GREENING YOUR NIH INSTITUTE OR CENTER

A How-To Guide

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for the National Institutes of Health

LIST OF APPENDICES

LIST OF ACRONYMS

DEP	Division of Environmental Protection
EMS	Environmental Management System
E.O.	Executive Order
EPA	Environmental Protection Agency
EPEAT	Electronic Product Environmental Assessment Tool
FY	Fiscal Year
IC	Institute or Center
ISO	International Organization for Standardization
IT	Information Technology
NEMS	NIH Environmental Management System
NIH	National Institutes of Health
SMT	Sustainability Management Team

HOW TO USE THIS GUIDE

The term “green” is heard increasingly in the media and from organizations to describe everything from food to buildings to products and services. Green is an umbrella term that refers to environmentally-sound and sustainable goods and services.

The purpose of a Green Team is to look at how an Institute or Center (IC) conducts its day-to-day activities and determine how to conduct those activities in a "greener" way. It may be necessary for the Team to develop or identify guidance and tools that will be helpful in changing the way employees conduct their activities. It is the challenge of the Green Team to determine how to ensure that staff have the knowledge and support to make the best environmentally-sound decisions that they can when conducting their day-to-day activities. The Green Teams may need guidance, outreach documents, best management practices, or other tools to both raise awareness throughout their IC and change employee’s behavior.

This guide has been prepared as a tool for Green Teams implementing the greening process. It is designed to be a step-by-step workbook that captures much of what has already been developed and used by other ICs who have begun the greening process. Green Teams that are just starting out and others that are already up and running should find the guide helpful in instituting the greatest change with the least amount of added effort. The steps are meant to be completed in consecutive order, and a general timeline is provided on page 9. Because each IC’s circumstances and needs vary, users of this guide may need to modify the procedures and worksheets to fit their unique requirements. However, the steps for greening are based on the International Organization for Standardization’s (ISO) 14001 standard and is a proven process for improving environmental stewardship.

If you would like background information and a framework for which the greening of ICs is taking place, start at “How is NIH Going Green?” on page a. If not, jump right to “Where Do We Start?” on page 10 and begin greening!

At the end of this guide, you will find a Notes section where you can capture decisions and action items from each step.

If you have ideas for improving this guide or have any other questions, please contact Terry Leland, the NEMS Coordinator, at (301) 451-6474 or lelandt@mail.nih.gov.

HOW IS NIH GOING GREEN?

All federal agencies are required to implement an environmental management system (EMS) to comply with Executive Order (E.O.) 13423, "Strengthening Federal Environmental, Energy, and Transportation Management." An EMS is a tool used by an organization to improve sustainability and manage its environmental footprint. Although the National Institutes of Health (NIH) has always had a strong environmental compliance program, an EMS has enabled us to go even further in setting goals to reduce our environmental impact.

Creating a greening system for a large, complex, decentralized, multi-Institute environment like NIH is a challenge! The NIH Environmental Management System (NEMS) addresses the environmental impact from the large scope of operations at NIH, which includes:

- 300 acres in Bethesda, Maryland, our site in Poolesville, Maryland, and leased facilities throughout Montgomery County, Maryland;
- 23,000 employees in Montgomery County;
- 27 autonomous Institutes and Centers (ICs) that make decisions through committees;
- 75 energy-intensive buildings with a total utilities cost of $100 million in Fiscal Year 2008;
- 12 million square feet of federally-owned and leased facilities; and
- Diverse activities, including: laboratory research; animal care; patient/clinical care; patient lodging; facility design, construction, renovation, operations and maintenance, decommissioning, and leasing; managerial and administrative office activities; procurement; information technology (IT) activities; transportation; emergency response services; and fleet management.

NIH uses the NEMS to encourage each person to be aware of the impact of their job and empowers them to make green choices. It is not hard to understand why NIH takes its role as a steward of the environment so seriously. The mission of NIH is science in pursuit of fundamental knowledge about the nature and behavior of living systems and the application of that knowledge to extend healthy life and reduce the burdens of illness and disability. Many public health issues are caused or exacerbated by environmental pollution and contamination. Through the NEMS, we support the NIH mission by reducing NIH's impact on the environment and the accompanying burden on human health.

In order to meet the challenge of deploying our greening system, ICs began forming Green Teams in 2008. These Teams have been very successful in reducing environmental impact and

Greening Tool

A copy of E.O. 13423 is provided in Appendix A. Also review the implementing instructions (available at fedcenter.gov) for detailed directions on fulfilling E.O. requirements and goals.

creating greater awareness of environmental issues on and off campus. This guide has captured their successes and lessons learned. More information is available on their Web pages (nems.nih.gov/teams/index.cfm).

The NEMS has allowed us to systematically evaluate what NIH does, identify its impact on the environment, and work towards achieving annual goals to reduce this impact. In January 2009 we unveiled more aggressive goals for NIH that all our ICs can contribute to (see page 37 for more details). Some areas with environmental impact that our Green Teams seek to address:

- **Energy and Water Conservation.** NIH has an aggressive program to conserve energy and water. With an annual utility bill of $100 million and the sizeable carbon footprint that goes with it, we must focus on both our infrastructure and our individual actions to reduce our carbon footprint and water usage.
- **Waste and Recycling**. NIH generates more than 39,000 pounds of waste daily. This is a tremendous amount of waste. While most of this waste is recyclable, the majority ends up in the trash rather than the recycling bin. Surely NIH employees can do better than that!
- **Hazardous Waste Management.** Our intramural research programs generate chemical and radioactive wastes as a byproduct of their research. There are many opportunities for greening research, and our Green Teams will continue to identify new and innovative way to reduce impacts.
- **Toxics Reduction.** Everything that we purchase leaves our sites as some form of waste. Minimizing the hazardous materials we bring into our sites minimizes toxic wastes. NIH has identified chemicals still in use on the Bethesda campus for which greener laboratory options are available.
- **Green Procurement.** Everything we purchase and ship to our sites has an impact. By making green choices, we can significantly reduce this impact.
- **Forest Conservation, Grounds Maintenance, and Stormwater Management.** NIH manages the quality and quantity of its stormwater discharge and has an Urban Forest Conservation Plan to enhance wildlife habitat and increase forest canopy and stream buffer canopy on the Bethesda campus.
- **Transportation.** More than 5,000 NIH employees participate in the Transhare program. Many other employees walk, bike, or carpool to and from work.

NIH's excellence in environmental stewardship is recognized by many organizations, including the White House, the U.S. Environmental Protection Agency (EPA), and the State of Maryland. NIH's recent environmental successes and awards include:

Greening Tool

Additional information on hazardous waste management, toxics reduction, and other ways to reduce the impact of lab activities on the environment is available at nems.nih.gov/teams/team_lab.cfm.

Additional information on green commuting options is available at nems.nih.gov/outreach/Commuting_Handout_062206_FINAL.pdf.

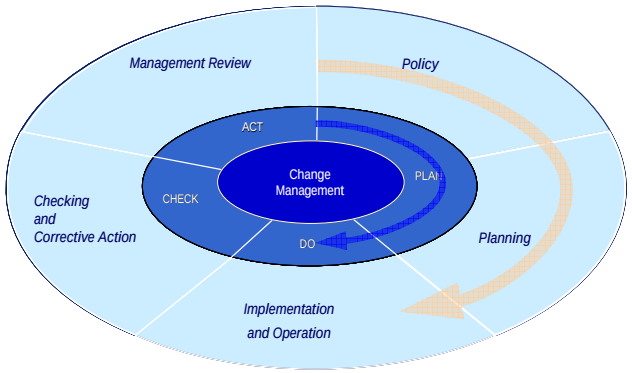
- Federal Electronics Reuse and Recycling Campaign from the White House Council on Environmental Quality (2007),
- EPA's National Partnership for Environmental Priorities Award for reducing mercury through sustainable lab decommissioning (2007),
- Gold Leaf Award for Outstanding Landscape Beautification Activities from the International Society of Arboriculture (2006),
- White Oak Award for Excellence in Forest Conservation and Land Development from the Maryland Department of Natural Resources (2005), and
- American Chemical Society's prestigious Howard Fawcett Award for the Mad as a Hatter Mercury Reduction Campaign.

Environmental Management System as a Tool for Greening

Before we go any further we should examine what an EMS is in more detail. An EMS is a systematic method to identify and reduce impacts on the environment by integrating environmental and health considerations into decision-making processes. The EMS framework is based on the "Plan-Do-Check-Act" model (see Figure 1) and the International Organization for Standardization's (ISO) 14001 standard. NIH is implementing the NEMS in accordance with E.O. 13423 and the Department of Health and Human Services EMS Policy Framework. The ISO 14001 approach relies on formalized steps to make progress. The steps are to:

- Assess what needs doing;
- Set specific objectives;
- Create action plans to accomplish objectives;
- Allocate resources and assign responsibility and authority;
- Conduct an audit or assessment to check the effectiveness of measures used to control environmental impacts;
- Correct any measure to improve environmental performance; and
- Continue to improve environmental performance through setting new objectives.

Figure 1. The Plan-Do-Check-Act Framework



Because the Plan-Do-Check-Act cycle takes place on an annual basis, the EMS goes through a continuous evaluation and improvement process. This continued improvement encourages an organization to explore opportunities to enhance its environmental performance and lessen its environmental footprint.

NIH Environmental Management System

The NIH Environmental Policy is the basis of the NEMS and affirms NIH's commitment to protect the environment and use resources responsibly. The policy establishes three important commitments:

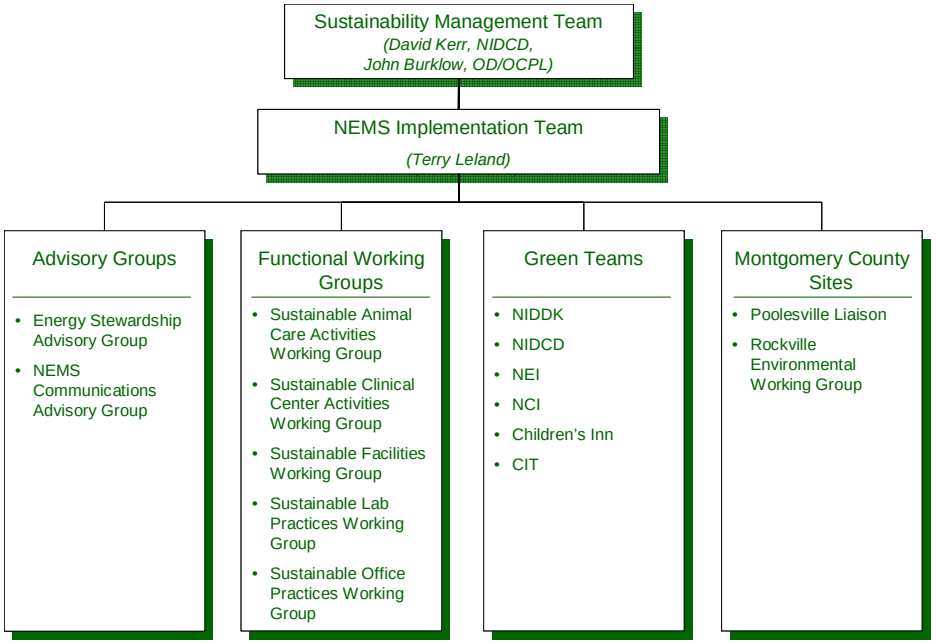
- Compliance with all environmental laws and regulations,
- Preventing pollution, and
- Continually improving the NEMS to better NIH's environmental performance.

We use the NEMS framework to:

- Look at what we do,
- Identify how our activities might impact the environment and public health,
- Change how we do things to make sure we do as little harm to the environment as possible, and
- Encourage continuous environmental improvement.

For an EMS to be effective, the system must be designed, implemented and deployed with the participation of many people. At NIH we are implementing this through a number of teams and groups that have differing responsibilities. The NEMS covers the activities and operations of NIH sites in Montgomery County, Maryland. Information about EMSs for other NIH sites is available at nems.nih.gov/offsite.cfm. Figure 2 illustrates the major NEMS teams and groups and the flow of information.

Figure 2. The NEMS Implementation Structure



The overall leadership of the NEMS is provided by the Sustainability Management Team (SMT), which is comprised of senior managers from the different functional areas at NIH. The primary responsibility for the continued maintenance of the NEMS falls with the cross-functional Implementation Team, which reports the status of the NEMS up to the SMT. Working Groups and Green Teams are the foundation of the NEMS. A Working Group represents a particular functional area, examines activities within the functional area, and identifies ways to improve how those activities are conducted. Green Teams are established by an IC to identify their most pressing environmental issues, set goals to address those issues, make changes in how activities are conducted, and track the resulting improvements in environmental performance. Additionally, the NEMS delegates responsibility and authority for environmental sustainability to every NIH employee and contractor.

All ICs that create Green Teams are asked to send a representative to the monthly Green Team Leads Council. At these meetings, ICs give updates on their progress and share ideas and lessons learned with one another.

Greening Tool

Visit nems.nih.gov for additional information on how the NEMS is implemented at NIH.

HOW CAN WE GREEN OUR IC?

Requirements for greening business practices at NIH are in Senior Executive Service-level performance plans. Although this is a new element in performance plans, the greening of business practices is already occurring at many ICs using the NEMS and Green Teams. This guide has been developed to help make the greening process as easy as possible. This section identifies why you should green your IC and how the greening process works.

IC's Role in Greening

Each IC should recognize the impact their activities and operations have on the environment and human health. Reducing your environmental footprint will improve your IC's environmental performance and minimize costs.

Green Teams use the greening process to examine the activities/business practices occurring within their IC and develop tools to green those activities. This includes developing guidance, tools, outreach programs, and best management practices as well as identifying new opportunities to become more sustainable.

Steps for Greening

This guide outlines a step-by-step process for greening your IC. It provides a systematic approach that mirrors the EMS cycle described in the previous section. The steps are intended to be completed in consecutive order to assist you with developing the records that document your progress through greening process.

