

WOMEN'S SUFFRAGE DIGITIZATION PROJECT

GENERAL IMPLEMENTATION GUIDELINES

and

WSDP BLUEPRINT DOCUMENT

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INTRODUCTION

In 1998, the Rochester Regional Library Council (RRLC) applied for and received a grant from New York State under the auspices of the Library Services and Technology Act to plan a digitization project. The purpose of the planning grant was to form a community of informed librarians and library staff prepared to embark on a regional project to digitize collections related to women's suffrage.

Project Objectives:

1. Develop a unified plan for the region, which considers the feasibility, practicality, and cost of digitizing and maintaining access to unique library, museum, historical society and other collections related to women's suffrage.
2. Create an awareness of the complexity of issues surrounding the development and maintenance of unique digital collections.
3. Insure that educators, researchers and the general public are aware of the results of the RRLC project -- Home of Women's Rights: Digitizing Rochester Area Collections on Women's Suffrage (a.k.a. The Women's Suffrage Digitization Project (WSDP)).

Teams of people – including librarians, members of library staffs, archivists, historians, and other members of the community at large – participated in discussing and researching aspects of digitization. Their efforts are encapsulated in this document.

The Teams recognized that the technology and knowledge around the creation, maintenance and use of digital images are in a constant state of flux. That flux and the lack of current standards surrounding digitization projects mean that written guidelines show only what the thinking is surrounding a specific project. Thus the guidelines become useful to other project teams in showing them the work of another project, the decisions made and the ideas discussed. However, they remain only guidelines, not rules cast in concrete.

Layout Of This Document

This document is divided into three sections: General Digitization Guidelines that would be applicable to any digitization project; WSDP Specific Implementation Guidelines; and an Appendix that contains additional, useful material for the Women's Suffrage Digitization Project. Each major section is divided into subsections as outlined in the Table of Contents (p. 3).

Note:

All Internet sites mentioned in the guideline document were checked during the Summer of 1999 and were valid at that time.

PROJECT'S MISSION STATEMENT

The goal of the Women's Suffrage Digitization Project is to bring together through digitization, primary resource materials on the Women's Suffrage Movement held by a variety of Rochester area libraries, archives, museums and historical societies. The focus will be on digital biographies of Western New York Suffragists. Digitization and placement on a web site will make these resources – many of which are fragile and underutilized – available to a wide range of students, scholars, and the general public, and accessible without physically destroying the originals.

The project will allow people to read about historical figures and events that shaped our nation and yielded the 19th amendment. It will provide context for further learning and discussions on the subjects of "equality" and "rights."

A secondary benefit of having the content available electronically is that it can be used by teachers in the K-12 setting. In the context of the "Learning Standards for Social Studies," published by the New York State Education Department, this project will be relevant to Standard 1.3, which covers the study of "major social, political, economic, cultural, and religious developments in New York State and United States history" which involves "learning about the important roles and contributions of individuals and groups."

The site also is useful in New York State's desire to have primary materials used in educating children. The document "Consider the Source: Historical Records in the Classroom", available through the NYS Archives and Records Administration addresses this. (<http://www.sara.nysed.gov:80/services/teachers/ctspromo.htm>)

Each institution participating in the Women's Suffragist Digitization Project must make its own decision concerning the long-term preservation of the items in its collection. This grant is concerned with the intellectual content and educational aspects of the material, not the creation of a preservation archive. The Rochester Regional Library Council will offer support in the examination of conservation and digitization issues for participating institutions, in order for those institutions to determine the appropriate materials for digitization, and to be aware of both the benefits and dangers of digitizing fragile materials. RRLC will also be available to advise participating institutions of grant opportunities available for the preservation of fragile materials.

Image Archive Or Surrogates?

Although there is discussion around the use of digital images for archival and preservation purposes, the Women's Suffrage Digitization Project views the digitized images as surrogates that provide wider access to the materials. It is important to note that from a traditional archivist's point of view, digital imaging is not considered to be an archival media, because the digital images require electronic equipment in order to be viewed. From a library's viewpoint, there are not yet firm standards in place to guarantee that digital images can be preserved for an extended period of time.

GENERAL DIGITIZATION GUIDELINES

TYPES OF MATERIALS

The following types of materials are appropriate for digitization and inclusion in a web site:

- Newspaper articles
- Handwritten manuscripts
- Photographic prints from the era
- Recent photographs of objects once owned by area suffragists (e.g., clothing). May also include photographs of homes, if still standing, or gravestones.
- Posters
- Maps
- Announcements
- Letters
- Ephemera including flyers announcements, invitations, trade cards, etc.

Although audio and film may be available from the Suffrage Movement, this project has not planned on including those types of materials on the web site. Nor is the project planning on creating new audio or video files due to cost constraints (e.g., someone reading documents from the era).

COPYRIGHT

In dealing with digitizing materials, copyright and donor rights must be considered, and the following questions answered:

- Does the institution own the copyright on the item?
- Can the item be photographed, digitized, reproduced, or placed on the Internet?
- Does the donor retain any rights, such as the right to reproduce in any medium?
- Does the donor want access to the item limited?
- Can the institution “clear” the rights on a given item by contacting the rights owner?

Given the amount of time and effort required to clarify the rights of a specific item, we recommend digitizing only those items where the institutions own all the rights.

Rights Requested:

The following rights are requested from the participating institutions:

- The right to access the material.
- The right to digitize the material.
- The right to associate the material with the institution.
- The right to make the material available via the Internet.
- The right to maintain the images on the Internet.

Rights from the participating institution as described above are granted to this project. The rights are not granted to any other institution participating in this project through association with this project.

Copyright Statement:

A copyright statement, similar to the following, will be placed on the project web site:

The Women's Suffrage Digitization Project, the Rochester Regional Library Council, and those institutions who have participated in the construction of this exhibit are not aware of any U.S. Copyright protection or any other restrictions on the materials in this collection. Some of the contents may be protected by U.S. Copyright Law (Title 17, U.S.C.) and/or by privacy and/or publicity rights.

The materials on this web site have been made available for use in research, teaching, and private study. The written permission of the copyright owners and/or other rights holders, such as publicity and/or privacy rights, is required for distribution, reproduction or other use of protected items beyond that allowed by fair use or any other statutory exemptions. Responsibility for making an independent legal assessment of an item and securing any necessary permission ultimately rests with persons desiring to use the item.

The Women's Suffrage Digitization Project is eager to hear from any copyright owners who are not properly identified so that appropriate information may be provided in the future.

Additional Resources:

U.S. Copyright Office	http://lcweb.loc.gov/copyright/
10 Big Myths about copyright explained	http://www.templetons.com/brad/copymyths.html
When Works Pass Into The Public Domain	http://www.unc.edu/~unc1ng/public-d.htm
Copyright FAQ (U.K.)	http://ahds.ac.uk/bkgd/copyrightfaq.html

INSURANCE

Some institutions may require that any item removed from its premises, for any purpose, be insured while it is off-site. The requirement to obtain insurance adds cost to the project. In order to handle this requirement, the following is suggested:

1. Review current insurance policies held by the individual institutions and the digitizing institution to see if those policies will cover these items.
2. Work with the digitization vendor to arrange insurance. Some vendors will build the cost of insurance into the project costs.
3.
 - a. Selected a bonded vendor.
 - b. Set specific requirements with the vendor on how items are to be handled and tracked.
 - c. Spend time with the vendor's digitization team and show them how items are to be handled. Ensure that you speak to management as well as those who will be doing the work.
 - d. If they do not have the proper handling equipment (e.g., archival gloves) work with them to get the right equipment on site.
 - e. Call or drop in periodically to check on their procedures.
 - f. Inventory everything before it is sent to the vendor. Have the vendor inventory all items received. When items are sent back to their institutions, have them inventoried again.

PRESERVATION

Ensuring the preservation of items being digitized during the digitization process is very important. What follows are two sections on the handling and preservation of materials. These guidelines should be communicated to staff members working on the implementation project, the participating institutions, and the digitization vendor.

PRESERVATION GUIDELINES FOR HANDLING ARCHIVAL MATERIALS IN A DIGITIZATION PROGRAM

Contributed by
Connie Cox Bodner, Director, Department of Collections and Research
And
Ralph Wiegandt, Conservator
Rochester Museum & Science Center

Paper-based objects, including works of art on paper, photographs on paper stock, books, and other print media require special handling to ensure that the digitization program does not damage or endanger them. Standard guidelines appropriate for fragile paper-based materials generally apply, yet the added handling and manipulation associated with scanning and imaging processes introduces some special concerns.

