



STATE OF WASHINGTON  
DEPARTMENT OF LABOR AND INDUSTRIES

950 Broadway, Ste. 200, Tacoma, WA 98402

March 2, 2006

Jennifer Wamboldt, EHS Manager  
Pacific Lutheran University  
1010 122nd St S  
Tacoma, WA 98447

RE: 503982662

Dear Jennifer:

I have enclosed the findings of your WISHA consultation, beginning 2/22/2006 at the Pacific Lutheran University campus in Tacoma.

In the enclosed report, you will find a description of my findings and recommendations.

You are required to share this report with your employees and/or their collective bargaining representatives as soon as possible, but no more than 30 days from receiving it (RCW 49.17.250(3)).

If you have any questions about this report, or need further assistance, please contact me. For on-line access to our safety and health rules, go to [www.lni.wa.gov/wisha](http://www.lni.wa.gov/wisha).

Sincerely,

*Nicole Irby*

Nicole Irby  
Industrial Hygiene Consultant  
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Approved By: *Patricia A. Mahoney*  
Consultation Supervisor

Attachments:  
Report Findings  
*Noise Results*



# Department of Labor & Industries

## Safety and Health Consultation Report

Consultation Report for: Pacific Lutheran University

Report No: 503982662

Date of Workplace Visit: 2/22/06

Consultant Name: Nicole Irby

Other Consultant(s) on Visit:

Company Representatives: Jennifer

Employee Representative: Peter, Tom, Kim, David, Don, Scott, Steve, Fred, Brian, Mori,  
Ben, Jared

### **What this report contains:**

1. Introduction
2. Hazards Identified
3. Other Findings and Recommendations
4. Notice of Obligation

## **I. Introduction**

Visit Number: 503982662

I appreciated having this opportunity to help you evaluate the safety and health of your workplace. We at WISHA are committed to encouraging voluntary compliance with Washington safety laws by offering technical advice and consultation with employers and their employees.

### **Definitions of serious and general hazards**

The law (RCW 49.17.250) requires you to fix, by a specific date, any serious hazards identified. Also, you must take steps to protect your employees until the serious hazards are corrected.

- **Serious hazards:** Washington law defines a hazard as serious when there is a substantial probability that death or serious physical harm could result to your employees.
- **General hazards:** A hazard is general when we determine that there is a probability that an employee could be injured or become ill as a result, but there is no reasonable probability that it could cause death or serious physical harm.

### **Make a copy of this report available to your employees**

You are required to share this report with your employees and/or their collective bargaining representatives as soon as possible, but no more than 30 days from receiving it (RCW 49.17.250(3)).

### **Make safety and health an ongoing priority in your workplace**

Your request for this consultation shows that you are committed to the safety and health of your employees. Make sure you continually self-inspect your workplace for hazards. The findings shown in this report were hazards identified on the day of the consult, and are not necessarily all of the hazards that may be present now or in the future at your work site. Situations and conditions can be different from day to day.

## **2. Hazards Identified**

Visit Number: 503982662

No hazards were found during the consultation visit.

## **3. Other Findings and Recommendations**

Visit Number: 503982662

Noise exposure evaluations were performed for a variety of jobs on campus. This included both personal dosimetry and instantaneous checks with a sound level meter. Resulting levels from these evaluations are summarized in a table included as an attachment with this report. While no conditions that would be classified as serious hazards were identified, there are several recommendations and suggestions presented below that arose from my visit.

First, the personal dosimetry that was done for employees in the dishroom illustrates that noise levels are still elevated enough that hearing protection should be used. Due to the length of time that employees are exposed to those noise levels, they are not required by State regulations to be included in a full hearing conservation program unless they work an 8-hour shift or more (which is the case for employees working on the weekend). If noise levels increase over time due to changes in production or the process, it is possible that employees working fewer than 8 hours would reach their allowable limit for noise exposure in a shorter period of time. At that point inclusion in a hearing conservation program would be a requirement rather than a recommendation.

Readings were taken during the operation of the espresso machine located in the café one floor down from the main cafeteria. The process lasted only minutes and included grinding beans and steaming milk. Noise levels were elevated enough that I recommend having those employees wear hearing protection during the times when there is a large influx of orders. The length of time that they would be exposed to those levels, though, is not sufficient enough to require them to be included in a full hearing conservation program. If the issue of not being able to hear the customers as they place their orders arises, there are a couple of things to consider. First, it is already loud enough that communication is difficult; you may want to change where the orders are placed. Second, hearing protection can sometimes make it easier to hear a person talk as it lowers the background noise levels from the process.

On the day that I came to the campus, personal dosimetry was unable to be completed for employees working in the print shop, but we did speak with those employees and do some spot checks with the sound level meter. Use of hearing protection needs to be a requirement in that work area for both employees. There are times when it is fairly quiet and hearing protection does not need to be used, but when louder equipment such as the cutter, press, and folder are run, hearing loss will occur without it. Since the space is relatively small, this applies to anyone working in there, not just the operator alone.

In the computer machine room where monitoring was done, levels were low enough that hearing loss would not occur from the exposure and thus, hearing protection does not need to be required. There is a constant low frequency "hum", though, and employees may find this to be a nuisance. It is suggested that they be provided with hearing protection at their request for the purpose of allowing them to perform their work in an environment where they do not feel distracted.

Monitoring was done in one of the boiler rooms reported to be the loudest on campus. Noise levels were just below the 85dBA cut-off for requiring the use of hearing protection. However, it is important to keep in mind that employees do not spend a full 8-hour shift working in those rooms. Hearing protection does not need to be required, but it would be a good idea to provide it to employees upon their request.

