Campus Master Plan Update

Sustainable Initiatives

University of Connecticut

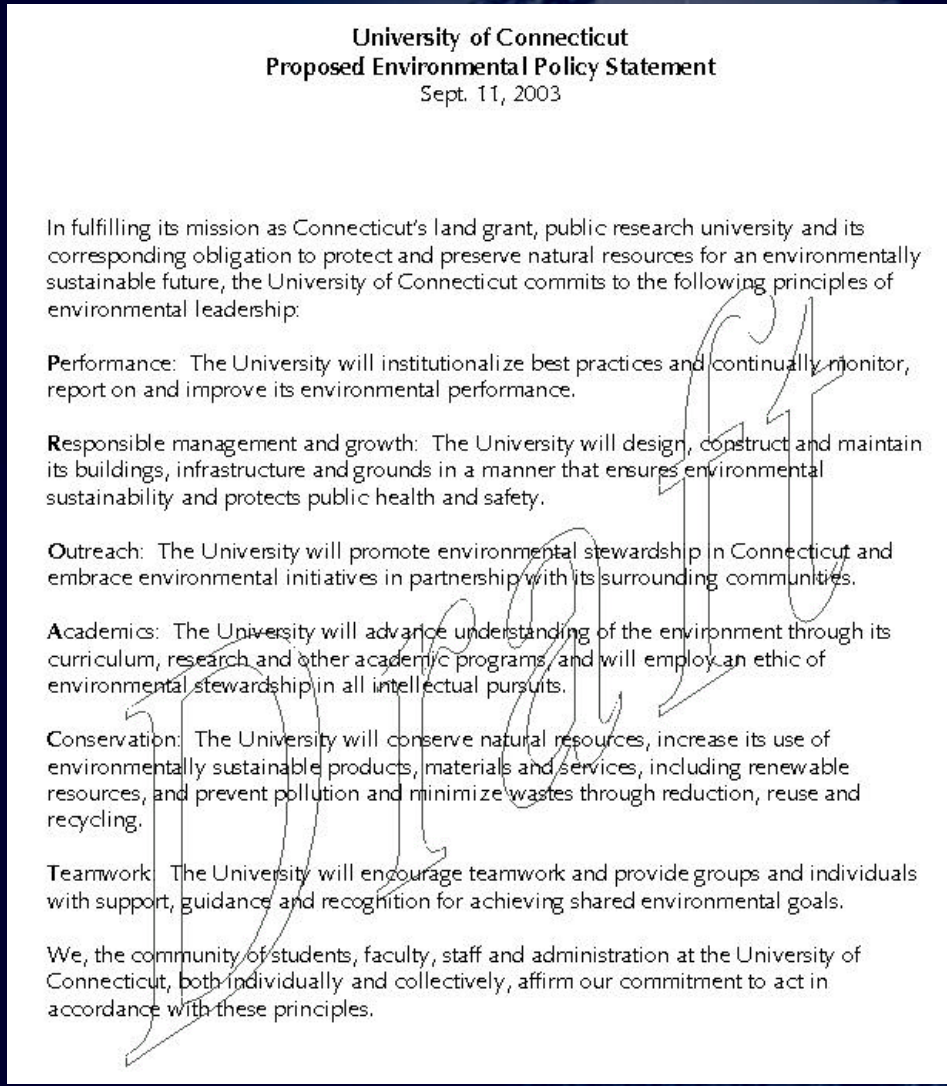
SmithGroup JJR

UConn Sustainable Initiatives

- Appointment - Director of Environmental Policy
- Embracing a philosophy of conservation and development – UConn 21st Century
  - Benchmark past performance
    - – Facility LEED Audit
  - Establish standards for future building projects
    - – Sustainable Design Guidelines

University of Connecticut
Proposed Environmental Policy Statement

- **P**erformance:
- **R**esponsible management and growth
- **O**utreach
- **A**cademics
- **C**onservation
- **T**eamwork



University of Connecticut
Proposed Environmental Policy Statement
Sept. 11, 2003

In fulfilling its mission as Connecticut's land grant, public research university and its corresponding obligation to protect and preserve natural resources for an environmentally sustainable future, the University of Connecticut commits to the following principles of environmental leadership:

Performance: The University will institutionalize best practices and continually monitor, report on and improve its environmental performance.