General guidelines:

- Plan Work Flow
 - Create separate work plans based on object types and sizes. For example:
 - ✓ Bound materials: books, pamphlets, bound periodicals, etc.
 - ✓ Photographs
 - ✓ Letters, manuscripts
 - ✓ Works of art on paper
 - Prints
 - Hand-applied media
 - Drawings
 - Pastel
 - Watercolor
 - Charcoal
- Assess Object Condition
 - Can object be safely handled, processed, and transported?
 - ✓ Document condition in a standardized format to accompany the object if there are special condition concerns.
 - ✓ Determine if the object can be digitized without incurring damage.
 - ✓ Establish protocols for fragile or at-risk materials.
 - ✓ Determine the most appropriate imaging process for the object depending on condition and type.
- Prepare Objects for Transport and Safeguarding During Imaging Process:
 - Use padded, waterproof, secure containers for transport.
 - Protect sensitive objects from contact and abrasion damage in transport with the use of cushioning, acid free interleaving sheets, and enclosures.
 - Do not over pack, only carry what can be safely and easily protected and handled.
 - Maintain an orderly clean workspace
 - ✓ Handle objects with clean hands, or wear protective gloves.

- ✓ Use support boards to move and manipulate single sheets of paper, especially if oversize or fragile.
- Hand carry or transport items by experienced object handlers, not by U.S. Postal Service or carrier service.

The imaging process subjects light-sensitive organic materials to high intensity bursts of light for a short duration; therefore preparation and set-up should be done in advance to minimize exposure. However, the greatest potential for damage is from handling and processing large numbers of objects to meet goals and deadlines.

Specific Considerations For Scanning And Digitizing Print And Image Media

The format and condition of the object to be imaged for digitization will determine the imaging process.

- Stable and undistorted (flat) print media and photo images can be scanned on a standard flat bed scanner, or by a handheld scanner. (Please note that specific digitization standards are not being addressed here.)
- Brittle and friable objects that have deformations, or have applied media (pastels, charcoal, drawings, and watercolor etc.) **cannot** be placed face down and pressed against the glass of a scanner. They require an alternative digitization process, such as digital photography, which will allow placing the object face up on a copy stand or photo table.
- Books and bound materials should not have their bindings stressed by placing them on a scanning bed. A digital photography set-up may accommodate bound material; another alternative is to copy the book pages with a book copier and then scan the copy.
- Folded and heavily creased paper objects are a special consideration. From a conservation standpoint, brittle folded letters and newspapers should not be unfolded and flattened without special treatment. The artifactual nature of the object should be determined before undertaking that step. Consult a paper conservator for advice and/or treatment of significant objects that require opening and flattening. They may require **controlled** humidification.

Additional Resources:

Gaylord Bros., a source for acid-free and materials for archive collections, also offers a set of useful pamphlets with information on the preservation of paper-based and photographic collections. The pathfinders, entitled *Gaylord Preservation Pathfinder Series*, are free. The pathfinders are available in hardcopy and PDF formats.

Gaylord Bros.
PO Box 4901
Syracuse, NY 13221-4901
(800) 448-6160
<http://www.gaylord.com>

Lumiere (f.k.a. Light Impressions Inc.) is a source for acid-free materials for archive collections:

PO Box 940
Rochester, NY 14603-0940
(800) 828-5539

Resources for preservation of archive collections and where specific questions can be directed are:

The Northeast Document Conversation Center
100 Brickstone Square
Andover, MA 01810-1494
(508) 470-1010
<http://www.nedcc.org>

Rick Sherin
Director of Conservation
The Strong Museum
(716) 263-2700 x281

Richard Peek
Librarian, Preservation Department
University of Rochester
(716) 275-9285

BASIC HANDLING TECHNIQUES FOR PAPER & MEDIA OBJECTS

(Excerpted from the "Collections Division Manual" produced by the Rochester Museum & Science Center)

- Never smoke, eat, or drink in any area where objects are located.
- Make sure there are no tools or sharp, dangling jewelry that could come in contact with the objects.
 - Remove hand, arm, and neck jewelry because they could snag or scratch object surfaces.
 - The contents of breast pockets should be emptied or secured before one bends over to lift an object or look at an object.
- Hand lotions cannot be used while working with objects.
- Wear gloves whenever handling objects. Latex, nylon, or cotton gloves are acceptable. Cotton gloves may reduce the handler's sensitivity, so latex gloves are preferable in handling paper and media objects.
 - Wear your correct glove size. Do not wear gloves that are too large because slippage can occur.
 - Wear only clean gloves.

Note: Some conservators recommend the use of "clean hands" rather than gloves due to the difficulty of working with papers with gloves on. Using gloves will be the default unless a lending institution prefers the clean hand rule.

- Because pen inks are impossible to remove from objects, always use pencil when you take notes. Highlighting markers and ballpoint, felt tip and other pens are prohibited in the same vicinity of the objects.
- Always handle objects with care! Consider each object as unique and irreplaceable.
- Never drag an object across a surface, even a padded surface. Pick up the object with both hands. Do not allow any part of the object to drape or hang over an edge, such as a table edge.
- Handle objects by the edges only. Use a spatula to aid in turning an object over or in getting one's hand underneath the object for carrying purposes. Always support the object along its entire length even when turning the object over.
- Do not place items, such as a magnifier, ruler, note pad, computer, or pencil directly on the surface of any object. No leaning of arms or hands on the objects.
- Do not place Post-It™ notes directly on the surface of any paper or media object. Do not write on the objects for any reason.
- Keep objects away from non-collection items and/or acidic papers such as cardboard, wrapping paper, notebooks, xerographic copies, etc.
- If objects are housed in a vertical orientation, please resist the temptation of "flipping" through objects. It is preferable to remove the particular grouping of objects, transport to appropriate work space, and view the objects one at a time.
- Return the object to the exact location from which it was taken. Remember the way the object was housed and duplicate the process when returning the object.
- Handle objects only when necessary and as little as possible since damage may be done each time the object is moved and handled.

- Transport the object in appropriate folder, envelope, or storage container, ideally on a cart or a tray.
- Avoid stacking objects one on top of another unless clean, smooth tissue papers or folders are used between the objects. Remember to stack tall/large objects on the bottom and short/small objects on the top. If an object is fragile or in poor condition, stacking is prohibited.
- Never handle or carry more than one object at a time unless using a tray or cart when transporting. When carrying, support the object along its entire length. Plan relocation and final work space in advance.
- Always carry objects from underneath, supporting their full weight and using both hands. This means the object is being carried horizontally and not vertically. Understand the strengths and weaknesses of the object before handling it.
- Cleanliness is essential for everything that touches the object.
- Prepare a clean, uncluttered surface on which to place the object by laying down clean acid free tissue paper, clean acid free folder stock, acid free mat board, or clean inert foam (Ethafoam®). Use clean tissue paper as a dust cover if objects must be left out for a period of time. Use "CAREFUL OBJECT BELOW" signs to identify objects in work areas.
- If photography or another form of reproduction is undertaken, minimize the time the object is exposed to light.

Additional Resource:

"Protecting the Physical Form"
John E. McIntyre
Head of Preservation
National Library of Scotland
<http://www.rlg.org/preserv/joint/mcintyre.html>

HARDWARE & SOFTWARE

Project:

- In considering the hardware needs of the project, a decision was made not to invest in optical scanners, digital cameras, high-quality monitors & printers, etc. Instead of purchasing scanners and other digitizing equipment, that work will be outsourced.
- Large computer monitors and high-quality printers needed for in-house quality assurance will be rented on an as-needed basis.
- Software decisions will be made during implementation. There are several types of software packages that could be used with the project including software for:
 - Collection management as used by museums to track the use and condition of their collections
 - Library management (like those used to track library materials from acquisition through circulation)
 - Image management
 - Database administration
 - Web development

Decisions about specific software packages are being delayed so as to give the Implementation Team the flexibility to decide based on the current technology and cost information.

User:

- The Project Team assumes that the user of the web site is using Netscape Navigator or Internet Explorer.
- The Team does not assume that the user can or will calibrate the monitor used for viewing the web site.

FILE FORMATS TO BE USED FOR SPECIFIC TYPES OF MATERIALS

Allison Zhang -- Digital Projects Specialist in the Systems Department, Rush Rhees Library, University of Rochester -- created a chart that compiled the Technology Team's thinking on the types of file formats to be used in this digitization project. Because information in this area continues to change, this chart represents a snapshot in time of how people are currently thinking about file format.

