

# **BMP** Best Management Practices

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1-800-472-7878

# Agenda

- Welcome
- Why you need BMPs
- How to Edit a Facility BMP Manual
- Questions throughout

# BMP Best Management Practices

BMPs are a common language for regulators, conservation organizations, scientists, engineers, and professionals.

- Structure: engineered, developed
  - Treatment wetlands, rip-rap, bio-swales
- Agriculture/Horticulture: nutrient management, cultivation, etc.
- Environmental: pollution prevention, pollinator habitat

# Why do I need BMPs?

- A facility BMP manual documents the knowledge, skills, and aptitude that are required for the superintendent in that position (as well as other golf course maintenance staff).
- A facility BMP manual provides documentation, justification and similar support for operational and project budgets, projects, maintenance practices, staff, etc.

# Why do I need BMPs?

- Participating with facility BMP adoption helps to support the golf course management industry.
- Participating with facility BMP adoption helps to support the superintendent profession on local, state, regional and national levels.
- The manual should be maintained and if possible, in conjunction with any water quality monitoring, nutrient management and pest management records to document the professional land management practices on their courses.

# Regulatory Implications

New labels are coming:

- Bulletins Live 2 Portal
- Pesticide Use Limit Areas (PULAs)
  - Range maps and core maps

EPA mitigation menu

- GCSAA BMPs + conservation program exception

# Golf is counting on you.

1. Tell Your Story
2. Pursue Cost Savings
3. Manage Your Risk
4. Demonstrate Your Professionalism
5. Unlock Access to Decades of Experience and Cutting-Edge Science

# **BMP** Best Management Practices

## **The Message**

Golf courses that incorporate science based best management practices provide valuable greenspace within any community or watershed.

Superintendents are professionals who manage these greenspaces and deliver healthy turfgrass and quality playing surfaces that provide significant benefits that include social/recreational, economic/jobs and environmental protection.

# **BMP** Best Management Practices

**How to access the online tool**



# Facility

Get started on your facility BMP manual today.

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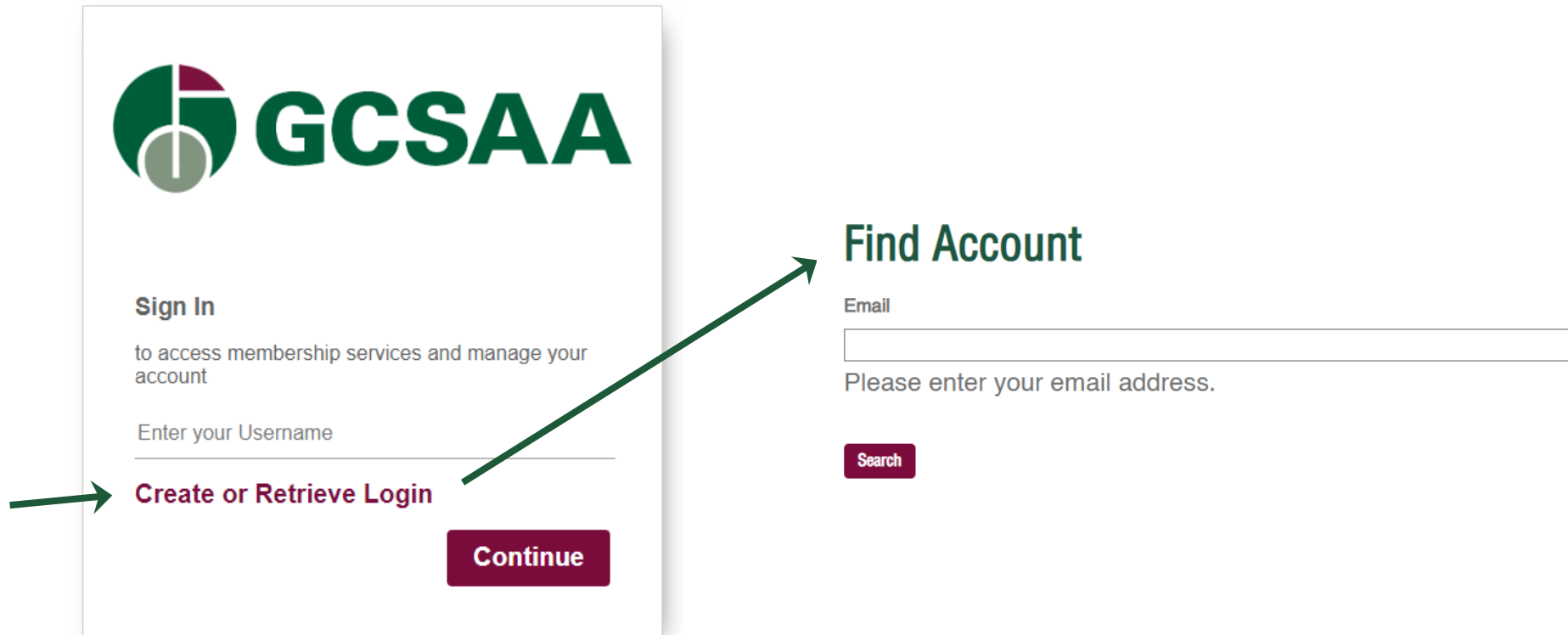
## BMP Planning Guide

