

Recommendations for Archiving Land Use Planning Data

Note: This document provides suggestions for archiving data used in preparing land use plans. The procedures discussed in this document are meant for use by land use planning teams. If the data you are working with is appropriate for designation as official agency records, such as in a Record Of Decision, then refer to your State Records Administrator for guidance on archiving official records. Also, for references on archiving official records, see Appendix A.

1.0 Archiving Land Use Planning Data

Archiving land use planning data means making a copy of digital and physical (non-digital) data and associated metadata used in land use plan decisions; and storing the data in a secure off-site location.

The purpose of saving this information is to provide an informal reference for resource specialists, planners, and other parties interested in BLM land use planning decisions and processes. In addition, the electronic information thus archived will be available for designation as, or conversion to, official records once electronic records guidance is adopted.

Land use planning data may include, but is not limited to, GIS layers and products, word processing files, studies, resource inventories, reports, memorandums, emails, photographs, images, maps, and charts.

Who Does The Archiving. Organizing and identifying the data to be archived should be directed by the planning team lead, in consultation with data stewards, the records administrator, and the GIS specialist. The local system administrator should carry out archiving of digital data.

Archiving planning data saves a permanent copy of data for future retrieval. Data may be retrieved for responding to public questions, and for reference to historic resource conditions. Unlike other archiving activities, which delete data from the system, land use planning data remains resident on existing systems for ongoing use, analysis, and reference.

Data must be preserved at critical planning steps remaining accessible for ongoing use by specialists.

At a minimum, planning data should be updated and archived at the time of the:

- management situation analysis
- issuance of the draft EIS
- final EIS
- Record of Decision

Data that exists only on paper or in physical form must be copied and placed in the planning case file. Digital data should be archived, and a notation placed in the case file of the archive location. See 3.0 and 4.0 below.

Archiving Data During The Life Of The Plan Once a land use plan is complete, with a signed record of decision, the plan continues to be dynamic. This means that as activities are defined, permits are reviewed, and questions are received and answered, the planning data continues to be updated. When a plan is completed, there continues to be a need to track and periodically archive the planning data. During the life of the land use plan, archive planning data once each year at

the end of the fiscal year. Within each year, regular 30, 60, or 90 day backups should accommodate most needs to retrieve digital planning data that has been used, processed and changed. Paper documents should be kept with the case file throughout the life of the plan, and archived yearly.

2.0 General Guidelines for Archiving Land Use Planning Data

At issuance of the management situation analysis, the draft EIS, the final EIS, and the Record of Decision, update and archive the land use plan data and documents. Store the original data at the Field Office, and store a copy at a secure off-site location.

Ensure there is a well-documented procedure for:

- placing electronic and paper data in off-site storage
- retrieving the hard copy and the electronic data from off-site storage
- periodically testing the electronic files to ensure they are usable. See Section 5.0 below.

Land use plan data archives are considered true copies of the original data used in making planning decisions.

The archived data will be certified to by the field office manager as being a true and complete copy of the land use plan documents. (See the 1271 Manual at .5 Certification of Records.)

Land use plan data residing on the Internet are not considered permanent archives.

3.0 Archiving Methods - paper documents/data which do not exist in digital form

Retain the original paper copy of each land use planning document, map, chart, and photograph used in decisions on site at the Field Office with the case file.

Make a copy of each printed document, map, chart, and photograph used in decisions. Store the duplicate copy at a secure off site location.

For the archive, make a notation that the paper documents are being archived because electronic versions are not available or do not exist.

Offices are not required to use extraordinary measures to attempt to convert physical data products to electronic format; but should do so where feasible and practical.

4.0 Archiving Methods – digital data, and media

For planning data, digital storage formats recommended for text or word processing documents are Adobe Acrobat or Microsoft Word.

For spatial data, retain the original format of the data and directory structure as it exists in the spatial software.

Digital files that are the result of conversion from paper documents shall be exact duplicates of the corresponding paper documents. Scanning to pdf format is recommended.

Storage media. For data sets requiring up to about two gigabytes of storage space, copy planning text files, word processing files, and spatial data used in planning decisions to CD-ROM media. Two gigabytes of data would require three CDs.

For data sets requiring more than two gigabytes of storage space, consider using the office's existing tape backup system to produce a permanent copy of the digital planning data used in decisions. Note that for the purpose of archiving, the backup tape media would be used for permanent storage; the tapes would not be re-used.

Determine the best use of media for archiving at your office based on:

- availability
- cost
- stability
- longevity of the media
- long term retrieval

For additional guidelines on archiving, see the attached Table 1 *Checklist for Choosing Archiving Media*.

Documenting and labeling the archived data. On each CD-ROM or tape, include a text file, (an archive metadata file, or what is commonly called a "readme" file) which describes the following:

1. Name of the land use plan.
2. Date of archiving.
3. Phase of plan at time of archiving.
4. Directory structure on the system at the time of archiving.
5. Any software-archiving or compression processes used prior to copying the data to CD-ROM or tape, with instructions on how to de-archive or uncompress the data.
6. An index to the archived information, so when the data is retrieved from the archive, users will be able to locate the data they are looking for. This list can be a filename listing, showing exact pathnames to files.
7. On the label for each CD-ROM or tape, include:
 - a) the name of the land use plan
 - b) date of archive
 - c) phase of the planning process when the archive was made
 - d) name of the text file which provides the archive metadata (readme file)
 - e) and the number of the CDs or tapes used for archiving (such as "disk 1 of 2," or "tape 3 of 4," etc.)
 - f) label CD media properly, using protective stick-on labels, or pens made for writing on CDs (no petroleum distillate based ink pens)

Some automated backup/archiving software, such as the BLM-approved Veritas NetBackup, automatically records information about the archived data.

