconnected ways: through participation, through human health, and through employment. That can mean making the course and wider site feel more inclusive and accessible, supporting confidence and skill development, promoting safe and healthy workplaces, and creating more opportunities for people to experience the benefits of being active and outdoors. Together, these qualities can improve everyday experience, support healthier communities, and strengthen the role of golf facilities as positive and responsible local assets.

This action area is intended to help superintendents think about health and wellbeing in a more connected way, using the themes of participation, human health, and employment to guide a practical, informed, and locally relevant approach to integrating environmental and social value.



Participation

Creating opportunities for more people to access, enjoy, and feel welcome in the game can strengthen community connections, widen the appeal of the facility, and support healthier, more active lifestyles. A more inclusive and accessible approach to participation can also enrich the experience a golf course offers, while also reinforcing its place as a positive, relevant, and welcoming presence within the local area.

Promote Golf to All

Broadening participation begins with making golf feel more open, approachable, and relevant to a wider range of people. That may mean reducing financial, practical, and cultural barriers, creating more welcoming first experiences, and working with local partners to reach those who may not otherwise see the game as accessible to them. Done well, this can help more people share in the benefits of golf while building a broader, more diverse, and more resilient base of participation.

Best Practice

- **Encourage children and their families to use the golf course and the facilities.** Offer family tee times, youth clinics, and affordable memberships or pay-and-play options. Provide junior equipment and shorter course setups to make play easy and enjoyable.
- **Encourage women to use the golf course and the facilities.** Run women's beginner programs and social events that combine golf with relaxed networking opportunities. Ensure facilities such as changing areas and tee boxes are welcoming and well-designed for mixed use.
- **Engage under-represented parts of the community in golf.** Identify local youth or newcomer groups and invite them to try golf through open days or community events. Provide flexible participation and support if needed.
- **Offer lessons using free equipment.** Partner with instructors to deliver short, low-cost sessions where clubs and balls are provided. Keep donated or repurposed beginner equipment for ongoing use.
- **Engage with national federation on golf participation programs.** Register as a host or partner facility for national or regional inclusion initiatives. Use available resources to engage more of the community in golf.
- **Work with local groups to engage the disadvantaged and those with disabilities.** Collaborate with schools, charities, and rehabilitation centres to create tailored programs, such as accessible putting sessions or supported coaching days.
- **Host a golf tournament specifically for under-represented and disadvantaged groups.** Run an annual event that celebrates inclusion and raises awareness of community access to the sport. Pair with sponsors or charities to cover costs and amplify impact.
- **Invite representatives from community groups, youth associations, etc. to visit the facility.** Offer guided tours or taster sessions to build connections and demonstrate a role in promoting wellbeing and social inclusion.
- **Promote golf in local amenities such as community centres, libraries, and day centres.** Display posters, flyers, or QR codes promoting free taster sessions or junior programs. Rotate materials seasonally to remain visible to new audiences.

National / Regional Opportunities

There are no regulatory requirements for golf courses in BC to run inclusion or outreach programs, but doing so aligns directly with national and provincial sport participation strategies.

[Golf Canada](#) delivers inclusive initiatives across BC.

[First Tee](#) provides free or low-cost youth programs with life skills training.



[NGCOA Canada](#) offer a kids play free program.

[She Plays Golf](#) supports women entering or returning to the game.

[Paragolf Canada](#) promotes adaptive golf opportunities for individuals with disabilities.

[British Columbia Golf](#) also runs junior and women's development programs that provide coaching and pathways for all ages and abilities. More information can be found in the [Play Golf](#) and [Women's](#) sections on their website.



"We have always had a strong junior section, with over 150 active junior members, and provides free coaching from PGA professionals to all juniors. More recently, the club piloted an outreach program with the three national schools closest to the club, delivering six one-hour sessions for boys and girls aged 9 to 11. The plan is now to expand the program to include more schools across a wider area."

Kinsale Golf Club, Ireland ▶

[View more examples ▶](#)

Engage Stakeholders

A facility is more likely to remain inclusive and relevant when it understands the perspectives of the people it serves. Listening to members, guests, staff, and the wider community can help shape better decisions about the course, clubhouse, services, and priorities for the future. Meaningful engagement creates space for feedback, strengthens trust, and helps facilities respond more thoughtfully to changing expectations, while also building loyalty and widening local support.

Best Practices

- **Gather feedback from members and visitors (surveys, questionnaires etc.).** Distribute regular online or paper surveys to collect structured feedback on member and visitor satisfaction, with areas for improvement. Follow up with respondents to show how their input is being used to shape the future of the golf course and wider facility.
- **Feedback on the golfing experience.** Ask players about course conditions, layout, pace of play, and overall enjoyment. Use results to prioritize maintenance or design improvements that directly impact the playing experience.
- **Feedback on clubhouse services.** Collect feedback on food, drink, retail, and customer service. Use the information to implement changes and improve satisfaction.
- **Feedback on sustainability initiatives.** Invite members to share views on topics like biodiversity, energy and water. Use the information to guide communications and identify further opportunities for new practices and projects.
- **Conduct market research with the local community, generating insights on how to attract newcomers.** Hold short interviews or focus groups with local residents, schools, and community organizations to understand perceptions of golf and barriers to participation. Use insights to tailor promotions or introductory programs.



- **Include golfers from a wide range of ages in decision making.** Form a member advisory group or youth panel to gather intergenerational perspectives. Ensure all age groups are represented when discussing future planning or pricing.
- **Include golfers of all genders and minorities in decision making.** Actively invite women, gender-diverse and minority players to contribute to course planning, facility upgrades, and club governance. Use participatory governance to embed inclusivity across all aspects of the operation.
- **Include local residents in decision making.** Host annual open meetings or online forums to discuss upcoming projects, community partnerships, and sustainability plans. Use these events to foster transparency and align with local priorities.

National / Regional Opportunities

In BC, several resources support structured engagement to strengthen relationships, enhance the player experience, and attract new participants from diverse backgrounds:

[Sport BC](#) and many provincial sport organizations offer community outreach programs and inclusion strategies that can help golf facilities engage underrepresented groups and reflect BC's cultural and social diversity.

The Canadian Parks and Recreation Association (CPRA) publishes the [Framework for Recreation in Canada](#), which includes tools for facilities to conduct market research, community consultations, and engagement planning.

Many municipalities in BC also publish recreation and community engagement strategies that clubs can align with to attract newcomers and ensure representation from a wide range of backgrounds.



"Since 2019, we have been part of 'Vision 50/50', a Swedish Golf Association club development program designed to ensure that staff, entrepreneurs and members work together towards creating better and more equal golf. To support this, we formed a five-person steering group and a 15-member reference group, surveyed all members about the club environment and atmosphere, and held a kick-off event."

Lidingö Golfklubb, Sweden ▶

[View more examples ▶](#)

Create Inclusive Policies

Inclusive participation depends not only on good intentions, but on clear standards that shape how a facility operates. Policies relating to equality, behaviour, recruitment, access, and safeguarding can help create an environment in which members, visitors, and staff feel respected, supported, and able to take part fully. When diversity, equity, and inclusion are treated as part of effective management, facilities are better placed to reduce discrimination, strengthen culture, and reflect the communities around them.



Best Practices

- **Membership policies free from discrimination across age, gender, sexual orientation, religion, and ethnic background.** Review all membership documents, pricing, and eligibility criteria to ensure they meet human rights standards. Clearly state your commitment to inclusivity in member handbooks and promotional materials.
- **Carry out equal opportunity monitoring across staff and golfers and put practices in place to encourage under-represented groups.** Collect voluntary demographic data from staff and members to identify imbalances. Use findings to inform recruitment, marketing, and outreach strategies aimed at building a more diverse membership and workforce.
- **Provide a system of feedback to report and act on any occurrence of discrimination.** Create a simple, confidential process, such as a web form or designated contact, for staff and members to report discrimination or harassment. Ensure reports are reviewed promptly and outcomes communicated transparently.

National / Regional Requirements

Golf facilities in BC must comply with the [BC Human Rights Code](#), which prohibits discrimination in employment, services, facilities, and membership based on age, gender, sexual orientation, gender identity or expression, race, religion, disability, and other protected grounds.

The [Accessible British Columbia Act \(2021\)](#) requires certain public-sector organizations to identify, remove, and prevent accessibility barriers, setting a clear example for all facilities to follow. While private golf courses are not directly bound, the Act reflects growing expectations for equitable access.

Employers must also comply with [Employment Standards BC](#), which outlines fair hiring, pay equity, and workplace treatment standards that apply to all staff, including seasonal and part-time workers.

National / Regional Opportunities

Golf courses in BC can also go beyond compliance by embedding inclusion and equity into everyday operations, creating a more welcoming culture for players and staff:

Golf Canada's [Equity, Diversity, Inclusion and Safe Sport Framework](#) provides national guidance on adopting inclusive policies and reporting systems, including templates and educational resources.

The [Canadian Centre for Diversity and Inclusion \(CCDI\)](#) provides training, resources, and assessment tools to help organizations embed equity, diversity, and inclusion policies.

BC's [Workplace Inclusion Programs](#) provide initiatives that support inclusive hiring and retention of underrepresented groups across different industries.



"We are now in our third season of offering special membership rates for kids and beginners. When both parents are members, or if you are a single parent, kids aged 18 and younger receive free membership, increasing membership in this age group by about 40% in two years. We also offer spouses a 50% discount in the first year, which has helped increase female membership from 479 in 2020 to 615."

Golfklúbbur Mosfellsbæjar, Iceland ▶

View more examples ▶



Ensure Accessibility

For participation to widen in practice, people must be able to move through and use the facility with confidence. Accessibility involves recognizing and removing physical, procedural, and communication barriers that may prevent people from fully enjoying the course and its wider amenities. Improving access is both a legal and ethical responsibility, but it is also a practical way to create a more welcoming experience, strengthen reputation, and ensure that more people can feel part of the game.

Best Practices

- **Clubhouse is accessible to those with limited mobility and/or physical disability.** Ensure that entrances, pathways, restrooms, and dining areas meet accessibility standards. Install ramps or lifts where needed, provide automatic doors, and maintain clear, level routes between facilities. ★
- **Mobility equipment is available to golfers on the course (e.g. golf carts).** Offer adaptive or all-terrain golf carts, and train staff to assist players who require mobility support. Clearly communicate availability and booking procedures both online and on-site.
- **Partake in an accessible golf program.** Partner with organizations that specialize in adaptive golf to deliver clinics, lessons, and events for players with disabilities. Promote these opportunities through your website and local community networks.

National / Regional Requirements★

Accessibility is an increasing priority in BC, supported by multiple legislative and design frameworks.

The [BC Human Rights Code](#) requires that services and facilities be provided without discrimination based on physical disability, obliging golf facilities to offer reasonable access and accommodation.

The [Accessible British Columbia Act \(2021\)](#) reinforces this by promoting the identification and removal of barriers across public spaces and services.

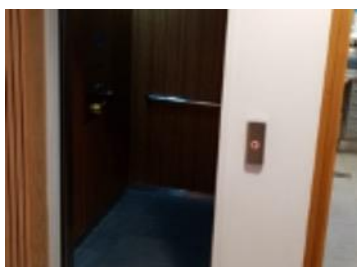
In practice, golf facilities must also comply with the [BC Building Code](#), which sets minimum standards for accessible design in new builds and major renovations, including requirements for ramps, door widths, washrooms, parking, and signage.

National / Regional Opportunities

Golf facilities can also go beyond compliance by aligning with national and provincial initiatives that promote accessibility and adaptive practices:

Golf Canada's [Equity, Diversity, Inclusion and Safe Sport Framework](#) provides national guidance on adopting inclusive policies and reporting systems, including templates and educational resources.

[Paragolf Canada](#) also supports golfers with disabilities through clinics, adaptive equipment, and partnerships with local facilities.



