

Southeast Coast Network

National Park Service
Inventory and Monitoring Division



Standard Operating Procedure 2.1.07

Digital Image Management—Version 3.1

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Summary

This standard operating procedure (SOP) provides instructions for management of digital images, and focuses on handling the data once collected; for original and edited file versions. This document does not describe the rationale for data collection, as that information is included in the individual long-term monitoring protocols (and is therefore outside the scope of this document). This document is not a cheat sheet or user guide in software specific tasks and applications. Rather, this document provides instructions on following digital image and image metadata standards to ensure proper acquisition, management, preservation, and availability of digital images throughout their useful life.

Revision Log

Revision Date	Author	Changes Made	Reason for Change	New Version #
10/2/2012	C.J. Wright	Updated NPS photo standards; workflow changed to reflect current information management systems; roles and responsibilities assigned; naming convention updated; publication standards added.	Previous content was out of date.	2.0
December 2016	W. Wright, P. Capece	Editorial review, Naming convention updated, metadata fields updated, process steps clarified, additional definitions clarified.	Protocol publication, content out of date	3.0
April 2017	P. Capece	Camera information removed, updated citations, included new information that allows .jpg use.	Previous content not reflective of the process in practice.	3.1

Overview

The SECN digital image management standard operating procedure serves to guide SECN staff in the organization, management, and preservation of digital photographs (including those scanned to digital format). Federal and National Park Service (NPS) standards are referenced where applicable. Original source material for portions of this document was derived from Digital Photograph Management Strategy for Alaska Inventory and Monitoring Program (Southwest Alaska Network and Southeast Alaska Network 2004).

Intended Audience

This SOP is written specifically for protocol project leaders, project crew members, data management staff, and cooperating partners who collect digital assets and are responsible for their organization, use, documentation and preservation.

- Data management staff should read the entire SOP and be familiar with all aspects of the document. Data managers should look for ways to improve the system, but must first understand the system.
- Project leaders are responsible for understanding and fulfilling the data stewardship tasks, as well as ensuring that anyone under their supervision understands and fulfills their assigned responsibilities

Digital Image Management

Introduction

Organization and maintenance of a variety of research information, including digital images collected as data, and images taken to document protocols and procedures, is one of the tasks of the Inventory and Monitoring (I&M) Program. There is also a growing need to make NPS digital images useful and available service-wide. In support of these goals, this document describes a management strategy to organize, store, name, retrieve, and preserve images in electronic format. The intent is to standardize processing and storage, increase available disk space, and document images for proper use by NPS employees, partners and the public.

Terms and Definitions

- **Digital Image:** Refers to an image in electronic format, regardless of original source (e.g., scanned, taken from a digital camera).
- **Documented Images:** Refers to images that have completed metadata.
- **Edited Image:** Refers to images that have incurred changes from the original or raw file state (e.g., cropping, resolution change). Note: A change to the filename and not the image does not mean the image has been edited.
- **Image Processing:** Refers to the sum total of all steps necessary to go from an image on your camera's storage card to the appropriate image directory or final repository.
- **Raw Image:** Refers to an original image file, in an unaltered state, prior to renaming, editing, or documenting has occurred.
- **Renamed Image:** Refers to an image file in which the device default naming scheme has been modified for adherence to the image file-naming standardized procedure included in this document.

National Park Service personnel take and use photographs for a variety of purposes. While it is impossible to anticipate every use/collection scenario, most images from the Inventory and Monitoring Program should fit into one of the general "image type" categories defined below:

- **Data Images:** Data images are images collected as data. Examples include: (1) site specific images documenting a shoreline classification and, (2) photo points taken to document a site. Data images are collected as part of a well-defined data collection protocol. Data images are stored in the protocol-specific folder structure. Links or pathways indicating the location of data images may also be stored in the protocol database, if appropriate.
- **Working Images:** Images in this category are "works in progress." Working images are renamed, edited as needed, documented, and stored, or deleted. Working images are stored in centrally located, protocol-specific folders.

- **Library Images:** These images are publication quality products that are edited, documented, reviewed, and added to the network directory and/or NPS repository. Metadata for these images is stored in the image file properties, also referred to as the image header, to the extent possible in order to travel with the image. A variety of staff uses these images for multiple purposes. They are generally in the public domain.
- **Aerial Images:** Aerial images are an important element of inventory and monitoring datasets and are acquired and processed to meet highly specific specifications. Therefore, digital aerial images standards are mentioned in this document but are not discussed in detail.