Type of Documents	Format/Resolution	Files	
		Master Files	Display Files
Textual Newspaper articles, book chapters, etc.	Scan Resolution	200-300 dpi	
	Formats	TIFF	HTML or ASCII
Textual & Graphics Newspaper articles with photos or graphics, handwritings, manuscripts, etc.	Scan Resolution	300 dpi	100-200 dpi for PDF f
	Formats	TIFF	GIF for single pages PDF for multiple page
	File Size & Resolution	Original size	72 dpi Maximum 600 pixels
Photographs In paper, book, or picture, etc.	Scan Resolution	300 dpi	
	Formats	TIFF	JPEG
	File Size & Resolution	Original size	72 – 300 dpi Maximum 600 pixels Low quality to reduce
Photographs Film, digital camera files, etc.	Scan Resolution	300 dpi	
	Formats	TIFF	JPEG
	File Size & Resolution	Original size	72 – 300 dpi Maximum 600 pixels Low quality to reduce
Maps and Drawings	Scan Resolution	300 dpi	100-200 dpi for PDF f
	Formats	TIFF	GIF for single page PDF for multiple page
	File Size & Resolution	Original size	72 dpi Maximum 600 pixels
Graphics Handwritings, manuscripts, black and white drawings, etc.	Scan Resolution	300 dpi	100-200 dpi for PDF f
	Formats	TIFF	GIF for single page PDF for multiple page
	File Size & Resolution	Original size	72 dpi Maximum 600 pixels

CREATION OF FILE BACK-UPS

Creating and retaining back-ups of all the files used in constructing the site is important to ensure that work is not lost.

During The Implementation Process

1. Each image file will be backed up after its creation.
2. The Team recommends that, during the construction of the web site, back-ups are created often¹. The two most recent back-ups should be kept².
3. After the site is fully constructed, a full back-up should be made. This back-up should be kept indefinitely.

Note: Each back-up should be done on the most current back-up media.

Ongoing Back-up Requirements

1. A new back-up should be done every time a change is made to the site after the site goes live.
2. At a minimum, a new back-up should be created once per year, on the anniversary date of the site's completion date.
3. The two most recent back-ups should be kept.
4. Each back-up should be done on the current back-up media. If the back-up media changes, a new back-up should be done.

¹ It would be easy to stipulate that back-ups be done nightly; however, that may not be practical. The people who develop the web site should be responsible for ensuring that timely back-ups are done and work is not lost.

² It is always recommended that back-ups be kept in a different physical location (i.e., off-site) from the computer that was backed up. Back-ups should be kept where they are secure and in an environment (i.e., climate-controlled) that does not harm the media.

FILE MIGRATION

File migration is very important, but no one knows how often the migration should take place or what exactly should trigger a migration.

Definition: Migration is the periodic transfer of digital materials from one hardware or software configuration to another, or from one generation of computer technology to the subsequent generation.

There are two migration issues:

1. Migrating to new file formats
2. Migrating to new storage media

In addition, each of the above applies to the online files as well as the high-quality images that are given back to the participating institutions.

a. Images Stored at Participating Institutions

Storage Medium: Each participating institution will receive a CD-ROM that contains the high-quality (TIFF) images of their items used in the project. Each institution will only receive copies of their images, not of the images from the other institutions. Scientific studies have estimated the life expectancy of a CD-ROM stored under optimal conditions to be approximately 200 years or more. However, our practical experience with CD-ROMs is not that long. Technological changes in regard to hardware used to read the CDs may also affect the usefulness of the CDs. Thus, it is recommended that the images, etc., be transferred from their current storage media to the current state-of-the-art storage technology every 5 to 7 years. Although the need for migration will be recommended by the Project Team to the participating institutions, it will be up to the participating institutions to carry out the migration.

File Formats: Although TIFF is used currently as a standard, file formats will change. It will be the participating institutions' responsibility to migrate their images to the new file format standard as standards change. The key will be for the institution to migrate the file formats before the current standard becomes obsolete. Although the need for migration will be recommended by the Project Team to the participating institutions, it will be up to the participating institutions to carry out the migration.

Each participating institution will receive the TIFF images after:

1. their material has been digitized
2. quality control has been completed on the digital images
3. the GIF/JPEG images have been created
4. quality control has been completed on the GIF and JPEG images

The creation of the GIF and JPEG images may not occur right away, and there may be a need to recreate those images as the web site is built to meet the needs of the site. Thus, in order to expedite the delivery of the TIFF images to the participating institutions, it is recommended that the Project create a copy of the TIFF files at the end of Step 2 (above) for use in the remainder of the process. The TIFF files retained by the Project will be destroyed when the web site is completed.

It is recognized that some participating institutions will be hesitant to allow the Project to retain a copy of the TIFF images for the duration of the project. In that case, the Project will not retain a copy of the images. If the Project needs to use the TIFF files to recreate the GIF and JPEG files, the Project Team will need to retrieve the TIFF files from the participating institutions.

LSTA projects in New York State need to make their output freely available to researchers. In the case of digitization projects, the images should be available upon request for non-profit use. Both the participating institutions and the Project Team need to ensure that the files are maintained so that this requirement can be met.

b. Online Image Files

The need here is to ensure ongoing access to the files and to the project.

- File Storage migration will occur as part of a normal computer hardware upgrade or at a minimum of every 5 years.
- The Team recommends that File Format migration occurs when a new file format standard is recognized for the storage of image files.

PRESERVATION OF DIGITAL IMAGES

Contributed by Rosemary Finn
Historian/Librarian

There are a number of options for digital storage media:

- Digital Audio Tape (DAT)
- Writable CD-ROM
 - CD-Recordable (CD-R)
 - CD-Rewritable (CD-RW)
- Photo CD (from Eastman Kodak)
- Digital Versatile Disc (DVD)
- Digital Linear Tape (DLT)

Despite claims of life expectancies of over 200 years for CDs, etc., none of these media have been around long enough to be proven as long term viable storage medium. As a result, it is advisable to write data (both the online and offline versions) to two different types of media, preferably held in different places.

Making multiple copies (if cost permits) of a CD or other media used is also advisable. For example, software companies that produce nothing but images store copies on site as well as at commercial storage facilities that guarantee a safe environment (i.e., proper temperature, proper handling, proper humidity levels, etc.). When making multiple copies of a CD, there should be a master copy and then derivatives. The master copy should be stored properly, be physically secure, and be handled only to make derivative copies. The derivatives should be used for everything else.

The combination of media most commonly in use for digital archival purposes is CD-ROM and DAT. While the life expectancy of DAT is not as great as that of CD-ROM (only 10 to 30 years), it is inexpensive and easy to use as a secondary backup to the CDs. For example, using a program called Retrospect Remote by Dantz, Inc., one can write data to tape, compress the information, and make a catalog of the tapes' contents that can then be searched. Backup occurs automatically at time and intervals specified (e.g., 6:00 p.m. every evening).

The hardware-based compression built into the DAT drive is a two edged sword.

1. It provides much faster backup times and generally allows at least 2 or 3 times the amount of information to be backed up on the media (approx. 5 GB on a 90m tape). However, the drawback is that the hardware compression may not be compatible with other hardware outside of your own facility. The use of a standard hardware compression, such as DDS-2, will help to mitigate this. The use of a non-standard hardware compression should be avoided.
2. The compression technique is lossless³, which is preferred.

³ There are two types of file compression: lossless and lossy. Lossless means that the file retains all the qualities of the original file and that no information is lost during the compression process. Lossy means that

According to scientific studies and CD-ROM manufacturers, the life expectancy (or length of "readability") of a CD is approximately 200 years or more, under optimal conditions. (This is true of Photo CDs as well.) Such conditions include storage in the dark at 25 degrees centigrade and 40% humidity. When stored in a regular office or home environment, the lifetime of a CD should be 100 years or more. In terms of physically handling the CDs, they should always be kept in a good plastic container.⁴ (It is not advisable to use plastic or cardboard sleeves). The worst handling stresses for a CD are caused by severe flexing or application of a sharp point (such as a ballpoint pen) to the top surface. Further information and specifications about the handling and storage of CDs can be found at: <http://www.kodak.com/US/en/digital/techinfo/permanence1.shtml>.

The quality of the disc itself and the quality of the instrument used to "play" it affect the longevity of a CD. Basically, it is important that the disc is "born" under the best conditions. This means that the disc is produced with a "not too thin" layer of aluminum, that the polycarbonate layer is resistant to humidity (most of them are), and, most importantly, that the top coat of resin is of good quality. For example, Century, 3M, and Kodak discs are produced with an extra thick layer of resin which helps to protect against scratches, airborne pollutants, etc.⁵

Of course, none of the life expectancy figures matter when the technology has changed and the hardware needed to read the CDs or other media have vanished. As a result, it is recommended that digital archives be transferred every 5 to 7 years to the current storage technology. Obsolescence should be avoided through migration.