"Restaurant 'De Gagel' is located on the first floor of our club building and is where almost all social happenings before and after matches take place, as well as the weekly bridge drives. To improve access for people with reduced mobility, a passenger lift was installed during the clubhouse renovation so members, even at an older age, can remain part of and enjoy our club many years longer."

Eindhovensche Golf, Netherlands ▶

View more examples ▶



Human Health

Golf facilities can make an important contribution to human health by creating environments that are safe and supportive of active, enjoyable, and socially connected lifestyles. From outdoor recreation and contact with nature to clean facilities, safe working practices, and thoughtful management of environmental risks, the way a course is designed and operated can positively shape the wellbeing of members, staff, visitors, and the wider community. By taking a more holistic approach, facilities can enhance the golfing experience while reinforcing their wider role as healthy and enjoyable places to work, play, and spend time outdoors together.

Promote Walking

Walking the course is one of the simplest and most accessible health benefits that golf can offer. By promoting walking as a normal and enjoyable part of play, golf facilities can support more active lifestyles, foster a stronger connection with the landscape, enhance the overall enjoyment and appreciation of the game, and make a meaningful contribution to wider public health and wellbeing.

Best Practices

- **Provide push carts for golfers.** Maintain a supply of manual and electric push carts to make walking practical and enjoyable for players of all ages and abilities. Keep them visible near the first tee to encourage use.
- **Monitor and record the number of rounds walked by each golfer.** Use booking systems or starter records to track walking rounds. Evaluate the data to measure trends and share internally to celebrate progress.
- **Calculate the percentage of rounds walked in a year.** Express walking participation as a percentage of total rounds played. Set annual targets to encourage staff and golfers to prioritize walking.
- **Visibly promote the health benefits of being a walking golfer.** Use signage, newsletters, and social media to highlight the physical and mental benefits of walking. Frame this as part of your identity and commitment to healthy lifestyles.
- **Calculate and promote the average number of steps taken and calories burned by a sample of golfers.** Collect data through pedometers or smartphone apps and share results. Establish a tangible connection between golf, health and fitness.

National / Regional Requirements

Supporting physical activity aligns with provincial health and recreation goals under the [BC Physical Activity Strategy](#), which promotes active living and the creation of environments that encourage daily movement.

By designing and managing courses that support walking play, golf facilities contribute directly to BC's broader health and community wellness priorities.

National / Regional Opportunities

Golf facilities in BC can build on existing programs and research that highlight the health benefits of walking golf:

[Golf Canada's Golf & Health](#) platform, which was developed in collaboration with international health experts, positions golf as a health-enhancing physical activity meeting World Health Organization criteria. It offers data and communication materials facilities can use to promote walking golf as part of a healthy lifestyle.



[HealthLink BC](#) and [ParticipACTION](#) also provide public health information that can be adapted for clubhouse signage or digital channels to communicate the benefits of active living through walking golf.



“Annually, our club hosts over 100,000 rounds of golf across our three courses, with each round covering nearly ten kilometers. Golfers collectively walk a distance equivalent to about 25 laps around the Earth each year, highlighting the significant wellness benefits golf brings to our members and visitors. Beyond golf, the approximately 130-hectare site is also used for walking and other recreation, making it a popular destination for all ages.”

Gävle Golfklubb, Sweden ▶

[View more examples ▶](#)

Facilitate Coaching and Mentoring

Health and wellbeing are shaped not only by physical activity, but by confidence, encouragement, and a sense of belonging. Coaching and mentoring can help create a more supportive culture by enabling experienced players to guide juniors, beginners, and those who are new to the game. Well-structured support of this kind can strengthen social connection, build confidence, encourage longer-term participation, and foster mutual respect across different ages, backgrounds, and levels of experience.

Best Practices

- **Provide intergenerational pairings in medals and awards.** Run events where adults and juniors compete as teams or partners. Use these pairings to share experience and build relationships between generations.
- **Identify adults willing to provide time to mentor juniors.** Ask members or staff to volunteer as mentors for youth programs. Offer guidance on mentorship and ensure alignment with national or regional safeguarding principles.
- **Identify older junior golfers willing to ‘buddy’ with new juniors.** Encourage older juniors to welcome and support younger or less experienced players. Recognize their contributions through awards or volunteer credits.
- **Help match mentors and mentees by running specific intergenerational tournaments.** Organize events that pair players of different ages and abilities. Offer introductions to new golfers and encourage mentors to share skills in a fun setting.

National / Regional Requirements

Providing equitable opportunities for youth and intergenerational participation aligns with the [BC Physical Activity Strategy](#) and the [Canadian Sport Policy](#), both of which promote lifelong engagement in sport, skill development, and community connection.

Facilities that deliver coaching or mentorship programs must ensure compliance with [Safe Sport](#) requirements, which outline expectations for background checks, codes of conduct, and safeguarding measures when working with minors.



National / Regional Opportunities

Facilities in BC can strengthen their mentoring and youth development programs through the following initiatives and resources:

[viaSport BC](#) offers education, certification, and Safe Sport-aligned training for coaches and volunteers, including mentorship and youth engagement tools.

Golf Canada's [Youth Development Program](#) provides structured frameworks for junior lessons, coaching progression, and mentorship, helping facilities grow participation in a safe, inclusive way.

[Sport for Life](#) publishes resources on long-term athlete development and intergenerational engagement, offering models for integrating mentorship into regular club activity.



"We have made a concerted effort to enhance our junior program, beginning with a season-opening event that brought more than 80 juniors to the Society for an afternoon of games and activities. We also created a 9-hole junior short course, introduced a structured development pathway and Junior tees, and partnered with a nearby prep school. As a result, junior membership is now at full capacity with over 200 members and a waiting list."

Bruntsfield Links Golfing Society Ltd, Scotland ▶

View more examples ▶

Build Confidence and Life Skills

Golf can also provide a valuable setting in which young people develop skills that reach well beyond the sport itself. Involvement in the life of the facility can help build communication, leadership, organization, responsibility, and self-belief, while giving younger players a stronger sense of purpose and connection. Creating opportunities to contribute ideas, support events, or take on meaningful roles can deepen that experience further, strengthening personal development and the wider culture of the facility.

Best Practices

- **Involve juniors in organizing competitions and golf fixtures.** Assign juniors meaningful roles in event planning, such as scorekeeping, registration, or helping with communications, to build organizational and teamwork skills.
- **Encourage juniors to contribute to events.** Invite juniors to assist with fundraising days, community outreach, or environmental projects. Encourage participants to connect their love of golf with wider social and environmental value.
- **Involve juniors in aspects of running the facility, to gain employability skills.** Offer opportunities to shadow staff in areas such as course maintenance, hospitality, or administration. Create internships or volunteer opportunities to provide practical experience and career awareness.
- **Set up a Junior Council to provide feedback and ideas.** Create a formal group of junior representatives who meet periodically to share ideas, voice concerns, and contribute to the direction of course setup and community engagement.
- **Invite a junior member to join a committee.** Include at least one junior member in committees and decision-making to ensure youth perspectives inform future visions and direction. Provide mentorship so they can meaningfully contribute.



National / Regional Opportunities

Developing confidence and life skills through golf aligns with broader sport development goals in BC and across Canada.

viaSport BC offers [Safe Sport and Leadership](#) resources that help organizations involve young people in decision-making, build life skills, and promote a safe, empowering environment.

[Sport for Life](#) provides the Long-Term Development in Sport and Physical Activity Framework, which includes guidance on fostering confidence, autonomy, and personal growth in young athletes.



“The Prince’s Foundation provides scholars with club membership, coaching from Prince’s teaching professionals, clothing, equipment, tournament entry and mentoring to support their development. With a strong heritage of producing European Tour, Challenge Tour and elite amateur players, Prince’s believes it is important to give juniors the best opportunity possible to learn and develop their skills. The development program currently includes six boys and girls aged 5 to 15.”

Prince’s Golf Club, England >

[View more examples >](#)

Create a Safe Environment

People should be safe and feel well supported in the spaces they use. A responsible playing and working environment is therefore fundamental to a sustainable operation, whether the risks relate to blind holes, machinery, severe weather, course conditions, or everyday operations. Clear planning, thoughtful design, and consistent attention to safety help reduce harm, prevent avoidable incidents, and build confidence among members, staff, and visitors, reinforcing the facility is well-managed and a responsible place to play and work.

Best Practices

- **Bells, mirrors, or flags to show clearance of blind greens and fairways.** Install visual or audible systems in areas where players cannot see ahead, ensuring safe clearance before the next shot. Regularly check their condition and visibility.
- **Signs to indicate steep sections of paths.** Place clear signage or railings at slopes, bridges, or uneven terrain to alert players and reduce slip and fall risks, especially in wet weather.
- **Storm shelters.** Provide designated, well-maintained shelters at accessible points across the course. These should be visible on course maps and clearly marked with signage.
- **Warning system for severe weather.** Develop and test a communication system, such as horns, sirens, or radio messages, to quickly alert players and staff of lightning or extreme weather. Ensure procedures are well understood.
- **Free drinking water.** Install accessible, well-marked refill stations or coolers throughout the course to keep people hydrated, especially during heat events.
- **Communication device for emergencies.** Equip marshals, starters, and key staff with radios or mobile phones. Display emergency contact information at tees and in scorecards.
- **Trees managed with safety considerations.** Schedule regular inspections of mature or leaning trees near play areas and paths, removing or pruning those that present risks during storms or high winds. *



- **Plans in place to respond to incidents and emergencies.** Maintain and regularly review a written emergency response plan. Include procedures for medical incidents, severe weather, and evacuations. Ensure all staff are aware of their responsibilities. *

National / Regional Requirements *

Golf facilities in BC have a duty of care under provincial law to maintain safe premises. This includes assessing and controlling hazards such as blind shots, unstable trees, steep paths, and severe weather risks.

The [BC Building Code](#) governs structures like bridges, shelters, and signage, ensuring structural integrity and accessibility.

Under WorkSafeBC's [Emergency Planning and Response](#) requirements, facilities must maintain an emergency plan, train staff, and provide appropriate first aid coverage. These obligations extend to managing public and worker safety during on-course incidents, such as lightning or medical emergencies.

Some municipalities have Tree Protection Bylaws that regulate tree safety, removal or pruning. Under [WorkSafeBC Occupational Health and Safety regulations](#), employers must ensure that trees which could pose a risk to workers are identified and assessed by a qualified person, with appropriate control measures implemented where necessary. Please confirm whether a Tree Protection Bylaw applies to your property and ensure that tree assessments are conducted where required.

National / Regional Opportunities

Golf courses can enhance safety systems and preparedness using available training and information resources:

The [Wildlife Danger Tree Assessor's Program](#) provides certified training for identifying and managing hazardous trees in recreational and park settings, including golf courses.

Climate Change Canada's [Lightning Safety](#) resources offers national guidance for outdoor recreation areas, including protocols for lightning detection, play suspension, and sheltering.

The [Canadian Lightning Danger Map](#) displays real-time lightning strike data to help courses make informed decisions during storms.

[BC Emergency Alerts](#) also provides emergency warnings for severe weather and natural hazards directly to mobile devices across the province.



"Our greenkeepers have been using a cherry picker to trim dead wood from trees around the golf course, an essential part of course maintenance that also helps prevent dangerous situations. In addition to pruning, several bat boxes have been installed to support nature, help control insects and contribute to a healthy ecosystem. Through these efforts, we are helping ensure a safe and nature-rich golfing experience for everyone."

Hooge Graven Golfclub Ommen, Netherlands ▶

View more examples ▶



Employment

Employment plays a central role in the long-term strength and sustainability of a golf facility. A workplace that is safe, supportive, and professionally rewarding is better able to attract, retain, and develop the people needed to manage the course and wider operation well, while also supporting stable livelihoods. By investing in fair employment practices, staff wellbeing, training, and opportunities for growth, golf facilities can strengthen performance, build resilience, and demonstrate their value as responsible and forward-looking employers.