Responsible management and growth: The University will design, construct and maintain its buildings, infrastructure and grounds in a manner that ensures environmental sustainability and protects public health and safety.

Outreach: The University will promote environmental stewardship in Connecticut and embrace environmental initiatives in partnership with its surrounding communities.

Academics: The University will advance understanding of the environment through its curriculum, research and other academic programs, and will employ an ethic of environmental stewardship in all intellectual pursuits.

Conservation: The University will conserve natural resources, increase its use of environmentally sustainable products, materials and services, including renewable resources, and prevent pollution and minimize wastes through reduction, reuse and recycling.

Teamwork: The University will encourage teamwork and provide groups and individuals with support, guidance and recognition for achieving shared environmental goals.

We, the community of students, faculty, staff and administration at the University of Connecticut, both individually and collectively, affirm our commitment to act in accordance with these principles.

LEED
Leadership in Energy and Environmental Design

- Benchmarking system developed by the US Green Building Council to illustrate a range of environmental strategies for built projects to reduce their environmental impact
- An environmental assessment tool to define “green” by providing a standard for measurement
- An environmental goal-setting tool

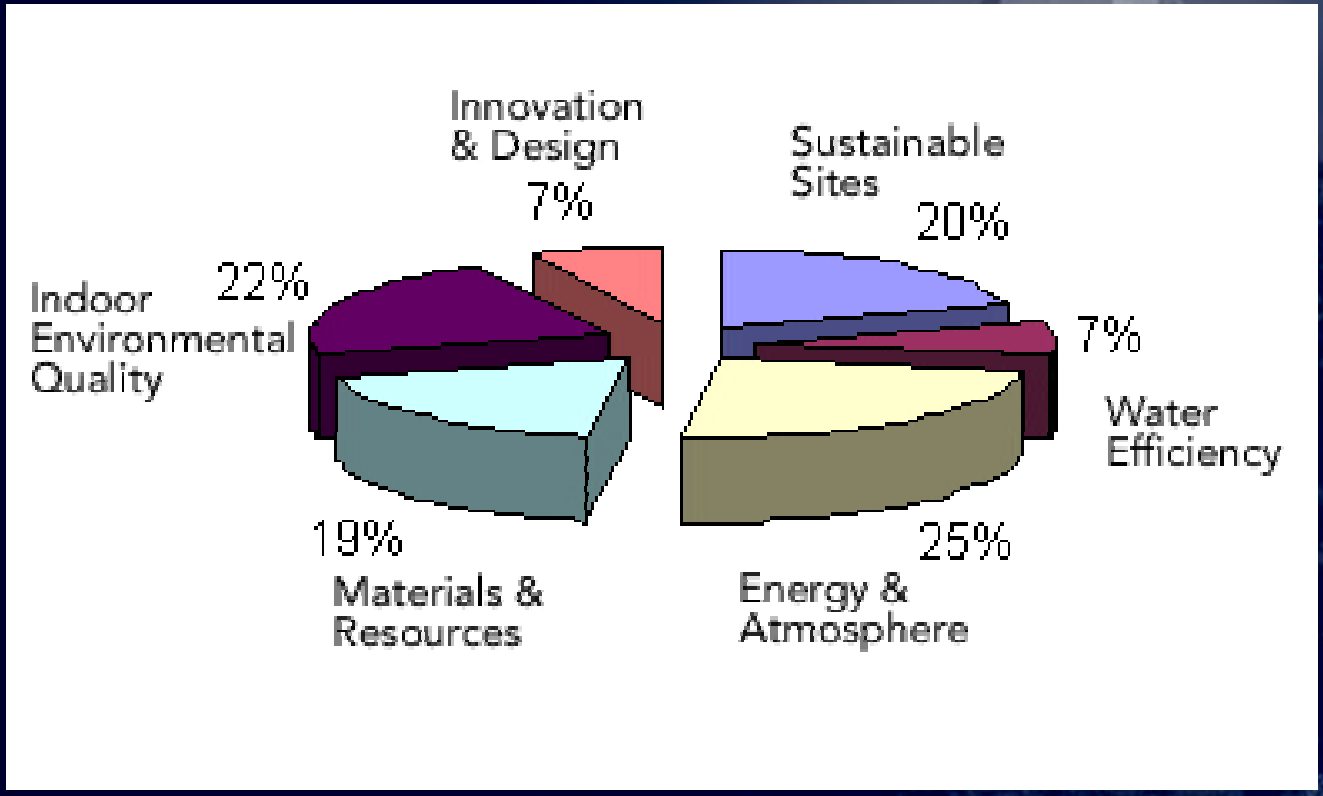
LEED Goal Setting

…. A non-prescriptive set of environmental goals.

