

INTRODUCTION

Noise in academic libraries is a long-standing concern of library staff and users. This concern has intensified as libraries have shifted from a focus on housing physical collections to one supporting student study and learning. As part of this shift, libraries have increasingly developed collaborative work spaces and learning commons where some level of noise is to be expected. What is an optimal noise level for this type of space? At what point does ambient noise support or diminish learning and productivity? Can optimal noise levels be reasonably managed through expectation-setting, self-monitoring and staff interventions?

While other studies of acceptable noise levels are documented in the literature, they commonly involved library settings where quiet was expected. This study investigates actual, perceived, and desired noise levels for a busy, collaborative study area in hopes of identifying ideal noise levels—the sonic sweet spot—for such a space.

OBJECTIVES

- To explore perceived, actual, and optimal noise levels within a collaborative library work space.
- To investigate effective elements of a noise management program from the perspective of staff and users.
- To expand the literature on noise and academic libraries.

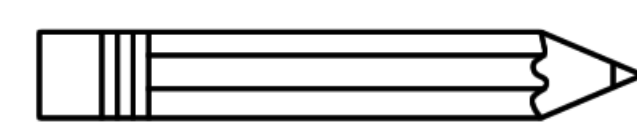


MATERIALS & METHODS

Actual Noise Level Measurements

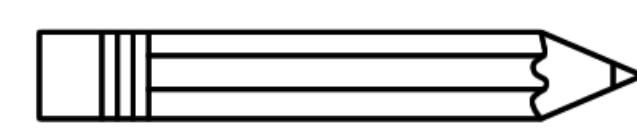


- 5 SoundEar II Noise Monitoring Signs
- 1 iPod Touch loaded with Decibel X PRO app, a sound meter for IOS devices offering pre-calibrated measurements.
- Measurements gathered at 3 times of day (10:30AM, 2:30PM, 9:30PM) in 6 different areas of the Learning Commons.
- Measurements taken prior to, during, and following implementation of noise management program.



User Feedback on Noise Levels

- Paper surveys administered to users within the Zimmerman Library Learning Commons (convenience sample).
- Question protocol used by Lange, Miller-Nesbitt, & Severson (2016) and Luyben *et al.* (1981):
 - How would you rate the current level of noise in this study area?
 - What is your desired level of noise for this study area?
 Additional Comments
- Perceived and desired levels recorded. Differences used to create noise differential score.
- Comments analyzed and coded to broad themes.

