

## **Life Cycle Assessment Tool & Library Project Update, September 2020**

In February 2020 FAIC was awarded a Tier II Research grant from NEH to create a life cycle assessment (LCA) Tool and an LCA Library to give cultural heritage professionals access to information concerning the environmental impact and toxicity resulting from actions and materials used to conserve, maintain, and exhibit cultural heritage objects. The project began in March with some adaptations under COVID-19, but the purpose remained the same: producing a full LCA Library with a range of case studies, and a robust LCA Tool populated with 2,000-3,000 items. Eric Pourchot from FAIC is the Project Manager and the three Principal Investigators are Sarah Nunberg, Sarah Sutton, and Matthew Eckelman. Sarah Sanchez, a PhD Candidate in Civil & Environmental Engineering at Northeastern University, is providing significant research support. They are joined by a number of professional peers and conservation students (see the list below).

This spring, Michelle Derrick and Rachael Arenstein made important headway organizing the foundational information for the LCA Tool. Conservation students (diverted by COVID-19 from their intended summer research) then joined the project to complete the work of sorting, culling, and describing materials to be included in the LCA Tool. At the same time, professional peers representing specific conservation programs and expertise worked together to identify assessment projects to be part of the LCA Library, and students recommended research projects as well. Peers and students worked with the project team to outline the components of those case studies. With both phases of descriptions nearly complete, the project shifts gears now to the calculation stage led by Sarah Sanchez and Matt Eckelman. We anticipate a beta version of the Tool to be available for peer testing in early 2021, and the first of the 7 - 10 case studies will be drafted soon after. Some of the first case studies to be completed will examine plant- and animal-based adhesives, rigid gels, travel crates, gloves, lining methods for paintings, and archival vs. non-archival boards.

Because students and peers suggested a number of fact sheets and introductory materials to support professionals using the Tool and Library, the project has expanded to include a resource website containing all of the materials produced by the grant project. Eric O'Toole, a project Peer and Pratt Institute communications design professor, will help us develop this part of the work.

We'd like to thank the peers and students who have worked with the project so far:

Professional peers: Rachael Arenstein, Danielle Bennett, Al Carver-Kubik, Meg Colbert, Michelle Derrick, Jacquie Fekete, Eric O'Toole, Michaleen Gallagher, Shannon Nortz, Ellen Pearlstein, Rebecca Ploeger, Patrick Raines, Joel Taylor, Joelle Wickens, and Hannelore Roemich.

Students: Melissa Amundsen, Annabelle Camp, Lauren Conway, Marie Desroucher, Tess Browyn Hamilton, Shaoyi Qian, Kathryn Kenney, Jennifer Mikes, Khanh Nguyen, Elizabeth Salmon, Magdalena Solano, and Celine Wachsmuth.

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- *Sarah Nunberg, Sarah Sutton, Sarah Sanchez*