Summary NJDH Requirements and Minimum Standards for Born-Digital Still Images and Photography Equipment

(Note: This document addresses standards for born-digital still images only. For standards and requirements pertaining to digitization, i.e. the scanning of paper, slides or other analog media into digital images, please refer to the RUcore Digitization Guidelines)

Resolution Requirements:

- ***Minimum* of 7.1 <u>effective</u> Megapixels (MP)**
  - Use of "total" or "interpolated" pixel counts to meet the standard are *not* acceptable, when the effective count is below the minimum.
  - A camera will *not* qualify as preservation-grade if it uses interpolation to reach its advertised resolution.

    Example: A manufacturer advertises an extremely inexpensive digital camera capable of producing 10MP images, however the fine print indicates the camera is only equipped with a 3MP sensor. This camera is in fact interpolating a 3MP image to 10MP, and is not acceptable for preservation purposes.

- ***Minimum* 8 bits per channel (24-bit color)**
  - The camera should be cpable of producing images using the sRGB palette.

- **The equipment *must* be capable of producing images with pixel dimensions of at least 3,000 pixels on one side.**
  - Example dimensions: 3504 x 2336; 3072 x 2902; 3872 x 2592; and 3264 x 2448 are all acceptable.
- **The equipment must be EXIF compliant, version 2.0 or later.**
  - EXIF compliance ensures the camera will embed metadata into the image file that details program modes, exposure settings, lens type, and other relevant information.

Image Format Requirements:

- **The equipment should be able to produce images in RAW format.**
  - RAW format ensures that the images produced by the camera are unprocessed, unedited and uncorrected.
  - The camera should either be able to produce image files conforming to the **Digital Negative (DNG)** file format, *or* interface with Adobe PhotoShop or other software that can export a DNG file from the camera's proprietary RAW format.
- **Alternately, the equipment must be able to produced uncompressed TIF images.**
  - Uncompressed TIFs can be used as an archival master, but bear in mind that

DNG is the preferred format. Care should be taken when using TIFs to ensure that no image processing occurs to the TIF file, beyond what the camera performs internally.

Other Considerations:

- **Image quality:** the equipment must be able to produce images with a minimum of sensor noise, and with optimal and accurate color reproduction.
- **Image stabilization:** If you choose a camera or lenses with Image Stabilization (IS), be certain the IS engine is of an "optical" variety, not "electronic" or "virtual." Optical IS uses floating internal lens optics and gyroscopes to ensure a steady image if the camera is moving. Electronic/Virtual IS uses software-based image editing and interpolation to artificially render a steady image.