Benefits of Greening

There are many benefits to greening your IC, including:

- Minimizing impact on the environment and public health
- Minimizing accidents and problems
- Improving efficiency and consistency in operations and activities
- Achieving cost savings
- Facilitating compliance
- Improving image in the community and from employees
- Enhances communications within your organization

The steps for greening are:

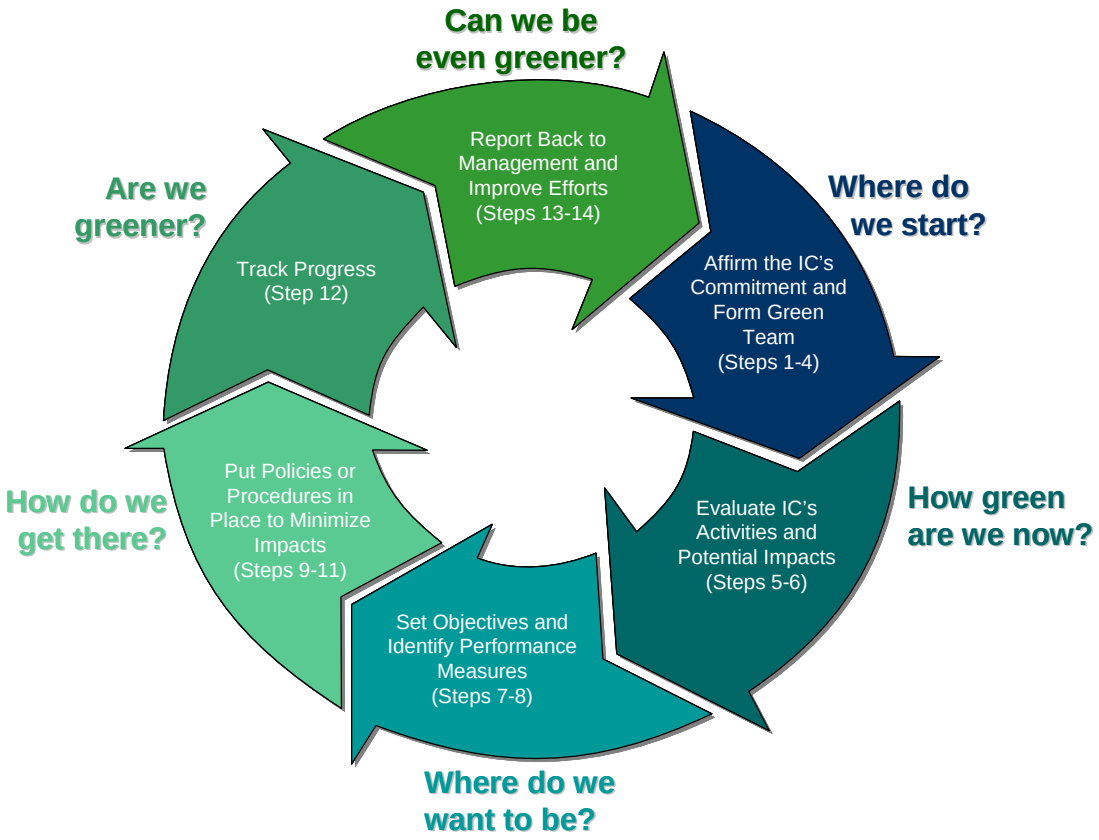
	Steps for Greening
1	Obtaining Management Commitment
2	Communicating Management's Commitment
3	Forming a Green Team
4	Preparing for the Green Team Kick-Off
5	Identifying How Our Work Impacts the Environment
6	Go Greener Challenges
7	Setting Objectives
8	Identifying Performance Measures and Baselines
9	Changing How We Do Things
10	Drafting a Green Policy
11	Communicating Our Efforts
12	Tracking Our Progress
13	Reporting Back to Management
14	Improving Our Efforts

By following these steps, your IC can:

- Save money by increasing energy efficiency and reducing waste generation;
- Comply with all federal, state, and local environmental laws and regulations, as well as Executive Orders;
- Reduce potential environmental liabilities; and
- Protect public health and the environment.

The steps can be grouped into six phases of the greening process. The greening process is illustrated in Figure 3.

Figure 3. The Greening Process



The Steps for Greening Tracking Sheet on page 9 will help you follow your progress in completing the greening process. Due to initial planning, it will likely take over a year to complete all of the greening steps. Your IC should strive for continued improvement and repeat the greening process annually.

The tracking sheet provides a proposed timeline and gives you an opportunity to track where you are in the greening process. The guide provides a series of worksheets that include a space for you to fill in the date when the step has been completed in full. Be sure to include this date in your tracking sheet as well.

Greening Tool

Use the Steps for Greening Tracking Sheet on page 9 to track your progress in completing the greening process. Space is provided to document targeted completion dates and responsibilities.

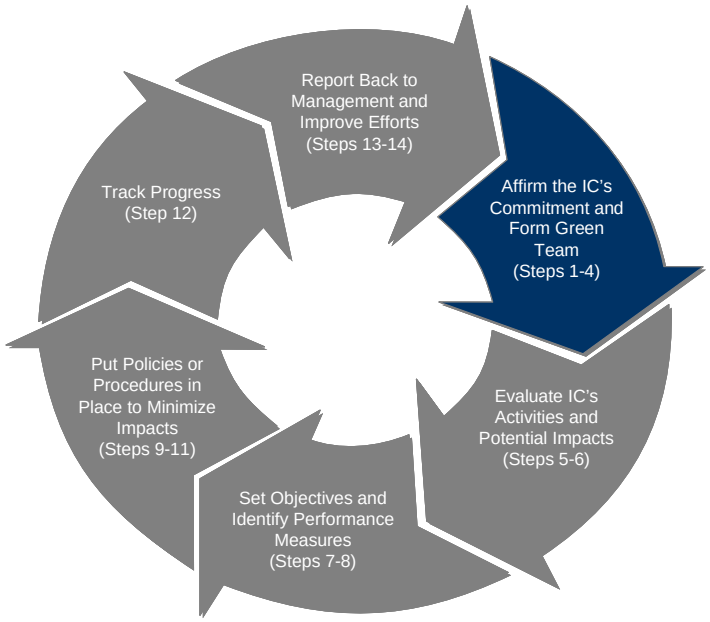
_____ Green Team

STEPS FOR GREENING TRACKING SHEET

Step	Section	Date Completed			Responsible Person
		Suggested Timeline	Target Date	Date Completed	
Where do we start?					
1	Obtaining Management Commitment	2 weeks			
2	Communicating Management's Commitment	2 weeks			
3	Forming a Green Team	2 weeks			
4	Preparing for the Green Team Kick-off	2 weeks			
How green are we now?					
5	Identifying How Our Work Impacts the Environment	4 weeks			
6	Go Greener Challenges	4 weeks			
Where do we want to be?					
7	Setting Objectives	4 weeks			
8	Identifying Performance Measures and Baselines	4 weeks			
How do we get there?					
9	Changing How We Do Things	Initially 8 weeks then ongoing			
10	Drafting a Green Policy	8 weeks			
11	Communicating Our Efforts	Ongoing			
Are we greener?					
12	Tracking Our Progress	2 weeks			
Can we be even greener?					
13	Reporting Back to Management	2 weeks			
14	Improving Our Efforts	Ongoing			

WHERE DO WE START?

This section kicks off the greening process and establishes the foundation for all the efforts to follow. To implement lasting change and improve environmental performance, it is important to engage management in the greening efforts and to communicate management's commitment to all employees. The steps that follow walk you through obtaining and communicating management's support for greening and establishing a means to facilitate change—a Green Team.



The steps covered in this section include:

- Step 1: Obtaining Management Commitment
- Step 2: Communicating Management's Commitment
- Step 3: Forming a Green Team
- Step 4: Preparing for the Green Team Kick-Off

By the end of this section, you will have:

- ✓ A commitment statement from management
- ✓ A cross-functional Green Team

STEP 1: Obtaining Management Commitment

Background

An IC's management will support a Green Team if it is convinced that the benefits will outweigh the costs. The potential benefits include financial advantages, compliance with regulations, improved public image, and reduced environmental impact.

Management must commit to provide resources to the Green Team and integrate NEMS goals into the IC's priorities. In order for the Green Team to be successful, management should support the development and use of improved policies and procedures. Management also needs to assess the performance of the Green Team and whether objectives are being met.

Instructions

Use *Step 1: Obtaining Management Commitment* worksheet to obtain management commitment. You should consider preparing a briefing on the greening process to communicate the approach and benefits to management.

Keys to Success
For a Green Team to work well, management should:

- Commit to pollution prevention and continual improvement of the IC's environmental performance,
- Support the NEMS and Green Team initiatives,
- Participate in the NEMS by helping the Green Team achieve its objectives,
- Update staff on greening initiatives during regular meetings,
- Challenge staff to lessen their impact on the environment and to green their activities,
- Encourage employees to find greener alternatives when designing research, and
- Be involved in regular discussions on the progress of greening.

Remember This
There is a Notes section at the end of this guide where you can capture decisions and action items from each step.

Greening Tool
A general briefing that can be tailored to your IC is available at nems.nih.gov/greening/guide/.

Barrier Alert!
Lack of top management involvement or visibility in your IC's greening efforts can impede progress.

_____ Green Team

STEP 1: OBTAINING MANAGEMENT COMMITMENT

✓	Management Briefing Steps
☐	Identify senior manager(s) who will champion the greening process. The following managers will be briefed:

_____

_____

_____

☐	Review general briefing (available at nems.nih.gov/greening/guide/) and tailor to our IC.
☐	Schedule Senior Management Briefing. The briefing will occur on _____
☐	Conduct briefing.

Date completed: _____

STEP 2: Communicating Management's Commitment

Background

When you have obtained management's support for greening, you should communicate this across the IC. This communication is critical to the success of a Green Team and their efforts since it will inform all employees that greening is a priority for management and their participation is expected.

Instructions

Use *Step 2: Communicating Management's Commitment* worksheet to structure how management's commitment will be communicated to all IC employees.

Keys to Success

- A top management official (e.g., IC Director, Executive Officer, Scientific Director) should send an email announcing the greening efforts. In this email it is important to highlight the kick-off of the IC's greening efforts and what a commitment to greening means to the IC. The email should also mention how greening is a team effort and participation is expected.
- The email should include the name and contact information for the Green Team Lead. This will provide a centralized point of contact for the greening efforts.
- Be sure to have management reiterate their commitment throughout the year. They should provide updates on the IC's efforts.

Greening Tool

An email template to communicate management's commitment is provided in Appendix B.

_____ Green Team

STEP 2: COMMUNICATING MANAGEMENT'S COMMITMENT

✓	**Drafting Commitment Announcement**
☐	Decide whether you will use the email template found in Appendix B or draft your own commitment email.

If you drafted your own commitment email, be sure to include:

- ☐ Compliance with all federal, state and local environmental laws and regulations, as well as Executive Orders.
- ☐ Prevention of pollution by minimizing the generation of wastes where possible, reducing consumption, recycling materials, and disposing of wastes in an environmentally responsible manner.
- ☐ Being good stewards of the environment and public health.
- ☐ Integration of environmental and health considerations into decision-making processes.
- ☐ Increasing awareness of the IC's impact on the environment and public health.
- ☐ Contact information for the Green Team Lead for questions and collecting names of those interested in participating in the Green Team.

✓	**Distributing Commitment Announcement**
☐	Decide who will send the commitment email (e.g., IC Director, Executive Officer, Scientific Director).

_____ will send the commitment email on _____

Date completed: _____

STEP 3: Forming a Green Team

Background

To effectively green your IC, a cross-functional Green Team should be formed. A Green Team can implement the greening process to examine activities occurring within your IC and develop tools to "green" those activities. A Green Team should be comprised of all functional areas within the IC. At a minimum, the Green Team must include a representative from:

- Senior leadership
- Intramural and/or extramural research
- Animal care (if applicable)
- Administrative support
- IT support
- Procurement
- Communications
- Off-campus sites

Instructions

1. Identify a Green Team Back-Up Lead who can assist the Green Team Lead and act in the Lead's absence.
2. Work with senior management to identify appropriate functional representatives.
3. Identify volunteers who would like to serve on the Green Team.
4. Fill out *Step 3: Forming a Green Team* worksheet to document Green Team membership.

Keys to Success

- To facilitate efficient management of the Green Team, the Green Team Lead and Back-Up should share responsibilities, including:
  - Establishing and maintaining a contact list, email distribution list (if necessary), and/or listserv (if applicable);
  - Arranging meeting logistics;
  - Setting agendas; and
  - Drafting and distributing meeting minutes.

  These responsibilities may be designated to other members. For example, you may elect to rotate the notetaking responsibility among different members.
- The Green Team Lead will participate in the NEMS Green Team Leads Council, which serves as a forum for ICs to share best practices and communicate challenges and opportunities encountered when greening NIH. The Back-Up Lead should attend when the Lead is not available.

Consider This

The Step 3 worksheet can be used as a contact list and sign-in sheet for Green Team meetings.

_____ Green Team

STEP 3: FORMING A GREEN TEAM

Initial HERE	Name	Email	Phone Number	Location	Job Function
					Green Team Lead
					Green Team Lead Back-up
					Senior Manager
					Intramural Research
					Extramural Research
					IT
					Administration
					Procurement
					Communications
					Animal Care
					Off-Campus Representative
					Other Functional Representative 1
					Other Functional Representative 2

Date Completed: _____

STEP 4: Preparing for the Green Team Kick-Off

Background

Once you have identified Green Team members, you should prepare for a Green Team kick-off meeting. This includes:

- Identifying meeting logistics (i.e., date, time, and location),
- Developing an agenda, and
- Distributing an email invitation to Green Team members identified in Step 3.

Instructions

Use *Step 4: Preparing for the Green Team Kick-Off* worksheet to help organize and execute the meeting.

Keys to Success

- Schedule monthly meetings to ensure progress in completing the greening process. A proposed schedule of meeting objectives is provided in Appendix C.
- Document discussions and decisions made during meetings by drafting and distributing meeting minutes or a summary. You can use the materials provided in the Notes section as a template for meeting summaries.

Greening Tool

A proposed agenda for the kick-off meeting is provided in Appendix D. This agenda can be used as a template for future meetings. Use the Notes section as a template for meeting summaries.

_____ Green Team

STEP 4: PREPARING FOR THE GREEN TEAM KICK-OFF

✓	**Meeting Preparation**

☐ Identify a meeting date and time. We will meet on:

_____

☐ Identify a meeting location. We will meet in:

_____

☐ Tailor the proposed agenda provided in Appendix D **OR** draft an agenda with the following items:

- ☐ Identify someone to take notes (template provided in Notes section) and distribute meeting summary after the meeting.
- ☐ Have members introduce themselves.
- ☐ Provide summary of the briefing with senior management and explain their commitment to greening.
- ☐ Determine if the Green Team would like to communicate via a listserv.
- ☐ Determine if the members would like to create a team Web page on the NEMS Web site (nems.nih.gov).
- ☐ Determine if the Green Team would like to develop a greening logo and/or brand.
- ☐ Identify how often and when meetings will occur.

We will meet every _____ Our next meeting is scheduled for _____

☐ Draft an email to the Green Team members on the purpose of the Green Team and the logistics for the kick-off meeting.

☐ Identify someone to distribute the kick-off meeting request. _____ will send out the meeting request.

☐ Conduct kick-off meeting.

☐ Distribute meeting summary.

Date Completed: _____

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HOW GREEN ARE WE NOW?

The purpose of this assessment phase is to develop a deeper understanding of the IC's activities and operations and to identify their current environmental impacts. During this phase you will also establish a baseline of how green your IC's activities and operations are.

The steps covered in this section include:

Step 5: Identifying How Our Work Impacts the Environment

Step 6: Go Greener Challenges

By the end of this section, you will have:

- ✓ A list of activities and environmental impacts
- ✓ Baseline performance data

STEP 5: Identifying How Our Work Impacts the Environment

Background

To effectively identify your IC's impact on the environment, you need to identify the activities occurring at your IC, such as the use of computers and printers or the use of chemical and biological materials. Afterwards, you can determine how each activity interacts with the environment. It is important to understand these interactions so that you can plan and manage actual and potential environmental impacts. The choices you make about how to do your job can have an obvious or invisible environmental impact—by depleting resources, generating waste, or creating pollution. The Green Team will be able to make use of tools developed by the NEMS to minimize these impacts on the environment, track these activities over time, and check for continued improvement.