Microfilm

While this is a "digitization" project (i.e., we want to store images in a digital format), there have been some arguments in the literature in favor of using microfilm as the "ultimate" archival backup. Microfilm is an analog format (not digital) stored on a silver halide film medium for preservation purposes. Unlike digital files, which require a long-term commitment to the constant tending to hardware/software standard changes, there is the reassurance that, even after the collapse of technology, a microfilm image will need only a light source and a magnifier to reproduce a visible image.⁶

the file does not contain all the qualities of the original file and that some information has been lost during the compression process.

⁴ Polypropylene CD cases are available from vendors such as Gaylord.

⁵ High quality discs are generally gold in color. The gold is the color of the dye used (which is "burned" into in the recording process) and does affect longevity. The Kodak CDs tend to have better life expectancy than many other brands due to the gold dye. When purchasing discs for a project of importance, be sure to check what the manufacturer and others say about the quality of the discs. Other dye colors, e.g., green and blue, may be of good/high quality, but again checking manufacturer specification, etc., should be done.

⁶ Creating microfilm as part of the Women's Suffrage Digitization Project was discussed; however, it was decided not to pursue the use of microfilm because: 1) it would complicate the project, and 2) the cost would not be covered by the grant sources currently being pursued. RRLC does support the creation of microforms and will work with institutions to investigate resources for such preservation efforts.

COST ISSUES

Due to digitization's short history, the real costs of such projects are still being studied. The workbook *Digital Images for Libraries and Archives*⁷ contains worksheets and formulae for discerning the costs of specific projects.

Trends and other thoughts:

- The cost of actually digitizing items is now approximately 10% of the project cost, with processes that require more manpower (indexing, creating databases, item selection, etc.) composing 90% of the project cost. The reason for this is that the hardware and software needed for the actual digitization continue to decrease in price. The cost of storing digital images is also decreasing.
- Over a 10-year period, the cost of maintaining digital images is estimated to be the same as the cost of the original digitization project.
- The web site must be maintained in order to remain "fresh" and viable. Users of any site will expect that it will change over time and be updated. There are no firm guidelines for the frequency of change, but there is consensus among team members and independent consultants (e.g., Forrester Research) that to remain interesting, a site must change more often than twice per year.

⁷ Kenny, Anne R. and Stephen Chapman. Ithaca, NY: Cornell University Library, 1995.

DIGITIZATION VENDOR SELECTION CRITERIA

If the digitizing of the items is not done in-house, then selecting the vendor, who will digitize items for use as part of the project, is an important task. The following questions should be asked when evaluating digitization vendors. The answers will assist in determining which vendor to use.

1. Is the vendor located in your geographic region?
2. Will the vendor work on site?
3. Can the vendor handle all of the types of materials that need to be digitized? For example:
 - Photographs (including slides, cased images, etc)
 - Newspaper articles
 - Hand-written manuscripts
 - Ephemera
4. How does the vendor propose to digitize the items? For example:
 - Flatbed scanner
 - Film/slide scanner
 - Digital camera
 - Overhead (planar) scanner
 - Microfilm/microfiche scanner
5. Can the vendor supply OCR (optical character recognition) services? If yes, what level of accuracy do they guarantee?
6. Will the vendor adhere to the Project's guidelines on the proper method for handling the materials?
7. Will the vendor follow check-in/check-out (inventory) procedures for the materials so that all of the materials are tracked during the scanning process?
8. Will the vendor provide digital normalization services?
9. Does the vendor provide the option of not having any normalization or touch-up work done on the digitized images?
10. What type of security system does the vendor have? Can they lock up material when not in use?

11. What type of insurance does the vendor carry on the items they house during a digitization project?
12. What is the vendor's per item pricing? Does the vendor offer any volume discounts? What services are bundled into the stated price?
13. Has the vendor worked on historic or sensitive materials before? If yes, what type of materials?
14. Can they provide references?

TEXT ON THE SITE

The web site needs to be structured so that it will have a broad appeal and motivate users to visit again. The text used on the web site should be of a reading level appropriate to a wide range of users. Researchers have performed usability tests on web sites and written general guidelines in this area.

Jakob Nielsen, who was the web usability guru at Sun Microsystems is one who has researched this area. The results of his research can be read at: <http://www.useit.com/papers/webwriting/>. Research he did with John Morke's "found that 79 percent of our test users always scanned any new page they came across; only 16 percent read word-by-word." According to his work, web pages should employ:

- Highlighted keywords
 - Hypertext links
 - Typeface variations
 - Color
- Bulleted lists
- One idea per paragraph
- Start with the conclusion, then supply the supporting material
- Half the word count (or less) than conventional writing

The medical community has emphasized the need to communicate in terms that people understand. Several medical sites on the web contain information on alternate words to use for medical terms as well as tools for assessing the reading level of text. Information on writing for readability -- using the "Fry Graph Reading Level Index" and the "SMOG Readability Formula" -- is available at:

Rollins School of Public Health
<http://www.sph.emory.edu/WELLNESS/reading.html>

Children, Youth and Families Education and Research Network
<http://www.cyfernet.mes.umn.edu/research/writeadult.html#formulas>

Center for Disease Control
<http://www.cdc.gov/od/ads/smog.htm>
<http://www.cdc.gov/od/ads/fry.htm>

Additional information on readability is available from Educational Resources Information Center (ERIC) at <http://www.askeric.org/>.

Good web site design, that takes into account human factors (ergonomic) issues, can help with readability (non-language) issues. Issues to be taken into account include:

- Background and text color

- Font size
- Size of buttons and other clickable areas
- Use of graphics
- Page loading speed
- Navigation tools

Resource material is available on this including workshops, books and web sites. For example:

Usable Web: Guide to Web usability resources
<http://usableweb.com/>

Writing for the Web: A Primer for Librarians
<http://bones.med.ohio-state.edu/primer/>

Recent Research Study

A recent study, published Jan. 25, 1999, by Forrester Research, Inc.⁸ determined that the following factors are what users consider important in motivating them to return to specific web sites:

<u>Factor</u>	<u>Percentage of Respondents</u>
High-quality content	75
Ease of use	66
Quick to download	58
Updated frequently	54
Coupons and incentives	14
Favorite brands	13
Cutting-edge technology	12
Games	12
Purchasing capabilities	11
Customizable content	10
Chat and BBS	10
Other	6

It is recommended that the first three items be incorporated into the site design. Although frequent updates (e.g., monthly or quarterly) is desired to keep the site “fresh”, the ability to provide frequent updates is dependent monetary resources available to support such an effort.

Tracking User Behavior

It is important to track user behavior on the web site in order to understand which items draw the user’s attention and which items are most/least popular.⁹ Tracking can be used to determine what pages are being used, determine where content should be added to maintain users’ attention, and help gauge the need for revising the site. There are tools for counting “hits” on specific web pages, web site hits overall, where people have come to the site from, and where they go afterwards. It is recommended that counting hits be done as a minimum. The usefulness of other tracking mechanisms should be discussed before deciding whether or not to implement.

⁸ Forrester Research, Inc. is an independent research firm that analyzes the future of technology change and the impact those changes will have on business and society. Their web site is at <http://www.forrester.com>

⁹ It is important to note that a raw count of hits on a particular page, although a measure of the page’s popularity, does not measure the page’s usefulness.

ANSWERING USER QUESTIONS

Users of the web site will need to be able to communicate with the participating institutions and the webmaster.

The webmaster should answer questions concerning access to the web site, browser/software concerns, and general troubleshooting. The webmaster must be someone who will respond quickly to these questions and comments. The goal would be to respond within 24 hours, during the business week.

The participating institutions should receive any questions or comments concerning their items used on the web site, their collections, operations, etc. The web site should have links to each institution, if available, and have contact information posted (e.g., address and phone number). The project cannot mandate the speed with which the participating institutions reply to questions and comments, however, each institution needs to understand that it is in their best interest to communicate quickly with users of the site.

In order to set expectations, the web site needs to contain information on how questions and comments will be handled by each so that users will understand the process. Information on the best means to contact the institution (i.e., e-mail, paper mail, telephone or fax) should be included.

ONLINE PAYMENT OPTIONS

Adding the ability to sell images on a web site can be beneficial but can also complicate a project. Implementing such a system would alter every aspect of the project.

Projects developed with LSTA funding cannot charge for access to materials developed under the auspices of the project. However, participating institutions may require payment for uses that fall out of the general area of research (e.g., images that are going to be published in a book).

Projects that consider online payment should review the mandates of their funding agencies as well as the wishes of their participating institutions before instituting a system.

