Recreating American Memory Materials for Off-line Use

Documents, Photographs, and Other Printed Materials:

Printed and pictorial materials are shown in three formats, from low to high resolution. The lower resolution formats are smaller in file size and can be seen on the Web with minimum download time. The higher resolution images have more detail and larger file sizes, and are suitable for high-quality printing, but often cannot be seen on the Web without additional software (browser plug-in).

.gif (Graphics Interchange Format)
- American Memory thumbnail images, plus some document pages
- Graphics, not photograph, format
- Small file size
- Useful for: PowerPoint slides, or to enhance worksheets or web pages

.jpg (Joint Photographers' Expert Group)
- Typically used for American Memory reference (larger) images
- Photograph format
- Small file size
- Useful for: PowerPoint slides, web pages, overhead transparencies, some prints/photocopies

.tif or **.tiff** (Tagged Image File Format)
- American Memory higher resolution images (format available for download; cannot be seen in a web browser without additional software)
- Format for most of the high resolution (large amount of detail) images
- Useful for: high quality printing, enlargements

Note – American Memory has a few reference prints in .pcx (PC format). Follow the directions for .tif images to save and print these images.

Saving displayed images:

TIP: Always record the image location, both the URL where the image was found and where you've saved the image on your computer, as well as the name of the image on this item record. You want to be able to find this image again - both in American Memory and on your computer!

Saving .gif or .jpg images:
1. Place the cursor over the image.
2. Depress the mouse button (right button on PC mouse, depress and hold on a Mac) to display a menu.
3. On the menu, select "*Save image as*" or "*Save picture as*".
4. In the box that appears:
   a. Select where you want the image to be saved.
   b. Give it a meaningful name and click the **save** button.

Saving linked images (for example, TIFF format):
1. Place the cursor over the link to the *TIFF* file.
2. Depress the mouse button (right button on PC mouse, depress and hold on a Mac) to display a menu.
3. On the menu, select "*Save target as*" or "*save link as*."
4. In the box that appears, select where you want the image to be saved. Give it a meaningful name and click the **save** button.

Printing Image Files:

.gif and **.jpg** images can be printed directly from the web browser. However, better results are achieved if the images are saved, opened in a graphics program and then printed. This is especially true if images are larger than a standard piece of paper or if the image layout needs to be changed to/from "landscape" or "portrait."

Printing smaller photographs (fit on one sheet of paper)
TIP: Image dimensions must be one inch smaller than paper dimensions to properly fit on one sheet of paper.
1. Open your graphics software.
2. Select **File-Open**, then find and retrieve the image from where it was saved.
3. Check the size of the image against the item record. Adjust if necessary. (Select **Image-Size**.)
4. View image dimensions and layout in **Print Preview**. Change if necessary.
5. **Print.**

Printing large photographs (require multiple sheets of paper)
TIP: Large high resolution may overwhelm some printers. When working with American Memory panoramic photographs, for example, selecting LZW compression and/or lowering the resolution from 900 DPI to between 100 and 300 will result in smaller more manageable files. Double check the file name before printing. Note: HABS/HAER drawings are 200 and 400 DPI.
1. Open your graphics software.
2. Select **File-Open,** then find and retrieve the image from where it was saved.
3. Check the size of the image against the item record. Adjust if necessary. (Select **Image-Size**.)
4. Crop and save the image in sections.
   a. To determine the size of each section, subtract one inch from each dimension of your printer paper to allow for the printer's required margins. With 8.5 x 11-inch paper, 7.5 x 10-inch sections usually work well, although sections can be smaller.
   b. In the graphics software, turn on rulers and any available guide grids.
5. First section:
   a. Start at top left of image and, with the rectangular marquee tool, draw a section one inch smaller in each dimension than the size of your paper.
   b. Select **Edit-Copy**.
   c. Then select **File-From Clipboard** if using Photoshop Elements. These actions create a file containing the first section and leave the original image intact.
      If using Photoshop software, select **File-New-Paste**.
   d. Save (**File-Save As**) this section with a name that describes its location in the large image (for example, player1.jpg, player2.jpg, player3.jpg., etc.)
6. Second and subsequent sections:
   a. Return to the original image. The first section should still be highlighted.
   b. To allow for overlap and a seamless join of sections, start the next section 1/2" *back* from the right end of first section.
   c. Continue as with the first section (as described in 4c, above).
TIP: Some graphic s programs allow you to move the rectangle along to the next area. If possible, simply put your cursor in the highlighted box and slide the rectangle along the length of the image)
7. You may print each section as it is created or, after creating all sections, print them in order for easy assembly.
8. Overlap the sections and glue together.
9. Optional: use laminating film on the front of the glued-together image for protection.

