***Connecting to Collections* project.**

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Drying Out Basement in Historic Buildings

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Wet basements often seem like a fact of life when historic buildings are considered. Rock foundation walls and dirt floors are common features of historic buildings that can seem to be inherently damp. The high humidity that results from basement dampness can cause irreversible damage to the structure of your historic building and to the irreplaceable collections housed inside. Preventive maintenance and creating a cyclical maintenance checklist are two proactive ways that you can reduce the cost of repairs and ensure that your collections are protected from the elements. There are several practical and relatively inexpensive ways that you can manage wet basement conditions.

Begin your approach to the problem by assessing where the water enters the basement. Try to monitor the walls and floor during and after a rainstorm to pinpoint where the worst areas are located. Once you have a better idea of how excess water is entering the basement, you can take the following measures to reduce, or even stop, the problem at its source.

- Check your gutters and downspouts. Make sure that they are complete and channeling water away from the building. If your building does not have gutters, consider adding historically appropriate gutters and downspouts.
- Make sure the ground surrounding the building slopes away as much as possible to keep water moving away from the foundation.
- Clean any debris and junk out of the basement to ensure easy access and free air flow.
- Cover dirt floors with 6 mil plastic sheeting and overlay the sheeting with a thin layer of gravel. The plastic will reduce the moisture that rises through the dirt and the gravel makes it possible to walk on the plastic without risk of punctures.

A ventilation fan controlled by a dehumidistat has been installed in this basement window to provide additional ventilation.

The dirt floor in this basement has been covered with 6 mil and a thin layer of gravel.

Images provided by Amanda Manahan.

- Install a basement ventilation fan that is controlled with a dehumidistat. A dehumidistat is a sensor that switches on the vent fan when the humidity in a space exceeds a set amount.
- Monitor fluctuations in temperature and humidity in the basement using a datalogger. Use the data collected by the datalogger to adjust the settings on the basement ventilation fan as necessary to create the best climate possible.

Resources:
National Park Service Preservation Brief 39
From the Roof Down...and Skin Deep online tutorial
This Old House website

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