

# Caring for Newspapers in Your Collections



Image credit: Library of Congress Prints and Photographs

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**Connecting to Collections Care**

**January 2025**

# Introductions & Goals

## Welcome

- Who I am
- What I do

## Goals for this presentation

- Understand the complex nature of newsprint materials
- Provide a framework for approaching newsprint preservation
- Increase knowledge of archival storage and reproduction options
- Provide guidelines for decision-making

## Introductions & Goals

**What is one question that you would like to have answered today?**

**Jot it down and we'll come back to questions at the end.**

# Understanding Newsprint

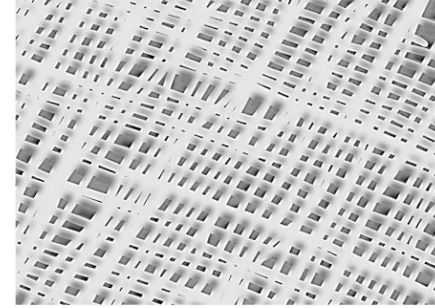


Dallas, Texas. Mail room at the Dallas Morning News Image credit: Library of Congress

# Understanding Newsprint

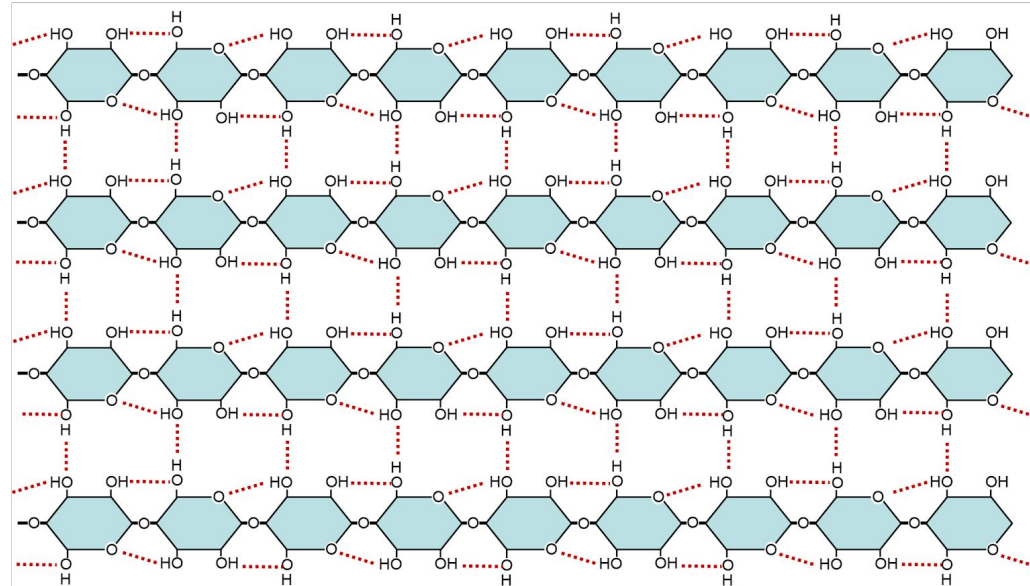
**What is the first thing that comes to mind when you think about newsprint?**

# Understanding Newsprint



## What is paper?

- Cellulose!
  - Repeating chain of glucose molecules
  - Basic structural component of plant cell walls
  - Most abundant of all naturally occurring organic compounds



Top: Cellulose microfibrils in cell wall. Bottom: Four cellulose molecules. Image credit: Wikimedia Commons

