Storage of Public Records in Agencies

PROS 97/002 Specification 1

Public Record Office Victoria

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This document specifies the conditions for storing public records in agencies in accordance with standards issued by the Public Record Office Victoria.

1.0 Introduction

Public records may be stored in-house pending their disposal or transfer to an Approved Public Record Office Supplier (APROSS) or the Public Record Office Victoria (PROV). All records may be stored in-house, unsentenced records or sentenced temporary records may be stored in an APROSS and records appraised as permanent may be transferred to the PROV.

When storing public records in-house agencies should ensure that their storage area meets the following specifications.

2.0 Environmental factors and precautions

2.1 Environmental stability

It is important to maintain as constant an environment as possible because fluctuations, even relatively small ones, adversely affect the long term preservation of records. It should be noted that there are also special requirements for film and magnetic media storage areas, which are referred to below.

Control of environmental conditions within a storage area is easier if due consideration has been paid to design and structural elements that provide insulation. Such provisions minimise the task of moderating fluctuations in temperature and humidity by air conditioning. A fundamental consideration is that ambient temperature and humidity remain relatively stable. The air conditioning requirements for people in an office building are generally similar to those for archival storage (temperature 20^{o}C +/-2^{o}C and relative humidity 50% +/-5%) and records maintained in office environments are usually climatically well cared for. Paper records which the PROV has appraised as temporary will be eventually destroyed and may not need the additional atmospheric controls required for records that are permanent or have not been assessed by the PROV.

2.2 Temperature

Temperature is a major factor contributing to the preservation of paper. One estimate suggests that the shelf life of paper records doubles for every temperature decrease of 5.5^{o}C - presumably this is in the higher brackets of temperature as the normally accepted optimum level for archives is around 20^{o}C, which is comfortable for staff.

2.3 Humidity

Humidity is a factor which can have serious effects on paper documents. If it is above 50%, there is a risk of mould; if it is below 40%, there is a risk of desiccation.

2.4 Audio visual/machine-readable records

The importance of avoiding fluctuations in temperature and humidity is even greater if archival film media (including microfilm) and magnetic media are to be stored.

For film media the storage should be air conditioned to 10^{o}C and 40% relative humidity. It is then also necessary to have conditioning facilities to permit the reduction of humidity of the material to that of the storage area before the temperature is reduced, and (in order to avoid moisture condensation on material retrieved from a low temperature vault) to permit an increase in the temperature of outgoing records without moisture condensation before they receive a further conditioning to higher humidity.

For magnetic media the air conditioning should provide a temperature of 21^{o}C +/-5^{o}C and relative humidity of 50% +/-10%.

For both film and magnetic data storage, dust and dirt controls should be included in the air conditioning/filtration system, and dust treatment is required for walls and ceiling. Consideration may have to be given to particular filtration or laminar flow ventilation requirements - for example toilets, washrooms and cleaners stores are a common source of mould growth in museums, libraries and archives, and the air conditioning system should be so designed that there is no possibility of mould spores travelling from these areas to records storage areas.

2.5 Acid

The major factor in the preservation of documents is generally acknowledged to be the acid content of the paper used. Acid-free paper should be used for important records intended for permanent retention. The acid content of the atmosphere in which records are stored needs to be minimised. This can be done by using an appropriate air filtration system. (Electrostatic air cleaners tend to produce ozone, which is an oxidising agent, and are not recommended for record storage areas of any type.)

The major pollutants are sulphur dioxide (which can convert to sulphuric acid), oxides of nitrogen (which can convert to nitric acid), ozone (which oxidises nitric oxide to the more harmful nitrogen dioxide) and hydrogen sulphide.

Small quantities of the pollutants mentioned above are also damaging to film (as they can be involved in reactions with silver, thus destroying the image).

2.6 Dust

Air conditioning is required to maintain an atmosphere with minimum levels of dust or dirt particles, which could be a significant source of pollution.

2.7 Electrical installations

Information on computer records is lost if demagnetisation occurs (from static electricity or reversed polarity) and care should be taken to minimise the risk of this happening. Precautions

must be taken to protect magnetic media from high intensity electro-magnetic fields, including floor polishers, electric motors and generators.

2.8 Lighting

Unless preventive measures are taken, damage can be caused to records by unrestricted ultraviolet and visible radiation light from natural and artificial lighting. Ultraviolet light is a prime cause of cellulose oxidation.

Preventive methods are :-

(1) natural lighting entering the building and likely to fall directly on to records should be filtered using the appropriate U/V filtering glass windows and

(2) artificial lighting should be U/V screened (e.g. by using Phillips 32 or similar fluorescent tubes).

2.9 Pests

Fungi, insects and rodents favour temperatures of over 20^{o}C and humidity above 70%. Regular fumigation of the records storage area should occur even when the climatic conditions standards have been attained. The fumigant used should contain toxins appropriate to the pests to be controlled.

2.10 Fire and water

Appropriate fire suppression technology should be determined for each area. As a minimum, a wet pipe fire sprinkler system shall be provided. Smoke hazard management systems shall be installed to meet the intent of the Building Code of Australia, to provide assistance in occupant evacuation, Fire Brigade access and minimisation of potential damage to the records.

Requirements for fire protection need detailed consideration on a case by case basis.

Water damage can occur from fire brigade intervention in case of fire, from weather if repositories are inadequately waterproofed, or from flooding (especially in basement areas). Storage needs to be 300mm above the 100 year flood level. Records should not be stored on the floor.

3.0 Precautionary equipment

3.1 Environment monitors

Devices to allow the temperature and relative humidity to be monitored will be required in certain areas (such as film and magnetic tape storage areas) and may be required in other areas.

3.2 Security

Physical security measures which would require consideration on a case by case basis include consideration of vital records, access, file movement, security storage and surveillance.

Vital records are those without which a public office cannot function. These records should be identified and special care taken to prevent their loss or damage. If possible vital records should be duplicated and the duplicates stored at a different location to the originals. Vital records do not necessarily become archives and may only be required for retention for a short period.

Security cannot be achieved if there is uncontrolled access to storage areas.

Movement of records into and out of storage areas should always be recorded.

Special arrangements should be made for confidential and vital records. Lockable storage units are available.

Any building housing records should be under standard security surveillance when unoccupied. Alarm systems should be fitted to all means of access to records storage areas inkling ducts. Unmanned areas should always be provided with a fire alarm system to alert authorities if a fire breaks out.