Maps

Maps (both thumbnail and large sections) are displayed in **.gif** format in American Memory. The complete map is available for download in a compressed, high-resolution format (*.sid*). A stand-alone software viewer (MrSID) is available as a free download to install on your computer. The MrSID viewer can convert the *.sid* format to *.tif* format for use in graphics software.

Saving Map Files:
TIP: Remember to check the American Memory item record for the size of the map **before working with the map. Size and scale when working with maps.*
.gif Format:
1. Place the cursor over the map within your web browser window.
2. Depress the mouse button (right button on PC mouse, depress and hold on a Mac) to display a menu.
3. On the menu, select "*Save image as*" or "*Save picture as*".
4. In the box that appears:
    a. Select where you want the map to be saved.
    b. Give it a meaningful name.
    c. Check/change the extension (it must be *.gif*).*
    d. Click the **save** button.

Map selections generated by the American Memory map viewer end in .pl as a result of the map display technology used. In the "Name" box, delete "Map_image.pl" and replace it with a meaningful name that ends in .gif (like "potomac.gif"). Click **save to save the map section. Print these sections using the "printing image files" instructions, below.*

.Sid Format and *JPEG2000* **Format**
1. On the map display page in American Memory, scroll to the bottom of the page to find "Download MrSID (or JPEG2000) file" link. Place the cursor on this link.
2. Depress the mouse button (right button on PC mouse, depress and hold on a Mac) to display a menu.
3. On the menu, select "*Save target as*" or "*Save link as.*"
4. In the box that appears:
    a. Select where you want the map to be saved.
    b. Give it a meaningful name.
    c. Check/change the extension (*.sid* or *.jp2*).
5. Click the **save** button.

Printing Map files:

American Memory maps are available in **MrSID** and **JPEG2000** formats, which use similar compression technologies that allow sections of the maps to be displayed via the web. Maps are displayed via regular web browser software as **.gif** and **.jpg** files. These can be saved and used off-line, or printed using the directions, below. Full maps in **.sid** and **.jp2** file formats must be changed to **.tif** files before the map can be printed. If maps have a "miles to inches" scale, consider printing them to their original size (which can be dramatically large!). If you choose to print them at sizes larger or smaller than original size, consider making a ruler to the appropriate scale to use with the map.

If it is not already on your computer, you will need software to convert these files. For MrSID files, try the MrSID Stand-Alone Viewer – directions for finding the viewer are in the final section of this document.

Changing .*sid* to .*tif* files:
1. Open the map in the MrSID viewer (**File-Open**).
2. Choose **File-Export**. (or click the small TIFF button.)
3. In the box that appears:
    a. Click **Export to** and check the location in the **Save in** box. If necessary, change to a location that you can readily find on your computer.
    b. Click the "**1-1**" button.
    c. Click the "**full dataset**" button.
    d. Click **Save**.
    e. Click **Go**.