Offer Fair and Safe Employment

Fair pay, equal opportunity, safe working conditions, and respectful treatment are fundamental to building a workplace in which people can contribute with confidence and professionalism. When staff feel protected, valued, and treated fairly, facilities are better placed to build trust, strengthen retention, and establish themselves as responsible, desirable and credible employers.

Best Practices

- **Adopt an equal opportunity recruitment and hiring policy.** Ensure hiring decisions and job progression are made on merit and free from discrimination. Publicly communicate your commitment to inclusion and diversity in all job postings and recruitment materials.
- **Follow all relevant legislation and best practice for hiring and employment.** Keep up to date national and regional requirements on pay, working hours, holidays, and employment contracts. Maintain clear, written policies on conditions of employment and staff rights. *
- **Follow all relevant legislation and best practice for worker safety.** Develop a comprehensive health and safety policy, conduct routine risk assessments, and provide ongoing training tailored to each department. *
- **Participate in local or national employee welfare guidance or certification programs.** Join recognized programs that promote fair treatment and wellbeing at work. Demonstrate a commitment to staff welfare beyond compliance.
- **Compensate workers with a living wage.** Benchmark pay against national or regional living wage rates to ensure all staff earn enough to meet local living costs.
- **Pay workers for overtime.** Track hours accurately and compensate staff in accordance with national or regional legislation. *

National / Regional Requirements*

Golf facilities in BC must comply with a range of legislation designed to ensure fair, safe, and equitable employment.

The [BC Employment Standards Act](#) sets out minimum requirements for wages, hours of work, overtime, vacation, statutory holidays, and termination.

Employers must also meet the [BC Human Rights Code](#), which prohibits discrimination in hiring and employment on the basis of age, gender, race, sexual orientation, religion, disability, and other protected grounds.

Worker safety is governed by the [Workers Compensation Act](#) and enforced by [WorkSafeBC](#). This requires golf courses to provide a safe workplace, conduct risk assessments, develop health and safety programs, and ensure workers are trained and supervised appropriately.

Where golf facilities employ temporary foreign workers or seasonal staff, federal requirements under [Employment and Social Development Canada \(ESDC\)](#) and the [Temporary Foreign Worker Program](#) may also apply, ensuring fair treatment, housing standards, and proper wages.



National / Regional Opportunities

Beyond minimum legal compliance, golf courses can engage with programs and resources in BC that promote employee wellbeing, fair compensation, and inclusive workplace culture:

[Living Wage BC](#) provides guidance on paying a living wage beyond the provincial minimum, with certification available for employers who commit to this standard.

BC's Centre for Disease Control provide [Workplace Health Programs](#) with tools and resources to promote staff health and wellbeing, including fatigue management, mental health, and safe food-handling practices.

[BC's Tourism and Hospitality HR Association \(go2HR\)](#) provide sector-specific guidance on HR, training, health and safety, and mental wellbeing for tourism-related businesses, including golf facilities.

[Canadian Centre for Diversity and Inclusion \(CCDI\)](#) offer training and resources for embedding equity, diversity, and inclusion into workplace culture and recruitment.

[WorkSafe BC's Resources](#) also provide extensive tools, training modules, and industry-specific guidance to help employers go further in protecting staff safety.



"As of November 20, 2024, our maintenance department had achieved 4,996 days without a lost-time injury. This reflects the leadership team's commitment to safety through comprehensive equipment training and engaging weekly safety meetings that actively involve staff. The achievement is particularly notable given the region's high percentage of seasonal staff and demonstrates that safety remains a core value despite workforce changes."

TPC Twin Cities, United States ▶

[View more examples ▶](#)

Provide Training to Employees

A strong workforce also depends on opportunities to learn and improve over time. Across greenkeeping, hospitality, administration, and management, training can strengthen capability, reduce risk, and raise standards in service, sustainability, and day-to-day performance. Ongoing development also signals that employees are being invested in for the long term, helping facilities attract committed staff and support professional growth across the operation.

Best Practices

- **Accredited professional development programs.** Support staff in earning recognized qualifications or certifications relevant to their role. Allocate time and funding for continued professional development through industry associations or accredited providers.
- **Pesticide training.** Ensure that all staff handling or applying pesticides complete approved certification and receive ongoing refresher training on safety and legal requirements. *
- **Health and safety.** Deliver mandatory work safety training modules and regular briefings. Cover emergency procedures, hazard identification, and the safe use of equipment. *
- **Manual handling.** Train staff on correct lifting, carrying, and loading techniques to prevent injury, particularly in maintenance and housekeeping roles.



- **Project management.** Offer training for supervisors and managers in scheduling, budgeting, and team coordination to strengthen efficiency and leadership capacity.
- **Hospitality management.** Provide customer service and hospitality training for clubhouse and food service staff to strengthen member experience and service quality.
- **Supply chain.** Train procurement staff to assess and select suppliers based on the sustainability and quality of the product.
- **Landscape management.** Develop technical knowledge in turf, soil, and irrigation management to improve performance and resource efficiency.
- **Sustainability and carbon reduction.** Offer training on energy management, waste reduction, and sustainable operations to align everyday practices with national and regional sustainability and climate action goals.
- **Biodiversity protection.** Educate staff on local ecology, habitat protection, and best practices for managing natural areas across the course.
- **Resource efficiency.** Build awareness of efficient water, energy, and material use across departments, encouraging all staff to contribute to operational targets.

National / Regional Requirements

Under the [Workers Compensation Act](#) and [WorkSafeBC Regulations](#), employers must ensure staff are properly trained and supervised for their specific roles, particularly where equipment, chemicals, or potentially hazardous conditions are involved.

Beyond this baseline, professional training is voluntary but strongly encouraged as best practice to maintain high standards of course and facility management.

National / Regional Opportunities

Golf facilities in BC can support staff development by connecting them with recognized training and certification programs:

The [Canadian Golf Superintendents Association \(CGSA\)](#) offers professional development, turfgrass management certification, webinars, and conferences tailored to superintendents and other staff.

The [BC Golf Superintendents Association \(BCGSA\)](#) and [Western Canada Turfgrass Association \(WCTA\)](#) provide professional development, workshops, conferences and networking opportunities covering turf and facility management.

The [Club Management Association of Canada \(CMAC\)](#) and [National Golf Course Owners Association Canada \(NGCOA Canada\)](#) offer a range of business management resources, webinars, and regional workshops for club managers and owners.

[BC's Tourism and Hospitality HR Association \(go2HR\)](#) deliver sector-specific HR, leadership, and workplace safety training for hospitality and tourism operations, including golf courses.

WorkSafeBC's [Certification and Training Resources](#) provide safety-focused training materials and e-learning modules for all industries, ensuring staff understand and apply safe working practices.



"We provide customized service training to strengthen the skills of all departments that interact directly with customers. During the off-season, the General Manager personally conducts tailored training sessions for all service-related roles to continuously elevate on-site service quality. Each department also participates in regular safety and health training, maintains up-to-date safety and hygiene certifications, and undertakes preventive training for potential emergency situations."

The Club At Nine Bridges, Korea, Republic of ▶

View more examples ▶

Offer Employee Benefits

Employee benefits can play an important role in attracting, motivating, retaining and supporting staff. Practical, health-focused, and lifestyle-related benefits can strengthen a culture of wellbeing, support work-life balance, and reinforce the facility's wider commitment to people as well as performance. Even relatively simple initiatives, such as staff playing opportunities, support for active travel, or access to health and fitness facilities, can make a meaningful difference to morale, loyalty, and day-to-day engagement.

Best Practices

- **Access to the golf course.** Provide complimentary or discounted access to the course and practice areas for staff. Encourage participation in staff tournaments or team golf days to build camaraderie and deepen understanding of the player experience.
- **Cycle to work incentive.** Promote active commuting by providing secure bike storage, shower facilities, and possible financial incentives or equipment support. Where possible, align the program with national or regional cycling initiatives.
- **Access to fitness equipment.** Offer access to a gym or wellness equipment, either on-site or through partnerships with local fitness centres. Encourage staff to use these facilities during breaks or off-hours as part of a workplace wellbeing program.

National / Regional Opportunities

Golf courses in BC can strengthen staff engagement and wellbeing by offering benefits that align with health, recreation, and sustainability goals:

Programs such as cycling-to-work initiatives can be supported through local government [Active Transportation Grants](#) and provincial rebates for cycling infrastructure.

Employers can also connect staff to national health campaigns like [ParticipACTION](#) or local wellness resources via [HealthLink BC](#), supporting active living and mental health.

As part of BC's tourism sector, golf facilities can also draw on [go2HR's Resources](#) for building benefits packages that improve staff recruitment and retention in a competitive labour market.



"Employees have the privilege of accessing a work well-being benefit via ePassi, with over 40,000 available usage locations across Finland. We have also established a dedicated outdoor fitness room on the premises, specifically designed to emphasize stretching, for the well-being and enjoyment of both customers and staff. Through this, we encourage people to view our site as more than just a golf destination, but as a resource for maintaining fitness and overall health."

Han-Golf Oy Ab, Finland ▶

View more examples ▶



Offer Apprenticeships and Work Experience

Providing apprenticeships and work experience can create valuable entry points into the industry, strengthening local employment pathways and bringing fresh perspectives and energy into the team. Structured opportunities can create clearer pathways into greenkeeping and the wider golf industry, especially when developed in partnership with schools, colleges, and training providers. They can also strengthen local connections and help ensure that the next generation see golf as a source of rewarding careers and meaningful livelihoods.

Best Practices

- **Provide work experience opportunities on the golf course.** Offer short placements for students or job seekers to gain hands-on experience in turf management, machinery operation, and course presentation. Assign mentors to guide participants, ensuring appropriate safety and learning outcomes.
- **Provide work experience opportunities in the clubhouse.** Introduce participants to customer service, catering, and retail operations. Structure placements to include varied tasks that develop both practical and interpersonal skills.
- **Liaise with local authority or skills development agency to source funding and candidates.** Work with regional organizations or local economic development offices to identify funding programs, wage subsidies, or candidate referral networks for apprenticeships and work placements.
- **Liaise with local college or training provider.** Partner with institutions offering programs in turf management, horticulture, or hospitality. Formalize apprenticeship pathways and align placements with certification requirements.

National / Regional Requirements

While golf courses are not legally required to offer apprenticeships, those providing structured placements must meet general workplace safety and supervision standards under the [Workers Compensation Act](#) and [WorkSafeBC Regulations](#). Participants must receive appropriate training and personal protective equipment (PPE) for their tasks.

When hosting minors or students, facilities must also ensure compliance with the [BC Employment Standards Act](#) and safeguarding expectations aligned with [Safe Sport](#) and provincial education policies, ensuring a safe and supportive learning environment.

National / Regional Opportunities

Golf facilities in BC can access a range of programs to help design, fund, and promote apprenticeship and work experience opportunities:

[WorkBC Employer Resources](#) offers wage subsidies, apprenticeship funding, and job-matching services to help businesses train and hire new workers.

[SkilledTradesBC](#) provides provincial apprenticeship programs and certifications, including trades relevant to golf course maintenance and horticulture.



go2HR provides sector-specific workforce development and training resources for the tourism and hospitality industry, including apprenticeship information and HR templates.

Vancouver Island University have Horticulture and Turf Management Programs that offers hands-on training that aligns with golf course operations and apprenticeship placements.

British Columbia Institute of Technology have Sustainable Business and Hospitality Programs that provide collaboration opportunities for placements in sustainability, facility operations, and hospitality.



"We collaborated with Careers in Golf to host students from local schools and raise awareness of the diverse career opportunities within the golf sector. Aimed at students approaching Year 11, the event introduced apprenticeships as an alternative to the traditional university route, while sharing career stories and insight into roles such as PGA Professional and Turf Manager. We hope to inspire a new generation to consider a future in golf."

