

# Western IPM Center Project Report Form

**How to submit:** Please submit this completed form electronically, as an attached Microsoft Word file, to Jane Thomas at [jmthomas@tricity.wsu.edu](mailto:jmthomas@tricity.wsu.edu). If you have questions, contact Linda Herbst, (530) 752-7010. **Content:** Complete each section below, and include responses to as many of the questions listed in Attachment A as are relevant to your project. *These are guidelines.* Provide your readers with enough detail that someone who is not familiar with your project can understand what you were trying to achieve, how you went about it, and what you accomplished, but please keep it concise.

## A. Report Data

**Date:** 03/26/2010

**Reporting Period:** 2007-2009

**Report Type (please check one):**

Progress Report     Final Report

## B. Grant Data

- Grant Agreement #: USDA primary award # 20075112003885; sub-award # 07001492UA2
- Title: Western Region School IPM Implementation and Assessment
- Grant Type: Work Group
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- Washington State University, Puyallup, WA; Tim Stock, IPM Education Specialist
- Oregon State University, Corvallis, OR; William Lanier, Insect Diagnostician and ICPM Assistant, Montana State University, Bozeman, MT
- State(s) involved: Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming.

**C. Nontechnical Summary.** An overview of the project, briefly outlining the problem(s), how your project addresses them, and your results, *written to a lay audience*. (500 words)

The Western Region School IPM Implementation and Assessment Work Group was established in 2007 to encourage collaboration between university, state agencies, federal agencies, industry, and advocacy groups working to encourage and enhance successful implementation of IPM in schools in the western region. We strive to accomplish this through development of an inventory of programs and resources, increased networking and communication, improved access to and sharing of resources, and identification of IPM implementation challenges and barriers.

This region encompasses a wide variety of geographic and climatic habitats. Thus, the pest spectrum is diverse and varies even within states. Many of the Western states support large urban centers with rapidly increasing populations. The level of extension help available within the region is highly variable, with some states having absolutely no Extension entomologists available to support urban initiatives. This work group is comprised of an enthusiastic group of scientists, educators, and regulatory participants, including Extension scientists, state and federal representatives, advocacy representatives and industry experts. While specific pests may vary, the process of implementing IPM in a school environment is oriented towards people management, and as such, is much the same anywhere. As such, our translation of programs within the Western region or from other parts of the United States is appropriate.

Extension and other School IPM (sIPM) programs rely on competitive funds to maintain programs. Although many such programs have been instrumental in providing resources and education to promote the implementation of school IPM, interrupted funding and limited personnel have hampered implementation efforts. Historically, school IPM efforts have often been focused in higher population areas in the eastern United States (Beyond Pesticides, 2003). However, western states now accommodate the fastest growing populations in the U.S., with Las Vegas, NV, and Phoenix, AZ, being two of the nation's fastest growing urban populations. While some western states (e.g., Arizona, Washington, California) have active school IPM programs in specific areas, they often

struggle for resources, and many western urban areas lack implementation efforts completely. School IPM projects sponsored by state agency and non-governmental organizations are often disconnected from national networks that encourage collaboration and minimize duplication of efforts, and therefore often fail to make use of existing implementation resources. The result is an environment of fragmented school IPM programs throughout the West that are effectively isolated from one another.

The Western Region School IPM Implementation and Assessment Work Group has set out to combine efforts and collectively address commonly identified issues. We developed a school IPM assessment tool and completed a state-by-state inventory of sIPM resources among nine represented states, and succeeded in establishing productive collaborations among previously isolated programs. Original membership has continued to increase and almost all the states in the western region are now represented. Conference calls, personal communications, and regular e-mails have facilitated discussions on future collaborative efforts and potential funding opportunities and fostered partnerships among emerging and ongoing sIPM efforts.

**D. Objectives and Progress.** List your objectives and describe your progress for each objective.

1. Expand the Western Region School IPM Implementation and Assessment Work Group by inviting appropriate representatives from Hawaii, Alaska, New Mexico, and Idaho.

