# Thinking in Systems: Preservation Site Assessments April Webinar

Marie Desrochers
Utah Division of Arts and Museums

April 21, 2022
11 am- 1 pm

NATIONAL ENDOWMENT FOR THE HUMANITIES

UTAHHUMANITIES
Ideas in Action

# PROGRAM OVERVIEW: Year at a Glance

~~1. ACCESS AND ARTIFACT HANDLING~~

**JANUARY** ~~Workshop~~
**FEBRUARY** (pt A & B) ~~1. Webinar~~
**MARCH** ~~2. Webinar~~ ~~3. Webinar~~

2. PRESERVATION IN STORAGE AND DISPLAY

**APRIL** Workshop (pt A & B)
**MAY** 1. Webinar
**JUNE** 2. Webinar 3. Webinar

3. ENVIRONMENT AND BUILDING SYSTEMS

**JULY** Workshop (pt A & B)
**AUGUST** 1. Webinar
**SEPTEMBER** 2. Webinar 3. Webinar

4. RISK MANAGEMENT, EMERGENCY PREPAREDNESS & DISASTER RESPONSE

**OCTOBER** Workshop (pt A & B)
**NOVEMBER** 1. Webinar
**DECEMBER** 2. Webinar 3. Webinar

# GOALS

Gain a better understanding of Key Themes...

## Key Themes

1. Understand the concept of "Thinking in Systems"
2. Understand how Preservation Site Assessments are conducted
3. Understand the relationship between the systems at your institution and preservation

# AGENDA

- Program Overview/Housekeeping
- Introductions
- “Thinking in Systems”
- Preservation Site Assessments
- Activity
- Discussion

# INTRODUCTIONS

Please share the following:

Your name, where you work, and your role

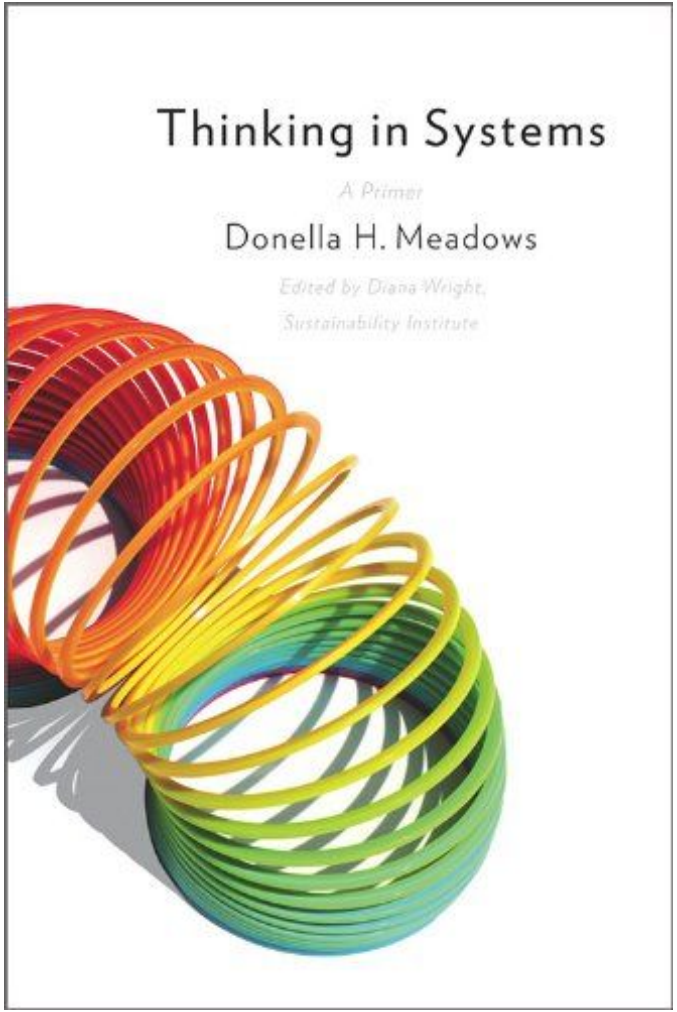
# “THINKING IN SYSTEMS”

March 13, 1941 – February 20, 2001

## Introducing Donella “Dana” Meadows

- Environmental scientist, educator and author
- PhD in biophysics from Harvard
- Worked at MIT using systems thinking to solve “global problems”
- MacArthur Fellow
- Wrote 8 books
- Wrote a weekly, widely syndicated column called “The Global Citizen,” commenting on world events from a systems point of view
- Writing and philosophy lives on at the Donella Meadows Project: Academy for Systems Change

# “THINKING IN SYSTEMS”



# Thinking in Systems

"We can't impose our will on a system. We can listen to what the system tells us and discover how its properties and our values can work together to bring forth something much better than could ever be produced by our will alone."

