Keeping Green Schoolyards Green:
A Study of Challenges and Success Strategies for the Long-Term Sustainability of Schoolyard Habitats

Executive Summary[1]

Despite the well-researched benefits of nature exposure for physical and emotional well-being, children today spend less time outdoors than in years past. As a result, the green schoolyard movement, which aims to transform school campuses from grass and asphalt to diverse havens of nature, has emerged to address this issue. A wealth of information is available to educators on how and why to begin green schoolyard projects, but little empirical research exists on sustaining these projects for many years after their installation. Therefore, the objective of this study was to determine how and why some green schoolyard projects are successful over the long term and why others are not. The green schoolyard program used here to examine this topic was the National Wildlife Federation's Schoolyard Habitats program. The Schoolyard Habitats program, which was established in 1996, has two purposes: 1) to educate students about the natural world and encourage stewardship behaviors and 2) to conserve the environment by providing wildlife habitat.

This study of the Schoolyard Habitats program began in October 2011 with a series of telephone and email interviews. Individuals selected for interviews were teachers or volunteers that were considered to be "habitat leaders," or those educators that were most heavily involved in the Schoolyard Habitats program at their schools. The majority of the sample of schools still used their habitats for educational purposes and were deemed "active habitat schools." However, in some schools, the habitats had been removed or were no longer used for education, and these schools were classified as "dormant habitat schools." Figure 1 shows that 69 percent of schools that responded to the interviews were active habitat schools.

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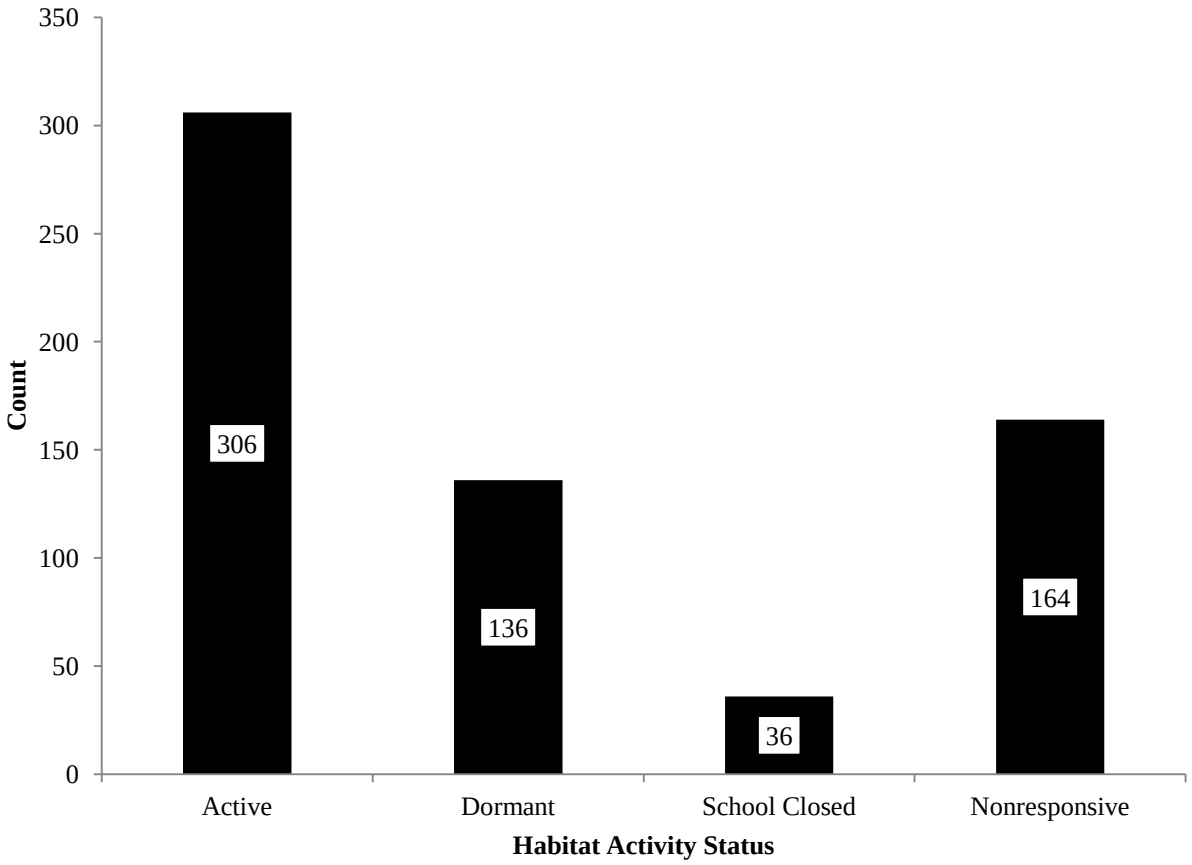

Figure 1 Counts of schools contacted for interviews that were classified as active, dormant, closed, or nonresponsive.