Consider This

The relationship between the activities and environmental impacts is often one of cause and effect.

Instructions

Step 5: Identifying How Our Work Impacts the Environment worksheet lists common activities occurring across NIH, which are grouped functionally. Review the list of activities, and strike through any that are not applicable to your IC. Add other activities as needed in the space provided.

For each activity, one or more environmental concerns have been selected to indicate how the activity interacts with the environment. The environmental concerns identified throughout this guide are: Air/Water Pollution, Electricity Consumption, Fuel Consumption, Paper & Materials Consumption, Waste Generation, and Water Consumption. As you review the list of activities, discuss the how the activity can interact with the environment and review the environmental concern(s). If you believe the activity is associated with an environmental concern that is not selected, check the box under the appropriate environmental concern.

Barrier Alert!

Some people may not understand the relationship between the environment and the IC's core activities (i.e., "The environment gets in the way of what we do.")

NOTE:

The environmental concern(s) selected for each activity in the Step 5 worksheet is intended only to be a guideline and to help you prioritize the changes you will take to become greener. These are the minimal impacts that you should consider, and you should add impacts as necessary. Priorities and environmental impacts for activities and operations may change over time. Therefore, you should review these impacts annually and make changes as necessary.

_____ **Green Team**

STEP 5: IDENTIFYING HOW OUR WORK IMPACTS THE ENVIRONMENT

OFFICE ACTIVITIES	Air/Water Pollution	Electricity Consumption	Fuel Consumption	Paper & Materials Consumption	Waste Generation	Water Consumption
Purchase of:						
Electronics (e.g., computers, monitors, printers)	☐	☒	☐	☐	☒	☐
Equipment (e.g., small appliances, lamps)	☐	☒	☐	☐	☐	☐
Office supplies (e.g., paper, folders, binders)	☐	☐	☒	☒	☐	☐
Furniture	☐	☐	☐	☒	☐	☐
Carpeting	☒	☐	☐	☒	☐	☐
Use of:						
Electronics (e.g., computers, monitors, printers)	☐	☒	☐	☒	☐	☐
Equipment (e.g., small appliances, lamps)	☐	☒	☐	☐	☒	☐
Office supplies (e.g., notebooks, folders, binders)	☐	☐	☐	☒	☒	☐
Desk and overhead lighting	☐	☒	☐	☐	☐	☐
Disposal of:						
Electronics (e.g., computers, monitors, printers)	☐	☐	☐	☐	☒	☐
Equipment (e.g., small appliances, lamps)	☐	☐	☐	☐	☒	☐
Office supplies (e.g., paper, folders, binders)	☐	☐	☐	☐	☒	☐
Furniture	☐	☐	☐	☐	☒	☐
Carpeting	☐	☐	☐	☐	☒	☐
Are there other activities that are not listed?						
	☐	☐	☐	☐	☐	☐
	☐	☐	☐	☐	☐	☐
	☐	☐	☐	☐	☐	☐
	☐	☐	☐	☐	☐	☐
	☐	☐	☐	☐	☐	☐

Date completed: _____

STEP 5: IDENTIFYING HOW OUR WORK IMPACTS THE ENVIRONMENT (CONTINUED)

LABORATORY/RESEARCH ACTIVITIES	Air/Water Pollution	Electricity Consumption	Fuel Consumption	Paper & Materials Consumption	Waste Generation	Water Consumption
Purchase of:						
Biological materials	☐	☐	☒	☐	☒	☐
Chemicals	☐	☐	☒	☐	☒	☐
Electronics (e.g., computers, monitors, printers)	☐	☒	☐	☐	☒	☐
Laboratory supplies (e.g., glassware, lab coats, pipette tips, plates/dishes)	☐	☐	☒	☒	☐	☐
Small laboratory equipment (e.g., microscopes, centrifuges)	☐	☒	☐	☐	☐	☒
Large laboratory equipment (e.g., freezers, refrigerators, biosafety cabinets)	☐	☒	☐	☐	☐	☒
Use and/or Storage of:						
Biological materials	☒	☐	☐	☐	☒	☐
Chemicals	☒	☐	☐	☐	☒	☐
Electronics (e.g., computers, monitors, printers)	☐	☒	☐	☐	☐	☐
DI System (Deionized Water)	☒	☒	☐	☐	☐	☒
Electromagnetic radiation equipment	☒	☒	☐	☐	☒	☐
Equipment cooling	☒	☒	☐	☐	☐	☒
Fume hoods	☒	☒	☐	☐	☐	☐
Heavy metals (dental lab)	☐	☐	☐	☐	☒	☐
Laboratory supplies (e.g., glassware, lab coats, pipette tips, plates/dishes)	☐	☐	☐	☐	☒	☐
Small laboratory equipment (e.g., microscopes and centrifuges)	☐	☒	☐	☐	☐	☒
Large laboratory equipment (e.g., freezers, refrigerators, and biosafety cabinets)	☐	☒	☐	☐	☐	☒
Radioactive isotopes	☒	☐	☐	☐	☒	☐
Vacuum pumps	☒	☒	☐	☐	☒	☐

LABORATORY/RESEARCH ACTIVITIES	Air/Water Pollution	Electricity Consumption	Fuel Consumption	Paper & Materials Consumption	Waste Generation	Water Consumption
Disposal of:						
General (nonhazardous) waste	☐	☐	☐	☐	☒	☐
Recyclable materials	☐	☐	☐	☐	☒	☐
Chemical waste	☐	☐	☐	☐	☒	☐
Medical pathological waste	☐	☐	☐	☐	☒	☐
Radiological waste	☐	☐	☐	☐	☒	☐
Miscellaneous Activities:						
Bio-containment (levels 2, 3 & 4)	☒	☐	☐	☐	☒	☐
Decontamination and sterilization	☒	☒	☐	☐	☒	☒
Human tissue pathology/histology	☒	☐	☐	☐	☒	☐
Imaging (e.g., X-ray, CAT scans)	☒	☒	☐	☐	☐	☐
Photodevelopment	☒	☐	☐	☐	☒	☐
Tissue culture	☐	☐	☐	☐	☒	☐
Are there other activities that are not listed?						
	☐	☐	☐	☐	☐	☐
	☐	☐	☐	☐	☐	☐
	☐	☐	☐	☐	☐	☐
	☐	☐	☐	☐	☐	☐
	☐	☐	☐	☐	☐	☐

Date completed: _____

STEP 5: IDENTIFYING HOW OUR WORK IMPACTS THE ENVIRONMENT (CONTINUED)

ANIMAL CARE ACTIVITIES	Air/Water Pollution	Electricity Consumption	Fuel Consumption	Paper & Materials Consumption	Waste Generation	Water Consumption
Purchase of:						
Chemicals	☐	☐	☒	☐	☐	☐
Equipment	☐	☐	☐	☐	☐	☐
Use and/or Storage of:						
Bedding	☐	☐	☐	☐	☒	☐
Chemicals	☐	☐	☐	☐	☒	☐
Equipment	☐	☐	☐	☐	☐	☐
Food	☐	☐	☐	☐	☒	☐
Operation of:						
Animal husbandry	☒	☐	☐	☐	☒	☒
Animal surgery	☒	☒	☐	☐	☒	☐
Cage washing	☒	☐	☐	☐	☒	☒
Feeding	☒	☐	☐	☐	☒	☒
Disposal of:						
Bedding	☒	☐	☐	☐	☒	☐
Chemical waste	☐	☐	☐	☐	☒	☐
General (nonhazardous) waste	☐	☐	☐	☐	☒	☐
Medical pathological waste	☐	☐	☐	☐	☒	☐
Recyclable materials	☐	☐	☐	☐	☒	☐
Radiological waste	☐	☐	☐	☐	☒	☐
Are there other activities that are not listed?						
	☐	☐	☐	☐	☐	☐
	☐	☐	☐	☐	☐	☐
	☐	☐	☐	☐	☐	☐
	☐	☐	☐	☐	☐	☐

Date completed: _____

STEP 5: IDENTIFYING HOW OUR WORK IMPACTS THE ENVIRONMENT (CONTINUED)

CLINICAL CENTER/HOSPITAL ACTIVITIES	Air/Water Pollution	Electricity Consumption	Fuel Consumption	Paper & Materials Consumption	Waste Generation	Water Consumption
Purchase of:						
Biological materials	☐	☐	☒	☐	☒	☐
Chemicals	☐	☐	☒	☐	☒	☐
Electronics (e.g., computers, monitors, printers)	☐	☒	☐	☐	☒	☐
Equipment	☐	☒	☐	☐	☐	☐
Office supplies (e.g., paper, folders, binders)	☐	☐	☒	☒	☐	☐
Radioactive isotopes	☐	☐	☒	☐	☒	☐
Use and/or Storage of:						
Biological materials	☒	☐	☐	☐	☒	☐
Chemicals	☐	☐	☐	☐	☒	☐
Electronics (e.g., computers, monitors, printers)	☐	☒	☐	☐	☐	☐
Equipment	☐	☒	☐	☐	☒	☐
Office supplies (e.g., paper, folders, binders)	☐	☐	☐	☒	☒	☐
Radioactive isotopes	☒	☐	☐	☐	☒	☐
Disposal of:						
Chemical waste	☐	☐	☐	☐	☒	☐
Medical pathological waste	☐	☐	☐	☐	☒	☐
General (nonhazardous) waste	☐	☐	☐	☐	☒	☐
Recyclable materials	☐	☐	☐	☐	☒	☐
Radiological waste	☐	☐	☐	☐	☒	☐
Miscellaneous Activities:						
Drug dispensing operations	☒	☐	☐	☐	☒	☐
Imaging (e.g., X-ray, CAT scans)	☒	☒	☐	☐	☐	☐
Morgue and autopsy	☒	☒	☐	☐	☒	☒
Occupational medicine services	☐	☐	☐	☐	☒	☐
Patient care	☐	☒	☐	☐	☒	☐

CLINICAL CENTER/HOSPITAL ACTIVITIES	Air/Water Pollution	Electricity Consumption	Fuel Consumption	Paper & Materials Consumption	Waste Generation	Water Consumption
Patient transportation	☐	☐	☒	☐	☐	☐
Surgery	☒	☒	☐	☐	☒	☒
Testing	☐	☐	☐	☐	☒	☐
Vaccine programs	☒	☐	☐	☐	☒	☐
Are there other activities that are not listed?						
	☐	☐	☐	☐	☐	☐
	☐	☐	☐	☐	☐	☐
	☐	☐	☐	☐	☐	☐
	☐	☐	☐	☐	☐	☐
	☐	☐	☐	☐	☐	☐

Date completed: _____

STEP 5: IDENTIFYING HOW OUR WORK IMPACTS THE ENVIRONMENT (CONTINUED)

FACILITY MANAGEMENT ACTIVITIES	Air/Water Pollution	Electricity Consumption	Fuel Consumption	Paper & Materials Consumption	Waste Generation	Water Consumption
Decommissioning	☒	☐	☒	☒	☒	☐
Demolition	☒	☒	☒	☒	☒	☐
Laboratory moves	☐	☐	☐	☐	☒	☐
New building construction	☒	☐	☒	☒	☒	☒
New building design	☒	☒	☐	☐	☒	☒
Pre-project planning	☒	☐	☐	☐	☐	☐
Renovation	☒	☒	☒	☒	☒	☒
Toxic material removal (e.g., asbestos and lead-based paint)	☒	☐	☐	☐	☒	☐
Animal shipping and receiving	☐	☐	☒	☒	☐	☐
Package shipping and receiving	☐	☐	☒	☒	☐	☐
Moving furniture and equipment	☐	☐	☒	☐	☐	☐
Real estate acquisition and leasing	☐	☒	☐	☐	☐	☒
Are there other activities that are not listed?						
	☐	☐	☐	☐	☐	☐
	☐	☐	☐	☐	☐	☐
	☐	☐	☐	☐	☐	☐
	☐	☐	☐	☐	☐	☐
	☐	☐	☐	☐	☐	☐

Date completed: _____

STEP 5: IDENTIFYING HOW OUR WORK IMPACTS THE ENVIRONMENT (CONTINUED)

EXTRAMURAL ACTIVITIES	Air/Water Pollution	Electricity Consumption	Fuel Consumption	Paper & Materials Consumption	Waste Generation	Water Consumption
Grant Funding for:						
Office activities	☒	☒	☒	☒	☒	☒
Lab activities	☒	☒	☒	☒	☒	☒
Animal care	☒	☒	☒	☒	☒	☒
Clinical care	☒	☒	☒	☒	☒	☒
Buildings and facilities	☒	☒	☒	☒	☒	☒
Are there other activities that are not listed?						
	☐	☐	☐	☐	☐	☐
	☐	☐	☐	☐	☐	☐
	☐	☐	☐	☐	☐	☐
	☐	☐	☐	☐	☐	☐
	☐	☐	☐	☐	☐	☐
	☐	☐	☐	☐	☐	☐
	☐	☐	☐	☐	☐	☐
	☐	☐	☐	☐	☐	☐

Date completed: _____

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STEP 6: Go Greener Challenges

Background

The Go Greener Office and Lab Challenges can be used to baseline how "green" your activities and operations are while identifying opportunities for offices and labs to minimize their environmental impacts and become more sustainable. Evaluators are trained on how to use a specially designed evaluation form to baseline how environmentally-sound the activities are within a particular office or lab space and to use that data to provide a particular score or rating. This information will be used to identify how well you are conducting your activities and help you prioritize your opportunities to improve.

The Go Greener Challenges includes a walk-through survey and employee interviews. Since the evaluation includes quantitative analysis, the data will be used to baseline activities and to perform periodic checks to track improvements in performance. The evaluation examines multiple components of an office/lab environment and rates how green each component is. After completing just one evaluation, the evaluator can identify successes and opportunities forimproving performance. Follow-up evaluations can determine if outreach or other actions taken to encourage employees to green office activities were effective and improved the office's rating. The Green Team should strive for continued improvement in environmental performance, and this tool will help gauge your success.

Instructions

Use *Step 6: Go Greener Challenges* worksheets to help you prepare and conduct a Go Greener Challenge evaluation and to take next steps once the evaluation is complete.

Remember This

Contact Terry Leland (301-451-6474 or lelandt@mail.nih.gov) to schedule training for the Go Greener Challenges evaluators.

_____ Green Team

STEP 6: GO GREENER CHALLENGES – OFFICE

✓ Pre-Evaluation Steps

- ☐ Contact the NEMS Coordinator, Terry Leland at (301) 451-6474 or lelandt@mail.nih.gov to schedule training for evaluators.
- ☐ Identify evaluators. Our Go Greener Office Challenge evaluators are:

  _____ _____
  _____ _____
  _____ _____
  _____ _____
  _____ _____

- ☐ Identify a training date and time. We will meet on: _____
- ☐ Identify a training location. We will meet in: _____
- ☐ Identify someone to distribute training meeting request. _____ will send out the meeting request.
- ☐ Draft email from IC Director or Executive Officer to all IC employees about the upcoming evaluation two weeks before training.
- ☐ Conduct Go Greener Office Challenge evaluators training.
- ☐ Identify dates for evaluation. The evaluation will occur on: _____
- ☐ Ensure your IC Director or Executive Officer distributes an email regarding the evaluations to IC employees at least three days before the evaluations starts.