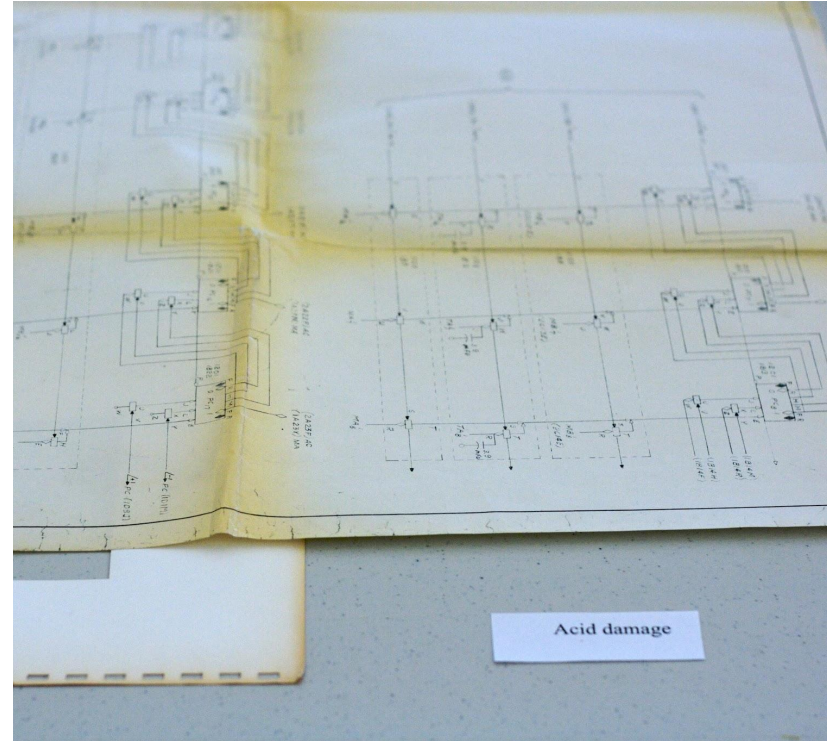
# Understanding Newsprint

As an organic material, cellulose is at risk of degradation from

- Bacteria, mold, pests
- Light, especially ultraviolet light
- Environmental acids
  - Air pollution
  - Poor quality enclosures
  - Wooden shelves, etc.

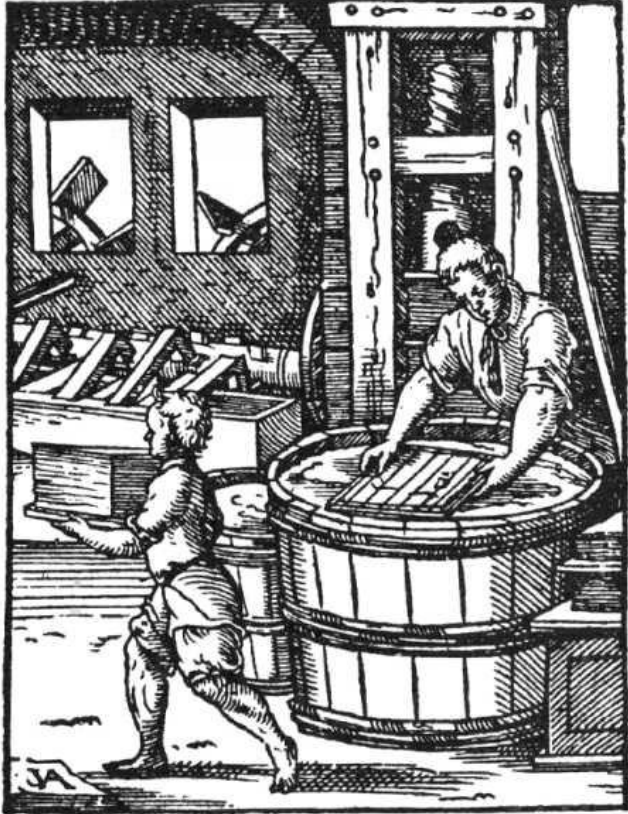
Environmental acids cut glucose chains into shorter lengths.

- Process is known as **acid hydrolysis**
- Acid hydrolysis produces more acids which causes further degradation



Paper with acidic damage. Image credit: Wikimedia Commons

# Understanding Newsprint



## Traditional European handmade paper

- Labor-intensive process
- Made from cotton or linen rags
  - Cotton is 90% cellulose
  - Linen is 75% cellulose
- Preserved long fibers of raw material

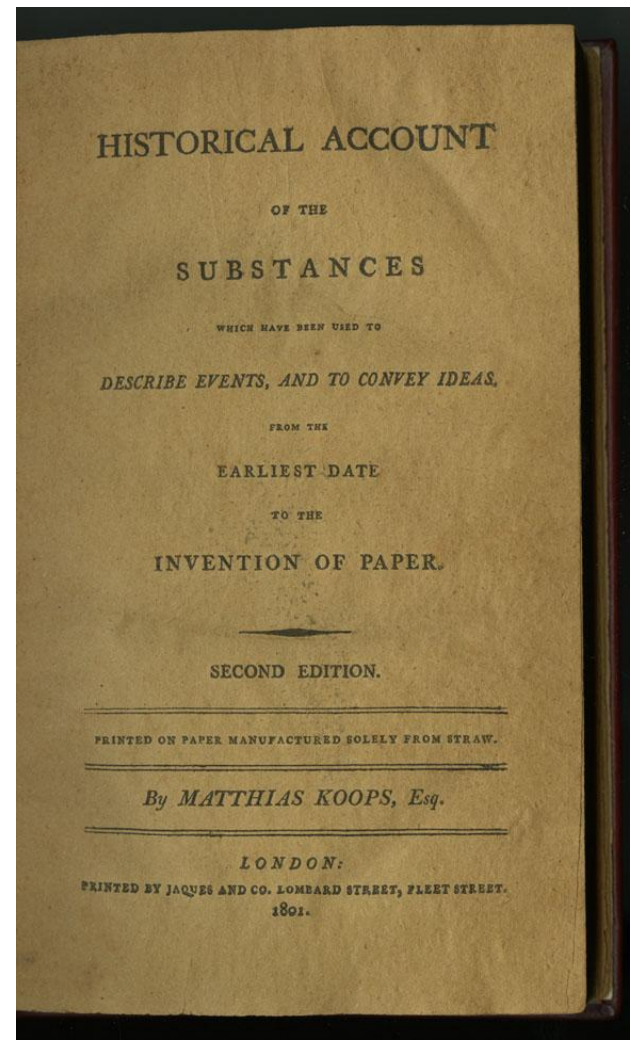
Due to technological and social advances (eg. the printing press, increased literacy), the demand for paper soon outstripped the supply of rags.