State BMP Guides

Facility BMP FAQs

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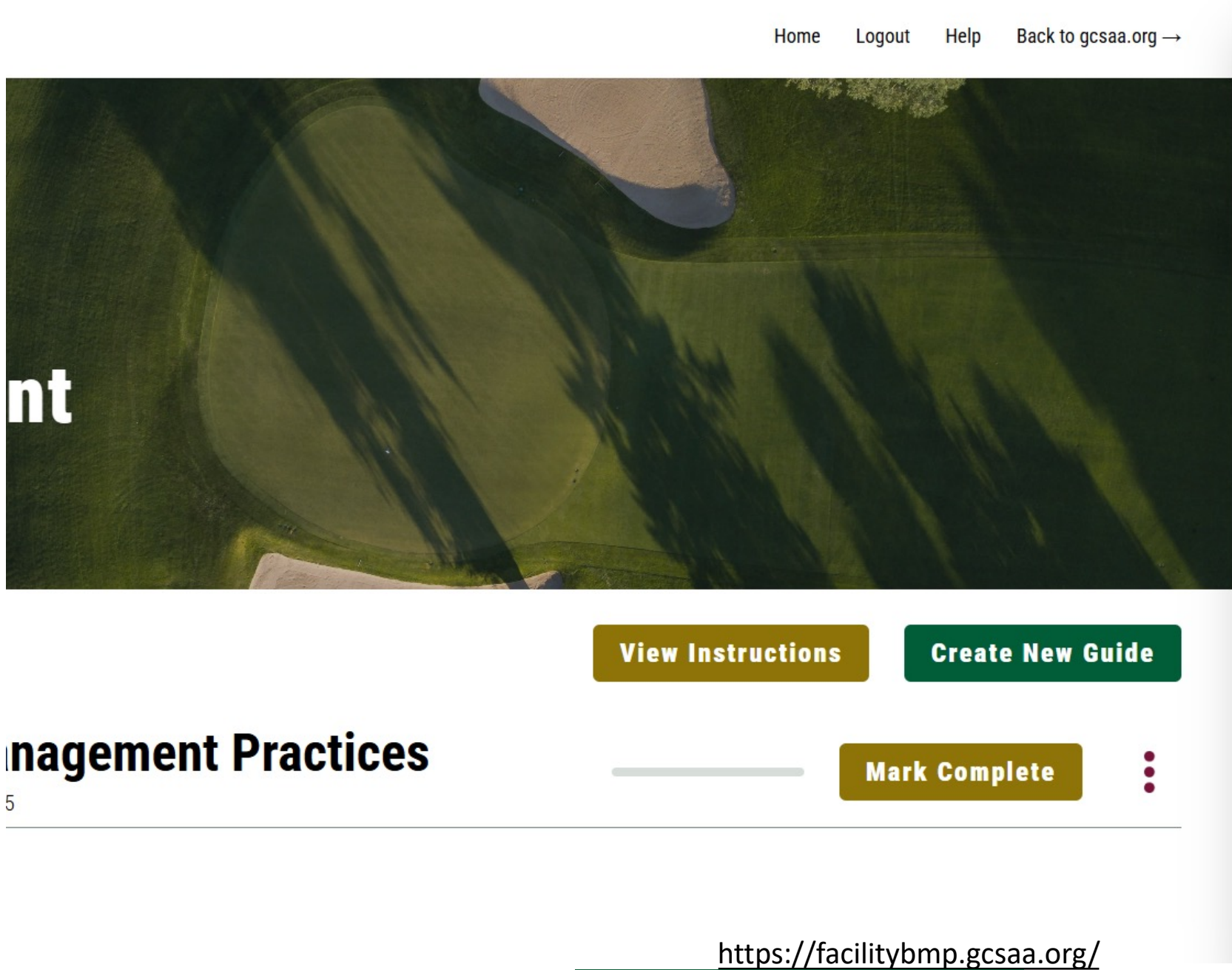
