Storage conditions have long been recognized by museum professionals as important factors in the long-term survival of artifacts. Although all materials deteriorate over time, stable environment, controlled lighting, careful handling, and the use of appropriate housing materials are strategies developed to slow the rate of degradation.

The housings found within this packet were developed by Jessica Waite and Tina Koeppe with assistance from the staff of the Ford Conservation Center, a division of History Nebraska as part of a larger project, funded in part with a Save America’s Treasures grant, to improve the storage conditions for the History Nebraska Native American collection.

The collection of more than 3000 Native American objects was at risk due to inadequate storage space that caused ongoing damage to objects; space constraints that made safe access to artifacts nearly impossible; and toxic pesticide contamination. Staff members developed a project to remove or reduce these threats by increasing storage space and accessibility through the addition of safe, high-density compactor storage units; testing for harmful residues; cleaning and conserving each artifact; and rehousing each artifact in a protective archival housing. At the same time, each artifact was cataloged, photographed, and entered into the collections management database. This greatly improved access to information and artifact images for staff, researchers, and the public.
Internal Support for Cradleboard Covers

Cradleboard covers require two types of support systems, internal and external. The following plans for an internal padded three-dimensional support was adapted from Nancy Iona “Padded Doll Supports for Cradleboard” http://stashc.com/the-publication/supports/malleable/padded-support-for-cradleboards/ and the National Park Service Conserve O Gram “Internal Supports for Buckskin Clothing Storage”, September 2011, Number 5/3, https://www.nps.gov/museum/publications/conserveogram/05-03.pdf?pdf=5-3.

The support helps maintain the shape of a cradleboard and prevent creases. The support is made from soft-structured Tyvek and is shaped like a baby with a head and body. The head and body sections are assembled separately and then joined. Each cradleboard is measured carefully to produce a custom-fit support.

Directions

1) Using a flexible ruler, determine the interior dimensions of the cradleboard cover (circumference, diameter, length). Determine the length of the body portion of the support and the separate head portion of the support as shown in Fig. 1.

2) Using the compass, draw a circle to match the diameter of the cradleboard cover. Add half an inch around for a seam allowance. This will be the bottom of the body portion of the support.(Fig. 3)

3) Cut a rectangle for the body that is the length of the cradleboard cover by the circumference, adding a half-inch seam
allowance. (Fig. 2)

4) Fold the rectangle in half length-wise with slick sides together and pin along the long seam.

5) Sew along the long seam. You now have a hollow tube.

6) Pin the tube to the circular base putting slick sides together. Sew around the seams and then turn right-side out.

7) Fill the tube with polyester batting until firm.

8) Draw two circles of Tyvek using the length of the head area plus half an inch for seam allowance as the circumference, similar to Fig. 3, but using the head length measurement for the diameter.

9) Pin slick sides of the Tyvek together and sew, leaving space unsewn at the bottom for stuffing and attaching to the body.

10) Turn Tyvek right side out and fill with polyester batting until firm.

11) Pin and hand stitch the opening of head portion to the body portion. If needed, leave a space open, and add more stuffing the neck before hand stitching shut.

12) Gently place the form inside the cradleboard cover and secure
with cotton twill tape.

13) Measure the length and height of the decorative portion of the head cover of the cradleboard cover.

14) Cut a piece of pH neutral blueboard to the length and height of the head cover.

15) Bend carefully and insert around the internal head support to provide structural support to the head cover.

**External Support for Cradleboard Covers**

Cradleboard covers need an external support system along with the internal support. This external support system provides support for the rounded shape of cradleboard cover.

The cradleboard cover mount is formed from three to five pieces of blueboard carved to the shave of the cradleboard cover. Areas that are in contact with the cradleboard cover are protected with a softer, thin closed-cell or crosslinked polyethylene foam sheeting to avoid abrasion. The mounts are secured to a standardized or custom-made box.

**Directions**

1) Determine the dimensions of the cradleboard cover (length, width, height). Determine the size box needed to house the cradleboard cover.