INDEXING & CONTROLLED VOCABULARY

Indexing a web site can provide more versatile and direct access to the materials. Three indexing schema, in particular, were discussed:

AACR2 in USMARC formatted records	http://lcweb.loc.gov/marc/
Dublin Core	http://purl.org/dc/
Encoded Archival Description (EAD)	http://lcweb.loc.gov/ead/

In general, these schema fall under the heading of metadata¹⁰. According to the Task Force on Metadata:¹¹

METADATA are structured, encoded data that describe characteristics of information-bearing entities to aid in the identification, discovery, assessment, and management of the described entities .

According to the Free On-line Dictionary of Computing¹², metadata is:

Data about data...For example, meta data would document data about data elements or attributes, (name, size, data type, etc) and data about records or data structures (length, fields, columns, etc) and data about data (where it is located, how it is associated, ownership, etc.). Meta data may include descriptive information about the context, quality and condition, or characteristics of the data.

Although the three schemas are unique, tools are available to allow for the translation of metadata in one schema to be translated into another. Tools for interoperability are also being built.

The Management Teams decided that both Dublin Core and MARC/AACR2 will be used for the image collection. MARC would be used for the images and Dublin Core for the web pages. This would make the web pages findable by various Internet search engines. The MARC records could be placed in the ROARing CAT (<http://rrlc.library.net/>). [See the section the ROARing CAT]

Translation programs (crosswalks) do exist between MARC and Dublin Core¹³. OCLC is addressing this issue through its Cooperative Online Resource Catalog (CORC)¹⁴ project,

¹⁰ Metadata is spelled both as one word (metadata), a hyphenated word (meta-data), and as two words (meta data).

¹¹ Committee on Cataloging: Description and Access, Task Force on Metadata, Summary Report, June 1999, <http://www.ala.org/alcts/organization/ccs/ccda/tf-meta3.html>

¹² The Free On-line Dictionary of Computing is available at: <http://foldoc.doc.ic.ac.uk/foldoc/contents.html>

¹³ Dublin Core/MARC/GILS Crosswalk, <http://lcweb.loc.gov/marc/dccross.html>

¹⁴ Information on CORC is available at; <http://www.oclc.org/oclc/research/projects/corc/>

which is geared towards indexing the web, and allows instant translation of records into different formats.

The Team also decided that the Library of Congress Subject Headings would be used as the primary controlled vocabulary for the items with the possibility of adding local subject headings (e.g., town names) as needed. In addition, the Team believes that the *Thesaurus for Graphic Materials* could be useful to the project.

The Thesaurus for Graphic Materials I: Subject Terms
<http://lcweb.loc.gov/rr/print/tgm1/>

The Thesaurus for Graphic Materials II: Genre and Physical Characteristic Terms
<http://lcweb.loc.gov/rr/print/tgm2/>

The Getty Institute has also developed vocabularies that may be employed, including *The Art & Architecture Thesaurus* (AAT), *The Union List of Artist Names* (ULAN) and *The Getty Thesaurus of Geographic Names* (TGN). They are located at:
<http://www.getty.edu/gri/vocabularies/index.htm>

WSDP SPECIFIC IMPLEMENTATION GUIDELINES

COLLECTION PARAMETERS

Many women and men in Western New York State were active in the decades-long effort to gain for women the right to vote. Most of these people were also active in other reform, religious, political, social, educational and cultural organizations that helped shape our region's history. Some of these names are well known, while others are not.

This digitization project would include biographical sketches of approximately 50 women and men, pictures of them, where available, and images of their documents and memorabilia. Biographical sketches will be available on the famous (e.g., Susan B. Anthony) as well as the lesser-known suffragists. Emphasis will be on women in the movement; however, some men such as Frederick Douglass will be mentioned due to their influence and enthusiastic support.

Tying together the biographical sketches will be a timeline that traces the suffrage movement from 1848 to 1920, and which mentions some of the deterrents to the movement (e.g., the religious conservatives) and the opposition (anti-suffragists).

KNOWN REGIONAL SUFFRAGISTS

Suffragists who lived in the five county region covered by RRLC will be included in the project. The five counties are Livingston, Monroe, Ontario, Wayne, and Wyoming.

The people listed below are known to have been suffragists in the Rochester region:

Mary Anthony, 18xx - 1907
Susan B. Anthony, 1820 - 1906
Antoinette Brown Blackwell, 1825 – 1921
Abigail Bush, 1810 -
Ella Hawley Crossett
Frederick Douglass, 1817 - 1895
Mary Lewis Gannett (1854 - 1952) & William Channing Gannett
Jean Brooks Greenleaf
Mary Howell, 1844 – 1913
Emily Howland
Kate Johnson Jackson
Hester Jeffreys
Helen Montgomery
Lucretia Mott (1793 - 1880) & James Mott
Rhoda Palmer [attended the 1848 convention and voted in 1920]
Amy Post (1802 - 1889) & Isaac Post 1798 - 1872
Garrett Smith 1797 - 1874
Emma Biddlecom Sweet
Charlotte Woodward Pierce (1829 – 19xx) [attended the 1848 convention and voted in 1920]
Martha Coffin Wright 1806 - 1875

Information on suffragists in other regions, like Seneca Falls, may lead back to locating additional suffragists in the Rochester region.

Seneca Falls – Syracuse Region:

Amelia Bloomer, Seneca Falls, 1818 - 1894
Matilda Joslyn Gage, Fayetteville, 1826 - 1898
Samuel May, Syracuse
Elizabeth Cady Stanton, 1815 - 1902
Mary Anne Mc'lintock, Waterloo

REGIONAL ORGANIZATIONS WITH SUFFRAGE MATERIALS

The following regional organizations are known to have suffrage materials:

- George Eastman House -- a few photographs, which are also part of the collection at the Susan B. Anthony House. They have no documents concerning Eastman's support of the anti-suffrage movement. (He gave \$900 to the anti-suffrage movement. Although a "good sum", it is much less than the amounts he gave to organizations that he really cared about.)
- Monroe County Historian – The County Historian has a “few papers” related to the suffrage movement.
- Rochester Public Library – The Local History Room contains a number of suffrage items.
- Rochester City Archives -- The archives has the tax records noting when Susan B. Anthony and her sister (Mary) paid their taxes under protest.
- Rochester Museum & Science Center – The museum has letters, photos, and scrapbooks. The museum also has some 3D objects including the gavel from the 1848 Seneca Falls convention.
- Strong Museum – The museum has a few items from the suffrage and anti-suffrage movements, including photos.
- Susan B. Anthony House – The Anthony House has photos, personal items, documents from Susan B. Anthony as well as photographs donated by Carrie Chapman Catt, president of the NAWSA in 1920 and some of her memorabilia.
- University of Rochester -- (according to the "Cornell Red Book") material including the Anthony - Avery papers; Ella Sargent Montgomery scrapbook; Emma B. Sweet papers; Post Family papers; Susan B. Anthony papers; Sylvina Mary Dewey Green scrapbook; William Channing Gannett papers; Other women's suffrage material (1888 - 1948); Posters, broadsides and circulars; Photographs; and Information from the Rochester Convention & the Seneca Falls Conventions in 1848.

Collections of materials from the Women's Suffrage Movement will be discovered through a survey conducted during 1999 by the Documentary Heritage Program (DHP) and through a survey to be conducted at the start of the implementation period. (The DHP survey is being done in conjunction with the Western NY Library Resources Council and the Central New York Library Resources Council.) Information will also be gathered through the RRLC Local History Committee.

CONDITIONS OF LOAN OF OBJECTS TO THE RRLC WOMEN'S SUFFRAGE DIGITIZATION PROJECT

1. All loans to the Women's Suffrage Digitization Project must be authorized by the director or authorized individual of the participating institution.
2. Each object shall at all times be given due care to insure it against theft, mishandling, loss, damage or deterioration. Should theft, mishandling, loss, damage or deterioration occur, the participating institution shall be informed immediately and in detail.
3. Objects loaned to the WSDP shall not be altered by the project team or by the digitization vendor except with the express written permission of the participating institution.
4. Objects shall be protected at all times against direct light, moisture, heat, excessive humidity and dry conditions.
5. Objects will be packed and transported in a manner agreed to by the participating institution.
6. Objects will be handled in accordance with the "Preservation Guidelines For Handling Archival Materials In A Digitization Program" published in the WSDP General Implementation Guidelines document.
7. The participating institution shall provide to the WSDP information on the object and its history in regard to the Suffrage Movement for use on the WSDP web site.
8. All items will receive proper attribution on the WSDP web site, including the institution's contact information and a pointer to the institution's web site.
9. The expenses of packing and transportation to and from the digitization site will be borne by the Women's Suffrage Digitization Project.
10. The Director or authorized individual of the participating institution must approve any departure from the requirements listed here or in the WSDP Guidelines in writing.