Our group now has representatives from: Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, and Wyoming (see Appendix 1 - Membership).

2. Expand assessment of sIPM programs and activities in western states to include all additional states that join the work group in the coming term.

Activities of various kinds have occurred in most of the 13 states participating, the exceptions being Hawaii and Alaska. School IPM needs assessment activities have been run in Oregon and Wyoming. IPM demonstration/pilot sites are running in Utah, Colorado and Oregon. School District Coalition activities are running in Arizona, Washington and Oregon. Stakeholder education and networking activities have occurred in California, Nevada, New Mexico, Idaho, Montana, and Colorado.

3. Conduct a national assessment of sIPM implementation tools through the eXtension website.

The eXtension Community IPM site is developing, but it was not used to assess implementation tool use or popularity. We collaborated as a working group with the National School IPM Implementation Committee members and determined the most useful websites (see Appendix 2 - On-line Resources) as well as determining IPM implementation status in 36 states (see Appendix 3 - IPM Implementation Status).

4. Identify regional and national networking opportunities and promote work group involvement on emerging projects that support awareness, implementation, and assessment of sIPM.

We are networking and resource-sharing with the other three regional school IPM working groups, as well as the national implementation team. We collaborate on state implementation and assessment projects (see Appendix 4 - Collaborative Efforts).

5. Promote work group objectives, members, activities, and resource findings to a national audience.

A number of presentations and publications have been occurred with this goal specifically in mind, presentations are listed in Appendix 4, publications are listed in section E. Outputs below.

**E. Outputs.** List your project's outputs, which might include publications, information, data, meetings held, attendance at meetings held, etc.

Al Fournier has published a new book: Fournier, A., T.J. Gibb & C.Y. Oseto. 2010. Go to the Head of the Class: A Research-based Approach to Understanding Adoption and Implementation of Integrated Pest Management in Schools. Purdue IPM Technical Resource Center, Purdue University. West Lafayette, IN.

California's Use of IPM in Managing Pests in Schools. 2010. Brajkovich, Laurie; Hanger, Ann; Messenger, Belinda; Simmons, Sewell. Outlooks on Pest Management, Volume 21, Number 1, February 2010, pp. 25-30(6).

Gouge, D. H., Green, T., Lame, M., Shour, M., Hurley, J., Braband, L., Glick, S., Graham, F., Murray, K. 2009. Integrated Pest Management: The Most Effective Way to Manage Pests in Your School! [cals.arizona.edu/pubs/insects/az1234.pdf](http://cals.arizona.edu/pubs/insects/az1234.pdf).

School IPM Webinaire, 2009, School Dude. Dawn H. Gouge, University of Arizona.

School IPM Webinaire, 2010, EPA R8. <http://www.peakstoprairies.org/webinars/> Kirk A. VanDyke, University of Wyoming.

Steering committee conference calls/meetings to date: 8

Regional working group conference calls/meetings to date: 7

Open meetings/workshops to date: 8

School IPM 2015 website page requests since 5/24/09 (<http://www.schoolipm2015.com>): 4,583

Newsletters/announcements circulated to contact list to date: 42

**F. Impacts and Potential Impacts.** The “impacts” and “potential impacts” sections of your report will help the Western IPM Center highlight the value of IPM research and education by detailing the real-world impacts of Center-funded projects. We will use the information in news articles, reports, and informational brochures to showcase the impacts of projects that our program supports. *See Attachment A at end of form for questions to assist you in describing the impacts of your project.*

**1. Impacts.** Describe any impacts of your work. *Impacts* are specific changes in condition for those affected by your work. Impacts include adoption of technology, creation of jobs, reduced cost to the consumer, less pesticide exposure to farmers, access to more nutritious food, and a cleaner environment and healthier communities.