During the interviews, educators were asked to discuss challenges that hindered the continual use and upkeep of their schoolyard habitats. Their responses fell into three main categories that were further separated into individual issues. Pertinent examples and additional information related to each of these challenges is presented in Table 1.

Table 1 Schoolyard habitat challenges described by interviewees from active and dormant habitat schools.

Challenge Categories	Examples
1) Habitat design and location	
Safety and usability issues	• Poison ivy and biting/stinging insects • Potential for drowning hazard in school ponds • Prairie burns near school building • Lack of shade/inconvenient location
Wildlife challenges and conflicts	• "Regular garden challenges"—mammals eating plants or birdseed • Nonnative wildlife • Human behavior—students/teachers disturbing wildlife • Difficulty attracting wildlife • Large carnivores were NOT mentioned as a problem
Damage	• Renovations/construction on school building destroys habitat • Vandalism • Pollution/pesticides • Broken fixtures
Weather and seasonality	• Weather-related damage (falling trees, drought) • Too cold/rainy to use habitat • Short growing season limits the use of the habitat for students
2) The school environment	
Constrictive curriculum	• Changing science curriculum causes discontinued use of habitat • Pressure to cover other subjects for standardized tests • Habitat seen as an "add-on" to strict curriculum
Lack of teacher involvement	• Teachers are more comfortable teaching indoor lessons • Lack of time to use habitat because of "curriculum crunch" • Habitat viewed as a play area rather than a learning area • No incentive for teachers to use
Lack of time	• Mostly due to curriculum pressures • Sometimes a minimal challenge and other times a major concern
Unsupportive administration	• Administrators ordering removal of habitat for cosmetic reasons • Administrators supportive of habitat on paper but don't make it a priority • Turnover of administrators from a supportive hands-on principal to a hands-off one
Lack of funding	• Habitats are not always built into school budgets, so funds must be sought elsewhere • Direct correlation between poverty in the school community and lack of funding for the habitat
3) Lack of community involvement	
Lack of community understanding	• Communities with the mentality that "everything should be mowed" • Dislike of the unmanicured look of a wildlife garden
Maintenance	• Weeding and watering often seen as minor challenges • The biggest habitats were actually the most likely to remain active
Difficulties with habitat workforce	• Lack of volunteerism—too much maintenance for too few people • Schoolyard habitats in affluent neighborhoods tend to be parent-driven whereas habitats in impoverished areas tend to be teacher-driven • Turnover of habitat leaders

This final example, turnover of habitat leaders, tended to be one of the best predictors of a habitat's status as active or dormant. Several educators emphasized how important it was to have leadership for projects like these, and some individuals worried that when they retired or left the school, no one would take over for them and the habitat would be abandoned. Figure 2 shows that this concern was likely warranted. In the sample of schools that still employed their original habitat leaders, 89 percent of the habitats were active. But for schools that had lost their original habitat leaders, only 61 percent of the habitats remained active.

