

Safety and Health Investment Projects FINAL REPORT REQUIREMENTS

The purpose of the final report of your SHIP project is to:

1. Evaluate and document the achievements, challenges, and shortcomings of the project for the constructive benefit of others interested in learning from SHIP projects; and
2. Provide the Division of Occupational Safety and Health with information that shows:
 - a. The outcomes specified in the project application were met; and
 - b. The grant was used for the purpose(s) for which it was approved and in accordance with relevant WAC rules and any special conditions or requirements; and
 - c. The outputs of the project have been disseminated as specified in the application.

The report format has four sections:

1. Cover Sheet
2. Narrative Report (part I)
3. Financial Information (part II)
4. Attachments (part III)

Please provide complete and detailed information in the final report. If you have questions, please call your SHIP grant manager.

REMINDER!!: All products produced, whether by the grantee or a subcontractor to the grantee, as a result of a SHIP grant are in the public domain and can not be copyrighted, patented, claimed as trade secrets, or otherwise restricted in any way.

SAFETY AND HEALTH INVESTMENT PROJECTS FINAL REPORT

Changing the Workplace Environment for Materials Handling Employees
2014XC00278
November 15, 2014 through August 31, 2016

Susan Whitford
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Kitsap Regional Library

September 13, 2016

Susan Whitford



Washington State Department of
Labor & Industries
Division of Occupational Safety and Health

Funding and support for this project has been provided by the State of Washington, Department of Labor & Industries, Safety & Health Investment Projects.

Kitsap Regional Library is solely responsible for the content of and views expressed in this report and related materials unless they have been formally endorsed by the Washington State Department of Labor and Industries.

PART I

Narrative Report

Organization Profile:

For awarded organizations, to include partners and collaborators, provide a brief description of each organization. Mission, vision, and purpose for each of the organizations who applied (this includes partners and collaborators) for the grant.
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Kitsap Regional Library (KRL) was formed in 1955. We provide public library service to the 259,000 residents of Kitsap County through nine branch locations, a Bookmobile, an outreach staff that serves more than 200 homebound residents and an always accessible virtual branch. We actively partner with our five county school districts, with the county government itself, with four city governments and two tribal governments to support important community priorities, most specifically literacy, the education of our youth and providing forums for civic engagement. Our mission is “Inspiring our community to dream more, learn more, do more and be more.”

Abstract:

Present a short overview of the nature and scope of the project and major findings (less than half a page).

The timely movement and processing of materials is vital to a library system. Much of this includes moving boxes of books and materials from one location to another and within a building. KRL has a collection of more than 535,000 books and materials that are shared among the nine branches and circulated by a courier system. The scope of this project was to introduce several changes that would significantly reduce the repetitive bending, lifting and twisting by staff in order to reduce the risk of injury. Additionally, this project includes the creation of training information and a training video for existing and new staff on proper procedures of lifting and processing materials.
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Purpose of Project:

Describe what the project was intended to accomplish.

The purpose of this project was to reduce the risk of injury during the daily work of delivery couriers, as well as material sorters in all library buildings by implementing new methods and tools for performing job tasks that reduce bending, lifting and twisting.

Statement and Evidence of the Results:

Provide a clear statement of the results of the project include major findings and outcomes and provide evidence of how well the results met or fulfilled the intended objectives of the project.

Our first step was to reduce the size of the tote boxes used to move books and materials from one location to another and within a building. Previously, the tote boxes came in two sizes with 70% of them typically being over the recommended weight of 30 pounds. Through this grant, we were able to purchase and replace all of our tote boxes with appropriate sized boxes that limit the weight. Now, we are only seeing 2% of the totes that are 5 or more pounds overweight.

Our second step was to replace the flooring in our courier van. Previously, the flooring had ridges which made it difficult to move tote boxes around in the van. They would tip into the ridges and valleys of the floor causing difficulty in moving them and putting significant strain on the couriers trying to move them. Level flooring was installed in the vans to allow easier movement of the totes within the van saving strain and exertion by the couriers. Additionally, this level floor has reduced the likelihood of tripping and improved safety while working in the van cargo area.

Our long standing method of loading and unloading the vans required the couriers to manually lift each and every tote box from the ground to the bed of the van or on top of an existing stack of totes already in the van or vice versa. Step three of this project included the purchase of a ramp to allow a reduction in the amount of lifts required to load and unload the van. We found that while the use of the ramp would allow a reduction in the number of lifts required to load and unload the van at our central library location by a little over 50%, this only resulted in a relatively small overall savings in the number of lifts the courier does in a day at all stops. Additionally, we found that the ramp size and weight made it too cumbersome for the couriers to set up and utilize safely and effectively for general daily operations. We determined that using the ramp was as much a hindrance to safety and operations as it was a help in reducing the number of lifts required. We felt that the risks involved outweighed the benefits. Also, given that we have reduced the weight of the totes, the need for the ramp is less than it had been. We have, however, found the ramp to be a useful tool on occasions where significantly overweight items are being transported (e.g., surplus of large equipment, support of special events, etc.) In these situations, the ramp is employed using a buddy system or team pairing to install and remove the ramp.