2) Draw the mount support according to the diagram on a piece of blueboard. When drawing the mount, use solid and dashed lines as illustrated in Fig. 1.

3) Use the width of the box to determine the width of the mount. The height of the mount should be 1/2 the height of the box.

4) Measure the full width of the
5) Use the flexible ruler to determine the shape of the bottom of the cradleboard cover. (see Fig. 2)

6) Cut out the tray and cross section with a sharp utility knife. Change the blade often. Cut along solid lines only.

7) Score the dashed lines using the utility knife or bone folder and straight edge. Be careful not to cut through the underside of the blueboard.

8) Score the two center lines on the underside of the blueboard to fold it in half.

9) Fold the blueboard along the scored lines. Be careful and work the blueboard gently to avoid splitting the board.

10) Make sure the cradleboard cover fits adequately into the mount. Pare away the blueboard with a utility knife or file so that the fit is close enough to prevent rolling or pitching of the object during transport.

11) The cut surface of the blueboard can be rough. To avoid abrasion, line the curved area with cut pieces of Volara.

12) Determine the number of mounts needed based on the length of the cradleboard cover. Space the mounts equally down the box.

13) Using the hot glue gun on high setting, adhere the side and bottom flaps to the sides and bottom of the box.

14) If the cradleboard cover has a beaded tab with fringe, measure the length of the cradleboard cover and 1/3 the height of the cradleboard cover to determine the measurements for the cross-section.

Materials Needed:

- Flexible ruler
- Soft-Structure Tyvek
- Compass
- Polyester batting
- Scissors
- Sewing machine
- Thread and needle
- pH neutral blueboard, 1/4in
- metal straight edge
- Utility knife
the length and width of the tab. Cut out a piece of polyethylene sheeting and cover it with soft-structure Tyvek using the tab’s dimensions. (see Fig. 3)

15) Adhere the covered polyethylene pad to the bottom of the box underneath the tab.

16) Cut three to four long strips of soft-structure Tyvek to be used as slings for lifting the cradleboard cover from the mount.

Fig. 2

Fig. 3

w width of the cradleboard cover
h 1/3 height of the cradleboard cover
**Consulting a Conservator**

If you have any concerns about the care of your object, consult a conservator in your area for further guidance. A conservator will be able to assess all the issues relating to its condition and long-term care. Conservingors can also provide structural repairs, aesthetic compensation, and protective coatings for a range of materials.

**Additional Resources and References**

- [Minnesota State Historical Society](http://www.mnhs.org/preserve/conservation/index.html)
- [National Park Service, Conserv-O-Grams](http://www.nps.org/museum/publications/conservation/cons_toc.html)

**Conservation Suppliers**

**Conservation Resources International**

7350-A Lockport Place  
Lorton, Virginia 22079  
Toll free: (800) 634-6932  
[www.conservationresources.com](http://www.conservationresources.com)  
Archival housing/storage supplies, photographic supplies, general

**Gaylord Archival**

P. O. Box 4901  
Syracuse, NY 13221-4901  
Toll Free: (800) 448-6160  
[www.gaylord.com](http://www.gaylord.com)  
General conservation supplies, housing supplies

**Hollinger Metal Edge, Inc.**

9401 Northeast Drive  
Fredericksburg, VA 22408  
Toll Free: (800) 634-0491  
[www.hollingermetaledge.com](http://www.hollingermetaledge.com)  
Archival housing/storage supplies

**Light Impressions**

100 Carlson Road  
Rochester, NY 14610  
Toll Free: (888) 222-2054  
[www.lightimpressionsdirect.com](http://www.lightimpressionsdirect.com)  
Photographic supplies, housing, matting and framing supplies

**University Products**

517 Main Street  
P. O. Box 101  
Holyoke, MA 01041  
Toll Free: (800) 628-1912  
[www.universityproducts.com](http://www.universityproducts.com)  
General conservation supplies, housing and matting supplies

**Talas**

330 Morgan Ave  
Brooklyn, NY 11211  
Telephone: (212) 219-0770  
[www.talasonline.com](http://www.talasonline.com)  
Conservation supplies, photographic supplies, general