7 pre-requisite goals, 32 goals

- LEED Certified
  26 - 32 points
- Silver Level
  33 - 38 points
- Gold Level
  39 - 51 points
- Platinum Level
  52+ points

  (69 possible)



LEED Trends

Federal Agencies who have adopted LEED:

- GSA, Air Force, Army, Navy, State Department

States who have adopted or are considering adopting LEED:

- Pennsylvania, Maryland, California, Massachusetts, Oregon

Cities who have adopted or are supporting LEED:

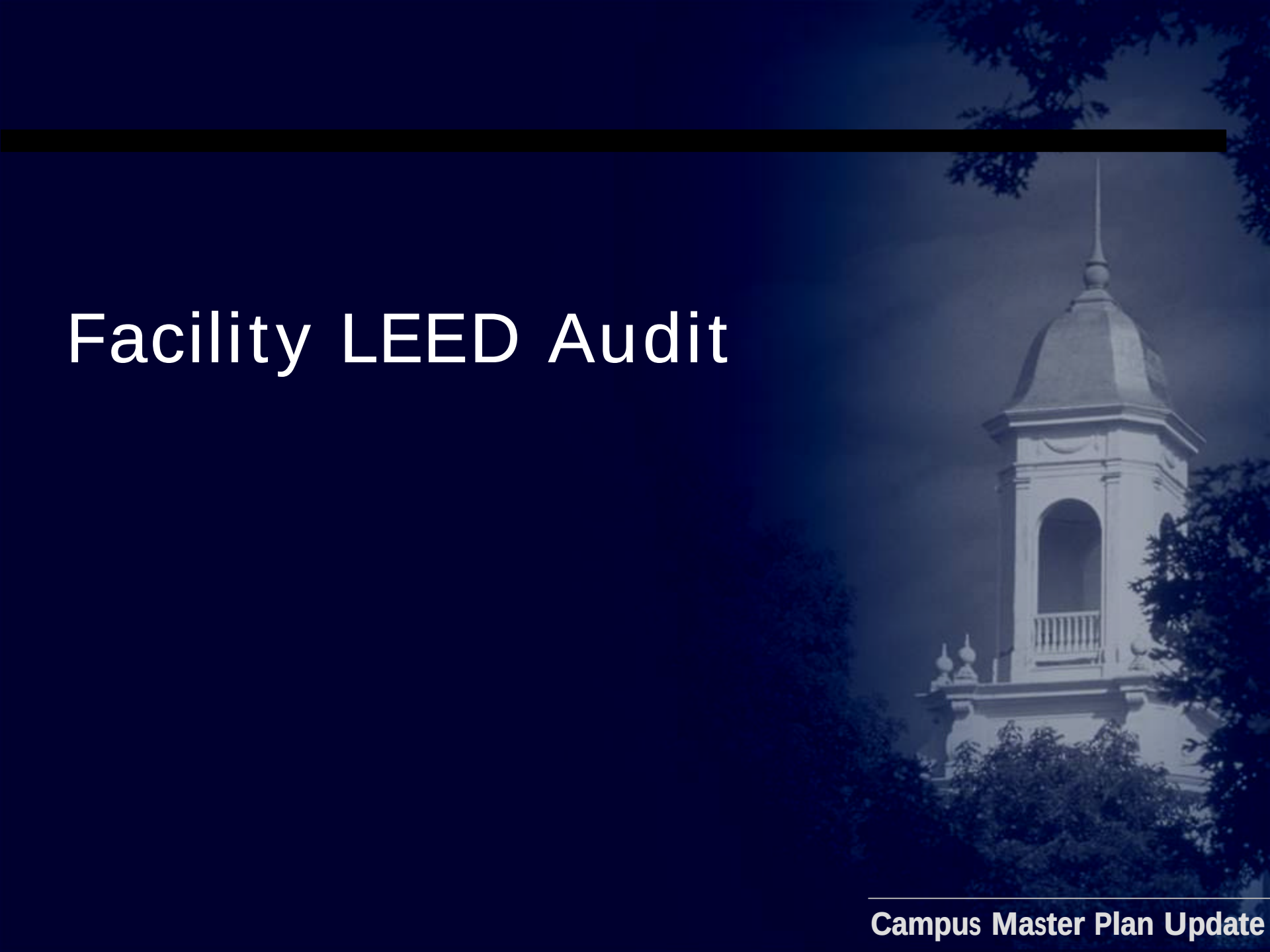
- Portland, OR., Austin, TX., Chicago, IL., Arlington, VA.