LOAN AGREEMENT FOR THE WOMEN'S SUFFRAGE DIGITIZATION PROJECT

Name Of Lender: _____

Lender's Phone: (_____) _____

Fax: (_____) _____

Email: _____

Lender's Address:

The following objects are being lent to the Rochester Regional Library Council WSDP: (including notes on physical condition)

Special Considerations For The Care Of Loaned Object(s):

Date Of Loan: From _____ To _____

Lender's Signature: _____

Lender's Title: _____

Date: _____

Loan Received By: _____

For the Women's Suffrage Digitization Project

Date: _____

Item Returned On(Date): _____

Lender's Signature: _____

THE WSDP WEB SITE

A brainstorming session was held on the requirements for the web site. These questions were asked:

What do you want included on the web site? What must be there?

The following answers were given:

- Biographies of lesser-known suffragists and other people (e.g., anti-suffragists) mentioned on the web site. (A “chapter” per person.)
- Images of items from each suffragist.
- Transcriptions of written/typed documents for use with their images.
- Each item should be catalogued and described.
- Links to other qualified web sites on the suffrage movement. (Factual, not editorial, sites.)
- Copyright information.
- Participating institution information including name, full address, e-mail address, and web site address.
- Ability to view the images in different configurations other than by suffragist: all photos together, all articles together, etc.
- Search engine for searching the site.
- A timeline of the suffrage movement, broken into segments that can be clickable to display what items are from that era.
- Purpose of site and funding.
- Link to the webmaster.
- Because the colors of the suffrage movement in the United States were purple, gold and white, use the colors purple and gold on the web site.
- Develop an icon/symbol for the site and use it on all pages.

In addition, the following suggestions were made at other WSDP Team meetings:

- Ability to annotate items and share those annotations online.
- Ability to view/browse subject headings used when the items were indexed.
- Ability to “click on” a thumbnail image and thus view a larger version of the image.
- When you search, you are taken to the items themselves not to intermediary pages.
- Information from the site should be available via a Z39.50 compliant system so that users searching a library category will be able to locate the images.
- Images should be of a image quality that loads quickly on the Internet (e.g., JPEG and GIF images, no TIFF images).
- Text in other written languages such as Spanish.

THE IMPACT OF THE SECONDARY FOCUS ON K-12 ON THE WEB SITE

As stated in the Project Focus Statement, a secondary benefit of having the content available electronically is that it can be used by teachers in the K-12 setting as well as students. In the context of the "Learning Standards for Social Studies," published by the New York State Education Department, this project will be relevant to Standard 1.3, that covers the study of "major social, political, economic, cultural, and religious developments in New York State and United States history" which involves "learning about the important roles and contributions of individuals and groups."

This secondary focus brought with it many questions, some of which were:

- Why the secondary focus on school children as users of the site?
 1. Children are adept at using the Internet and are one of the groups that use it heavily.
 2. Some sites, like the American Memory Project, are finding that children use their site more frequently than adults.
 3. Many teachers and schools are turning to Internet resources to supplement information on subjects that historically have not been covered well in textbooks.
- Does this mean that the site will be geared solely for the use of children?

No, but given the information gathered on literacy, a site geared for a broad audience will naturally be useful for children.
- How will this secondary focus affect the language used on the site?

Given the guidelines already presented for "Text on the Site", this secondary focus will have no impact.
- Does this mean that the site should include lesson plans for teachers?

The Teams disagreed on this, as did educators we talked to. It was felt that some teachers would welcome lesson plans (even if there are skeleton plans) and information that ties into the new NYS standards. Some felt that teachers would not want to use someone else's teaching material. Questions were also raised as to the project's ability to write lesson plans that would be useful for teachers. There was some agreement around the idea that some specialized material could be made available for teachers, but that extensive work in this area would not be done.

Would the site have a section geared for students and/or teachers?

A firm decision was not made on this. Many sites that can be viewed as educational do this as a way of providing specific information for this group. Examples of this can be found at:

Thomas Jefferson:

A Film by Ken Burns	http://www.pbs.org/jefferson/
National Park Service	http://www.cr.nps.gov/
United Nations CyberSchoolBus	http://www.un.org/Pubs/CyberSchoolBus/
Women of the West Museum	http://www.wowmuseum.org/index2.html
Mrs. Donn's Special Sections	http://members.aol.com/Donnclass/indexlife.html

- What types of items could be placed on the site for children and teachers without heavily impacting the overall site?

Lists of web sites that contain information on:

- 1) The U.S. Women's Suffrage Movement
- 2) Women's suffrage movements in other countries
- 3) Associated movements like the abolitionist movement
- 4) The women's rights movement
- 5) The impact of the suffrage movement on modern society

The new social studies criterion demands that children be able to compare and contrast. Thus having pointers to others sites for that type of exercise would be useful. Adults should also be encouraged to think about how the Women's Suffrage Movement in the United States related to other movements of its day as well as before and after.

Additional Resources:

The Social Studies Resource Guide
<http://www.nysed.gov/guides/social/>

Sharing Success
<http://www.sharingsuccess.org/>

ERIC Clearinghouse for Social Studies/Social Science Education
http://www.indiana.edu/~ssdc/eric_chess.htm

ERIC Clearinghouse on Elementary and Early Childhood Education
<http://ericeece.org/index.html>

Lesson Ideas
<http://memory.loc.gov/ammem/ndlpedu/lesson.html>

Consider the Source: Historical Records in the Classroom
<http://www.sara.nysed.gov/services/teachers/ctstoc.htm>

Z39.50 AND THE ROARing CAT

ANSI/NISO¹⁵ Z39.50 is a protocol that is used by libraries to provide a common language for the selection and retrieval of information. It allows for the interoperability and communication of computer systems, search engines and databases. The most common implementation of Z39.50 is with library catalogues. The Library of Congress is the official maintenance agency for Z39.50.

In order to allow Z39.50 systems to access information about the images in the WSDP project and to access those images on the Internet, the images will be catalogued in the ROARing CAT. ROARing CAT is the Rochester Area Regional Union Catalog that helps people find library materials no matter where they are located in the hundreds of libraries in the Rochester region. The ROARing Cat contains holdings information of all academic, special, public and school libraries in the area. ROARing CAT contains holdings information for more than 500 libraries and historical agencies in the five county Rochester Regional Library Council area. In all, 8.3 million holdings locations for 2.9 million titles are currently included in ROARing Cat. Materials of all types are included: books, journals, newspapers, magazines, videos, and CDs. ROARing Cat is a service of the Rochester Regional Library Council and is located at: <http://rrlc.library.net/>

The MARC records created for the digital images in this project will be placed in the ROARing CAT. The web site address for the individual image will be placed in the 856 field of its MARC records. (The 856 field is for the item's Electronic Location and Access.) The item will be attributed to the participating institution.

Additional Resource:

Z39.50 Resource Page
<http://www.niso.org/z39.50/z3950.html>

¹⁵ NISO – the National Information Standards Organization – develops and promotes technical standards. NISO is accredited by the American National Standards Institute (ANSI).

LINKS TO OTHER WEB SITES

The web site for the Women's Suffrage Digitization Project will contain links to other women's suffrage web sites as well as lists of pertinent materials that are not available on the Web. These citations will become a resource list for users of the web site.

The resource list supports the web site, but is not the major focus of the web site. Thus the resource list does not have to be exhaustive nor of a specific length.

Hardcopy and electronic resources will be selected based on:

- Pertinence to the historic Women's Suffrage Movement in the United States.
- Pertinence to other suffrage movements in the world.
- Objective viewpoint on the subject.
- Documentation of splinter groups formed from the national Suffrage Movement.
- Documentation of anti-suffrage activities.

Care should be taken to ensure that the resource list does not contain:

- Historically inaccurate materials.
- Materials that are biased against a person's race, gender, creed or ethnic origin.

A list of sample Women's Suffrage and Women's History Web sites that could be included in the online resource list are located in the Appendix.

ARCHIVING THE PROJECT

One issue that was not addressed by the Teams was the issue of archiving work done on this project. After discussing this with the Regional Archivist with the Documentary Heritage Program in Rochester, the following recommendations were written.

1. A project file should be created and retained as part of the RRLC records. In this file should reside a printed copy of :
 - The LSTA grant application for the Planning Grant, which began this project.
 - The final report written at the end of the Planning Grant.
 - The Implementation Guidelines written during the Planning Grant.
 - Minutes from the WSDP Team meetings.
 - The LSTA and IMLS grant applications for the Implementation Project.
 - The final report written at the end of the Implementation Project.
 - Any changes made to the Guidelines document during the Implementation Project.
2. In the project file should reside an electronic copy of the completed web site, will all the programs, images, HTML, etc. that are on the web site. Information on the programs used to create the files should be kept along with information on version numbers and operating systems.
3. Because of file migration issues, paper copies of the files in #2 above should be kept.