Digital Image Lifecycle

The “digital image cycle” typically runs through the following steps. Images are acquired, stored, viewed, renamed, edited, documented, stored in an appropriate directory location for each corresponding protocol, archived and, in some cases, are deleted. Some of the issues and questions that crop up along the cycle include:

- Acquisition
 - Digital cameras—what is the best quality and size?
 - Scanning images—which parameters should be used?
- Processing
 - Download and storage—where? For how long? Naming standards?
 - Viewing—which software? Or as contact sheets?
 - Renaming—manually or batch? Naming standards?
 - Editing—which software? Should you write over the master or make a copy?
 - Documenting—which attributes should be documented? How is the documentation “attached” to the image?
- Long-term storage
 - On-line storage—Where? Managed by whom? For how long?
 - Off-line storage and archiving—where and when? When to delete?

As previously stated, this document will attempt to address these questions and provide NPS standards or logical guidelines to facilitate good image management. This document discusses imaging standards and how digital images will be handled, stored, and documented.

Roles and Responsibilities

Data stewardship is the responsibility of the entire SECN staff, from the field crews who collect, verify, and enter data, to the protocol leads that validate, analyze, and summarize the data, to the network data manager and database programmer who ensure that master data sets are of high quality and should advise on whether proper data management standards and practices are being adhered to by staff. Descriptions of general roles and responsibilities of key personnel are below in Table 1.

Table 1. Digital photograph management roles and responsibilities for core personnel.

Position	Roles and Responsibilities
SECN Protocol Lead	Develops protocols and sets standards for photos taken in support of individual long-term monitoring protocols; ensures photos taken meet protocol standards and follow stated procedures; designates images to be used in mapping applications where appropriate; ensures sensitive images and/or metadata information (e.g. location information) are not being posted or released publically, packaging all final and fully documented image data/files as part of annual reporting package items.
SECN Field Crew	Takes photos or scans images following standards and procedures set forth in the protocol; saves original images to a protocol-specific folder on the network server drive that is backed up and sets the directory to read-only; makes a copy of the originals and places in a working directory for editing; renames images; edits images as described below; generates image metadata and embeds metadata into image header; organizes images for upload into the NPS repository (NPS Focus or IRMA) as assigned.
Park Staff	Provides feedback on any questions regarding the sensitivity of images or image metadata (e.g. location data) PRIOR to the network posting any data to online repositories.
SECN Data Manager, Data management staff, or network-designated IRMA Contact	Where necessary, creates IRMA records for images in a manner that associates them with the appropriate protocol data reports; uploads image files; works with NPMap to link images to web mapping services where appropriate.
SECN Database Programmer	Technical point of contact for all tasks concerning database, application development, and database administration; supports the linking of data images within the databases where appropriate.

Digital Photo Acquisition Standards

Camera Settings

Individual long-term monitoring protocols should define the resolution requirements for digital photos being taken in support of the protocol—for both data photos (e.g., photo points) and non-data supporting photos (e.g., site, plant or animal photos) that may or may not be intended for publication. When a pre-determined resolution is not stated, digital cameras should be set at a resolution appropriate for the highest level at which a photo may be used. For example, take publication quality photos at a minimum of five megapixels. If the camera allows it, the resolution should be set at 1760 × 1168 or higher. Because the final destination of a photo may be unknown at the time it is taken, recommended general recommendation is that all photos be taken with this resolution or for lower resolution cameras, the highest resolution possible.

Most digital cameras can digitally imprint the date and time onto the photo image. Because the date and time imprint reduces image quality and hence image value, it is not recommended. Most digital cameras embed date and time data in digital image file properties (also known as “header information”). Accurate camera date and time is important to maintain; it is recorded as the file creation date for each image, and for JPEG files, it is embedded in the image itself. When in field use, the camera time should be checked for accuracy a minimum of once per week.

File Format Considerations for Data Images

File formats are a critical consideration for the long-term integrity of image files. Adobe DNG file format provides the highest resolution, but is not always easily viewed with image viewing software and is generally a very large file. When handling large numbers of data images, protocol leads may find it advantageous to utilize file formats that allow for quick viewing and editing in a range of different image software. The most commonly used file formats (including JPEG, GIF, and PNG) each have advantages and disadvantages, depending on the specific uses of the image.