LEED as a Guideline for Campus Development

Focus on:

1. Sustainable Site Design
2. Water Efficiency
3. Energy and Atmosphere
4. Materials and Resources
5. Indoor Environmental Quality

Facility LEED Audit



UConn and LEED

- The Facility LEED Audit gave an understanding of the university's current standards, practices, and procedures with regard to LEED

- The future goal is for selected built projects to be designed using the LEED rating system as a benchmark, going as far as is feasible within individual project requirements and budgets

Facility LEED Audit

- Surveyed a diverse group of recently completed project:
  - Wilbur Cross Hall
  - School of Chemistry
  - School of Business
  - South Campus Residence Halls
- Standard for Audit: LEED™ Version 2.1

Overall Scoring

	Wilbur Cross Renovation	South Campus Residence Hall	School of Chemistry	School of Business
Sustainable sites	6	5	3	4
Water Efficiency	3	3	2	1
Energy and Atmosphere	1	1	1	1
Materials and Resources	5	3	4	3
Indoor Environmental Quality	6	6	5	3
TOTAL	21	18	15	12

Note: Audited buildings were completed in the late 1990's and designed in the early and mid 1990's prior to the public release of LEED 2.1 in 2003

- LEED Certified: 26 - 32 points
- Silver Level: 33 - 38 points
- Gold Level: 39 - 51 points
- Platinum Level: 52 - 69 points

