

**Greening the School Nutrition Scene!  
A Guide for Developing and Sustaining  
Green/Environmental Conservation Practices  
for School Nutrition Professionals**



National Food Service Management Institute  
The University of Mississippi  
1-800-321-3054

**2014**

This project has been funded at least in part with federal funds from the U.S. Department of Agriculture, Food and Nutrition Service through an agreement with the National Food Service Management Institute (NFSMI) at The University of Mississippi. The contents of this publication do not necessarily reflect the views or policies of the U.S. Department of Agriculture, nor does mention of trade names, commercial products, or organizations imply endorsement by the U.S. government.

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Suggested Reference Citation:

Lewis, K. L. and Gerald, B. (2014). *Greening the School Nutrition Scene! A Guide for Developing and Sustaining Green/Environmental Conservation Practices for School Nutrition Professionals*. University, MS: National Food Service Management Institute.

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# **National Food Service Management Institute The University of Mississippi**

## **Building the Future Through Child Nutrition**

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### **PURPOSE**

The purpose of the National Food Service Management Institute is to improve the operation of child nutrition programs through research, education and training, and information dissemination.

### **MISSION**

The mission of the National Food Service Management Institute is to provide information and services that promote the continuous improvement of child nutrition programs.

### **VISION**

The vision of the National Food Service Management Institute is to be the leader in providing education, research, and resources to promote excellence in child nutrition programs.

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**GREENING THE SCHOOL NUTRITION SCENE!  
A GUIDE FOR DEVELOPING AND SUSTAINING  
GREEN/ENVIRONMENTAL CONSERVATION PRACTICES  
FOR SCHOOL NUTRITION PROFESSIONALS**

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**EXECUTIVE SUMMARY**

Green and environmental conservation (GEC) efforts have been at the forefront of food service organizations' agendas to curtail waste and save money while conserving resources. Until recently, gleaning and recycling were the primary practices conducted by school nutrition (SN) programs. There are few research-based resources and information to support sustainable GEC practices specifically for SN professionals. The National Food Service Management Institute, Applied Research Division (NFSMI, ARD) conducted a research study to identify and confirm GEC practices, or quality indicators, for successful implementation and sustainability of GEC practices in SN programs. The information garnered from this study would be used to develop a Web-based resource for SN and school professionals.

This research study was conducted in two phases. In Phase I, researchers utilized information from NFSMI, ARD data from previous GEC studies and research literature to draft 107 GEC practice statements. These statements were identified as sustainable practices in SN facilities and schools across the country. The information was presented to a panel of experts (state agency personnel, school administrators, and SN directors) who were recognized for their sustainable GEC programs and resources. The expert panel participated in a pre-meeting review, a day-and-half workgroup session, and a post-session review of GEC practices, goals, and supporting statements. Then, the panel provided recommendations for the format design of the GEC resource. The information collected from the expert panel was then summarized, formatted into a draft resource, and used in Phase II of the research study. In Phase II, a review panel of



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state agency personnel, school administrators, and SN directors evaluated the draft resource.

Comments and suggestions provided by reviewers were used to revise the resource and to create the final version of a Web-based resource that could be used by SN professionals and school personnel to assess GEC practices in SN programs and schools.

The final resource, *Greening the School Nutrition Scene! A Guide for Developing and Sustaining Green/Environmental Conservation Practices for School Nutrition Professionals*, contains two sections. In Section I, the assessment tool contains four sub-sections that can be used to identify preliminary actions to establish or evaluate 73 GEC practices, identify and define roles for key stakeholders, and review information to create GEC policies and plans. Section II contains seven steps or categories with 59 action statements that could be used to support the achievement of sustainable GEC practices and programs. The resource also includes instructions for its use, key definitions, and resource citations to assist SN and school professionals. Sections of the entire resource can be used to plan, implement, evaluate, and sustain GEC practices, and is available on the NFSMI Website.

## INTRODUCTION

School nutrition (SN) programs have the challenge of serving nutritious meals that children will consume within a healthy environment. Of the meals served in SN programs, approximately 0.6 pounds of waste/meal is generated (Santa Barbara County Public Works Department, 1997). Costs for services, such as solid waste removal, water and sewage, and energy, are seldom reflected in the total cost/meal for child nutrition programs. Food production requires an intense use of energy and water. Implementing practices to conserve resources can reduce the amount of waste generated in addition to decreasing energy and water inputs for food production. In 2008, the recycling rate for municipal solid waste (MSW) was 33.2%, an increase of 8.8% from the 1990 recycling rate (EPA, 2009). Government initiatives, such as EnergyStar and Waterwise, have resulted in more efficient food production equipment. Federally-funded research has further developed a solid-waste-management hierarchy.

Several issues negatively impact resource conservation efforts of SN programs. One issue is the lack of energy and water data for food production. The ability to calculate cost savings from conservation measures from current usage data is an effective method for determining cost/benefit ratios. Utilities are considered an indirect cost by many SN programs, because meters are not installed in kitchens. Approximately 84% of SN programs report indirect costs, such as equipment and custodial labor, as part of the full cost of a meal, but they do not include utility cost (Food & Nutrition Service, 2008). A green and environmental conservation (GEC) expert panel indicated that the use of disposable and permanent serviceware by SN programs was influenced by factors, such as type of production system and sanitation practices (Lofton, 2009). Previous NFSMI, ARD research on GEC practices indicated recycling was affected by limited storage for recyclables, pickup of recyclables, community participation in recycling, and staff

support of recycling programs (Lofton, 2009; Lewis, 2013). Additionally, Leadership in Energy and Environmental Design (LEED) certified chemicals were not widely available. Research is limited on cost effectiveness of receiving LEED certification. Overall, barriers to sustaining GEC practices were cost, lack of equipment and resources to support GEC practices, program administration, community support, and teamwork/collaboration among stakeholders. School nutrition professionals indicated willingness to implement GEC practices, such as recycling, because students support green practices. Farm-to-school and school gardens were perceived as beneficial for students. However, the SN professionals raised concerns about quality, consistency, and size of locally grown produce (Lofton, 2009; Lewis, 2013).

Resources to assist SN directors in making appropriate decisions for purchases, such as energy efficient equipment, have been developed (National Food Service Management Institute [NFSMI], 1993). However, Nettles and Carr (2009) found that SN directors perceived the most useful information for purchase decisions and facility planning came from other SN directors. A model or checklist developed by a review panel of SN professionals of factors to consider when creating a GEC practice would likely be perceived as useful to SN directors. To address the needs of SN professionals assessing, implementing, and evaluating GEC practices in SN programs and/or schools, the NFSMI conducted a research study to develop a resource.

### **Research Objectives**

Research objectives for this study were based on findings from previous research findings conducted by the NFSMI, Applied Research Division that identified GEC practices used by SN programs, and barriers encountered when implementing these practices. The research objectives for this study were to:

- Identify quality indicators, or GEC practices, for operational factors to consider when formulating environmental practices most appropriate for the SN program or school district;
- Identify quality indicators, or GEC practices, for policy issues to consider when formulating environmental practices most appropriate for the SN program or school district;
- Identify quality indicators, or GEC practices, for effective roles of SN professionals in supporting and contributing to GEC efforts in the SN setting and the school district;
- Identify quality indicators, or GEC practices, for appropriate education and training activities related to GEC that have been implemented for students, SN staff, and other school personnel;
- Create a GEC guide that can be used as a Web-based assessment tool for SN professionals; and
- Validate and evaluate the usefulness of the GEC guide.

## **METHODOLOGY**

### **Research Design**

The purpose of this research study was to identify and confirm green and environmental conservation (GEC) practices, or quality indicators, for successful implementation and sustainability of GEC practices in school nutrition (SN) programs. Expert panel methodology; a modified best practice research model by Mold and Gregory (2003); data and findings from previous National Food Service Management Institute, Applied Research Division (NFSMI, ARD) research; and research literature on GEC practices in schools were used to identify sustainable GEC practices in the SN setting. The study was conducted in two phases. Phase I utilized an expert panel consisting of state agency personnel, school administrators, and SN directors to assist with the development and review of GEC practices, goals, and supporting statements. The panel also provided recommendations for the format design of the guide. In Phase II, information from Phase I was used to draft and format the GEC guide, and the draft guide was sent to a review panel of state agency personnel, school administrators, and SN directors for evaluation. Comments and suggestions provided by reviewers were used to revise the draft to create the final version on a Web-based resource that could be used by SN professionals and school personnel.

### **Informed Consent**

The University of Southern Mississippi Human Subjects Protection Review Committee approved this research study. All expert panel and review panel members in this study agreed to participate by attending the workgroup session or by returning the review panel evaluation forms which served as consent in the study.

## **Phase I: Development of Draft Green and Environmental**

### **Conservation Practice Statements**

To accomplish research objectives, a modified version of the best practice research method described by Mold and Gregory (2003) was used to develop the research protocol for this study. Previous NFSMI, ARD GEC research findings, research literature, and GEC standards and regulations from various sources were used to draft sustainable GEC practice statements. The resources used for drafting the statements were:

- Santa Barbara County Public Works Department. (1997). *Guide to solid waste and recycling plans for development projects*. Retrieved from <http://www.calrecycle.ca.gov/wastechar/wastegenrates/Institution.htm>
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### ***Pre-Meeting Assessment***

The draft 107 GEC practice statements were formatted into a pre-meeting document for the expert panel workgroup session. School nutrition professionals were e-mailed the pre-meeting document two weeks prior to the workgroup session. Seven expert panel members who agreed to attend the session were asked to review each GEC practice statement using the following guidelines:

- Review the wording of each statement;
- Respond “yes” or “no” that each statement is or is not an action statement related to contemplating, planning, implementing, and/or sustaining GEC practices ; and
- Respond to keep, delete, or modify the wording of each GEC practice statement.

Additional space was provided for panel members to suggest additional comments and/or suggestions related to organization, clarity, and wording of the GEC practice statements. Expert panel members were then advised to bring their completed document to use during the scheduled workgroup session. Completed pre-meeting documents were later collected by the researchers at the end of the session and used in the final report.

### ***Expert Panel Workgroup Session***

Seven SN professionals and school personnel previously identified by state agency directors from the seven USDA regions engaged in GEC experiences were invited to participate in a workgroup session to evaluate the draft GEC practice statements. The invitation explained the study, the purpose of the expert panel workgroup session, and provided the researchers' contact information for questions and concerns. Informed consent outlining the details of expert panel members' participation in the study was included with the e-mail invitation, and addressed expert panel members' rights and consent procedures established by The University of Southern Mississippi Human Subjects Protection Review Committee. After potential panel members agreed to participate, confirmation letters were sent with additional information on the upcoming workgroup session and travel arrangements. Once expert panel members confirmed their arrangements, the researcher e-mailed an agenda and pre-meeting assignment. The agenda contained the objectives and additional items to be discussed during the workgroup session. The pre-meeting assignment included the draft GEC practice statements and asked expert panel members to review the statements and provide feedback on the content, wording, and scope of each statement as a sustainable GEC practice.

The expert panel workgroup session was facilitated by a trained researcher and an assistant moderator. Expert panel members convened for a day-and-a-half session to confirm the draft GEC practice statements; identify the gaps in the literature; and categorize the GEC practice statements into factors or functional areas identified in previous NFSMI, ARD GEC research. After the session, the researcher then summarized the data collected and formatted the information to be confirmed by the expert panel by e-mail. After the confirmation, the draft was then formatted as a GEC resource that would be evaluated by the review panel in Phase II of the



project. Seven expert panel members met for a day-and-a-half session to complete consensus building activities to accomplish the following objectives:

- Review the wording of each GEC practice statement and take action to accept, modify, or delete a statement;
- Sort statements into practice categories and identify goals, if necessary, and time permitted;
- Identify additional GEC practice statements needed to achieve goals under each practice category; and
- Discuss an appropriate format and design for the Web-based GEC practice resource for SN professionals and school personnel.

### ***Post Workgroup Assessment***

After the workgroup session, a researcher performed a content analysis of the information gathered from the consensus activities in preparation for a post workgroup session review. The categories were drafted for the GEC practice statements related to the research-based factors from previous NFSMI, ARD research. These factors or categories included: GEC roles and responsibilities of stakeholders (SN and school personnel, community and industry representatives), types of GEC practices, and resources. The post workgroup assessment document was e-mailed to expert panel members. Panel members were instructed to review each GEC practice statement under each category as summarized from the workgroup session and to return the document within two weeks. A reminder e-mail was sent one week after the post session assessment asking panelists to confirm the summary and/or provide comments and suggestions for the draft resource review in Phase II.

## **Phase II: Draft Green and Environmental Conservation Practice Guide**

The draft GEC practice guide contained categories and practice statements that could be used to identify actions necessary for starting the “go green” process or for evaluating existing ones. The research-based tool was created from previous research conducted by NSFMI, ARD and SN professionals, and by state agency and school personnel with experience implementing and maintaining successful GEC practices in school environments. This draft guide consists of two sections. The user may utilize Section I of the guide to:

- Identify potential GEC practices that have been successfully implemented in SN programs and school districts;
- Identify internal and external key stakeholders, their roles and responsibilities for implementing and sustaining GEC practices;
- Utilize steps and resources to advocate and inform the school community about the importance of GEC practices and the need for their support;
- Follow steps to create GEC teams or committees; and
- Use suggestions and resources to develop a GEC mission statement and goals for planning, implementing, evaluating, and sustaining GEC practices.

Section II of the draft contains seven categories: “Feasibility Study,” “Roles and Responsibilities,” “Budget/Finance,” “Training,” “Marketing,” “Monitoring,” and “Assessment.” These categories were identified as research-based action statements necessary for maintaining a sustainable GEC program. The checklist followed a user-friendly format. There were 59 action statements that supported the achievement of a sustainable GEC program within the seven practice categories. Each statement was assessed following a 4-point scale (*No Support/No Knowledge, Potential Resources/Support Available, Knowledge and Support Exist for Use, and*

*Resources/Knowledge for Program Sustainability*) with *Not Applicable* as an option to select should the best practice not address specific program needs.

The following statements were identified as ways to use this guide:

- Identify potential GEC practices that would benefit the SN program and/or school;
- Identify internal and external stakeholders involved with GEC practices;
- Assess resources needed for implementing a GEC practice;
- Identify SN staff training needs to implement and sustain GEC practices; and
- Develop approaches to build support for GEC practices.

The draft also contained an introduction, instructions for use of the resource, and definition of key terms.

### ***Review Panel***

The review panel members were comprised of a minimum of two members of the expert panel and twenty SN and school professionals involved in GEC practices recommended previously by state agency directors. Review panel members were asked to review and confirm GEC practice statements under the factors or categories identified in previous NFSMI, ARD research. A cover letter and an evaluation form for the resource were drafted and attached to an e-mail to review panel members. The cover letter described the purpose of the study and provided instructions for reviewing and offering comments on the statements under the categories. It included the confidentiality statement, researchers' contact information, and return instructions for the evaluation form. The evaluation form consisted of two sections and instructed reviewers to utilize the resource and respond to the statements for their facilities and to complete and return the evaluation form to the researcher. Open-ended questions and space for comments and suggestions to improve the wording, clarity, and scope of the GEC practice statements were

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included under the categories. The return of the evaluation form served as consent to participate on the review panel.

## **RESULTS AND DISCUSSION**

The purpose of this research study was to develop a green and environmental conservation (GEC) sustainable practice resource for school nutrition (SN) professionals and school personnel. Seven factors or categories identified in previous National Food Service Management Institute, Applied Research Division (NFSMI, ARD) research and 107 GEC practice statements were assessed by expert panel members during the workgroup session.

### **Phase I: Expert Panel Workgroup**

An expert panel of SN and school professionals received a pre-meeting document of 107 GEC research-based statements to review prior to the expert panel workgroup session. Panelists convened to confirm the sustainability of GEC practice statements under research-based categories as outlined by a modified version of the best practice research model (Mold & Gregory, 2003). Of the eight SN and school professionals invited to serve on the expert panel, seven agreed to participate (87.5% participation rate). Five of the panelists were SN professionals (71.4%), one was state agency personnel (14.3%), and one was school personnel (14.3%). All were recommended, because they have played a role in implementing and sustaining GEC practices in SN and school settings.

Expert panel members were guided through three major activities during the workgroup session:

- Reach consensus on the draft GEC practice statements by taking action to keep, modify, combine, or delete statements that related to the objectives of this study;
- Group similar GEC practice statements under seven research-based categories; and
- Suggest a format for the GEC guide as an online resource.

The workgroup session results were summarized, and the final consensus on the placement and formatting of 80 GEC practice statements under six research-based categories and three sub-sections were included in Section I, and 76 GEC action statements under seven steps were included in Section II and formatted into a draft resource. All seven expert panel members confirmed the GEC practice statements for two sections of the resource. Definitions and instructions for use of the assessment tool were then drafted by a researcher and formatted as a part of the resource in preparation for the evaluation in Phase II of the study.

### **Phase II: Review Panel**

Of the two expert panel members and 20 SN and school professionals invited to participate in the review panel process, sixteen (72.7%) completed and returned the self-assessment tool and evaluation form. Review panel members who returned completed evaluation forms represented six of the seven USDA regions. Two reviewers (12.5%) were state agency representatives, and 14 (87.5%) were SN professionals. Revisions were made, and the final draft was formatted by a graphic designer as a Web-based resource for SN professionals and school staff.

The final resource, *Greening the School Nutrition Scene! A Guide for Developing and Sustaining Green/Environmental Conservation Practices for School Nutrition Professionals*, is a 31-page assessment tool that could be used to identify actions necessary for establishing or assessing GEC practices within two sections. Section I, “Identify Preliminary Actions for Establishing GEC Practices,” was designed to assist SN professionals with the identification of GEC practices (73 GEC practices under six categories) (Table 1); identification of key stakeholders (n = 23) and their roles and responsibilities (n = 5); avenues to advocate and inform

the school community; and information to form a GEC Team/Committee. This section could be used to:

- Identify potential GEC practices that have been successfully implemented in SN programs and school districts;
- Identify internal and external key stakeholders, and their roles and responsibilities for implementing and sustaining GEC practices;
- Utilize steps and resources to advocate and inform the school community about the importance of GEC practices and the need for their support;
- Follow steps to create GEC teams or committees; and
- Use suggestions and resources to develop a GEC mission statement and goals for planning, implementing, evaluating, and sustaining GEC practices.

Table 1

*Section I: GEC Practice Categories and Number of GEC Practices*

<b>GEC Practice Categories</b>	<b>Number of GEC Practices</b>
Recycling Practices	14
Energy Conservation Practices	16
Air and Water Conservation Practices	12
Resource Conservation Practices	11
GEC Building Renovations and Construction Practices	11
Other GEC Practices	9

Section II, “Green/Environmental Conservation Action Statements,” contains seven steps or categories that allow the user to evaluate actions that their SN department or school may take to plan, implement, evaluate, and sustain GEC practices. The seven steps or categories are: “Feasibility Study,” “Roles and Responsibilities,” “Budget/Finance,” “Marketing,” “Training,” and “Monitoring and Assessment.” A series of 59 action statements are listed under each step in which users are instructed to review each statement and assess their SN department’s/school’s actions (No Support/No Knowledge; Potential Resources/Support Available; Knowledge and Support Exist for Use; and Resources/Knowledge for Program Sustainability) to plan, implement, evaluate, and sustain GEC practices (Table 2).

Table 2

*Section II: GEC Categories/Steps and Number of GEC Action Statements*

<b>GEC Categories/Steps</b>	<b>Number of GEC Action Statements</b>
Feasibility Study	19
Roles and Responsibilities	5
Budget/Finance	9
Marketing	10
Training	6
Monitoring	4
Assessment	6

Seven key GEC definitions and Web-based resources are also included in the resource to assist users completing the assessment of GEC practices for their facilities.



## CONCLUSIONS

### Limitations

The resource developed is for use by SN and school professionals who would like to assess potential or current GEC practices in school nutrition programs. Many GEC practices in the resource are for the SN environment only, and may not be applicable to other school settings or departments.

### Conclusions

The purpose of this research study was to identify and confirm green and environmental conservation (GEC) practices, or quality indicators, for successful implementation and sustainability of GEC practices in school nutrition (SN) programs. The research was based on previous research studies and literature related to sustainable GEC practices in the SN environment. The final results yielded the *Greening the School Nutrition Scene! A Guide for Developing and Sustaining Green/Environmental Conservation Practices for School Nutrition Professionals*, a Web-based assessment tool that could be used to plan, implement, evaluate, and sustain GEC practices by SN and school professionals in school settings.

*Greening the School Nutrition Scene! A Guide for Developing and Sustaining*

*Green/Environmental Conservation Practices for School Nutrition Professionals* may be used to:

- Identify potential GEC practices that would benefit the SN program;
- Identify internal and external stakeholders involved in sustainable GEC practices;
- Assess resources needed for implementing a GEC practice;
- Identify SN staff training needs to implement and sustain GEC practices, and
- Develop approaches to build support for GEC practices.

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The resource may also be used and/or modified to develop education and training resources to assist SN and school professionals who are making GEC decisions, developing GEC programs, or assessing existing ones.

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Washington, DC: Author. Retrieved February 22, 2010, from

<http://www.epa.gov/osw/nonhaz/municipal/pubs/msw2008rpt.pdf>.

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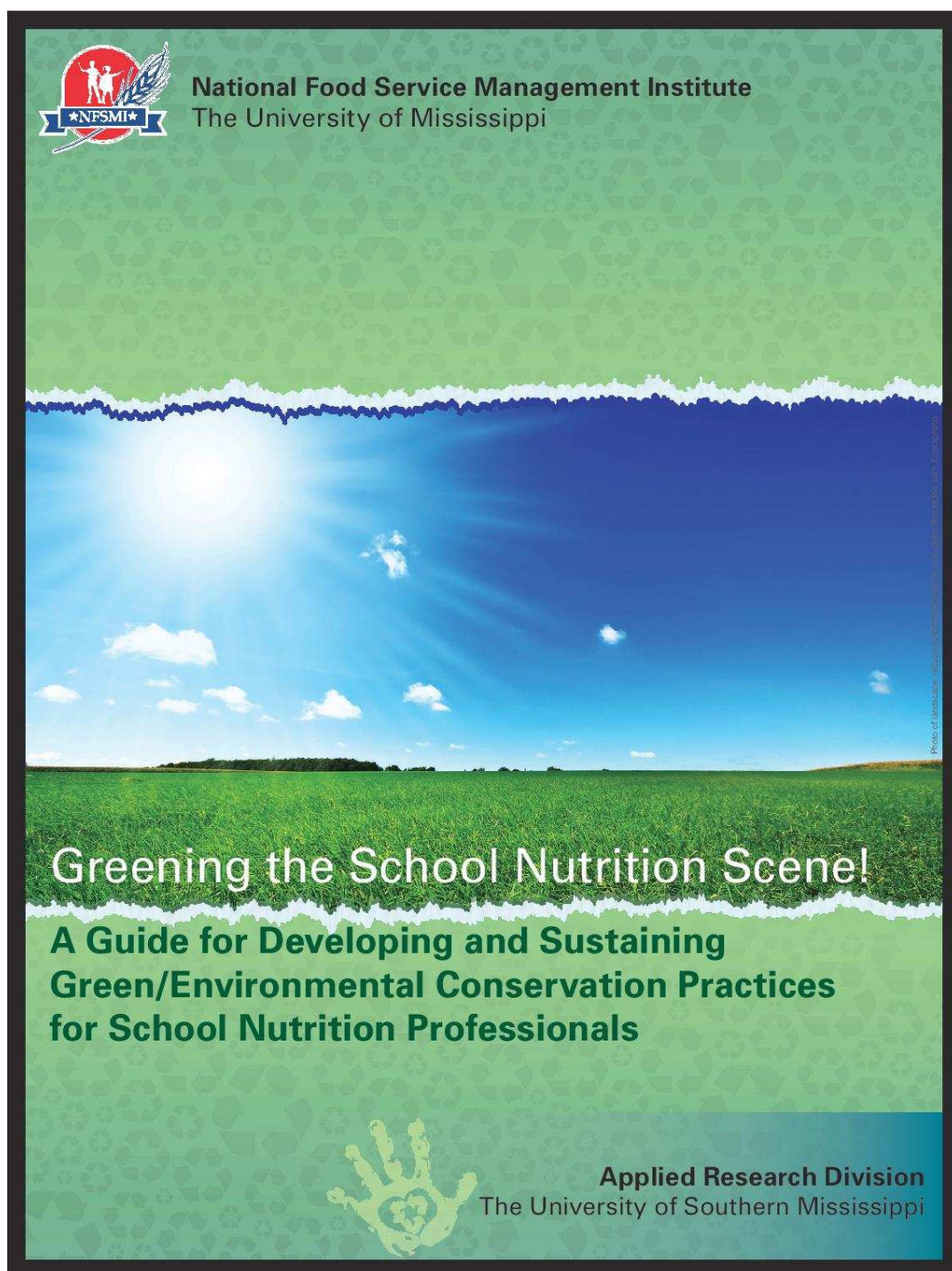
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Appendix

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## **Greening the School Nutrition Scene!**

### **A Guide for Developing and Sustaining Green/Environmental Conservation Practices for School Nutrition Professionals**



**National Food Service Management Institute  
The University of Mississippi**

**Applied Research Division  
The University of Southern Mississippi**

**Grant Year 2010 Project #5**

**Greening the School Nutrition Scene! A Guide for Developing and Sustaining Green/Environmental Conservation Practices for School Nutrition Professionals**

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Suggested Reference Citation:

Lewis, K. & Gerald, B. (2013). *Greening the School Nutrition Scene! A Guide for Developing and Sustaining Green/Environmental Conservation Practices for School Nutrition Professionals*. University, MS: National Food Service Management Institute.

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## **National Food Service Management Institute**

### **The University of Mississippi**

### **Building the Future Through Child Nutrition**

The National Food Service Management Institute was authorized by Congress in 1989 and established in 1990 at The University of Mississippi in Oxford and is operated in collaboration with The University of Southern Mississippi in Hattiesburg. The Institute operates under a grant agreement with the United States Department of Agriculture, Food and Nutrition Service.

#### **PURPOSE**

The purpose of the National Food Service Management Institute is to improve the operation of child nutrition programs through research, education and training, and information dissemination.

#### **MISSION**

The mission of the National Food Service Management Institute is to provide information and services that promote the continuous improvement of child nutrition programs.

#### **VISION**

The vision of the National Food Service Management Institute is to be the leader in providing education, research, and resources to promote excellence in child nutrition programs.

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## INTRODUCTION

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School nutrition (SN) programs are intense users of energy and water. Costs for services such as solid waste removal, water and sewage, and energy are seldom reflected in the total cost/meal for SN programs. Implementing practices to conserve resources can reduce the amount of waste generated in addition to decreasing energy and water inputs for food production. Environmental conservation programs such as recycling cans and using disposable serveware have been implemented by SN programs across the country.

School nutrition departments and school districts using green/environmental conservation (GEC) practices have realized positive outcomes such as decreased solid waste, reduced utility costs, and opportunities to educate students and their community about the importance of conserving the environment. The National Food Service Management Institute, Applied Research Division (NFSMI, ARD) developed this self-assessment resource for SN professionals who would like to implement and/or sustain GEC practices in their SN program or school district. *Greening the School Nutrition Scene! A Guide for Developing and Sustaining Green/Environmental Conservation Practices for School Nutrition Professionals* can be used to identify actions necessary for starting the “Go Green” process or evaluate existing green and environmental conservation practices. This research-based tool was created from previous research conducted by NFSMI, ARD and SN professionals with experience implementing and maintaining successful GEC practices in school environments.

This guide consists of two sections. School nutrition professionals may use *Section I, Identify Preliminary Actions for Establishing GEC Practices*, to:

- identify potential GEC practices that have been successfully implemented in SN programs and school districts;
- identify internal and external key stakeholders, their roles and responsibilities for implementing and sustaining GEC practices;
- utilize steps and resources to advocate and inform the school community about the importance of GEC practices and the need for their support;
- follow steps to create GEC teams or committees; and
- use suggestions and resources to develop a GEC mission statement and goals for planning, implementing, evaluating, and sustaining GEC practices.

*Section II, Green/Environmental Conservation Action Statements*, is a user-friendly checklist containing seven categories:

- *Feasibility Study*
- *Roles and Responsibilities*
- *Budget/Finance*
- *Marketing*
- *Training*
- *Monitoring*
- *Assessment*



Greening the School Nutrition Scene! A Guide for Developing and Sustaining Green/Environmental Conservation Practices for School Nutrition Professionals

## Introduction

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The statements under each category were identified as research-based action options necessary for maintaining a sustainable GEC program. There are 59 action statements that support the achievement of a sustainable GEC program within the seven practice categories. Each statement is assessed following a 4-point scale:

<b>No Support/No Knowledge</b>	Currently has no support or knowledge of related action statement
<b>Potential Resources/Support Available</b>	SN program/school has avenue to secure resources and/or support available to accomplish the action statement
<b>Knowledge and Support Exist for Use</b>	SN program/school has knowledgeable GEC team members and the necessary resources to support the action statement
<b>Resources/Knowledge for Program Sustainability</b>	SN Program has knowledgeable GEC team members and the necessary resources to sustain the action statement

*Not Applicable* is also an option to select should the best practice not address specific program needs.

*Greening the School Nutrition Scene! A Guide for Developing and Sustaining Green/Environmental Conservation Practices for School Nutrition Professionals* may be used to:

- identify potential GEC practices that would benefit the SN program,
- identify internal and external stakeholders involved with GEC practices,
- assess resources needed for implementing a GEC practice,
- identify SN staff training needs to implement and sustain GEC practices, and
- develop approaches to build support for GEC practices.

## DEFINITIONS

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**Ecological/Environmental Sustainability** – Maintenance and sustainability of the environment for future generations (EPA).

**Energy Star** – International standard for energy efficient consumer products.

**Environmental Audit** – An independent assessment of the school district's compliance with applicable environmental requirements or of a party's environmental compliance policies, practices, and controls (EPA).

**Farm-to-School (F2S)** – Partnership between food producers and purchaser (the school district) to sell/purchase locally grown foods. Partners determine the type of food, amount and time of delivery of food, cost, and processes for food quality and food safety supervision, and distribution (ATTRA).

**Green/Environmental Conservation (GEC) Practices** – Actions implemented and sustained to conserve natural and manmade resources. This also includes practices that prevent and/or reduce the amount of waste materials in the environment (EPA).

**Leadership in Energy & Environmental Design (LEED)** – An internationally recognized certification rating system for buildings identifying them as operational to support the health and well-being of its occupants and saves energy, resources and money.

**Low Volatile Organic Compounds (Low-VOC)** – Products with less volatile organic compounds known to evaporate at room temperature and emit sharp odor, ozone, and other compounds. Low-VOC products reduce risks to human health and the environment.

## SECTION I

# IDENTIFY PRELIMINARY ACTIONS FOR ESTABLISHING GREEN/ENVIRONMENTAL CONSERVATION PRACTICES

## SECTION I

### Identify Preliminary Actions for Establishing Green/Environmental Conservation Practices

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#### HOW TO BEGIN...

In this section, you will identify preliminary actions for establishing Green/Environmental Conservation (GEC) practices. These actions may include recognizing potential GEC practices, collaborating with school staff and community organizations to create GEC policies and plans.

#### 1 IDENTIFY GEC PRACTICES

Below is a checklist of GEC practices commonly found in school nutrition (SN) departments and/or schools. Review the list and check the practices that you think could be implemented in your school nutrition department and/or school. This list could be shared with SN staff, school administrators, principals, teachers, students, custodial staff, or parents to identify preferred GEC practices that could be adopted and sustained in your SN department and/or school.

##### **RECYCLING PRACTICES**

- |  |  |
|--|--|
| <input type="checkbox"/> Recycle paper/cardboard/boxes   | <input type="checkbox"/> Recycle aluminum                        |
| <input type="checkbox"/> Recycle plastic milk bottles  | <input type="checkbox"/> Recycle glass                           |
| <input type="checkbox"/> Reuse wood pallets  | <input type="checkbox"/> Recycle oil/grease                      |
| <input type="checkbox"/> Use recyclable serveware  | <input type="checkbox"/> Use recyclable trays                    |
| <input type="checkbox"/> Recycle polystyrene/Styrofoam   | <input type="checkbox"/> Recycle steel, tin, and/or other metals |
| <input type="checkbox"/> Reuse/recycle biodegradable products  |  |
| <input type="checkbox"/> Plan to follow single stream recycling procedures                               |  |
| <input type="checkbox"/> Purchase/Use carts and racks made of recycled aluminum                          |  |
| <input type="checkbox"/> Place recycling bins and cans in key locations to encourage recycling practices |  |

##### **ENERGY CONSERVATION PRACTICES**

- |  |   |
|--|---|
| <input type="checkbox"/> Turn off excess lights  | <input type="checkbox"/> Use energy-efficient bulbs               |
| <input type="checkbox"/> Use energy-efficient equipment  | <input type="checkbox"/> Purchase/Use hybrid vehicles             |
| <input type="checkbox"/> Install motion-sensored lighting                                      | <input type="checkbox"/> Remove excess fluorescent bulbs          |
| <input type="checkbox"/> Use solar panels  | <input type="checkbox"/> Use bio-fuels in transportation vehicles |
| <input type="checkbox"/> Use wind energy   | <input type="checkbox"/> Install programmable thermostats         |
| <input type="checkbox"/> Keep windows and doors closed   | <input type="checkbox"/> Purchase/Use Energy Star Equipment       |
| <input type="checkbox"/> Implement/Practice fuel conservation procedures                       |   |
| <input type="checkbox"/> Use an Energy Monitoring Management System                            |   |
| <input type="checkbox"/> Monitor and regulate temperatures on all cooling equipment            |   |
| <input type="checkbox"/> Ban/Remove personal microwaves, fans, and refrigerators in classrooms |   |



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Conservation Practices for School Nutrition Professionals

**Section I      Identify Preliminary Actions for Establishing Green/Environmental Conservation Practices**

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***Air and Water Conservation Practices***

- |  |   |
|--|---|
| <input type="checkbox"/> Turn off water when not in use  | <input type="checkbox"/> Plan/Install sensor-control ventilation hoods  |
| <input type="checkbox"/> Use microfiber mops/cleaning cloths   | <input type="checkbox"/> Plan/Install waterless urinals in restrooms    |
| <input type="checkbox"/> Plan/Install low-flow spray nozzles   | <input type="checkbox"/> Plan/Install motion-sensored water faucets     |
| <input type="checkbox"/> Plan/Install water collection system  | <input type="checkbox"/> Implement Integrated Pest Management System    |
| <input type="checkbox"/> Plan/Install low-flow faucets   | <input type="checkbox"/> Conduct maintenance of water filtration system |
| <input type="checkbox"/> Conduct regular maintenance of faucets, ice machines, and steamers to prevent leaks       |   |
| <input type="checkbox"/> Use GEC-certified, non-toxic and/or biodegradable products to reduce air/water pollutants |   |

***Resource Conservation Practices***

- |   |  |
|---|--|
| <input type="checkbox"/> Reuse paper  | <input type="checkbox"/> Donate leftovers to local food banks          |
| <input type="checkbox"/> Use can crushers to reduce waste                         | <input type="checkbox"/> Plan/Follow other product reduction practices |
| <input type="checkbox"/> Send e-mails instead of paper memos                      | <input type="checkbox"/> Plan/Reduce bleach use                        |
| <input type="checkbox"/> Plan/follow bleach-free practices                        | <input type="checkbox"/> Use both sides of paper for printing          |
| <input type="checkbox"/> Use pulper to reduce amount of waste                     |  |
| <input type="checkbox"/> Prepare menu items that require less labor/energy        |  |
| <input type="checkbox"/> Purchase products with minimal packaging to reduce waste |  |

***GEC Building Renovations and Construction Practices***

- |   |  |
|---|--|
| <input type="checkbox"/> GEC building renovations   | <input type="checkbox"/> Plan/Install windows for natural light    |
| <input type="checkbox"/> New GEC building construction  | <input type="checkbox"/> Plan/Apply for GEC certification programs |
| <input type="checkbox"/> Use eco-friendly paint   | <input type="checkbox"/> Plan/Install double-paned windows         |
| <input type="checkbox"/> Plan/Install energy-/water-efficient equipment   |  |
| <input type="checkbox"/> Plan/Install Low-Volatile Organic Compounds (Low-VOC) flooring                           |  |
| <input type="checkbox"/> Use recycled materials/eco-friendly construction materials for new buildings/renovations |  |
| <input type="checkbox"/> New building/renovation projects include plans that support recycling practices          |  |
| <input type="checkbox"/> Plan/Apply for Leadership in Energy & Environmental Design (LEED) School Certification   |  |

***Other GEC Practices***

- |   |   |
|---|---|
| <input type="checkbox"/> Composting   | <input type="checkbox"/> Form School-based GEC team                     |
| <input type="checkbox"/> School garden projects                             | <input type="checkbox"/> Participate in community conservation projects |
| <input type="checkbox"/> GEC Policy Development                             | <input type="checkbox"/> Reduce/shorter school days to conserve energy  |
| <input type="checkbox"/> Provide GEC and food conservation education        |   |
| <input type="checkbox"/> Participate in farm-to-school programs (F2S)       |   |
| <input type="checkbox"/> Purchase locally-grown foods (not a part of a F2S) |   |

Section I Identify Preliminary Actions for Establishing Green/Environmental Conservation Practices

## 2 IDENTIFY KEY STAKEHOLDERS

It's important to gather support for implementing and sustaining GEC practices in your school nutrition (SN) department and/or school. The next step is to identify members of your school nutrition staff and school staff who support GEC practices or who are aware of the importance of GEC practices in schools. It will be important for you to describe the benefits for implementing and sustaining GEC practices to all stakeholders. You can use the list below to help you to identify key stakeholders that are interested or have been implementing GEC practices:

### INTERNAL

- |  |  |
|--|--|
| <input type="checkbox"/> SN Director                             | <input type="checkbox"/> SN Supervisors/Managers         |
| <input type="checkbox"/> SN Staff                                | <input type="checkbox"/> School District Administrators  |
| <input type="checkbox"/> School Staff                            | <input type="checkbox"/> Principals                      |
| <input type="checkbox"/> Parents                                 | <input type="checkbox"/> Teachers                        |
| <input type="checkbox"/> Students                                | <input type="checkbox"/> Custodial Staff                 |
| <input type="checkbox"/> Buildings & Grounds Director/Supervisor | <input type="checkbox"/> Buildings & Grounds Staff       |
| <input type="checkbox"/> Financial Manager/Accountant            | <input type="checkbox"/> PTA/PTO                         |
| <input type="checkbox"/> Student Groups/Organizations            | <input type="checkbox"/> School District GEC Coordinator |

### EXTERNAL

- |   |  |
|---|--|
| <input type="checkbox"/> Vendors/Manufacturers                      | <input type="checkbox"/> Farmer (F2S)                |
| <input type="checkbox"/> Environmental Specialist/Health Inspector  | <input type="checkbox"/> City/County Agencies/Agents |
| <input type="checkbox"/> Utility/Power Company                      | <input type="checkbox"/> County Extension Agent      |
| <input type="checkbox"/> Community Partners/Community Organizations |  |

## 3 ADVOCATE AND INFORM

The adoption of GEC practices depend on strong support to make change. Share information about the importance of GEC in schools and how everyone can help. Organize information for sharing by presenting a multimedia presentation, distributing GEC brochures, newsletter articles, or social network postings. Your medium for sharing should include:

- information and ideas about GEC practices/environmental issues,
- benefits of implementing and sustaining GEC practices, and
- information on how stakeholders could help.

### Resources:

**Green Schools Initiative**  
[www.greenschools.net](http://www.greenschools.net)

**Center for Eco-literacy**  
[www.ecoliteracy.org](http://www.ecoliteracy.org)

**Growing Greener Schools**  
<http://www.growinggreenerchools.org/>

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Section I Identify Preliminary Actions for Establishing Green/Environmental Conservation Practices

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**Center for Green Schools**

<https://www.google.com/search?q=forming+a+green+school+team&ie=utf-8&oe=utf-8&aq=t&rls=org.mozilla:en-US:official&client=firefox-a>

**School Nutrition Association, The Green Guide 2010**

<http://www.schoolnutrition.org/Content.aspx?id=13376>

**Healthy Schools Campaign,**

***The Quick + Easy Guide to Green Cleaning in Schools***

<http://www.greencleanschools.org/s4-food-service.html>

**The U.S. Green Building Council, The Center for Green Schools**

<http://www.centerforgreenschools.org/main-nav/takeaction/advocate.aspx>

**The U.S. Green Building Council,**

***Green Schools Move Forward Through Advocacy***

<http://www.usgbc-ncc.org/resources/blog/1-chapter-news/103-green-schools-move-forward-through-advocacy>

**Treehugger, Back to School: Become a Green School Advocate**

<http://www.treehugger.com/culture/back-to-school-become-a-green-school-advocate.html>

**Smartplanet, Make Sure Your Community Has a Green School Advocate**

<http://www.smartplanet.com/blog/business-brains/make-sure-your-community-has-a-green-school-advocate/8639>

**The National Food Service Management Institute,**

***Going Green! A Case Study Approach Examining Green and Environmental Conservation Practices in School Nutrition Programs***

<http://www.nfsmi.org/documentlibraryfiles/PDF/20130204081844.pdf>

## 4 FORM GEC TEAM/COMMITTEE/COALITION

Because one person cannot effectively implement and sustain GEC practices alone, it is important to form a GEC team. Your GEC team can plan a course of action for the SN department or school; and investigate, implement, and evaluate green practices likely to become sustainable. You can invite key stakeholders you identified as being interested in the SN department/school commitment to “going green”. Contact all interested stakeholders from your advocacy efforts to serve on a GEC team for your SN department/school and share ways how they can help.

**Resources:**

***The Green Team. Washington State Green Schools***

[www.wagreenschools.org/40/the-green-team.html](http://www.wagreenschools.org/40/the-green-team.html)

***Kerry, M. Building a Successful Green Team: A Heart-Centered Approach.***

***Portland Public Schools***

[http://www.pps.k12.or.us/files/facilities/Rc.doc.Building\\_a\\_Successful\\_Green\\_Team.032010.pdf](http://www.pps.k12.or.us/files/facilities/Rc.doc.Building_a_Successful_Green_Team.032010.pdf)



Section I

Identify Preliminary Actions for Establishing Green/Environmental Conservation Practices

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E  
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K**

Your GEC team is united by the shared purpose of implementing GEC practices. Team members will likely come from diverse backgrounds in the school environment. It is important to recognize that although diverse, you rely on each other to accomplish your purpose. Committing to that purpose is key to mutual respect and trust. One way to get commitment from your GEC team is to have them sign a “GEC pledge”. It can be a pledge to identify potential green practices, potential outcomes, and share information. An excellent example can be found at [www.greenschools.net](http://www.greenschools.net) “Take the Green Schools Pledge”.

## ROLES & RESPONSIBILITIES

### **Individual and GEC team roles**

Individual and GEC team roles may depend on school dynamics and GEC practices. The team is responsible for establishing governance, commitment, service, and time. Team roles may include:

- **Budget/Finance** – management of resources to support GEC practices
- **Coordinator/Community Liaison** – coordinates all GEC efforts at school and in the community
- **Department Representatives** – responsible for sharing information with department staff and bringing department to action
- **Marketing/Public Relations** – distribute information and benefits of GEC efforts
- **Team Secretary/Recorder** – record keeper

### **Establishing mission and goals of the GEC team**

After identifying potential GEC practices you can implement in your school or school district and establishing a GEC team, you will then need to develop a team mission statement and goals. A mission is a shared vision of success. If you were successful in implementing and sustaining your GEC efforts, what would your accomplishments be? Discuss all the GEC practices you'd like to accomplish as a team. As you identify practices, you may notice common themes that begin with action verbs such as: reuse, decrease, increase, implement, or reduce. Use these themes to develop a mission statement. Limit it to one sentence and keep it focused. What do you ultimately want to accomplish? Refer to your vision of success to help compose the mission statement. Next, establish goals. Goals are based upon principles and beliefs for implementing and sustaining GEC practices. The mission and goals should be shared by all GEC team members. The following resources are available to guide the development of the mission statement and goals.

### **Resources:**

Gabriel, J. & Farmer, P. Association for Supervision & Curriculum Development.  
*Chapter 2: Developing a Vision and a Mission.*  
<http://www.ascd.org/publications/books/107042/chapters/developing-a-vision-and-a-mission.aspx>

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Scheid, J. (2010). *Tips on Writing Goals for a Project*. Bright Hub PM.  
<http://www.brighthubpm.com/project-planning/70769-tips-on-writing-goals-for-a-project/>

Greenschools.net *The four pillars of a green school*  
[www.greenschools.net](http://www.greenschools.net)

#### FOCUS ON PRIMARY GEC PRACTICE

Once you have established your mission and goals, it is time for your GEC team to brainstorm potential GEC practices within the categories you identified in Section I. It is easy to get excited about all the possible GEC goals you could accomplish. Now is the time to evaluate your list of ideas in the context of your mission: Is this practice a good fit with our overall goals? Focus on the GEC practices that fit your mission. At this stage you should conduct a feasibility study for the potential GEC practices. A feasibility study is an evaluation of the factors affecting a proposed practice and the resulting outcome. You will collect information on the costs and resources needed for the GEC practice. The feasibility study is a decision making tool to make the decisions that will serve the best interest of the school or school district.



## SECTION II

# GREEN/ENVIRONMENTAL CONSERVATION ACTION STATEMENTS

## SECTION II

### Green/Environmental Conservation Action Statements

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#### INSTRUCTIONS

This section contains seven categories: *Feasibility Study, Roles and Responsibilities, Budget/Finance, Marketing, Training, Monitoring and Assessment*. There are 59 action statements that support the achievement of sustainable GEC programs within the seven categories. Review the GEC statements and identify actions your school nutrition department/school district may take to plan, implement, evaluate, and sustain GEC practices.

Each statement should be assessed using a 4-point scale:

<b>No Support/No Knowledge</b>	Currently has no support or knowledge of related action statement
<b>Potential Resources/Support Available</b>	SN program/school has avenue to secure resources and/or support available to accomplish the action statement
<b>Knowledge and Support Exist for Use</b>	SN program/school has knowledgeable GEC team members and the necessary resources to support the action statement
<b>Resources/Knowledge for Program Sustainability</b>	SN Program has knowledgeable GEC team members and the necessary resources to sustain the action statement

*Not Applicable is also an option to select should the best practice not address specific program needs.*



SECTION II

Green/Environmental Conservation Action Statements

**STEP 1** **FEASIBILITY STUDY**

A feasibility study allows individuals/GEC team to review GEC practices your SN program/school district could implement or evaluate existing ones. As you consider potential GEC practices, be aware of available resources in your school/district required to achieve desired sustainability. The purpose of your study is to collect information to determine the outcomes of your potential GEC practice.

<b>FEASIBILITY STUDY</b> <b>GEC Action Statements</b>	No Support/Knowledge	Potential Resources/Support Available	Knowledge & Support Exist for Use	Resources/Knowledge for Program Sustainability	Not Applicable
1. Identify proposed GEC practice	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Describe current practice or procedures	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Identify resources needed to implement/sustain GEC practices	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Identify SN personnel involvement in the GEC practice	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Identify school administrators/staff involvement in the GEC practice	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Determine methods and how often GEC practices will be monitored by GEC coordinator/GEC team	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Determine if there are any health, safety, or sanitation issues or concerns associated with implementing new or sustaining existing GEC practices	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Identify potential barriers for implementing or sustaining GEC practices	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Explore if any other GEC practices are being planned, implemented, or sustained in the SN department or school district	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



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**SECTION II**

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<b>FEASIBILITY STUDY</b> <b>GEC Action Statements</b>	No Support/Knowledge	Potential Resources/Support Available	Knowledge & Support Exist for Use	Resources/Knowledge for Program Sustainability	Not Applicable
10. Determine if there are opportunities to collaborate between school departments and personnel to help identify GEC stakeholders and roles. <i>(Review the ROLES &amp; RESPONSIBILITIES section on page 15 for help)</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. Determine if community agencies assist with training workshops, resources, and/or materials	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. Identify vendors who are implementing GEC practices that benefit the SN program	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. Develop a GEC plan with policies and procedures	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. Specify and clearly define measurable goals to build support for GEC practices	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. Evaluate the SN department/school district/school board philosophy, goals and priorities as related to the GEC practices/program	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16. Develop a plan to increase support with SN/ school administrators and staff, students, and district leaders who will be or are involved in implementing/sustaining GEC practices	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17. Obtain approval and support from school district/ school board administrators prior to implementing GEC practices	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18. Conduct baseline assessments for GEC outcomes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19. Seek grants and incentives to support GEC practices	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SECTION II

Green/Environmental Conservation Action Statements

STEP  
2

**ROLES AND RESPONSIBILITIES**

In this step, you will assess the roles and responsibilities of internal and external stakeholders who would contribute to the sustainability of GEC practices. Complete the assessment of the following action statements and establish accountability measures for GEC roles and responsibilities of stakeholders.

<b>ROLES AND RESPONSIBILITIES</b> <b>GEC Action Statements</b>	No Support/Knowledge	Potential Resources/Support Available	Knowledge & Support Exist for Use	Resources/Knowledge for Program Sustainability	Not Applicable
1. Select a GEC coordinator	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Organize a GEC team to implement/sustain GEC practices	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Identify leadership roles for key stakeholders within the GEC program	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Identify school and SN staff who would be responsible for implementing and sustaining GEC practices	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Determine if opportunities exist to collaborate between school departments and personnel to help identify GEC roles	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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**STEP 3 BUDGET/FINANCE**

In this step, you will evaluate the financial impact of implementing or sustaining GEC practices. In some cases, external support such as grants or opportunities to collaborate with other organizations is available.

<b>BUDGET/FINANCE</b> <b>GEC Action Statements</b>	No Support/Knowledge	Potential Resources/Support Available	Knowledge & Support Exist for Use	Resources/Knowledge for Program Sustainability	Not Applicable
1. Create a budget for implementing/sustaining GEC practices based on feasibility study results	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Evaluate if the GEC practices have opportunities to generate revenue	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Identify vendors who may have rebates	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Identify in-kind services, such as audit services	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Identify grant opportunities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Identify marketing costs such as supplies and contract services	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Identify utility costs for reductions and special rates	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Identify labor costs such as consultants' fees	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Identify equipment costs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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**STEP 4** **MARKETING**

Marketing is more than advertising your product or service. It is the process of building a relationship with your “customers” (i.e., staff, students, parents, administrators, and the community). This relationship is based on meeting your customers’ needs through the four P’s – **Product, Price, Place, and Promotion**. For example, your feasibility study may show there is support for plastic milk bottle recycling.

Your target audience would include students, school staff, and beverage vendors. The beverage vendors may be able to supply your school with storage containers for empty milk bottles. You could inform the school/school district of your GEC effort by hosting a recycling kick-off with SN staff, school athletes, teachers, and principals, distributing flyers to staff, and posting signs next to the recycling containers.

Other examples of marketing strategies for implementing milk bottle recycling:

- Teachers on the GEC team may use the recycling program as part of an environmental curriculum.
- Students could measure the volume of plastic bottles collected and record the data on a poster they create which is displayed in the cafeteria.
- The GEC coordinator/GEC team would share this information with administrators and other stakeholders, highlighting any waste removal savings and impact to the science curriculum.

<b>MARKETING</b> <b>GEC Action Statements</b>	No Support/Knowledge	Potential Resources/Support Available	Knowledge & Support Exist for Use	Resources/Knowledge for Program Sustainability	Not Applicable
1. Create a marketing plan for GEC practices	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Conduct a Market Research Study: conduct a SWOT (Strengths, Weaknesses, Opportunities and Threats) analysis by reviewing a GEC practices’ benefits, barriers, and opportunities for sustainability	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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<b>MARKETING</b> <b>GEC Action Statements</b>	No Support/Knowledge	Potential Resources/Support Available	Knowledge & Support Exist for Use	Resources/Knowledge for Program Sustainability	Not Applicable
3. Identify your target audience <i>Examples: Students, vendors, school board, administrators, PTA/PTO, community organizations, utility companies, waste management, city/county officials</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Provide updates to all stakeholders including school board and school administrators of GEC progress	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Provide an annual report on GEC efforts to the school community	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Establish budget for marketing plan	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Create a GEC brand that includes your SN department/school mission, vision, and/or goals <i>Examples include: logos, slogans, promotional materials and promotional reusable containers</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Establish marketing goals that include information about your GEC practices	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Ensure that marketing goals include benefits for implementing/sustaining GEC practices to the school community	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Post GEC plans and/or policies on the SN program/school/school district Website, newspaper, or distribute through other forms of media	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



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**STEP 5** **TRAINING**

In this step, you will consider training issues for GEC practices such as content development, internal and external support, and available resources. Training needs will likely be identified through the feasibility study.

<b>TRAINING</b> <b>GEC Action Statements</b>	No Support/Knowledge	Potential Resources/Support Available	Knowledge & Support Exist for Use	Resources/Knowledge for Program Sustainability	Not Applicable
1. Determine training needs of SN staff, school staff, volunteers, and/or students	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Establish and implement GEC training to support GEC practices <i>Examples of GEC training needs: recycling, energy, air, water, resource conservation, GEC building and renovation, composting, farm to school, gardens, other</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Identify resources for training <i>Examples of GEC training resources: utility companies, federal, state, and local agencies, local associations</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Ask vendors to provide on-site training in the proper use of their products <i>Examples of types of training delivery: on-site, classroom, online, "no-time" lessons (written), hands-on (interactive), conferences</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Train SN staff to implement GEC activities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Include strategies for providing opportunities to inform and educate students in GEC plans	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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**STEP 6** **MONITORING**

In this step, you will consider how outcomes of GEC practices will be evaluated. The outcomes should be linked to your GEC mission statement and goals.

<b>MONITORING</b> GEC Action Statements	No Support/Knowledge	Potential Resources/Support Available	Knowledge & Support Exist for Use	Resources/Knowledge for Program Sustainability	Not Applicable
1. Determine how GEC outcomes will be measured	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Conduct baseline assessments for GEC outcomes that will be measured	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Assess effectiveness of each GEC practice using data collected – frequency determined by policy & procedure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Document all changes to the GEC plan/policy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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**STEP 7 ASSESSMENT**

Assessment is the next step after you have implemented a GEC program and measured its outcome. GEC results should be evaluated in the context of local, state, and federal regulations. Stakeholders' support and the financial impact of GEC practices will determine sustainability as well as adoption of future GEC practices.

<b>ASSESSMENT</b> GEC Action Statements	No Support/Knowledge	Potential Resources/Support Available	Knowledge & Support Exist for Use	Resources/Knowledge for Program Sustainability	Not Applicable
1. Identify existing GEC regulations, ordinances, policies, & procedures	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Seek information and assistance for GEC initiatives from federal, state, and local agencies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Assess all of the GEC practices such as energy, water, solid waste, and air that could be adopted by the SN program	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Provide opportunities for school board members, school administrators, parents, school staff, students, and parents to share their ideas about GEC	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Assess the potential benefits for implementing and sustaining GEC practices in the school nutrition department and school district	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Identify practical GEC practices for the SN department, school, school district, and community	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



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## SECTION II RESOURCES

## SECTION II

### Resources

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#### Step 1: Feasibility Study

*EPA Green Practices from Waste Management to Energy Efficiency*  
[www.epa.gov/oaintmt/practices/index.htm](http://www.epa.gov/oaintmt/practices/index.htm)

*NY Schools Waste Reduction Resource Book*  
[http://www.dec.ny.gov/docs/materials\\_minerals\\_pdf/schoolhb.pbf](http://www.dec.ny.gov/docs/materials_minerals_pdf/schoolhb.pbf)

#### Step 3: Budget and Finance

*Guide to Financing Energy Smart Schools*  
[www.eere.energy.gov/buildings/publications/pdfs/energysmartschools/ess\\_financeguide\\_0708.pdf](http://www.eere.energy.gov/buildings/publications/pdfs/energysmartschools/ess_financeguide_0708.pdf)

#### Step 4: Marketing

*Information on marketing and planning guides*  
[www.managementhelp.org/marketing](http://www.managementhelp.org/marketing)

*Marketing Tutorials*  
[www.knowthis.com/index.php](http://www.knowthis.com/index.php)

#### Step 5: Training

*Toolkits for “green clean schools”*  
[www.healthyschoolscampaign.org](http://www.healthyschoolscampaign.org)

*American Federation of Teachers  
Building Minds, Minding Buildings*  
<http://www.aft.org/pdfs/psrp/bmmbgreenguide0109.pdf>

#### Step 6: Monitoring

*US Green Building Council provides resources for building, operating, and maintaining green schools: The Center for Green Schools*  
[www.greenschoolbuildings.org](http://www.greenschoolbuildings.org)

*US Green Building Council*  
[www.usgbc.org](http://www.usgbc.org)

#### Step 7: Assessment

*U. S. Green Schools Foundation providing green practices consulting to schools*  
[www.usgreenschools.org](http://www.usgreenschools.org)

*Energy Star: Energy efficient equipment*  
[www.energystar.gov](http://www.energystar.gov)

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*FTC guidelines on green products and services, deceptive language, specific product information*  
<http://www.ftc.gov/opa/2012/10/greenguides.shtm>

<http://www.ftc.gov/os/2012/10/greenguides.pdf>

Courage to lead – Passing green school policies

<http://www.aia.org/aiaucmp/groups/aia/documents/pdf/aiab093467.pdf>

Greening our schools – A state legislator's guide to best policy practices

[http://www.centerforgreenschools.org/docs/GreeningOurSchools\\_PRINT.pdf](http://www.centerforgreenschools.org/docs/GreeningOurSchools_PRINT.pdf)

Greening School Behaviour and Attitudes = Greening Our Ethic

<http://www.greenhearted.org/greening-school-behaviour.html>

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Conservation Practices for School Nutrition Professionals



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