The next step involved a trip to Timberland Regional Library to see how they use their lift hand trucks. Through our grant, we purchased one to test and evaluate. The plan was to use the lift truck to raise the stack of tote boxes so the staff person would not have to bend and twist as they removed items from the box and scanned them as a "check in" into the computer system. The first test was unsuccessful due to reluctance to change procedures and a lack of coordination and training. Subsequently, we reached out to a supervisor at one of larger branches offering some expert assistance to review all procedures associated with the check in process, as well as information regarding the benefits of minimizing the lifting and twisting that was previously happening. The supervisor, along with our safety and security coordinator, implemented the process improvements as our pilot.

Following this pilot, we revisited our largest and busiest branch to understand what the issues were with the first test. We found that the footprint of the lift truck and the difficulty they had moving it when it was fully loaded impacted the success of the test. We ran another test using a lift table that was easier to move from one side of the room to the other. This seemed to be a better solution for the floorplan and pattern of movement at this branch location. Through the grant, we purchased a lift table for this branch location.

Our next step was to re-evaluate the remaining branch locations and their needs. After lengthy discussions with staff, we determined that a course correction was needed. The smaller branch locations did not process and move as many totes, nor did they have the floorspace to accommodate a hand lift truck or lift table. We did determine that we needed more small totes to accommodate our Summer Learning program with a higher than normal number of materials that needed to move between branch locations, an adjustable height table that would be used in conjunction with the hand lift-truck, and several sit-to-stand devices to be used for staff that process books and materials to reduce bending and twisting.

These items were purchased and deployed with success.

Measures to Judge Success:

If relevant, state what measures or procedures were taken to judge whether/ how well the objectives were met and whether the project or some other qualified outside specialist conducted an evaluation.

Relevant Processes and Lessons Learned:

Specify all relevant processes, impact or other evaluation information which would be useful to others seeking to replicate, implement, or build on previous work

AND

Provide information on lessons learned through the implementation of your project. Include both positive and negative lessons. This may be helpful to other organizations interested in implementing a similar project.

Lessons Learned –

We had a representative from L&I previously come out and make recommendations regarding our processes and procedures with our couriers and staff that handle tote boxes. We used the recommendations from these reports as the framework for this project.

The first step in a successful project, especially one where you are introducing change, is to get buy in from the people that will be impacted. Having someone champion the change is critical. We did have this with the couriers and were successful. We did not have this with the first branch location we tried, but we did with the second. The other important element in a successful project is to clearly identify the goal so that staff can understand why and how they may be impacted.

I believe our goal was very clear and we have measureable successes with the weight of the smaller totes. We also have success in the branch locations where we understood the current process and worked with the staff to improve the processes making their jobs easier and more ergonomically correct.

Product Dissemination:

Outline of how the products of the project have been shared or made transferrable.

The product of this project is a PowerPoint training guide that will be used for all new staff working in the departments affected, as well as refresher guide for existing staff. This training guide is available on our internal website for any staff to learn about safe lifting.

Feedback:

Provide feedback from participants, trainees, individuals who have used your products/processes, as well as any reports from an independent evaluator on the project.

Following are quotes directly from staff using the items purchased through this grant.

Small Totes

“Switching to all smaller totes has all but eliminated the seriously overweight totes that had previously made up a significant portion of my workload, which has greatly reduced the daily strain on my body (back and grip especially). While I may have to make more ‘lifts’ per day due to branches now needing to use more totes to pack the same amount of books, it has removed the heavier lifts that really hurt!”

Lift truck

“The lift truck at Poulsbo has been helpful for processing our daily shipments, which usually consists of 15-25 shipment crates daily, and usually takes about a half hour to process. Having the lift truck available to lift items off of the floor has made processing the last remaining crates much easier on employees’ knees and backs, by greatly reducing bending, twisting, and lifting. Having this lift truck has also established a clear working area for processing shipment, something that had not been established before, and this has redirected foot traffic patterns to create a safer work environment. All team members use the lift truck regularly as part of processing shipment, and team members agree that this has improved their work environment. “

Adjustable height table

“The window station where the adjustable height table was installed went from being a station that people didn’t really use, to now being a functional desk where staff members now regularly work. Some of the employees, including myself, choose to process books with the desk raised, for check in and processing holds, and then to shelve the items on our carts, we sit down so we can reach the lower shelves more comfortably. The value of having it adjustable to sitting or standing is a major benefit to this station now that we didn’t have before, and this reduces bending, twisting, and lifting. As for the volume of items processed, one task that is often completed at that station is processing holds, and we use our larger style of cart for this, which can hold 50-150 books at any time.”