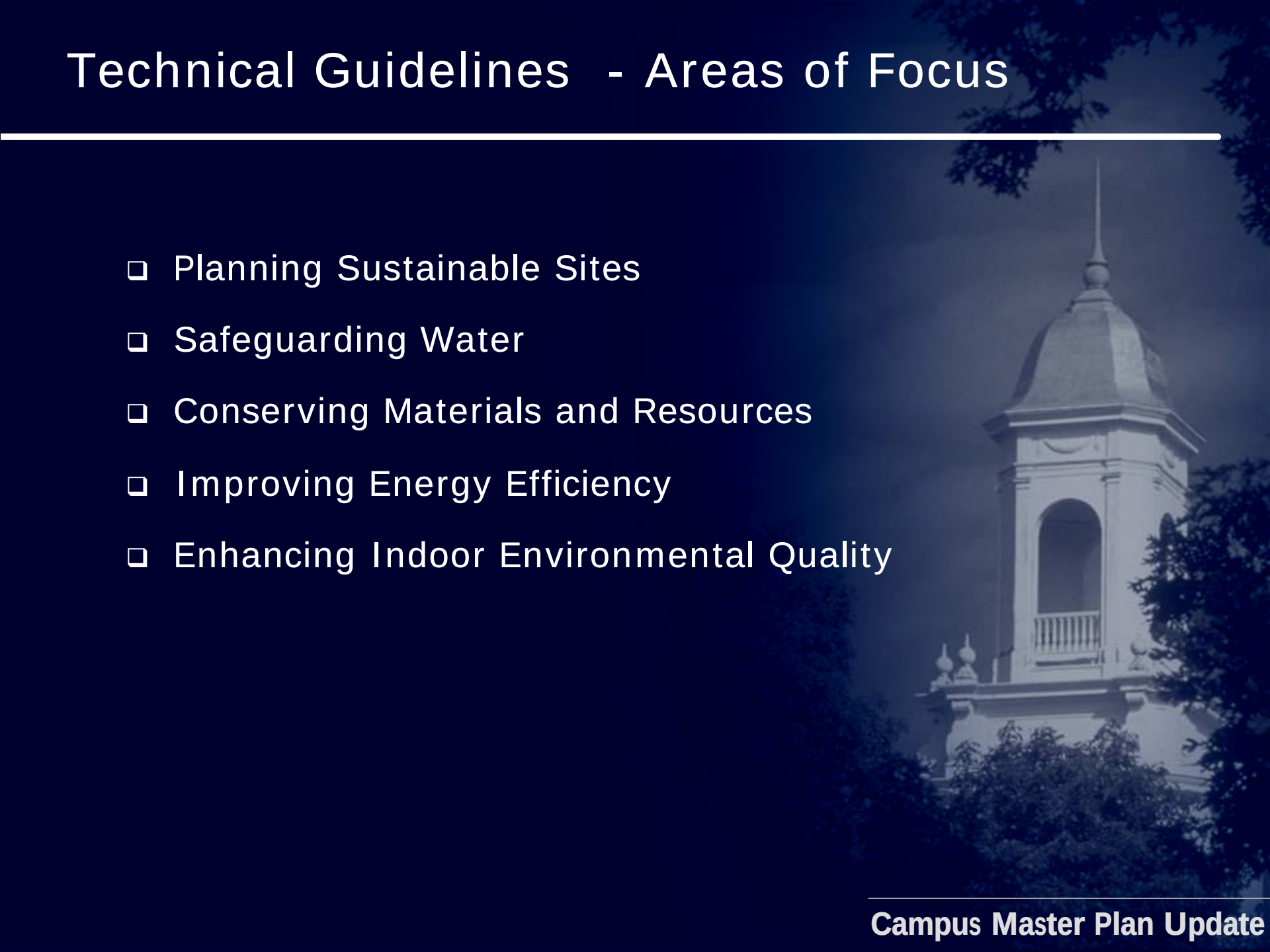
Campus Sustainable Guidelines

Campus Sustainable Guidelines

- Adopted in whole or part for selected projects
- Will become part of the Campus Design Guidelines
- Two main sections:
  - Technical Guidelines
  - Process Guidelines

Technical Guidelines - Areas of Focus

- Planning Sustainable Sites
- Safeguarding Water
- Conserving Materials and Resources
- Improving Energy Efficiency
- Enhancing Indoor Environmental Quality



Planning Sustainable Sites

Goals:

Place new buildings on the most suitable site possible

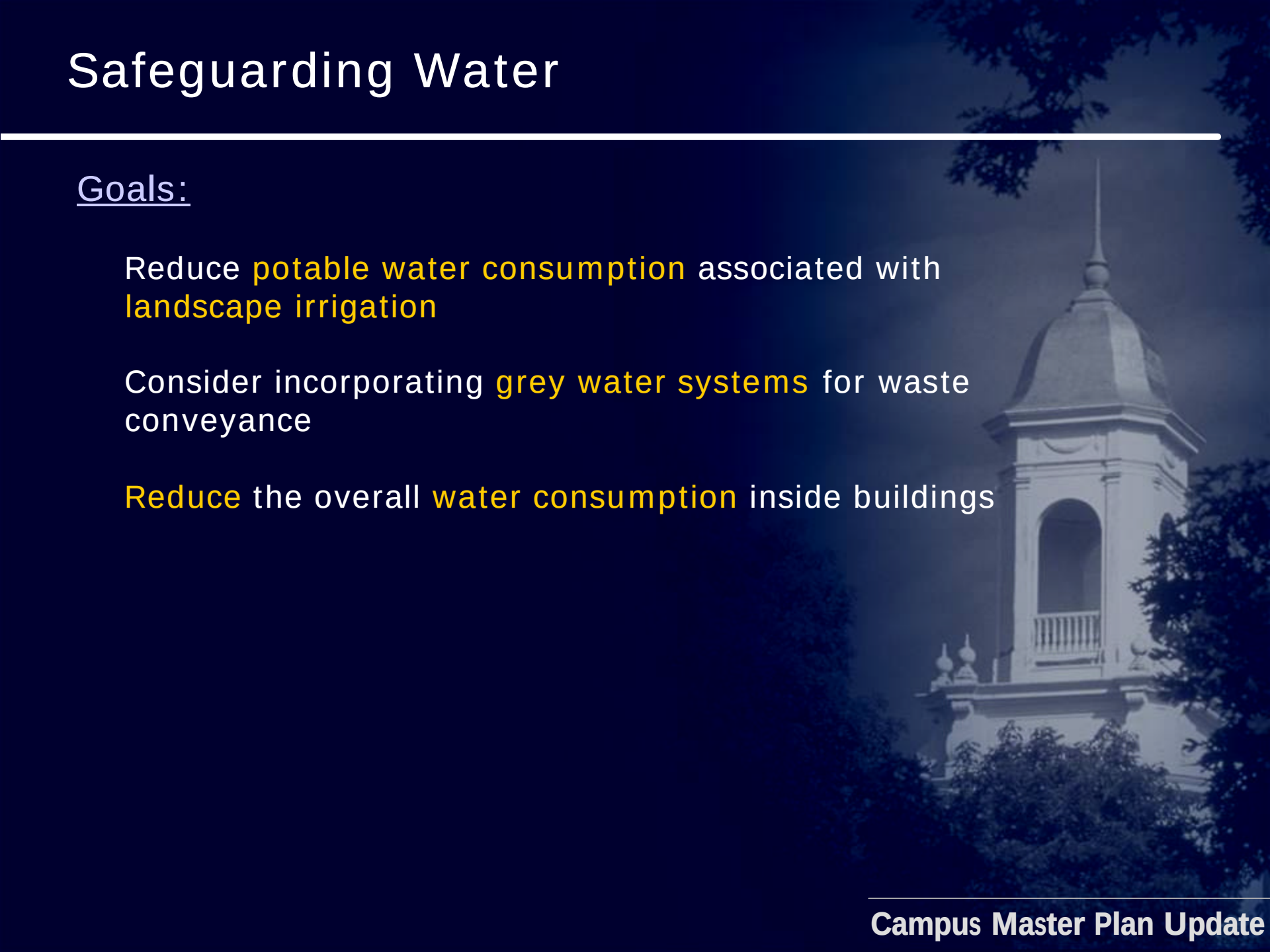
Encourage alternative transportation methods and alternative energy vehicles