# Understanding Newsprint

As early as 1666, England issued a law requiring wool to be used in burials so that cotton and linen would be saved for papermaking.

In the effort to find new raw materials for paper, people tried to make paper from

- Straw
- Asbestos
- Turf
- Old shingles
- Potatoes
- Mummy wrappings



Title page of book printed on straw. Image credit: Wikimedia Commons



# Understanding Newsprint

Wood replaced rags as raw material in papermaking around the mid-19th century with the advent of wood grinding machines.

Wood is 50% cellulose.

Wood is processed into paper by mechanical or chemical pulping.

Newsprint is wood pulp paper.

# Understanding Newsprint

## Characteristics of newsprint:

- Shorter paper fibers (cellulose chains are more broken up)
- Can contain lignin (another type of plant cell) that contains acidic compounds

Southland Paper mill, Kraft (chemical) pulp used in making newsprint, Lufkin, Texas. Image credit: Library of Congress



# Understanding Newsprint

Remember acid hydrolysis? Newsprint is more vulnerable to it because:

- It contains **lignin** that contains acidic compounds
- Before 1980, it was sized with alum-rosin sizing
  - Sizing is added to paper to make it less absorbent to prevent the bleeding of inks
  - Alum-rosin sizing generates sulfuric acid in the presence of moisture

Lignin is also more vulnerable to light damage, which weakens and darkens newsprint.

All of these things together are what make newsprint turn brown and brittle over time.

# Understanding Newsprint

In short:

Newsprint has **inherent vice**, i.e. it is made of unstable components that cause its deterioration.

Newsprint is not built to last.



# How Do You Solve a Problem Like Maria Newsprint

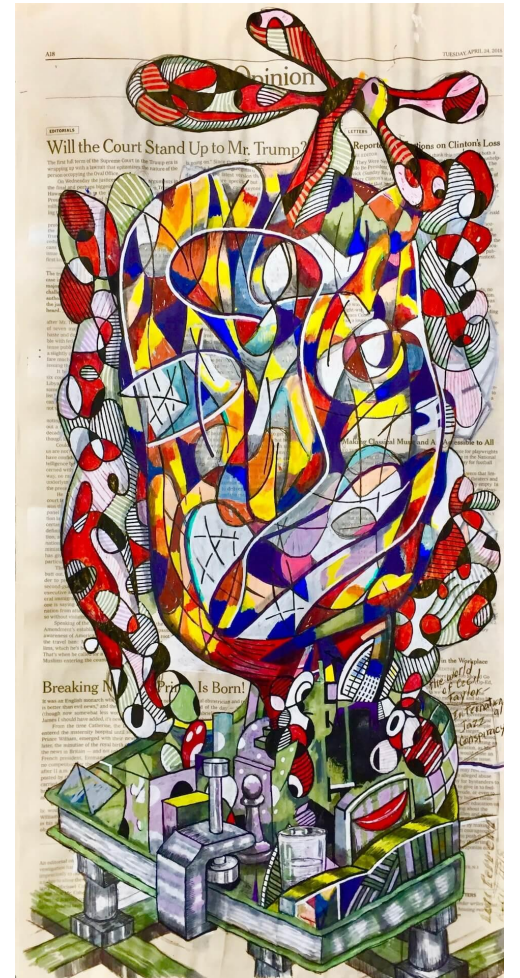


Newspapers. Image credit: abbyladybug on Flickr.