Sit-to-stand devices

“The sit to stand desk is helping with my hip and back pain. I am working with a physical therapist and she has said the more I can do standing at work the better it will be. I can stand up to use the computer for inputting borrowing requests in Worldshare, receiving requests in Worldshare and working on other tasks that involve focusing on the computer screen. The majority of my daily tasks (with the exception of days I assist Lisa S. with putting the yellow ILL paper straps on incoming ILL books) using the computer can now be done standing. The ease of moving the desk up and down for when I need to sit is very helpful. “

“I do many different jobs throughout the day and the Sit-to-stand device allows me move

through each task more efficiently.

A snapshot of one day with the Sit-to-stand desk:

I was able to process 35 incoming ILL items and 80 ILL returns by moving books on a book cart, scanning them into the computer without having to bend and twist, and then moving them over to our shipment shelves and shipping area.

I was able to evaluate and weed 60 audio books by adjusting the height of my desk in order to remove audio books from shipment crates, scanning, and discarding them without constantly twisting or bending over.

I was able to pay \$6500.00 in invoices and order \$3000.00 in materials. The ability raise and lower the desk allows me to get more done as I am not in the same position for long periods of time.”

Project's Promotion of Prevention:

Explain how the results or outcomes of this project promote the prevention of workplace injuries, illnesses, and fatalities?

There are three primary area where workplace injuries will be prevented as a direct result of this grant:

- With smaller tote boxes, the weight of the box is reduced and is nearly always at or below 30 lbs. Because our couriers are moving these boxes all day, we have minimized the opportunity for back injuries.
- Staff are moving lighter weight tote boxes and in several locations they are using lift trucks or lift tables to raise and lower the height of the boxes as they process materials and check-in items.
- The sit-to-stand devices have allowed staff to perform multiple tasks from one workstation and to allow staff the opportunity to stand while they work relieving pressure from their backs.

Uses:

How might the products of your project be used within the target industry at the end of your project?

Is there potential for the product of the project to be used in other industries or with different target audiences?

The training video could certainly be used in other mid-sized libraries that have multiple locations and transport materials in tote boxes.

Smaller totes and lift tables could be used in other industries that transport items between locations, such as school districts, health care and even food services. Sit-to-stand devices could be used for organizations where employees have to sit for long periods of time like insurance offices, government organizations, etc.

Additional Information

Project Type <input checked="" type="checkbox"/> Best Practice <input type="checkbox"/> Technical Innovation <input checked="" type="checkbox"/> Training and Education Development <input type="checkbox"/> Event <input type="checkbox"/> Intervention <input type="checkbox"/> Research <input type="checkbox"/> Return to Work <input type="checkbox"/> Other (Explain):	Industry Classification (check industry(s) this project reached directly) <input type="checkbox"/> 11 Agriculture, Forestry, Fishing and Hunting <input type="checkbox"/> 21 Mining <input type="checkbox"/> 22 Utilities <input type="checkbox"/> 23 Construction <input type="checkbox"/> 31-33 Manufacturing <input type="checkbox"/> 42 Wholesale Trade <input type="checkbox"/> 44-45 Retail Trade <input type="checkbox"/> 48-49 Transportation and Warehousing <input type="checkbox"/> 51 Information <input type="checkbox"/> 52 Finance and Insurance <input type="checkbox"/> 53 Real Estate and Rental and Leasing <input type="checkbox"/> 54 Professional, Scientific, and Technical Services <input type="checkbox"/> 55 Management of Companies and Enterprises <input type="checkbox"/> 56 Administrative and Support and Waste Management and Remediation Services <input type="checkbox"/> 61 Educational Services <input type="checkbox"/> 62 Health Care and Social Assistance <input type="checkbox"/> 71 Arts, Entertainment, and Recreation <input type="checkbox"/> 72 Accommodation and Food Services <input checked="" type="checkbox"/> 81 Other Services (except Public Administration) <input type="checkbox"/> 92 Public Administration														
Target Audience: Mid-sized libraries that have more than one location, but don't have automated materials handling systems. Other industries that repetitively move items around															
Languages: English															
Please provide the following information - - <i>(information may not apply to all projects)</i>	List, by number above, industries that project products could potentially be applied to. 61, 62, 72														
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 40%;"># classes/events:</td> <td></td> </tr> <tr> <td># hours trained</td> <td></td> </tr> <tr> <td># students under 18</td> <td></td> </tr> <tr> <td># workers</td> <td></td> </tr> <tr> <td># companies represented</td> <td style="text-align: center;">1</td> </tr> <tr> <td># reached (if awareness activities)</td> <td style="text-align: center;">150</td> </tr> <tr> <td>Total reached</td> <td style="text-align: center;">150</td> </tr> </table>	# classes/events:		# hours trained		# students under 18		# workers		# companies represented	1	# reached (if awareness activities)	150	Total reached	150	Potential impact (in number of persons or companies) after life of project?
# classes/events:															
# hours trained															
# students under 18															
# workers															
# companies represented	1														
# reached (if awareness activities)	150														
Total reached	150														
Have there been requests for project products from external sources? No <i>If Yes, please indicate sources of requests:</i>															