Reduce the impacts of stormwater runoff from existing and new development

Develop site features to minimize adverse impacts to the site's microclimate

Provide site lighting that is sensitive to light pollution of the night sky

Safeguarding Water



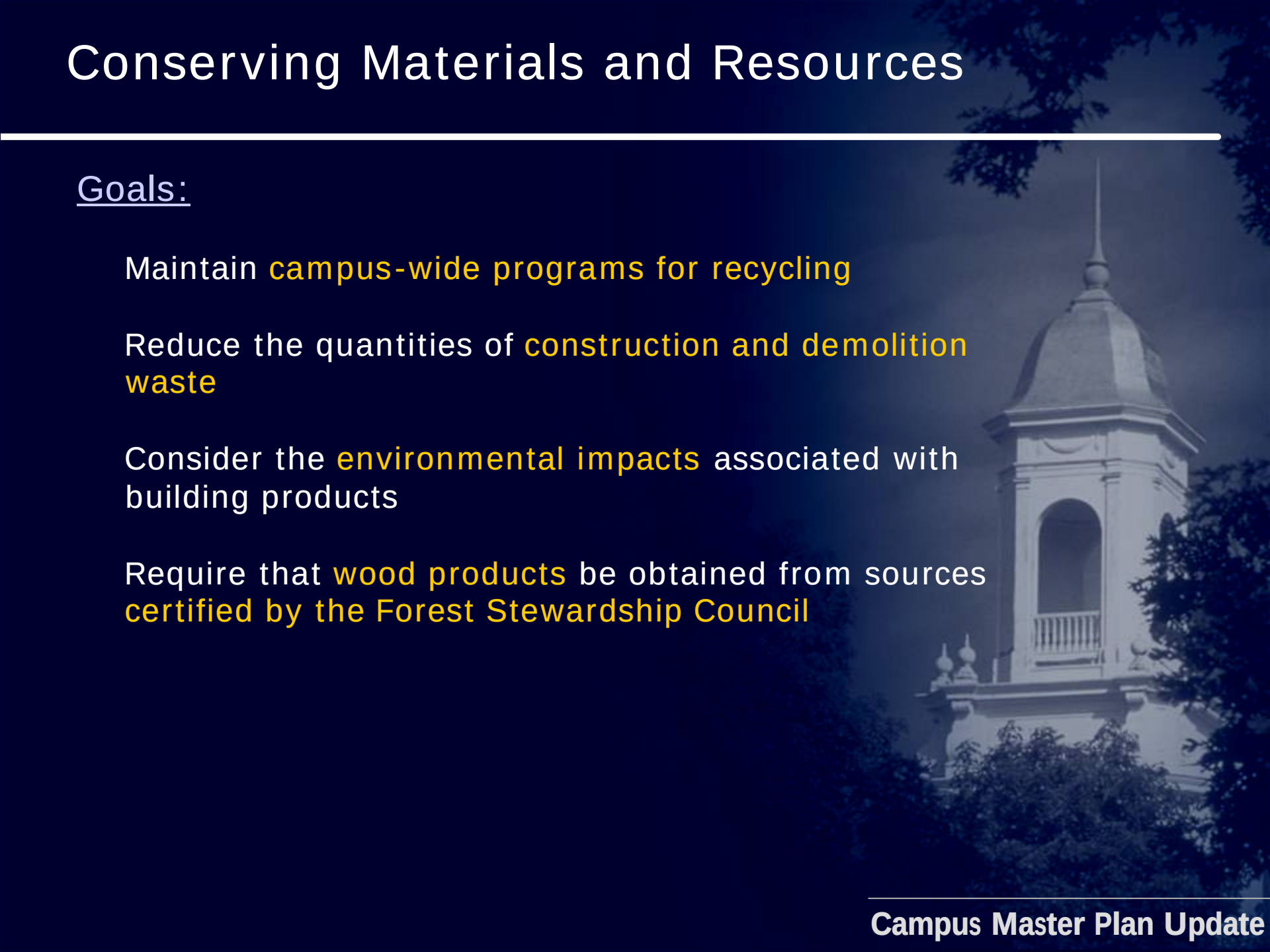
Goals:

Reduce potable water consumption associated with landscape irrigation

Consider incorporating grey water systems for waste conveyance

Reduce the overall water consumption inside buildings

Conserving Materials and Resources



Goals:

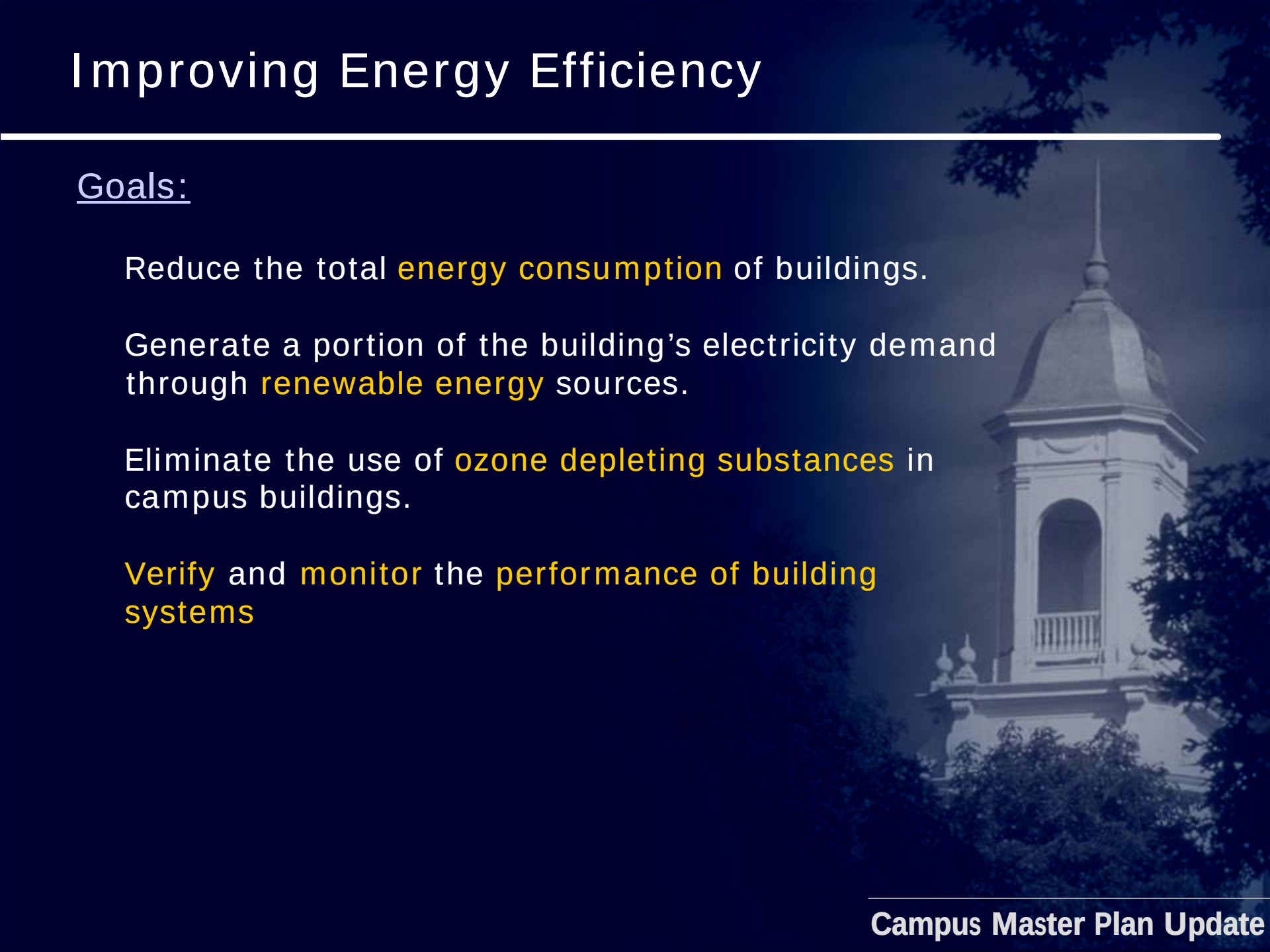
Maintain campus-wide programs for recycling

Reduce the quantities of construction and demolition waste

Consider the environmental impacts associated with building products

Require that wood products be obtained from sources certified by the Forest Stewardship Council

Improving Energy Efficiency



Goals:

Reduce the total energy consumption of buildings.

Generate a portion of the building's electricity demand through renewable energy sources.

Eliminate the use of ozone depleting substances in campus buildings.

Verify and monitor the performance of building systems

Enhancing Indoor Environmental Quality

Goals:

Ensure that indoor air quality is acceptable and free from known contaminants

Create healthy interior spaces that are comfortable to users and support learning

Process Guidelines - Objectives

- Promote an integrated and collaborative process
- Ensure that the resulting project is compatible with university expectations and culture
- Consultant design team will coordinate the sustainable design process

Process

- Pre-Design
  - Pre-proposal
  - Project Initiation
- Design
- Construction
- Occupancy

Establish an obtainable sustainable target – Use LEED as a benchmark

Discuss broad sustainable approaches

Hold a Green Building Charrette

Process

- Pre-Design
- Design
  - Schematic Design
  - Design Development
  - Construction Documentation
- Construction
- Occupancy

Discuss how each strategy will contribute to the project's sustainability goal

Develop Life-Cycle Cost Analyses for the primary green strategies

Develop appropriate specifications

Process

- Pre-Design
- Design
- Construction
  - Bidding and Contract Negotiations
  - Construction
- Occupancy

Consider the contractor's sustainable practices for pre-qualifications

Work with the contractor to discuss sustainable strategies

Verify that the necessary considerations for implementing specific sustainable strategies are being discussed at the appropriate pre-construction meetings

Process

- Pre-Design
- Design
- Construction
- Occupancy

Monitor project performance to gather and document lessons learned

For more Information and Details . . .

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  - Director of Environmental Policy
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University of Connecticut