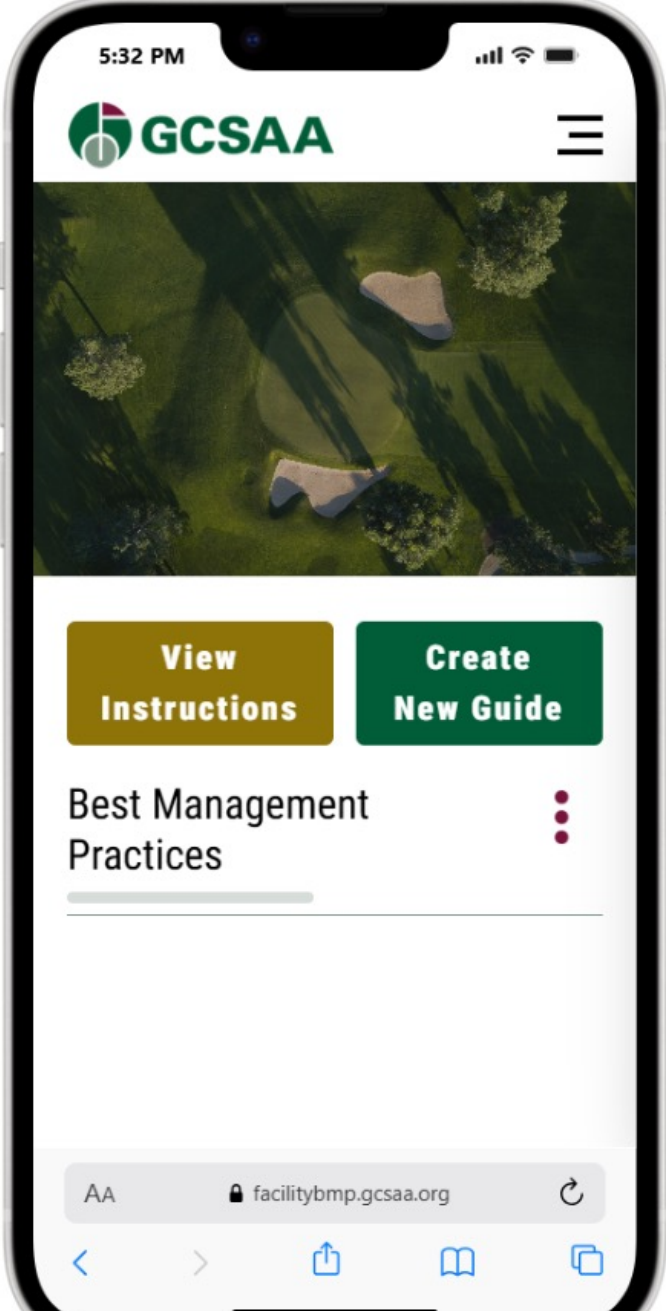
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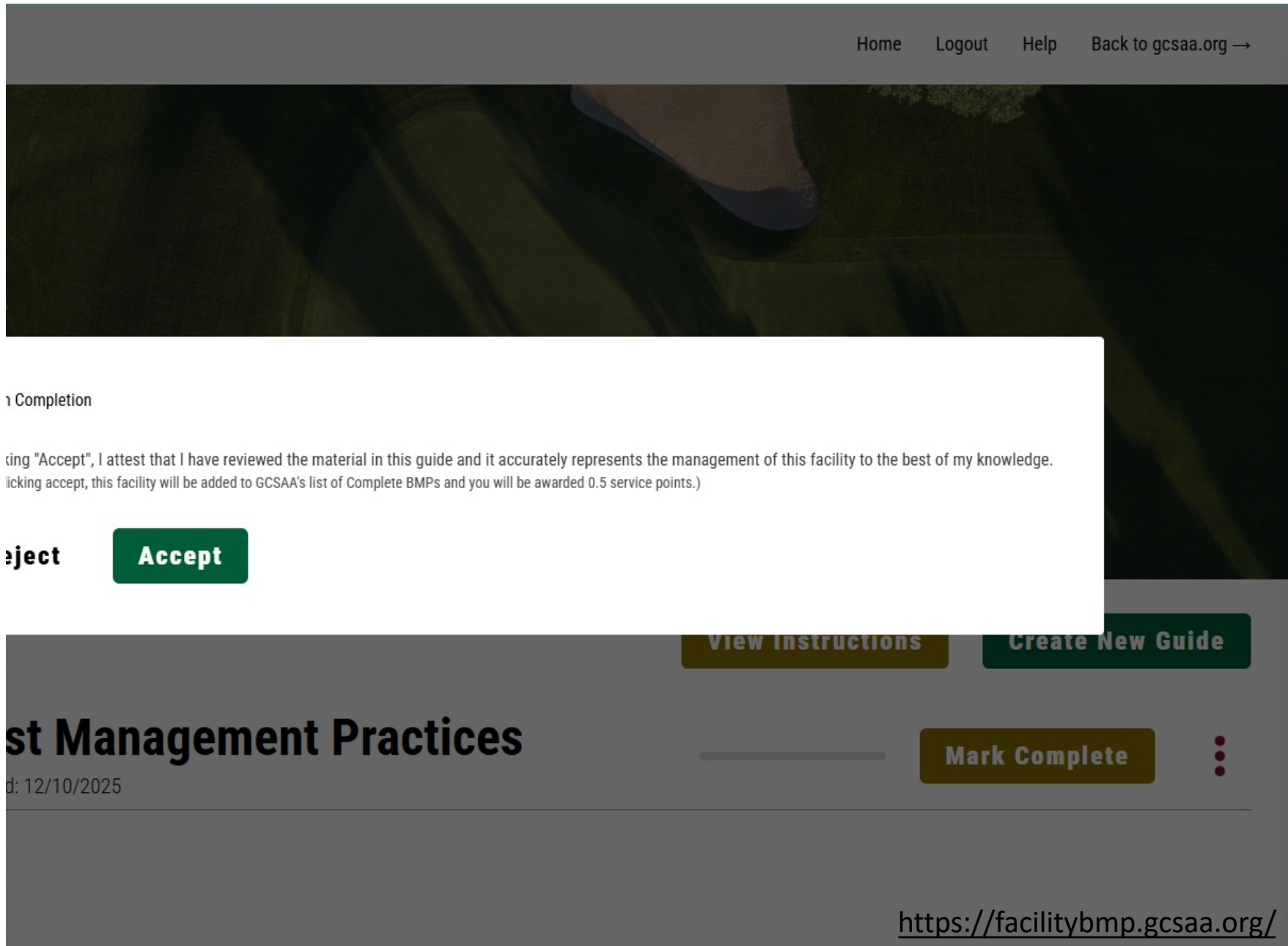
