

**State Historical Society of North Dakota  
State Archives Digitization/Scanning Standard**

Created June 2017

Reviewed May 2022

**A. Purpose**

The purpose of this standard is to provide information about the digitization of historical state and local government records with a permanent retention. This policy specifically refers to digital surrogates generated through scanning or imaging systems.

All records found to be archival resources, as defined by NDCC 54-46-08.1, are covered by this policy.

**B. Standard**

The following standards represent industry recommendations for digitization of permanent historical records. It is recommended that agencies first create a master file of high quality (example: TIFF) and then derive access versions (example: JPEG) from the master file.

**1. Technical Preservation Standards**

Textual Documents	Image type: 24-bit color Resolution: 400 pixels per inch (ppi) File Format: PDF/A or TIFF
Photographic Transparencies/Negatives	Image type: 24-bit color Resolution: 4000 ppi File Format: TIFF
Prints and Photographs	Image type: 24-bit color Resolution: 600 ppi File Format: TIFF
Oversize Items	Image Type: 24-bit color Resolution: 400 ppi File Format: TIFF

**2. Indexing and Metadata**

In order to ensure access to the digitized records in the future, descriptive metadata must accompany the digitized record. At a minimum, metadata stored with the record includes file name, date of creation, and creator name. Metadata can be embedded in the file or accompany the records in an index.

**3. Quality Assurance and Control**

Quality assurance and control are important steps during and after digitization to reduce error. Quality assurance is the process by which digitized records are examined to ensure that records meet quality standards. Quality assurance and control procedures must be conducted before the state agency disposes of original records. This shall include visual

inspection of the digitized documents to ensure clarity, readability, and accurate representation of the original record.

Other quality control steps may include checking for correct and appropriate file naming conventions, file formats, size and resolution, contrast, and indexing.

If the inspection returns unacceptable quality of digitized records, a new scan of the original must be completed.

#### **4. Vendor Scanning**

If a state agency contracts a vendor to provide imaging services, the state agency must ensure that the vendor is in compliance with these standards. All procedures performed by the vendor must be in accordance to these standards. The state agency and vendor must agree on procedures for transfer, security, handling, and processing of the original records.

#### **5. Retention/Disposal of Original Records**

The state agency's records coordinator must contact the State Archives to discuss retention of the original records before scanning project starts. Do not dispose or destruct records until discussing it with the State Archives.

### **C. Policy Review**

The policy will be reviewed annually by the North Dakota State Archives.

### **D. Related Documents**

- National Archives Records Management Policy and Guidance Appendix A: Tables of File Formats
- Federal Agencies Digital Guideline Initiative (FADGI)
- ISO 16067-1: Spatial resolution measurements of electronic scanners for photographic images, Part 1: Scanners for reflective media
- ISO 16067-2: Electronic scanners for photographic images - Spatial resolution measurements, Part 2: Film scanners
- ISO 19263: Archiving systems, Part 1: Best practices for digital image capture of cultural heritage material
- ISO 19264: Archiving systems, Image quality analysis, Part 1: Reflective originals

## **Appendix A: Definitions/Glossary**

**Analog record:** A record that is non-digital format that is not computer-readable. This may include printed materials, photographs, or microfilm.

**Bit Depth:** The number of bits used to form a pixel in a graphics array.

**Born Digital:** Refers to materials that originate in digital form. Born-digital information is distinguished from information that was created in another format and digitized through scanning or digital photography, creating a digital surrogate.

**Digital Surrogate:** Digital item created through digitization or scanning.

**Digitization:** The process of transforming analog material into digital form. Also referred to as scanning.

**Digital Preservation:** The active management of electronic content over time to ensure the readability, usability, integrity, and accessibility of electronic records across technology generations.

**Resolution:** A measure of sharpness and detail in an image or optical system.