PART II

Financial Information Budget Summary

Project Title:	Changing the Workplace Environment for Materials Handling Employees		
Project #:	2014XC00278	Report Date:	September 15, 2018
Contact Person:	Susan Whitford	Contact #:	360-475-9176
Start Date:	November 15, 2014	Completion Date:	August 31, 2016

1. Total original budget for the project	\$ <u>15,381.00</u>
2. Total original SHIP Grant Award	\$ <u>15,381.00</u>
3. Total of SHIP Funds Used	\$ _____
4. Budget Modifications (= or - if applicable)	\$ _____
5. Total In-kind contributions	\$ _____
6. Total Expenditures (lines 3+4+5)	\$ <u>15,381.00</u>

Instructions:

- Complete the Supplemental Schedule (Budget) form first (on the next page).
- The final report must include all expenditures from date of completion of interim report through termination date of grant.
- Indicate period covered by report by specifying the inclusive dates.
- Report and itemize all expenditures during specified reporting period per the attached supplemental schedule.
- Forms must be signed by authorized person (see last page).
- Forward one copy of the report to **Grant Manager Name, SHIP Grant Manager at PO Box 44612, Olympia, WA 98504-4612**

PART II *(Continued)*

Financial Information

Supplemental Schedules (Budget)

Project Title:	Changing the Workplace Environment for Materials Handling Employees		
Project #:	2014XC00278	Report Date:	September 15, 2016
Contact Person:	Susan Whitford	Contact #:	360-475-9176
Total Awarded:	\$15,381.00		

ITEMIZED BUDGET: How were SHIP award funds used to achieve the purpose of your project?

	Budgeted for Project	Amount Paid Out	Difference
A. PERSONNEL			
Explanation for Difference and other relevant information:			

	Budgeted for Project	Amount Paid Out	Difference
B. SUBCONTRACTOR			
Explanation for Difference and other relevant information:			

	Budgeted for Project	Amount Paid Out	Difference
C. TRAVEL			
Explanation for Difference and other relevant information:			

	Budgeted for Project	Amount Paid Out	Difference
D. SUPPLIES	\$15,115.08	\$15,115.08	\$0.00
Explanation for Difference and other relevant information:			

	Budgeted for Project	Amount Paid Out	Difference
E. PUBLICATIONS			
Explanation for Difference and other relevant information:			

	Budgeted for Project	Amount Paid Out	Difference
F. OTHER			
Explanation for Difference and other relevant information:			

	Budgeted for Project	Amount Paid Out	Difference
TOTAL DIRECT COSTS	\$15,115.08	\$15,115.08	\$0.00
	Budgeted for Project	Amount Paid Out	Difference
TOTAL INDIRECT COSTS	\$265.92	\$265.92	\$0.00
	Budgeted for Project	Amount Paid Out	Difference
TOTAL SHIP BUDGET	\$15,381.00	\$15,381.00	\$0.00

	Budgeted for Project	Amount Paid Out	Difference
G. IN-KIND			
Explanation for Difference and other relevant information:			

I hereby certify that the expenditures listed on this report were made with my approval:

Date

Signature of Project Manager

PART III

Attachments:

Provide resources such as written material, training packages, or video/ audio tapes, curriculum information, etc. produced under the grant.

Also include copies of publications, news releases, curriculum, posters, brochures, etc.

The above information should also be provided on a CD or DVD for inclusion in the file.

- DVD: must be in an MP4 format
Other video files must be provided in uncompressed source files.
- Publications:
PDF of publication should be provided. SHIP also needs the original publishing documents (design documents), .eps, and .psd (if any illustrations/graphics are used)

REMINDER!!: All products produced, whether by the grantee or a subcontractor to the grantee, as a result of a SHIP grant are in the public domain and can not be copyrighted, patented, claimed as trade secrets, or otherwise restricted in any way.