Joint Photographic Experts Group (JPEG) files format is a 16-bit data format that can display millions of colors. It is the standard file format of most digital cameras. It is highly compatible across the widest range of platforms and software programs. JPEGs use lossy compression, which lets image details be “forgotten” and then filled in when later displayed, which results in a small amount of data loss. However, JPEGs are ideal for use with photographs and still images entailing complex coloring or combinations of shading characteristics.

Tag image bitmap files (TIFF) format is used for high-quality graphics. It uses lossless compression, which means no data loss, and supports CMYK color mode used for printing. TIF format is ideal for very high-quality graphics that may be retouched or modified at a later date.

Graphic Interchange Format (GIF) uses lossless compression, meaning the compression process does not result in any data lost. This file format is best for transferring simple images quickly across slow connections. Image color is limited to 256 indexed colors, though a process called “dithering” where two pixels colors combine to make one reducing the number of colors needed partially compensates for this. This file format allows for smaller file sizes than JPEG. GIF is best utilized for line drawings, very simple still images and for simple animations.

Portable Network Graphics (PNG) also uses lossless compression, so no data is lost. PNG-8 is very similar to GIF and allow files sizes even smaller than GIF. PNG-24 includes over 16 million colors. With high color accuracy and 24-bit color (similar to JPEG) plus lossless compression, PNG-24 file sizes tend to be large. PNG-24 are best used for complex images, where retaining all data of the original image is desired. It is important to note that PNG format supports only RGB color format, and not CMYK, which is used for printing. This requires a conversion of PNG files to TIF or JPEG before being used in print products, which can result in changes in the color profile.

File Format Considerations for Publication Quality Photos

The capability of the camera and the settings chosen by the photographer determine the file type produced by a digital camera. The type of file significantly influences the quality possible in media

production. All high-end cameras can produce camera raw and JPEG file formats. Many also have higher-quality file capabilities. Adobe DNG files, PNG-24, or proprietary camera raw formats automatically provide the highest resolution and bit depth for the camera, with the most flexibility, and ultimately the highest possible quality for reproduction. If your camera does not make camera raw files, it is not up to the task of making files for publication.

For a detailed discussion of digital images for media production, please refer to the National Park Service digital image guide (NPS 2010).

Scanning Settings

Select the scanning resolution based on the size of the original image. The smaller the photo, slide, or other material, the higher the resolution required to acquire a detailed scan. Below are the minimum recommended scan resolutions for different formats. Higher resolution scans will yield better quality images but also result in larger file sizes.

- **35mm color slides or negatives** (scanner should be set up to scan transparent materials—both hardware and software)
 - Choose source size of approx. 1.3" × 0.85" (3.3 × 2.2 centimeters [cm], software should auto-detect this exact dimension)
 - Choose target size same as original
 - Choose resolution 2400 dpi, 24 bit color (do NOT use 32 or 48 bit color)
 - Save as uncompressed TIFF file
 - Scan to yield file approximately: 3120 × 2040 pixels, file size 15–20MB

- **3.5" × 5" (8.9 × 12.7cm) color photographs**
 - Choose source size 3.5" × 5.0" (8.9 × 12.7 cm, software should auto-detect the exact size)
 - Choose target size the same as the original
 - For color photos, choose resolution 600–700 dpi, 24 bit color (do NOT use 32 or 48 bit color)
 - For black & white photos, choose resolution 600–700 dpi, 8 bit grayscale (do NOT use 16 bit grayscale)
 - Save as uncompressed TIFF file
 - Scan to yield file approximately: 3000 × 2100 pixels, file size 15–20MB

- **4" × 6" (10.2 × 15.2 cm) color OR black & white photographs**
 - Choose source size 4.0" × 6.0" (10.2 × 15.2 cm, software should auto-detect the exact size)
 - Choose target size the same as the original
 - For color photos, choose resolution 600 dpi, 24 bit color (do NOT use 32 or 48 bit color)