WORKFLOW PATTERNS AND ISSUES DRAFT STATEMENT

Contributed by Susan Shippey
Assistant Head Librarian in the Arts, Music and Recreation Department
Rochester Public Library

This workflow was written by Susan Shippey of the Management Team, using workflow documentation from other projects and the experiences from a project being done by the Rochester Public Library. Ideas from this workflow statement were incorporated in to the WSDP Implementation Project Timetable.

Prior to beginning workflow:

- Survey resources
- Determine rights
- Determine database to use, search engine or indexing plan
- Establish file structure
- Establish system to assign a unique scan number to each item -- a two part form is suggested, first a unique identified for the collection such as one or two letters, then a unique sequential number for each scan
- Establish contract with service agency -- specify details of scans, arrange for high resolution archival scan and possibly the derived scans needed for screen presentation, if this is not to be done in-house
- Prepare rough design of site, especially establishing the database and file structure so that catalog records and scans can be uploaded.

Preparation of material:

- Select and pull material for project
- Check for duplicates
- Assign unique scan number -- can assign manually or use bar code when scanning, considering the size of this collection, manually assigning numbers is suggested
- Perform any preparation of material needed, including labeling and packaging material, and any necessary repairs

Inventory material:

- Establish list or database to use to track item throughout scanning and cataloging process
- Record metadata for cataloging
- Maintain inventories of items delivered to the service agency, include this list with items delivered to the agency -- include date, contact person, number of items, unique identifier numbers and physical description of items

Scanning:

- Transport items to service agency for scanning or arrange to have item photographed on site, then scan from negative
- Provide all information necessary for the file tag

- Retrieve items and scan files when scanning done; maintain items in temporary storage until quality control is finished

Quality control:

- Check inventory to be sure all items were scanned and returned
- Examine scans, compare with originals if necessary; check for correct file name, image size and format correct, color fidelity, etc.
- Return to service agency any unacceptable scans for rescanning
- When all scans have been accepted, return material to owners and check items for damage; owners will refile items

Scans:

- Prepare archival scans for storage, making back-up copies if not supplied by service agency, and put them in proper storage
- If necessary, derive the screen presentation scans from the high resolution scan
- Using the file structure previously established, upload the screen presentation scans

Cataloging:

- Using information gathered for inventory, and further research if necessary, prepare catalog record with both description and subject headings and perform any indexing needed
- Perform quality control measures on the text record
- Upload record, link scans to record

Final site preparation:

- Mount the beta web site and have project participants critique the site
- Perform adjustments on the site and finalize the design
- Go live!

Resources used:

- Historical collections for the National Digital Library in D-Lib Magazine, April 1996, <http://www.dlib.org/dlib/april96/loc/04c-arms.html>
- "Options for digitizing visual materials" by Ricky L. Erway, p. 128-132 in Going digital: strategies for access, preservation, and conversion of collections to a digital format, The Haworth Press Inc., 1998. (<http://www.haworthpressinc.com/>)
- Procedures and practices for scanning, <http://sunsite.Berkeley.edu/Imaging/Databases/Scanning/index.html>
- Susan Shippey's experience as project manager for Rochester Public Library
- Tasi workflow guidelines, <http://www.tasi.ac.uk/building/workflow2.html>

Additional Resources:

OPC Digital Library: A Workflow Model
http://www.opc.on.ca/doc_img/

Steps In The Digitization Process
<http://lcweb2.loc.gov/ammem/award/docs/stepsdig.html>

APPENDIX

IMPLEMENTATION PROJECT TIMETABLE

The timetable for the implementation project is as follows:

Task No.	Begin Date	End Date	Task	Dependent Task	Person/Group Responsible
1	Oct. 1, 1999		Monies allocated for the implementation project. Project begins.	--	RRLC
2	Oct. 1		Hire a part-time Project Manager to oversee all tasks associated with the project.	1	RRLC Executive Director
3	Oct. 1		Contract with a Historical Consultant to work on the biographies and to assist in the selection of images.	1	RRLC Executive Director
4	Oct. 11	Oct. 29	Review WSDP Project Guidelines, Project Timetable, and the grant applications for grants received. Check for areas that need to be updated.	2, 3	RRLC Executive Director, Project Manager and Historical Consultant.
5	Oct. 11	Oct. 29	Obtain a domain name for this project.	1	Project Manager
6	Oct. 11		Contract with RRLC web service provider to provide additional server space for this project.	1	Project Manager and RRLC Technical Associate Librarian
7	Oct. 11	Oct. 29	Clarify the roles and goals for the Digital Teams.	4	RRLC Executive Director, Project Manager and Historical Consultant.
8	Nov. 1	Nov. 15	Form Digital Teams to act as advisors to the project. Recruit members from the previous digital teams and from the RRLC membership.	7	Project Manager
9	Nov. 1		Enlist the assistance of school librarians, teachers, and professors, to develop a chronology of the history of the Women's Suffrage Movement that will be valuable to the general public and to students.	4	Historical Consultant

Task No.	Begin Date	End Date	Task	Dependent Task	Person/Group Responsible
10	Nov. 1	Mar. 31	Create chronology of the Women's Suffrage Movement in the region in order to put the information on the suffragists in context on the web site.	4	Historical Consultant
11	Nov. 1	Nov. 30	Survey regional repositories for appropriate materials to include as part of the Project. Survey is to be conducted by mail.	1	Project Manager and Historical Consultant
12	Nov. 15	Dec. 15	Hold a meeting with the Digital Teams to discuss their role, goals, project plans and to gather additional input.	8	Project Manager
13	Dec. 1	Dec. 31	Follow-up on survey results with telephone or onsite visits to confirm/expand information provided.	11	Project Manager and Historical Consultant
14	Dec. 1		Contract with a web site developer to create the WSDP site.	1	Project Manager
15	Dec. 1	Feb. 29	Begin work on web page design with input from the Digital Teams, teachers, RRLC staff, and Project Historian. Work first on the general page layouts and how the pages will interact with each other.	14	Web Site Developer
16	Jan. 1, 2000	Jan. 30	Create a database of survey results	13	Project Manager
17	Jan. 1	Feb. 29	Analyze survey results. Look for information in the surveys on suffragists, anti-suffragists, and historic items.	16	Historical Consultant
18	Feb. 1	Feb. 29	Have status meeting with the Digital Teams.	17	Project Manager
19	Feb. 1	June 30	Explore continued funding options.	1	RRLC Executive Director
20	Mar. 1		Begin awareness activities	1	Project Manager
21	Mar. 1	June 30	Create an alpha test site for this project on the RRLC web site.	15	Web Site Developer

Task No.	Begin Date	End Date	Task	Dependent Task	Person/Group Responsible
22	Mar. 1	Mar. 30	Select materials suitable for digitization under the project.	17	Historical Consultant
23	Mar. 1	Apr. 30	Obtain permissions to digitize and display materials selected.	22	Project Manager
24	Apr. 1	Apr. 15	Contract with a cataloguer or cataloguing service to catalogue the images.	1	Project Manager
25	Apr. 1	Apr. 15	Contract with a digital reproduction service (digitization vendor) to digitize the items selected for inclusion on the web site.	1	Project Manager
26	Apr. 1	Apr. 30	Have an update meeting with the Digital Teams to review progress and receive input.	23	Project Manager
27	May 1	May 30	Collect items from participating institutions and have items digitized	23	Project Manager and Digitization Vendor
28	Apr. 15	Apr. 30	Create/Review metadata elements to be used in cataloguing the images. Revise with input from Project Historian	24	Contract Cataloguer
29	May 1	June 30	Catalogue the digital images using appropriate indexing and metadata elements.	28	Contract Cataloguer
30	May 1	June 30	Create the textual context for all of the digital images.	27	Historical Consultant
31	June 7	June 30	Create beta version of web site.	30	Web Site Developer
32	June 1	June 30	Have an update meeting with the Digital Teams to review progress and receive input.	31	Project Manager
33	July 1	Aug. 30	Web site is beta tested.	31	Web Site Developer
34	Aug. 1	Aug. 20	Have an update meeting with the Digital Teams to review progress and receive input.	33	Project Manager
35	Aug. 20	Aug. 30	Web site approved by RRLC Executive Director	34	Project Manager
36	Sept. 1		Web site goes "live"/into	35	Web Site Developer