Storage Location. Storage options may include a safe-deposit box in a bank vault, a contract with an off-site storage company, or a reciprocal agreement with another governmental agency to use their tape vault. The location should be at least five miles from the originating office.

5.0 Planning for Long Term Archiving of Digital Data

A critical issue is how to maintain archived digital data over long periods of time, for example over five, ten, or twenty years. As hardware and software change with industry advancements, will it still be possible to retrieve five- or ten-year-old archived data that was created using software and storage media that is no longer in use? (For long term archiving of official records, refer to NARA.)

Maintaining archived digital land use planning data.

1. Establish a schedule for checking archived data, for example every year or every two years. Retrieve the archived land use plan data. Copy the data onto the current system and test the data by opening a reasonable sample of text, graphic, and spatial files. When the test is completed, add a dated notation to the tape label or the CD label, verifying that the archived data was checked and found intact.
2. When planning to archive data for a long period of time, consider archiving the software along with the data. For example, if GIS data was created in ArcView, then copy the Arc Explorer viewing software to the archive media so, years later, when retrieving the data, you will not have to search for software capable of reading and displaying the data.
3. When software and hardware upgrades or changes are planned for the office, include in the plans for the upgrades the need to determine:
 - a. if the new software and/or hardware will be able to access, read, and use the archived data,
 - b. if there will be a need to convert the archived data to a new format that will be compatible with the new system,
 - c. if the archived data must be converted, make a plan to:
 - i. determine the conversion process
 - ii. schedule time and staff to access and convert the archived data
 - iii. convert the archived data to the new system format
 - iv. make a detailed verification test to assure that all text, graphic, and spatial files can be accessed and processed on the new system.
 - v. update the text file of archive metadata to include the information that the land use plan data has been converted from its original or previous version to the new version, noting the exact versions, and the date of the conversion and verification of the data.
 - vi. store copies of the newly converted archived land use plan data at the secure off-site storage location, at the State Office, and at the Field Office.
 - vii. determine the period of time your office needs to retain an archive copy of the original version of the land use plan data.

Table 1 - Checklist for Choosing Land Use Planning Data Archiving Media

<p><u>Size of Data Set</u> How large (megabytes or gigabytes) is the data set?</p>	
<p><u>Capacity of Media – CD-ROMs</u> Can the land use plan data be stored on one, two, or three CD-ROMs? If so, consider archiving to CD-ROM.</p>	
<p><u>Using Backup Media and Software</u> Can you use your office’s existing backup software, hardware, and media for archiving?</p>	
<p><u>Capacity of Media – Backup Tapes</u> How much data (megabytes, gigabytes) can your office’s system backup media store? Will the land use plan data fit onto one or maybe two backup tapes?</p>	
<p><u>Automate</u> Is it possible to fully automate the archiving so that it happens without any user intervention at all? Is fully automated archiving advisable?</p>	
<p><u>Cost</u> What is the cost of the archiving method, including hardware, software, and storage media?</p>	
<p><u>Performance</u> How much time will it take to do the archiving?</p>	
<p><u>Reliability</u> How reliable is the archiving software and media?</p>	
<p><u>Simplicity / Convenience</u> Is the archiving method easy and/or straight forward to use?</p>	
<p><u>Universality</u> How common is the hardware and software to be used for archiving? If you need to use the hardware and software five years from now, how likely is it that you could find support or additional media for it? Along with the data, consider archiving software that will read the data.</p>	

Appendix A - References for Archiving Official Records

To understand how to identify and archive official records, make use of the sources of information listed below, and consult with your Records Administrator.

National Archives and Records Administration (NARA)

http://www.archives.gov/about_us/regulations/part_1228_1.html

Where to find rules on media acceptable to NARA

http://www.archives.gov/about_us/regulations/part_1228_1.html

When and What to Archive

National Archives and Records Administration - General Records Schedules

<http://ardor.nara.gov/grs/>

1220 - RECORDS AND INFORMATION MANAGEMENT, GRS/BLM Combined Records Schedules. <http://www.blm.gov/nhp/records/blmgrs/cover.html>

1220 - RECORDS AND INFORMATION MANAGEMENT, GRS/BLM Combined Records Schedules, Schedule 4 - Property Use and Disposal Records. Item 19 RESOURCE MANAGEMENT PLAN (RMP) FILES [1610].

<http://www.blm.gov/nhp/records/blmgrs/sched04.html>

1220 - RECORDS AND INFORMATION MANAGEMENT, GRS/BLM Combined Records Schedules, Schedule 4 - Property Use and Disposal Records. Item 20 RESOURCE ACTIVITY PLAN (RAP) RECORDS [1610]. <http://www.blm.gov/nhp/records/blmgrs/sched04.html>

1220 - GEOGRAPHIC INFORMATION SYSTEM (GIS) GRS/BLM Combined Records Schedules, Schedule 20 - Electronic Records. Item 52 GEOGRAPHIC INFORMATION SYSTEM (GIS) [9167]. Provides rules for disposition of GIS data layers: “Data layers uniquely created by the BLM and maintained in support of significant ongoing projects or significant specific decisions that clearly support the basic mission of the BLM” are retained as permanent records. <http://www.blm.gov/nhp/records/blmgrs/sched20.html>.