The Grove Hotel, England ▶

View more examples ▶





Multifunctionality ▶	Volunteering and Charity ▶	Partnerships ▶
Offer Community Activities ▶	Use the Golf Course and Other Facilities for Charity ▶	Collaborate with Local Education Groups ▶
Support Access to the Site ▶	Volunteer for Local Projects and Charities ▶	Collaborate with Environmental Groups ▶
Encourage Use of Building Facilities ▶	Types of Charity Supported ▶	Join with Other Sustainable Businesses ▶
		Share Resources ▶

Golf courses can offer far more than a place to play. They can provide space, skills, relationships, and resources that contribute to education, volunteering, recreation, and community life. When these opportunities are opened up thoughtfully, the facility can become more welcoming, relevant, and accessible, while building trust and creating a stronger sense of shared value. In this way, the course has the potential to function not only as a sporting venue, but as a landscape that supports wider social connection, learning, and local engagement.

For golf superintendents and facility teams, this means looking beyond the traditional boundaries of the course and considering how the site can serve a broader purpose. Through multifunctional use, charitable activity, and local partnerships, golf facilities can make a meaningful contribution to the people and places around them. That may involve improving community access, working with schools and environmental organizations, supporting volunteering, or sharing facilities, knowledge, and practical expertise in ways that benefit others.

Seen in this light, community value is not separate from good stewardship. It is part of how a golf facility builds stronger relationships, deepens its local relevance, and demonstrates wider responsibility and purpose. A course that engages well beyond its membership can strengthen its reputation, create new forms of support and goodwill, and show more clearly how golf facilities can make a positive contribution to society.

This action area is designed to help superintendents explore that role through the connected themes of multifunctionality, volunteering and charity, and partnerships, enabling golf facilities to strengthen local relationships, broaden the benefits they provide, and play a more meaningful and respected role in the communities they serve.



Multifunctionality

Golf facilities can offer more than a setting for formal play. They can provide valuable space for recreation, learning, nature connection, and shared local use, opening up new ways for people to experience the landscape and engage with the game. Thinking more multifunctionally about the site can broaden its relevance, help shift perceptions of golf as more open and welcoming and make fuller use of the course and its supporting facilities. It can also strengthen local relationships and allow more people to benefit from the wider social, recreational, and environmental value a well-managed golf landscape can provide.

Offer Community Activities

Creating space for community activities is one of the clearest ways a golf facility can become more multifunctional in practice. Appropriate opportunities for walking, recreation, learning, and nature-based engagement can open the site to new audiences and allow more people to experience the landscape in different ways. This can broaden the relevance of the facility, deepen local connections, and highlight the golf facility as a more open, relevant, and positive presence within the community.

Best Practice

- **Walking and nature trails.** Designate clear, well-signed walking routes through out-of-play or low-risk areas. Use durable surfaces or mown paths, add benches and interpretation boards, and include maps that highlight local wildlife, habitats, and sustainability initiatives.
- **Sledding.** Identify suitable slopes for winter use away from greens, bunkers, trees, and water. Mark boundaries clearly, close areas during maintenance, and inspect for obstacles before opening to the public.
- **Cross-country skiing trails.** Mark and groom designated ski routes during off-season periods, ensuring separation from infrastructure and water features. Communicate seasonal closures and route maps to members and local users.
- **Horse riding trails.** Create perimeter bridle paths with clear signage and safe crossings. Maintain firm, well-drained surfaces and coordinate with local equestrian groups for access, safety, and maintenance schedules.
- **Biking trails.** Develop low-impact cycling routes in safe, low-traffic areas, ideally along course perimeters or connecting paths. Use signage to distinguish cycling zones from playing areas and manage trail surfacing to prevent erosion.
- **Outdoor education.** Partner with schools or local educators to host field studies and guided activities. Use natural areas such as woodlands, ponds, and meadows as outdoor classrooms, integrating lessons on ecology, soil, and water.
- **Historical or cultural education.** Use signage, trails, or events to share the site's heritage, landscape history, or cultural connections. Collaborate with local historians or heritage groups to ensure accuracy and community engagement.
- **Other forms of golf.** Introduce short courses, par-3 layouts, footgolf, or disc golf to engage new audiences. Use flexible turf areas or existing fairways to minimize construction and maintenance needs.
- **Birdwatching.** Install observation points, benches, or small hides near ponds and naturalized areas. Coordinate with wildlife or conservation groups to host bird walks, monitoring events, or citizen-science programs.
- **Community garden or planters.** Dedicate an accessible area for shared growing spaces or planter boxes. Provide compost, irrigation, and signage, and encourage staff or local volunteers to help maintain them.
- **Greenhouse.** Use existing service areas or new small structures for propagation, plant trials, or educational partnerships. Integrate composting, rainwater collection, and native plant projects to reinforce sustainability messaging.



National / Regional Requirements

When opening their grounds for multifunctional community use, golf courses in BC must meet their obligations under the [Occupiers Liability Act](#), ensuring the safety of all visitors. This includes clear signage at public crossings, designated routes for non-golfers, and regular maintenance of paths and facilities.

Any new trails, access routes, or structures must comply with the [BC Building Code](#), particularly regarding accessibility, slope, and surface standards. Where community events or facilities involve food handling, waste management, or livestock (e.g., gardens or horse riding), relevant municipal bylaws and [BC Food Safety Act](#) provisions also apply.

National / Regional Opportunities

Resources and partnerships are available to help golf courses in BC design and manage these initiatives:

[Recreation Sites and Trails BC](#) offers guidance on trail design, safety, and maintenance standards adaptable for golf courses.

[Birds Canada](#) provides tools and resources for citizen science, bird monitoring, and community birdwatching events.

[Wildsight's Classroom with Outdoors](#) offers outdoor education materials that align with BC's curriculum and can be adapted for use at golf courses.



"To help visitors explore and appreciate our rich biodiversity and natural beauty, we have introduced a Nature Trail Map featuring accessible walking and wheeling routes around the courses. These trails guide users through key ecological areas without impacting golf play, promoting education, inclusion and wellbeing, while helping raise awareness of biodiversity and showcasing how thoughtful land management can benefit both nature and people."

Carnoustie Golf Links, Scotland ▶

View more examples ▶

Support Access to the Site

Providing safe and clearly defined access points can help golf facilities welcome the wider community while protecting both players and visitors. Thoughtful design of entrances, signage, routes, and crossings can improve connections with local walking and cycling networks, make the site feel more open and accessible, and support more positive day-to-day relationships with neighbouring users. Managed well, these points of access can strengthen community trust and demonstrate a responsible approach to protecting players, visitors, and the quality of the landscape itself.

Best Practices

- **Signage for access and crossings.** Install clear, durable signage to show where the public may enter or cross the course safely. Mark sightlines at fairway crossings and use warning signs or mirrors where visibility is limited.



- **Welcome and information boards.** Place welcoming signs at public access points explaining rights of way, golf course etiquette, and safety practices (e.g., shouting “fore,” keeping dogs on a leash, staying clear of active play). Include maps and contact details for reporting concerns.
- **Integration with public paths.** Where possible, link designated walking or cycling paths within the course to nearby public rights-of-way or community trail systems. Use gates or delineation features to manage flow and avoid interference with play. Maintain paths regularly to ensure safe, accessible passage year-round.

National / Regional Requirements

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Any new trails, access routes, or structures must comply with the [BC Building Code](#), particularly regarding accessibility, slope, and surface standards. Where community events or facilities involve food handling, waste management, or livestock (e.g., gardens or horse riding), relevant municipal bylaws and [BC Food Safety Act](#) provisions also apply.

National / Regional Opportunities

Golf courses can strengthen community access by aligning with established provincial and municipal frameworks:

[Recreation Sites and Trails BC](#) provides detailed guidance on signage, wayfinding, and trail safety suitable for integrating public routes with golf landscapes.

Local governments' [Active Transportation Strategies](#), such as those in Vancouver, Surrey, and Kelowna, offer design standards and funding pathways for walking and cycling connectivity.

Facilities engaged in community use can also collaborate with [Birds Canada](#) and [Wildsight](#) on interpretive signage and outdoor learning programs, turning access points into opportunities for education and engagement.



“We recently unveiled a diverse system of hiking trails, many of which run through the resort’s nine-hole golf course. Signs have been set up throughout the recreational area and near the 9th green, with free maps available in Hotel Húsafell reception, the Visitor Center and by digital download. Developed in part from ancient sheep and horse trails, the ten routes showcase both natural and cultural heritage.”

Húsafell Golf Course, Iceland ▶

[View more examples ▶](#)

Encourage Use of Building Facilities

Making clubhouse and other facility spaces available for wider community is another great way to strengthen local connections and increase the value of the golf course as a shared asset. Opening meeting rooms, catering areas, and event spaces for appropriate public or private use can create additional income, showcase the quality of the amenities, and introduce new audiences to the facility. It can also help position the golf facility as a more welcoming and versatile place for social, educational, and recreational activity.



Best Practices

- **Promote catering facilities to local community groups.** Publicize clubhouse dining options to local associations, schools, and businesses. Offer flexible menus and competitive packages for meetings, luncheons, or events to increase off-peak usage.
- **Make rooms available for community meetings or workshops.** Identify underused spaces that can host small gatherings or classes. Provide clear booking information, ensure insurance coverage, and establish guidelines for external users.
- **Offer function rooms for hire.** Market larger rooms for private events such as weddings, fundraisers, or conferences. Ensure suitable parking, accessibility, and service support are available.
- **Offer other services externally.** Extend expertise such as catering, event planning, or hospitality management to external clients. This can strengthen brand recognition and diversify income while keeping staff engaged year-round.
- **Offer facilities for public use.** Provide changing rooms, storage, or restroom access for walkers, cyclists, or event participants. Ensure facilities are secure, clean, and clearly signposted, with hours of access displayed.

National / Regional Requirements

When opening clubhouse or maintenance buildings for public use, operators must comply with the [BC Building Code](#), which governs accessibility, structural safety, emergency egress, and occupancy limits.

Where food or beverages are served, compliance with the [Food Premises Regulation](#) and approval from local health authorities are required to maintain hygiene and food safety standards.

Local business bylaws may further regulate public rentals, signage, and event hosting activities.

National / Regional Opportunities

Facilities can also align with municipal recreation strategies, many of which encourage partnerships with local venues for meetings, workshops, and cultural activities.

The [BC Non-Profit Housing Association](#) and [Volunteer BC](#) both offer resources and networks that facilities can connect with to host community programs or provide space for local groups.

For facilities wishing to market themselves as venues, the [Tourism Industry Association of BC](#) and [Destination BC](#) provide promotional tools and best practice guides for reaching local audiences and integrating into broader community and tourism activity.



"We offer weekly yoga classes in the Club Room with views of the 18th green and Mount Rigi. Golf and yoga both focus on strength, balance, flexibility and concentration. By practicing yoga, golfers can improve physical condition, reduce injury risks, and take a more sustainable approach to the sport."

Golf Küssnacht, Switzerland ▶

View more examples ▶



Volunteering & Charity

Supporting volunteering and charitable activity can help golf facilities build stronger, more meaningful relationships with the people and places around them. By offering time, space, skills, and practical support to local causes, facilities can show generosity, deepen their local presence, and create opportunities for connection around shared purpose. These efforts can also widen the appeal of the facility, foster pride among staff and members, and reinforce the positive role the golf course can play in community life.

Use the Golf Course and Other Facilities for Charity

Golf facilities are well placed to bring people together in support of good causes. By hosting charity tournaments, community fundraisers, and special events, the course, clubhouse, and wider facilities can be used to generate meaningful social and financial impact. When these activities are well chosen and thoughtfully delivered, they can also strengthen community ties, enhance reputation, and create memorable experiences that connect members, guests, and the wider public to a shared purpose.