✓ Evaluation Steps

- ☐ Conduct evaluations

✓ Post-Evaluation Steps

- ☐ Collect worksheets and determine environmental category ratings.
- ☐ Meet to discuss ratings and identify ways to improve these ratings on page 33 of this guide.

  We will meet on _____ in _____
- ☐ Communicate the results to senior management and IC employees.

Date completed: _____

STEP 6: GO GREENER CHALLENGE – OFFICE

Ways for Improving Our Ratings from Go Greener Office Challenge

_____ Green Team

STEP 6: GO GREENER CHALLENGES – LAB

✓ Pre-Evaluation Steps

- ☐ Contact the NEMS Coordinator, Terry Leland at (301) 451-6474 or lelandt@mail.nih.gov to schedule training for evaluators.
- ☐ Identify evaluators. Our Go Greener Lab Challenge evaluators are:

  _____ _____
  _____ _____
  _____ _____
  _____ _____
  _____ _____

- ☐ Identify a training date and time. We will meet on: _____
- ☐ Identify a training location. We will meet in: _____
- ☐ Identify someone to distribute training meeting request _____ will send out the meeting request.
- ☐ Draft email from IC Director or Executive Officer to all IC employees about the upcoming evaluation two weeks before training.
- ☐ Conduct Go Greener Lab Challenge evaluators training.
- ☐ Identify dates for evaluation. The evaluation will occur on: _____
- ☐ Ensure IC Director or Executive Officer distributes an email regarding the evaluations to IC employees three days before the evaluations starts.

✓ Evaluation Steps

- ☐ Conduct evaluations

✓ Post-Evaluation Steps

- ☐ Collect worksheets and determine environmental category ratings.
- ☐ Meet to discuss ratings and identify ways to improve these ratings on page 35 of this guide.

  We will meet on _____ in _____
- ☐ Communicate the results to senior management and IC employees.

Date completed: _____

STEP 6: GO GREENER CHALLENGE – LAB

Ways for Improving Our Ratings from Go Greener Lab Challenge

WHERE DO WE WANT TO BE?

Once you have an understanding of how your activities and operations impact the environment, the next phase is to determine where your IC wants to be and a way to know when you are there. The steps that follow will help you set objectives for improving your environmental performance and identify measures to help you determine if the objectives are met.

The steps covered in this section include:

Step 7: Setting Objectives

Step 8: Identifying Performance Measures and Baselines

By the end of this section, you will have:

- ✓ List of objectives
- ✓ Performance measures for each objective
- ✓ Initial performance data

STEP 7: Setting Objectives

Background

The results of the Go Greener Challenges can be used to identify successes and opportunities for improved performance. Areas for improvement can be captured in the form of objectives and measured over time to show progress. For example, if the results of the Go Greener Office Challenge identify that employees need to improve their recycling efforts, an objective or goal should be set to increase the IC's recycling rates.

It is important to consider NIH goals when setting objectives. These goals outline long-term priorities for NIH and incorporate E.O. 13423 sustainability areas (see Appendices E and F for a complete list of NIH and E.O. 13423 goals). You should link your objectives to an NIH goal.

Instructions

Use *Step 7: Setting Objectives* worksheet to document your IC's objectives. Beside each environmental concern, NIH goals are provided and should be considered when setting your objectives. Pre-determined objectives are included in the worksheet to ensure compliance with NIH and E.O. goals. Be sure to consider the potential objectives identified through the Go Greener Challenges (see pages 33 and 35).

Once the objectives have been determined, you should obtain management's approval for these objectives. This will ensure management's commitment to the actions and resources required to meet the objectives.

In upcoming steps, you will identify an appropriate performance measure and track progress for meeting each objective. In Step 8, you will identify the measure and document initial data in this worksheet. Later in Step 12, you will revisit this worksheet to see if you have met your objectives in preparation for reporting back to management.

Keys to Success

- Identify simple actions that can be made to show quick progress.
- Look to other IC Green Teams for successes and lessons learned.

Consider This

When setting objectives, it is important to:

- ✓ Make sure objectives are specific and measurable in order to track progress and demonstrate change.
- ✓ Make sure you consider areas of improvement identified during the Go Greener Challenges post-evaluation meetings.
- ✓ Prioritize by greatest impact to the environment but consider factors such as cost, resources required, and control.

Remember This

Fuel consumption, an environmental concern identified in the Step 5 worksheet, can also include the commuting habits of IC employees.

_____ Green Team

STEP 7: SETTING OBJECTIVES

STEP 7: SETTING OBJECTIVES			STEP 8: IDENTIFYING PERFORMANCE MEASURES AND BASELINES		STEP 12: TRACKING OUR PROGRESS		
Environmental Concern	NIH/E.O. Goal	IC Objective	Performance Measure	Initial Data Number / Percent	2nd Set of Data Number / Percent	Percent Change Number / Percent	Was the objective met?
Example: *Paper & Materials Consumption*	*Use paper with a minimum of 30% recycled material content*	• *Increase the purchase of 100% post-consumer recycled content (PCRC) paper to 100%*	*Number of 100% PCRC paper cases purchased vs. total number of cases purchased* *Tracking: IC purchasing database; Jane Smith*	*0 of 230 cases total purchased*	*240 of 240 cases total purchased*	*100%*	*Yes*
Air/Water Pollution	Reduce the NIH carbon footprint becoming carbon neutral by 2020	•					
		•					
		•					
Electricity Consumption	Develop NIH campuses to be energy independent by 2050	•					
		•					
		•					
	Improve energy and water management to reduce energy intensity 50% over the 2003 baseline by 2020	• Purchase energy-efficient products					
		• Enable ENERGY STAR® features on 100% of monitors					
		•					
		•					
		•					
	All electronic office products purchased meet the EPA Electronic Product Environmental Assessment Tool (EPEAT) Gold standard or latest replacement by 2020	• Purchase 95% of computer products meeting EPEAT standards					

STEP 7: SETTING OBJECTIVES			STEP 8: IDENTIFYING PERFORMANCE MEASURES AND BASELINES		STEP 12: TRACKING OUR PROGRESS		
Environmental Concern	**NIH/E.O. Goal**	**IC Objective**	**Performance Measure**	**Initial Data Number / Percent**	**2nd Set of Data Number / Percent**	**Percent Change Number / Percent**	**Was the objective met?**
Paper & Materials Consumption	Use paper with a minimum of 30% recycled material content	•					
		•					
		•					
Waste Generation	Improve recycling and green procurement to achieve zero waste by 2020 *(zero waste is diverting > 90% of the solid wastes generated from landfill and incineration)*	• Recycle non-usable computers					
		• Purchase recycled-content products					
		• Purchase biobased products where applicable					
		•					
		•					
		•					
	Require 75% of all product purchases to use take back or minimal packaging by 2020	•					
		•					
		•					
	Reduce toxic chemical use by 50% at all NIH facilities by 2020, developing and employing less toxic alternatives for standard research protocols	•					
		•					
		•					
Water Consumption	Reduce water consumption by 2% annually or 16% by the end of FY 2015 based on 2007 baseline	•					
		•					
		•					

Date completed: _____

STEP 8: Identifying Performance Measures and Baselines

Background

Before you can begin working towards meeting your objectives, performance measures need to identified and baselines established. The measures and baselines will help you determine if progress is being made. You cannot work towards an objective or know if you are improving if there is no way to measure the objective. The purpose of Step 8 is to identify performance measures and initial data for each objective.

Instructions

For each objective listed in the Step 7 worksheet on pages 38-39, identify a measure of performance that will be used to determine if progress is being made. To identify the performance measure, you may need to determine what data you currently collect and monitor using the Go Greener Challenges or other tracking mechanisms. If you cannot measure performance for an objective using current mechanisms, you should consider revising the objective or establishing a new tracking mechanism.

Document the performance measure in the Step 8 section of the worksheet and consider identifying the tracking mechanism and/or a point of contact for the data. Once a measure has been identified, collect and document the initial data in the Step 8 section to baseline the current state.

Greening Tool
Potential performance measures from the Go Greener Challenges are provided in Appendix G.

Barrier Alert!
The Go Greener Challenges can be used to measure environmental performance but only for office and lab activities. If your IC has animal-, clinical-, or hospital-related activities, take action to identify other ways to measure performance.

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HOW DO WE GET THERE?

Once objectives have been identified, you should begin to develop and implement actions to help you achieve them. This section will help you identify the actions you will to need take to green your activities and operations, develop tools to implement those actions, and communicate the greening efforts to your IC. You can use the many NEMS tools and resources currently available to quickly implement change. These tools and resources are highlighted in this section, but you can always visit the NEMS Web site at nems.nih.gov for additional information.

The steps covered in this section include:

Step 9: Changing How We Do Things

Step 10: Drafting a Green Policy

Step 11: Communicating Our Efforts

By the end of this section, you will have:

- ✓ Actions for minimizing the IC's impact on the environment
- ✓ A Green Policy
- ✓ A strategy for communicating policy and procedures

STEP 9: Changing How We Do Things

Background

Now that you have identified objectives and established baselines, you are ready to identify ways to "green" your IC's activities and operations. This step ensures you take a strategic approach for minimizing your IC's impact on the environment. This can be accomplished by identifying activities that may potentially impact the environment, actions that can be taken to lessen that impact, and ways to implement the greening actions.

Instructions

Step 9: Changing How We Do Things worksheet is organized by the six standard environmental concerns used in previous steps. You will need to:

1. Review the list of activities associated with each environmental concern and strike through any activity that is not applicable to your IC. Be sure to add any activities identified in Step 5.
2. Identify an action(s) that you can take to lessen the activity's impact on the environment.
3. Identify how the action(s) will be implemented.

Keys to Success

- Functional representatives should identify actions and implementation methods for those areas they are most familiar with. For example, your animal care representative should review activities specific to animal care and determine the best actions and means to implement change.

Barrier Alert!
Resistance to change is natural in any organization. Employee behavior will change over time.

Consider This
Split Worksheet 9 up into functional areas and have your Green Team's functional experts fill in the worksheet for their respective area. This will draw on the expertise of these Green Team members, identify actions that are likely to result in lasting change, and help you complete Step 9 in a timely manner.

STEP 9: CHANGING HOW WE DO THINGS

What activities cause the impact?		What action can we take to lessen the activity's impact on the environment?	How will we implement this action?
Example for Paper and Materials Consumption: *Use of electronics (e.g., computers, monitors, printers)*		*Double-side printing*	*- Set as policy responsibility for all employees* *- Purchase printers with duplexing capability* *- Set duplexing as default setting for print jobs*
		Use 100% post-consumer recycled content paper	*- Purchase only 100% post-consumer recycled content paper*
Air/Water Pollution			
Office	Purchase of carpeting	Purchase carpet with no or low levels of volatile organic compounds	
		Other:	
	Other:		
Lab	Use/storage of biological materials		
	Use/storage of chemicals		
	Use of DI System (Deionized Water)		
	Use of electromagnetic radiation equipment		
	Use of equipment cooling		
	Use of fume hoods		
	Use/storage of radioactive isotopes		
	Use of vacuum pumps		
	Bio-containment (levels 2, 3 & 4)		
	Decontamination and sterilization		
	Human tissue pathology/histology		
	Imaging (e.g., X-ray, CAT scans)		

	What activities cause the impact?	What action can we take to lessen the activity's impact on the environment?	How will we implement this action?
	Photodevelopment		
	Other:		
Animal Care	Animal husbandry		
	Animal surgery		
	Cage washing		
	Feeding		
	Disposal of bedding		
	Other:		
Clinical Care	Use/storage of biological materials		
	Use/storage of radioactive isotopes		
	Drug dispensing operations		
	Imaging (e.g., X-ray, CAT scans)		
	Morgue and autopsy		
	Surgery		
	Vaccine programs		
	Other:		
Facility	Decommissioning		
	Demolition		
	New building construction		
	New building design		

	What activities cause the impact?	What action can we take to lessen the activity's impact on the environment?	How will we implement this action?
	Pre-project planning		
	Renovation		
	Toxic material removal (e.g., asbestos and lead-based paint)		
	Other:		
Extra-mural	Grant funding for office activities		
	Grant funding for lab activities		
	Grant funding for animal care		
	Grant funding for clinical care		
	Grant funding for buildings and facilities		
	Other:		
Electricity Consumption			
Office	Purchase of electronics (e.g., computers, monitors, printers)	Purchase ENERGY STAR® and EPEAT certified equipment	
		Other:	
	Purchase of office equipment (e.g., small appliances, lamps)	Purchase ENERGY STAR labeled equipment	
		Other:	
	Use of electronics (e.g., computers, monitors, printers)	Enable ENERGY STAR and other power management features	
		Other:	
	Use of office equipment (e.g., small appliances, lamps)	- Unplug equipment when not in use - Use compact fluorescent bulbs in desk lamps	
		Other:	
	Use of desk and overhead lighting	Turn off lights when leave room	
		Other:	

	What activities cause the impact?	What action can we take to lessen the activity's impact on the environment?	How will we implement this action?
	Other:		
Lab	Purchase of electronics (e.g., computers, monitors, printers)	Purchase ENERGY STAR and EPEAT certified equipment	
		Other:	
	Purchase of small laboratory equipment (e.g., microscopes, centrifuges)	Purchase energy-efficient equipment	
		Other:	
	Purchase of large laboratory equipment (e.g., freezers, refrigerators, biosafety cabinets)	Purchase energy-efficient equipment	
		Other:	
	Use of electronics (e.g., computers, monitors, printers)	Enable ENERGY STAR and other power management features	
		Other:	
	Use of DI System (Deionized Water)		
	Use of electromagnetic radiation equipment		
	Use of equipment cooling		
	Use of fume hoods		
	Use of small laboratory equipment (e.g., microscopes and centrifuges)	Unplug equipment when not in use	
		Other:	
	Use of large laboratory equipment (e.g., freezers, refrigerators, and biosafety cabinets)		
	Use of vacuum pumps		
	Decontamination and sterilization		
	Imaging (e.g., X-ray, CAT scans)		
	Other:		

	What activities cause the impact?	What action can we take to lessen the activity's impact on the environment?	How will we implement this action?
Animal Care	Animal surgery		
	Other:		
Clinical Care	Purchase of electronics (e.g., computers, monitors, printers)	Purchase ENERGY STAR and EPEAT certified equipment	
		Other:	
	Purchase of clinical equipment	Purchase energy-efficient equipment	
		Other:	
	Use of electronics (e.g., computers, monitors, printers)	Enable ENERGY STAR and other power management features	
		Other:	
	Use of clinical equipment	Unplug equipment when not in use	
		Other:	
	Imaging (e.g., X-ray, CAT scans)		
	Morgue and autopsy		
	Patient care		
	Surgery		
	Other:		
Facility	Demolition		
	New building design		
	Renovation		
	Real estate acquisition and leasing		
	Other:		

