

Healthy School Communities through IPM and Expanded Partnerships: Reducing Pest and Pesticide Risks, Improving Asthma Outcomes and Furthering Environmental Justice

Executive Summary

Childhood asthma is epidemic and increasing, affecting up to 28% of children in low-income communities. IPM is a proven approach to reduce leading causes of asthma and asthma triggers associated with cockroaches, rodents and dust mites. In this project, our national working group will build and expand effective partnerships in fifteen states with high asthma rates to deliver quantified reductions in asthma triggers and pest and pesticide risks in more than 300 school districts. Each of these fifteen coalitions will use peer-to-peer recruitment, ongoing networks and science-based educational materials and approaches to train and support professionals working in and with schools to institutionalize high-level IPM.

Our project supports priorities set by EPA Administrator Jackson, who has asked each staff member at EPA to make environmental justice part of every decision made. Our work aligns with EPA's Strategic Plan by applying science-based methods, targeting areas for high impact potential, identifying factors most conducive to results and rigorously measuring output/outcomes. Our project links to Michelle Obama's childhood obesity campaign: obesity is strongly associated with greater time spent indoors where pest-related allergens are highest as well as impaired lung function potentially increasing asthma risk; up to 75% of patients visiting emergency rooms for asthma treatment are obese (Figueroa-Munoz *et al.* 2001, K State 2008, Wiess and Shore 2004); and children with asthma may also be at greater risk of obesity due to restrictions on physical activity. Our work leverages EPA's investment in the Pesticide Environmental Stewardship Program by developing and implementing an online reporting template for schools to track progress and achieve Gold-level participation.

Our effort will facilitate our ultimate goal of effective, self-sustaining school IPM coalitions in all states, where trained and experienced school professionals recruit and mentor peers at other districts. Implemented nationally, our project will impact more than 49 million students served by 6.1 million staff including 3.1 million teachers in 14,383 public school districts in the US. Although our project will improve outcomes for all children, including at least a 50% improvement in asthma outcomes and pest and pesticide risk reduction, we will disproportionately benefit low-income and non-white populations by virtue of our selection of target geographies and our focus on asthma reduction.

We will leverage prior US EPA, USDA, CDC, state agency and other investments in demonstration projects and network building, secure significant new funding, and use science-based methods to improve, test, measure and report performance of the coalition model for ensuring IPM in schools nationally. The same process refined during this project will be used to continue building state and regional coalitions across the United States.

Our goal is to deliver quantitative reductions in asthma incidence and impacts, and in pest and pesticide risk through expanded partnerships. Performance will be carefully and thoroughly measured through a comprehensive set of metrics and online performance reporting for participating school districts. We will deliver fifteen new, effective coalitions while documenting: numbers of coalition meetings, training site inspections in participating schools, monthly pest press newsletters, Schoolbugs listserv communications, websites and page views, newsletters, presentations and webinars. We will also deliver an expanded national steering committee, an "Ask the Expert" on-line column, take-home educational materials about asthma and IPM in homes, a written business case for coalitions, a tested and refined coalition protocol, a model coalition funding proposal, 300 PESP memberships, and school facility statistics on pesticide use and asthma status. Our project has a strong likelihood of success given our working group's proven track record of national coordination, active engagement of professionals working in and with schools, and leveraged funding exceeding \$2.08 million to date.