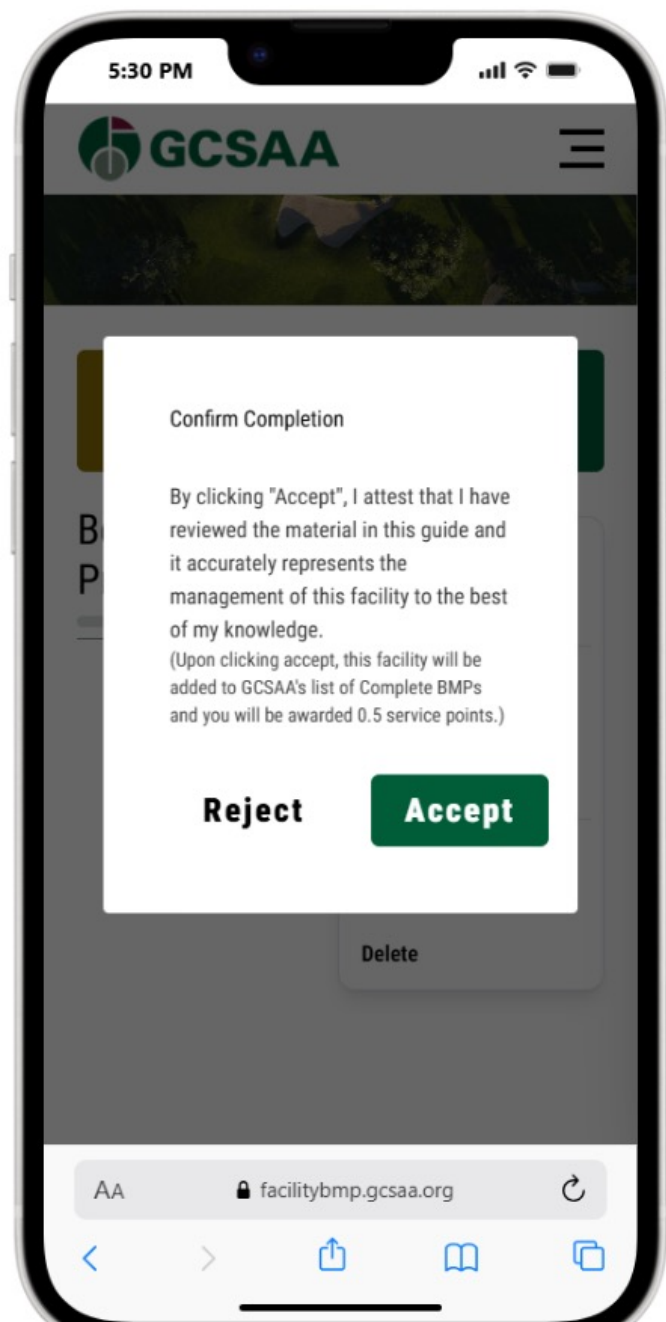
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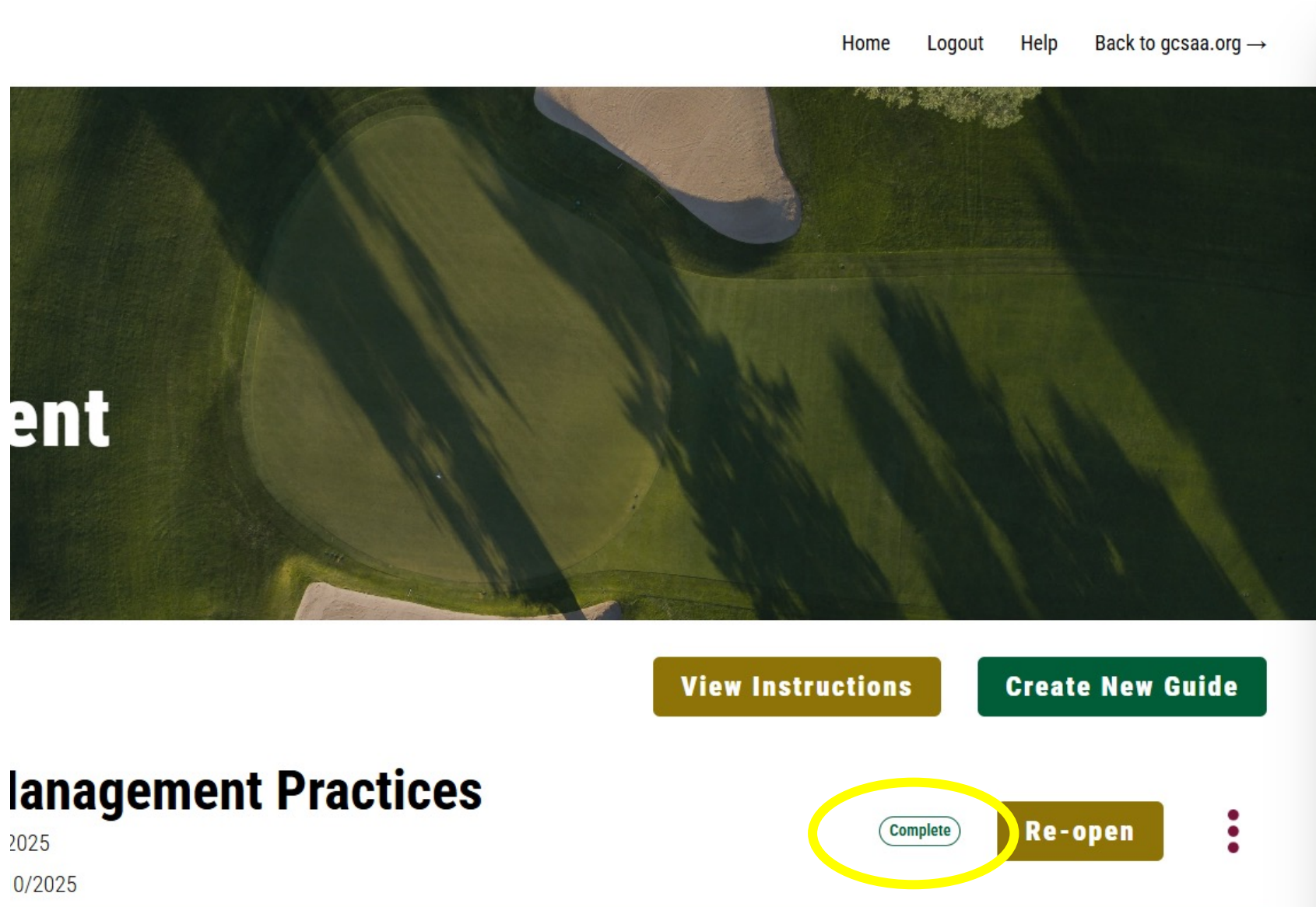