Best Practices

- **Select one or more charities for the golf facility to support.** Choose causes that reflect the facilities values or local community needs. Establish clear annual goals, promote the partnership through communications, and involve members in selecting or volunteering for chosen charities.
- **Host a tournament which donates funds to one or more selected charities.** Organize annual or seasonal charity tournaments, with entry fees, raffles, or sponsorships contributing to the selected cause. Publicize results to build engagement and accountability.
- **Offer tee times to charities to be utilized in their fundraising efforts.** Donate tee times, lesson packages, or memberships for use in charity auctions, raffles, or prize draws. Create a simple process to manage and track these donations.
- **Use the golf course for fundraising events.** Explore non-golf fundraising opportunities such as fun runs, orienteering challenges, or nature walks. Coordinate schedules to avoid conflicts with play and ensure the safety of participants.
- **Use the restaurant and function rooms for fundraising events.** Host dinners, auctions, concerts, or community dances, offering preferential rates for registered charities. Ensure events meet licensing and safety requirements while highlighting hospitality offerings.

National / Regional Opportunities

BC's charitable and sporting frameworks provide multiple avenues for golf facilities to develop structured, visible community partnerships.

The [BC Amateur Sport Fund](#) enables charitable donations to be directed through approved sport-related projects, including golf development and community initiatives.

The [BC Association for Charitable Gaming](#) offers resources and guidance on licensing, compliance, and best practices for charitable fundraising events.

To expand visibility and participation, facilities can also collaborate with [Destination BC](#) and regional tourism associations to promote charity tournaments or community events, positioning them as part of BC's vibrant visitor economy and culture of giving.



"We were honoured to host the world's first WWF Golf Open in partnership with WWF Suomi, dedicated to raising awareness and support for the protection of the Baltic Sea. The event promoted sustainable practices within the golf community while drawing attention to urgent environmental challenges facing the Baltic Sea ecosystem. Proceeds were directed towards initiatives that protect regional biodiversity and water quality for future generations."

Hirsala Golf, Finland ▶

View more examples ▶

Volunteer for Local Projects and Charities

By encouraging staff and members to contribute their time, skills, and resources to local projects and charitable causes, facilities can also demonstrate a wider commitment to people, place, and positive local impact. Whether through conservation work, fundraising, mentoring, or support for local events, volunteering can build pride, strengthen morale, and reinforce the facility's role as a constructive and engaged presence in local life.

Best Practices

- **Identify local projects in need of volunteers.** Build relationships with nearby schools, charities and councils to identify where staff or members can add value. Match opportunities to available skills, such as landscaping, event organization, or mentoring.
- **Encourage staff and golfers to volunteer for good causes.** Promote local volunteer opportunities through newsletters, noticeboards, or digital channels. Recognize and celebrate volunteer contributions publicly to maintain engagement.
- **Encourage staff and golfers to represent the facility in the local community.** Support participation in local fairs, clean-up events, or fundraisers to raise visibility and goodwill.
- **Provide staff with time and opportunities to volunteer.** Offer flexible scheduling or dedicated volunteer days for staff to participate in local projects. Ensure these arrangements comply with wage and leave requirements.
- **Donate equipment or provide resources for community projects.** Repurpose tools, furniture, or surplus materials for use by local schools, parks, or community gardens. Keep a record of donations for transparency and social reporting.

National / Regional Requirements

There are no provincial or federal regulations mandating golf facilities to participate in community volunteering. However, under the [Employment Standards Act](#), employers who formally release staff during paid hours to volunteer must manage this in line with wage and leave provisions.

National / Regional Opportunities

Voluntary, organized community service is increasingly recognized as a hallmark of responsible business practice and a key pillar of corporate social responsibility. Facilities in BC can access resources to formalize and expand their volunteer programs.

[Volunteer BC](#) provides training, networking, and promotional tools to help organizations structure and publicize their community involvement.



The [BC Recreation and Parks Association \(BCPRA\)](#) also supports local engagement initiatives that allow sport and recreation facilities to contribute expertise, equipment, or staff time to local projects like park improvements to school-based programs.

Partnerships with local governments and environmental NGOs can also help align volunteer activities with broader sustainability and community goals



“As part of our contribution beyond our course, we volunteer in regular local beach clean-ups, using our vehicles to help transport collected waste and remove it from the beach. Larger pieces of driftwood are brought onto the golf course and reused for furniture or as part of log piles and habitat in native out-of-play areas. It is important for us to help keep our surroundings clean and safe for fauna.”

Hoiana Shores Golf Club, Vietnam ▶

[View more examples ▶](#)

Types of Charity Supported

Golf facilities have the potential to contribute to a wide range of causes, reflecting the diverse interests and values of their members and communities. By supporting charities that promote health, education, sport, the environment, or civic life, facilities can use their platform to create visible, long-term benefits beyond the course. Aligning charitable work with the facility’s identity, whether through wellness, youth development, or nature stewardship, also helps ensure that contributions are both authentic and impactful.

Best Practices

- **Human health.** Support charities focused on physical and mental health, such as local hospitals, cancer research foundations, or mental health organizations. Host fundraising tournaments, wellness days, or awareness campaigns that link golf with healthy living.
- **Community sports.** Partner with local sports programs or youth development initiatives to expand access to recreation. Contribute through donations, shared facilities, or mentorship to help remove barriers to participation.
- **Environmental.** Collaborate with conservation organizations on habitat restoration, native planting, or water stewardship projects. Use charity events to raise awareness about biodiversity and sustainability on and beyond the course.
- **Education.** Work with schools, colleges, or educational charities to provide scholarships, learning opportunities, and work experience placements. Promote golf as a platform for life skills, leadership, and outdoor learning.
- **Civic groups.** Engage with local foundations, service clubs, and community associations to support projects that strengthen the local area, such as park improvements, cultural events, or heritage conservation.



National / Regional Opportunities

Golf courses in BC can align their charitable focus with reputable provincial and national organizations to further amplify their impact:

Health partnerships could include the [BC Cancer Foundation](#), [Canadian Mental Health Association BC](#), or [Heart and Stroke Foundation of BC](#). For sport inclusion, [KidSport BC](#) helps fund access to recreation for children in need.

Facilities with an environmental or conservation focus can collaborate with [Nature Trust of BC](#), [Pacific Salmon Foundation](#), or [Ducks Unlimited Canada](#).

To support education and civic engagement, facilities might partner with organizations such as [Indspire](#), which advances indigenous education, or their local community foundation, which connects donors with neighbourhood projects and social initiatives.



"We offer our facilities for a '24 hours of golf' charity challenge in which two teams of six players competed for 24 hours to raise money for l'Association PEAK, supporting physical exercise and sports projects for adults, adolescents and children with cancer. This year's event raised 4,000 CHF. The club also offers its facilities for other charity events throughout the year."

Golf Club Crans-sur-Sierre, Switzerland ▶

[View more examples ▶](#)





Partnerships

Strong partnerships can expand what a golf facility is able to achieve, bringing in new perspectives, wider expertise, and closer connections with the people and places around it. Collaboration with schools, charities, local authorities, environmental groups, and community organizations can help facilities contribute to shared priorities and take part in initiatives that extend beyond the course. When these relationships are built with care, they can deepen trust, create mutual value, and give the facility a more visible and constructive role in local life.

Collaborate with Local Education Groups

Working with schools, colleges, clubs, and other local education groups can help golf facilities share their landscapes, expertise, and sustainability practices in ways that support learning, encourage outdoor activity, and open up pathways into green careers. These relationships can build naturally on wider work around education, apprenticeships, and volunteering, helping to turn good intentions into more structured, lasting, and mutually beneficial forms of collaboration.

Best Practices

- **Primary and secondary schools.** Support primary learning in areas such as literacy, numeracy, and science - measuring distances, recording observations, or writing about nature in an engaging outdoor context. Offer sessions on ecology, turf management, or the physics of golf to link classroom subjects with real-world examples.
- **Colleges and universities.** Partner with post-secondary institutions for research projects, sustainability initiatives, or practical training. Share data or allow site access for student studies in environmental science, sports management, or hospitality.
- **Internships and apprenticeships.** Formalize existing opportunities for work experience or seasonal employment by working with educational institutions and skills agencies. Ensure clear learning outcomes and mentorship are in place.
- **Outdoor groups and clubs.** Collaborate with local recreation groups, youth organizations, and community clubs to host joint activities such as guided walks, conservation work, or sport and wellness events.

National / Regional Opportunities

Golf facilities in BC can access a wide range of resources to support educational partnerships.

[First Green](#) provides STEM and environmental education resources that help turn golf courses into outdoor classrooms for local schools and young people.

The [Association for Co-operative Education and Work-Integrated Learning BC/Yukon](#) connects employers with universities and colleges to facilitate internships, placements, and applied learning projects.

The [BC Recreation and Parks Association \(BCPRA\)](#) promotes collaboration between sport, recreation, and community clubs.

For outdoor learning, resources from [Wildsight's Classroom with Outdoors](#) can help courses integrate environmental education into school partnerships.



“We embarked on our inaugural participation in the First Green program, hosting local school students aged 15 to 16 in a unique learning experience on the golf course using the STEM approach. The program helps integrate golf into the community and highlight the positive role golf plays in land management. We also plan to adapt it for on-site staff and use it as a recruitment tool to promote greenkeeping as a credible local career.”

Cabot Cape Breton, Canada ▶

View more examples ▶

Collaborate with Environmental Groups

Partnerships with environmental organizations can help golf facilities connect their landscapes more directly to wider efforts in conservation, restoration, and nature recovery. Wildlife charities, community groups, and environmental agencies can bring valuable expertise, strengthen habitat work, and create new opportunities for learning and local involvement. These relationships can also deepen the impact of existing sustainability initiatives, from habitat management to composting and multifunctional land use, through shared knowledge, practical collaboration, and stronger community connection.

Best Practices

- **Wildlife charities.** Partner with local or national organizations to protect and enhance habitats. Activities might include creating nesting zones, running bird counts, or restoring native vegetation. Ensure initiatives are informed by sound ecological advice and involve staff and members where possible.
- **Environmental protection agencies.** Collaborate with municipal, provincial, or national agencies on restoration projects, stream management, or biodiversity surveys. Share monitoring data, participate in conservation programs, and align maintenance practices with regional environmental priorities.
- **Civic/community projects.** Join or host local stewardship groups working on tree planting, invasive species removal, or wetland rehabilitation. Encourage staff and members to volunteer time or resources to projects that connect the course to the surrounding community.

National / Regional Opportunities

Golf facilities in BC have access to a strong network of environmental organizations and initiatives:

The [Nature Trust of BC](#) and [Pacific Salmon Foundation](#) lead habitat restoration and watershed protection programs that often welcome partnerships with land managers. [Birds Canada](#) offers a range of citizen science initiatives, such as the BC Breeding Bird Survey and Great Backyard Bird Count, that golf facilities can host or contribute to.

For local engagement, regional districts and municipalities frequently support stewardship groups, offering coordination and funding for collaborative habitat projects. The [Invasive Council of BC](#) also provides training, resources, and community initiatives to help facilities manage invasive plants and animals effectively while strengthening ecological resilience on and around the course.



"We have joined forces with the RSPB, alongside other golf courses and land managers in the East of Scotland, on a Farmland Bird Lifeline targeting the decline in Corn Bunting numbers in recent years. The project involves creating and managing specific habitats, sown with a specially formulated seed mixture to create nesting areas and provide food through the winter months."

Dumbarnie Golf Links, United Kingdom ▶

View more examples ▶

Join with Other Sustainable Businesses

Partnerships can also extend into the wider local economy. By working with responsible suppliers, local enterprises, municipalities, and broader sustainability networks, golf facilities can exchange ideas, create new opportunities, and contribute to a more resilient and forward-looking business environment. These relationships help show that environmental responsibility is reflected not only in on-site management, but in procurement, collaboration, and the wider way the facility operates.

Best Practices

- **Work with suppliers to showcase innovation with their products.** Collaborate on demonstrations or pilot projects for low-impact products such as electric equipment, organic fertilizers, or recycled materials. Use these partnerships to educate staff, members, and peers about emerging sustainable technologies.
- **Join a local Fairtrade network.** Support ethical trade by sourcing Fairtrade-certified goods for catering and retail operations. Engage with community events or campaigns that promote fair and sustainable supply chains.
- **Participate in local authority "green" business initiatives.** Register with local programs that connect sustainable businesses, share resources, and promote environmental performance across sectors. Use these forums to exchange ideas and showcase progress.
- **Enter sustainable business award incentives.** Submit applications to regional and provincial sustainability awards to benchmark achievements, gain visibility, and motivate ongoing improvement. Document measurable outcomes such as emissions reductions, waste diversion, or community impact.