- For black & white photos, choose resolution 600 dpi, 8 bit grayscale (do NOT use 16 bit grayscale)
- Save as uncompressed TIFF file
- Scan to yield file approximately: 3600 × 2400 pixels, file size 15–20MB
- **5" × 7" (12.7 × 17.8 cm) color OR black & white photographs**
 - Choose source size 5.0" × 7.0" (12.7 × 17.8 cm, software should auto-detect the exact size)
 - Choose target size the same as the original
 - For color photos, choose resolution 600 (450 if controls allow it) dpi, 24 bit color (do NOT use 32 or 48 bit color)
 - For black & white photos, choose resolution 600 (450 if controls allow it) dpi, 8 bit grayscale (do NOT use 16 bit grayscale)
 - Save as uncompressed TIFF file
 - Scan to yield file approximately: 4200 × 3000 pixels, file size 20-25MB for color
- **8" × 10" (20.3 × 25.4 cm) color OR black & white photographs**
 - Choose source size 8.0" × 10.0" (20.3 × 25.4 cm, software should auto-detect the exact size)
 - Choose target size the same as the original
 - For color photos, choose resolution 300 dpi, 24 bit color (do NOT use 32 or 48 bit color)
 - For black & white photos, choose resolution 300 dpi, 8 bit grayscale (do NOT use 16 bit grayscale)
 - Save as uncompressed TIFF file
 - Scan to yield file approximately: 4200 × 3000 pixels, file size 20–25MB for color
- **8 1/2" × 11" (21.6 × 27.9 cm) typewritten/printed paper**
 - Scan at resolution 300 dpi or 400 dpi if the text has very small print
 - Save as uncompressed TIFF file
- **9" × 9" (22.3 × 22.3 cm) aerial photographs**
 - If possible scan from a slide or transparency rather than a print
 - Scan at resolution 1200 dpi or as high as possible/feasible
 - Scan with sharpness set to extreme
 - Save as uncompressed TIFF file

Organization

This section outlines the recommended approach for organizing images, with particular emphasis on data images. Within a user's workspace on a networked drive, or other drive that is regularly backed up (NOT on your PC's hard drive), the following directory structure is recommended for storing images during the processing phase. If nothing else, it is important that image originals be maintained intact and stored separately from working/edited images to prevent accidentally "ruining" an image during editing and having no original to return to—or accidentally saving the only copy of an image to a lower resolution, rendering it no longer acceptable for other uses.

\Images

\Raw: image file downloaded directly from camera device storage. These photos are in unaltered form. They should be kept in a read-only directory folder.

\Working: images in process of renaming or editing. Renaming is a mandatory step; some files will be edited and renamed additional times. Renamed images are unedited images in otherwise original form, with only the file name changed. Edited images have been altered in some way and are no longer in original form. The last requirement during the processing stage is to document each image file.

\Final: images which have been fully processed and documented. These images can then be moved to the protocol-specific directory structure.

Raw Photos

As part of post-field data entry, each protocol team should download raw, unaltered photos in a \Raw image folder. Preserve raw photo files as is. After downloading or scanning images to the \Raw directory, set this directory to "read-only" permissions to prevent inadvertent edits. It is desirable to import images from the original source device as file formats that entail only "lossless" compression (such as PNG). If files imported from a device are in a lossless compression file format, move copies of raw images to clearly named working folders for review and editing (e.g. \Working). If the source device exports files to only "lossy" file formats (such as JPEG), then instead of creating a copy from the \Raw folder for working files, a second original set of the same files should be imported directly to the \Working folder. As part of the working process, once all raw photos have been re-named in otherwise original form and double-checked by the protocol lead as part of data quality control, the original raw files in the \Raw folder may be deleted.

Working Images

Images need to be processed before they are ready to be stored long-term or used. Images actively processed are "working images" and should be stored within a user's image directory on a networked drive; do NOT store and process your images on your PC's hard drive. All raw image files will be reviewed during this process. Some of these images will not be useful due to improper exposure, or alternatively they may be "bad" versions of better images taken to document the same data need. Any "bad" image should be deleted. All other images should be renamed in their otherwise original form.

These are “renamed” images. Renamed data images should be kept in the appropriate protocol-specific image or image directory. Saving image files to a new file format (if converting from JPEG to PNG for example) will also occur in this step. In some cases, renamed images may require editing to make them useful for specific purposes. They may be edited by cropping the image or altering the image resolution from the original state. These are “edited” images. Edited images must be denoted as such within the file name to differentiate them from the renamed original file. All renamed and edited images must then be documented. Once appropriate file property information or “image metadata” is applied to each image file, the images are then fully documented and are considered Final.

Final Images

Once all working images have been finalized by being fully processed, including appropriate documentation, and double-checked by the protocol lead as part of data quality control, the working files may be deleted.

Data Images

Images taken as part of a protocol’s data collection procedure are data that need to be organized, documented, and preserved in conjunction with all other protocol data. Protocol data images should be organized and contained within the protocol data structure and supported by detailed standard operating procedures that define how and where images are to be downloaded, edited, and rolled up into final folder locations.