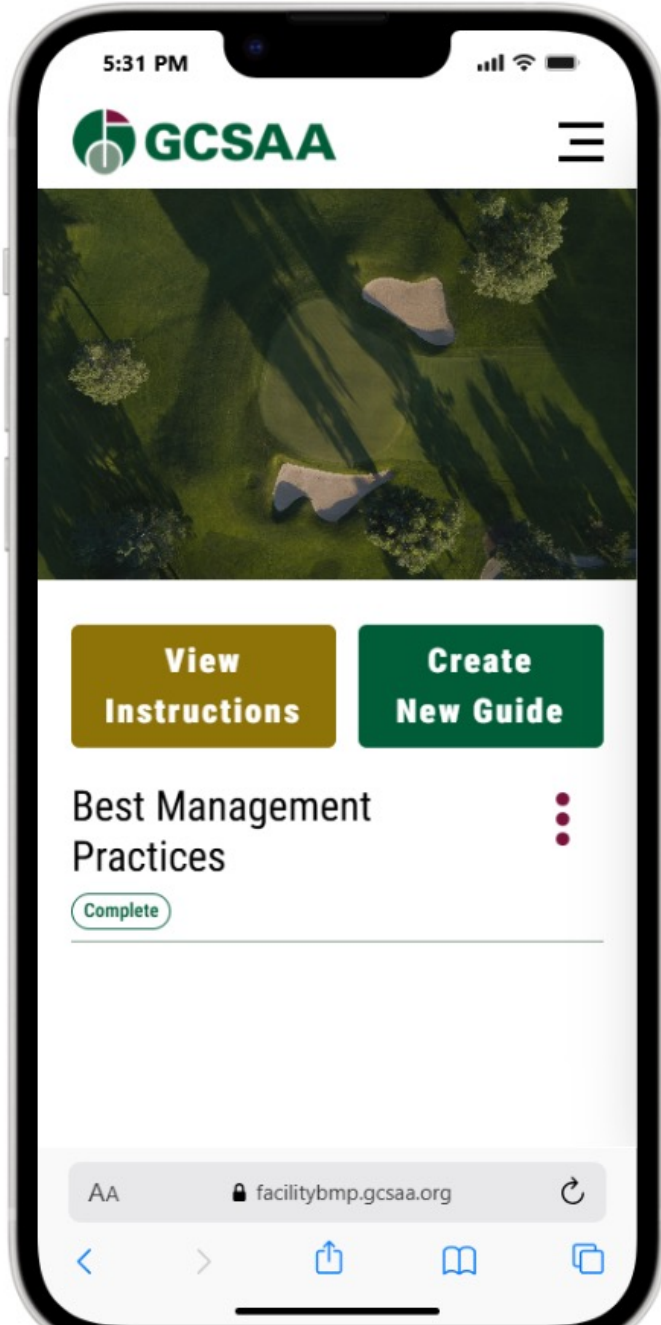
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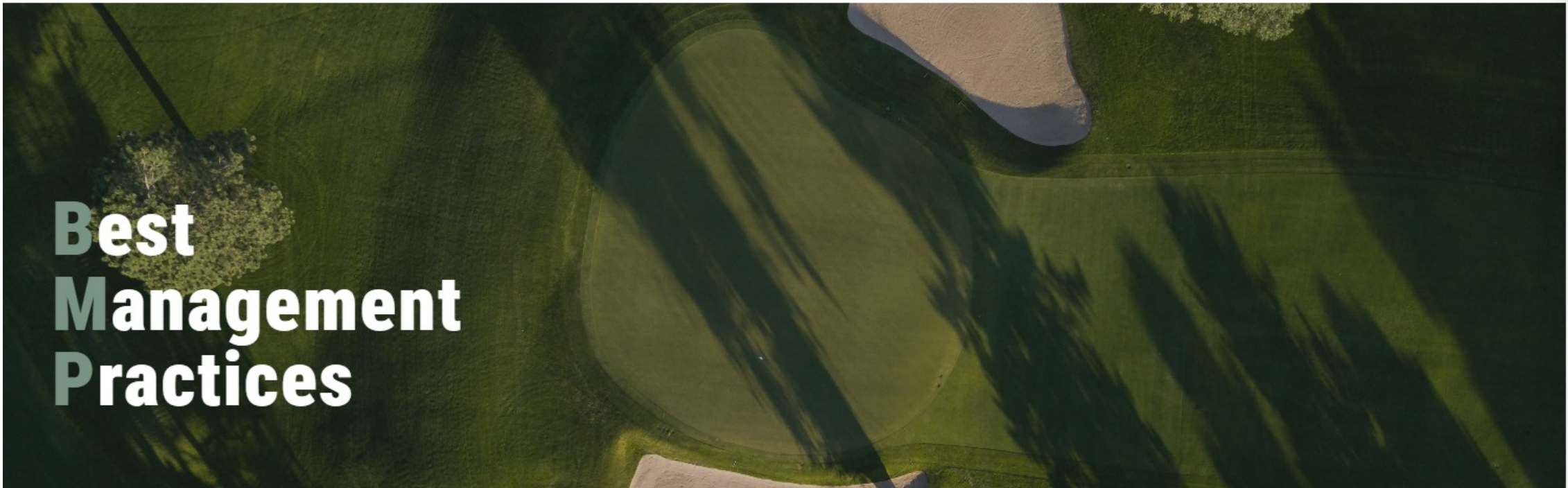