	What activities cause the impact?	What action can we take to lessen the activity's impact on the environment?	How will we implement this action?
Extra-mural	Grant funding for office activities		
	Grant funding for lab activities		
	Grant funding for animal care		
	Grant funding for clinical care		
	Grant funding for buildings and facilities		
	Other:		
Fuel Consumption			
Office/ Lab/ Clinical	Purchase of: Office supplies (e.g., paper, folders, binders) Biological materials Chemicals Laboratory supplies (e.g., glassware, lab coats, pipette tips, plates/dishes) Radioactive Isotopes	Purchase in bulk or as needed from NIH self-service stores or stock catalog	
		Other:	
		Other:	
		Other:	
	Other:		
Clinical	Clinical patient transportation		
	Other:		
Facility	Decommissioning		
	Demolition		
	New building construction		
	Renovation		
	Animal shipping and receiving		
	Package shipping and receiving		
	Moving furniture and equipment		

	What activities cause the impact?	What action can we take to lessen the activity's impact on the environment?	How will we implement this action?
	Other:		
Extra-mural	Grant funding for office activities		
	Grant funding for lab activities		
	Grant funding for animal care		
	Grant funding for clinical care		
	Grant funding for buildings and facilities		
	Other:		
Paper & Materials Consumption			
Office/ Clinical	Purchase of office supplies (e.g., paper, folders, binders)	Purchase paper products with at least 30% post-consumer recycled content	
		Other:	
	Purchase of furniture	Purchase furniture with recycled content	
		Other:	
	Purchase of carpeting	Purchase carpet with recycled content	
		Other:	
	Use of electronics (e.g., computers, monitors, printers) in office and clinical care	- Double-sided printing - Print only what you need	
		Other:	
	Use of office supplies (e.g., paper, folders, binders) in offices and clinical care		
	Other:		
Lab	Purchase of laboratory supplies (e.g., glassware, lab coats, plates/dishes)		
	Other:		

	What activities cause the impact?	What action can we take to lessen the activity's impact on the environment?	How will we implement this action?
Facility	Decommissioning Demolition	- Contact DEP for recyclable dumpster - Dispose of recyclable materials	
		Other:	
	New building construction Renovation	- Contact DEP for recyclable dumpster - Dispose of recyclable materials - Use recycled content materials	
		Other:	
	Animal shipping and receiving		
	Package shipping and receiving		
	Other:		
Extra-mural	Grant funding for office activities		
	Grant funding for lab activities		
	Grant funding for animal care		
	Grant funding for clinical care		
	Grant funding for buildings and facilities		
	Other:		
Waste Generation			
Office/ Lab/ Clinical	Purchase of office equipment (e.g., small appliances, lamps)		
	Purchase of office supplies (e.g., notebooks, folders, binders)	Purchase with recycled content and in the smallest quantities needed	
		Other:	
	Purchase of biological materials for lab and clinical use	Purchase in the smallest quantities needed	
		Other:	
	Purchase of chemicals for lab and clinical use	Purchase in the smallest quantities needed	

What activities cause the impact?	What action can we take to lessen the activity's impact on the environment?	How will we implement this action?
	Other:	
Purchase of radioactive isotopes for clinical use	Purchase in the smallest quantities needed	
	Other:	
Disposal of electronics (e.g., computers, monitors, printers)	Turn surplus into Property Utilization Branch	
	Other:	
Disposal of office equipment (small appliances, lamps)	Dispose of compact fluorescent light bulbs as hazardous waste	
	Other:	
Disposal of office supplies (e.g., paper, folders, binders)	Recycle all paper products	
	Other:	
Disposal of furniture	Turn surplus furniture into Property Utilization Branch	
	Other:	
Disposal of carpeting		
Disposal of general waste		
Disposal of recyclable materials		
Disposal of chemical waste		
Disposal of radiological waste		
Disposal of medical pathological waste		
Other:		

	What activities cause the impact?	What action can we take to lessen the activity's impact on the environment?	How will we implement this action?
Lab	Use/storage of biological materials		
	Use/storage of chemicals		
	Use of electromagnetic radiation equipment		
	Use of heavy metals		
	Use of laboratory supplies (e.g., glassware, lab coats, pipette tips, plates/dishes)		
	Use of radioactive isotopes		
	Use of vacuum pumps		
	Bio-containment (levels 2, 3 & 4)		
	Decontamination and sterilization		
	Human tissue pathology/histology		
	Photodevelopment		
	Tissue culture		
	Other:		
Animal Care	Use/storage of animal bedding		
	Use/storage of animal care chemicals		
	Use/storage of food		
	Animal husbandry		
	Animal surgery		
	Cage washing		
	Feeding		

	What activities cause the impact?	What action can we take to lessen the activity's impact on the environment?	How will we implement this action?
	Disposal of animal bedding		
	Other:		
Clinical Care	Use/storage of biological materials		
	Use/storage of chemicals		
	Equipment		
	Use of office supplies (e.g., paper, folders, binders)		
	Use/storage of radioactive isotopes		
	Drug dispensing operations		
	Morgue and autopsy		
	Occupational medicine services		
	Patient care		
	Surgery		
	Testing		
	Vaccine programs		
	Other:		
Facility	Decommissioning		
	Demolition		
	Laboratory moves		
	New building construction		
	New building design		

	What activities cause the impact?	What action can we take to lessen the activity's impact on the environment?	How will we implement this action?
	Renovation		
	Toxic material removal (e.g., asbestos and lead-based paint)		
	Other:		
Extra-mural	Grant funding for office activities		
	Grant funding for lab activities		
	Grant funding for animal care		
	Grant funding for clinical care		
	Grant funding for buildings and facilities		
	Other:		
Water Consumption			
Lab	Purchase of small laboratory equipment (e.g., microscopes, centrifuges)	Purchase water-efficient equipment	
		Other:	
	Purchase of large laboratory equipment (e.g., freezers, refrigerators, biosafety cabinets)	Purchase water-efficient equipment	
		Other:	
	Use of DI System (Deionized Water)		
	Use of equipment cooling		
	Use of small laboratory equipment (e.g., microscopes and centrifuges)		
	Use of large laboratory equipment (e.g., freezers, refrigerators, and biosafety cabinets)		
	Decontamination and sterilization		
	Other:		

	What activities cause the impact?	What action can we take to lessen the activity's impact on the environment?	How will we implement this action?
Animal Care	Animal husbandry		
	Cage washing		
	Feeding		
	Other:		
Clinical Care	Morgue and autopsy		
	Surgery		
	Other:		
Facility	New building construction		
	New building design		
	Renovation		
	Real estate acquisition and leasing		
	Other:		
Extra-mural	Grant funding for office activities		
	Grant funding for lab activities		
	Grant funding for animal care		
	Grant funding for clinical care		
	Grant funding for buildings and facilities		
	Other:		

Date completed: _____

STEP 10: Drafting a Green Policy

Background

A formal policy statement is the best way to encourage behavior change and to ensure employees will conduct activities in a more environmentally-sound manner. A Green Policy states in broad terms the principal environmental commitments of an IC. In addition, the Green Policy should include specific actions or responsibilities that employees shall engage in on a daily basis to support the IC's broader environmental goals. Once formally approved, the Green Policy should be communicated to all IC employees.

Instructions

Step 10: Drafting a Green Policy worksheet walks you through the steps for drafting and distributing a Green Policy. You should first decide whether you will work from a template used by other ICs or draft your own Green Policy. If you draft your own Green Policy, be sure to include the actions identified in Step 9.

Keys to Success

- You should have your IC Director or Executive Officer sign the policy. This will demonstrate senior management's commitment to greening your IC.
- If you choose to create your own Green Policy, consider implementing actions identified in Step 9 using the Green Policy.

Barrier Alert!
By incorporating specific employee responsibilities into the Green Policy, employees are unable to claim that "environmental responsibilities are not my responsibility."

Greening Tool
A template for a green policy is provided in Appendix H.

_____ Green Team

STEP 10: DRAFTING A GREEN POLICY

✓ Drafting the Green Policy

- ☐ Decide whether you will use the template found in Appendix H or draft your own Green Policy.

If you draft your own Green Policy, at a minimum, you should direct your employees to:

- ☐ Recycle paper products, bottles, cans, batteries, electronics, toner and ink cartridges.
- ☐ Minimize waste by repurposing or donating used electronics through the Property Utilization Branch.
- ☐ Minimize toxics by not using or purchasing mercury or mercury-containing equipment without approval.
- ☐ Minimize toxics and hazardous waste by reducing the purchase and use of toxic chemicals.
- ☐ Purchase copier and printer paper that contains at least 30% post-consumer recycled content (It is recommended that 100% recycled content paper be purchased).
- ☐ Purchase supplies and furniture that has biobased content or the highest percentage of recycled and non-toxic content.
- ☐ Purchase ENERGY STAR® office equipment and computers and monitors with at least an EPEAT Silver rating.
- ☐ Take the NEMS awareness training to increase awareness of our impact on the environment and public health.

✓ Distributing the Green Policy

- ☐ Have your IC Director or Executive Officer sign the policy to demonstrate a commitment from senior management.
- ☐ Identify someone to distribute the Green Policy to the IC. _____ will send out the Green Policy.

Date Completed: _____

STEP 11: Communicating Our Efforts

Background

Strategic, consistent communication will strengthen your employees' understanding, ability, and willingness to support the greening process. The Green Team should develop a strategy to execute a targeted and phased communications effort that delivers the right messages at the right time. You should communicate your objectives, procedures for changing how you will do things, and progress towards achieving your objectives. A variety of communications tools can be used to raise awareness and help your employees comply, such as:

- Global emails
- Staff meetings
- Internal memoranda
- Greening process flyer
- Presentations/ briefings/brown bags
- Listserv for sharing ideas and questions
- IC's intranet page
- Articles in the *NIH Record, Catalyst, NEMS News*, or other newsletters and publications

Instructions

Step 11: Communicating Our Efforts worksheets provide a framework for developing your communications strategy. Use page 60 to document a monthly schedule of what you want to communicate. For each month, you should identify an awareness topic linked to your objectives, the event(s) that will encourage employees to help meet your objectives, and any materials that should be distributed to help green how your IC does things. You should review the communications tools listed on page 61 for ideas. These tools are organized by environmental concern, but the awareness topics may be linked to specific objectives. These tools should be considered as a starting point—so be creative! Use the Action Item Checklist on page 62 to help you plan your communication events and materials for each month. Consider making a copy of this sheet to plan multiple events.

The Green Team may develop fact sheets or guidance documents that instruct employees on how to take action to minimize the environmental impacts of activities. A greening sheet template is provided in Appendix I. Use the information collected in previous steps to populate specific sections of the template. You do not need to use the template provided in this guide. However, you should determine the best tools for communicating the greening actions that your employees should take and provide instructions on how they can implement those actions.

Greening Tool

- ✓ There are several tools already developed and available for your IC to use, including fact sheets and posters about reducing your environmental impact. These fact sheets and posters are available at nems.nih.gov/outreach/index.cfm.
- ✓ A greening sheet template is provided in Appendix I, which uses the information documented in previous steps to populate specific sections.

_____ Green Team

STEP 11: COMMUNICATING OUR EFFORTS

Month	Awareness Topic	Event	Materials
Example: *October 2009*	*Energy Conservation*	*<u>Speaker/Video:</u> Kilowatt Ours, followed by presentation NIH initiatives by Greg Leifer* *<u>Date and Location:</u> October 15, 2009*	*- Energy Tips fact sheet* *- Electricity bill poster to pass out* *- Green Policy responsibilities*
1 -		Speaker/Video: Date and Location:	
2 -		Speaker/Video: Date and Location:	
3 -		Speaker/Video: Date and Location:	
4 -		Speaker/Video: Date and Location:	
5 -		Speaker/Video: Date and Location:	
6 -		Speaker/Video: Date and Location:	
7 -		Speaker/Video: Date and Location:	
8 -		Speaker/Video: Date and Location:	
9 -		Speaker/Video: Date and Location:	
10 -		Speaker/Video: Date and Location:	
11 -		Speaker/Video: Date and Location:	
12 -		Speaker/Video: Date and Location:	

Date completed: _____

STEP 11: COMMUNICATING OUR EFFORTS (CONTINUED)

Environmental Concern	Awareness Topics	Key Dates/Themes	Green Hour Ideas	Other Communications *(e.g., events, emails, briefings)*	Available Materials *(To download materials, visit http://www.nems.nih.gov/outreach/index.cfm)*
Air/Water Pollution	• Stormwater Management • Green Roofs • Green Commuting	N/A	Speaker: Kenny Floyd, DEP Director *For commuting options, see Fuel Consumption*	• Guided walk of the Gateway Center's green roof	• NIH commuting options fact sheet • Prescription for a Healthier Environment flyer
Electricity Consumption	• Energy use and conservation in office and lab spaces • Energy use in electronics • Green buildings	October – Energy Awareness Month	Video: Kilowatt Ours Speaker: Greg Leifer, NIH Energy Engineer Terry Leland, NEMS Coordinator	• Guidance on enabling ENERGY STAR® features on computers and monitors	• Energy saving tips fact sheet • Electricity Bill poster
Fuel Consumption	• Green Commuting • Telework	Bike-to-Work Day – Third Friday in May	Video: Peak Oil Speaker: Tom Hayden, DATS Director Mark Minnick, Chief Fleet Management Branch	• Briefing on telework policy	• NIH commuting options fact sheet
Paper & Materials Consumption	• Use of Paper and Other Materials • Green Purchasing • NIH Forest Conservation	Arbor Day – Last Friday in April	Speaker: Lynn Mueller, Landscape Architect	• Guided walk of NIH's Urban Forest • Tree planting or beautification event • Email or briefing to purchase card holders and procurement staff on green purchasing	• NIH Offices Go Greener fact sheet
Waste Generation	• Recycling of Solid Waste • Recycling of Electronics • Disposal of Hazardous Waste	America Recycles Day – November 15	Video: Story of Stuff (http://www.storyofstuff.com/) Speaker: Mark Marshall, NIH Recycling Coordinator Don Wilson, Chief, Waste and Resource Recovery Branch	• Email or briefing to lab staff on target chemical reduction	• Recycling posters for paper, commingled, voluntary recycling and charity benefits
Water Consumption	• Water Conservation in Labs	World Water Day – March 22		• Email or briefing to lab staff on water use and conservation	• NIH Labs Go Greener fact sheet
Other	• Environmental Awareness	Earth Day – April 22	*See videos and speakers provided above*	• Volunteer or present at NIH Earth Day event	• NEMS general information fact sheet • What's Your Role in Protecting the Health of the Nation? flyer

STEP 11: COMMUNICATING OUR EFFORTS (CONTINUED)

Use the following checklist to help plan and execute Green Hour events, targeted emails, and other events.