It is recommended images not be stored or embedded directly within a database; instead links or directory pathways to data images can be stored in the database, as appropriate. Data images should also be packaged and stored in the IRMA Data Store to accompany the corresponding snapshot of the network’s data and made available to NPS staff, partners, and the public with the appropriate level of permissions for data access.

Image Processing Steps

Renaming Images

When dealing with hundreds of images, such as in the case of data images, descriptive naming is neither practical nor useful and image file names should be batch renamed without unnecessary descriptive components. **In all cases, image names should not use spaces or special characters.** The following section provides the SECN image naming standards for data images and nondata images.

Data Images:

All protocol data images should follow the convention described here when being named.

PARK_YYYYMMDD_ProtocolIdentifier_###

PARK—Four character park code of where picture or file was taken or created

YYYYMMDD—Date image was taken or image was created in year, month, day, format. The date must be eight characters long.

Protocol Identifier—refers to each protocol’s system of uniquely identifying the subject of the image. This will usually be a sampling location, site or station code. For example, a protocol identifier for the stream channel monitoring protocol might be CHAT001T3Up, with CHAT001 being the site code, T3 being the transect code, and Up denoting an upstream direction. This file name element should not exceed 15 characters.

###—when necessary to ensure unique file names, a three digit sequential number used at the end of the file name. Restart at 001 at the beginning of each day.

****Important:** If an image contains sensitive information, either as image data or as file property information, it is recommended to add an additional suffix “SENSITIVE” in caps following the last file name element (###).

General (non-data) Images:

All non-data images should follow the convention described here when being named.

PARK_YYYYMMDD_BriefTitle_###

PARK—four character park code of where picture or file was taken or created

YYYYMMDD—date image was taken or GPS file was created in year, month, day format. The date must be eight characters long.

BriefTitle—a very short title, up to 15 characters long.

###—when necessary to ensure unique file names, a three digit sequential number used at the end of the file name. Restart at 001 at the beginning of each day.

****Important:** If an image contains sensitive information, either as image data or as file property information, it is recommended to add an additional suffix “SENSITIVE” in caps following the last file name element (###).

Editing

At a minimum, library images should be edited as follows:

- Rotate images to portrait or landscape, as appropriate.
- Rotate images to make the horizon level.
- Remove “red eye” from images of people.
- Crop images to remove edge areas that grossly distract from the subject.

Large groups of photos acquired under sub-optimal exposure or lighting can be batch processed to enhance contrast or brightness. Batch processing can also be used to resize groups of photos for use on the web.

Image Documentation and Cataloging

Images must be documented and cataloged. Documentation, or metadata, provides the minimum information a user will need for appropriate use of the photo. Cataloging provides a collective means for searching, finding, and retrieving photos.

SECN Image Metadata

The National Park Service digital photo metadata standard specifies seven mandatory metadata elements (NPS 2006). These are intended to be the minimum elements required to discover, interpret and manage images. While this standard is a helpful guide, there is currently no known image viewing or editing software that fully meets the NPS standard. The Southeast Coast Network utilizes the mandatory elements from the NPS standards, where those elements are applicable.

Image metadata should be stored along with the image file itself in the file properties, (or “file header”) wherever possible. Not every image viewer will display the full suite of image metadata that that can be included. In general, Adobe Photoshop software is capable of displaying the widest variety of image metadata standards in existence, but performs slowly and requires every user to possess a license. As databases are built, image metadata tables can be constructed to provide functionality that would accommodate the full suite of NPS mandatory fields beyond what an image header allows. While this is not ideal because the full suite of metadata would not be traveling with the image itself, it is the only known way to record the full suite of image metadata. The below list represents a balance of minimum required image metadata to ensure image files are usable over time.

ALL IMAGES SHOULD INCLUDE:

Date Created—date image was created.

Title—a shorthand reference for the image or “photograph” - primarily for identification. The title of an image should be a short, human-readable name.

Author—the first and last names of the person who created the image or took the photo. If it is not appropriate to add the name of the author or photographer (for example, the identity needs to be protected) use a company or organization name. Once saved, this field should not be changed.

Subject—one word or compound word that helps to group images into primary categories.

Keywords (also known as tags)—Describes topics or themes of the content of the image; used to express greater detail on the subject of the image; may be free text and do not come from a controlled vocabulary; may be topics, proper names of places, events, places, or visual descriptions of the image. The keyword primarily describes a theme or topic used to facilitate discovery (searching) and classification of the image.