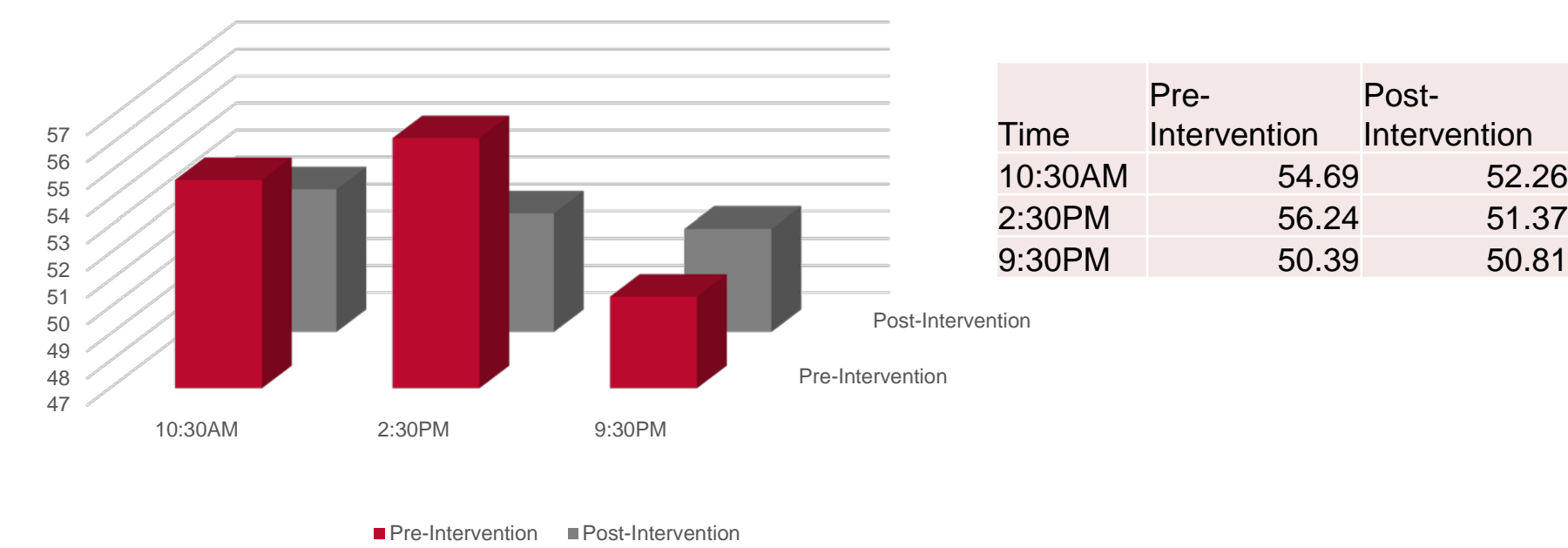


Staff Feedback on Noise Management Program

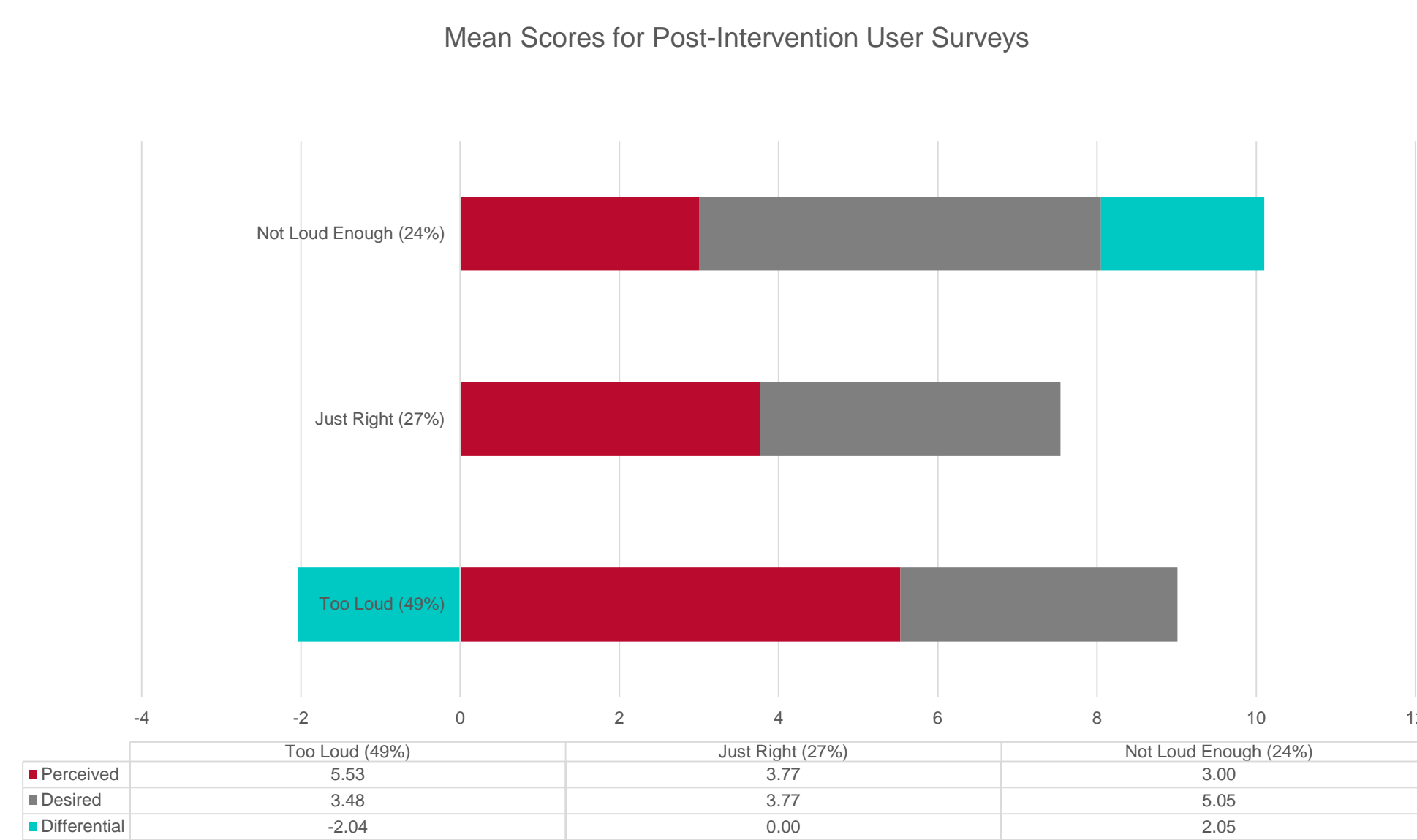
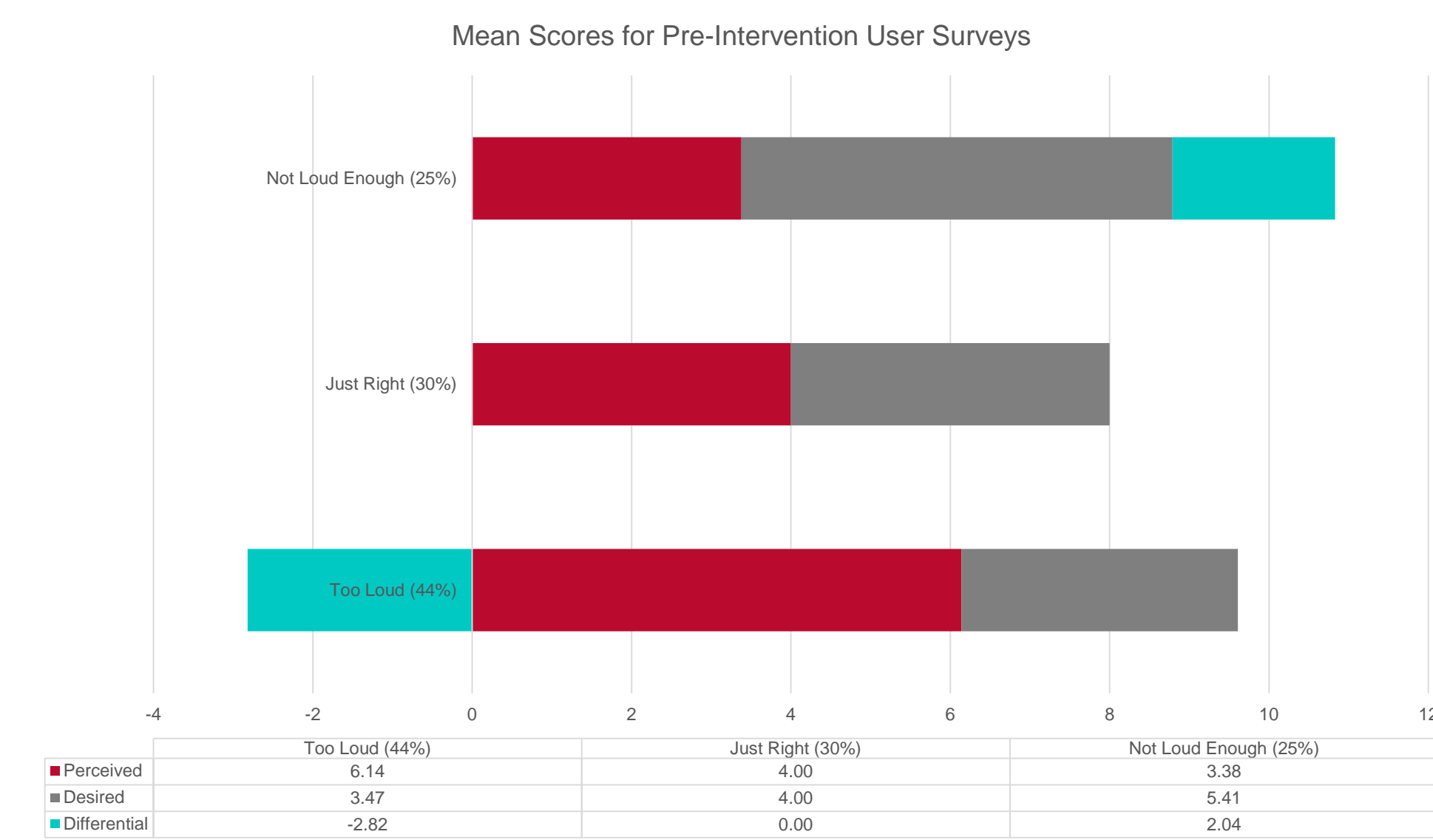
- Survey administered to all Access Services staff working within the Zimmerman Library Learning Commons via Opinio, a web-based survey and questionnaire tool.
- Focus group with student supervisors working within the Zimmerman Library Learning Commons.
- Questions asked of both groups:
 - What was successful?
 - What needs improvement?
 - Ideas for moving forward
- Responses analyzed.