✓ Green Hour Action Items

Planning Actions:

- ☐ Identify a coordinator for the Green Hour
- ☐ Identify topic and video/presenter
- ☐ Identify location(s)
- ☐ Identify date(s) and time(s)
- ☐ Coordinate presentation materials with speaker (if applicable)
- ☐ Ensure DVD-capable equipment is available for video showing (if applicable)
- ☐ Create and produce sign-in sheet and other applicable materials

Day-of Actions:

- ☐ Arrive early to ensure audio-visual equipment is available and ready
- ☐ Ask participants to sign-in
- ☐ Introduce speaker or video
- ☐ Announce next Green Hour event

SUMMARY

Green Hour Topic:

Date and Time:

Location:

✓ Targeted Email Action Items

Planning Actions:

- ☐ Identify targeted audience
- ☐ Draft email
- ☐ Draft any supplemental materials
- ☐ Identify appropriate person to distribute email

Distribution Actions:

- ☐ Provide email and any supplemental materials to person distributing email
- ☐ Distribute email

Other Actions:

- ☐ _____
- ☐ _____
- ☐ _____
- ☐ _____
- ☐ _____

✓ Other Event Action Items

Planning Actions:

- ☐ _____
- ☐ _____
- ☐ _____
- ☐ _____
- ☐ _____
- ☐ _____

Day-of Actions::

- ☐ _____
- ☐ _____
- ☐ _____
- ☐ _____
- ☐ _____

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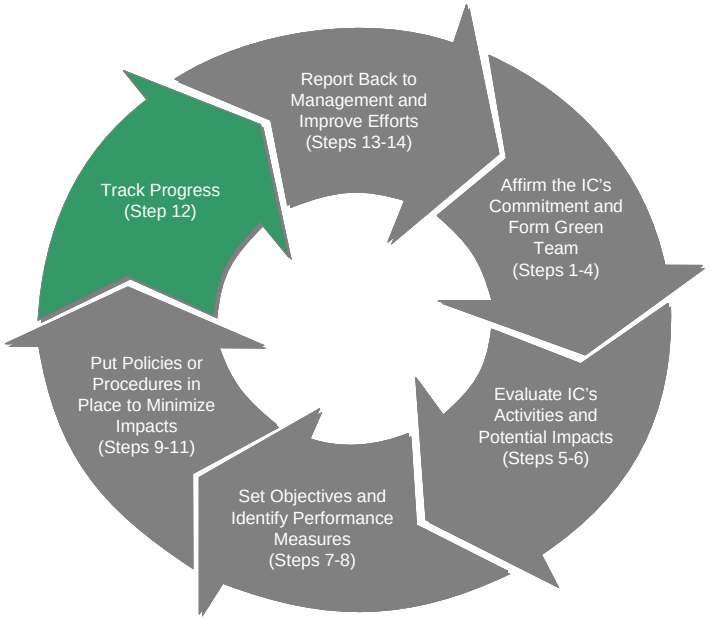
ARE WE GREENER?

Now it's time to step back and look to see if the IC is greener. To do this, you will determine if your objectives were met. From the review of your results, you will be able to identify new opportunities for improving your IC's environmental performance.



The step covered in this section include:

Step 12: Tracking Our Progress

By the end of this section, you will have:

- ✓ Second set of performance data and performance trends
- ✓ Status of objectives

STEP 12: Tracking Our Progress

Background
Tracking progress over time determines whether the objectives are being met and if your IC is continually improving its environmental performance.

Instructions

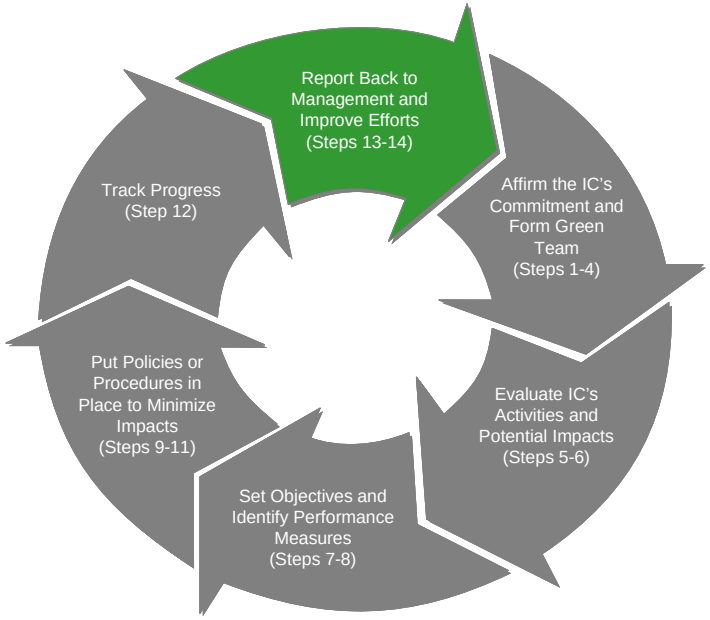
1. Collect a new set of data at least six months after actions identified in Step 9 have been implemented to see if your IC has made progress in minimizing its environmental impacts. This may require reevaluating your office and lab activities using the Go Greener Challenges.
2. Enter the second set of collected data in *Step 12: Tracking Our Progress* section of the Step 7 worksheet (see pages 38-39).
3. Determine the percent change (if applicable) between the initial data and the newly collected data.
4. Review the data and performance trends and document in the Step 12 section if the objectives have been met.

Keys to Success

- You should check progress at least annually. More frequent progress checks, such as every 3-6 months, could identify any problems or issues with the actions or their implementation sooner. This will allow you to make adjustments so that the objectives can be met.
- You should consider developing graphical charts to show trends over time that can be used to convey progress when reporting back to management.

CAN WE BE EVEN GREENER?

The greening of your IC should be continuous rather than a one-time effort. Once the highest priority greening efforts have been addressed, the Green Team should look to areas with lower priorities or new priorities as they evolved. The ultimate goal of the Green Team should be to reduce the IC's environmental impact as much as possible with management identifying continuous improvements.



The steps covered in this section include:

Step 13: Reporting Back to Management

Step 14: Improving Our Efforts

By the end of this section, you will have:

- ✓ Reaffirmed commitment to greening from management
- ✓ Areas for improvement

STEP 13: Reporting Back to Management

To maintain support for greening efforts, you should brief management on the status of objectives, performance trends, and your accomplishments and successes. Reporting to your managers not only provides them with an understanding of how green the IC has become but also allows them to reaffirm their commitment to greening and to identify specific areas for continued improvement.

Instructions

Use *Step 13: Reporting Back to Management* worksheet to prepare a briefing for management on the outcome of the greening efforts. You will need to use the Step 7 worksheet on pages 38-39 to prepare your briefing. Be sure to document the decisions made during the briefing in a meeting summary.

Keys to Success

- Briefing management regularly will ensure continued support and sustained momentum for improving your IC's environmental performance.

Remember This

The status of objectives and management's decisions on areas for improvement provide the basis for planning and implementation of the next greening cycle.

STEP 13: REPORTING BACK TO MANAGEMENT

✓	Reporting Back to Management Steps
☐	Review objectives, performance measures, and collected data documented in Step 7 worksheet (see pages 38-39).
☐	Prepare briefing or summary document to report on progress against objectives and major achievements. Consider including the following information:

- ☐ Identify the objectives that were met.
- ☐ Identify the objectives that were not met and provide information on why they could not be achieved.
- ☐ Identify the objectives that should be carried over to next greening cycle.
- ☐ Demonstrate trends in key performance measures.
- ☐ Identify next steps to ensure continual improvement.
- ☐ Identify specific areas in which management can assist in achieving future objectives.
- ☐ Obtain management's reaffirmed commitment to greening and support for specific improvements.

☐ Identify senior manager(s) who should be briefed on the status of the greening process. The following managers will be briefed:

_____

_____

_____

☐ Identify a date to brief management. The briefing is scheduled for: _____

☐ Conduct briefing.

☐ Document decisions made by senior management in a meeting summary (available in the Notes section).

Date Completed: _____

STEP 14: Improving Our Efforts

Background

The actions you have taken through Step 13 of the greening process must evolve to meet your IC's ever-changing needs. You can ensure continual improvement of your IC's environmental performance by repeating the greening process. The greening process is designed to be a feedback loop in which the outcomes of changing how you do things are used to modify objectives to ensure continuous environmental improvement.

Instructions

Use *Step 14: Improving Our Efforts* worksheet to guide you through another cycle of the greening process. This worksheet provides general actions to complete another cycle of the greening process and key questions you should ask yourself when completing each greening step. Be sure to identify the completion date and responsible person for each step.

Greening Tool

Worksheets to restart the greening process are available at nems.nih.gov/greening/guide/

_____ Green Team

STEPS 14: IMPROVING OUR EFFORTS

Step	Section	Actions to Take	Ask Yourself…	Date Completed	Responsible Person
Where do we start?					
1	Reaffirming Management Commitment	Obtain management's commitment to greening and identify areas for improvement in Step 13.	What does management want to improve next cycle?		
2	Recommunicating Management's Commitment	Communicate a summary of outcomes reported to management in Step 13 and management's continued commitment.	What do all employees need to know about our accomplishments and next steps?		
3	Reviewing Green Team Membership	Review membership to determine if changes or additions are required.	Has anyone been replaced? Are there any new functional areas or sites that need to be represented?		
4	Preparing for Green Team Meetings	Identify topics and revise schedule for completing a new cycle of the greening process.	What is the timeline for conducting the greening process? What topics should be covered in upcoming meetings?		
How green are we now?					
5	Identifying How Our Work Impacts the Environment	Review activities listed in Step 5 to identify any changes.	Have your activities changed? Have new environmental concerns been introduced as a result of any changes?		
6	Go Greener Challenges and Capturing Performance Data	Conduct Challenges and execute other mechanisms for collecting new data.	Do we need to collect data for any new tracking mechanisms?		
Where do we want to be?					
7	Setting Objectives	1. Review last cycle's objectives. An objective that has been met may be removed from future versions of the objectives list. Determine if an unmet objective should be carried over. If an objective was not met due to extenuating circumstances, document the reason in the meeting summary and then remove the objective from the list.	What did we accomplish?		

Step	Section	Actions to Take	Ask Yourself…	Date Completed	Responsible Person
7	Setting Objectives (continued)	2. Identify new objectives. Review the meeting summary from Step 13 and identify objectives for the improvement areas identified by management.	What are our greening priorities for the upcoming year?		
8	Identifying Performance Measures and Baselines	Identify performance measures for new objectives and collect baseline data. Identify any new tracking mechanisms.	Are there other methods for collecting performance data? Do new objectives require new performance measures and tracking mechanisms?		
How do we get there?					
9	Changing How We Do Things	1. Review list of implementing actions and determine if changes are needed. 2. For new activities identified in Step 5, identify actions to implement for reducing their environmental impact.	Do we need to change how we implement actions to lessen our impact on the environment? Are new actions needed to address new activities?		
10	Review Green Policy	Review the Green Policy and incorporate any necessary changes.	Are there any new actions that all employees must do?		
11	Communicating Our Efforts	Review the communications strategy and identify new information to communicate.	What new information should we communicate?		
Are we greener?					
12	Tracking Our Progress	Collect additional performance data and determine if objectives were met.	Have the objectives been met?		
Can we be even greener?					
13	Reporting Back to Management	Prepare and conduct briefing on status of objectives and performance trends to management.	Is our environmental performance improving? Where do we need management's assistance?		
14	Improving Our Efforts	Start this step over again and make sure outcomes of Step 13 are incorporated.	Did the review of the green process identify areas for improvement?		

Date Completed: _____

Federal Register

Friday,

January 26, 2007

Part II

The President

Executive Order 13423—Strengthening Federal Environmental, Energy, and Transportation Management

Federal Register
Vol. 72, No. 17
Friday, January 26, 2007

Presidential Documents

Title 3—

The President

Executive Order 13423 of January 24, 2007

Strengthening Federal Environmental, Energy, and Transportation Management

By the authority vested in me as President by the Constitution and the laws of the United States of America, and to strengthen the environmental, energy, and transportation management of Federal agencies, it is hereby ordered as follows:

Section 1. *Policy*. It is the policy of the United States that Federal agencies conduct their environmental, transportation, and energy-related activities under the law in support of their respective missions in an environmentally, economically and fiscally sound, integrated, continuously improving, efficient, and sustainable manner.

Sec. 2. *Goals for Agencies*. In implementing the policy set forth in section 1 of this order, the head of each agency shall:

(a) improve energy efficiency and reduce greenhouse gas emissions of the agency, through reduction of energy intensity by (i) 3 percent annually through the end of fiscal year 2015, or (ii) 30 percent by the end of fiscal year 2015, relative to the baseline of the agency's energy use in fiscal year 2003;

(b) ensure that (i) at least half of the statutorily required renewable energy consumed by the agency in a fiscal year comes from new renewable sources, and (ii) to the extent feasible, the agency implements renewable energy generation projects on agency property for agency use;

(c) beginning in FY 2008, reduce water consumption intensity, relative to the baseline of the agency's water consumption in fiscal year 2007, through life-cycle cost-effective measures by 2 percent annually through the end of fiscal year 2015 or 16 percent by the end of fiscal year 2015;

(d) require in agency acquisitions of goods and services (i) use of sustainable environmental practices, including acquisition of biobased, environmentally preferable, energy-efficient, water-efficient, and recycled-content products, and (ii) use of paper of at least 30 percent post-consumer fiber content;

(e) ensure that the agency (i) reduces the quantity of toxic and hazardous chemicals and materials acquired, used, or disposed of by the agency, (ii) increases diversion of solid waste as appropriate, and (iii) maintains cost-effective waste prevention and recycling programs in its facilities;

(f) ensure that (i) new construction and major renovation of agency buildings comply with the *Guiding Principles for Federal Leadership in High Performance and Sustainable Buildings set forth in the Federal Leadership in High Performance and Sustainable Buildings Memorandum of Understanding (2006)*, and (ii) 15 percent of the existing Federal capital asset building inventory of the agency as of the end of fiscal year 2015 incorporates the sustainable practices in the Guiding Principles;

(g) ensure that, if the agency operates a fleet of at least 20 motor vehicles, the agency, relative to agency baselines for fiscal year 2005, (i) reduces the fleet's total consumption of petroleum products by 2 percent annually through the end of fiscal year 2015, (ii) increases the total fuel consumption that is non-petroleum-based by 10 percent annually, and (iii) uses plug-in hybrid (PIH) vehicles when PIH vehicles are commercially available at

a cost reasonably comparable, on the basis of life-cycle cost, to non-PIH vehicles; and

(h) ensure that the agency (i) when acquiring an electronic product to meet its requirements, meets at least 95 percent of those requirements with an Electronic Product Environmental Assessment Tool (EPEAT)-registered electronic product, unless there is no EPEAT standard for such product, (ii) enables the Energy Star feature on agency computers and monitors, (iii) establishes and implements policies to extend the useful life of agency electronic equipment, and (iv) uses environmentally sound practices with respect to disposition of agency electronic equipment that has reached the end of its useful life.