– Donella H. Meadows

# MY TAKEAWAYS from *Thinking in Systems*

- Everything is more than a sum of its parts- and this is good news
- Humans are irrational, but systems can be rational
- Problems, thought of as systems, feel less impossible
- There are points where we can influence every system

# WHY THINK IN SYSTEMS

"A Systems-thinking lens allows us to:

- Reclaim our intuition about whole systems
- Hone our abilities to understand parts
- See interconnections
- Ask 'what-if' questions about possible future behaviors
- Be creative and courageous about system redesign

Then we can use our insights to make a difference in ourselves and our world"

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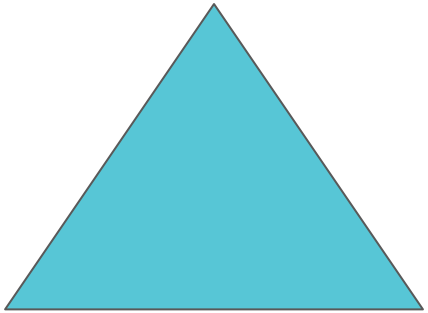
# “SIMPLY PUT”…

1. Know what stuff you have
2. Know what stuff you need
3. Know where it is
4. Take good care of it
5. Make sure someone gets some good out of it
6. Especially people you care about
7. And your neighbors

Systems thinking can help us achieve 1-7

# THINKING IN SYSTEMS IS SUSTAINABLE

Social



Economic

Environmental

# SYSTEM

an interconnected set of elements that is coherently organized in a way that achieves something

Includes three kinds of things: *elements*, *interconnections* and a *function* or *purpose*

*Thinking in Systems: A Primer*

**“How to know whether you are looking at a system or just a bunch of stuff:**

A) Can you identify parts?...and

B) Do the parts affect each other?...and

C) Do the parts together produce an effect that is different from the effect of each part on its own?...and perhaps

D) Does the effect, the behavior over time, persist in a variety of circumstances?”

*Thinking in Systems: A Primer*

# SYSTEMS AT PLAY

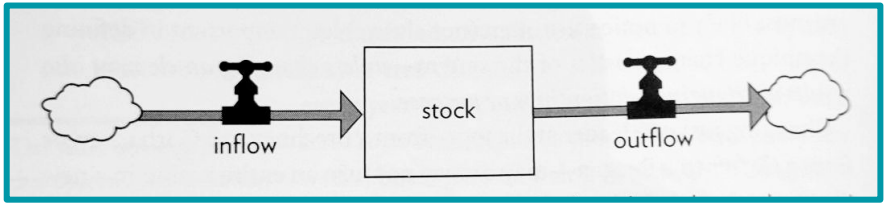
- Your collection
- Your institution
- An exhibit
- A single object
- What else?

# DYNAMIC SYSTEMS: Basic elements

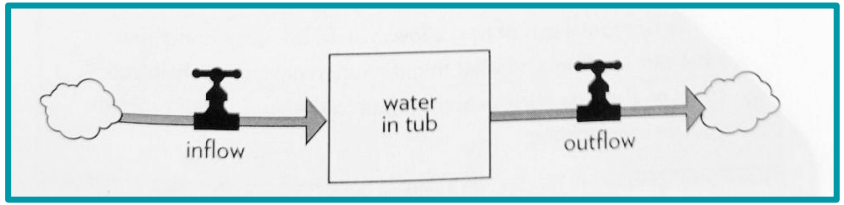
- **Flow**- material or information that enters/leaves a stock over a period of time
- **Stock**- accumulation of material or information in a system over a period of time