National / Regional Opportunities

Golf facilities in BC can leverage several programs to connect with other sustainable enterprises:

The [BC Green Business Program](#) provides certification, networking, and recognition for businesses adopting verified sustainable practices, including energy efficiency, waste reduction, and community engagement.

Many municipalities operate their own green business networks or award programs. For example, the Capital Regional District's [EcoStar Awards](#) in Victoria highlights leadership and collaboration across sectors.

For sourcing and retail operations, aligning with [Fairtrade Canada](#) strengthens ethical procurement and supports producers committed to fair wages and environmental stewardship.



"We launched a 'Pioneers of Sustainability' initiative to recognize the environmental commitment of our business community. All our partners share with us the values of sustainability, and each receives an award to celebrate its contribution to the success of our overall sustainability."

US Kids Venice Open, Italy ▶

View more examples ▶

Share Resources

In some cases, collaboration can take a more practical form through the sharing of machinery, materials, expertise, or staff capacity. Working in this way with neighbouring golf courses, local businesses, or community partners can reduce costs, avoid unnecessary duplication, and make better use of existing assets. It can also support a more circular and resilient local economy, keeping resources in use for longer and reinforcing golf's role as a constructive and connected presence within the wider area.

Best Practices

- **Machinery sharing.** Partner with nearby golf facilities or local land-based businesses to share specialist equipment such as aerators, topdressers, or tractors. Establish clear schedules, maintenance responsibilities, and insurance agreements to ensure reliability and accountability.
- **Raw material sharing.** Exchange or jointly purchase materials such as sand, soil, gravel, or compost. Bulk purchasing and coordinated deliveries can reduce costs, packaging, and emissions from transport.
- **Workforce collaboration and sharing.** Coordinate with nearby facilities to share skilled staff during peak seasons or collaborate on training and development. Shared seasonal or part-time roles can help retain talent and balance workloads.
- **Other golf facilities.** Explore joint initiatives between neighbouring golf facilities, such as waste collection contracts, recycling programs, or sustainability reporting, to benefit from economies of scale and shared expertise.

National / Regional Opportunities

Golf facilities in BC can access several networks to support cooperative approaches:

The [BC Golf Superintendents Association \(BCGSA\)](#) and related chapters host regular meetings and an annual education and networking conference.

The [Western Canada Turfgrass Association \(WCTA\)](#) also hosts an annual meeting and other opportunities for superintendents to network with other turfgrass professionals.

The [Allied Golf Association of BC](#) serves as a collective industry body, fostering collaboration and shared solutions among golf facilities across the province.

Regional business organizations such as the [BC Chamber of Commerce](#) and local economic development offices often facilitate cooperative purchasing and resource-sharing initiatives within communities.



For workforce collaboration, **go2HR** connects employers across the tourism and hospitality sectors, supporting shared training, recruitment, and retention strategies.



"To streamline management, we consolidated three golf clubs under a single management, PlayGolf54. The resulting synergies enabled significant streamlining of communications, purchasing, personnel management and equipment usage. Less frequently used machinery, such as the core drill, sod cutter, catenary and airject, has been shared. This approach has reduced access costs without compromising the quality of services offered."

Montecchia Golf Club, Italy ▶

View more examples ▶



Communications & Advocacy



Awareness and Inspiration ▶	Leadership ▶
Engage and Involve Staff in Sustainability Commitments ▶	Integrate Sustainability into the Overall Business ▶
Engage and Involve Golfers in Sustainability Commitments ▶	Share Sustainability Updates and Achievements ▶
Engage and Involve the Community in Sustainability and Climate Action ▶	Get Recognized ▶
Promote the Ecological Value of the Site ▶	Follow a Journey of Continuous Improvement ▶

Communications and advocacy play an essential role in turning sustainability efforts into wider understanding, stronger engagement, and lasting value. What matters is not only the work taking place on the ground, but how that work is explained, evidenced, and shared with staff, golfers, partners, communities, and decision-makers. For golf superintendents and facility teams, this is an opportunity to do more than raise awareness. It is a chance to strengthen trust, enhance reputation, reach a broader range of audiences, and demonstrate credibility in areas such as planning, licensing, funding, and stakeholder relations.

Effective communication helps others see both the purpose and the impact of sustainability work. It can bring staff and golfers into the journey, give greater visibility to the priorities shaping management decisions, and show how environmental action connects with the quality, character, and wider contribution of the facility. By communicating progress clearly, recognizing achievements, and highlighting the ecological and social value of the site, golf facilities can challenge outdated perceptions, generate stronger local support, and present themselves more positively to members, visitors, regulators, and potential partners or funders.

Advocacy adds a further dimension. It allows facilities not only to explain what they are doing, but to show leadership in how sustainable golf is understood and discussed more widely. When this is done with clarity and consistency, it can reinforce business resilience, open new opportunities for collaboration and investment, and position the facility as a credible and forward-looking voice within the game.

This action area is designed to help superintendents approach communication and advocacy with greater purpose, using the connected themes of awareness, inspiration, and leadership to strengthen engagement, demonstrate progress, and increase the wider value of sustainability and climate action.



Awareness and Inspiration

Awareness and inspiration help turn sustainability from a set of actions into something people can believe in, contribute to, and feel part of. When staff, golfers, and the wider community understand not only what a facility is doing, but why it matters, it can build shared purpose, strengthen commitment, and generate the collective momentum needed for lasting change. Positive and inspiring initiatives can engage hearts and minds, foster pride, encourage participation, and strengthen the passion, responsibility, and human relationships that drive meaningful progress on nature, climate, and community wellbeing.

Engage and Involve Staff in Sustainability Commitments

Sustainability becomes far more powerful when it is understood, valued, and carried through the day-to-day culture of the facility. Engaging staff across turf management, hospitality, administration, and management helps turn broad commitments into consistent practice, giving sustainability a stronger place in how the operation functions as a whole. When people understand the purpose of the work, recognize their role in it, and feel a sense of ownership over the progress being made, sustainability can become a shared source of pride, accountability, and long-term improvement.

Best Practice

- **Involve staff and committees in sustainability efforts.** Engage representatives from all departments in shaping and delivering sustainability initiatives. Encourage staff to contribute ideas, participate in decision-making, and take responsibility for specific projects or focus areas to build ownership and shared accountability.
- **Display information on sustainability in staff areas.** Use noticeboards, posters, and digital displays to share progress updates, sustainability goals, and success stories. Keep the information practical and relevant to daily work.
- **Include sustainability in staff meetings and training.** Make sustainability a regular agenda item and integrate into inductions and refresher training. Highlight how individual actions contribute to wider goals.
- **Run additional sustainability training.** Provide focused sessions on topics such as carbon reduction, biodiversity protection, or energy efficiency. Encourage peer-to-peer learning by showcasing practical examples from staff and other facilities.
- **Build a sustainability team.** Form a team or working group representing all departments to guide, review, and communicate progress on sustainability initiatives. Give the team ownership over targets and recognition for results.
- **Acknowledge staff contributions.** Regularly thank and celebrate staff for their role in sustainability projects through newsletters, recognition programs, or staff events to sustain motivation and a sense of shared achievement.

National / Regional Opportunities

BC offers several programs and resources to help employers engage staff and embed sustainability within workplace culture.

[go2HR](#) provides tools on employee engagement, training, and organizational culture that can easily incorporate environmental goals. The [BC Green Business Program](#) includes certification pathways and toolkits that reward staff participation in sustainability, with practical checklists for energy, waste, and water management.

The Government of BC's [Climate Action Resources](#) and [ESG Centre of Excellence](#) provide frameworks to integrate climate awareness and carbon reduction into business operations.



The [BC GreenCare Guide](#), though designed for healthcare organizations, also contains adaptable templates, conversation starters, and behavioural prompts that can help golf facilities communicate sustainability expectations and inspire collective participation.



"We include environmental awareness as part of our Colleague Service Culture training, recognizing it as core to our company responsibilities. Aligned with this mission, we are now bringing awareness of the environment to a local level so club colleagues and the local community can grasp its importance. We have installed a 'Green Information Wall' in our Club and a similar board in our colleagues' rest area."

Jumeirah Golf Estates, United Arab Emirates ▶

View more examples ▶

Engage and Involve Golfers in Sustainability Commitments

Golfers also play an important part in shaping the culture and direction of a facility. As the people who experience the course most directly, they influence expectations, respond to visible change, and can either strengthen or resist the choices that support a more sustainable future. By making initiatives clear across the course and clubhouse, inviting participation, and showing progress over time, facilities can build a stronger sense of understanding and connection among players. When golfers see the purpose behind sustainability decisions and are given meaningful ways to engage, they are more likely to support the direction of the facility and become positive advocates both on and off the course.

Best Practices

- **Involve golfers in sustainability efforts.** Invite members and visitors to participate in projects such as tree planting, litter clean-ups, or biodiversity monitoring. Provide easy ways for them to share ideas and feedback on sustainability priorities.
- **Post sustainability information in the clubhouse and on the course.** Use noticeboards, posters, or digital screens to communicate key actions, achievements, and future goals. Keep messaging clear, positive, and locally relevant.
- **Share commitments online.** Publish a sustainability policy or goals on the facility website, ideally with a dedicated sustainability section highlighting progress and initiatives.
- **Use newsletters and social media.** Include regular sustainability updates in member communications, featuring stories about projects, staff efforts, and community partnerships. Encourage golfers to engage, share, and celebrate achievements.
- **Sustainability team open to golfers.** Invite interested members to join or contribute to a sustainability team, ensuring their perspectives and ideas are part of ongoing discussions.
- **Organize educational events.** Host workshops, guided walks, or talks on sustainability topics like local ecology, water conservation or responsible turf management to strengthen understanding and connection with the course's natural environment.



National / Regional Opportunities

Golf facilities in BC can access a range of tools to help communicate sustainability effectively.

The Government of BC's [Climate Action Resources](#) provide ready-made materials and messaging that facilities can adapt to showcase their environmental commitments.

[BC Green Business](#) offers templates, signage examples, and recognition programs that make it easier to highlight sustainability achievements to members and visitors.

Partnerships with environmental organizations such as [Birds Canada](#) and the [Invasive Council of BC](#) can also add value by providing educational materials, citizen science opportunities, and project support to engage golfers and the wider community.



"Our Sustainability Sub-Committee established a new club competition, the Woodland Cup, to promote sustainability to members. Held in a cross-country format during national Sustainability Week, it showcased the more remote parts of the course with a competitive edge. It was followed by a presentation on our sustainability plan and current progress, while surplus funds from the competition went towards buying new trees for planting on the course."

Nevill Golf Club, England ▶

[View more examples ▶](#)

Engage and Involve the Community in Sustainability and Climate Action

Beyond staff and golfers, the wider community can also become part of the sustainability journey. Golf facilities have the opportunity to act as visible and trusted contributors to local action on nature, climate, and wellbeing, whether through events, partnerships, education, or participation in shared initiatives. This can help position the facility as a more relevant and constructive presence in the area, while also building stronger relationships, greater goodwill, and new opportunities for support and collaboration.

Best Practices

- **Share sustainability content on social media.** Use regular posts to highlight achievements, partnerships, and practical tips for sustainable living. Feature behind-the-scenes work, such as habitat restoration or energy-saving initiatives, to show tangible action.
- **Join online forums and sustainability networks.** Participate in industry and community discussions, such as green business forums or local climate action pages, to share progress and learn from others.
- **Engage through local business and community groups.** Join chambers of commerce or development associations to promote sustainability leadership and collaborate on local environmental projects.
- **Host themed events with local partners.** Work with conservation groups or schools to run community days like birdwatching events, native planting sessions, or sustainability fairs that encourage participation and visibility.
- **Encourage local groups to visit the site.** Invite schools, environmental clubs, or community organizations to experience the golf course as a learning and engagement space, linking activities to topics such as biodiversity, climate, or sustainable design.