Sec. 3. *Duties of Heads of Agencies*. In implementing the policy set forth in section 1 of this order, the head of each agency shall:

(a) implement within the agency sustainable practices for (i) energy efficiency, greenhouse gas emissions avoidance or reduction, and petroleum products use reduction, (ii) renewable energy, including bioenergy, (iii) water conservation, (iv) acquisition, (v) pollution and waste prevention and recycling, (vi) reduction or elimination of acquisition and use of toxic or hazardous chemicals, (vii) high performance construction, lease, operation, and maintenance of buildings, (viii) vehicle fleet management, and (ix) electronic equipment management;

(b) implement within the agency environmental management systems (EMS) at all appropriate organizational levels to ensure (i) use of EMS as the primary management approach for addressing environmental aspects of internal agency operations and activities, including environmental aspects of energy and transportation functions, (ii) establishment of agency objectives and targets to ensure implementation of this order, and (iii) collection, analysis, and reporting of information to measure performance in the implementation of this order;

(c) establish within the agency programs for (i) environmental management training, (ii) environmental compliance review and audit, and (iii) leadership awards to recognize outstanding environmental, energy, or transportation management performance in the agency;

(d) within 30 days after the date of this order (i) designate a senior civilian officer of the United States, compensated annually in an amount at or above the amount payable at level IV of the Executive Schedule, to be responsible for implementation of this order within the agency, (ii) report such designation to the Director of the Office of Management and Budget and the Chairman of the Council on Environmental Quality, and (iii) assign the designated official the authority and duty to (A) monitor and report to the head of the agency on agency activities to carry out subsections (a) and (b) of this section, and (B) perform such other duties relating to the implementation of this order within the agency as the head of the agency deems appropriate;

(e) ensure that contracts entered into after the date of this order for contractor operation of government-owned facilities or vehicles require the contractor to comply with the provisions of this order with respect to such facilities or vehicles to the same extent as the agency would be required to comply if the agency operated the facilities or vehicles;

(f) ensure that agreements, permits, leases, licenses, or other legally-binding obligations between the agency and a tenant or concessionaire entered into after the date of this order require, to the extent the head of the agency determines appropriate, that the tenant or concessionaire take actions relating to matters within the scope of the contract that facilitate the agency's compliance with this order;

(g) provide reports on agency implementation of this order to the Chairman of the Council on such schedule and in such format as the Chairman of the Council may require; and

(h) provide information and assistance to the Director of the Office of Management and Budget, the Chairman of the Council, and the Federal Environmental Executive.

Sec. 4. *Additional Duties of the Chairman of the Council on Environmental Quality*. In implementing the policy set forth in section 1 of this order, the Chairman of the Council on Environmental Quality:

(a) (i) shall establish a Steering Committee on Strengthening Federal Environmental, Energy, and Transportation Management to advise the Director of the Office of Management and Budget and the Chairman of the Council on the performance of their functions under this order that shall consist exclusively of (A) the Federal Environmental Executive, who shall chair, convene and preside at meetings of, determine the agenda of, and direct the work of, the Steering Committee, and (B) the senior officials designated under section 3(d)(i) of this order, and (ii) may establish subcommittees of the Steering Committee, to assist the Steering Committee in developing the advice of the Steering Committee on particular subjects;

(b) may, after consultation with the Director of the Office of Management and Budget and the Steering Committee, issue instructions to implement this order, other than instructions within the authority of the Director to issue under section 5 of this order; and

(c) shall administer a presidential leadership award program to recognize exceptional and outstanding environmental, energy, or transportation management performance and excellence in agency efforts to implement this order.

Sec. 5. *Duties of the Director of the Office of Management and Budget*. In implementing the policy set forth in section 1 of this order, the Director of the Office of Management and Budget shall, after consultation with the Chairman of the Council and the Steering Committee, issue instructions to the heads of agencies concerning:

(a) periodic evaluation of agency implementation of this order;

(b) budget and appropriations matters relating to implementation of this order;

(c) implementation of section 2(d) of this order; and

(d) amendments of the Federal Acquisition Regulation as necessary to implement this order.

Sec. 6. *Duties of the Federal Environmental Executive*. A Federal Environmental Executive designated by the President shall head the Office of the Federal Environmental Executive, which shall be maintained in the Environmental Protection Agency for funding and administrative purposes. In implementing the policy set forth in section 1 of this order, the Federal Environmental Executive shall:

(a) monitor, and advise the Chairman of the Council on, performance by agencies of functions assigned by sections 2 and 3 of this order;

(b) submit a report to the President, through the Chairman of the Council, not less often than once every 2 years, on the activities of agencies to implement this order; and

(c) advise the Chairman of the Council on the Chairman's exercise of authority granted by subsection 4(c) of this order.

Sec. 7. *Limitations*. (a) This order shall apply to an agency with respect to the activities, personnel, resources, and facilities of the agency that are located within the United States. The head of an agency may provide that this order shall apply in whole or in part with respect to the activities, personnel, resources, and facilities of the agency that are not located within the United States, if the head of the agency determines that such application is in the interest of the United States.

(b) The head of an agency shall manage activities, personnel, resources, and facilities of the agency that are not located within the United States, and with respect to which the head of the agency has not made a determination under subsection (a) of this section, in a manner consistent with the policy set forth in section 1 of this order to the extent the head of the agency determines practicable.

Sec. 8. *Exemption Authority.* (a) The Director of National Intelligence may exempt an intelligence activity of the United States, and related personnel, resources, and facilities, from the provisions of this order, other than this subsection and section 10, to the extent the Director determines necessary to protect intelligence sources and methods from unauthorized disclosure.

(b) The head of an agency may exempt law enforcement activities of that agency, and related personnel, resources, and facilities, from the provisions of this order, other than this subsection and section 10, to the extent the head of an agency determines necessary to protect undercover operations from unauthorized disclosure.

(c) (i) The head of an agency may exempt law enforcement, protective, emergency response, or military tactical vehicle fleets of that agency from the provisions of this order, other than this subsection and section 10.

(ii) Heads of agencies shall manage fleets to which paragraph (i) of this subsection refers in a manner consistent with the policy set forth in section 1 of this order to the extent they determine practicable.

(d) The head of an agency may submit to the President, through the Chairman of the Council, a request for an exemption of an agency activity, and related personnel, resources, and facilities, from this order.

Sec. 9. *Definitions.* As used in this order:

(a) ''agency'' means an executive agency as defined in section 105 of title 5, United States Code, excluding the Government Accountability Office;

(b) ''Chairman of the Council'' means the Chairman of the Council on Environmental Quality, including in the Chairman's capacity as Director of the Office of Environmental Quality;

(c) ''Council'' means the Council on Environmental Quality;

(d) ''environmental'' means environmental aspects of internal agency operations and activities, including those environmental aspects related to energy and transportation functions;

(e) ''greenhouse gases'' means carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride;

(f) ''life-cycle cost-effective'' means the life-cycle costs of a product, project, or measure are estimated to be equal to or less than the base case (i.e., current or standard practice or product);

(g) ''new renewable sources'' means sources of renewable energy placed into service after January 1, 1999;

(h) ''renewable energy'' means energy produced by solar, wind, biomass, landfill gas, ocean (including tidal, wave, current and thermal), geothermal, municipal solid waste, or new hydroelectric generation capacity achieved from increased efficiency or additions of new capacity at an existing hydroelectric project;

(i) ''energy intensity'' means energy consumption per square foot of building space, including industrial or laboratory facilities;

(j) ''Steering Committee'' means the Steering Committee on Strengthening Federal Environmental, Energy, and Transportation Management established under subsection 4(b) of this order;

(k) ''sustainable'' means to create and maintain conditions, under which humans and nature can exist in productive harmony, that permit fulfilling

the social, economic, and other requirements of present and future generations of Americans; and

(l) ''United States'' when used in a geographical sense, means the fifty states, the District of Columbia, the Commonwealth of Puerto Rico, Guam, American Samoa, the United States Virgin Islands, and the Northern Mariana Islands, and associated territorial waters and airspace.

Sec. 10. *General Provisions.* (a) This order shall be implemented in a manner consistent with applicable law and subject to the availability of appropriations.

(b) Nothing in this order shall be construed to impair or otherwise affect the functions of the Director of the Office of Management and Budget relating to budget, administrative, or legislative proposals.

(c) This order is intended only to improve the internal management of the Federal Government and is not intended to, and does not, create any right or benefit, substantive or procedural, enforceable at law or in equity by a party against the United States, its departments, agencies, instrumentalities, entities, officers, employees or agents, or any other person.

Sec. 11. *Revocations; Conforming Provisions.* (a) The following are revoked:

(i) Executive Order 13101 of September 14, 1998;

(ii) Executive Order 13123 of June 3, 1999;

(iii) Executive Order 13134 of August 12, 1999, as amended;

(iv) Executive Order 13148 of April 21, 2000; and

(v) Executive Order 13149 of April 21, 2000.

(b) In light of subsection 317(e) of the National Defense Authorization Act for Fiscal Year 2002 (Public Law 107–107), not later than January 1 of each year through and including 2010, the Secretary of Defense shall submit to the Senate and the House of Representatives a report regarding progress made toward achieving the energy efficiency goals of the Department of Defense.

(c) Section 3(b)(vi) of Executive Order 13327 of February 4, 2004, is amended by striking ''Executive Order 13148 of April 21, 2000'' and inserting in lieu thereof ''other executive orders''.

THE WHITE HOUSE,
January 24, 2007.

[FR Doc. 07–374
Filed 1–25–07; 8:50 am]
Billing code 3195–01–P

Appendix B: Email Template for Communicating Management's Commitment

Greetings to all!

(Insert IC name) is going green! With the support of the NIH Environmental Management System (NEMS), (Insert IC name) management is onboard and ready to begin greening.

Over the next several months, (Insert IC name) will work to form a Green Team to guide the greening efforts. Part of these efforts will include examining such things as the equipment and materials that we buy, how we conduct our office and lab activities, the energy we use, and the amounts and types of waste that we generate. Stay tuned for more information on ways that you can get involved!

By going green at (Insert IC name), we will:

- Comply with all federal, state and local environmental laws and regulations as well as Executive Orders;
- Prevent pollution by minimizing the generation of wastes where possible, reducing consumption, recycling materials, and disposing of wastes in an environmentally responsible manner;
- Be good stewards of the environment and public health; and
- Integrate environmental and health considerations into decision-making processes.

I am confident that within a year we will see measurable change in our environmental impact, and other ICs will be able to learn from our successes.

If you would like to volunteer and get involved with the Green Team, contact our Green Team Lead, (Insert Green Team lead name) at (insert phone number) or (insert email address).

Many thanks,
(Insert Name of IC Director)

Appendix C: Suggested Monthly Meeting Objectives

Month	Meeting Objectives	Corresponding Greening Steps
1	• Kick-off Green Team	4
2	• Identify how the IC's activities impact the environment	5
3	• Plan Go Greener Challenges and other data collection efforts	6
4	• Review results of Go Greener Challenges • Identify draft objectives from Challenges results	6, 7
5	• Identify objectives	7
6	• Finalize and approve objectives • Identify performance measures	7, 8
7	• Identify actions to lessen the environmental impacts of your IC's activities • Identify content for Green Policy	9, 10
8	• Review draft Green Policy and collect comments	10
9	• Finalize Green Policy • Develop strategy for communicating the Green Policy and other greening actions • Plan for policy rollout, including setting schedule (if applicable), identifying logistics for upcoming events, and drafting outreach materials	10, 11
10-16	• Implement communication strategy by continuing to plan and executing policy rollout activities	11
17	• Plan another round of data collection using the Go Greener Challenges and other tracking mechanisms	12
18	• Review new data and determine if objectives have been met • Begin preparing for reporting back to management	12
19	• Prepare to report to management	13
20	• Review decisions made during management briefing • Restarting greening process by: communicating accomplishments and management's reaffirmed commitment to greening, reviewing Green Team members, and reviewing activities	14

(Insert IC Name) Green Team Meeting
(Insert Meeting Date)
(Insert Meeting Time)
(Insert Meeting Location)

Objectives:

- Identify strategy for "greening" (Insert IC Name)

Agenda:

00:00 – 00:00	Introductions	(Insert Presenter's Name)
00:00 – 00:00	Management's Commitment to Greening	(Insert Presenter's Name)
00:00 – 00:00	Membership for the Green Team	(Insert Presenter's Name)
00:00 – 00:00	Green Team Communications and Branding	(Insert Presenter's Name)
00:00 – 00:00	Meeting Logistics	(Insert Presenter's Name)
00:00 – 00:00	Next Steps	(Insert Presenter's Name)

Appendix E: NIH Environmental Goals

- Improve energy management to reduce energy intensity 50% over the 2003 baseline by 2020
- Improve recycling and green procurement to achieve zero waste by 2020 *(zero waste is defined as diverting > 90% of the solid wastes generated from landfill and incineration)*
- Reduce NIH's carbon footprint becoming carbon neutral by 2020
- Develop NIH campuses to be energy independent by 2050
- Require all electronic office products purchased minimally meet the EPA Electronic Product Environmental Assessment Tool (EPEAT) gold standard or latest replacement by 2020
- All NIH and contractor vehicles powered by non-carbon based fuel and exceed toughest US emission standard by 2020
- Require all new construction and renovations to meet the US Green Building Council Leadership in Energy and Environmental Design (LEED) Platinum standard or better by 2020
- Require 75% of all product purchases to use take back or minimal packaging by 2020
- Reduce toxic chemical use by 50% at all NIH facilities by 2020, developing and employing less toxic alternatives for standard research protocols
- By 2020 improve local environmental quality through water efficient landscaping and land management practices that reduce erosion concerns and releases at all NIH sites

Appendix F: Executive Order 13423 Sustainability Practice Areas

Energy Efficiency – "…improve energy efficiency and reduce greenhouse gas emissions through reduction of energy intensity by *3 percent* annually, or *30 percent* by 2015, compared with a 2003 baseline."

Renewable Energy – "…at least *50 percent* of the statutorily required renewable energy must come from "new" renewable sources and to the extent feasible, the agency implements renewable energy generation projects on agency property for agency use."

Water Conservation – "through life-cycle cost effective measures…reduce water consumption by *2 percent* annually through 2015 or 16 percent total by 2015, relative to Fiscal Year (FY) 2007 levels."

Sustainable Acquisition – Agency acquisitions of goods and services shall use sustainable environmental practices, including acquisitions of biobased, environmentally preferable, energy-efficient, water efficient, and recycled-content products, and use paper with minimum 30% recycled material content.

Pollution Prevention and Management of Toxic and Hazardous Materials – "…conduct its activities, including acquisitions, to reduce the quantity of toxic and hazardous chemicals purchased, used, and/or disposed of and increases diversion of solid waste as appropriate, and maintain cost-effective waste prevention and recycling programs…"

Fleet Management – " Reduce fleet total consumption of petroleum products by *2 percent* annually through 2015, increase consumption of fuels that are non-petroleum-based by at least *10 percent* annually relative to FY 2005 baseline consumption levels, and use plug in hybrid (PIH) vehicles when commercially available at a cost reasonably comparable to non-PIH vehicles.

