

# ENVIRONMENTAL SUSTAINABILITY GUIDELINES

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NORTH CAROLINA **Museum of Natural Sciences**

# **ENVIRONMENTAL SUSTAINABILITY GUIDELINES**

The practice of sustainability and environmental protection  
throughout operations at the  
North Carolina Museum of Natural Sciences

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**NORTH CAROLINA *Museum of* Natural Sciences**

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# INTRODUCTION

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By any environmental measure, our planet is degrading at an alarming rate. The Covid-19 pandemic that has (at the time of writing) caused more than 2.8 million deaths worldwide was caused by a damaging and inappropriate relationship with wildlife. The climate is changing, due in large part to the 87 million tons of CO<sub>2</sub> emitted every day globally, hastened by a daily net loss of 12,500 hectares of forest across the planet (Worldometer 2021). Against this backdrop, our planet's wildlife is declining precipitously, in a sixth great extinction (Kolbert 2014).

North Carolina Museum of Natural Sciences (NCMNS) is committed to pursuing a triple-bottom line approach of environmental, financial and social responsibility. Our mandate as the State science museum challenges us to support an economy aimed at reducing environmental risks and ecological scarcities, one that aims for sustainable development without degrading the environment. A 2009 Pew Report (NC Department of Commerce, 2009) acknowledged that North Carolina was poised at that time to make green energy jobs a cornerstone of North Carolina's economy. They cited the fact that in 2007, more than 1,700 clean energy businesses in North Carolina accounted for 17,000 jobs. Now, fourteen years later, the need — and potential — for such decisive action is even greater.

By finding innovative ways to do more while lessening our ecological footprint, we aim to drive sustainability efforts and build resilience into all of our activities in order to continue positively impacting the communities we serve. We work actively to reduce the environmental impact of and risk to our institution by focusing on critical areas including carbon emissions, energy, food & beverage, indoor environmental quality, supply chain, waste and water.

Additionally, as one of the State's most visited attractions, we are also able to promote messages of sustainability to a broad audience in a meaningful way. The more we do internally to act responsibly with respect to the environment, the more authentic our messages become. Through our diverse activities, we are committed to integrating leading environmental practices and sustainability principles aimed at:

- Conserving natural resources
- Protecting ecosystem biodiversity
- Driving sustainable development
- Minimizing waste and pollution
- Establishing and reporting on key environmental performance indicators
- Raising environmental awareness among our associates, our guests and communities

In this document, we present guidelines to move our operations to greater sustainability, working toward reducing our carbon footprint to the greatest extent possible. We also present plans to promote stories of sustainability in action, unlocking ways that individuals can make a tangible difference to our mounting environmental problems.



**Eric Dorfman, PhD**  
Director & CEO  
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## Vision

North Carolinians understand and value their contributions toward a greener socioeconomic future.

## Guiding Principles

- The future quality of human life is dependent on both economic vitality and a healthy, sustainable natural environment.
- Interdependence exists across both time as well as space. Past, present and future are inextricably connected.
- Environmental sustainability has cultural and financial benefits for our Museum and our communities.

## Purpose of these Guidelines

The purpose of these guidelines is to catalyze new operational practices, and to support the ones already in place, that will lead to greater environmental sustainability over time. They include:

- **Energy:** increase energy efficiency, reduce energy consumption, especially of fossil fuels
- **Products:** use clean, energy-efficient sustainable products; minimize use of plastics, especially single-use plastics
- **Waste:** reduce consumption of raw or processed materials and minimize environmental impact of all our waste disposal; wherever possible recycle and compost
- **Consumption:** encourage healthy and sustainable food choices and work with our partners toward that goal
- **Communicate:** promote sustainable behaviors in the community through our programming, exhibitions and research
- **Vendors:** Prioritize vendors who use environmentally sustainable methods

Our Museum operates within the scope of the State of North Carolina, and some of the operational activities are not under our direct control. In these cases, we will support department- and state-wide initiatives and benchmarking.

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## Application and Scope

### **Strategic Objectives.**

1. Promote the importance of understanding, and responding to, global anthropogenic climate change.
2. Maintain a commitment to responsible energy management by including environmental sustainability in strategic planning.
3. Give high priority to energy efficient investment by budgeting for improvements to efficiency and sustainability across our operations.
4. Do everything feasible to reduce consumption through setting meaningful operational objectives with measurable annual targets.
5. Minimize environmental impact through reduction, reuse, recycling, composting and use of sustainable products and services.
6. Promote use of sustainable energy resources through our public interface and build on the work of others, such as United Nations Sustainable Development Goals (SDG) and, where possible, advocate for greater reliance on green energy supply.

### **Operational Objectives**

1. Create and maintain a prominent place for energy management within the Museum and to its stakeholders.
2. Monitor and evaluate performance levels on a monthly basis, captured in standard operating procedures.
3. Set and publish annual targets for performance and improvement, with specific initiatives for their enhancement and adjust housekeeping practices accordingly. Report achievements as part of the Museum's annual report.
4. Motivate staff and the public to use environmental resources wisely.
5. Require contractors and vendors to have a sustainability policy that ensures their conduct is commensurate with that of NCMNS.
6. Establish annual budget for investing in energy efficiency.
7. Introduce environmentally sustainable operations into site induction and training programs.
8. Introduce environmentally sustainable operations into design brief for gallery fit-out and refurbishment projects.
9. Include specific methodology for reducing, reusing, composting and recycling into the design brief for all new and refurbishment projects.
10. Investigate environmental accreditation within our operating context.

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## Performance Measures

Measuring environmental performance requires a look at all different areas of an organization — materials, energy, water, emissions, effluents and waste, products and services and many other topics and, for an organization such as ours, public programming. Over time, we will implement specific sustainability measures across our operations. Many are possible; those presented here are a starting point for future work.

1. Percentage of materials used that are recycled input materials such as paper
2. Direct energy consumption by primary energy sources per unit of output
3. Energy saved due to conservation and efficiency improvements
4. Percentage of water recycled and reused
5. Total direct and indirect greenhouse gas emissions by weight
6. Emissions of ozone-depleting substances by weight
7. Nitric oxide (NO), sulfuric oxide (SO), and other significant air emissions by type and weight
8. Total water discharged by quality and destination
9. Total weight of waste by type and disposal method
10. Percentage of products sold and their packaging materials that are reclaimed by category
11. Promote sustainability by using one Sustainable Development Goal (SDG) per year as the basis of an annual Museum celebration. Each SDG covered should also lead to tangible improvement in the Museum's progress toward operational sustainability.

## References

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