National / Regional Opportunities

Golf facilities in BC can build their community presence by using existing platforms and support networks.

[BC Green Business](#) provides templates, case studies, and recognition tools that clubs can adapt for communications, social media, and newsletters. Many municipalities, such as Vancouver and Victoria, also run local climate action networks and offer communication toolkits for sharing sustainability stories.

The [BC Chamber of Commerce](#) offers a platform for showcasing leadership within the broader business community, while environmental organizations like [Birds Canada](#) and the [Invasive Council of BC](#) supply ready-made campaigns, event toolkits, and citizen science opportunities that clubs can host or promote across digital and community channels.



“A key feature of our success has been our ability to engage with the wider community by communicating projects, environmental work and general golf course information using drone flights. Combining modern technology with professional-standard video production has improved public perception of the club and had a direct positive impact on our financial sustainability. Our future plan is to increase the information shared through social media platforms, publications and newsletters.”

Whitley Bay Golf Club, England ▶

[View more examples ▶](#)

Promote the Ecological Value of the Site

One of the most compelling ways to inspire people is to help them see the golf course differently. Golf landscapes can offer a rich experience of habitat, wildlife, seasonal change, and ecological function, yet much of this value can remain unnoticed unless it is actively interpreted and shared. By drawing attention to the living character of the site, facilities can deepen people’s connection with the landscape and create a more immersive and enjoyable sense of place. This not only enriches the golfing experience, but can also awaken a deeper appreciation of nature, foster a stronger ethic of care, and reveal the course as a landscape full of meaning, stewardship, and lasting value.

Best Practices

- **Post seasonal wildlife updates.** Use clubhouse boards, digital displays, or course signage to share sightings and seasonal changes in wildlife activity. Include photos from staff or golfers to encourage participation and awareness.
- **Highlight conservation work in communications.** Feature ongoing habitat or restoration projects in newsletters, social media, and other local channels. Explain how these efforts benefit both nature and course management.
- **Install habitat signage and maps.** Mark areas such as ponds, roughs, or nesting zones with interpretive signs that explain their ecological value. Display habitat maps in the clubhouse to show how biodiversity is supported across the site.
- **Create sustainability and ecology information boards.** Position boards in high-traffic areas to communicate initiatives like water conservation, native planting, or pollinator protection in clear, engaging language.



- **Produce a wildlife guide.** Develop a simple leaflet or downloadable PDF that helps golfers and visitors identify key species found on the course. Include QR codes linking to bird or plant identification apps.
- **Host nature walks and educational events.** Invite local experts or staff to lead guided tours during quieter times of year. Focus on locally relevant topics to strengthen connections with the wider community.

National / Regional Opportunities

Promoting ecological value aligns with BC's [Conservation Priorities](#) and broader public engagement goals under the province's biodiversity strategy.

[Birds Canada](#) provides citizen science programs, survey templates, and outreach materials that clubs can incorporate into signage, newsletters, and guided events.

The [Invasive Council of BC](#) also offers education kits, posters, and best-practice materials that support community learning and ecological awareness.

Through collaboration with regional groups such as the [Nature Trust of BC](#) or local stewardship societies, facilities can further enhance interpretation, host biodiversity monitoring days, and showcase their landscapes as active contributors to BC's natural heritage.



"New yardage markers were installed with each hole featuring the silhouette of a bird and a brief description in both English and Arabic. The 18 birds were selected from the 173 species identified on the course over the past 10 years, with birds chosen strategically for the signs where they generally congregate. The new yardage markers give both members and guests a greater opportunity to learn more about the beautiful wildlife on show as they move around the golf course."

Al Mouj Golf, Oman ▶

[View more examples ▶](#)





Leadership

Leadership is about showing, through action as much as words, that golf facilities can be credible, ambitious, and practical examples of sustainability in action. By setting clear direction, making visible commitments, and demonstrating progress over time, facilities can influence expectations within the game, and beyond. This can strengthen trust, attract partners and support, and position the golf course as a positive example to others - showing how environmental responsibility, operational success, and community value go hand in hand.

Integrate Sustainability into the Overall Business

Embedding sustainability into core business operations ensures it becomes part of everyday decision-making rather than an isolated, standalone initiative. For golf facilities, this means aligning environmental, social, and commercial priorities across the whole operation - from course maintenance and clubhouse management to procurement, governance, and long-term planning. A clear sustainability plan, supported by appropriate leadership and shared responsibility, can help drive progress, engage staff, and position the facility as a credible, forward-looking and inspiring example to others.

Best Practices

- **Create a sustainability plan covering all aspects of the facility.** Develop a written plan that sets clear objectives, timelines, and responsibilities across areas such as energy, water, biodiversity, waste, and community engagement. Review it annually and report progress to staff and stakeholders.
- **Create a volunteer sustainability position.** Appoint a staff member or committee volunteer to coordinate small projects, gather data, and maintain visibility of sustainability goals across departments.
- **Employ a part-time sustainability lead.** Dedicate part of an existing role, such as the course superintendent or supervisor, to implementing sustainability actions, recording progress, and ensuring compliance with local or national programs.
- **Employ a full-time sustainability professional.** Establish full-time role focused on developing strategy, leading projects, managing certifications, coordinating communications, and pursuing funding or partnership opportunities.

National / Regional Opportunities

Integrating sustainability into business planning aligns with BC's [CleanBC Plan](#) toward corporate environmental and social accountability.

The [ESG Centre of Excellence](#) supports BC businesses in embedding sustainability into governance and reporting frameworks. [BC Green Business](#) offers certification programs, templates, and action planning tools that can structure sustainability integration at any scale.

For facilities developing new roles or expanding responsibilities, [go2HR](#) provides tailored HR and training resources that can be tailored to sustainability roles.



"We have implemented the WAVE quiz as an eye-opener in our sustainability journey. The quiz assesses areas within the club based on social, environmental and economic values, giving us a concrete understanding of where we can make a difference and highlighting the need for more inclusive and informative communication. As part of our new master plan, we will now hold annual meetings for all staff using the WAVE quiz as a starting point."

Hørsholm Golf, Denmark ▶

View more examples ▶



Share Sustainability Updates and Achievements

Sharing sustainability progress and achievements is an opportunity to bring the facility's values, ambition, and day-to-day efforts to life. Done well, it can turn practical action into a positive and credible story of stewardship, showing members, staff, partners, and the wider community how the golf course is contributing to nature, climate action, and local wellbeing. By celebrating progress openly and consistently, facilities can build trust, inspire pride, strengthen reputation, and position themselves as visible and forward-looking leaders in sustainable golf.

Best Practices

- **Share at least three highlights on [Sustainable.Golf](#).** Share short success stories or case-studies showcasing key sustainability achievements such as habitat restoration, energy efficiency, or community partnerships. Include clear outcomes and images to demonstrate impact and inspire other facilities through practical examples.
- **Produce a sustainability press release.** Draft a concise statement summarizing key achievements, such as new certifications, infrastructure upgrades, or biodiversity milestones. Distribute this to local media and industry channels.
- **Host a media event or sustainability tour.** Invite local journalists, partners, and community leaders to visit the site and see initiatives in action. Prepare talking points for each stop, such as renewable energy systems, water-saving features, or wildlife habitats.
- **Hold an annual community day.** Celebrate progress by inviting partners, members, and neighbours to participate in guided tours, volunteer sessions, or family-friendly sustainability events.

National / Regional Opportunities

Sharing sustainability achievements publicly aligns with BC's [CleanBC Plan](#), which emphasizes on community-driven climate action and environmental leadership.

[BC Green Business](#) provides communication templates, recognition tools, and awards that help facilities promote progress both locally and across the province. The [BC Chamber of Commerce](#) and regional chambers offer opportunities to highlight sustainability milestones through business networks and local media.

Many municipalities also maintain digital newsletters, sustainability portals, and event calendars, offering an accessible way to share their updates, thank partners, and inspire other organizations to follow their lead.



"We use a wide range of tools to share our story, from sustainability and course developments to community outreach and junior golf. Our quarterly Community Leaflet, Environmental Booklet, Health, Wellbeing & Sustainability Booklet, website and social media channels help keep local residents, families and the wider community informed, while regular staff communications foster collaboration and shared purpose."

Carnoustie Golf Links, Scotland ▶

View more examples ▶



Get Recognized

External recognition can help turn sustainability progress into something visible, influential and credible. By pursuing relevant certifications, awards, and other forms of third-party validation, golf facilities can celebrate achievement, strengthen trust, and demonstrate leadership to members, partners, funders, and the wider community. It can also help raise the profile of the work being done, inspire others to follow, and unlock wider opportunities for funding, planning, marketing, media and stakeholder relations.

Best Practices

- **Enter local or national awards.** Apply for sustainability or environmental awards through international, national, or regional programs. Highlight achievements in areas such as biodiversity, resource efficiency, and community impact to gain recognition and benchmark against other leading organizations.
- **Enter golf industry awards or distinctions.** Submit sustainability achievements to golf industry programs that recognize community engagement, environmental management, or innovation. Use these platforms to share progress, raise the profile of your facility, and inspire others within the sport.
- **Apply for golf's international sustainability certification – GEO Certified®.** Use OnCourse® to review best practices, submit annual data, and upload essential documentation. Prepare for independent verification, respond to feedback, and maintain continuous improvement.
- **Hold an event for community leaders, local government, and businesses.** Celebrate achievements publicly through an annual event or open day. Offer guided tours of sustainability features and short presentations to demonstrate leadership, strengthen partnerships, and encourage collaboration on shared environmental goals.

National / Regional Opportunities

Pursuing sustainability awards and certification aligns with BC's [CleanBC Plan](#), which encourages leadership in climate action and community engagement.

The [CGSA/Rain Bird Environmental Achievement Award](#) recognizes golf course superintendents and their teams for projects, policies, practices and management approaches that improve environmental sustainability, including water management, IPM, monitoring, environmental planning, staff education and community engagement.

[BC Green Business](#) offers certification and recognition for environmental and social leadership across sectors.

The [BC Chamber of Commerce](#) and regional networks regularly spotlight sustainability achievements through local business awards and events, providing opportunities for golf facilities to share their stories with wider audiences.



"We recently delivered an ambitious, large-scale nature restoration project across seven golf courses, enhancing wildlife habitats and strengthening ecological connectivity. The 'Seven Golf Courses for Nature' project was completed in March 2025 and has delivered significant environmental benefits. It has also generated substantial recognition, including wins at the Scottish Golf Awards, Scottish Golf Tourism Awards, Fife Business Awards and the RSPB Nature of Scotland Awards."

Fife Golf Trust, Scotland ▶

[View more examples ▶](#)



Follow a Journey of Continuous Improvement

Strong leadership continues through reflection, learning, and the willingness to keep improving. Sustainability is an ongoing process, and golf facilities are best placed to lead when they review progress objectively, set meaningful goals, and build on learnings over time. Tools such as OnCourse® and the Sustainable Golf Scorecard and Action Plan help translate ambition into practical and measurable action, supporting a more transparent, evidence-based, and purposeful approach to long-term improvement.