Printing small maps (fit on one sheet of paper)
*TIP: Map dimensions must be one inch smaller than paper dimensions to fit on one sheet of paper.
1. Open your graphics software.
2. Select **File-Open** and retrieve the map from where you saved it.
3. Check the size of the map against the item record. For the best quality image, adjust as follows:
    a. Note the total number of pixels in the horizontal and vertical dimensions.
    b. Change the resolution from "72" to "300" DPI (dots per inch), the resolution at which most American Memory maps were scanned.
    c. The horizontal and vertical pixel dimensions will automatically change when you change the DPI. Click "resample image" with "bicubic" not selected. The inch or centimeter dimensions should change, but the pixel dimensions should remain the same. If this option is not available, change the pixel dimensions back to the original values, manually.
    d. Click OK.
    e. Change "inches" to "centimeters" and compare to the original from the webpage. Change these if necessary.
    f. View map dimensions and layout in **Print Preview**. Change if necessary.
5. **Print**.

Printing large maps (requires multiple sheets of paper)
1. Open your graphics software.
2. Select **File-Open** and retrieve the map from where it.
3. Check the size of the map against the item record. Adjust, as above, if necessary.
4. Crop and save the map in sections.
   a. To determine the size of each section, subtract one inch from each dimension of your printer paper to allow for the printer's required margins (generally 1"on each side). With 8.5 x 11-inch paper, 7.5 x 10-inch sections usually work well, although sections can be smaller.
   b. In the graphics software, turn on ruler and grid guides.
   c. First section:
      i. Start at top left of map and, with the crop tool, draw a section the size of your paper.
      ii. Select **Edit-Copy**.
      iii. Then select **File-From Clipboard** if using Photoshop Elements. (These actions create a file containing the first section and leave the original image intact.) If using other software, select **File-New-Paste**.
      iv. Save (**File-Save As**) this section with a name that describes its location in the large map, for example, map1a.tif.
   d. Second and subsequent sections:
      i. Return to the original map. The first section should still be highlighted. To allow for overlap and a seamless join of sections, start the next section *1/2" back* from the right end of first section.
      ii. Continue as with the previous section. (See 4c, above).
5. Print each section in order for easy assembly.
6. Overlap the sections and glue together.
7. Optional: use laminating film on the front of the map for protection.
TIP: Some graphics programs allow you to move the rectangle along to the next area. If possible, simply put your cursor in the highlighted box and slide the rectangle along the length of the image, and then if necessary, down and across for subsequent rows.

Motion Pictures:

Motion pictures come in three basic formats that range from low to high quality:
.rm (Real Media)
- Streaming (Think of a television. The media begins to play before the whole film is downloaded.)
- Minimum download time before viewing
- Lowest file size
- Picture (and sound) can be choppy depending on Internet traffic
- Can **not** be saved and replayed.

.mov (QuickTime)
- File downloads completely before playing.
- Smaller file size than .mpg, quicker download time (but slower than Real Media).
- Can be saved and replayed.

.mpg or *MPEG* (Motion Picture Experts Group)
- File downloads completely before playing
- High quality, larger file size, longer download time
- Can be saved and replayed

Saving:
1. Place the cursor over the link to the film.
5. Depress the mouse button (right button on PC mouse, depress and hold on a Mac) to display a menu.
2. On the menu, select "*Save target as*" or "*save link as.*"
3. In the box that appears:
   a. Select where you want the film to be saved.
   b. Give it a name meaningful to you;
   c. click the **save** button.

Playing:
Both **.mov** and **.mpg** formats can be played by many software applications, including Windows Media Player and QuickTime. Check your computer's accessories section to see if your audio player plays these formats. You may also search the World Wide Web for "*video helper applications*" for software to play these files.
TIP: Collect films by topic in one folder. Burn this folder onto a CD-R (writable CD-ROM) to play on a computer, off-line.

Sound Recordings:

Sound recordings also come in three formats, from low to high quality.

.ra, .ram (Real Audio)
- Streaming (The media begins to play before the whole recording is downloaded.)
- Minimum download time
- Lowest file size
- Sound can be choppy depending on Internet traffic.
- Cannot be saved.

MP3 (MPEG2, Layer 3)
- File downloads completely before playing.
- Faster download time than WaveForm
- Relatively small file size, very good quality
- Can be saved and replayed

.wav (WaveForm)
- File downloads completely before playing.
- Longest download time
- Large file size; highest sound quality.
- Can be saved and replayed.