## HUMAN HEALTH IMPACTS

Short Term Impacts - Target audiences improve knowledge of:

- IPM role in reducing pests in schools and child care facilities
- existing pest problems and health effects of pest exposure
- increase awareness of sources and health effects of pesticide exposure
- efficacy of lower risk IPM tactics and materials
- benefits of using precision application technology and equipment
- existing IPM laws/policies in other states/schools/districts
- the need to train staff to implement pest management strategies
- how to develop a school IPM plan
- how to develop a school IPM contract and/or bid specification
- increase awareness of School IPM Certification Programs

Changes in Practise -

- Schools districts begin/increase use of IPM tactics
- Schools districts reduce/eliminate pest problems
- Parents and school boards request/support fewer pesticide inputs
- Schools, and districts, reduce use of highly toxic pesticides
- Schools districts increase adoption of lower risk pesticides
- Schools districts increase adoption of precision application technology and equipment
- Schools, districts and/or states adopt IPM laws and/or policies
- Schools provide/increase staff training in implementing IPM tactics
- School maintenance staff become certified applicators
- Schools districts facility staff develop and implement an IPM plan
- Schools districts develop and release an IPM contract and/or bid specification
- Schools districts become IPM Certified
- Children influence parent's management of pests in their homes

## ECONOMIC IMPACTS

Short Term Impacts - Target audiences increase awareness of:

- IPM benefits in reducing pest management costs (including externalities) in schools
- cost-effectiveness and efficacy of specific lower-risk IPM tactics and application technology
- cost-effectiveness of training staff (e.g., kitchen, custodial, educational or other)
- how to develop a school IPM plan
- how to develop a school IPM contract and/or bid specification
- School IPM Certification Programs

Changes in Practise -

- Target audiences prioritize IPM as a cost-effective long-term solution to pest management problems
- Parent groups and school boards request/support fewer pesticide inputs through use of increased IPM
- Increase in schools, districts, agencies, and/or states that develop IPM policies/laws
- Increase in schools/districts that become IPM Certified
- Government provides funding for implementing IPM in Schools programs
- Increase in number of schools/districts that adopt IPM practices
- Schools, districts, and/or agencies provide/increase staff training in implementing IPM strategies
- Maintenance staff become certified applicators after receiving IPM training
- Increase in schools, districts, and/or agencies that develop IPM plans
- Increase in schools, districts, and/or agencies that implement IPM plans
- Increase in the number of schools districts, and/or agencies that develop contracts/bid specifications with specific IPM wording
- Increase in schools, districts facilities, and/or agencies that issue an IPM contract and/or bid specification

**2. Potential impacts.** Describe your project's potential impacts. *Potential impacts* are the ways

that your project's outputs could directly lead to changes in condition that will unfold in the future.

Reduce children's and others exposure to pests and unnecessary pesticides in schools thus improve health and the learning environment

Schools use cost- effective IPM practices

Legal compliance with State and Federal Law

**G. Leveraged Funds.** List *additional funding* you have acquired because of the data and results yielded in this WIPMC-funded project.

**Additional Funding Award #1:**

Date of Award: 2008

Dollar Amount: \$250,000

Grant Period Duration: 2008-2010

Name of Granting Entity: US EPA

Name of Grant Program: PRIA 2

**Additional Funding Award #2:**

Date of Award: 2007

Dollar Amount: \$40,000

Grant Period Duration: 2007-2008

Name of Granting Entity: US EPA

Name of Grant Program: PESP R8

**Additional Funding Award #3:**

Date of Award: 2009

Dollar Amount: \$35,000

Grant Period Duration: 2009-2010

Name of Granting Entity: US EPA

Name of Grant Program: PESP R8

## H. Appendices

1. With your report, please attach *at least two (2) photographs* that illustrate your project. Please describe the photo and indicate the name and institution of the person who took the photo. (If you submit more than two photographs, please include those additional descriptions and photo credits under "I. Additional Information," below.)