Park Code—four letter park acronym

Comments—relevant notes pertaining to the image, including summary of image contents and significance.

Access Constraints—identifies whether access is restricted or image is publically available. This is indicates sensitive or non-sensitive image status.

Contact Info

DATA IMAGES SHOULD ALSO INCLUDE:

Coordinate X (GPS longitude)

Coordinate Y (GPS latitude)

Protocol citation

Long-Term Storage Considerations

The amount of server space required to house digital photos has grown extensively over time. The current annual estimate of disk space required to house SECN long-term monitoring protocol photos is thirty-four gigabytes (GB) (four GB for water protocols; two GB for amphibian, bird, and vegetation monitoring; and twenty-eight GB for saltmarsh monitoring). This does not include the vegetation mapping inventory project, estimated to require 175–200 GB drive space for images. In addition, storage requirements are likely to increase over time, due to the increase in file size as the network upgrades camera equipment and as all SECN vital signs monitoring protocols become operational. In order to maintain adequate storage space over time:

- Raw photos can be deleted after they have been reviewed, with “bad” images culled, and all remaining images renamed in otherwise original format.
- Ideally, all images will be processed immediately upon return to the office from the field in the same manner as all other data are processed.
- Final images should be filed according to the protocol-specific procedures in the appropriate SECN file server location. Files stored in this location are automatically backed-up on the SECN server back-up schedule.
- One copy of final images for each protocol may be stored on external media annually as an additional, informal back-up archive.
- A copy of final data images should be packaged and posted to the appropriate NPS data repositories (e.g., IRMA) so that they remain accessible beyond the network, as well as properly secured and backed up.
 - As a step in annual data reporting, ensure all image processing and documentation from the period of record was performed appropriately. Package protocol images for posting to IRMA (or other NPS repository).

- Images will likely be packaged by park and by field season in order to keep download sizes reasonable. Files should be zipped together for the maximum download speeds.
 - Unless otherwise specified, if and when a new repository is identified, create a record in IRMA for the image collection, complete with mandatory metadata elements. Upload the zip file of images to the IRMA record as a holding. If the file is too large for reasonable upload speeds, the files may be sent to the Inventory & Monitoring Division point of contact to attach the images to the appropriate records. Remember: do NOT post sensitive images in IRMA without restricting access to specific individuals.
 - Link the image record to the protocol, the annual data summary report, and the data records, through “collections” in IRMA.
 - Retain the final images on the SECN server. Do not delete them from the server once they have been posted to IRMA. Download speeds from IRMA can be problematic and requests for these images may come to the network directly in the future if an IRMA user is unable to download them.
- Every five years, image data on the local file server, IRMA Data Store, and informal back-up archives should be checked to ensure files are still accessible and readable. At this time, determine if the files need to be migrated to a newer format to avoid obsolescence. In addition, move the archive to new media at the first sign of wear.

Publication Considerations

Property and Use

All photos and images collected with the NPS funds and staff time are property of the National Park Service. Contractors collecting or using images as part of their project should provide copies of any photos or images, both original and edited, preferably high resolution, to the NPS project manager. Similarly, partners and volunteers must also be made aware that any photos or images they collect while working with the National Park Service are public record and must be stored on the SECN system. Photographs taken at parks or as part of SECN enabled-work or travel may not be used as proprietary images and may not be entered into formal contests for monetary gain.

When using a photo for publication, provide credit to the photographer where possible. This is usually written on the right side of the image or at the bottom in a smaller font size (e.g., sans serif) rather than as text in the document. For any image in which the photographer cannot be identified, “National Park Service” should be credited.

Photos of People and Rights to Privacy

- NPS employees wearing uniform in images must be fully dressed in a correct uniform.
- All individuals in photos should be wearing personal protective equipment (PPE) appropriate to the situation.

- NPS staff, volunteers, and partners should positively reflect the NPS in their behavior, expressions, and appearance.
- As a general rule, all NPS employees and volunteers have given the National Park Service rights to use their personal image or copies of images they took during work time and/or when using any government equipment. Therefore, you do not technically need permission from an NPS employee or volunteer in order to use an image of that person performing their job, or to use an image that person took.
- **Release forms must be obtained from the public or other individuals whose release rights are not included in NPS policy or contracts.** In the case of juveniles, the release must be signed by a parent.

Literature Cited

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