# Newsprint in Collections

Newsprint can show up in collections in many forms:

- Sheet music
- Government documents
- Newspapers - folded or bound
- Pamphlets/books
- Newspaper clippings in scrapbooks
- Art



“The Internal Affairs of Mr. Invincible.” Series. Mixed media, paint on newspaper by Lou Ferreri



# A Framework for Decision-Making

## Question 1: Do you have to keep it?

- Why is it important?
  - Is the paper itself valuable or just what's written on it?
- How unique is it?
  - Does it exist in other repositories?
  - Do you have duplicates?
- How important is it to your institution?
  - Does it serve the mission? The patrons?
  - Does it serve institutional goals?
  - Is it exhibitable?
- Is it accessible?

# A Framework for Decision-Making

## Question 1: Do you have to keep it?

Possible Answers:

- No. It has no importance/exists in another repository/does not serve the institution.

In this case, explore deaccessioning!

Newspapers can make a good test case for deaccessioning.

Consult [National Park Service's Museum Handbook, Chapter 6](#) for guidance.



Newspaper confetti. Image credit: Bishop Museum



# A Framework for Decision-Making

## Question 1: Do you have to keep it?

Possible Answers:

- The content is important.

This is a good case for making a reproduction. The original can be stored alongside the reproduction or deaccessioned.

# A Framework for Decision-Making

## Photocopying vs. Digitization

### Photocopying

- Use acid-free/alkaline buffered paper
- Use carbon black toner
- Keep a copier specifically for preservation photocopying
- Photocopies can be kept with original materials in collection spaces.
  - Avoid putting copies in direct contact with the original as the original is acidic.

# A Framework for Decision-Making

## Photocopying vs. Digitization

### Document safety

- Don't open books farther than they open naturally
- Don't put too much pressure on a book spine
- Can photocopy through polyester sleeves (for brittle paper)

### Limitations

- Some books cannot be photocopied!
- Consider taking photographs instead



Do not put too much pressure on a book spine. Image credit: University of Delaware Libraries.

# A Framework for Decision-Making

## Photocopying vs. Digitization

### Digitization

- May require more specialized equipment
- Will require a plan for storage, back-up, and ongoing monitoring and maintenance of digital files
  - May require specialized knowledge or software
- Will require different means of access to the collection material

# A Framework for Decision-Making

## Photocopying vs. Digitization

### Digitization

- Develop a consistent file-naming system
- Save files in an open format if possible
- Save multiple copies in multiple locations if possible
- Check files at least once a year to make sure they are working
- Remember: digital content is not easier or cheaper to take care of!

# A Framework for Decision-Making

## A Note On Microfilm

- With proper care and storage, microfilm is a stable preservation format
  - Store in a cool, dry environment (below 70°F, 50% relative humidity)
  - Handle with care by the edges or leaders; do not pull tight on reel
- Microfilm made on cellulose acetate will degrade over time (vinegar syndrome)
- Polyester is the only film base currently considered stable enough to be recommended for preservation purposes
- Can be scanned to provide digital access but scan is only as good as quality of image on microfilm
- Equipment is becoming obsolete



# A Framework for Decision-Making

## Question 1: Do you have to keep it?

Possible Answers:

- Yes, the item itself is important, OR
- The content is important but the item is not a good candidate for photocopying/digitization

Depending on the item and space and storage considerations, there are several ways to handle this depending on the answers to our next questions.

Bound newspapers. Image credit: Grant County Historical Society, Elbow Lake, MN.

# A Framework for Decision-Making

## Question 2a: What format is it?

Possible Answers:

- Single sheets
- Folded sheets (newspaper)
- Pamphlet
- Book
  - Scrapbook
  - Bound newspapers

## Question 2b: What resources (money, time, staff, space) are available?

# A Framework for Decision-Making

## Question 2: What format is it?

Possible Answers:

### Single Sheets

- Unfold and flatten paper if you can do it safely
- Use folders instead of envelopes to avoid damaging edges and corners
- If a document is fragile, enclose it in an archival plastic sleeve for support
- Newsprint should not touch other paper items since it is so acidic
- Never put adhesive on a document you want to keep permanently
- Store papers flat
- If too large to store flat, store rolled

# A Framework for Decision-Making

## Question 2: What format is it?

Possible Answers:

### Folded sheets (newspapers/pamphlet)

If you have a polyester welder then you could possibly “rebind it”

- Place each page between two polyester sheets and weld on all four sides, leaving spine end long. Trim.
- Staple/attach pages in order into a pamphlet binder.



A book with each page encapsulated. Images courtesy of Jenna Bluhm, Minnesota Historical Society.