Saving:
1. Place the cursor over the link to the sound recording.
2. Depress the mouse button (right button on PC mouse, depress and hold on a Mac) to display a menu.
3. On the menu, select "*Save target as*" or "*Save link as*."
4. In the box that appears, select:
   a. where you want the sound recording to be saved,
   b. give it a meaningful name,
   c. click the **save** button.

Playing:
Both .**mp3** and .**wav** formats can be played by many software applications. Check your computer's accessories section to see if your audio player plays these formats. You may also search the World Wide Web for "*audio helper applications*" for software to play these files.
TIP: 1. Collect sound recordings by topic in one folder for later play, off-line.
   2. Burn this folder onto a CD for playing off-line.

Tips for recording American Memory content to CD-ROMs:
1. Note the copyright status. Public domain materials may legally be placed on CD-ROMs, as may rights-protected items with permission. Review the Copyright "fair use" standards for rights-protected items.
2. To create audio-only CD-ROMS for playback in music compact disk players or on multi-media computers, select "music" CD-ROM when creating (or "burning") your CD-ROM.
3. For other file formats, or for audio in combination with other formats, select "data" CD-ROM when burning your CD-ROMs. These disks can be used on multi-media computers.
4. To use a CD-ROM on a Macintosh computer, make it on a Mac, or limit file names to the "8.3" standard.
5. For American Memory's highest quality, select *WAV* for audio files and *MPEG* for video files.

Tips for Putting American Memory content into PowerPoint presentations:
1. If your slide show will contain multimedia (text and images, sound and/or motion pictures), begin by creating a directory (folder) on your computer for the presentation. Put all sound and motion picture files in this folder before creating your slides.
2. Save your PowerPoint slide show file into the same folder that contains your multimedia elements.
3. To show your presentation on a different computer, save the **entire** directory to a ZIP disk, CD-ROM, or network.
4. Images become part of the PowerPoint (PPT) file, so image files are not required in this folder.
5. American Memory files in **.gif** or **.jpg** format are usually of sufficient quality for PowerPoint presentations.

Resources from the Library of Congress:
- Library of Congress Home Page: http://www.loc.gov
- American Memory Home Page: http://memory.loc.gov
- American Memory List of Collections: http://memory.loc.gov/ammem/amtitle.html
- American Memory Search Page: http://memory.loc.gov/ammem/mdbquery.html
- American Memory Frequently Asked Questions: http://memory.loc.gov/ammem/helpdesk/amfaq.html
- American Memory Viewer Information Page: http://memory.loc.gov/ammem/amviewer.html
- The Learning Page: http://www.loc.gov/learn/
- Educators' Resources from the Learning Page: http://www.loc.gov/learn/educators/
- Lesson Plans from the Learning Page: http://www.loc.gov/learn/lessons/
- Technical Information from the Learning Page (includes Linking & Bookmarking, Copyright & Fair-Use): http://www.loc.gov/learn/start/howtos.html

Other Resources:
- MrSID Map Viewer (free and commercial product download page): http://memory.loc.gov/ammem/help/download_sid.html (*Note: the Macintosh version works only in "Classic Mode" OSX users must ensure that they have "Classic Support" installed.)*
- Apple's QuickTime Viewer will soon support JPEG2000 for the Macintosh computers.
- The Photoshop "extras" or "goodies" disk has a JPEG2000 plug-in for Macintosh computers.
- Photoshop Elements Software (commercial graphics software product)
  About the software: http://www.adobe.com/products/photoshopel/main.html
  Download a free trial version:
  http: www.adobe.com/products/tryadobe/main.jhtml#product=40
- JASC Paint Shop Pro Software (commercial graphics software product)
  About the software: http://www.jasc.com/products/psp/
  Download a free, 30-day trial version: http://www.jasc.com/download_4.asp?prod=001
- The GIMP (free open source graphics software)
  Information and links for download: http://www.gimp.org/