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**Live Demonstration**



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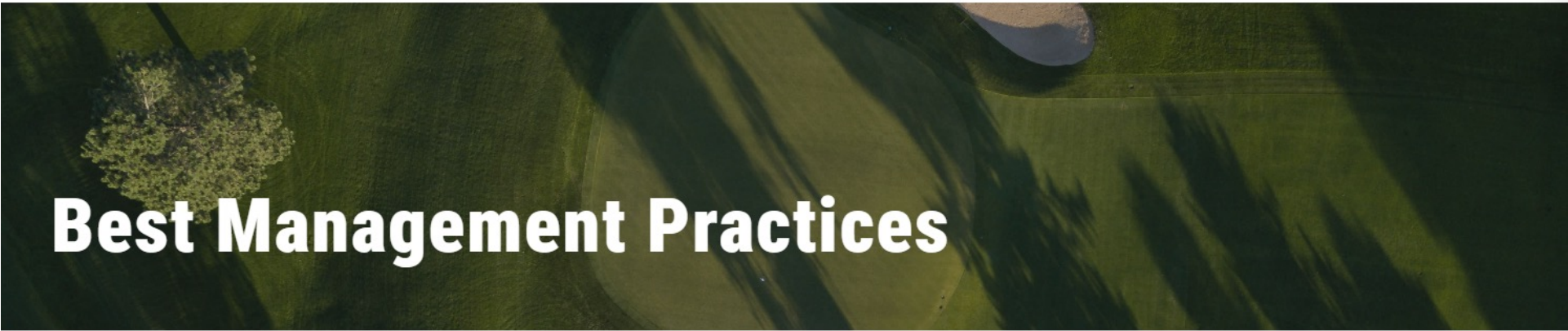
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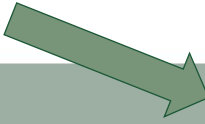
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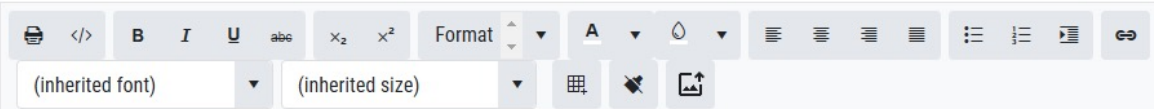
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- Stormwater Capture  
- Regulatory Considerations 
- Water Quality Protection 
- Dissolved Oxygen 
- Aquatic Plants 

### Editing...

Stormwater Capture 








Although golf courses are typically large properties ranging in size from 60 to 200 acres, they are just one link in a stormwater management chain. Generally, a quantity of stormwater enters the golf course area, supplemented by what falls on the golf course proper, and then the stormwater leaves the golf course. Therefore, golf courses are realistically capable of having only a small impact on major stormwater flow. That impact should be to add only small increments of water over a given period of time. Engineers call this function "detention."

When golf courses are designed and built, their drainage capability concept is guided by an average rainfall event of a given frequency. For example, typically, a golf course drainage system is designed to detain a two- or five-year rain event. In other words, when that rain event happens, the golf course will be able to be reasonably drained in a matter of hours, as excess water not absorbed by the soil flows through the drainage system, is temporarily held, and finally leaves the property. In some instances, golf courses and other recreational facilities are...

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≡ Regulatory Considerations 


≡ Water Quality Protection 

≡ Dissolved Oxygen 

≡ Aquatic Plants 

≡ Human Health Concerns 

≡ Floodplain Restoration 

≡ Stormwater, Ponds, and Lakes 

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Best Management Practices are intended to prolong the detention process as long as practical, harvest as much of the stormwater in surface or underground storage as reasonable, and to improve the quality of water leaving the property when possible.

**Stormwater Capture**

**Principles**

When the golf course is properly designed, rain and runoff captured in water hazards and stormwater ponds may provide most or all of the supplemental water necessary under normal conditions, though backup sources may be needed during drought conditions.

Capture systems should be considered part of the overall treatment.

Stormwater capture is desirable where the lowest quality of water is needed to conserve potable water, maintain hydrologic balance, and improve water treatment. This practice uses natural systems to cleanse and improve water treatment.

**Best Management Practices**

Install berms and swells to capture pollutants and sediments from runoff before it enters the irrigation storage pond.

Monitor pond water level for water loss (seepage) to underground systems. If seepage is occurring, it may be necessary to line or seal the pond or install pumps to relocate water.

Install water-intake systems that use horizontal wells placed in the subsoil below the storage basin; use a post pump to filter particulate matter.

A backup source of water should be incorporated into the management plan.

Inspect irrigation pumps, filtration systems, conveyances and control devices to prevent/correct system issues.