*Thinking in Systems: A Primer*

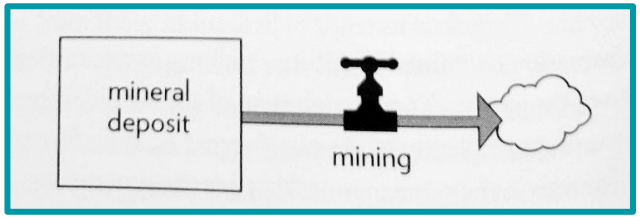
# STOCKS AND FLOWS




**Generic stock flow**




**Bathtub example**

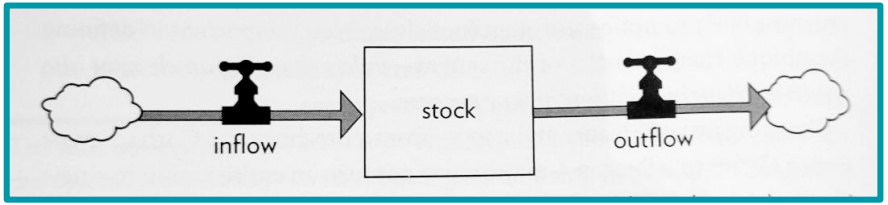



**Mining example**

**Collections example**

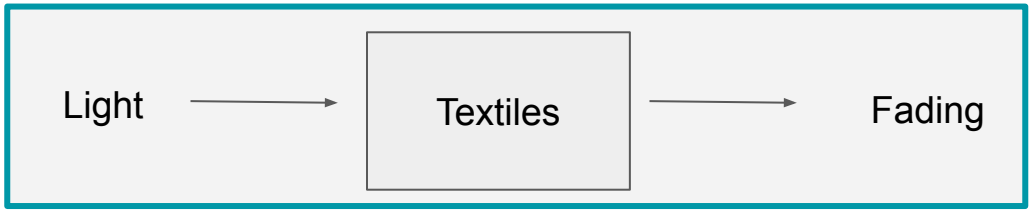
*Thinking in Systems: A Primer*

# STOCKS AND FLOWS



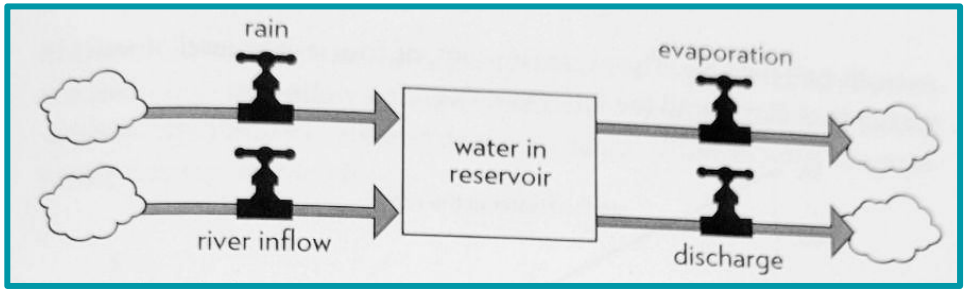

**Generic stock flow**

**Deterioration flow**

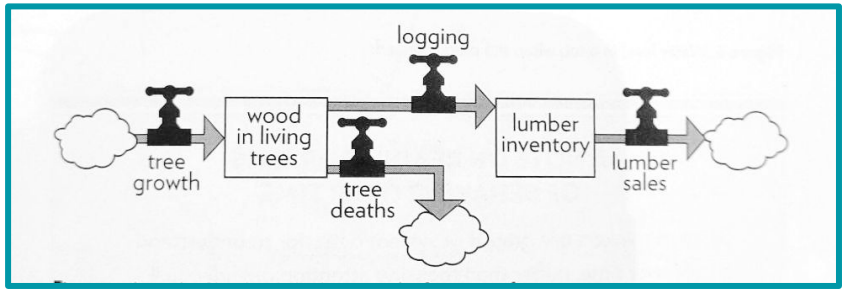


# A Flow: “How Andy Fritz ate the sun”

# STOCKS AND FLOWS




**Water stock flow**




**Lumber stock flow**

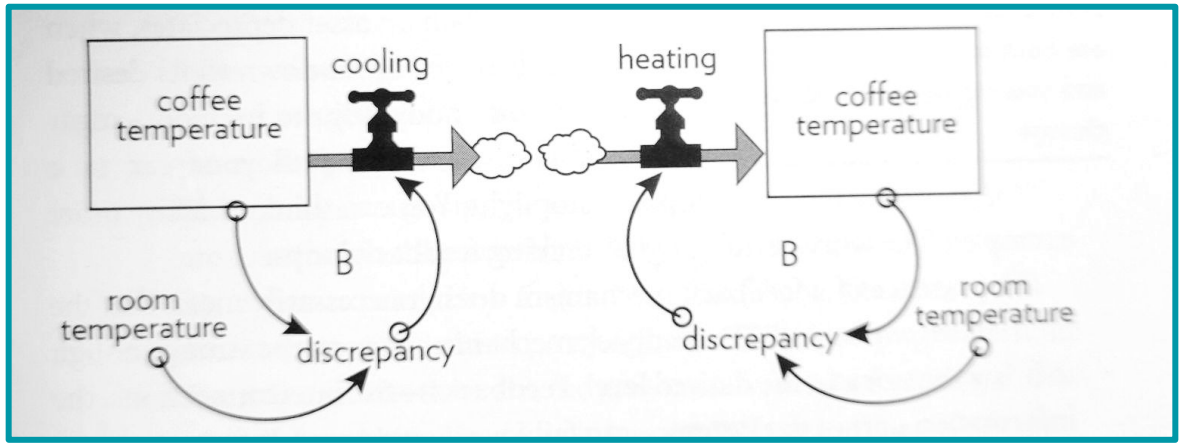
Light → Textiles → Fading

# DYNAMIC SYSTEMS: Basic elements

- **Feedback loop**- mechanism, rule or information flow that allows a change in stock to affect a flow in or out of the same stock
- **Balancing feedback loop**- stabilizing, goal-seeking, regulating feedback loop reversing the direction of change of the system
- **Reinforcing feedback loop**- an amplifying or enhancing feedback loop reinforcing the direction of change of the system

*Thinking in Systems: A Primer*

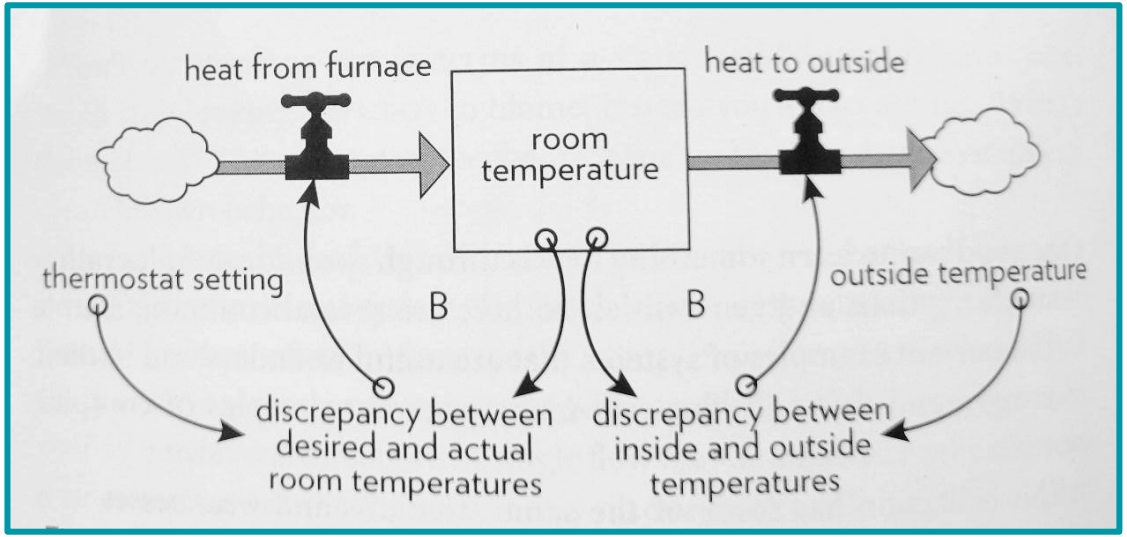
# STOCKS AND FLOWS




**Balancing Feedback Loop**

*Thinking in Systems: A Primer*

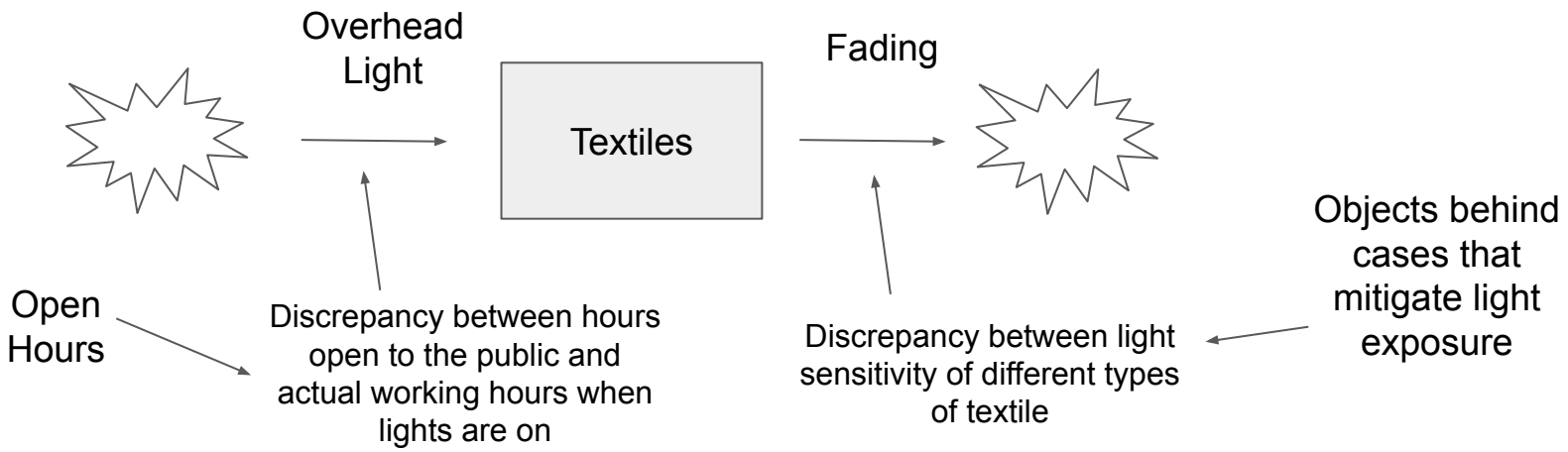
# STOCKS AND FLOWS




**One stock flow with two competing Balancing Loops: A Thermostat**

*Thinking in Systems: A Primer*

# STOCKS AND FLOWS



# WHY SYSTEMS THINKING IN PREVENTIVE CONSERVATION?

Systems thinking is about the dynamic relationships between:

- Behavior or **change** over time
- **Flows**: moisture, thermal energy, docent use, etc.
- **Stocks**: accumulation of deterioration impacts
- **Feedback** mechanisms which influence flows and stocks
- Points at which we can measure/monitor system behavior
- Identifying points in the system where we can intervene to achieve our objectives (conservation, preservation, energy efficiency, etc.)

# “FLOWS” IN A SYSTEM’S ENVIRONMENT AND DETERIORATION

# “FLOWS” IN A SYSTEM’S ENVIRONMENT AND DETERIORATION

Handling

Access

Exhibition lighting

Institutional use

School group programming

Documentation and access through online platforms

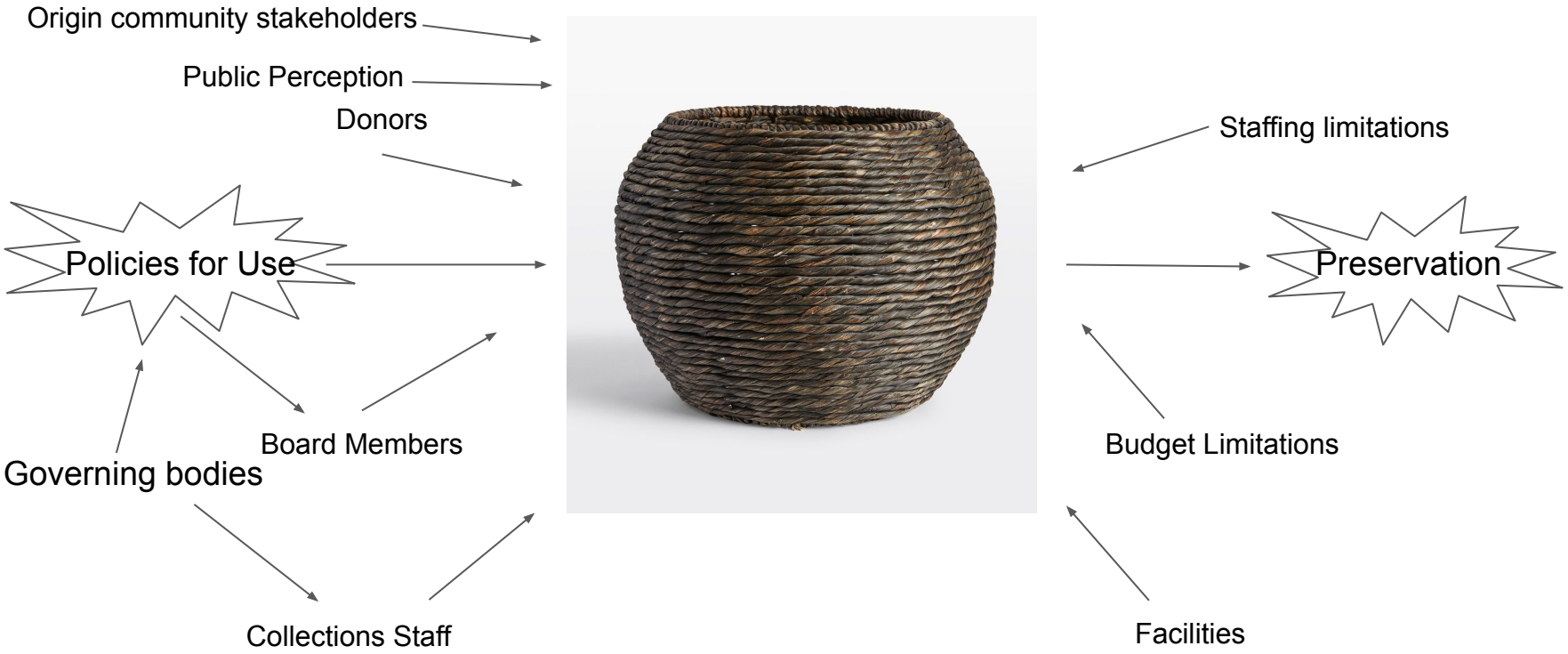
Fragile beyond use

Preservation

Use of a similar object

Creation of facsimile teaching tools

# “FLOWS” IN A SYSTEM’S ENVIRONMENT AND DETERIORATION



# *Preventive conservation* in 7 points

Instead of thinking *object*
think ***collection***

Instead of thinking *room*
think ***building***

Instead of thinking *individual*
think ***team***

Instead of thinking *short term*
think ***long term***

Instead of thinking *professionals*
think ***public***

Instead of thinking *trade secrets*
think ***communications***

Instead of thinking h*ow*
think ***why***

ICCROM

International Centre for the Study of the Preservation and Restoration of Cultural Property

**Preventive Conservation is a system to forecast risks and take proactive steps to deal with identified risks.**

**Ten Agents of Deterioration**

Graphic by Centroid PM

# LEVERAGE POINTS

Our job is to identify points in the system where we can intervene. Where can we alter flows to create the outcomes we want?

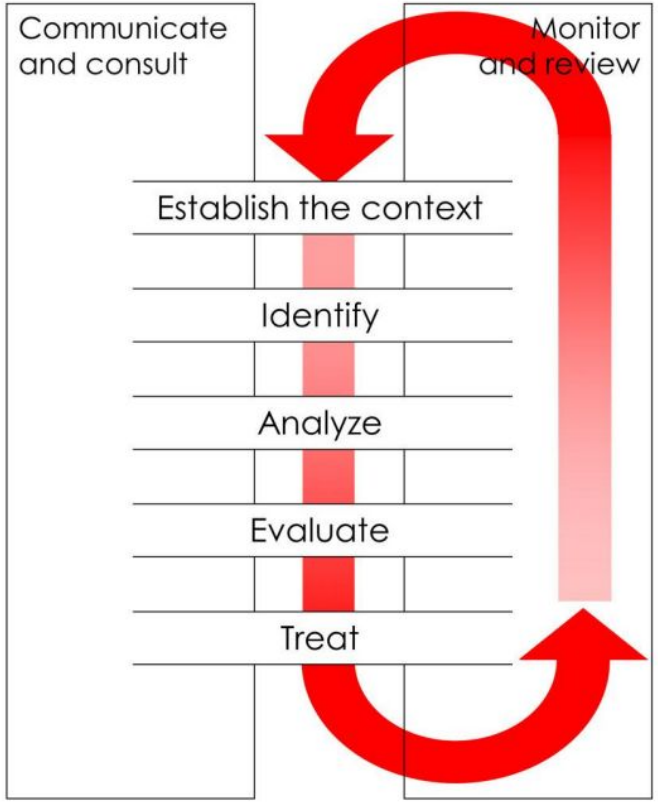



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Figure 2. The risk management cycle.

# ACTIVITY

Choose one system within your institution or collection, and draw a diagram showing the different flows and balancing loops impacting it

# BREAK (5 Minutes)

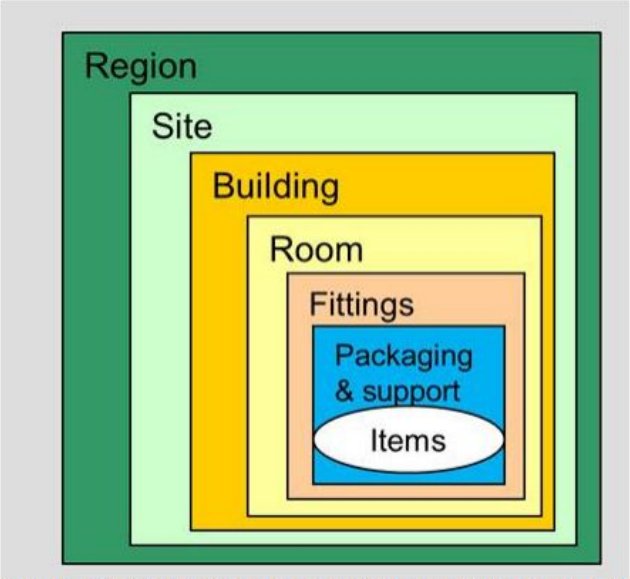
# Preservation Site Assessments

# PRESERVATION ASSESSMENTS

Think of your institution as a system.

Preservation Site Assessments are designed to address systems related to your collection.

What Systems exist within your collection or institution?

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Six Levels of Enclosure from CCI's 2016 Risk Manual

cap helping museums care for collections

since 1990

Conservation Assessment Program

Handbook for Assessors

American Alliance of Museums

Institute of Museum and Library Services

| | MAP | CAP |
|---|---|---|
| Program focus | Organizational; Collections Stewardship; or Community Engagement | Collections care |
| Internal or with outside consultants? | Internal, followed by external peer reviewers | External assessors |
| Time to complete | 1 year | Less than 1 year |
| Final product | Self-completed workbook and report from peer reviewer | Report from assessors |

FAIC Connecting to Collections Care

# PRESERVATION ASSESSMENTS

Preservation Assessments are tools for understanding the context of your collection, determining risks within your collection, and identifying strengths and areas for improvement in collections care.

Our assessment tool here at Utah Division of Arts and Museums is structured around the 10 agents of deterioration.

Utah Division of Arts & Museums

**Onsite Preservation Assessment**


**General Building/Facilities** 1
Building(s) Exterior 1
Building(s) Interior 2

**Temperature and Relative Humidity** 3
Structures with central HVAC (if you do not have central HVAC, please skip this section): 3
For structures with no central HVAC (refer to the section above should you have HVAC): 4

**Environmental Monitoring** 5

**Illumination**

**Pest Control**

**Collections and Collections Policies**

**Exhibitions**

**Storage**

**Emergency Preparedness**

**Security and Safety**


Name of Museum:
_____Date:_____
Assessment Facilitators:
_____
_____

**General Building/Facilities**

Building(s) Exterior

1. Are windows and doors operable? Y N
Describe:_____
_____

2. Is the roof /gutter(s) stable? Y N
3. Is there sufficient drainage away from the building/at the site more generally? Y N
Describe:_____
_____
_____

4. Plants: Is there regular groundskeeping? Y N
Describe:_____
_____
_____

5. Are there any concerns about overgrowth on or surrounding the structure? Y N
Describe:_____
_____
_____

6. Additional notes about the building envelope from the outside: roof, chimneys, porches, foundation, walls etc? (settlement, missing parts, damaged mortar, plumbness, sagging)

# PRESERVATION ASSESSMENTS

## Ten Agents of Deterioration

1. Physical Forces
2. Thieves & Vandals
3. Fire
4. Water
5. Pests
6. Pollutants
7. Light
8. Incorrect Temperature
9. Incorrect Relative Humidity
10. Custodial Neglect & Disassociation

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# WHY CONDUCT A PRESERVATION SITE ASSESSMENT

- Brings in fresh eyes with a new perspective
- Helps identify problems you may not have noticed
- Helps you problem-solve issues you knew existed
- May identify things you thought were problems, but actually aren't
- Provides support (emotional, practical, professional)
- Prioritizes solutions and goals for the future
- Provides a professional opinion with a final report
- Can be used as an advocacy tool for grants or other resources

# UTAH FIELD SERVICES

Utah Division of Arts & Museums

UTAHHUMANITIES
Ideas in Action

Utah Field Services offers Preservation Site Assessments to all Utah collecting institutions

Some members of Utah Field Services

COLLECTIONS PRESERVATION

# UTAH FIELD SERVICES

Utah Division of Arts & Museums

ABOUT PROGRAMS OPPORTUNITIES GRANTS RESOURCES BLOG EVENTS

## Museum Technical Assistance

### PRESERVATION ASSESSMENT

We are now offering virtual and limited in-person Preservation Assessments* for museums across the state interested in learning more about how to better preserve their collections. Utah Arts and Museum's Preservation Assessment provides constructive feedback on areas of improvement through a facilitated onsite or virtual visit and itemized report. The visit and report are meant to provide feedback that will assist in identifying priority collections care needs and better assist museums interested in applying for museum grants through Utah Arts and Museums.

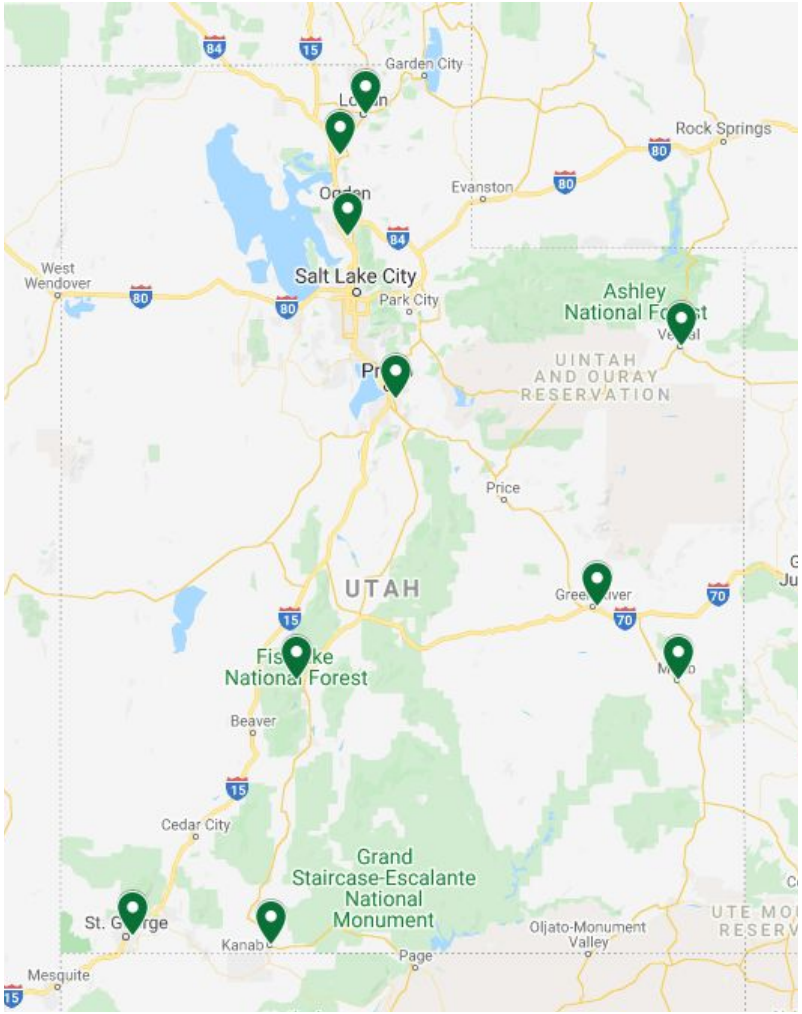
By going virtual, we are able to provide access to Preservation Assessments to a larger number of museums across the state in addition to adhering to social distancing guidelines. Please use the following checklist to get started on scheduling your next Preservation Assessment:

- Contact Emily Johnson at emilyjohnson@utah.gov to discuss your museum preservation needs. Together you will determine whether your museum is eligible for a virtual or in-person assessment.
- Fill out the Pre-Assessment worksheet here. This is a Google form that will need to be filled out in one sitting; the questions that you will encounter can be found here for your review. Once you submit your pre-assessment (and any other requested materials), the Preservation Assessment team will reach out to schedule your assessment.
- Following your virtual or in person assessment, a Preservation Assessment report will be sent to you as a recap of your visit and of the preservation needs

COLLECTIONS PRESERVATION

# 10 Recent Site Visits

**Annie Bommer**
Heritage Museum of Layton
**Liz Nagengast-Stevens**
Utah State Parks - Fremont Indian State Park, Sevier
**Emily Bentley**
City of Kanab / Kanab Museum
**Jaleesa Buchwitz**
St. George Dinosaur Discovery Site
**Hannah Barrett**
Springville Museum of Art
**Elayne Hinsch**
John Wesley Powell River History Museum, Green River
**Tara Beresh**
Moab Museum
**Sharon Johnson**
Cache Pioneer Museum, Daughters of Utah Pioneers, Logan
**Alana Blumenthal**
Brigham City Museums
**Lana Fulbright**
Uintah County Heritage Museum, Vernal



# PRESERVATION ASSESSMENTS

## PRE-ASSESSMENT WORKSHEET

### Pre-Preservation Assessment form

Preservation Assessments as conducted by staff from Utah Arts and Museums are part of the technical assistance the Office of Museum Services provides to small to mid-sized Utah Museums. They provide a general review of museum policies and practices in regards to how museums handle their collections. The assessment will offer the museum an outside perspective on their current collections care practices and provide constructive feedback on areas of improvement. This is not a test but rather an opportunity to receive external feedback for the overall improvement of collections care. Several benefits of going through a preservation assessment include:

- Assistance in identifying priority collections care needs
- Leveraging the assessment for collections care funding in grant proposals—this will make for a stronger argument
- Leveraging the report to get staff and board members in agreement on the importance of preservation and collections care in your museum
- Preparing your museum for national assessment programs such as the Conservation Assessment Program (CAP), the Museum Assessment Program (MAP), and national accreditation programs

The preservation assessment begins with a short form to fill out with information about the type of organization your museum is and what kind of collection the museum houses. We request that the museum provide the following prior to the onsite or virtual visit for staff to review. Please email materials to jenniferortiz@utah.gov:

- Collections management policy
- History of building/structure
- Emergency preparedness plan, if one exists
- Environmental monitoring records, if they exist
- Any site maintenance records, if they exist
- Any recent (read: 10 years) significant collections projects

What goals does the museum have for this survey? Check all that apply, and elaborate if there are areas of special concern. *

- [ ] develop a long-range preservation plan for collections
- [ ] improve collections care
- [ ] increase staff awareness of collections preservation concerns
- [ ] improve environmental conditions
- [ ] increase institutional commitment to collections
- [ ] improve the preservation of the building
- [ ] use as a tool to obtain funding for collections care
- [ ] Other...

On a scale of 1 to 10 (1 = low, 10 = high), rate collections care as a priority of your institution: *

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|
| ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |

Do you have comments/special concerns about your priorities or collections care needs? *

# PRESERVATION ASSESSMENTS

Utah Division of
Arts & Museums

## Onsite Preservation Assessment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**Illumination** 5

**Pest Control** 7

**Collections and Collections Policies** 8

**Exhibitions** 9

**Storage** 10

**Emergency Preparedness** 12

**Security and Safety** 13

# PRESERVATION ASSESSMENTS

## General Building/Facilities

Building(s) Exterior

Building(s) Interior

# PRESERVATION ASSESSMENTS

## Temperature and Relative Humidity

# PRESERVATION ASSESSMENTS

## Environmental Monitoring

# PRESERVATION ASSESSMENTS

## Illumination

# PRESERVATION ASSESSMENTS

## Pests

# PRESERVATION ASSESSMENTS

## Collections and Collections Policies

2. Does the museum produce condition reports? Y N

Please check all that apply:

| | Written Policy | Unwritten policy | No Policy |
|---|---|---|---|
| Collecting Plan | | | |
| Accession/Deaccession procedures | | | |
| Preservation plan | | | |
| Facility Report (example) | | | |
| Building Floorplans/architectural documents | | | |

# PRESERVATION ASSESSMENTS

## Exhibitions

# PRESERVATION ASSESSMENTS

## Storage

# PRESERVATION ASSESSMENTS

## Emergency Preparedness

# PRESERVATION ASSESSMENTS

## Security and Safety

# KEY TAKEAWAYS FROM SITE ASSESSMENTS

- Site Assessments attempt to identify systems affecting collections and the work of an individual
- Most stewards we meet with already know the main issues affecting their collections
- Context is everything
- Personnel systems and hierarchies are usually the most important piece of the puzzle

# Summary & Discussion

- Systems Thinking is one way of approaching collections care that helps us understand complex challenges
- We recognize that all of us are working within a variety of systems
- Preservation Site Assessments are designed to review systems those systems to promote preservation
- To best serve our missions, we are honest and critical in a productive way

# Thank you!

Marie Desrochers | mdesrochers@utah.gov
https://artsandmuseums.utah.gov/utah-collections-preservation/

This project was made possible in part by the National Endowment for the Humanities.

NATIONAL ENDOWMENT FOR THE HUMANITIES

UTAHHUMANITIES
Ideas in Action

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