Task No.	Begin Date	End Date	Task	Dependent Task	Person/Group Responsible
			production.		
37	Sept. 1	Sept. 15	Project evaluation conducted using questionnaires and group meetings.	36	Project Manager
38	Sept. 1	Sept. 30	Project report written and delivered to RRLC	37	Project Manager
39	Sept. 30		Project officially ends	38	RRLC Executive Director
40	Oct. 1		Begin to collect monthly statistics on site's usage for use in ongoing evaluation	36	RRLC Webmaster
41	Oct. 1	Oct. 30	Publish results of the WSDP project on the RRLC web site.	38	RRLC Executive Director
42	Oct. 1		Review options for continuing to add content to the web site.	--	RRLC Executive Director
43	Oct. 1	Oct. 28	Final LSTA report written and sent to NYS.	--	RRLC Executive Director

WSDP TEAM MEMBERS

The following people participated on the three Women's Suffrage Digitization Teams:

<p>Management Team</p> <ul style="list-style-type: none"> -- Marcia Trauernicht, Rochester Institute of Technology, Chairperson -- William Crocca, Xerox Corporation -- Betsy Gilbert, Rochester Regional Library Council -- Karen Junker, St. John Fisher College -- Sue Shippey, Monroe County Library System -- Melissa Mead, University of Rochester -- Judith Kharbas 	<p>Content Team</p> <ul style="list-style-type: none"> -- Mary Huth, University of Rochester, Chairperson -- Judy Emerson, Susan B. Anthony House -- Terry Lehr, SUNY Brockport -- Nancy Martin, St. John Fisher College -- Michelle Eichelberger, Finger Lakes Community College -- Anne Filiaci -- Lea Kemp, Rochester Museum & Science Center -- Ruth Otto, Rochester City Schools
<p>Technology Team</p> <ul style="list-style-type: none"> -- Rosemary Finn, Baker-Cedersberg Museum, Chairperson -- Andrea Weas, Rochester Regional Library Council -- Connie Cox Bodner, Rochester Museum & Science Center -- Perry Howland, Pultneyville Historical Society -- Ann Penwarden, Monroe Community College -- Marilyn Rosen, Monroe Community Hospital -- Allison Zhang, University of Rochester 	

Other people in the region were helpful in providing information on support to the Teams. Those people include:

- Mark Toor, Applied Graphics Technologies, Rochester, NY
- Eric Oberg, Applied Graphics Technologies, Rochester, NY
- Andrew Eskind, George Eastman House, Rochester, NY
- Sally Roesch Wagner, Matilda Joslyn Gage Foundation, Fayetteville, NY
- Jo Slovak, Wayne-Finger Lakes BOCES, Newark, NY

WOMEN'S SUFFRAGE AND WOMEN'S HISTORY WEB SITES

The Women's Suffrage Digitization Project does not control the content or the timeliness of the sites below. They are listed here as sources for further information and may be evaluated for inclusion into the WSDP web site. All links valid as of July 8, 1999.

	- Site Name - Organization - URL
1.	Account of the ideologies of anti-suffragists University of Rochester http://www.history.rochester.edu/class/suffrage/home.htm
2.	H-Women Michigan State University http://www.h-net.msu.edu/~women/
3.	History of the Suffrage Movement University of Rochester http://www.rochester.edu/SBA/hisindx.html
4.	The History of Women's Suffrage World Book™ http://www.worldbook.com/fun/whm/html/whm010.htm
5.	Living the Legacy: The Women's Rights Movement, 1848 – 1998 The National Women's History Project http://www.cr.nps.gov/nr/travel/pwwmh/lrnmore1.htm
6.	The National American Woman Suffrage Association Collection The Library of Congress, American Memory http://lcweb2.loc.gov/ammem/naw/nawshom.html
7.	National Museum of Women's History http://www.nmwh.org
8.	National Women's Hall of Fame http://www.greatwomen.org

	- Site Name - Organization - URL
9.	National Women's History Project http://www.nwhp.org
10.	One Hundred Years toward Suffrage: An Overview The Library of Congress, American Memory http://memory.loc.gov/ammem/vfhtml/vfwtl.html
11.	One Woman, One Vote -- A Short History & Guide PBS Online http://www.pbs.org/onewoman/one_woman.html
12.	Places Where Women Made History The National Park Service http://www.cr.nps.gov/nr/travel/pwwmh/
13.	The Quest for Equality The World Book™ http://www.worldbook.com/fun/whm/home.html
14.	Seneca Falls Convention, July 19 – 20, 1848 National Portrait Gallery http://www.npg.si.edu/col/seneca/senfalls1.htm
15.	75 Suffragists University of Maryland http://www.inform.umd.edu/EdRes/Topic/WomensStudies/ReadingRoom/History/Vote/75-suffragists.html
16.	Susan B. Anthony House http://www.susanbanthonyhouse.org/
17.	Votes for Women Suffrage Pictures, 1850-1920 Library of Congress, American Memory http://lcweb2.loc.gov/ammen/vfhtml/vfwhome.html
18.	Women and Social Movements in the United States, 1830 - 1930 State University of New York at Binghamton http://womhist.binghamton.edu/index.html
19.	Women's History Workshop

	- Site Name - Organization - URL
	Assumption College http://www.assumption.edu/whw/default.html
20.	The Women's Museum http://www.thewomensmuseum.org/
21.	Women's Rights National Historical Park The National Park Service http://www.nps.gov/wori/
22.	Woman Suffrage and the 19th Amendment National Archives and Records Administration http://www.nara.gov/education/teaching/woman/

GLOSSARY

Many outstanding glossaries of terms used in digitization projects already exist. Among them are:

Arts and Humanities Data Service
Digitising History, Chapter 7: Glossary And Bibliography
http://hds.essex.ac.uk/g2gp/digitising_history/sect71.html

The National Library of Australia
Information Paper on the Digital Services Project
<http://www.nla.gov.au/download/dsp/appendices.pdf>

Besser, H. and J. Trant (1995). Glossary of terms, The Getty Information Institute.
From "Introduction to Imaging: Issues in Constructing an Image Database"
http://www.ahip.getty.edu/intro_imaging/Gloss.html

ADDITIONAL RESOURCES

Kenney, Anne R. and Stephen Chapman. Digital Imaging for Libraries and Archives. Ithaca, NY: Cornell University Library, 1996.

Kenney, Anne R. and Oya Y. Rieger. Managing Digital Imaging Projects: An RLG Workshop. Mountain View, CA: The Research Libraries Group, 1997.

---. RLG DigiNews, <http://www.rlg.org/preserv/diginews/>

---. Current Cites, <http://sunsite.berkeley.edu/CurrentCites/>

Rochester Region
Documentary Heritage Program
GUIDE TO WOMEN'S HISTORIC RECORDS

Location Name: _____

Contact Person: _____ Title: _____

Address: _____

City: _____ County: _____ State: _____ Zip: _____

Mailing Address (if different from above location)

Telephone: _____ Fax: _____ E-mail: _____

Hours of Public Service: _____

Fee for Use: (circle one) Yes No

Appointment for Use: Yes No

Photocopying available: Yes No

Restrictions on use of material: _____

Finding Aids Available: (circle all that apply)

Collection description

Card Catalog

Printed Guide

Container and/or Folder List Inventory

Automated database

Types of Material related to women's historic records: (circle all that apply)

Diaries

Letters Journals

Photographs

Magazines

Scrapbooks

Newspaper

Clippings

Other: _____

Please include a brief description of your historical collection relating to women. Please be as clear as possible: specific women, dates, names of organizations, type of material, amount and condition of the material.

Please return this survey by July 30, 1999 to Judy Emerson, DHP, Rochester Regional Library Council, 390 Packett's Landing, P.O. Box 66160, Fairport, NY 14450 or fax to 716/223/7712.

July 1, 1999

Dear Archivist:

The Documentary Heritage Program is creating one directory of information about sites - libraries, museums, historical societies, agencies, colleges, etc. with material related to women in the Western, South Central, Central, and Rochester area counties of New York.

Does your organization have material about or by women?

- The famous, the not so famous, the unknown, and even the infamous
- Teachers, business owners, nurses, farm wives, and domestics
- Doctors, lawyers, clergy, librarians, social workers, scout leaders
- Architects, musicians, artists, dancers, authors

Women have left records of their activities as individuals and as members of organizations.

We are looking for records from the following organizations in your community:

- Clubs - social, neighborhood, church, school
- Service organizations - national and local, such as Zonta, League of Women Voters, YWCA, Federation of Women's Clubs
- Auxiliaries groups - fraternal organizations, veterans' groups, fire departments
- Unions
- Political organizations
- Sororities
- The Grange
- Singing societies
- Ethnic organizations
- Girl Scouts and Camp Fire Girls
- Individual women - those who attended all-women high schools and colleges