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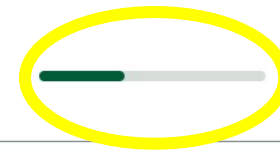
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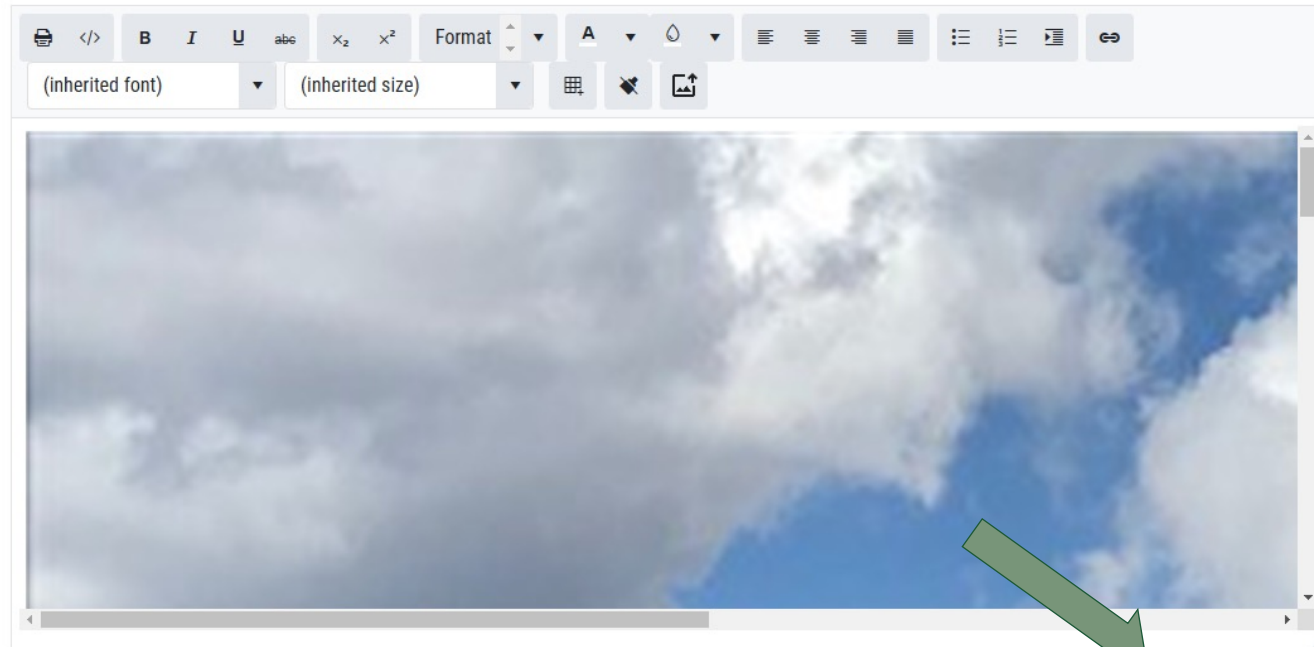
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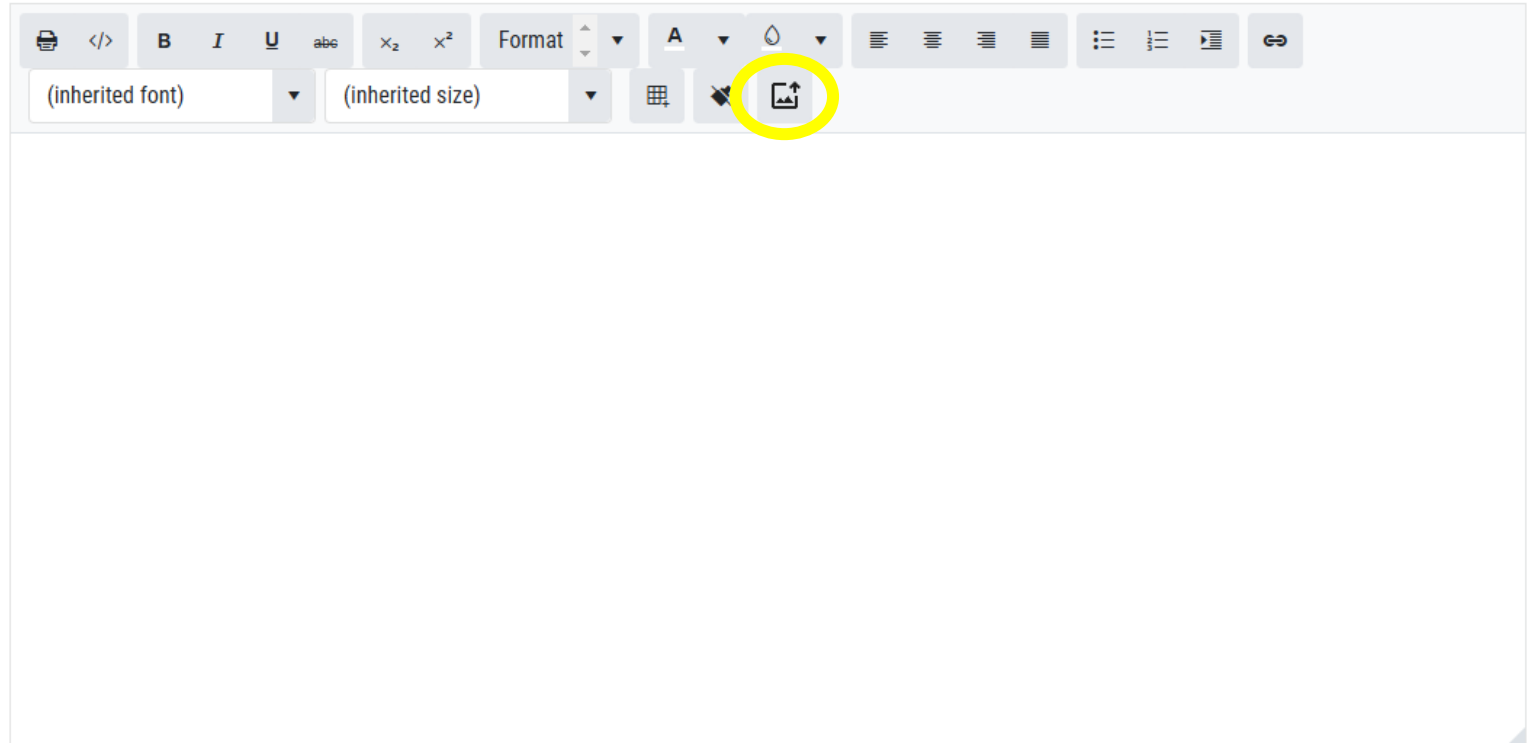
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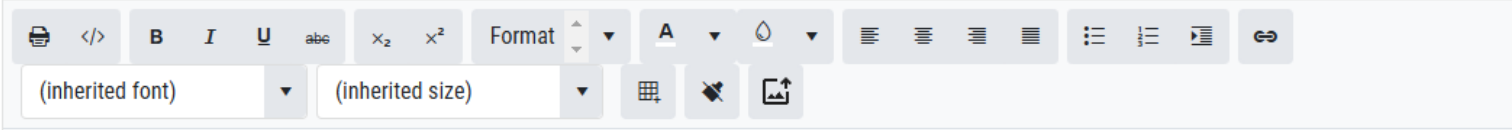
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 **Introduction**