According to the noise levels measured for equipment used on the golf course and ball fields, the groundskeepers working in those areas will need to be kept in your hearing conservation program. We were unable to measure the noise levels for the aerator, but it is reported that its use produces a loud impact type of noise. While the type of hearing protection currently in use is adequate for mowing, it may be that employees need to use plugs and muffs during this activity, depending upon just how loud it is.

In the equipment workshops for the Science building there are a variety of wood- and metal-working tools. Access to this area is fairly limited, but those people who do use it need to be made aware of the hazard. Noise levels were elevated to the point that hearing protection should be provided to and worn by employees when using the tools in those rooms. However, the length of time spent on projects there is limited enough that inclusion in the full hearing conservation program would not be necessary.

Existing training needs to be augmented by discussing the monitoring results covering jobs on your campus. It is also important to discuss protection from non-occupational noise with employees so that they do not incur hearing loss in their activities outside of work. Training needs to include clear direction on hearing protector use, including selecting the most appropriate type and ways in which it can be defeated (such as using headphones to listen to music underneath protective earmuffs). That they have a choice of hearing protectors if one type isn't working for them must be clear as well. Employees need to be informed who hearing protection is a requirement for and that their supervisors must ensure that they wear it.

A more in-depth evaluation of the noise levels that the general groundskeepers are exposed should be performed. During my visit, time was limited, but one reading was taken for a mower in use on that day. The noise level was very high and as such, further action may need to be taken to prevent hearing loss. Further action includes such things as engineering controls to reduce noise exposure levels, re-training for employees not wearing hearing protection or wearing it improperly, and an evaluation of the type of hearing protection being worn to ensure that it is sufficient. Due to time constraints

during the consultation, it was not possible to perform an assessment for effective engineering controls. General recommendations for reducing noise exposure in this manner include placing barriers between the employee and the noise source, making an acoustical enclosure around the noise source, purchasing less noisy equipment over time, and keeping motors tuned and moving parts lubricated. Additional evaluation would be necessary to further advise on this matter.

There are two other recommendations that I would like to make based upon this consultation. First, inviting a Safety Consultant to your campus to evaluate hazards outside of the scope of my expertise would be a good idea. This would include areas such as the maintenance shop and equipment workshop in the Science building. Similarly, having a Therapist Consultant who can best advise on ergonomic matters would be useful since soft-tissue injuries are the most common type seen on campus.

#### **4. Notice of Obligation**

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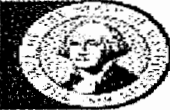
You are required to share this report with your employees and/or their collective bargaining representatives as soon as possible, but no more than 30 days from receiving it (RCW 49.17.250(3)).

Information obtained during consultations is confidential from public disclosure under RCW 49.17.250(3). However, a Thurston County Superior Court decision required the department to release consultation reports related to the WISHA Ergonomics Rule under the state's public disclosure laws. In light of this decision, we cannot guarantee the confidentiality of the final report and the information included within it.

We do not share consultant reports with WISHA compliance inspectors unless the employer refuses to correct serious hazards or imminent danger situations.

If, in the future, your workplace is inspected by WISHA compliance, you will not be required to tell the inspector about this consultation or share the report. However, if, during the consultation, we perform any tests for workplace exposures (such as noise levels or air quality) WISHA standards require you to show these monitoring results to the inspector, if requested.

If I give you specific guidance that you follow, you would not be cited if a WISHA inspector later finds my guidance did not address (or adequately address) a hazard. You would still have to fix the hazard by the correction date assigned by the inspector. However, it is possible for an inspector to cite you for a hazard not identified during my consultation. This could be because work conditions changed, we had a misunderstanding, or I may have overlooked the hazard. In such cases the inspector would consider any good faith effort by you in determining the penalty.



## Noise Monitoring Summary

Employee Name & Position	Measured Noise Level (dBA)	Comments
Don, Dishroom	87.5	Personal dosimetry done over the course of a 4-hour workshift Don and Scott at front line, Steve unloading
Scott, Dishroom	87.9	
Steve, Dishroom	85.3	
Fred and Brian, Print Shop	78-90	Ryobi 512H equipment levels
	74-98	Challenge MPC Cutter equipment levels
	87-92	Challenge Masterfold 1400 Folder equipment levels
Mori and Ben, Grounds	76-90	John Deere 4120 T2 e-Hydro equipment levels
	85	Greenmaster 3000 equipment levels
Jared, Grounds	84-100	TORO Z Master Commercial equipment levels
Peter, Science Equipment Tech.	76-93	Delta Unisaw 10" Tilting Arbor Saw tool levels
	79-88	Metal Grinder tool levels
	80-90	Bandsaw tool levels
	83-104	Sander tool levels
Kim, Barista	88	Noise level associated with grinding beans
	85-97	Noise levels associated with steaming milk
David, Computing	67-71	Environmental noise levels in computing room below the cafeteria
Boiler Room	83-84	Environmental noise levels in boiler rooms in building below the cafeteria
	75-80	

**Permissible Exposure**

**Limit for noise:**

85dBA averaged over an 8-hour period, or 50% dose (which is equal to 85dBA over an 8-hour period, 90dBA over 4 hours, 95 dBA over 2 hours, or 100dBA over 1 hour)

**Legend:**

dBA: A-weighted decibels

**Notes:** The wide range of noise levels seen for some of the equipment is due to the variation from idle to full operation