Electronics Stewardship – "…ensure that 95 percent of computer products acquired meet Electronic Product Environmental Assessment Tool (EPEAT) standards; ensure that Energy Star® features are enabled on *100 percent* of computer monitors; have policies and programs to extend the lifetime of electronic equipment; and ensure that non-usable computers are recycled using environmentally sound management practices."

Sustainable Buildings – "Ensure new construction and major renovation of agency buildings comply with the *Guiding Principles for Federal Leadership in High Performance and Sustainable Buildings set forth in the Federal Leadership in High Performance and Sustainable Buildings MOU*, and ensure that, by 2015, at least *15 percent* of its existing building inventory incorporates the sustainable design practices found in the *Guiding Principles*."

Appendix G: Potential Performance Measures from the Go Greener Challenges

NOTE: Performance measures from the Go Greener Lab Challenge should be considered draft and are subject to change. The Go Greener Lab Challenge will be piloted in select NIH labs in Spring 2009. This appendix will be updated to incorporate changes that may result from the pilot. The updated appendix will be available at nems.nih.gov/greening/guide/.

Challenge	Question Number	Performance Measure
Air/Water Pollution		
Lab	2.19	Number of labs purchasing phosphate-free, biodegradable, chlorine-free, non-corrosive, clean-rinsing detergents
	2.20	Number of labs purchasing concentrated cleaners and detergents
	2.25	Is the fume hood closed to the appropriate height that will allow for 100 ft/sec flow rate when not in use?
Electricity Consumption		
Lab	2.3	Number of lights turned off when not in use
	2.4	Number of lights turned off after hours
	2.5	Number of equipment and monitors turned off when not in use
	2.6	Number of equipment and monitors turned off (no screen savers) after hours
Office	1.7, 1.23, 1.32, 1.44, 1.71	Number of lights in office spaces turned off after hours
	1.8-1.12, 1.25, 1.45-1.49, 1.73-1.77	Number of office equipment in Sleep/Power Save mode after hours
	1.24, 1.72	Number of computers and monitors turned off (no screen savers) after hours
	1.31, 1.67	Number of small appliances unplugged when not in use
	1.68	Number of employees whose ENERGY STAR® power management features are enabled
	1.69	Number of compact fluorescent light bulbs used in free standing lamps
	1.70	Number of lights in workspaces turned off when not in use
Fuel Consumption		
Lab	2.21	Number of labs purchasing materials from the NIH self-service stores or stock catalog (GDC warehouse) when possible to reduce transport of materials
	2.22	Number of labs purchasing lab equipment from the Property Utilization Branch
	2.23	Number of labs consolidating orders and vendors when possible
Office	1.87	Number of employees participating in the Transhare program
	1.88a	Number of trips to/from NIH in a personal car with no passengers
Paper & Materials Consumption		
Lab	2.12	Number of labs recycling journals and other paper products *(also listed under Waste Generation)*
	2.24	Number of labs using electronic or CD versions of catalogs

Challenge	Question Number	Performance Measure
Office	1.17, 1.55, 1.81	Number of office spaces with copiers and printers containing at least 30% post-consumer recycled content paper
	1.18, 1.56, 1.82	Number of office spaces where majority (<50%) of office products contain recycled content
	1.36	Number of kitchens or vending areas stocked with reusable plates, cups, or cutlery
	1.37	Number of kitchens or vending areas stocked with biodegradable plates, cups or cutlery
	1.89	Number of employees using stocked with reusable plates, cups, or cutlery
	1.90	Number of employees using biodegradable plates, cups or cutlery
	1.19, 1.20, 1.57, 1.58, 1.83, 1.85	Number of printers and copiers with duplexing (double-sided) capabilities
	1.84, 1.86	Number of employees printing and copying double-sided documents
Waste Generation		
Lab	2.7	Number of labs recycling cardboard packaging
	2.8	Number of labs recycling or returning other packaging (e.g., Styrofoam coolers, ice packs)
	2.9	Number of labs recycling pipette tip racks
	2.10	Number of labs using pipette tip reload systems
	2.11	Number of labs recycling non-contaminated glass bottles
	2.12	Number of labs recycling journals and other paper products
	2.13	Number of labs recycling plastic labware
	2.14	Number of labs recycling X-ray film
	2.15	Number of labs using digital imaging
	2.16	Number of labs recycling plastic and glass containers (including tissue culture media) if they are NOT contaminated with hazardous, infectious, or radioactive waste
	2.17	Number of labs recycling batteries from lab equipment
	2.18	Number of labs recycling empty solvent bottles through hazardous waste pick-up
	2.22	Number of labs providing surplus lab equipment to the Property Utilization Branch
	2.26	Number of labs using mercury-free thermometers and other equipment
	2.27	Number of labs purchasing or providing unused chemicals through the chemical exchange distribution list through the Lab Managers listserv
	2.28	Number of labs currently sharing chemicals within the IC or with other ICs
	2.29	Number of labs maintaining chemical inventories
	2.30	Number of labs using non-radioactive labeled markers

Challenge	Question Number	Performance Measure
	2.31	Number of labs using non-hazardous liquid scintillation counting fluid
	2.32	Number of labs disposing of unwanted source vials, unwanted chemicals, and lead bricks
	2.40	Number of labs using a silver recovery unit for photo development activities
Office	1.16, 1.29, 1.35, 1.53, 1.80	Number of waste bins that contain only non-recyclable waste
Water Consumption		
Lab	2.33	Number of labs recirculating water in equipment with cooling systems (use a cooling loop)
	2.34	Number of labs repairing leaky faucets
	2.35	Number of labs following the NIH Policy that only water can go down the drain or that have obtained an exception from the Division of Environmental Protection for substances poured down the drain
	2.36	Number of labs using reverse osmosis (RO) water to feed their deionizing system
	2.37	Number of labs that avoid distillation to purify water
	2.38	Number of labs using Type II water (i.e., RO water) for all water needs, i.e. washing glassware, buffers, water baths
	2.39	Number of labs, if supplied, using building wide water purification system

Appendix H: Green Policy Template

A. Purpose

This document describes (Insert IC Name) policies and procedures for conducting their operations and activities in an environmentally responsible and sustainable manner.

B. Background

In 2005, the NIH Director created the Environmental Policy of the National Institutes of Health to officially declare a commitment to the protection of the environment and responsible use of natural resources. As the steward of medical and behavioral research for the Nation, the NIH leads the way in the pursuit of knowledge about living systems and the application of the knowledge to extend healthy life and reduce illness and disability. As proactive keepers of the public health and the environment, the NIH community embraces pollution prevention and sustainable development while continually seeking to reduce resource consumption.

The NIH environmental policy establishes the following important commitments:

- Compliance with all federal, State, and local environmental laws and regulations, as well as Executive Orders.
- Prevention of pollution by minimizing the generation of wastes where possible, reducing consumption, recycling materials, and disposing of wastes in an environmentally responsible manner.
- Integration of environmental and health considerations into decision-making processes.
- Reduce the environmental impact of staff's commuting to and from work and NIH's transportation of staff between facilities on and off the Bethesda campus.

All NIH employees are responsible for being aware of the environmental and health impacts of their jobs and for continually striving to minimize these impacts as set forth in this policy.

C. Policy

(Insert IC Name) is committed to protecting public health by conducting our operations and activities in an environmentally responsible and sustainable manner. We are committed to complying with all applicable laws and regulations. We recognize that reducing and, where possible, eliminating the environmental impacts of our activities is an important part of our mission as stewards of public health. We strive to be a leader among the NIH Institutes and Centers in achieving environmental excellence and will work with our employees and other internal and external entities to establish and follow principles, in conjunction with the Environmental Policy of the NIH, that will guide (Insert IC Name) environmental practices.

The (Insert IC Name) guiding principles and practices to achieve resource conservation, waste reduction, and sustainability overall are summarized below:

- Comply with mandatory requirements and conduct our activities and operate our facilities within applicable environmental laws and regulations
- Conserve energy and other natural resources
- Encourage employees to use mass transit
- Reduce, reuse, and recycle to reduce waste

- Minimize the production of hazardous waste
- Adopt green procurement practices
- Ensure all employees complete the environmental awareness training
- Continue to review and minimize the impacts of our activities

D. Responsibilities

a) Energy Conservation

Employees shall:

1. Turn off lights when not in use and use natural light when possible.
2. Turn off, not just log off, all computers, terminals, speakers and other office equipment at the end of every work day.
3. Turn off your power strip at the end of every work day.
4. Activate the power down features on your computer and monitor to enter into a low-power or sleep mode when not in use.
5. Unplug equipment that drains energy even when not in use (e.g., cell phone chargers, fans, coffee makers, desktop printers, radios).
6. Use compact fluorescent light bulbs (CFLs) in desk lamps as opposed to incandescent lights whenever possible.
7. Use the stairs when possible.
8. Utilize videoconferencing and conference calls as an alternative to travel when possible.
9. Limit the use of space heaters.

b) Reduction of Materials Consumption

Employees shall:

1. Avoid using paper by distributing and storing documents electronically.
2. Print and photocopy only what you need and double side your jobs when possible.
3. Tell staff and colleagues that you prefer double-sided documents.
4. Use the back side of old documents for faxes, scrap paper, or drafts.

c) Reduce Fossil Fuel Consumption and Air Pollution

Employees shall:

1. Ride mass transit or other alternative forms of transportation, whenever possible.
2. Use carpools or vanpools, when possible, over single use cars.
3. Telework one day a week, if possible.

d) Minimize Waste and Increase Recycling

Employees shall:

1. Use durable reusable beverage containers, plates, and utensils.
2. Reduce the amount of toner in documents that will be printed when possible.

3. Print documents in black and white or grayscale whenever possible.
4. Recycle paper, paper products, plastic, binders, folders, catalogs, boxes, bottles, cans, batteries, electronics, toner and ink cartridges if located at the Bethesda campus .
5. Recycle plastic and paper products in accordance with county regulations if located Montgomery County facilities other than the Bethesda campus. Plans for implementing such recycling will be developed by the Green Team.
6. Donate used furniture and electronics through the Property Utilization Branch.

e) Minimize Toxics and Hazardous Waste

1. Do not pour toxic or hazardous substances down the drain.
2. Reduce the use of toxic chemicals and use less toxic alternatives wherever possible.
3. Do not use or purchase mercury or mercury-containing equipment, unless approval has been obtained.
4. Design experiments, when possible, to use less toxic or hazardous substances.
5. Purchase chemicals in the smallest quantities needed to avoid over-ordering.
6. Dispose of hazardous chemicals appropriately and in accordance with the NIH Disposal Guide and other legal requirements.

f) Commitment to Green Purchasing

Employees shall:

1. Purchase copier and printer paper that contains at least 30% post-consumer recycled content.
2. Purchase office supplies and furniture that contain the highest percentage of recycled and non-toxic content whenever possible.
3. Purchase products that contain biobased content whenever possible.
4. Purchase Energy Star office equipment.
5. Use the Electronic Product Environmental Assessment Tool (EPEAT) to identify computers and monitors with environmental attributes and purchase computers and monitors with at least a Bronze rating.
6. Purchase quality furniture and electronics that are no longer needed through the Property Utilization Branch.

g) Increasing Awareness of (Insert IC Name's) Impact on the Environment and Public Health

All employees are required to complete the NIH Environmental Management System (NEMS) awareness training course. The course may be found at: http://lms.learning.hhs.gov.

Replace NIH logo with your IC's logo
DELETE THIS TEXT BOX WHEN DONE

[INSERT Greening Sheet Title HERE]

INTRODUCTORY PARAGRAPH: Identify topic being communicated in this fact sheet.

Replace with your IC's name.
DELETE THIS TEXT BOX WHEN DONE

IC's Objectives

To track our progress in greening [INSERT IC name HERE], the Green Team set objectives and determined our current status or baseline with an evaluation tool.

Our objectives to reduce [INSERT environmental concern] are:

- [INSERT Objective 1 HERE]
- [INSERT Objective 2 HERE]
- [INSERT Objective 3 HERE]

Insert objectives identified in Step 7 Worksheet here.
DELETE THIS TEXT BOX WHEN DONE

Can you believe…

- [INSERT topic-related fact from NIH or IC-specific data HERE]
- [INSERT Fact 2 HERE]
- [INSERT Fact 3 HERE]

NIH facts available at nems.nih.gov.
DELETE THIS TEXT BOX WHEN DONE

If you do a monthly or quarterly awareness series, insert next topic here.
DELETE THIS TEXT BOX WHEN DONE

Next Month's Topic: [INSERT HERE]

Provide information on Green Hour or other events identified in Step 11 Worksheet here.
DELETE THIS TEXT BOX WHEN DONE

Get Involved!

Green Hour: [INSERT Title HERE]

Provide description of event and include logistics information if applicable

[INSERT Date HERE]
[INSERT Time HERE]
[INSERT Location HERE]

[INSERT Other Event Title HERE]

Provide information on event

Got Ideas, Comments or Questions?

Contact [INSERT Green Team lead's name and email address or another designate HERE]

In this section, communicate how the action you would like employees to take to minimize your IC's impact on the environment. Present the information in the 2 right columns of Step 9 Worksheet.
DELETE THIS TEXT BOX WHEN DONE

[INSERT Subtitle HERE]

Take these simple actions to do your part in making [INSERT IC name HERE] more sustainable.

[INSERT action to be taken from Step 9 Worksheet HERE]

Significance: Provide description of why this action is significant and impact on the environment
Do Your Part: Provide additional information on how employees can implement action. Use information provided in Step 9 Worksheet.

[INSERT action to be taken from Step 9 Worksheet HERE]

Significance: Provide description of why this action is significant and impact on the environment
Do Your Part: Provide additional information on how employees can implement action. Use information provided in Step 9 Worksheet.

[INSERT action to be taken from Step 9 Worksheet HERE]

Significance: Provide description of why this action is significant and impact on the environment
Do Your Part: Provide additional information on how employees can implement action. Use information provided in Step 9 Worksheet.

[INSERT action to be taken from Step 9 Worksheet HERE]

Significance: Provide description of why this action is significant and impact on the environment
Do Your Part: Provide additional information on how employees can implement action. Use information provided in Step 9 Worksheet.

[INSERT action to be taken from Step 9 Worksheet HERE]

Significance: Provide description of why this action is significant and impact on the environment
Do Your Part: Provide additional information on how employees can implement action. Use information provided in Step 9 Worksheet.

[INSERT action to be taken from Step 9 Worksheet HERE]

Significance: Provide description of why this action is significant and impact on the environment
Do Your Part: Provide additional information on how employees can implement action. Use information provided in Step 9 Worksheet.

[INSERT action to be taken from Step 9 Worksheet HERE]

Significance: Provide description of why this action is significant and impact on the environment
Do Your Part: Provide additional information on how employees can implement action. Use information provided in Step 9 Worksheet.

Date:

Time:

Location:

Applicable Greening Step(s):

Attendees:

Decisions:

Action Items:

- ☐
- ☐
- ☐
- ☐
- ☐
- ☐
- ☐

Notes: