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NR 734: School Building Energy Efficiency Education
WI K-12 Energy Education Program (KEEP)
Franklin Middle School
K-5 Alternative Education
Native Planting for Insulation and Energy Efficiency

1. Action Plan Summary

Project Purpose

The purpose of this plan is to incorporate native plants as a way of shading the building on hot days and providing windbreaks and insulation on colder days. The native plantings also have the added bonus of attracting birds, insects and other wildlife, which will serve to connect urban students and school staff to a more diverse natural environment than currently exists on campus. This project will be implemented in the spring of 2010.

I expect that alternative education staff and students from across the city will participate, as well as interested special education staff at Franklin. Chance for Change East and West have both expressed interest in helping with a current landscaping project. I expect they will be interested in a project for the 2009-2010 school year. The recently formed district Green Team, which includes teachers, students and members of several district departments, will also have some level of involvement.

My students and I will research which plants we would like to include. I will prepare grants to fund the project. I will discuss placement of plants with district facilities director, Bob Fuhr, and our on-site facilities manager, Jim Wiesner. These men, along with my principal, Matt Weller, and Director of Alternative Education, Tom Blankenheim have given me the go ahead to put native plants on the property. The budget amount will determine how much we can do.

I will aim for a \$1000 grant. We will incorporate trees and other native plants. We will not go after seeds, because even though they are cheaper, they are less reliable than adult plants.

2. Introduction to the Audience

This school year, I have been able to gather enough interested parties, plant donations, monetary donations, volunteers, as well as permission from the right people to get a native garden project started at Franklin Middle School. Facilities and administration has signed off on the plan, monetary donations have been pledged, and we have planted over 200 plants. Our agriculture teacher and a teacher at Chance for Change East are helping us sprout some of our plants.

Franklin Middle Schools sits near Oneida and Mason, which is one of the busiest intersections in the city of Green Bay. Currently, it serves about 700 students, but has

capacity for 1200. It may move to a K-8 model, which would increase attendance. With proper signage and staff education, many students and staff members would have the opportunity to learn about native plants and energy efficiency. Visitors to the school, staff and students at Notre Dame Academy, and commuters who use West Mason would also be able to appreciate the aesthetics of the project.

Signs would explain the benefits of choosing native plants and would educate students, staff and visitors about shading and wind-blocking. I can advertise energy-saving principles by writing short pieces in the Franklin newsletter, and the District Events e-newsletter. I could also give tours to staff members, who could in turn give tours to their students. It may be especially useful to discuss with agriculture, science and special education teachers, as they would have more freedom to practice outdoor education. We could also do tours with the district Green Team to discuss how plantings can benefit wildlife and save money on energy costs.

3. Statement of Problem or Need

Bob Fuhr and his facilities team have identified much inefficiency in the district. They have also created detailed energy costs on a building-by-building basis. We have baseline data with which to work.

Franklin Middle School is a 50-year old building. Many of the rooms are poorly insulated, which leads to high heating bills during most of the year and high cooling costs in the warm months. With proper shading and windbreaks, energy costs could be cut by 10%, according to one EPA estimate. The district is undergoing a massive budget overhaul. Any project funded by grant money that could save money for the district would help save jobs, programs and other resources.

4. Project Goals and Objectives and 5. Methods and Timelines [SMART Goals Section]

April-May 2009, I will create and revise project proposal.

By the end of spring 2009, I will have gathered the pertinent baseline data on energy costs for Franklin Middle School.

By the end of spring 2009, I will map current plantings on Franklin Middle School property.

By the end of spring 2009, I will add ideas for site improvements.

During the beginning of the 2009-2010 school year, my students and I will choose plants for the project.

During the beginning of the 2009-2010 school year, my students and I will discuss the costs and benefits of adding native plants to specific spots on the Franklin Middle School campus.

By the end of fall 2009, I will have made contacts with interested parties about volunteering with the project.

By the end of fall 2009, I will have applied for at least 2 grants to pay for the project. By the end of fall 2009, I will have gained permission to do plantings at the Franklin Middle School site from current administrators and facilities staff.

By spring 2010, I will have gained local media involvement to promote the project. By spring 2010, I expect to have several native plants in the ground.

6. Evaluation Criteria and Process

Short-term success in the project will be measured by the timely and reasonable meeting of the above goals.

Long-term success in this project will be measured by the use of the native plantings as a teaching tool. A drop in energy use at Franklin Middle School will indicate success. Use of the Franklin campus by native birds, butterflies, bees and other wildlife is another indicator of success. An improvement in aesthetics and reduction in need for traditional yard care (mowing, weeding, spraying) will also be part of a successful plan. Creating appropriate signage for the native plantings will also be an important educational component of the plan.

The facilities department will track energy usage at Franklin. My students and I have been gathering baseline data on wildlife seen on campus. If we continue this work, we will be able to gauge attractiveness to wildlife. Because Franklin is in the middle of an urban area, we will probably expect to see a rise in avifauna over other types of wildlife. A staff survey on use of the native plants and corresponding signage as a tool for learning can measure success over the course of several years.

Educational success can be measured by providing quizzes to staff and students. Questions regarding proper plant placement, seasonal changes in energy demands, seasonal benefits of plantings, and plant identification can be included within the quiz.

7. Budget

I will seek grant money and private donations for this project. I expect to apply for at least \$1000 for mature trees and other plants.

Several groups have grant money for such projects. These are possible sources: Wild Ones Seeds for Education fund; Wisconsin Environmental Education Board (WEEB) grants; Wisconsin Society for Ornithology Grant Program; and Lowe's Outdoor Classroom Grant Program.

Several local groups make native plant donations as well, including Wild Ones, Stone Silo Prairie Nursery, and Applied Ecological Services