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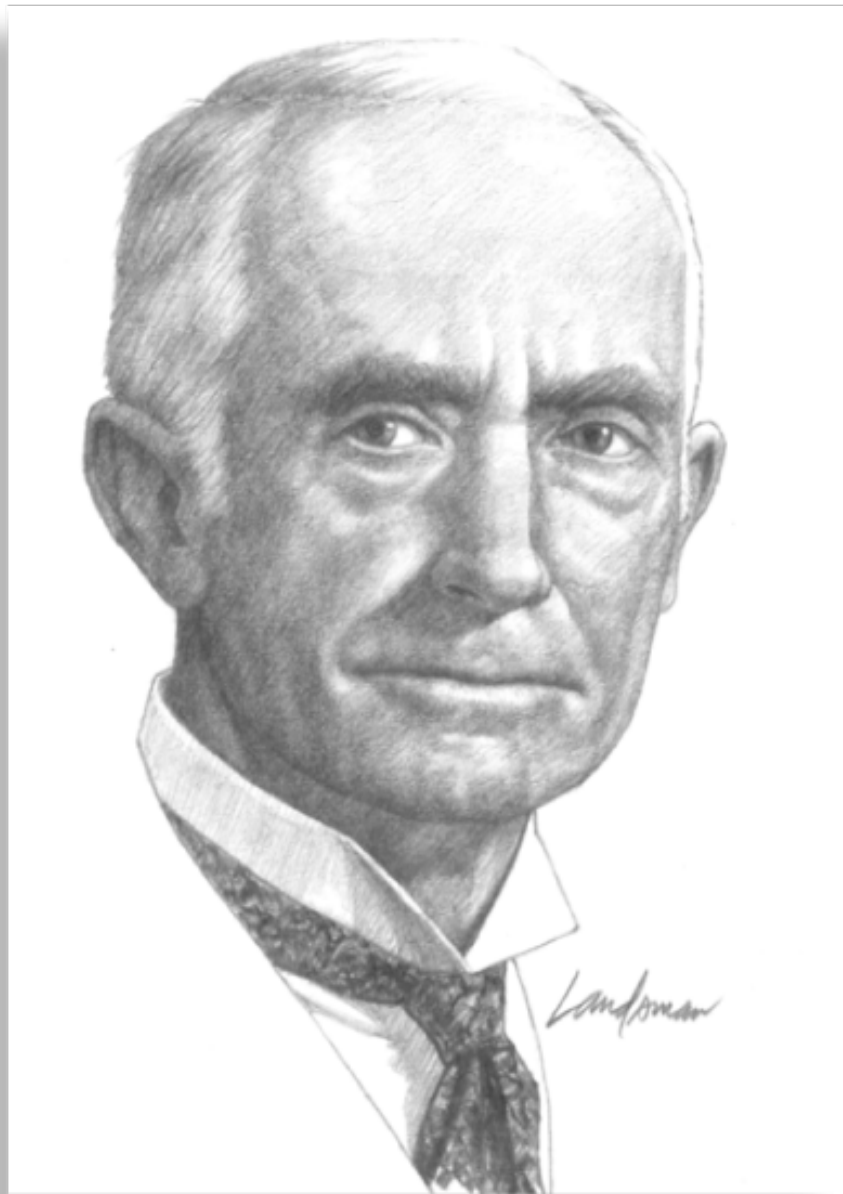
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“No life is, or can  
be, self existent.  
We depend upon  
each other.”

Col. John Morley 1926



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