RESULTS

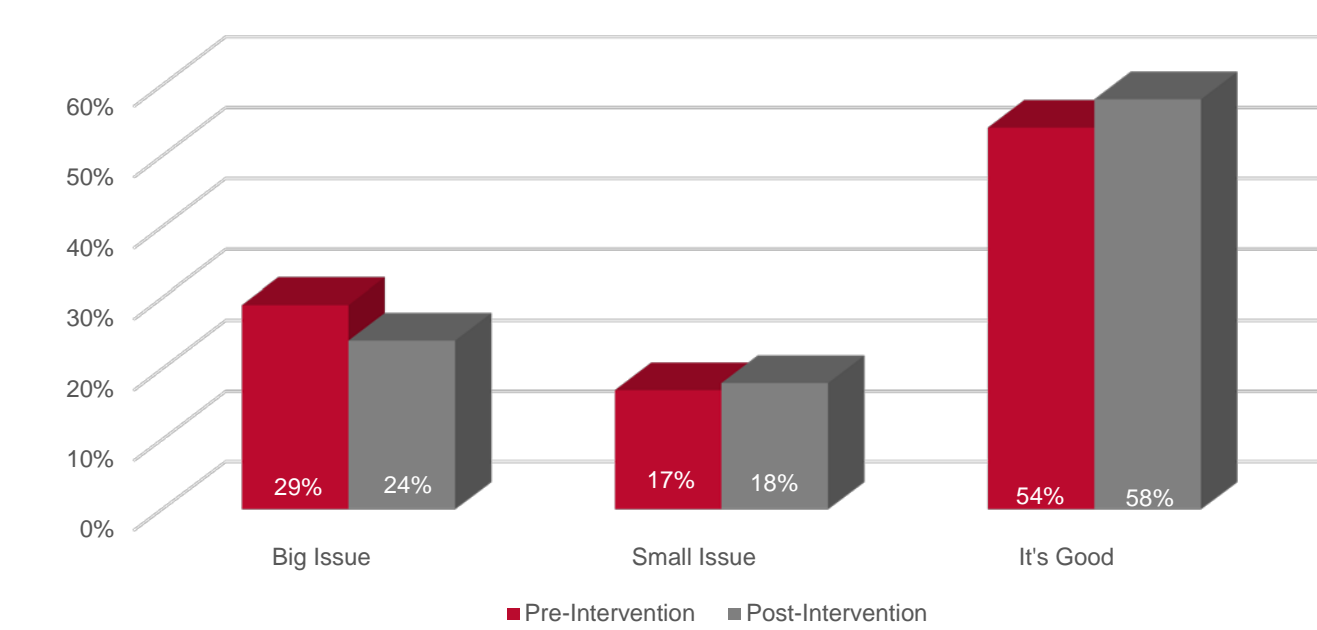
Noise Levels – Actual



Noise Levels – Perceived and Desired



Themes from User Comments on Noise



Staff feedback

- ✓ Increased awareness / Self-monitoring
- ✗ Placement/Function of Ears, Layout of space
- ! Noteworthy – Culture and Space

CONCLUSIONS

- Most found the space to be too loud, but not by much
- People are not good at defining noise levels
- Awareness key to finding and maintaining the Sonic Sweet Spot

NEXT STEPS

- More work with guidelines
- Space layout changes (what's easy and helps)
- Space layout changes (what helps, but requires money and time)

REFERENCES (selected)

Brown, S., Bennett, C., Henson, B., & Valk, A. (2014). *Next-Gen Learning Spaces*. Association of Research Libraries: Chicago, IL.

Lange, J., Miller-Nesbitt, A., & Severson, S. (2016). Reducing noise in the academic library: the Effectiveness of installing noise meters. *Library Hi Tech*, 34(1), 45-63.

Luyben, P. D., Cohen, L., Conger, R., & Gration, S. U. (1981). Reducing noise in a college library. *College & Research Libraries*, 42(5), 470-481.

Mehta, R., Zhu, R., & Cheema, A. (2012). Is noise always bad? Exploring the effects of ambient noise on creative cognition. *Journal of Consumer Research*, 39(4), 784-799.

Yelinek, K., & Bressler, D. (2013). The perfect storm: a Review of the literature on increased noise levels in academic libraries. *College & Undergraduate Libraries*, 20(1), 40-51.

Pre-Intervention

- Measure actual dB levels in Learning Commons
- Survey users on perceived/desired noise levels

Intervention

- Activate noise monitoring signs
- Train staff to intervene when noise is high
- Continue to measure actual dB levels

Post-Intervention

- Survey users on perceived/desired noise levels
- Survey staff on perceptions of program
- Continue to measure actual dB levels