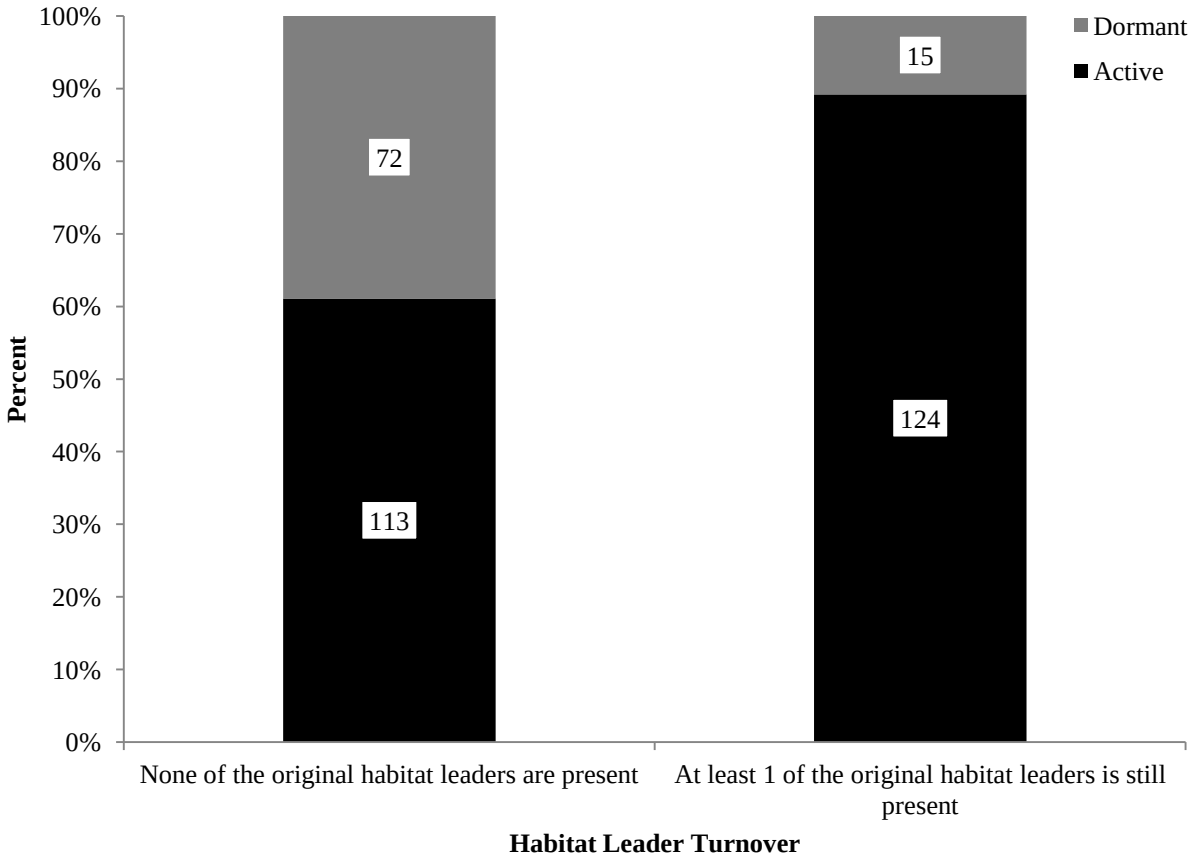

Figure 2 Percentages of schools with active and dormant habitats based on whether any of their original habitat leaders were still present at the time of the interview. Original habitat leaders were considered to be those people who applied for the habitat's certification with National Wildlife Federation.

Despite all of these challenges—or rather, because of them—many success strategies were discussed as well. Although cases vary school by school, one of the main keys to sustaining schoolyard habitats rests in promoting the habitat to a school-level priority rather than leaving it as an isolated project of one or a few educators. When the habitat is a part of the school's culture, when it is valued by students, teachers, administrators, and the community, then it is more likely that the school will be able to combat challenges and overcome leadership turnover.

Some habitat leaders that were looking to involve more teachers in their schoolyard habitats found success by providing their colleagues with lesson plans and ideas for getting outside. This could be an especially important tactic for achieving involvement of non-science teachers, because survey results indicate that science lessons are the number one use of schoolyard habitats. Teachers of math, social studies, language arts, and other subjects may not see the connection between their curriculum and the schoolyard habitat as easily, and so they therefore miss opportunities for outdoor education. Adding educational signage to a habitat was another way to gain involvement and recognition for the habitat, as signs easily convey the location and purpose of the habitat to the school community.

Advice that interviewees had for schools starting new habitats or revitalizing old habitats was to start small and not build bigger than can be maintained. Several educators described how they started off with a massive project but could not keep a large enough volunteer base to maintain it all. Thus, careful planning and recognition of the amount of work involved with each habitat feature are needed for the best outcomes. Interviewees also advised finding ways to connect habitat elements to the curriculum. For example, if all grade school children are required to know the life cycle of a butterfly, then planting a butterfly garden is a common sense way to bring lessons outside. Additionally, adding seating areas, white boards, or shade to a habitat could make it more inviting and more practical for teachers to use.

Finally, it is worth noting that the dormant habitat stage is not permanent. Many interviewees from active habitat schools mentioned that their schoolyard habitats had gone through periods of disuse before an interested teacher came in and restarted the project. Therefore, those schools with dormant habitats that are interested in restarting the program still have an excellent chance of enjoying an active schoolyard habitat again.