Photo #1 description:

Inspection/training workshop. Oregon, Salem-Keiser School District Pilot/Demonstration site. Oregon implementation effort led by Tim Stock OSU. Photo credit: Jerry Jochim

Photo #1 credit (photographer's name and institution):

A good find :) Photo credit: Tim Stock

Photo #2 description:

Ricardo Zubiate teaching. Salt Lake City School District IPM Specialist. Photo credit: Gregg Smith

Photo #2 credit (photographer's name and institution):

Your rubbish?!? This is my dinner. Photo credit: Dawn H. Gouge

2. Also attach any printed fact sheets or other publications resulting from your work that will enhance our understanding of your project and its impacts. Please provide a description of each attached publication below.

Document #1 description:

Gouge, D. H., Green, T., Lame, M., Shour, M., Hurley, J., Braband, L., Glick, S., Graham, F., Murray, K. 2009. Integrated Pest Management: The Most Effective Way to Manage Pests in Your School! [cals.arizona.edu/pubs/insects/az1234.pdf](http://cals.arizona.edu/pubs/insects/az1234.pdf).

Document #2 description:

California's Use of IPM in Managing Pests in Schools. 2010. Brajkovich, Laurie; Hanger, Ann; Messenger, Belinda; Simmons, Sewell. *Outlooks on Pest Management*, Volume 21, Number 1, February 2010, pp. 25-30(6).

Document #3 description:

## I. Additional Information

*Credit: Some of the language about impacts and potential impacts was adapted from a PowerPoint presentation by H. Michael Harrington, Executive Director, Western Association of Agricultural Experiment Station Directors, Colorado State University.*

## Western Region School IPM Implementation and Assessment Work Group

~March 2010~

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Chip Osborne	Osborne Organics	President	<a href="mailto:ozflor@aol.com">ozflor@aol.com</a>	(781) 631-2468
Clay W. Scherer	DuPont Crop Protection	Manager - Professional Pest Management	<a href="mailto:clay.w.scherer@usa.dupont.com">clay.w.scherer@usa.dupont.com</a>	(302) 999-5531
Forrest St. Aubin	Augustine Exterminators	Manager	<a href="mailto:forrest@saintaubinbce.com">forrest@saintaubinbce.com</a>	(913) 927-9588
Keith Willingham	Western Exterminator Company	Vice President Technical Services	<a href="mailto:kwillingham@west-ext.com">kwillingham@west-ext.com</a>	(714) 517-9000
Erick Wolf	Innolytics, LLC	President	<a href="mailto:erick.wolf@cox.net">erick.wolf@cox.net</a>	(858) 759-8012
<b>Regional Reps</b>				
Lynn Braband	Cornel University <b>Northeast Region sIPM WG</b>	Community IPM Extension Area Educator	<a href="mailto:lab45@cornell.edu">lab45@cornell.edu</a>	(585) 461-1000 ext. 241

Zach Bruns	IPM Institute of North America, Inc. <b>North central sIPM WG</b>	IPM Specialist	<a href="mailto:zbruns@att.net">zbruns@att.net</a>	608 232-1410
Bill Coli	University of Massachusetts <b>Logic Model</b>	UMass Extension Specialist	<a href="mailto:wcoli@umext.umass.edu">wcoli@umext.umass.edu</a>	(413) 545-1051
Kathleen Murray	Maine Dept. of Agriculture, Food and Rural Resources <b>Northeast Region sIPM WG</b>	IPM Entomologist	<a href="mailto:Kathy.murray@maine.gov">Kathy.murray@maine.gov</a>	(207) 287-7616
L.C. Fudd Graham	Auburn University <b>Southern Region sIPM WG</b>	Coordinator, Alabama Fire Ant Management Program	<a href="mailto:fgraham@acesag.auburn.edu">fgraham@acesag.auburn.edu</a>	(334) 844-2563
Tom Green	IPM Institute of North America, Inc. <b>North central sIPM WG</b>	President	<a href="mailto:ipmworks@ipminstitute.org">ipmworks@ipminstitute.org</a>	(608) 232-1528
Janet Hurley	Texas AgriLife Extension <b>Southern Region sIPM WG</b>	School IPM Coordinator	<a href="mailto:ja-hurley@tamu.edu">ja-hurley@tamu.edu</a>	(972) 952-9213
Marc Lame	<b>National Implementation Group</b>	Entomologist	<a href="mailto:mlame@indiana.edu">mlame@indiana.edu</a>	(812) 855-7874
Mark Shour	Iowa State University Extension <b>North central Region sIPM WG</b>	School IPM Coordinator	<a href="mailto:mshour@iastate.edu">mshour@iastate.edu</a>	(515) 294-5963
<b>International</b>				
Debby Mir	Tel-Hai Academic College	Environmental Sciences Specialist	<a href="mailto:debbymir@yahoo.com">debbymir@yahoo.com</a>	972- (0) 54-9911536

<b>State/Possession</b>	<b>Website 1</b>
ALABAMA	<a href="http://www.ag.auburn.edu/enpl/schoolipm/index.php">http://www.ag.auburn.edu/enpl/schoolipm/index.php</a>
ALASKA	
ARIZONA	<a href="http://cals.arizona.edu/urbanipm/schools/index.html">http://cals.arizona.edu/urbanipm/schools/index.html</a>
ARKANSAS	
CALIFORNIA	<a href="http://apps.cdpr.ca.gov/schoolipm/">http://apps.cdpr.ca.gov/schoolipm/</a>
COLORADO	<a href="http://www.colostate.edu/programs/northernipm/school/sch">http://www.colostate.edu/programs/northernipm/school/sch</a>
CONNECTICUT	<a href="http://www.hort.uconn.edu/ipm/ipmscool.htm">http://www.hort.uconn.edu/ipm/ipmscool.htm</a>
DELAWARE	
DISTRICT OF COLUMBIA	
FLORIDA	<a href="http://schoolipm.ifas.ufl.edu/">http://schoolipm.ifas.ufl.edu/</a>
GEORGIA	
HAWAII	
IDAHO	<a href="http://www.agri.state.id.us/Categories/Pesticides/urbanPest/">http://www.agri.state.id.us/Categories/Pesticides/urbanPest/</a>
ILLINOIS	<a href="http://www.idph.state.il.us/envhealth/ipm/index.htm">http://www.idph.state.il.us/envhealth/ipm/index.htm</a>
INDIANA	<a href="http://extension.entm.purdue.edu/schoolipm/">http://extension.entm.purdue.edu/schoolipm/</a>
IOWA	<a href="http://www.ipm.iastate.edu/ipm/schoolipm/">http://www.ipm.iastate.edu/ipm/schoolipm/</a>
KANSAS	<a href="http://www.ksre.ksu.edu/pesticides-ipm/DesktopDefault.asp">http://www.ksre.ksu.edu/pesticides-ipm/DesktopDefault.asp</a>
KENTUCKY	
LOUISIANA	<a href="http://www.ldaf.state.la.us/portal/Offices/AgriculturalEnviro">http://www.ldaf.state.la.us/portal/Offices/AgriculturalEnviro</a>
MAINE	<a href="http://www.state.me.us/agriculture/pesticides/schoolipm/">http://www.state.me.us/agriculture/pesticides/schoolipm/</a>
MARYLAND	<a href="http://www.mda.state.md.us/plants-pests/pesticide_regulatio">http://www.mda.state.md.us/plants-pests/pesticide_regulatio</a>
MASSACHUSETTS	<a href="http://www.umass.edu/umext/schoolipm/">http://www.umass.edu/umext/schoolipm/</a>
MICHIGAN	<a href="http://www.pested.msu.edu/CommunitySchoolIpm/index.htm">http://www.pested.msu.edu/CommunitySchoolIpm/index.htm</a>
MINNESOTA	<a href="http://www.extension.umn.edu/pesticides/ipm/ipmhome.htm">http://www.extension.umn.edu/pesticides/ipm/ipmhome.htm</a>
MISSISSIPPI	
MISSOURI	<a href="http://mda.mo.gov/plants/ipm/ipm.php">http://mda.mo.gov/plants/ipm/ipm.php</a>
MONTANA	<a href="http://ipm.montana.edu/SchoolIPM/index.html">http://ipm.montana.edu/SchoolIPM/index.html</a>
NEBRASKA	<a href="http://schoolipm.unl.edu/">http://schoolipm.unl.edu/</a>
NEVADA	
NEW HAMPSHIRE	<a href="http://extension.unh.edu/Agric/SchoolIPM.htm">http://extension.unh.edu/Agric/SchoolIPM.htm</a>
NEW JERSEY	<a href="http://www.pestmanagement.rutgers.edu/IPM/SchoolIPM/pl">http://www.pestmanagement.rutgers.edu/IPM/SchoolIPM/pl</a>
NEW MEXICO	
NEW YORK	<a href="http://www.nysipm.cornell.edu/">http://www.nysipm.cornell.edu/</a>
NORTH CAROLINA	<a href="http://schoolipm.ncsu.edu/resources.htm">http://schoolipm.ncsu.edu/resources.htm</a>
NORTH DAKOTA	<a href="http://www.agdepartment.com/Programs/Plant/IPM.htm">http://www.agdepartment.com/Programs/Plant/IPM.htm</a>
OHIO	<a href="http://ipm.osu.edu/school/school.htm">http://ipm.osu.edu/school/school.htm</a>
OKLAHOMA	<a href="http://entopl.okstate.edu/ipm/School_IPM/index.html">http://entopl.okstate.edu/ipm/School_IPM/index.html</a>
OREGON	<a href="http://www.ipmnet.org/Tim/IPM_in_Schools/IPM_in_Schools">http://www.ipmnet.org/Tim/IPM_in_Schools/IPM_in_Schools</a>
PENNSYLVANIA	<a href="http://paipm.cas.psu.edu/154.htm">http://paipm.cas.psu.edu/154.htm</a>
RHODE ISLAND	
SOUTH CAROLINA	<a href="http://www.clemson.edu/ipm/schoolipm.html">http://www.clemson.edu/ipm/schoolipm.html</a>
SOUTH DAKOTA	<a href="http://www.epa.gov/region8/toxics/pests/ipm.html">http://www.epa.gov/region8/toxics/pests/ipm.html</a>
TENNESSEE	<a href="http://schoolipm.utk.edu/">http://schoolipm.utk.edu/</a>
TEXAS	<a href="http://schoolipm.tamu.edu/">http://schoolipm.tamu.edu/</a>
UTAH	<a href="http://www.slc.k12.ut.us/depts/facilities/news.html">http://www.slc.k12.ut.us/depts/facilities/news.html</a>

VERMONT <http://www.uvm.edu/pss/pd/schoolipm/>  
VIRGINIA <http://sites.ext.vt.edu/schoolipm/>  
WASHINGTON <http://www.ecy.wa.gov/PROGRAMS/SWFA/upest/schoolIPM>.  
WEST VIRGINIA  
WISCONSIN <http://www.datcp.state.wi.us/arm/agriculture/pest-fert/pesti>  
WYOMING [https://www.uwyo.edu/plants/wyopest/school\\_ipm.htm](https://www.uwyo.edu/plants/wyopest/school_ipm.htm)

\*National <http://www.schoolipm2015.com>  
<http://www.epa.gov/pesticides/ipm/index.htm>  
\*Extension <http://www.extension.org/Urban%20Integrated%20Pest%20M>  
[http://www.extension.org/pages/School\\_Integrated\\_Pest\\_Ma](http://www.extension.org/pages/School_Integrated_Pest_Ma)  
Other <http://www.beyondpesticides.org/schools/index.htm>  
<http://www.beyondpesticides.org/pesticidefreelawns/>  
<http://www.panna.org/>  
<http://www.pesticide.org/>  
<http://www.ipminstitute.org/school.htm>  
<http://www.pestweb.com/schoolipm/index.cfm>  
<http://www.nationalchildrensstudy.gov/Pages/default.aspx>  
<http://cdc.gov/>  
[http://www.whatisipm.org/schools\\_IPM.asp](http://www.whatisipm.org/schools_IPM.asp)  
<http://www.juniorpi.com/>  
<http://www.mccsc.edu/~mccscipm/>  
[http://ipm.ifas.ufl.edu/pdf/school\\_ipm\\_manual.pdf](http://ipm.ifas.ufl.edu/pdf/school_ipm_manual.pdf)

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## State School IPM Report Card Statistics

### A 2008-2009 Survey

#### Objective

Track progress towards IPM in all schools and identify resources and resource needs by providing a current snapshot of the status of school IPM in each state.

#### I. State Demographics

Number of states that submitted a report card:	36
Number of school districts represented:	12,180
Number of public school children (K-12) represented:	38,777,472

#### II. Laws, Policy and Planning

Number of states with regulations for:

- Posting indoor pesticide applications 7/36 (19%)
- Posting outdoor pesticide applications 14/36 (39%)
- Pre-notification of parents or staff prior to pesticide applications 10/36 (28%)
- IPM required for pest management in schools 8/36 (22%)
- Minimal training requirements for applicators 16/36 (44%)
- Re-entry requirements beyond the pesticide label 2/36 (6%)
- Pesticide product restrictions 4/36 (11%)
- Other
  - All applications must be made by a licensed applicator on all school property including private and higher education, plus child care facilities. 1/36 (3%)

Number of states with *at least one* school districts that has a Board of Education approved written IPM policy 8/36 (22%)

Number of states that have *at least one* committee that addresses IPM 7/36 (19%)

Number of states with *at least one* district that has a designated IPM coordinator 18/36 (50%)

Number of states with *at least one* district that has a written IPM plan 19/36 (53%)

#### III. School IPM Implementation

Number of states with *at least one* school district practicing IPM. 12/36 (33%)

Number of states that have *partially or fully* implemented the following:

- Avoiding calendar-based applications in structures 5/36 (14%)
- Avoiding calendar-based applications on grounds (excluding fire ants) 6/36 (17%)
- Regular inspections of structures for maintenance including pest-proofing 5/36 (14%)
- Regular inspections of grounds for pests and pest-conducive conditions 4/36 (11%)
- Certified applicators (structural & grounds) required for pesticide applications 10/36 (28%)
- Formal IPM decision-making protocols, e.g., steps prior to pesticide application 5/36 (14%)
- Pest ID before any treatment 5/36 (14%)

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- Monitoring schedules and action thresholds for structural and/or grounds 3/36 (8%)
- Formal protocols for food management, e.g., stored in sealed plastic containers 2/36 (6%)
- Pre-approved list of least-hazardous pesticide options 2/36 (6%)
- Record keeping for pesticide applications and pest complaints and/or monitoring results 6/36 (17%)
- Formal sanitation/housekeeping protocols addressing common pests 4/36 (11%)
- Staff training on IPM, e.g., food handling, pest complaint reporting 4/36 (11%)
- Focus on identifying and resolving cause of pest problems 2/36 (6%)

Number of states that have used the following sources to collect data for School IPM implementation:

- Survey 8/36 (22%)
- Sample of school districts 1/36 (3%)
- Rough estimate based on work with schools 5/36 (14%)
- Other
  - By legislation 1/36 (3%)
  - Routine IPM Compliance Inspections 1/36 (3%)

Number of states with the following level of outreach, education and support for school IPM implementation:

- Statewide coordinated effort involving multiple agencies & institutions (i.e., a coalition, committee or working group) 3/36 (8%)
- Statewide program implemented by a single agency or institution 7/36 (19%)
- Independent outreach / implementation efforts engaged in by one or more entities locally (e.g., pilot programs) 4/36 (11%)
- Schools are making independent efforts towards IPM implementation 5/36 (14%)
- None of the above 16/36 (44%)

Number of states with a state-wide program for IPM in childcare facilities 5/36 (14%)

#### IV. School IPM Training and Resources.

Number of states with *at least 0.1* FTE (full-time equivalent) public agency or university/extension staff who are committed to school IPM 22/36 (61%)

Number of states with additional FTE (non-public agency, e.g., NGO staff) working on school IPM. 2/36 (6%)

Number of states that have a *budget of at least \$5,000* to support IPM implementation, including grants, staff salaries and other sources 9/36 (25%)

Number of states that indicate the following IPM training activities for school professionals:

- *At least one* school district trained in school IPM 17/36 (47%)
- *At least one* school IPM workshop conducted by agencies or NGOs 15/36 (42%)
- *At least two* school IPM presentations to school staff, school business officials, school health professionals, pest management professionals, etc., made by state agency, NGO, or industry. 13/36 (36%)
- *At least one* school district with on-site training (e.g., compliance assistance, problem resolution) 13/36 (36%)

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- *At least one* school district with an IPM curriculum 2/36 (6%)
- *At least one* IPM communication vehicle  
(newsletters, listserv, etc) distributed to school districts 11/36 (31%)
- *At least one* state website(s) or webpage(s) specific to school IPM? 25/36 (69%)

**V. Awards**

Number of states with at least one school district that has won an award,  
e.g. IPM STAR, Green Flag, PESP Partnership, other recognition. 6/36 (17%)

## Appendix 4 - Collaborative Efforts

### 1. Demonstrations

#### Western Region

- i. Oregon (PRIA and W WG funds)
- ii. Utah
- iii. Colorado (EPA funds)

### 2. Coalitions

#### Western Region

- i. Colorado (EPA Region VIII funds)
- ii. Washington (PRIA funds)
- iii. Arizona

### 3. Cost-benefit Case (Documenting Risk Reduction)

- a. Allergen and pesticide residue reduction
  - i. Oregon
- b. Report cards
  - i. In from
    1. Western Region:
      - a. Arizona
      - b. California
      - c. Nevada
      - d. Oregon
      - e. Washington

### 4. Calendar of events

- a. April 21, 2008 –working group conference call
- b. February 9, 2009–working group meeting, Reno
- c. March 6, 2009 –working group conference call
- d. March 24<sup>th</sup>-26<sup>th</sup>, 2009 – 6<sup>th</sup> annual IPM Symposium, “Transcending boundaries” Portland, OR
- e. March 24<sup>th</sup>, 2009 – Evening extension workshop, Portland, OR
- f. March 25<sup>th</sup>, 2009– Evening open school IPM meeting, Portland, OR
- g. May 8<sup>th</sup>, 2009 – Open school IPM conference call
- h. June 9<sup>th</sup>-10<sup>th</sup>, 2009 – Missouri coalition meeting, Centralia, MO
- i. Aug 28<sup>th</sup> – Sept 2<sup>nd</sup>, 2009 - School IPM session, ASPCRO annual meeting Denver, CO
- j. October 21, 2009–working group conference call
- k. November 17th-18th, 2009 – PESP Annual Conference, Arlington, VA
- l. January 26-28<sup>th</sup>, 2010, CDC, NEHA, and City of New Orleans: Biology and Control of Insects and Rodents, New Orleans, LA
- m. February 26, 2010 –working group conference call
- n. February 24-25, 2010 - Northern New England Facility Masters Conference, Laconia, NH
- o. May 16<sup>th</sup>-19<sup>th</sup>, 2010 – National Conference on Urban Entomology, Portland, Oregon

Numerous other communications continue too numerous to reference.