Best Practices

- **Request an Annual Sustainability Scorecard and Carbon Footprint.** Receive an annual summary of your facility's environmental and social performance. Review the results to measure progress, communicate achievements, and identify clear priorities for improvement in the year ahead.
- **Request a custom 3-year Sustainable Golf Action Plan with your GEO Certification.** Based on your OnCourse® self-assessment and verifier feedback, receive a tailored three-year Action Plan to create a structured roadmap of improvement points, goals, and timelines for practical action and measurable results.
- **Follow and regularly review your Sustainable Golf Action Plan.** Integrate recommendations into everyday operations and annual reviews. Monitor progress against goals, update priorities as conditions change, and engage staff across departments to ensure sustainability is embedded across all areas of management.
- **Put measures in place to ensure data can be added to OnCourse® annually.** Establish simple systems to record data on turf management, water, energy, waste, and community activities throughout the year. Assign clear responsibilities for uploading information to keep OnCourse® up to date and ready for annual review.
- **Respond to sustainability data requests from membership or government bodies.** Maintain well-organized records so information can be provided quickly and accurately. Use reporting opportunities to demonstrate accountability, evidence progress, and align your performance with recognized sustainability frameworks and standards.
- **Take part in national or membership association sustainability education or campaigns.** Engage in sector-wide initiatives, webinars, and peer-learning opportunities that promote best practice, build skills, and contribute to collective progress across the sport.
- **Include sustainability in annual project planning.** Incorporate sustainability targets into annual budgets and operational plans. Consider efficiency, environmental impact, and community benefit in all major projects and purchasing decisions to ensure steady, long-term improvement.

National / Regional Opportunities

At the national level, [Golf Canada](#) runs campaigns and programs that facilities can participate in to demonstrate commitment and stay connected to the sport's sustainability direction across the country.

The [Allied Golf Association of BC \(AGA-BC\)](#) also provides a provincial platform for collaboration across the industry and shares advocacy, education, and practical guidance to help facilities improve environmental and social practices.

For course maintenance staff, the [Canadian Golf Superintendents Association \(CGSA\)](#) provides professional development, education, and technical guidance, including resources that directly support sustainable turfgrass and facility management.

Superintendents in BC can also access training and peer learning through the [British Columbia Golf Superintendents Association \(BCGSA\)](#) and the [Western Canada Turfgrass Association \(WCTA\)](#),



both of which actively promote environmental stewardship and continuous improvement in course management practices.

The [Club Management Association of Canada \(CMAC\)](#) also offers professional development and planning resources for club managers, helping to build sustainability into operational strategies and long-term business planning.



"We are implementing strong ESG (Environmental, Social and Governance) practices across both clubhouses because they bring numerous benefits. We see this work enhancing employee satisfaction and retention by aligning our values with those of the workforce, particularly younger generations, while fostering a more inclusive and innovative culture, attracting top talent and strengthening our reputation. Good governance and sustainability practices also help us reduce risks and contribute to long-term financial performance."

Royal Automobile Club, England ▶

[View more examples ▶](#)



A scenic view of a golf course green and fairway, framed by large, mature trees and a wooden fence in the foreground. The green is in the middle ground, with a blue flag visible. The foreground is dominated by tall, golden-brown grasses and a rustic wooden fence. The background is a dense forest of tall trees under a clear blue sky.

From Best Practice to Leadership in Sustainable Golf

Recommended Next Steps for Golf Facilities in British Columbia

This Sustainable Best Management Practices Guide provides a clear, regionally grounded framework for responsible, efficient, and sustainable golf course and facility management in British Columbia. It draws together agronomic expertise, regulatory context, environmental science, and operational experience into a structured approach rooted in continual improvement.

The value of this guide not only lies in its content, but its application. To translate guidance into measurable performance, facilities are encouraged to engage fully with the international [Sustainable Golf Pathway](#) and Platform of Resources. These connect commitment, implementation, validation, and communication within a coherent system that aligns local action in British Columbia with national coordination and internationally recognized standards.

FORMALIZE COMMITMENT

Sign the Sustainable Golf Pledge

By signing the [Sustainable Golf Pledge](#), you can reinforce a commitment to operate in alignment with the four core themes of the Sustainable Golf Framework: Nature, Resources, Climate, and Community. The Pledge establishes sustainability as a clearly embedded principle within governance and operational decision-making.

It also connects facilities in British Columbia to a broader national and international movement working collectively to strengthen environmental performance and climate action across the sport. This alignment reinforces that sustainable golf is part of a coordinated global progression.

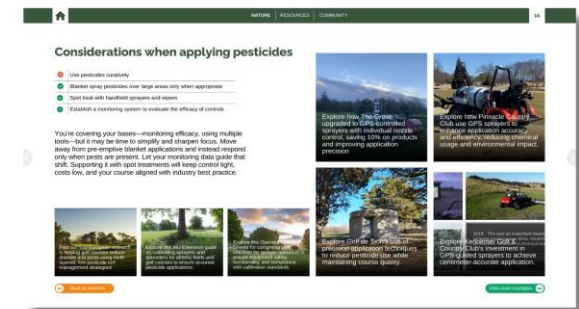
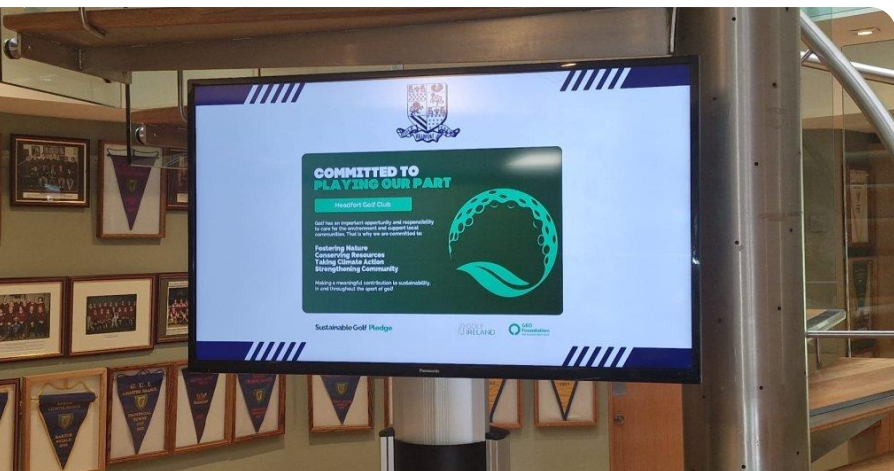
OPERATIONALIZE BEST PRACTICE

Activate OnCourse Canada

The full content of this guide has also been integrated into [OnCourse® Canada](#) - a free, fully customized sustainability and climate platform designed specifically for golf facilities. OnCourse® Canada provides the operational framework through which best practices can be reviewed, tracked, measured, and improved.

Through the platform, you can assess implementation across action areas, record environmental and operational performance data, generate annual sustainability insights, calculate carbon emissions, and develop structured action plans tailored to your site.

In practical terms, this embeds sustainability into routine management processes, including budgeting cycles, capital planning, maintenance programming, and board reporting. It enables superintendents and decision-makers to move beyond general aspiration toward documented, measurable progress.



VALIDATE PERFORMANCE

Pursue Optional GEO Certified® Recognition

As implementation matures, facilities may choose to pursue independent validation and international recognition through [GEO Certified®](#).

GEO Certified® provides third-party assurance that environmental, social, and governance practices are being delivered in accordance with internationally recognized standards for sustainable golf. Developed through stakeholder engagement and in line with established codes of good practice in sustainability standard-setting and impact, including alignment with the [ISEAL framework](#), certification provides credible and externally verified confirmation of performance.

For facilities in British Columbia, this strengthens regulatory dialogue, reinforces community trust, affirms professional leadership and supports continuous improvement within the sector. It also confirms that sustainability performance is structured, systematic, and independently assessed, with enhanced operational efficiencies and improved marketing and funding opportunities.



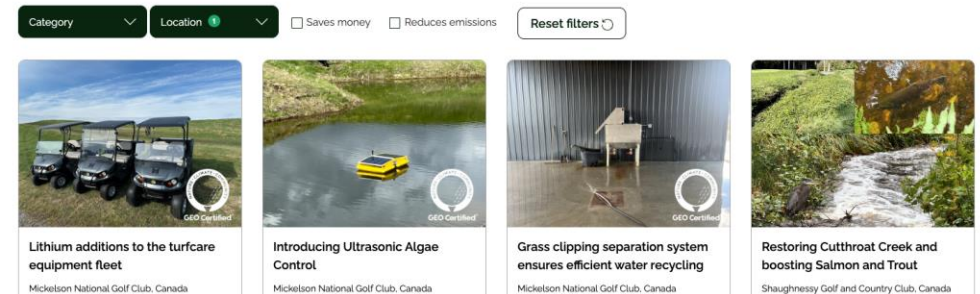
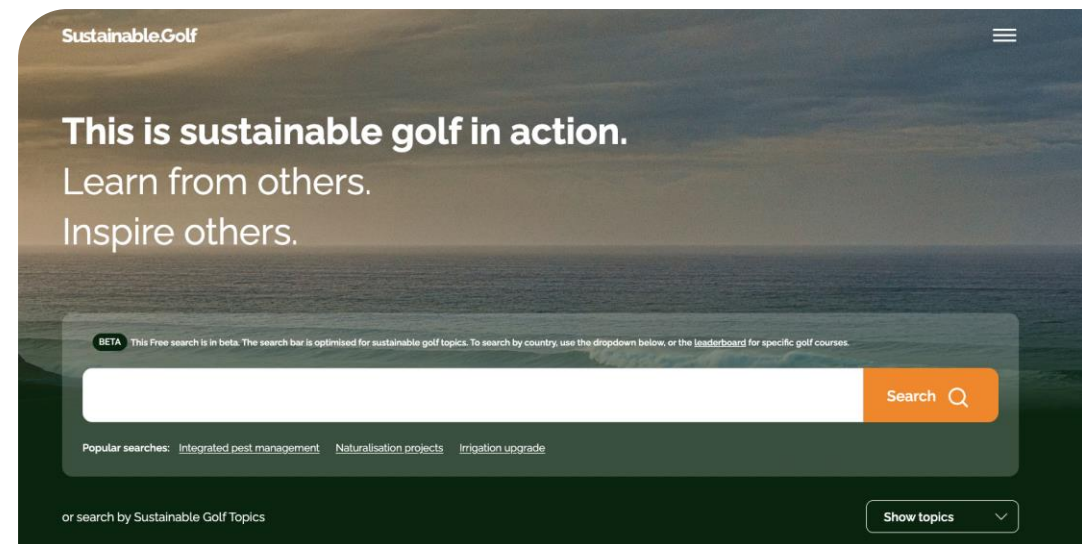
COMMUNICATE LEADERSHIP

Create and Share Highlights

Facilities are also encouraged to document and submit [Highlights](#) that demonstrate measurable improvements, innovation, and practical application of valuable projects and practices. These case studies strengthen knowledge-exchange across the province, support national communications, and provide tangible evidence of the value golf delivers to landscapes and communities.

Collectively, these contributions build a credible and growing body of evidence that supports informed engagement with policymakers, partners, and the wider public.

Find out more at [sustainable.golf](#) and [CGSA Sustainability](#).



A Structured System for Continual Improvement

Together, these components form a comprehensive and scalable system designed to support golf facilities through increasing regulatory complexity, resource constraints, and climate variability, while strengthening operational efficiency and long-term resilience.

British Columbia's golf courses operate across diverse biogeographic regions and hydrological systems. They face rising input costs, water pressures, and evolving public expectations. At the same time, they hold significant capacity to conserve natural resources, enhance biodiversity, support climate action, and generate lasting economic and community value.

Engagement with this pathway positions facilities not merely to remain compliant, but to operate with strategic clarity and credibility. It enables the sector to show, in practical and measurable terms, that responsible stewardship strengthens both environmental outcomes and operational performance.

This guide is not intended to sit as a static reference, but to function as a living management framework - implemented, reviewed, refined, and evidenced through meaningful sustainability and climate action.

By progressing through this structured pathway, golf facilities across British Columbia can collectively elevate professional standards and position the province at the forefront of sustainable golf internationally, moving from maintaining courses as isolated operations to managing them as dynamic assets that support nature, conserve resources, and strengthen communities.

This is the foundation for the next generation of golf in British Columbia - one that safeguards the landscapes on which the game depends, strengthens the communities it serves, secures its long-term viability through responsible, measurable, forward-thinking stewardship, and builds facilities that are resilient in operation, credible in governance, and respected for the wide-ranging value they deliver.



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