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June 27, 2017

Chris Steller
Legislative Reference Library
645 State Office Building
100 Rev. Dr. MLK Jr. Blvd.
St Paul, MN 55155

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RE: PT contract #84090 MN Department of Agriculture (MDA) and University of Minnesota, Office of Sponsored Projects Final Report

Project: Assessing Region-wide Needs for Bed Bug Education and Outreach Efforts

Dear Chris:

Here is complete copy of the final report submitted to the Minnesota Department of Agriculture Pesticide and Management Division. The electronic copy was emailed to you on June 27, 2017.

I apologize for sending this late. The project Manager retired and I did not get the final-final report until recently.

I am submitting only one print copy. This report was prepared by the contractor and according to the project manager is not mandated by law.

Please contact me at (651) 201-6196 if you have questions.

Sincerely,

Kam Carlson

Kam Carlson
Contracts & Grants Coordinator
Pesticide & Fertilizer Management Division
Minnesota Department of Agriculture
625 Robert Street N.
St. Paul, MN 55155-2538

Enclosures: One copy of final report for project listed above

Consultant's Report

Minnesota Department of Agriculture Pesticide & Fertilizer Management

FINAL REPORT: JANUARY – DECEMBER 2016

PROJECT DESCRIPTION: Assessing Region-Wide Needs for Bed Bug Education and Outreach Efforts, Initiating a Bed Bug Resource Center for EPA Region 5, and Expanding the Let's Beat the Bug Campaign in Minnesota.

REPORT DUE DATE: January 31, 2017

PROJECT MANAGER NAME: Kevin Cavanaugh

ORGANIZATION: Pesticide & Fertilizer Management Division, Minnesota Dept. of Agriculture (MDA)

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January - December 2015

(Including No-Cost Extension Period-to January 2017)

1.) GOALS AND OBJECTIVES OBTAINED *(Specific to the work plan in the agreement, which goals or objectives have you accomplished. If possible, quantify progress made on each objective [example: we planted and maintained 10 of the 15 plots]. Include analysis, explanation, and specific reasons why goals and objectives were not met.)*

Objective 1: Extend the *Let's Beat the Bug!* campaign (*InformationLine*)

This was an on-going activity that occurred throughout the grant period. (COMPLETED)

Objective 2: Establish regional bed bug working group.

A regional bed bug working group was established and met on a regular scheduled basis. Ongoing conference calls with each state and at the regional level were used to plan workshops and other training activities. (COMPLETED)

Objective 3: Survey bed bug issues in EPA Region 5.

Work on this objective begun during the first quarter of the 2015. By the end of the third quarter, it was in its final stages. By the end of 2015 work on this objective was completed. (COMPLETED)

Objective 4: Stakeholder webinars,

Work on this objective begun once further progress had been made on objective 3. Planning for these webinars was underway by the second quarter of 2015. Webinars would most likely be held in August and September, depending on availability of participants, but planning for these webinars was still underway by the third quarter of 2015. By the fourth quarter, three webinars were conducted; this completed the work on this objective. (COMPLETED)

Objective 5: Preparation of new tasksheets and provision of materials in additional languages

The solicitation process to receive quotes for translation services was initiated at the beginning of 2015. New factsheets were prepared with different languages and posted to the website in 2016 when the website underwent a complete revision. Please refer to 2016 outcomes for a summary of the content usage (COMPLETED)

Objective 6: Bed bug listserve

Working with UMN IT services to establish the ListServe. (COMPLETED)

Objective 7: Publications to support learning

Work on this objective will began later in the grant period. (COMPLETED)

Objective 8: Peer-to-peer Community Health Worker Training

This training was completed in June 2016. (COMPLETED)

Objective 9: Bed Bug Survey for Karen Community

By the fourth quarter, we were in discussions with the Karen Organization of Minnesota to hire a Karen speaking employee (COMPLETED)

2.) **ACTIVITIES PERFORMED AND OUTCOMES** (*Describe the types of activities that you performed and the resulting outcomes...may include maps, photographs, etc.*)

Objective 1: Extend the *Let's Beat the Bug!* Campaign (*InformationLine*)

2015 Website Visits

In this period, we received a total of 665,750 visitors to www.bedbugs.umn.edu. Within EPA Region 5 we received the following number of visitors 123,619, which occurred by state as such:

- Ohio 32,452
- Illinois 32,440
- Michigan 21,363

- Minnesota 17,765
- Indiana 10,375
- Wisconsin 9,224

2015 InformationLine Outreach:

During this period, we responded to inquiries on the bed bug *InformationLine* and Email service. The majority of these calls continue to be from Minnesota.

- Ohio 6
- Illinois 8
- Michigan 32
- Minnesota 370
- Indiana 4
- Wisconsin 6

Develop training program with additional LEP Community

We continued our efforts to reach out to the Somali community regarding bed bug prevention and control trainings and were not receiving many positive responses. Many of the contacts were relying on the Campaign to pay money for the attention of community elders and communication programs. Due to this, we changed our tactics and looked at reaching these communities in other ways, including via Community Health Fairs and making presentations to other organizations that work directly with these communities. Presentations during this period include:

- January 6, 2015 – Skyline Towers (affordable housing community). Three presentations were given to various small groups. Information was presented in both Somali and English to 11 participants
- March 19, 2015 – WellShare International (a community health organization which serves various LEP communities) 15 staff members participated in a 1.5 hr. training and received translated materials for distribution to their clients.
- March 26, 2015- Restart Inc, (in-home health care company, serving elderly and disabled patients) 17 staff members received 1.5 hours of training on bed bug prevention and control for themselves and information to share with their clients.

Develop Relationship with Tribal Communities

We completed two training sessions with the White Earth Nation on March 16th and 17th. Over the two days, 77 individuals attended the training. Participants included a mix of staff from various tribal entities such as public health, housing, and EMS. Reviews were very positive and we continue to communicate with White Earth Staff about developing their bed bug prevention and Control Policies. In addition, we scheduled two additional training events with the Mille Lacs band of Ojibwa to be held on June 8th and 9th. We also reached out to contacts at Indian Health Services and EPA to continue to develop relationships with Tribal Communities.

Develop training program with additional LEP Community

We continued to reach out to LEP communities through a variety of mechanisms. We worked with the Powderhorn Park Neighborhood Association and the City of Minneapolis to organize trainings for Spanish speaking residents.

- On June 19, 2015, Ms. Shindelar presented to Renters United, a group of Spanish speaking tenants who are affiliated with the Lyndale Neighborhood association. There were 9 adults and 2 children in attendance. The training started with our Spanish language video on bed bug prevention and control, which was followed by a lengthy question and answer sessions. We also provided them with printed materials in the Spanish language.
- On June 20, 2015, we had a table at the Twin Cities World Refugee Day Resource Fair. Via this event, we were able to connect with the public, staff and volunteers from social service agencies, members of various immigrant and refugee communities. We estimate that we connected directly with over 75 individuals.

Develop Relationship with Tribal Communities

On June 8th and 9th, we conducted two additional training sessions for individuals from Tribal communities. The Events were hosted by the Mille Lacs band of Ojibwa at their Casinos in Mille Lacs and Hinckley, MN. Participants included members of the Mille Lacs band, as well as other Minnesota tribes such as White Earth, Bois Forte, St. Croix Chippewa (WI), and Fond Du Lac. The training lasted approximately 7 hours with a break for lunch. The morning sessions were devoted to basic bed bug information, and control procedures. The afternoon sessions were split in two with Dr. Kells presenting to Hotel/Casino staff and Ms. Shindelar presenting to community staff. 55 individuals attended the training on June 8th in Hinckley and 31 individuals attended the Jun 9th training in Mille Lacs.

Slumberland Safety and Wellness Fair

Sabrina and Hilda attended this fair sometime On July 29, 2015. We put up a display of bed bugs and fact sheets. We answered questions on bed bug related issues especially the risks of transporting used furniture, how to inspect for bed bugs while collecting used furniture, how to protect oneself from getting them into the truck or bringing them home, how to treat a truck on finding out that the furniture transported had bed bugs.

Judging by the number of bed bug ID cards and fact sheets we gave out, more than thirty-five people stopped by the display table. They either worked for the company or were spouses/friends of employees.

Develop training program with additional LEP Community

Working with the Powderhorn Park Neighborhood Association (PPNA) we conducted two training sessions aimed at Spanish speaking renters in the neighborhood. The trainings included viewing the Bed Bug Prevention and Control Video in Spanish Language. This was followed by a question and answer session, as well as distribution of factsheets (Spanish). Detailed descriptions of both events are included below.

- Dr. Kells and Hilda (our Public Health Intern) did the first training on Saturday August 8, 2015 from 9:30am to 11:00am. There were five Spanish-speaking adults present. They all rent. Three live in an apartment and the other two in single-family homes. The questions were on various issues related to bed bugs and cockroaches. Topics covered included bed bug behavior, how to eliminate bed bugs, knowing they are bed bugs, what to do if one has them (DIY), discouraged the use of OTC's, informing the landlord, and best practices to help reduce bed bugs before treatment. Live bed bugs were displayed and the participants got to view them. Several facts sheets were put together and handed out to the participants. At the end, Raul from PPNA, asked them to fill out a post survey questionnaire. Coffee, juice and donuts were served.
- Dr. Kells and Hilda did the second training on Friday August 26, 2015 from 6 pm to 8:30pm. There were twelve Spanish-speaking adults present and several children. They all rent either apartments or single-family homes. On arrival, the participants would sign in and pick fact sheets on bed bugs and from HOMEline. They got a chance to observe live bed bugs. They filled out a pre bed bug training survey. Raul introduced Dr. Kells, Hilda and a representative from HOMEline. The participants watched the bed bug video. The representative from HOMEline talked about what their organization did, in Spanish. He then answered questions from the clients and was Dr. Kells' interpreter during the group session. The group split into two and Dr. Kells worked with a woman client who was having major bed bug issues and her landlord was threatening her with eviction. Hilda, with the help of Raul answered some questions on the fact sheets related to bed bugs.
Topics covered included bed bug behavior, how to eliminate bed bugs, knowing they are bed bugs, what to do if one has them (DIY), why no to use OTC's, informing the landlord, and best practices to help reduce bed bugs before treatment.
Raul then asked the participants to complete the post survey.

Develop Relationship with Tribal Communities

We are in discussions with two tribal communities (Fond Du Lac and Grand Portage) to arrange future training sessions. Due to Ms. Shindelar's maternity leave, these training sessions will be completed during the extension period.

We also participated in two additional outreach activities during this reporting period.

State Fair – September 2015

Sabrina and Hilda participated in the MDA bed bug stand at the State Fair from 11:30am to 5:30 pm on September 2, 2015.

We had live bed bugs on display and used an assimilated bedroom to show areas where bed bugs hide or can be found. We answered questions on bed bug related issues and handed out fact sheets to fair goers.

Topics covered included bed bug bites, buying used furniture, identifying bed bugs, treating bed bugs, diseases bed bugs cause, how to look for them in hotels while travelling, DIY methods, effective treatments, policies around bed bug infestations in rental properties, pest control

companies that treat bed bugs, bed bug behavior and training offered by the program to the public. There were approximately 40 active fair goers who stopped and looked around the bedroom. They had many questions. Attendees viewed the bed bugs and picked fact sheets.

Discussions with UMN administration and IT regarding rebranding and updating of www.bedbugs.umn.edu were in progress during 2015.

Objective 2. Establish regional bed bug working group

A regional bed bug working group was established and quarterly working group calls were being held. Informal feedback from participants was positive. A call was held on May 6, 2015.

Due to scheduling conflicts, the regional working group call which was scheduled for August was not held.

Conference calls were held with State level working groups on the following dates 12/2/2015 (Wisconsin) 12/3/2015 (Ohio) and 12/5/2015 (Michigan). These calls were used to: begin planning for local workshops, discuss translation needs and other training needs. Calls were also scheduled for Illinois and Indiana but had to be rescheduled. Conversations occurred via email with Illinois and Indiana working group members to begin the process of planning for a workshop in those locations

Objective 3. Survey bed bug issues in EPA Region 5

Step 1: Review Existing Literature

A literature review was underway, the Community Health Coordinator reviewed bed bug prevention and control literature from all R5 states, initial feedback provided on the regional bed bug working group conference call, which stimulated interesting conversation. In the second stage of the literature review, the Community Health Coordinator completed a second reading of all materials to develop detailed notes, reports and suggestions for future improvement. The Community Health Coordinator completed the literature review. Notes and reports from the literature review were used to inform the reviews that were currently being written for each State in the region.

Step 2: Create a Simple Survey

A draft of the survey was presented at the February 4, 2015 regional working group conference call. Feedback was provided and integrated into the draft. A final survey was completed and distribution began on February 18, 2015. As of March 30, 2015, the survey had received 98 responses. The survey remains open and we continued to solicit additional responses. During this period, the Community Health Coordinator continued to reach out to individuals and groups within the region to solicit additional participation in the survey. As of the writing of this report, 182 individuals had participated in the survey. The results of the survey were analyzed and used to inform the reviews. During this period the Community Health Coordinator continued to reach out to individuals and groups within the region to solicit additional participation in the survey. 238

individuals participated in the survey. The results of the survey were analyzed by the Community Health Coordinator and included in the reviews.

Step 3: Reviews

This step was initially delayed, as steps 1 and 2 needed to be completed before step 3.

The Community Health Coordinator wrote the reviews for each state. Information gathered in steps 1 and 2 were used to inform these reviews, which were presented to stakeholders in each state for feedback before finalization of the reports.

The Community Health Coordinator wrote reviews for each state. Information gathered in steps 1 and 2 were used to inform these reviews which were presented to stakeholders in each state via conference calls. These calls were held between June 29th and July 9th, 2015; during the call Ms. Shindelar solicited feedback from stakeholders and discussed how the project would move forward.

Objective 4. Stakeholder Webinars, planning for these webinars is underway. These webinars were held during November and early December.

On December 1, 2015 Dr. Kells presented the webinar “Bed Bug Updates for Pest Management Professionals” there were 171 attendees. Topics included; best management practices, customer service, and protecting the company.

On December 3, 2015 Ms. Shindelar presented the webinar “Understanding Bed Bug Control for Social Service Providers” there were 491 attendees. Topics included: basic bed bug information, protecting yourself, educating your clients and available resources. Ms. Shindelar was joined by Megan Curran DeNiento from ClearCorps who provided her perspective as an individual who does in home visits.

On December 10, 2015 Dr. Kells presented the webinar “Four Steps to a Bed Bug Free Premises for Landlords” there were 350 attendees. Dr. Kells was joined by representatives from Minneapolis Public Housing and St. Paul Public Housing to discuss prevention and control procedures in multi-family housing.

Archived versions of these webinars are available at www.bedbugs.umn.edu/webinars.

Objective 5: Preparation of new tasksheets and provision of materials in additional languages

We have reached out to multiple professional translation services to request quotes for translating 8 factsheets into Standard Chinese, Vietnamese and Oromo. These languages were determined via the survey sent out in early 2015 and through discussions with stakeholders. Once quotes were received, we moved forward with selecting an organization to work with and establish a contract for the translation of these materials.

Objective 6: Bed Bug ListServe

Numerous conversations occurred with University of Minnesota IT services to determine the best method for establishing and administering this ListServe, it was functioning in early 2016, however, there were demands to product content for the ListServe and we found the website, Facebook and Twitter platforms were more amenable to distributing information. The List Serve was cancelled at the end of 2016.

Objective 7: Publications to support learning

Work on this objective will begin later in the grant period. One publication was written and sent for peer review. There were a number of rejections in higher level Public Health Journals and we eventually found acceptance for this important data in mid-2016.

Objective 8: Peer-to-Peer Training

Working with WellShare International, we scheduled this training to be held on June 16, 2016.

Objective 9: Bed Bug Survey for Karen Community

On November 30, 2015, Dr. Kells and Ms. Shindelar met with members of the Karen Community, Ramsey County Public Health and State employees to discuss improper application of pesticides for bed bug control. During this meeting, we developed a plan to move forward with hiring a Karen speaking student with the support of the Karen Organization of Minnesota.

3.) CHALLENGES ENCOUNTERED AND LESSONS LEARNED (*Describe any challenges that you encountered and what was learned from those challenges.*)

Challenges during this period include a lack of response from individuals and organizations within the Somali community whom we had reached out to regarding bed bug prevention and control trainings, and difficulties making connections with stakeholders in other Region 5 states.

Ms. Shindelar was on maternity leave for 12 weeks, this caused a delay in organizing and presenting the proposed webinars. In addition, Midwest Pesticide Action Center aggressively advertised two webinars during the same target period that we had intended to present. These webinars were held during the extension period, and prior to what we saw as a weakness in the seasonal bed bug infestation patterns.

4.) FINANCIAL INFORMATION (*This may include balance sheets or general ledger. As listed in the agreement, no more than 10% of the total award can be moved from one budget category to another without prior approval. Describe any problems in this area and provide analysis, explanations, and specific reasons why any cost overruns or under spending may have occurred.*)

January - December 2016

1.) GOALS AND OBJECTIVES OBTAINED (*Specific to the work plan in the agreement, which goals or objectives have you accomplished. If possible, quantify progress made on each objective [example: we planted and maintained 10 of the 15 plots]. Include analysis, explanation, and specific reasons why goals and objectives were not met.*)

Objective 1: Development of regional bed bug resource center

This was an ongoing activity which took place over the course of the grant period. (COMPLETED)

Objective 2: Response Plans for Workgroup Members

Ongoing conference calls with each state and at the regional level were being used to plan workshops and other training activities. A workshop in Michigan was completed. The Indiana workshop was scheduled and workshops in the other three states were being discussed. A workshop in Illinois was completed. The Wisconsin and Indiana Workshops were scheduled, and the workshop for Ohio was being planned. Workshops in Wisconsin and Indiana were completed. The Wisconsin (Eau Claire) Workshop was done on September 12th, 2016 and the Indiana (Michigan City) Workshop was completed on September 25th, 2016. (COMPLETED, but modified because of a lack of resources in the other States)

The Wisconsin Workshop covered the following topics:

- What are Bed Bugs and Why Are They a Problem?
- How do Bed Bugs Become a Problem?
- Wisconsin Laws and Regulations
- Integrated Pest Management: Inspecting and Monitoring
- Integrated Pest Management: Treatments

The Indiana Workshop covered the following topics:

- What are Bed Bugs and Why Are They a Problem?
- How do Bed Bugs Become a Problem?
- Integrated Pest Management for Bed Bugs
- The Dangers of Using Pesticides Incorrectly
- Tenant Landlord Laws and Regulations

The Ohio Workshop is scheduled for November 3rd 2016 in Perrysburg City 12 miles southwest of Toledo City. This Workshop will cover the following topics:

- What are Bed Bugs and Why Are They a Problem?
- How do Bed Bugs Become a Problem?
- Ohio Laws and Regulations
- Integrated Pest Management: Inspecting and Monitoring
- Integrated Pest Management: Treatments

Objective 3: Preparation of new tasksheets and provision of materials in additional languages –

Translation services were contracted and completed. They were uploaded to the website. The translated tasksheets were linked to other parent pages on the new (drupal) website. (COMPLETED)

Objective 4: Bed Bug ListServe –

The bed bug ListServe was established, but then discontinued for lack of interest and competing information platforms (COMPLETED).

Objective 5: Publications to support learning

Work on this objective began later in the grant period. A publication was submitted to the Journal of Environmental Health for Publication. The publication was accepted by the Journal of Environmental Health for Publication and will appear in their March 2017 issue. (COMPLETED)

Objective 6: Peer-to-peer Community Health Worker Training –

This training was scheduled and completed in June 2016. A second part to this objective was completed on July 13th, 2016. The training was held at the Black Bear Casino, MN. A third training was held on August 17, 2016, Hilda provided a presentation to 35 Case Managers at Hennepin County Health and Human Services - Children Services as part of the Community Health Worker Peer Network. MCTC nurse and Social Worker, CVT social worker, Coordinator Somali Parent Association (SPA) (COMPLETED)

Objective 7: Bed Bug Survey for Karen Community –

A Karen individual was hired in collaboration with the Karen Organization of Minnesota. The individual helped work towards meeting this objective. (COMPLETED)

2.) **ACTIVITIES PERFORMED AND OUTCOMES** (*Describe the types of activities that you performed and the resulting outcomes...may include maps, photographs, etc.*)

Objective 1: Development of regional bed bug resource center

In this period (1/1/2016-12/31/2016) www.bedbugs.umn.edu received 952,349 visitors. Within EPA Region 5 we received the following number of visitors 161,356, and as follows by state:

- Illinois: 46,645

- Indiana: 16,910
- Michigan: 33,571
- Minnesota: 13,273
- Ohio: 39,797
- Wisconsin: 11,160

Discussions with UMN administration and IT regarding rebranding and updating of www.bedbugs.umn.edu were in progress at the beginning of 2015. Ms. Shindelar was working with UMN-IT to migrate the website to the new Drupal content management system that UMN has deployed. This included uploading all of the new translation pages, as well as moving all current pages to the new system.

Hilda worked in collaboration with UMN-IT to complete the migration of the www.bedbugs.umn.edu to the new Drupal content management system that UMN had deployed. This included uploading all of the new translation pages, as well as moving all current pages to the new system. In addition, links to the translated factsheets were made available to parent pages in the website. An additional page on Training and Workshops was added under the parent page resources. This site permits extra languages to be presented as well as other options the previous system did not have.

We also worked with the North Central Cooperative Extension Association to disseminate our information to regional stakeholders.

Between January 1, 2016 and December 31, 2016, we responded to inquiries on the *InformationLine*. We saw an increase in the number of callers from a number of EPA Region 5 states including Michigan. The breakdown within the region was as follows:

- Illinois: 36
- Indiana: 24
- Michigan: 99
- Minnesota: 406
- Ohio: 32
- Wisconsin: 23

Objective 2: Response Plans for Workgroup Members

On March 15, 2016, we held the first of our workshops for states within EPA Region 5. This workshop was held in Bay City Michigan in cooperation with the Michigan Environmental Health Associations Annual Conference. 127 individuals attended the workshop, which received very positive feedback.

The quarterly regional Bed Bug Working Group conference call was held on February 3, 2016..

Additional conference calls were held with state level working groups on the following dates. 1/14/2016 (Michigan), 1/27/2016 (Indiana and Illinois), 2/10/2016 (Wisconsin and Ohio)

2/26/2016 (Michigan), 3/9/2016 (Wisconsin) and 3/31/2016 (Illinois). These calls were used to facilitate planning on workshops and other educational activities.

A workshop was scheduled for September 25, 2016 in Michigan City, Indiana.

On June 2, 2016, we held the second of our workshops for states within EPA Region 5. This workshop was held in Champaign, Illinois. Approximately 110 individuals attended this event.

The quarterly regional Bed Bug Working Group conference call was held on May 4, 2016.

Additional conference calls were held with state level working groups on the following dates: 4/4/2016 (Indiana) 5/6/2016 (Illinois) 5/23/2016 (Ohio) 6/15/2016 (Wisconsin). These calls were used to coordinate and organize upcoming workshops.

Workshops were scheduled for September 12, 2016 in Eau Claire, Wisconsin, September 25, 2016 in Michigan City, Indiana, and November 3, 2016 for the Toledo area in Ohio.

On July 13th, 2016 a training was held at the Black Bear Casino, MN. This was a Bed Bug Prevention and Control in Hospitality training for the Housekeeping and Maintenance Department.

The quarterly regional Bed Bug Working Group conference call was held on August 3rd, 2016. The agenda included:

- Update on current activities involving the Bed Bug Informationline, Resource Center ListServe, and the new website.
- Update on planned workshops in Indiana, Wisconsin, and Ohio.
- Update on peer-to-peer training in Black Bear and at Hennepin County Health and Human Services - Children Services.
- Update on installing the translated tasksheets on the drupal site.
- Future EPA Region 5 Working Group Conference Call, which is planned for Thursday November 17th 2016.

In collaboration with the conference calls that were held with state level working groups on the following dates: 4/4/2016 (Indiana) 5/6/2016 (Illinois) 5/23/2016 (Ohio) 6/15/2016 (Wisconsin), additional conference calls were held on Tuesday 09/06/2016 for Wisconsin and Tuesday 09/20/2016 for Indiana. These calls were used to coordinate and organize upcoming workshops. The last two conference calls were for confirmation, update and final preparations for the workshops.

On September 12th, 2016 we held the third workshop for states within EPA Region 5. This workshop was held in Eau Claire, Wisconsin. Approximately 40 individuals attended this event.

On September 25th, 2016 we held the fourth workshop for states within EPA Region 5. This workshop was held in Michigan City, Indiana. Approximately 65 individuals attended this event.

In collaboration with the conference call that was held with state level working groups on the following date 10/27/2016 and several calls to EPA Region 5 individuals, the 'Ohio Bed Bug Prevention Workshop' was a success. These calls were used to coordinate and organize and search for presenters. The last conference call was for confirmation, update and final preparations for the workshop.

The workshop was held on November 3rd 2016 in Toledo Ohio at the Holiday Inn Hotel. There were 52 registered participants. The workshop was from 9:00am to 5:00pm. After registration attendees had a fifteen-minute Listening Session, in the course of the day they had a one-hour lunch break and a thirty-minute break during the afternoon session. At the end of the workshop, facilitators and attendees had a one-hour break out session.

Topics covered included:

- What are Bed Bugs and Why Are They a Problem?
- How do Bed Bugs Become a Problem?
- Bed Bug Prevention
- Ohio Laws and Regulations
- Ohio Pesticides Laws and Concerns
- Integrated Pest Management: Inspecting and Monitoring
- Integrated Pest Management: Treatments

When asked (attendees): what was the most important thing they learned during the program? Attendees responded thus:

- It shed much light on my anxiety and panic when I hear about these bugs when visiting clients home and also to keep watch on my own home.
- Difference between a bat bug and a bed bug.
- Not everyone reacts to bed bug bites.
- Preventions and corrections on myths I have believed about bed bugs.
- The great treatment options and success rate. What is coming in the future!
- Not all bed bugs are found within the mattress.
- How easy it is to transport them on our stuff.

When asked: what would you recommend for this program in the future? Attendees responded thus:

- Landlord speakers and Tenants to provide examples of use and misuse.
- Info was presented very quickly; more time is needed to do this workshop justice.
- Flyer for prevention tips to educate tenants on how to take precautions for avoiding bed bugs.
- More on educating tenants.
- Maybe a two-day program, so much information?
- Funds to help with treating client's homes that cannot afford the expenses.
- Talk about what science is working on for bed bug, future research.
- Include Public Health roles in case of bed bugs in hotels/motels/restaurants and other facilities.

Objective 3: Preparation of new tasksheets and provision of materials in additional languages

After reaching out to multiple professional translation services it was determined that we had the funding to complete translations of eight tasksheets into Amharic, Burmese, Standard Chinese, French, Oromo, Russian and Vietnamese. We worked with Tembua Language Solutions to complete the translations. Translations were completed during the past project period and were now in the process of being uploaded on to the website. In the meantime, they could be requested by emailing a request at bedbugs@umn.edu.

The following are the titles in the native languages of the fact sheets as they appear in the new drupal website:

Bed Bug Control in Residences

- English - Bed Bug Control in Residences
- Arabic - ليزان لما يف شارفلا قب ةحفالكم - ةيبرعلا
- Hmong - Hmoob - Kev pab tiv thaiv tsev kom tsis txhob muaj kab uas tom neeg saum txaj
- Somali - Xakamaynta Dhiqla ee Aqalka
- Spanish -Español - Control de las Chinchas de Cama en Las Residencias
- Amharic - ባባባባ - ባባባባ ባባባባ ባባባባ ባባባባ
- Chinese - 简体中文 - 在住所内治理臭虫
- French - Français - Lutter contre l'infestation des punaises de lit dans les résidences
- Oromo - Tukaana Siree Mana Jireenyaa Keessatti Too'achuu
- Russian - Русский - Борьба с клопами в жилых помещениях
- Vietnamese - Tiếng Việt - Kiểm Soát Rệp ở Nơi Cư Trú

Controlling Bed Bugs By Hand

- English - Controlling Bed Bugs By Hand
- Arabic - ايودي شارفلا قب لى ع قرطيسلا - ةيبرعلا
- Hmong - Hmoob - Thaum tua cov kab uas tom neeg saum txaj nrog koj ob txhais tes
- Somali - Sida aad Dhiqlaha gacantaada ugu xakamayn kartid
- Spanish - Español - Controlando Las Chinchas de la Cama a Mano
- Amharic - ባባባባ - ባባባባ ባባባ ባባባባ
- Chinese - 简体中文 - 人工治理臭虫
- French - Français - Lutter manuellement contre les punaises de lit
- Oromo - Tukaana Siree Harkaan To'achuu
- Russian - Русский - Как избавиться от клопов вручную
- Vietnamese - Tiếng Việt - Kiểm Soát Rệp Thủ Công

Have I Found a Bed Bug?

- English - Have I Found a Bed Bug
- Arabic - شارفلا قب ىلع ترثع له - ةيبرعلا
- Hmong - Hmoob - Puas yog kuv nrhiav taum ib tug kab uas tom neeg saum txaj?
- Somali - Ma Dhiqlaan Helay?
- Spanish - Español - He Encontrado una Chinche de la Cama?
- Amharic - ቅቅቅቅ - ቅቅቅ ቅቅቅቅቅቅ?
- Chinese - 简体中文 - 我是否发现了臭虫？
- French - Français - Ai-je trouvé une punaise de lit ?
- Oromo - Tukaana Siree Argeeraa?
- Russian - Русский - Как определить клопа?
- Vietnamese - Tiếng Việt - Tôi đã Tìm Thấy Rệp Phải Không?

Hiring a Pest Management Professional

- English -Hiring a Pest Management Professional
- Arabic - تافال قراداي ففرتحم عم دقاعتلا - ةيبرعلا
- Hmong - Hmoob - Ntiav cov neeg paub tua kab hus ua Pest Management Professional
- Somali - Shaqaalaynta Shirkada ladagaalanka Dhiqlaha
- Spanish - Español - Contratando a una Compañía de Manejo de Plagas
- Amharic - ቅቅቅቅ - ቅቅቅቅ ቅቅቅቅቅቅ ቅቅቅቅ ቅቅቅቅ
- Chinese - 简体中文 - 雇佣害虫管理专业人士
- French - Français - Faire appel à une entreprise de désinsectisation
- Oromo - Ogeessa To'ataa Tukaana Qacaruu
- Russian - Русский - Как заказать услуги профессионального дезинсектора
- Vietnamese - Tiếng Việt - Thuê Chuyên Gia Quản Lý Loài Phá Hoại

How to Prevent Bed Bugs From Entering Your Home

- English - How to Prevent Bed Bugs From Entering Your Home
- Arabic - لكلزنم لوخد نم شارفلا قب عنمت فيك - ةيبرعلا
- Hmong - Hmoob - Txoj kev tiv thaiv yus lub tsev kom tsis txhob muaj kab uas tom neeg saum txaj
- Somali - Sida aad Aqalkaaga uga Xakaamayn kartid inuu Dhiqle Yeesho
- Spanish - Español - Como Prevenir que las Chinchas de cama Entren en su casa
- Amharic - ቅቅቅቅ - ቅቅቅቅ ቅቅ ቅቅ ቅቅቅቅቅቅ ቅቅቅቅ ቅቅቅቅቅ ቅቅቅቅ
- Chinese - 简体中文 - 如何防止臭虫进入您家
- French - Français - Comment empêcher les punaises de lit de pénétrer dans votre maison
- Oromo - Tukaanni siree akka mana keenya hin seennu akkamitti too'achuu dandeenya
- Russian - Русский - Как предотвратить заражение клопами
- Vietnamese - Tiếng Việt - Cách Ngăn Không Cho Rệp Vào Nhà quý vị

Laundering to Kill Bed Bugs

- English - Laundering Items to Kill Bed Bugs
- Arabic - شارفلا قب تارشح لتقل فيفجتلا و لسغلا - ةيبرعلا
- Hmong - Hmoob - Ntxhua khoom kom tua cov kab uas tom neeg saum txaj
- Somali - Dhiqlaha ku dil dharmaydhida
- Spanish - Español - Lavar Objetos para Matar a las Chinchas de la Cama
- Amharic - ባባባባ - ባባባባባ ባባባባባባ ባባባባባባ ባባባባባባ
- Chinese - 简体中文 - 清洗物品以杀死臭虫
- French - Français - Blanchissage/lavage du linge pour tuer les punaises de lit
- Oromo - Meeshaalee Huccuu Ittin Miiccan kan Tukaana Siree Ajjeesuuf Gargaaran
- Russian - Русский - Стирка вещей как способ борьбы с постельными клопами
- Vietnamese - Tiếng Việt - Giặt Các Vật Dụng để Tiêu Diệt Rệp

Vacuuming to Capture Bed Bugs

- English - Vacuuming to Capture Bed Bugs
- Arabic - شارفلا قب طاقتلا ةيئابرهكلا ةسنكاملاب طفشلا - ةيبرعلا
- Hmong - Hmoob - Lub nqus tsev pab ntes cov kab tom neeg saum txaj
- Somali - Faakiyuum-garee dhiqlaha
- Spanish - Español - aspirar para Capturar las Chinchas de la Cama
- Amharic - ባባባባ - ባባባባባ ባባባባ ባባባባ
- Chinese - 简体中文 - 使用真空吸尘器捕捉臭虫
- French - Français - Passer l'aspirateur pour supprimer les punaises
- Oromo - Tukaana Siree Qabuuf Iddoo Banaa Qopheessuu
- Russian - Русский - Уборка пылесосом как способ борьбы с клопами
- Vietnamese - Tiếng Việt - Hút Bụi để Bắt Rệp

What NOT to Do When You Have Bed Bugs

- English - What NOT to Do When You Have Bed Bugs
- Arabic - شارفلا قب تدجو اذا لعفت ال أكيلع اذام - ةيبرعلا
- Hmong - Hmoob - Tej yam TSIS TXHOV ua thaum yus muaj cov kab tom neeg saum txaj
- Somali - Waxyaabaha aad u baahanyahay in aanad samayn markaad heshid dhiqle
- Spanish - Español - Lo que NO debe hacer cuando tiene chinchas
- Amharic - ባባባባ - ባባባባ ባባባ ባባባባ ባባባባባባ ባባባባባባ
- Chinese - 简体中文 - 当您遭受臭虫害时不要做的事情
- French - Français - Ce qu'il NE FAUT PAS FAIRE lorsque vous avez des punaises de lit
- Oromo - Tukaana Siree Yeroo Arginu Wantoota Gochuu HIN Qabaanne
- Russian - Русский - При обнаружении клопов НЕ рекомендуется
- Vietnamese - Tiếng Việt - Những Việc KHÔNG Được Làm Khi Quý Vị có Rệp

Objective 4: Bed Bug ListServe

With the assistance of UMN IT services, the ListServe was established. The email address for reaching the ListServe is: bed_bug_resource_center_listserve@umn.edu. The ListServe currently has 1,046 members.

Objective 5: Publications to support learning

Work on this objective begun later in the grant period. The article "The 'Let's Beat the Bug! Campaign' Statewide Active Public Education against Bed Bugs in Minnesota" was accepted by the Journal of Environmental Health and is in press. We will provide notification when it has been published in March 2017.

Objective 6: Peer-to-Peer Training

Worked with WellShare International and scheduled this training to be held on June 16, 2016. On June 16, 2016, Ms. Shindelar provided a presentation to 15 Community Health Workers as part of the Community Health Worker Peer Network. Feedback was very positive.

On July 13th, 2016 a training was held at the Black Bear Casino, MN. The training was centered on Bed Bug Prevention and Control in Hospitality. It included the following topics:

- What are Bed Bugs and Why Are They a Problem?
- How do Bed Bugs Become a problem in Hotels?
- Integrated Pest Management for Bed Bugs
- Bed Bugs for Hospitality Managers

Guardian Pest Control joined the workshop to provide a demonstration of their canine scent detection team.

On August 17, 2016, Hilda provided a presentation to 35 Case Managers at Hennepin County Health and Human Services - Children Services as part of the Community Health Worker Peer Network. Feedback was very positive. Stress was put on the following areas:

- What Bed Bugs look like and why they are confused with the Bat Bug
- Bed Bug Stages and Bites
- Bed Bug Identification and why it is important
- Common Bed Bug Hiding Places
- Reasons why Bed Bugs are a Problem
- Bringing Bed Bugs Into Your Home or Office
- Bed Bug Treatments
- Guidelines for Home Visitors
- Being Prepared for a Bed Bug Encounter
- What to do during and after Visit
- Available Bed Bug Resources

During Peer to Peer training these are some of the topics covered

- What Bed Bugs look like and why they are confused with the Bat Bug
- Bed Bug Stages and Bites
- Bed Bug Identification and why it is important
- Common Bed Bug Hiding Places
- Reasons why Bed Bugs are a Problem
- Bringing Bed Bugs Into Your Home or Office
- Bed Bug Treatments
- Guidelines for Home Visitors
- Being Prepared for a Bed Bug Encounter
- What to do during and after Visit
- Available Bed Bug Resources
- What are Bed Bugs and Why Are They a Problem?
- How do Bed Bugs Become a problem in Hotels?
- Integrated Pest Management for Bed Bugs
- Bed Bugs for Hospitality Managers

Objective 7: Bed Bug Survey for Karen Community

After a number of meetings with the Karen Organization of Minnesota (KOM) we established a contract with KOM and hired Eh Gay Moo to work with us on creating and implementing a survey and additional outreach plans. Eh Gay Moo (Contract through the Karen Organization of Minnesota) worked with us to address issues of improper pesticide applications for bed bug control in the Karen Community. Mr. Moo also worked to develop a survey for community members. Survey questions were created and vetted by multiple stakeholders. An online form and database were created for data collection, which is scheduled to begin in early July. The period for the data collection was scheduled to be completed by mid – November.

Eh Gay Moo (Contract through the Karen Organization of Minnesota) and Nay Htoo (Minnesota Department of Health) worked with us to address issues of improper pesticide applications for bed bug control in the Karen Community. Mr. Moo has also been working to develop a survey of community members. Survey questions have been created and vetted by multiple stakeholders. An online form and database was completed in mid – November.

3.) CHALLENGES ENCOUNTERED AND LESSONS LEARNED (*Describe any challenges that you encountered and what was learned from those challenges.*)

While the List Serve was established and members recruited, we are not seeing any activity in the group and need to work on stimulating conversation. Website migration was delayed, as we worked with coding the new content management system to accept the multitude of new languages that use a non-roman scripts. Burmese, Karen, and Arabic scripts were particularly challenging. The scripts for Burmese and Karen were programed into the content management system, and we worked to troubleshoot the Arabic script, which was not displaying properly. By the third quarter, the website was underway. IT employed coding the new content management system to accept the multitude of new languages that use a non-roman scripts. By the end of the year, 2016, the Website was getting close to completion.