# A Framework for Decision-Making

## Question 2: What format is it?

Possible Answers:

### **Books**

Options:

- If binding has fallen apart, the book can be treated like single sheets or sets of sheets (stored in folders, etc.)
- If binding is intact, place in an enclosure to protect from environmental damage
- Consult a conservator if you have concerns about condition/ease of access

# A Framework for Decision-Making

## Notes on specific formats: Bound Newspapers

- These can be particularly fragile.
- Format is not accessible (often do not open well/text in gutter).
- Disbinding is likely to do damage.
- No good solutions.



Bound newspapers. Image credit: Jordan Area Historical Society, MN.

# A Framework for Decision-Making

## Notes on specific formats: Scrapbooks

- Also usually fragile.
- Paper support and attachments often both acidic
- Attachments often loose/damaged

### Options:

- If the binding has fallen apart, it may be treated like single sheets or sets of sheets (stored in folders, etc.)
  - REMEMBER TO NUMBER THE LEAVES!
- Attachments can be photocopied and stored with book
- In dire circumstances, can photocopy entire leaves of book
- If binding intact, place in enclosure to protect from environmental damage



# A Framework for Decision-Making

## Deacidification

Deacidification is a process of treating paper to remove acidic compounds. Paper conservators often pair it with alkanization, where paper is treated to embed it with an alkaline buffer.

This is a complex process that involves a lot of risk!

Newsprint is generally not a good candidate for deacidification conservation treatment unless it is already in very good shape and not deteriorated. Alkanization is not suitable for newsprint.

# A Framework for Decision-Making

## Deacidification sprays

There are deacidification sprays on the market that used to be very popular and were very widely used.

The consensus is that **these sprays are most effective before any chemical deterioration has occurred.**

Deacidification will not restore flexibility to brittle paper or reduce darkening. Once the paper is deteriorated, it is not useful to treat it with a deacidification spray.

HOWEVER, newsprint that is new and not deteriorated can be treated with deacidification spray to extend its lifespan.

# A Note on Art

Some items are not meant to last.

- Artists can decide that their work has a finite lifespan.
- They may use materials with inherent vice with the understanding that this will eventually result in the destruction of that work.
- In this case, your only option is documentation and dialog with the artist on what is acceptable.
- For further information, consult [Voices In Contemporary Art \(VoCA\)](#).



“Plague Doctor” from series “The Internal Affairs of Mr. Invincible. Mixed media, paint on newspaper by Lou Ferreri

# So Now What?



"I don't know \*explored\*." Image credit: Evil Erin on Flickr.

# The Bottom Line: The Environment Trumps Everything

## Manage Storage and Housing

- Remove metal and plastic fasteners:
  - Metal fasteners can rust and damage paper
  - Non-archival plastic fasteners can ooze plasticizer
- Remove rubber bands
- Store items as flat as possible (i.e. with fewest creases)
- Use archival storage containers
  - Paper: look for “acid-free,” “lignin-free,” and/or “buffered”
  - Plastic: look for “polypropylene”, “polyethylene,” “Mylar,” “Melinex” or “polyester”
- Avoid trying to “fix” newsprint yourself
  - This includes using adhesives, lamination, and all tape
    - Yes, this includes “archival tape”

# The Bottom Line: The Environment Trumps Everything

## Beware “Archival” Materials!

[Home](#) > [Studio and Office Supplies](#) > [Archival Supplies](#) > [Plastic Sleeves and Print Protectors](#) > [Acid-Free Poly-Bags](#)



### Acid-Free Poly-Bags

★★★★☆ 4.5 8 Reviews | [Write A Review](#)

**\$2.09**

A perfect storage solution for cards, photographs, and other items, these Acid-Free Poly-Bags are made from safe, long-wearing, crystal-clear PVC.



Item Specs



Poly-Bags, Pkg of 20

# The Bottom Line: The Environment Trumps Everything

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# When Do You Need A Conservator?

Consult a conservator if handling the item is unsafe for you or the item, eg.

- Unfolding/unrolling very brittle paper (if bits start to fall off as you touch it!)
- If there is mold (fuzzy or powdery)

You can also talk to a conservator if you want to explore options for access, eg. thinking about disbinding a book.

You can find a conservator near you (or one willing to travel!) at [www.culturalheritage.org](http://www.culturalheritage.org).

# Thank you!

## **Special thanks go out to:**

Fletcher Durant and Sarah Stauderman at the National Archives and Records Administration

Megan Brakob Narvey and Jenna Bluhm at the Minnesota Historical Society

Sarah Barsness at the University of Minnesota Libraries

Robin Kilgo Bauer at Connecting to Collections Care